



# **Fiscal Year 2013 National Environmental Information Exchange Network Grant Program**

## **Solicitation Notice**

**U.S. Environmental Protection Agency  
Office of Environmental Information  
Office of Information Collection  
Information Exchange and Services Division  
Information Exchange Partnership Branch  
September 7, 2012**

# Fiscal Year 2013 National Environmental Information Exchange Network Grant Program Solicitation Notice

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# **FY 2013 National Environmental Information Exchange Network Grant Program Solicitation Notice**

## **Overview Information**

**Agency Name and Office:** U.S. Environmental Protection Agency (EPA), Office of Environmental Information (OEI)

**Funding Opportunity Title:** FY 2013 National Environmental Information Exchange Network Grant Program

**Announcement Type:** Availability of Funding Solicitation Notice

**Funding Opportunity Number:** EPA-OEI-13-01

**Catalog of Federal Domestic Assistance (CFDA) Number:** 66.608

**Dates:** November 9, 2012 – Deadline for submitting applications to EPA  
July 31, 2013 – Expected Award of FY 2013 Exchange Network Grants

## **I. Funding Opportunity Description**

EPA, states, tribes, and territories, are working together to implement the National Environmental Information Exchange Network (referred to in this Solicitation Notice as the Exchange Network, the Network, or EN), a secure, Internet- and standards-based way to support electronic data reporting, sharing, and integration of both regulatory and non-regulatory environmental data. EN Partners exchanging data with each other or with EPA, have made the Exchange Network and the Agency's connection to it, the Central Data Exchange (CDX), the standard way they exchange data and are phasing out any legacy methods they have been using. More information on the Exchange Network is available at [www.exchangenetwork.net](http://www.exchangenetwork.net).

The Exchange Network Grant Program provides funding to states, tribes, inter-tribal consortia and territories to develop and implement the information technology and information management capabilities they need to actively participate in the Exchange Network. This grant program supports the exchange of environmental data and collaborative work within the Exchange Network. Grantees may also use grant funds for the standardization, exchange and integration of geospatial information to support work to preserve and improve the environment, natural resources, and human health.

### **I-A. Background**

EPA and its state, tribal, and territorial partners continue to invest collaboratively to expand the Exchange Network. In 2007, the Exchange Network Leadership Council (ENLC) issued the Exchange Network Strategic Plan that committed to “building a state-of-the-art Environmental Information Exchange Network which will become the preferred method for exchanging environmental data in support of better environmental decision-making.” The Plan’s objectives include completing infrastructure, exchanging environmental data, and expanding use of the

Network to support environmental decision-making. EN Grant Program applicants can access the EN Strategic Plan at <http://www.exchangenetwork.net/ENStrategicPlan.pdf>.

The ENLC is currently preparing an implementation plan for the second phase of the Exchange Network. Phase 2 is the term that the Exchange Network community uses to refer to this new phase of Network development. Phase 1 focused on development of the Network infrastructure and implementation of data reporting to EPA using the Network. In Phase 2, the Network community will:

- expand Network publishing (data owners making their information available to other partners on the Network using automated services);
- develop applications (both mobile and desktop) and websites (including public sites) that analyze and/or display data accessed using Exchange Network services;
- expand the use of the Network for data reporting to additional EPA data systems;
- expand intra-partner data sharing including programs where EPA does not have a central data store (e.g. institutional controls for cleanup sites); and
- develop new technologies that make using the Network easier and less costly.

EPA expects the statutory authority for the Fiscal Year 2013 Exchange Network Grant program to be provided under the State and Tribal Assistance Grant (STAG) heading within EPA's Fiscal Year 2013 appropriation act. The FY 2013 President's Budget requests \$10,200,000 for the National Environmental Information Exchange Network Grant Program. Funding of grant applications under this Solicitation Notice is subject to the availability of program funds in the FY 2013 annual appropriation for EPA.

## **I-B. Grant Program Funding History and Results**

FY 2013 is the twelfth year of the Exchange Network Grant Program. From FY 2002 through FY 2012, EPA has provided approximately \$171 million for state, tribal, and territorial awards and associated program support through the grant program. As of June 2012, all 50 states, 87 tribes and five territories have received Exchange Network grants. For descriptions of previously awarded Exchange Network grants, please see <http://www.epa.gov/exchangenetwork/grants/index.html>. For information on the progress of the data exchanges, see <http://www.exchangenetwork.net>.

## **I-C. Assistance Activities**

This Solicitation Notice requests that states, tribes, inter-tribal consortia, and territories develop and submit applications to support the exchange of data among Exchange Network partners. Applications must focus on the Exchange Network priorities stated in Section I-E. Applications must commit to and clearly describe the development and implementation of EN tools and services reusable by other partners or the development and implementation of technologies and services directly related to Exchange Network activities. Examples of EN activities are contained in Section I-E and in Appendix B. Applicants may propose projects that include activities other than those listed as examples, provided they are consistent with the EN priorities.

EPA will determine the eligibility of each applicant (see Section III-A). EPA will then evaluate applications from eligible applicants based on the evaluation criteria in Section V-A.

Appendix B of this Solicitation Notice offers more detailed information on data exchanges and priority EN project areas. Applicants are responsible for reading and complying with the instructions and criteria found in this Notice.

### **I-D. Environmental Results Supported by Assistance Activities**

EPA’s mission is to protect human health and the environment. Timely access to information supports strong environmental decision-making and improves the ability of EPA, with its state and tribal partners, to carry out that mission. The Exchange Network helps states, territories, tribes, and EPA share environmental information more efficiently and effectively over the Internet. Phase 2 of the Exchange Network will make data critical for decisions more readily available. Efficient sharing of and increased access to high-quality data among EN partners strengthens their ability to make sound environmental decisions including improved priority setting and resource targeting.

Applications under this Solicitation must clearly demonstrate support of the EPA 2011-2015 Strategic Plan, Cross-Cutting Fundamental Strategies, Objectives of “Strengthening State, Tribal, and International Partnerships” and “Expanding the Conversation on Environmentalism”. (EPA’s 2011-2015 Strategic Plan can be found at: <http://epa.gov/planandbudget/strategicplan.html>)

It is EPA policy to directly link work supported by assistance agreements to the Agency’s mission and Strategic Plan. Grant applications, assistance agreements, and work plans must all have outcomes that lead to or are instrumental in achieving environmental results supporting the Agency’s mission and Strategic Plan goals.

### **Goals, Outputs, Outcomes and Environmental Results**

EPA recognizes that Exchange Network projects do not *directly* produce environmental results, and will therefore evaluate applications based on the major technical and non-technical outputs and outcomes of the proposed work. **Each proposed goal should have at least one outcome the applicant expects will lead to or be instrumental in achieving an environmental result.**

***Examples of Project Outputs:***

- development of schema
- development of publishing tools
- issuance of Requests for Proposals (RFPs)

***Examples of Project Outcomes:***

- improving the timeliness and accuracy of environmental data
- reducing burden and costs associated with data management and reporting
- increasing access to environmental data
- supporting better decision-making by building data access for environmental professionals and the public
- facilitating place-based decision-making through the inclusion of quality locational data which transcend jurisdictional boundaries

Figure 1-1 below presents an example workplan for an Exchange Network flow showing the relationship of goals, outcomes, and outputs leading to environmental results.

**Figure 1-1**

<b>Goal 1 – Implement WQX Flow</b>	<b>Goal 1 Outcome(s)</b> 1. Supports timelier, more accurate data to improve environmental decision-making by Agency managers 2. Supports better understanding of environmental conditions by the public and other interested parties.
<b>Output</b>	<b>Scheduled Date</b>
1.1 Contractor selected for flow	December 2013
1.2 Data mapped to XML schema	March 2014
1.3 Sustained WQX Flow implemented	September 2014
1.4 Written documentation of implementing WQX	January 2015
1.5 Beta testing of web service	May 2016
1.6 Web service published	September 2016

- Each goal should result in a major deliverable, such as a sustained data flow.
- Applications should list and schedule major outputs that lead to achieving a goal.
- Each goal should have at least one outcome that leads to environmental results.

### **I-E. Program Priorities**

EPA expects Exchange Network assistance agreement support projects to improve the exchange of and access to high-quality environmental data from public and private sector sources.

2013 will be a pivotal year for the Exchange Network, as the Exchange Network community shifts its focus to Phase 2. This transition will be reflected in the types of projects EPA is soliciting for grant awards, as well as the tiering of grant priorities, described in more detail in this section. EPA will be placing a higher priority on activities which advance Phase 2 goals, including 24/7 data publishing, virtual sharing, virtual node implementation support, shared Cross-Media Electronic Reporting Regulation (CROMERR) services and components, and implementation of new and innovative data flows. At the same time, EPA recognizes that partners continue to implement automated reporting to the 10 National Priority data systems that were the focus of Phase 1. EPA will support states, tribes, and territories in completing these priority flows through Exchange Network grant funding.

With this Phase 2 transition and the outcome of improved data exchange and access in mind, applications should demonstrate the implementation of the Exchange Network program priorities, grouped in three tiers as described below. In general, Tier 1 focuses on activities related to the scope of Phase 2 (e.g., publishing, integration of new technologies into a partner’s information technology infrastructure, implementation of new national data exchanges). Tier 2 focuses on the priorities continuing from Phase 1 (e.g., implementation of the original 10 priority data exchanges). Tier 3 focuses on the remainder of Network-related activities.

Applications that include Tier 1 goals will receive more points than those with tier 2 goals, which, in turn, will receive more points than those with only tier 3 goals (see section V-A for more details).

(Note: No Exchange Network grant funds will be available to state and territorial partners for node development projects. Furthermore, FY 2013 will be the final year that grant funding will be available to tribes and inter-tribal consortia for node development. These grant projects will be limited to \$50,000 per tribal applicant. All applicants are encouraged to use the services of EPA's new virtual node, which EPA is making available to all EN partners.)

### **Tier 1 Activities:**

- **24/7 Data Publishing.** Activities that lead to the creation of services that make subsets of data available as XML or JSON. This should include REST-based services that conform to the EN REST Standard (anticipated to be in place by the end of 2012) or Exchange Network SOAP services. Specific areas of focus for publishing proposals include:
  - Supporting mobile and desktop applications and publishing/accessing environmental information sources.
  - Integrating with web applications.
  - Publishing data to publicly accessible web pages
  - Developing a high-level Dashboard for program managers and Agency executives.
- **Phase 2 Flows.** New flows that advance Phase 2 Network priorities. Possible flows include:
  - Air Facility System (AFS)
  - Safe Drinking Water Information System (SDWIS) Compliance data
  - Electronic Notice of Intent (eNOI) flow to Integrated Compliance Information System – National Pollutant Discharge Elimination System (ICIS-NPDES)
- **Use of the Exchange Network for Virtual Sharing** (especially cross-state, cross-tribal, or state-tribal) of data, including institutional controls at contamination sites, data on cleanup sites, data sets of national significance to tribes (*e.g.*, open dumps), UST data, and data that support environmental management of multi-state or regional airsheds, watersheds, and water bodies of priority concern (*e.g.*, Great Lakes, Chesapeake Bay).
- **Virtual Node Implementation Support for States, Tribes, and Territories.**
  - Support transitioning from nodes to virtual nodes
  - Create data publishing services and new data flows on virtual nodes
  - Support virtual node related security analyses and plans(A detailed description of these activities may be found in Appendix C: Cloud Transition Grants for EN Partners.)
- **Shared CROMERR Services and Components.** Design systems to utilize new EPA web services that provide CROMERR compliant functionality (*e.g.*, electronic signature), minimizing redundant development by partners and streamlining Technical Review Committee (TRC) application reviews/approvals. EPA plans to have these web services available for use in 2013.

[Note: Exchange Network Governance has established Integrated Project Teams (IPTs) that are on an accelerated schedule to provide access to the virtual node and shared CROMERR services



and components to all Exchange Network partners. EPA will be posting additional details concerning these two topics on the EPA Exchange Network website in the coming months, and will also request that the Environmental Council of the States (ECOS) notify Exchange Network partners via an EN Alert. (Potential grant applicants may sign up for EN Alerts by sending a request to Greg McNelly of ECOS at [gmcnelly@ecos.org](mailto:gmcnelly@ecos.org).)]

Examples of specific potential projects related to these broad topics include the following:

- **Collaborative Opportunity:** A partnership proposal that includes joint state and/or tribal efforts to develop an application that uses Exchange Network web services (*e.g.*, solicit services) to enable a user to query databases for information related to remediation sites (*e.g.*, underground storage tanks, hazardous waste sites) such as institutional controls, displaying and accessing site data through a spatial view, presenting data in tabular format, and enabling users to download data in a variety of formats. To power this application, the partners would need to define and/or implement schemas and Exchange Network web services to make the data available to the application.
- **Collaborative Opportunity:** A partnership proposal that builds an eReporting system integrating one or more EPA web services that provide CROMERR compliant functionality (*e.g.*, electronic signature). In order for this proposal to be eligible for funding, applicants must commit to flowing the reported data to EPA using the Exchange Network, thus providing a complete end-to-end electronic reporting solution for environmental data.
- **Geo-enabled Field Data Collection Tool:** Development and sharing of source code for a field data collection tool for emergency response, inspection, compliance verification, or other activities. The tool will use GIS visualization and integrated GPS, allow updates to be made in the field, and then flow data back to backend systems via the Exchange Network. This project will utilize key strengths of the Exchange Network by enabling the flow of secure data, in near real-time, to multiple locations. The project could include developing EN standards and services which could plug into other tools such as Scribe for emergency response or other existing applications used in field deployment. The grantee can utilize EPA's Facility Registry Service web service, currently being developed, that will provide sub-facility data and their locations from multiple media programs, as well as submitting to other systems as appropriate. In addition, EPA will enable the data service to filter data by specific source(s), such as real-time emergency response data, or a subset of data from a specific state. The grantee can also collaborate with EPA to develop additional FRS web services as necessary. To ensure close collaboration between EPA and state, tribal, and territorial partners, any assistance agreements to develop this tool will be awarded as cooperative agreements.

## **Tier 2 Activities:**

- **Phase 1 10 Priority Flows.** Additional funding for completing 10 priority flows.
  - Implementation by an Exchange Network partner (or partners) of one of the 10 flows that they currently have not completed.
  - Addition of entirely new modules to existing data flows. For example, adding an entire class of UIC reporting, adding a new RCRAInfo module, or adding a new data family under ICIS-NPDES.
  - Operations and maintenance of flows is not an eligible activity for funding.

- **Development and deployment of Cross-Media Electronic Reporting Regulation (CROMERR)** upgrades to an existing electronic reporting system, described in a CROMERR application previously approved by EPA, to bring it into compliance with the regulatory standards.
- **Collaborative Opportunity:** Partnership to develop multi-program CROMERR application for states that currently do not have an enterprise-wide approach; application should seek to leverage solutions implemented by other states already approved by EPA. (An application that additionally commits to using the new EPA components and services that will provide CROMERR-compliant functionality will be scored as a Tier 1 proposal.)
- **Collaborative Tribal Opportunity:** Tribal governments and inter-tribal consortia are eligible to apply for Exchange Network grants to build tribal capacity that will result in enhancing environmental programs on tribal lands and the ability to share environmental data electronically with EN partners. Collaborative tribal capacity building proposals must include multiple tribes and identify tribes with existing capacity that can serve as mentors. Collaborative tribal capacity proposals must identify specific outputs and outcomes that result in the increased ability to share environmental information/data electronically with EPA and/or other EN partners (e.g., developing a backend database for a priority data system).

### **Tier 3 Activities:**

- **Phase 1 10 Priority Flows:** Funds for partners already flowing one or more of the 10 priority flows, who want to upgrade one or more of these data flows by:
  - Adding historical data
  - Adding new data elements
  - Changing processes
  - Modifying XML schema
  - Adding new parameters
  - Creating geo-enabled data
- **Development and deployment of other innovative data exchanges** (e.g., emergency response, open dump, surface coal mining data integration and reporting, support for sustainable development through sharing data related to transit, zoning/master plan, building permits and LEED buildings and infrastructure initiatives such as water quality laboratory data reporting) that are applicable to multiple partners.
- **Updating large national data sets:** Schema development effort that will enable states to flow data through the Exchange Network to update large national datasets that fall under Appendix E of OMB Circular A-16: “Coordination of Geographic Information and Related Spatial Data Activities.” These datasets can include: the National Hydrography Dataset (NHD), National Watershed Boundary dataset, National Wetland Inventory Dataset, National Elevation Dataset, Geographic Names Dataset, and other datasets.

EPA will score an innovative application as Tier 2, such as the Homeland Emergency Response System (HERE), if the applicant will be implementing one or more of the 10 priority flows for the first time, or will be adding a new module to one of those flows. For example, EPA would score an application that includes completion of the RCRAInfo Handler data exchange as a component of a HERE exchange as Tier 2. If, on the other hand, the applicant is implementing

an application such as HERE that does not propose a new priority flow or module of a priority flow, then EPA would score this application as Tier 3. For example, an application that includes HERE implementation, integrating an *existing* RCRAInfo Handler data exchange would be a Tier 3 application.

In addition to the priority activities above, EPA programs have identified other activities, which can be found in Appendix B. Grant applications that include one or more of these other activities will be scored according to the tier specified *in bolded italicized text* in Appendix B. For each data system in this appendix, the tier is identified either in a note directly following the list of activities for that system (if the activities are all to be tiered the same), or in parentheses after each activity (if the activities within a system are to be tiered differently).

As part of the project description, each grant application must include a short statement describing the business need that the proposed project will address. Please see the note in Evaluation Criterion 3 (Section V-A) for more detailed information.

### **I-F. Partnership Agreements**

*Project narratives and budgets should explain specifically why the proposed project requires additional resources available through a partnership assistance agreement. Reasons for additional funding may include project complexity or activities in support of partner collaboration.* Partnership applications may fall into Tier 1, Tier 2, or Tier 3; EPA will determine the appropriate tier based on the specific project proposals and the Program Priorities described in Section I-E. See Section III-C, “Eligibility Criteria for Partnership Applications,” before making any financial commitments to project partners or listing these partners in your application.

## **II. Award Information**

The Catalog of Federal Domestic Assistance number for the Exchange Network Grant Program is 66.608 (<http://www.cfda.gov>).

### **II-A. General Information**

In FY 2013, EPA expects to award about \$10,000,000 for 40 to 50 grants of up to \$500,000. The exact number of grants will depend on the final amount of EPA’s appropriation for the grant program, the number of applications submitted to EPA by the application deadline, the amounts of proposed budgets, and the outcome of application reviews.

Most awards will be in the \$50,000 to \$300,000 range. **Awards to a single applicant cannot exceed \$300,000. EPA may make a limited number of awards to collaborative, partnership assistance agreements. Budgets for these projects cannot exceed \$500,000.** EPA remains committed to, at a minimum, awarding tribal assistance agreements equal to approximately 10 percent of the appropriated funds. The amount awarded to tribes may be greater than this minimum level, depending on the merit of tribal applications and on the competitive review of all applications. The standard period of performance for each project is three years. EPA expects to announce the FY 2013 Exchange Network Grant program awards during April 2013 and award the grants by July 31, 2013.

EPA reserves the right to partially fund applications by funding only proposed goals that the Agency believes to be eligible and appropriate Exchange Network projects. If EPA decides to partially fund a project, it will do so in a manner that does not prejudice any applicants or affect the basis upon which the application or portion thereof, was evaluated and selected for award, and therefore maintains the integrity of the competition and selection process.

**Additional Awards:** EPA reserves the right to make additional awards under this announcement, consistent with Agency policy, if additional funding becomes available after the original selections. EPA will make any additional selections for awards no later than six months from the date of the original selections.

## **II-B. Types of Assistance**

EPA may award assistance agreements funded through the Exchange Network Grant Program as grants or cooperative agreements, in-kind services, or performance partnership grants. EPA will consider an applicant's preferences when the Agency decides what type of assistance to award.

EPA uses assistance agreement vehicles to transfer funding and services to a recipient to accomplish a public purpose. Unlike contracts, grants are structured and managed to ensure the project benefits the recipient toward the identified public purpose. Exchange Network assistance agreements allow recipients to develop infrastructure, systems, and capacity to electronically report environmental information and participate fully on the Network. Applicants should identify and justify requests for the various structural elements available within their assistance agreement to best achieve their project goals. EPA will consider the following options for awarding EN resources:

- **Grant or Cooperative Agreement.** Grants represent direct funding to a recipient to support an identified project with defined environmental results. A cooperative agreement anticipates substantial involvement from EPA, in collaboration with the recipient, to achieve project results. If the recipient does not identify a preference, EPA's default award will be a grant.
- **Direct Funding or In-Kind Services.** EPA will consider grantee requests to use all or a portion of awarded grant funds to provide in-kind services to the recipient through an EPA contract vehicle. Applicants should request and justify project efficiencies they expect from this approach.
- **Single Grant or Performance Partnership/Consolidated Grants.** An applicant whose organization has an existing Performance Partnership Grant (PPG) with EPA may request any new grant recommended for funding be incorporated into the PPG. Similarly, a territorial applicant whose territory has a Consolidated Grant (CG) with EPA may request that new awards be incorporated into the CG. Absent a request from the recipient for inclusion within a PPG or CG, EPA will award the grant in a stand-alone vehicle.

## **II-C. Funding Restrictions**

Applicants may propose EN project funding for costs associated with personnel salaries and fringe benefits, Intergovernmental Personnel Act Agreements (IPAs) travel, travel related to Exchange Network activities, equipment, supplies, contractual costs, in-kind services provided

by EPA, and indirect costs. Applicants may *not* use EN funding for the following functions (see Appendix A for definitions):

- **Construction costs.**
- **Operations and maintenance** including previously developed and implemented EN projects.
- **Workshops and Conferences** that are not initiated, advertised, and conducted for the benefit of the recipient and other state, tribal, territorial, or local representatives or public participants or are conducted primarily for EPA's benefit.
- **Pre-Award Costs** not previously requested to cover pre-award costs incurred 90 days or less before the award date.
- **Management Fees** in excess of the direct costs and indirect costs at the rate approved by the applicant's cognizant audit agency, or at the rate provided for by the terms of the agreement negotiated with EPA.

### III. Eligibility Information

#### III-A. Eligible Applicants

*Examples of Eligible Project Leads:*

- State Department of Environmental Quality
- Territorial Environment Division
- Tribal Council on behalf of two or more tribal environmental and/or health agencies
- State Department of Public Health
- Tribal Water Quality Administration
- State Office of the Chief Information Officer
- Regional Air Quality Board delegated authority for the air program
- State university where the university or the university system is formally designated as an instrumentality of the state

Eligible applicants for the Exchange Network Grant program include states, U.S. Territories (i.e., American Samoa, the Commonwealth of the Northern Mariana Islands, the District of Columbia, Guam, Palau, Puerto Rico, the U.S. Virgin Islands), federally recognized Indian tribes and native villages, and inter-tribal consortia of federally recognized tribes (e.g., the Northwest Indian Fisheries Commission because their membership is primarily federally recognized tribes and they have sufficient controls to ensure tribes will benefit from funding).

Other entities, such as regional air pollution control districts, and some public universities may apply for assistance if they are agencies or instrumentalities of a state under applicable state laws. These entities, as well as other entities that submit applications asserting they are agencies or instrumentalities of a state,

must provide with the application a letter from the appropriate state Attorney General certifying that the applicant is an agency or instrumentality of the state. If the application does not contain the required documentation, the application will not be considered.

EPA recognizes that some EPA programs are delegated to local governments, which are responsible for reporting data to EPA. Local governments that can demonstrate that they are instrumentalities of the state by providing the documentation described in the preceding paragraph, are eligible to apply for Exchange Network Grants. Most local governments that are delegated to implement EPA programs, however, are not agencies or instrumentalities of the state (i.e., a true agency or instrumentality is under the direct control of the state and the management of a state agency or instrumentality may generally be changed by the state executive or other state officials) and, therefore, are not eligible to apply. EPA encourages such entities to partner with a state applicant to allow for their data to be reported and shared through the Exchange Network. Interstate commissions and other interstate entities are not eligible to apply and are also encouraged to partner with a state applicant.

Applicants with questions about eligibility can contact Salena Reynolds, Exchange Network Grants Program Manager, at (202) 566-0466 or [reynolds.salena@epa.gov](mailto:reynolds.salena@epa.gov). They may also attend Exchange Network Users meetings to learn about and discuss Exchange Network projects and technology. Applicants not meeting the eligibility criteria may consider collaborative work with eligible organizations. EPA will only evaluate applications with eligible entities identified as the lead implementing agency for the project.

### **III-B. Threshold Criteria for Eligibility**

These are requirements that, if not met by the time of application submission, will result in elimination of the application from consideration for funding. EPA will only evaluate applications from eligible entities (see above). EPA will notify applicants it deems ineligible for funding consideration as a result of the threshold eligibility review within 15 calendar days of the ineligibility determination.

1. EPA will only review applications with proposed goals that lead to the completion of tiered activities listed in the Priorities Section (I-E) or additional activities identified in Appendix B. Examples of EN activities are contained in Section I-E and in Appendix B. Applicants may propose projects that include activities other than those listed as examples, provided they are consistent with the EN priorities.

2.a. Applications must substantially comply with the application submission instructions and requirements set forth in Section IV and Appendix D of this announcement or else they will be rejected. Section IV and Appendix D require that a project narrative not exceed ten pages – pages in excess of this page limitation will not be reviewed.

2.b. In addition, applications must be postmarked, delivered by an overnight courier service, or electronically submitted through [www.grants.gov](http://www.grants.gov) as specified in Section IV and Appendix D of this announcement on or before the application submission deadline published in Section IV and Appendix D of this announcement.

2.c. Applications postmarked, delivered by an overnight courier service, or electronically submitted through [www.grants.gov](http://www.grants.gov) after the submission deadline will be considered late and returned to the sender without further consideration unless the applicant can clearly demonstrate that it was late due to EPA mishandling or because of technical problems associated with

[www.grants.gov](http://www.grants.gov). Applicants should confirm receipt of their application with Salena Reynolds ([reynolds.salena@epa.gov](mailto:reynolds.salena@epa.gov)) as soon as possible after the submission deadline – failure to do so may result in your application not being reviewed.

3. EPA will not fund any activities or deliverables for which the applicant has previously received funds. If an application is similar to a previously funded proposal, the application must discuss how previously funded activities differ from those currently proposed or how the current application will complement or build on past or ongoing work.

Ineligible activities: If an application is submitted that includes any ineligible tasks or activities, that portion of the application will be ineligible for funding and may, depending on the extent to which it affects the application, render the entire application ineligible for funding.

4. All **state government applicants** must complete the Implementation Plan form posted on EPA's Exchange Network website (<http://www.epa.gov/exchangenetwork>). A sample of this form can be found in Appendix H. On this form, state applicants will identify whether they have been delegated authority to implement each of the 10 national priority data systems. For each program a state has been delegated authority, the applicant will also identify the current status of their use of the Exchange Network as well as future plans. State applicants that have never used the Exchange Network for reporting to a particular system and do not plan to use the Network, or who have stopped using the Exchange Network for reporting to a particular system and do not plan to restart, must provide a business reason explaining why they will not use the Network. ***EPA will not review state applications that do not include this Implementation Plan.***

EPA encourages applicants to coordinate with other agencies within their state to provide a comprehensive, statewide Implementation Plan for all national and priority data exchanges within the Exchange Network. The Implementation Plan form does not count as part of the 10-page maximum limit for the project narrative. Territorial and tribal applicants are not required to submit an Implementation Plan form.

5. EPA will not review applications with project periods of more than three years, applications from a single applicant with a budget of more than \$300,000 or multi-partner, collaborative applications that have budgets over \$500,000.

6. EPA will not review applications from applicants who already have five or more active Exchange Network assistance agreements with the Agency. EPA will determine whether an applicant meets this threshold criterion on January 15, 2013, prior to the final scoring of applications by Agency grant review panels. An assistance agreement will be considered active if EPA has not yet approved the final technical report. In order for an agreement to be considered closed (and therefore not included in this count), the applicant's final technical report must be approved by the Regional Project Officer on or prior to January 15, 2013.

### **III-C. Eligibility Criteria for Partnership Applications**

EPA will consider the higher funding limit (\$500,000) for projects that include more than one Exchange Network partner. For these, one eligible entity must lead the collaborative effort and assume program and financial responsibility for the project. Partners must state their support,



through a letter of intent or other written mechanism included within the application, for specific project activities within the partnership application.

The lead applicant for a partnership application must demonstrate within their application the project's support for Exchange Network priorities and explain how the partnership components justify a need for the additional partnership funding. **EPA will not consider coalitions formed from within a single state, territorial, or tribal government (e.g., coalition of environment and health departments within a state) as eligible partnerships. EPA will limit funding for intrastate projects of this sort to the maximum funding for a single-jurisdiction grant, which in FY 2013 is \$300,000.**

### **III-D. Cost Sharing or Matching**

Exchange Network grants do not require cost sharing or matching of funds by applicants.

## **IV. Application and Submission Information**

Applicants for the FY 2013 Exchange Network Grant program must submit a application package to EPA by November 9, 2012. EPA will accept applications for National Environmental Information Exchange Network grants in one of two ways: 1) a hardcopy mailed or delivered application, including one original and two copies; or 2) an application submitted electronically through the grants.gov website. EPA will confirm receipt of each application with an e-mail to the contact(s) listed in the cover letter.

The specific requirements of the application package and each document included with the package are available in Appendix D, which outlines the format for the project narrative (no more than ten-single-spaced pages) and provides detailed application instructions. Appendix G provides a checklist of required documents to submit. Fillable versions of these forms are available at <http://www.epa.gov/ogd/AppKit/application.htm>.

EPA may require applicants approved for funding to submit additional or updated documents to complete the funding package. EPA will provide further instructions for submittal of additional or updated documents at that time.

### **IV-A. Submission Date and Time**

Signed and completed application packages as described in Appendix D must be sent electronically via grants.gov, postmarked, or delivered by an overnight courier service **no later than 11:59 PM Eastern Standard Time, November 9, 2012**. EPA will return application packages to the sender without further consideration if they are postmarked, sent electronically through grants.gov, or delivered by an overnight courier *after* the published closing date and time.

### **IV-B. Intergovernmental Review**

This funding opportunity is *not* subject to Executive Order (EO) 12372, "Intergovernmental Review of Federal Programs."



#### **IV-C. Partnership Agreements**

EPA awards funds to one eligible applicant as the recipient even if other eligible applicants are partners, co-applicants, or members of a coalition or consortium. The awardee is accountable to EPA for the proper expenditure of funds, programmatic and administrative reporting and attainment of program and environmental results.

Grantees may provide subgrants or subawards to fund partner work within the overall project, provided the recipient complies with applicable requirements for subawards or subgrants including those contained in 40 CFR Parts 30 or 31, as appropriate. Successful applicants cannot use subgrants or subawards to avoid requirements in EPA grant regulations for competitive procurement by using these instruments to acquire commercial services or products from for-profit organizations to carry out its assistance agreement. For more detailed information on partnership agreements, contracts, and subawards, please see Appendix F.

EPA panels will review applicants' qualifications, past performance, and reporting history, and will consider, as appropriate and relevant, the qualifications, expertise, and experience of formal partners. Applicants should detail their own project roles and responsibilities, experience and past performance and those of their formal partners. Section V, below, describes in detail the evaluation criteria and process EPA will use to make selections under this Notice.

#### **IV-D. Pre-application Assistance and Communications**

In accordance with EPA's Assistance Agreement Competition Policy (EPA Order 5700.5A1), EPA staff will not meet with individual applicants to discuss draft applications, provide informal comments on draft applications, or provide advice to applicants on how to respond to ranking criteria. Applicants are responsible for the contents of their applications. However, EPA will respond to questions in writing, including electronic mail, from individual applicants regarding threshold eligibility criteria, administrative issues related to the submission of the application, and requests for clarification about the announcement. In addition, if necessary, EPA may clarify threshold eligibility issues with applicants prior to making an eligibility determination. Questions should be addressed to Salena Reynolds ([reynolds.salena@epa.gov](mailto:reynolds.salena@epa.gov)). Applicants can find answers to frequently asked questions, helpful tips, and links to the required application forms at <http://www.epa.gov/exchangenetwork/grants/index.html>.

#### **IV-E. Confidential Business Information**

EPA recommends that you do not include confidential business information ("CBI") in your application. However, if CBI is included, it will be treated in accordance with 40 CFR 2.203. Applicants must clearly indicate which portion(s) of their application they are claiming as CBI. EPA will evaluate such claims in accordance with 40 CFR Part 2. If no claim of confidentiality is made, EPA is not required to make the inquiry to the applicant otherwise required by 40 CFR 2.204(c)(2) prior to disclosure. The Agency protects competitive applications from disclosure under applicable provisions of the Freedom of Information Act prior to the completion of the competitive selection process.

## V. Application Review Information

### V-A. Evaluation Criteria

EPA review panels will evaluate and score proposals from eligible applicants using the evaluation criteria in this section. The EPA Selection Official will make final funding decisions based on an applicant's score and other factors discussed in section V-B.

Applications will be ranked out of a total maximum possible score of 100 points. The possible point totals for each of the five major evaluation criteria are listed below in bold text. Sub-components (or possible point deductions) within each of the five criteria are listed in bold italic text below the relevant criterion.

#### 1. Project Outputs and Outcomes Leading to Environmental Results (20 points):

*Goals, Outputs, and Outcomes in Exchange Network Grant Proposals*

**Each proposal must include one or more goals, outputs for each goal, and at least one outcome for each goal.** Goals, outputs, and outcomes each have specific meanings in the context of Exchange Network proposals. The following is a review of the Exchange Network usage of these terms.

- **Goals** are the end products of a self-contained project such as the implementation of a data flow. A proposed goal might be to flow FRS data, for instance. A proposal must have at least one goal and may have more than one goal.
- Projects progress towards goals through a series of **outputs** from their beginning to their conclusion. Outputs are intermediate accomplishments necessary to achieve a particular goal. Examples include completion of a schema or testing a flow. Each output should have a scheduled completion date. Scheduled outputs should demonstrate “a plan that allows the applicant to track, and report to EPA, progress towards achieving proposed goals.”
- Each goal should have at least one **outcome** leading to an environmental result. Examples include supporting better decision-making by building data access for environmental professionals and the public or facilitating place-based decision-making through the inclusion of quality locational data. See section “I-D Environmental Results Supported by Assistance Activities” of this Solicitation Notice for more examples.

Definitions of “outcome” and “output” may be found in Appendix A.

**If an applicant uses the terms “goals,” “outputs,” and “outcomes” properly, the proposal will be easier for reviewers to understand and score. Using terms such as “objective,” “target,” “task,” or “milestone” will make it more difficult for reviewers to understand and properly score an Exchange Network grant proposal.**

Appendix E provides an example of how to demonstrate goals, outputs, and outcomes clearly. EPA encourages applicants to follow this example when applying.

For each goal, EPA will use the following criteria to evaluate the appropriateness and clarity of project outputs and outcomes leading to environmental results (such as improved environmental decision-making):

- Does each proposed goal have at least one outcome that leads to an environmental result? These might include outcomes such as improving the timeliness, completeness, and accuracy of environmental data; reducing the burden and costs associated with data management and reporting; or supporting better environmental decision making by enhancing data access for environmental professionals and the public, as well as providing high quality locational data to facilitate place-based approaches such as community-oriented initiatives. **(10 points)**
- Does the application include a plan that allows the applicant to track and report progress towards achieving the proposed goal to EPA? Each grant-funded goal, such as a completed data flow, should have several outputs scheduled over the project period. **(10 points)**

**2. Project Feasibility and Approach (20 points):** EPA will evaluate the feasibility of proposed projects using the following criteria:

- Does the application clearly describe individual project roles and responsibilities for the applicant and, for collaborative projects, each partner? **(10 points)**
- All projects involving programmatic data must describe programmatic involvement in the development and management of the project. This description must include the names, positions and roles of all who are involved in the project. For example, “Jane Doe, multimedia inspector, will advise the Project Manager and contractor on the Compliance Dashboard design and take part in end user testing.” Some projects may not need programmatic participants. An example would be a CROMERR system upgrade.
  - Does the proposal describe each programmatic participant’s name, position and role in the project? For non-programmatic projects, does the proposal describe why significant programmatic participation is unnecessary? **(5 points)**
- Applicants must commit, in their response to this Solicitation Notice, to reuse existing EN tools whenever possible. This involves searching Reusable Component Services (RCS) and Exchange Network Discovery Services (ENDS) for existing tools such as data flows, web services or EN services. The applicant must also commit to registering any new tool or resource they develop in RCS or any new node, data flow or EN service in ENDS. For innovative flows, applicants must demonstrate that the project will result in reusable tools and services for the Exchange Network. **(5 points)**

**3. Exchange Network Priorities (30 points):** EPA will evaluate the consistency of proposed work with EN priorities (Section I-E). More details on data exchange activities are in Appendix B or the EN website at <http://www.exchangenetwork.net/exchanges/>.

Under this criterion, projects that include at least one Tier 1 activity will receive the maximum 30 points. If an application is for a Tier 2 priority, and does not include any Tier 1 activities, it will only receive 20 points. Similarly, projects proposing only Tier 3 activities will receive 15 points.

NOTE on Business Need (possible 5 point deduction): EPA requires applicants to submit a short statement of the business need for this grant proposal as part of the proposed project narrative within their application package. Applicants should consider the following questions as they prepare their justifications:

- What problem does this proposal solve?
- How does the proposed project solve this problem and meet the applicant's business need?
- How is this different than other Exchange Network grants that EPA has previously awarded to the applicant?

Failure to submit a statement of business need will result in a mandatory 5 point deduction during application scoring.

**4. Budget, Resources, and Key Personnel (15 points):** EPA will evaluate: (1) the budget's appropriateness including the amount allocated to each goal and its adequacy to support and complete the proposed work; and (2) the qualifications of the project manager and other key personnel to perform the project.

- Does the application include a detailed budget for each goal in the project narrative? *(10 points)*
- Does the application document the qualifications of the project manager and other key personnel who would perform the proposed work? In the case of a tribal applicant who proposes to use a portion of this grant to hire key personnel for a capacity building proposal, has the applicant submitted a statement of knowledge, skills, abilities, and qualifications from the recruitment package for that position? *(5 points)*

**5. Past Performance (15 points):** EPA will evaluate applicants on their progress towards achieving goals proposed in prior Exchange Network grants. The evaluation will be based on Exchange Network Grant semi-annual progress reports (past recipients who have a poor semi-annual reporting record will receive a reduced score). If an applicant does not have prior Exchange Network grants then they will be evaluated based on their progress towards achieving the expected results under other prior federal agency assistance agreements (an assistance agreement is a grant or cooperative agreement and not a contract) performed within the last 3 years.

Please note that in evaluating applicants under this criterion, the Agency will consider the information provided by the applicant (including semi-annual report submissions) and may also consider relevant information from other sources (including agency files and prior or current grantors to verify or supplement the information supplied by the applicant). If an applicant does not have any relevant or available past performance or reporting information, the application should state this and will receive a neutral score for this criterion of 5 points. If the applicant does not provide any response for these items, the application will receive a score of zero for this criterion.

EPA's monitoring of Exchange Network grant performance indicates that the majority of grantees are making steady progress. The work under some grants, however, is falling behind

schedule or has stopped altogether. Although unliquidated obligations (ULO's – also known as unspent balances) are not a perfect indicator of grant progress, they can serve as a useful proxy to indicate if there are performance problems. Consequently, EPA established the following criteria for grants with excessively high ULO's or unspent balances:

**Figure 1-2: Criteria for Identifying Excessive ULO's**

Period of Performance Milestone	Criteria – Unspent Balance as Percent of Awarded Funds
End of year two	Greater than or equal to 95 percent
End of year three	Greater than or equal to 70 percent
End of year four	Greater than or equal to 40 percent
End of year five	Greater than or equal to 10 percent

The past performance evaluation criterion will include consideration of ULO's. Specifically, for any grant that meets the appropriate excessive ULO criterion in Figure 1-2, all applications submitted by the recipient of that grant will *automatically lose 10 points*, unless the applicant can explain that the excessively high ULO was not due to action or inaction on the part of the state, tribe, or territory. For example, an adequate explanation would be delays in the grant's project schedule resulting from delays on the part of EPA, such as occurred with development of the Integrated Compliance Information System (ICIS). EPA will post lists of grants that meet these criteria on its Exchange Network website (<http://www.epa.gov/exchangenetwork>) during the first week of October 2012, and will also request that the Environmental Council of the States (ECOS) notify Exchange Network partners via an EN Alert. (Potential grant applicants may sign up for EN Alerts by sending a request to Greg McNelly of ECOS at [gmcnelly@ecos.org](mailto:gmcnelly@ecos.org).) The final determination of whether previously awarded Exchange Network grants meet the excessive ULO threshold will be made from the following quarter's report, which EPA will make available during January 2013.

## V-B. Review and Selection Process

EPA review panels will base their evaluation and ranking of applications on the criteria listed in section V-A. The EPA reviewers will submit comments and rankings and make funding recommendations to the selection official, the Assistant Administrator of the Office of Environmental Information (OEI) or his or her designee, who will make the final funding decisions. The EPA selection official may decide to partially fund a project to focus limited resources only on those demonstrated goals and results of each project that support the stated Exchange Network priorities within this Solicitation Notice.

**Other Evaluation Factors:** In making the final funding decisions from among the most highly scored applications, the EPA selection official may consider one or more of the following factors:

- EPA programs' ability or readiness to support proposed project activities;
- geographic distribution of funding;
- selection of higher priority activities over other assistance activities;

- ensuring participation in the Exchange Network by federally recognized Indian tribes and inter-tribal consortia; and
- EPA's capacity to provide any requested in-kind services.

### **V-C. Anticipated Award Dates**

EPA anticipates that it will announce selection decisions in or around April 2013. EPA plans to issue the awards by July 2013.

## **VI. Award Administration Information**

### **VI-A. Award Notices**

EPA will notify all applicants, by telephone, or by electronic or postal mail, of their status in or around April 2013. The notification will be sent to the original signer of the application or the project contact listed in the application. The notification of a full or partial funding recommendation, which advises the applicant that EPA has preliminarily selected and recommended their proposed project for award, is not an authorization to begin work. The award notice, signed by an EPA grants officer, is the authorizing document and will be provided through electronic or postal mail. The time between notification of selection and award of a grant can take up to 90 days or longer.

### **VI-B. Administration and National Policy Requirements**

Each assistance agreement will include a set of Administrative Terms and Programmatic Conditions, such as requirements for electronic funding transfers, additional financial status reporting, limitations on payments to consultants, and application of indirect cost rates. These terms and conditions form the basis for the final award of Exchange Network grant funding. Failure to concur with the included terms and conditions will invalidate the award.

In accordance with the Exchange Network Interoperability Policy, applicants must commit, in writing, to the reuse of existing data flows and EN services registered in Exchange Network Discovery Services (ENDS), and other IT resources such as widgets and REST web services registered in Reusable Component Services (RCS). For information on reuse, please see Appendix J. Applicants must also commit to registering any newly developed resources in ENDS or RCS as appropriate. Information about ENDS can be found at [www.exchangenetwork.net/2011/07/15/exchange-network-discovery-service-ends/](http://www.exchangenetwork.net/2011/07/15/exchange-network-discovery-service-ends/); information about RCS can be found at [www.epa.gov/rcs](http://www.epa.gov/rcs). EPA will require all recipients of grants issued under this solicitation notice to meet these conditions.

EPA will include a grant condition in the assistance agreement requiring the recipient to submit a tailored Quality Assurance Project Plan (QAPP) to the EPA Regional Project Officer within 90 days of the award issuance date. This tailored QAPP must describe for each goal and task: the relevant task-specific Quality Assurance (QA) criteria, how the recipient will ensure adherence with the QA criteria, and how the recipient will confirm and document that the project deliverables meet the QA criteria. Completion of the Exchange Network Quality Assurance Reporting Form (QARF) satisfies the requirements for a tailored QAPP. The QA criteria information specified above must be documented for each goal and task under the Quality

Assurance Measures section of the Exchange Network QARF. The template for the Exchange Network QARF can be found at <http://www.epa.gov/exchangenetwork/grants/index.html> and in Appendix I of this notice.

### **VI-C. Reporting**

**Semi-Annual Performance Progress Reports:** Reporting is an important obligation that award recipients agree to undertake when they sign an assistance agreement. Both EPA and recipients are accountable to Congress and to the public for the proper and effective use of Exchange Network assistance funds. Award recipients will submit semi-annual and final technical reports electronically through EPA's Central Data Exchange (CDX) using a web form. EPA will provide successful applicants with detailed instructions for registering with and reporting through CDX at the time of award.

### **VI-D. Dispute Resolution Provision**

Assistance agreement competition-related disputes will be resolved in accordance with the dispute resolution procedures published in 70 FR (Federal Register) 3629, 3630 (January 26, 2005) which can be found at <http://www.epa.gov/ogd/competition/resolution.htm>. Copies of these procedures may also be requested by contacting Salena Reynolds at 202-566-0466 or [reynolds.salena@epa.gov](mailto:reynolds.salena@epa.gov).

### **VI-E. Subaward and Executive Compensation Reporting**

Applicants must ensure that they have the necessary processes and systems in place to comply with the subaward and executive total compensation reporting requirements established under OMB guidance at 2 CFR Part 170, unless they qualify for an exception from the requirements, should they be selected for funding.

### **VI-F. Central Contractor Registration (CCR) / System for Award Management (SAM) and Data Universal Numbering System (DUNS) Requirements**

Unless exempt from these requirements under OMB guidance at [2 CFR Part 25](#) (e.g., individuals), applicants must:

1. Be registered in the CCR prior to submitting an application or proposal under this announcement. CCR/SAM information can be found at: <https://www.sam.gov/portal/public/SAM/>;
2. Maintain an active CCR registration with current information at all times during which it has an active Federal award or an application or proposal under consideration by an agency; and
3. Provide its DUNS number in each application or proposal it submits to the agency. Applicants can receive a DUNS number, at no cost, by calling the dedicated toll-free DUNS Number request line at 1-866-705-5711, or visiting the D&B website at: <http://www.dnb.com>.



If an applicant fails to comply with these requirements, it will, should it be selected for award, affect their ability to receive the award.

Please note that the CCR has been replaced by the System for Award Management (SAM). To learn more about SAM, go to [SAM.gov](https://www.sam.gov) or <https://www.sam.gov/portal/public/SAM/>.

### **VI-G. Unliquidated Obligations**

An applicant that receives an award under this announcement is expected to manage assistance agreement funds efficiently and effectively and make sufficient progress towards completing the project activities described in the work-plan in a timely manner. The assistance agreement will include terms/conditions implementing this requirement. **EPA uses the following criteria to help determine if an applicant is expending grant funds at an acceptable rate:**

**Figure 1-2: Criteria for Identifying Excessive ULO's**

<b>Period of Performance Milestone</b>	<b>Criteria – Unspent Balance as Percent of Awarded Funds</b>
End of year two	Greater than or equal to 95 percent
End of year three	Greater than or equal to 70 percent
End of year four	Greater than or equal to 40 percent
End of year five	Greater than or equal to 10 percent

Grantees who meet the above criteria for excessive ULO's for Exchange Network assistance agreements may be subject to scoring penalties in future grant applications.

### **VI-H. Website References in Solicitations**

Any non-federal websites or website links included in this solicitation are provided for application preparation and/or informational purposes only. U.S. EPA does not endorse any of these entities or their services. In addition, EPA does not guarantee that any linked, external websites referenced in this solicitation comply with Section 508 (Accessibility Requirements) of the Rehabilitation Act.

### **VI-I. Unfair Competitive Advantage**

EPA personnel will take appropriate actions in situations where it is determined that an applicant may have an unfair competitive advantage, or the appearance of such, in competing for awards under this announcement. Affected applicants will be provided an opportunity to respond before any final action is taken.



## VII. Agency Contacts

The primary EPA Headquarters point of contact is:

Salena Reynolds  
Exchange Network Grant Program Manager  
Office of Information Collection  
Office of Environmental Information  
Phone: (202) 566-0466  
Facsimile: (202) 566-1684  
Email: [reynolds.salena@epa.gov](mailto:reynolds.salena@epa.gov)

**Mailing Address:**

Salena Reynolds  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, NW (2823-T)  
Washington, DC 20460

**Physical Address** *(for overnight, or courier deliveries):*

Salena Reynolds  
U.S. Environmental Protection Agency  
1301 Constitution Avenue, NW (Rm 6143N)  
Washington, DC 20004

# Appendix A

## Definitions

### **Central Data Exchange (CDX)**

EPA's CDX is the point of entry to the National Environmental Information Exchange Network (Exchange Network) for environmental data exchanges to the Agency. CDX provides the capability for submitters to access their data through the use of web services. CDX enables EPA and participating Program Offices to work with stakeholders - including state, tribal and local governments and regulated industries - to enable streamlined, electronic submission of data via the Internet.

### **Community of Interest**

A community of interest is a group of Exchange Network stakeholders who share an interest in the exchange of a specific set of environmental data.

### **Construction**

Construction is the erection, building, alteration, remodeling, improvement, or extension of buildings, structures or other property. Construction also includes remedial actions in response to a release, or a threat of a release, of a hazardous substance into the environment as determined by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980.

### **Cross-Media Electronic Reporting Regulation (CROMERR)**

Regulation which sets requirements – including performance-based, technology-neutral standards for electronic reporting systems – for states, tribes, and local governments implementing electronic reporting under their approved EPA-authorized programs. CROMERR requires that states, tribes, and local governments amend or revise their EPA-authorized program(s) to receive reports from regulated facilities under those programs. Both new and existing electronic reporting programs require EPA approval, and the regulation establishes a process for applying for and obtaining such approval. CROMERR also addresses electronic reporting directly to EPA.

### **Data Access Services (Publishing)**

Network publishing is a term that refers to using web services to make data available to Network users by querying nodes and returning environmental data in the form of XML documents. These services are also called data services. Once these data services are deployed, they 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. In other words, data access services are a specific subset of the many possible types of web services. Other web service types include data submission, security, quality assurance, notification, and status.

## **Data Element**

A data element is the smallest unit of information stored in and exchanged among Exchange Network partners' information systems. Examples of data elements are the facility name, DUNS number, and inspection date.

## **Data Exchange Template (DET)**

A data exchange template is a standardized format that identifies the types of information required/allowed in a particular document or data exchange. Data exchange templates contain no data, but they define the format for exchange according to data standards and trading partner agreements. A standard template for DET's is available on the Exchange Network website ([http://www.exchangenetwork.net/dev\\_schema](http://www.exchangenetwork.net/dev_schema)).

## **Data Standard**

A data standard documents an agreement on representation, format, and definition of common data exchanged. Exchange Network partners must use data standards that have been approved by the Exchange Network Leadership Council (ENLC). The ENLC has subsumed the activities of the Environmental Data Standards Council (EDSC). See information at <http://www.exchangenetwork.net/standards>.

## **Demonstrated Node Configurations (DNCs)**

Demonstrated Node Configurations are the messaging layer for web services that interacts with the Exchange Network. It is based on the Network WSDL which defines the web services.

## **Enhancement**

An enhancement is defined as expanding geographic coverage, or adding new data elements, additional parameters, or historical data to an existing national or priority data exchange or schema.

## **Exchange Network Discovery Services (ENDS)**

The Exchange Network Discovery Services (ENDS) is a set of directory services for all nodes in Exchange Network. This central catalog approach supports the automated consumption of services using tools such as the EN Browser and the EN Services Center via an XML document that contains the service metadata. ENDS automates both the discovery and retrieval of service metadata for the Network and supports the Administration and export of node services via the Web and Web Service interfaces. ENDS is composed of two main components: the first, is a set of services that allows EN partners to submit and query the service descriptions stored in the ENDS repository; the second, is a web interface that simplifies the data entry of service metadata into ENDS. The services all accept or return a common XML schema. This XML schema provides a structured, standard way to represent EN services across all EN Nodes. A second ENDS schema defines the Data Element Description Language (DEDL) that can be used by individual Exchange Network nodes for describing acceptable parameters and valid allowable values, and making them available as services. DEDL further enhances the ability for EN partners to build rich, user friendly applications using EN services.

## **Exchange Network Services Center (ENSC)**

The ENSC is a browser based portal that provides Exchange Network partners access to a broad range of Network services. Among the most notable features of the Service Center are the ability to submit data to EPA systems, monitor the status of data submissions, and access a variety of Network administrative data. Essentially, the ENSC offers most of the functionality of a Node, but it is not automated and cannot respond to data requests. It simplifies access to Network services because it requires no software to install or configure. It can be accessed from any computer with a browser and internet access.

## **Environmental Information Exchange Network (Exchange Network)**

The Exchange Network is an Internet and standards-based information network among EPA and its partners in states, tribes, and territories. It is designed to help integrate information, provide secure real-time access to environmental information, and support the electronic collection and exchange of high-quality data and information. The Exchange Network provides a more efficient way of exchanging environmental information at all levels of government. It significantly improves the way EPA and its state, tribal, and territorial partners send and receive information.

## **Extensible Markup Language (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. XML is a formatting language recommended by the World Wide Web Consortium (W3C). For guidance on the development of XML schema for the Exchange Network or related activities of the Network Technical Group, see the Exchange Network website at <http://www.exchangenetwork.net>.

## **Flow Configuration Documents (FCDs)**

FCDs are the principle document that captures the detailed data exchange processing design and roles governing the data exchange using narrative text, diagrams and examples. A standard template for FCDs is available on the Exchange Network website [http://www.exchangenetwork.net/dev\\_schema](http://www.exchangenetwork.net/dev_schema).

## **Geographic Information Systems**

Geographic Information Systems (GIS) include software and hardware systems that relate and display collected data in terms of geographic or spatial location. GIS allow users to collect, manage, and analyze large volumes of geospatial data and metadata. EPA and its partners use GIS systems to conduct complex environmental analyses.

## **Geospatial Data**

Geospatial data are data that identify, depict, or describe the geographic locations, boundaries, or characteristics of the Earth's inhabitants or its natural or human-constructed features. Geospatial data include geographic coordinates (e.g., latitude and longitude) that identify a specific location on the Earth and data that are linked to geographic locations or have a geospatial component (e.g., socio-economic data, land use records and analyses, land surveys, homeland security information, and environmental analyses). Geospatial data may be obtained using a variety of

approaches and technologies, including things such as surveys, satellite remote sensing, Global Position System (GPS) hand-held devices, and airborne imagery and detection devices.

### **Geospatial Technologies**

Geospatial technologies include the computer hardware and software that are commonly used to collect, import, store, manipulate, analyze, and display digital geospatial data. These technologies include GIS, global positioning systems (GPS), remote sensing and visualization systems.

### **In-Kind Services**

Services provided by EPA contractors and consultants on specific parts of the project for the recipient. The recipient can request this type of service as part of the grant application, if the in-kind work is directly related to the recipient's application and the applicant is the primary beneficiary of the work. However, EPA reserves the right to decide whether or not in-kind services will be provided. The recipient may not direct the work provided through in-kind services. These services are managed by EPA.

### **Integrated Project Team**

A group of individuals comprised of partner and EPA staff, support contractors, and technology vendors organized to design and implement a specific exchange.

### **Metadata**

Metadata are data or information that describes other data. Examples include data that describe how or where the data were collected, whether or not the data comply with agreed-upon data standards, or how the data will be used.

### **National and Priority System Flows**

Ten National and Priority System Flows identified in this Solicitation Notice. The flows are: Air Quality System (AQS); Emissions Inventory System (EIS); Integrated Compliance Information System – National Pollution Discharge Elimination System (ICIS-NPDES), including Net Discharge Monitoring Reports (NetDMR); Resource Conservation and Recovery Act Information System (RCRAinfo); eBeaches; Safe Drinking Water Information System (SDWIS); Underground Injection Control Database (UIC); Water Quality Exchange (WQX); Facility Registry System (FRS); and Toxic Release Inventory System (TRIS).

### **Network Authorization and Authentication Services**

Network Authorization and Authentication Services (NAAS) are a set of centralized information security services that Exchange Network partners can use to authenticate and authorize their users. NAAS provides an efficient way for Exchange Network participants to exchange data, without having to build and maintain their own security system. NAAS supports many levels of security, from PIN/passwords to public Key Infrastructure. All NAAS operations are conducted over a Secure Socket Layer (SSL) channel using 128-bit encryption.

## **Node**

A Node is a web service enabled server (hardware and software) that provides a point for exchanging information over the Internet. Exchange Network Nodes can gain access to and transmit information using web services. In order to achieve interoperability among Nodes, all Nodes must be set up according to the Exchange Network specifications. Specifications, protocols, tools, code, and documentation for building a functioning Exchange Network Node are available at <http://www.exchangenetwork.net/node/node2.0.htm>.

## **Node 2.0**

Node 2.0 refers to the newest version of the Network Exchange Protocol (v 2.0) and the Network Node Functional Specification (v 2.0).

## **Node Client**

A Node client is an application (software code) that can generate web service messages for using the Exchange Network. A Node client can do the following:

- Submit data in XML format to EPA or other partners using the Exchange Network and
- Request data in XML format from EPA or other partners using the Exchange Network.

Several Node clients that are very user friendly are available on the Exchange Network website already. More are on the way. A Node client software developer kit (SDK) is also available to help you integrate Node client requests into your applications. Unlike Nodes, Node clients *cannot* publish data on the Exchange Network (i.e., they cannot listen for or respond to data queries from other Exchange Network partners)

## **Outcome**

The term “outcome” means the result, effect, or consequence of carrying out a project leading to an environmental or programmatic goal. Outcomes may be environmental, behavioral, health-related or programmatic in nature, may be quantitative or qualitative, and may not necessarily be achievable within an assistance agreement funding period.

## **Output**

The term “output” means an environmental activity, effort, or associated work products leading to an environmental goal, that will be produced or provided over a period of time or by a specified date. Outputs may be quantitative or qualitative but must be measurable during an assistance agreement funding period.

## **Phase 2 (of the Exchange Network)**

Phase 2 of the Exchange Network is the term that the Network community uses to refer to the second phase of Network development. Phase 1 focused on development of the Network infrastructure and implementation of data reporting to EPA using the Network. In Phase 2, the Network community will expand Network publishing (data owners making their information available to other partners on the Network using automated services), develop applications (both mobile and desktop) and websites (including public sites) that analyze and/or display data accessed using Exchange Network services, expand the use of the Network for data reporting to additional EPA data systems, expand intra-partner data sharing including programs where EPA

does not have a central data store (e.g. institutional controls for cleanup sites) and develop new technologies that make using the Network easier and less costly.

### **Representational State Transfer (REST) / RESTful Web Service**

Software system designed to support machine-to-machine interaction over a network. Representational State Transfer (REST) services do not require XML, SOAP, or WSDL (Web Services Description Language) but rely on the exchange of requests and responses between the resources and on their corresponding states. REST-style services facilitate the aggregation of services into more complex services and the development of mashups. REST services are usually accessed via HTTP (like a web URL or link).

### **Reusable Component Services (RCS)**

Reusable Component Services (RCS) is a catalog of information technology resources (e.g., XML schema, widgets, REST web services) from US EPA, States, Tribes, and other partners that provides a central point of access to a broad range of components and services. RCS promotes effective information management by centrally registering these resources, and it enables reuse of those resources for the purposes of reducing cost, speeding development, and producing higher-quality systems.

### **Schema**

An XML schema defines the structure of an XML document including data elements and attributes can appear in a document; how the data elements relate to one another; whether an element is empty or can include text; which types of data are allowed for specific data elements and attributes; and what the default and fixed values are for elements and attributes. A set of Network quality assurance web services is available to validate your XML documents against the schemas using a standard parser. A list of procedural and guidance documents related to schema development is available in the Flow Documentation Checklist document on the Exchange Network website ([http://www.exchangenetwork.net/dev\\_schema](http://www.exchangenetwork.net/dev_schema)).

### **Schematron**

Schematron is an open source application that is used for validating XML documents against business rules and returning error reports. It uses XML stylesheet (XSLT) technology. The Network Quality Assurance Services use Schematron to validate XML documents against the business rules, as well as supporting a standard parser for schema validation.

### **Simple Object Access Protocol (SOAP)**

SOAP is a protocol specification for exchanging structured information for the implementation of web services on a computer network. It allows machines to interoperate in a loosely coupled manner using simple standard messages over the Hypertext Transfer Protocol (HTTP or others) and uses Extensible Markup Language (XML) as the mechanisms for information exchange.

### **Trading Partner Agreement (TPA)**

A Trading Partner Agreement (TPA) defines in writing, for specific data exchanges, the participating partners' individual and joint responsibilities in stewardship, security, and other items essential for the effective exchange of information between two or more trading partners on the Exchange Network. A TPA must be developed within six months after the exchange has

begun unless a waiver is obtained. The Network Policy Framework including the TPA Procedure can be found at: <http://www.exchangenetwork.net/policy/>. There are a few examples posted on the [exchangenetwork.net](http://www.exchangenetwork.net) site. In the near future there will be a section on the site devoted to TPAs.

### **Virtual Node**

A Virtual Node is a central node server that can host any number of partner nodes: state, tribe, region, agency, etc. Each partner node is simply configured using wizards and forms on the central virtual node cloud server. This eliminates the need for maintaining a local node completely. Each partner node functions like a conventional node, only it is much simpler and less expensive to set up and maintain.

### **Web Form**

A standard interface that can be downloaded from the Internet, a web form contains blank fields for a user to enter data and submit the form (e.g., environmental reports) to the receiver.

### **Web Services**

Web services are a software system designed to support interoperable machine-to-machine interaction over a network. They make it easier to conduct work across organizations regardless of the types of operating systems, hardware/software, programming languages, and databases that are being used.

### **Widget**

A software tool that uses a small (smaller than a page) graphical interface to provide a function or service and that can be added to a web application or to a web page.



# Appendix B

## Suggested Exchange Network Data Exchange Activities

This Appendix outlines the data exchange activities that applicants should consider when applying for the FY 2013 National Environmental Information Exchange Network Grant Program. Appendix B contains two subsections: *I.) Definition of Standard Milestones for EPA Information System or Data Exchanges*; and *II.) Data Exchanges* (descriptions of individual data exchanges and related EN activities). This Appendix highlights the EPA Program Office activities related to flows and provides suggested activities for applicants to consider when developing their application.

The Exchange Network Grant Program supports a variety of activities, including the development of common data standards, formats, and trading partner agreements for sharing data over the Exchange Network and implementation of collaborative, innovative uses of the Exchange Network. It also supports the standardization, exchange, and integration of geospatial information to address environmental, natural resource, and related human-health issues.

As part of the standardization mentioned above, grantees must utilize data standards that have been previously approved by the Exchange Network Leadership Council (ENLC) as they develop Exchange Network products and services. In most cases, the data standards needed in implementation will have previously been incorporated in the major EPA systems and Exchange Network data flows. These data standards can simply be re-used. For detailed information on each ENLC approved standard please refer to the Exchange Network website at <http://www.exchangenetwork.net/standards/index.htm>. There is also a separate document (located at the website cited above) to assist you with understanding how these standards have been implemented within the specific EPA systems. Please note that in some cases applicants may need to identify areas for new data standardization. If so, applications should identify the data standards needed and project the funding required to development them.

The success of the Exchange Network will ultimately depend on how EPA and its partners use the data and information that are exchanged to enhance decision-making and programmatic operations. EPA encourages all partners to use the Exchange Network to meet their business needs. This could include exchanging data that supports national environmental systems, as well as data that support particular state, territorial, and tribal needs. Innovative projects must demonstrate that they will leverage Exchange Network technology and result in the development of reusable services for the Exchange Network. These reusable services and components must be registered into the Exchange Network Discovery Service (ENDS) and into the Reusable Component Services (RCS), as appropriate.

## **I. Definition of Standard Milestones for EPA Information Systems or Data Exchanges**

This section will assist EPA Programs and Exchange Network partners in better understanding the EPA Program Office activities and establish consistency across all data flows by further defining each milestone. These activities may be already completed, in process or planned at the time of release of this guidance.

**Testing of XML schema - (Version X)** - Schema has completed EPA testing and is ready for limited release to Exchange Network Partners that will support the testing process with EPA to identify any potential issues from real data exchanges. This includes the use of real data sets in XML instance documents. At this stage, Partners will have the constructs for mapping data to their own systems and sufficient time would be needed by these partners to complete that process once the schema(s) is released.

**Release of final XML schema – (Version X)** - Schema has undergone conformance review and is ready for posting to the Exchange Network website for access by all Exchange Network Partners ([www.exchangenetwork.net](http://www.exchangenetwork.net)).

**National database available for testing** - National database is ready for testing to exchange data in a format that complies with agreed upon standards and rules. For example, the database can support testing the receipt and processing of XML instance documents or a converted format as part of the exchange process.

**Availability of EPA node services for testing** - EPA Node services include all central services the program offices need or choose that enable a more efficient data exchange among exchange partners. Examples include XML validation (Schema and Schematron), Network Authentication and Authorization Service (NAAS), XML Gateway services, and the Universal Description and Discovery Integration tool.

**Readiness for complete end-to-end testing by Exchange Network partners** - At this stage, the XML schema(s) at a minimum are ready for testing by Network Partners and the National Database and EPA Node services are available for testing. In addition, all EPA accounts have been established for testing (e.g. privileges to NAAS and authorization to the database)

**Flow Configuration Document completed or updated** - Flow Configuration Documents identify and standardize the minimum information needed by trading partners to execute a data exchange. They describe the technical configuration and business processes used to exchange data between trading partners.

**System ready to receive or publish** - This status indicates that a sufficient amount of end-to-end testing has occurred and all problems have been addressed, the XML schema(s) has been released, supporting documentation has been finalized, all production readiness reviews have been completed, the Program Office has received approval (if applicable) from the National Computing Center for deploying new code to production, and the appropriate parties (e.g. helpdesks) have been notified of release and have the necessary tools to support Exchange Network Partners' inquiries.

**Trading Partner Agreement (TPA) developed** - A Trading Partner Agreement (TPA) defines in writing, for specific data exchanges, the participating partners' individual and joint responsibilities in stewardship, security, and other items essential for the effective exchange of information between two or more trading partners on the Exchange Network. A TPA must be developed within six months after the exchange has begun unless a waiver is obtained. The Network Policy Framework including the TPA Procedure can be found at: <http://www.exchangenetwork.net/policy/index.htm>.

## II. Data Exchanges

This section of Appendix B describes the individual data exchanges (and related Network activities) for which EPA is soliciting FY 2013 Exchange Network grant applications. It is organized by media and includes both Phase 1 and Phase 2 data exchanges and related activities. As the Exchange Network community begins to transition to Phase 2, EPA is adjusting its priorities for this grant solicitation to support those Phase 2 activities and data flows. This includes placing a higher (Tier 1) priority on 24/7 data publishing, virtual sharing, virtual node implementation support, shared CROMERR services and components, and implementation of new and innovative data flows.

Each individual data exchange is described below and includes additional activities applicants should consider for their proposals. Those activities must align with EPA's programmatic priorities in Section I-E and will be scored according to the tiering in that section.

The data exchange descriptions highlight programmatic milestones and potential activities for each exchange during the FY 2013-2016 timeframe. Applicants can propose to implement one or more of these data exchanges, which are organized by media:

### Air

- Air Quality System (AQS)..... B-5
- Emission Inventory System (EIS) ..... B-6

### Office of Enforcement and Compliance Assurance (OECA)

- Integrated Compliance Information System – National Pollutant Discharge Elimination System (ICIS-NPDES)..... B-7
- ICIS-NPDES Data Publishing..... B-9
- Network Discharge Monitoring Reports (NetDMR)..... B-11
- Electronic Notice of Intent (eNOI)..... B-13
- Air Facility System (AFS)..... B-16

### Waste

- Resource Conservation and Recovery Act Information System (RCRAInfo)..... B-18

### Water

- eBeaches ..... B-19
- Safe Drinking Water Information System (SDWIS)..... B-20
- Underground Injection Control (UIC) Database..... B-22
- Water Quality Exchange (WQX) ..... B-24

- Assessment TMDL Tracking & Implementation System (ATTAINS) ..... B-26

**Other Data Exchanges**

- Facility Registry System (FRS) ..... B-27
- Toxics Release Inventory System (TRIS) ..... B-28
- Enabling Geospatial Data Exchange ..... B-29
- Non-Point Source Best Management Practice Data Exchange (NPS-BMP)..... B-30

## Air Quality System (AQS)

**Description:**

AQS is the official EPA repository of ambient air quality monitoring data, and related location and measurement metadata, collected by state, tribal, and local governments. It is used for regulatory purposes for determining compliance with the Clean Air Act, and for scientific and health effects research. Presently the state, local, and tribal agencies are submitting data to AQS using version 2.2a of the AQS flow. This flow was updated in 2011 and the first half of 2012 to support automated processing of submitted data, but no changes were made to the AQS XML schema.

40 CFR Part 58 Appendix A defines a number of monitoring QA/QC assessments that do not map cleanly into the data elements of the AQS version 2.2a XML schema. Additionally, EPA is updating the monitor metadata utilized by AQS to more closely reflect 40 CFR Part 58 requirements. The AQS XML schema will be updated to version 3.0 to support these additional data elements.(Note: It is anticipated that none of the existing AQS XML schema version 2.2 data elements will change.)

<b>Exchange Network Program Office Activities</b>	
<b>Milestone</b>	<b>Target Completion Date</b>
EPA finalization of information content additions for XML schema	08/31/2012
Draft AQS XML Schema v.3.0	09/28/2012
Final AQS XML Schema v.3.0	10/31/2012
Update to AQS Flow Configuration Document v.3.0	10/31/2012
Availability of AQS staging environment for testing v.3.0	03/04/2013
Availability of AQS production system for v.3.0 submissions	04/01/2013

**Additional Activities to be considered by Grant Applicants**

1. Review of draft 3.0 XML schema and participate in related IPT sessions. *(Tier 3)*
2. Update of state/local/tribal (SLT) data systems to support the new data elements required. *(Tier 3)*
3. Update SLT data systems to generate AQS XML v.3.0 documents. *(Tier 3)*
4. Upgrade of reporting agency’s IT infrastructure to allow end-to-end use of XML format for ambient air quality monitoring data. *(Tier 2)*
5. Development of re-useable tools for data quality screening of ambient air quality measurement data (i.e. identification of statistical outliers and anomalies.) *(Tier 3)*

*Note: All activities are eligible for funding provided that the project proposal includes a commitment to deploy the data flow into production.*

## **Emission Inventory System (EIS)**

### **Description:**

The Emissions Inventory System (EIS) is the new information system for storing all current and historical emissions inventory data. It will be used to receive and store emissions data and generate annual and triennial National Emission Inventory beginning with the 2008 NEI.

The National Emissions Inventory (NEI) is EPA's compilation of estimates of air pollutants discharged on an annual basis and their sources. EPA uses the NEI to track emissions trends over time, develop regional pollutant reduction strategies, set and analyze regulations, perform air toxics risk assessments including inhalation risks and multi-pathway exposure, model air pollutant dispersion and deposition, and measure environmental performance as required by the Government Performance and Results Act.

### **Additional Activities to be considered by Grant Applicants:**

EIS reporting will make use of a new schema that is expected to shorten the length of time required to meet reporting deadlines, and reduce burden on state, local and tribal agencies through the use of the Consolidated Emission Reporting schema (CERS). The CERS facilitates the reporting of data from state/local/tribal agencies-to-EPA for the NEI. The schema may also be used for direct facility to state reporting as additional data elements, identified in the Air Force project, have been included for this purpose.

Grant applications could include facility to state reporting and, the modernization of current systems to meet the shortened reporting requirements of the Air Emissions Reporting Rule (AERR) and the incorporation of the CERS.

*Note: These activities are eligible for funding as **Tier 3** priorities, provided that the project proposal includes a commitment to report the data to EPA using the Exchange Network.*

**ICIS-NPDES**  
**Integrated Compliance Information System –**  
**National Pollutant Discharge Elimination System**

**Description:**

ICIS-NPDES, the modernized version of the Permit Compliance System (PCS), supports traditional NPDES wastewater discharge program functions (e.g., permitting, compliance monitoring, and enforcement), as well as new functions for special regulatory programs, such as concentrated animal feeding operations (CAFO) and wet weather concerns. ICIS-NPDES currently accepts XML-formatted discharge monitoring reports (DMR's), permit related data, and inspection related data via the Exchange Network, and will soon be able to electronically receive enforcement and violations data. The ICIS-NPDES exchange will be completed with the final release of the Full "batch" implementation of the system, planned for the first quarter of FY 2013, and PCS is scheduled to be retired soon thereafter. The Full "batch" implementation enables states and facilities to electronically transfer some or all of their NPDES data into ICIS-NPDES using CDX.

The ICIS-NPDES batch implementation is being accomplished in three parts:

- **Part 1:** Batch DMR for Hybrid States. As of May 2008, *Hybrid States* were able to electronically transfer (batch) their DMR data from their state system to ICIS-NPDES and directly enter all of their non-DMR NPDES data into ICIS-NPDES via the ICIS web screens. Hybrid states typically use ICIS-NPDES to directly manage their NPDES program.
- **Part 2:** NetDMR. As of June 2009, ICIS-NPDES became capable of receiving DMR's (via CDX) from facilities that had electronically signed and submitted them using NetDMR. The NetDMR tool was developed pursuant to an Exchange Network grant managed by Texas with the participation of 11 other states, OEI and OECA. The DMR XML schema components developed in Part 1: Batch DMR for Hybrid States formed the basis for the NetDMR flow.
- **Part 3:** Full Batch States. Full Batch states have their own systems to manage the NPDES program and will electronically transfer (batch) some or all of their NPDES data from their state systems via CDX to ICIS-NPDES. This includes the previously-developed DMR data flow as well as all other NPDES data families. There are currently 15 remaining full batch states to be migrated from PCS to ICIS-NPDES. The full batch work is being accomplished in three releases, organized by data family (permit and facility data; inspection data; and all remaining data families, including enforcement actions and violations).

<b>Exchange Network Program Office Activities</b>	
<b>Milestone</b>	<b>Target Completion Date</b>
<b>Part 1:</b> System readiness to receive production data for Batch DMR for Hybrid states.	Completed
<b>Part 2:</b> NetDMR National instance operational for facilities where EPA or selected States are permitting authority. System readiness to receive production facility data for the NetDMR Flow from permitted facilities.	Completed
<b>Part 3:</b> Full Batch States activities	
System readiness to receive production data for Full Batch Release 1 permit-related data families.	Completed
Release XML Schema (Draft) for Release 2 of ICIS-NPDES Full Batch (Inspection Data Families)	Completed
Test ICIS-NPDES Inspection Data Families XML schema for Release 2 of Full Batch	Completed
Readiness for complete end-to-end testing by Pilot States/ Tribes for Release 2 of ICIS-NPDES Full Batch (Inspection Data Families)	Completed
Final Conformance Review of ICIS-NPDES Full Batch Release 2 (Inspection Data Families) XML schemas	Completed
System readiness to receive production data for Release 2 of ICIS-NPDES Full Batch (Inspection Data Families) for Pilot States	Completed
Release XML Schema (Draft) for Release 3 of ICIS-NPDES Full Batch (Remaining Data Families)	Completed
Test ICIS-NPDES Remaining Data Families XML schema for Release 3 of Full Batch	June 2012
Readiness for complete end-to-end testing by Pilot States/ Tribes for Release 3 of ICIS-NPDES Full Batch (Remaining Data Families)	June 2012
System readiness to receive production data for Release 3 of ICIS-NPDES Full Batch (Remaining Data Families) for Pilot States	December 2012

**Activities to be Considered by Grant Applicants:**

ICIS-NPDES grant applicants should consider the following activities among their opportunities for obtaining grant funding:

- Participate in node testing processes for new submissions to EPA.
- Develop capability to generate draft XML schema for ICIS-NPDES data flows.
- Develop capability to generate final XML schema for ICIS-NPDES data flows.
- Extract and convert the data from State NPDES systems into the XML format needed to submit data to ICIS-NPDES via batch.
- Modify state systems to accommodate the data requirements for ICIS-NPDES.
- Install and configure ICIS-NPDES plug-ins available on the Exchange Network.

*Note: These activities are eligible for funding as **Tier 2** priorities provided that the project proposal commits to deploying this data flow in production.*



## ICIS-NPDES Data Publishing

### **Description:**

ICIS-NPDES, the modernized version of the Permit Compliance System (PCS), supports traditional NPDES wastewater discharge program functions (e.g., permitting, compliance monitoring, and enforcement), as well as new functions for special regulatory programs, such as concentrated animal feeding operations (CAFO) and wet weather concerns. ICIS-NPDES currently accepts XML-formatted discharge monitoring reports (DMRs), permit-related data and inspections-related data via the Exchange Network, and will soon be able to electronically receive enforcement, violation, and program reports data. The ICIS-NPDES exchange will be completed with the final release of the Full “batch” implementation of the system, planned for the first quarter of FY 2013, and PCS is scheduled to be retired soon thereafter. The Full “batch” implementation enables states and facilities to electronically transfer some or all of their NPDES data into ICIS-NPDES via CDX.

States hosting their own NPDES systems may have requirements to have their NPDES data in ICIS published back to them so they can consume it for various purposes, including performing quality assurance. In addition, states hosting their own electronic DMR (eDMR) systems may want to have published back to them the ICIS limit data (to derive anticipated DMRs) or reference table data that has been recently changed. They could then consume this data for accurate mapping in subsequent data submissions to ICIS-NPDES.

The ICIS-NPDES data publishing flow will enable states to extract new and changed ICIS reference table data as well as new and changed NPDES data contained in EPA’s ICIS-NPDES system. OECA’s planned milestones in enabling data access and publishing are shown below.

<b>Exchange Network Program Office Activities</b>	
<b>Milestone</b>	<b>Target Completion Date</b>
Data Access Integrated Project Team (IPT) initiated.	Completed
Production release of web services to extract recently changed data from seven ICIS-NPDES reference tables.	Completed
Draft release of web services to extract recently changed state data from ICIS-NPDES data families.	November 2012*
Test draft web services to extract recently changed state data from ICIS-NPDES data families by pilot states.	Nov – Dec 2012*
Production release of web services to extract recently changed state data from ICIS-NPDES data families.	January 2013*
Testing of draft web services to extract a subset of recently changed state limit data from ICIS-NPDES for state eDMR systems to derive anticipated DMRs.	TBD

<b>Exchange Network Program Office Activities</b>	
<b>Milestone</b>	<b>Target</b>
Production release of web services to extract a subset of recently changed state limit data from ICIS-NPDES for state eDMR systems to derive anticipated DMRs.	June 2014*
Production release of web services to extract data from the remaining ICIS-NPDES reference tables.	December 2014*

\* These dates are estimates only and subject to change.

### **Activities to be Considered by Grant Applicants:**

ICIS-NPDES data publishing grant applicants should consider the following activities among their opportunities for obtaining grant funding:

- Participate on the Integrated Project Team (IPT), monitor progress, and test the processes for publishing NPDES data families and reference table codes to states, tribes and territories.
- Review the schema under the IPT work and assist the IPT with the development of universal NPDES shared schema components.
- Develop requirements and design for the capability of invoking the web services to extract data out of ICIS-NPDES via CDX and import the data to the State database.
- Develop and implement data mappings and the capability of invoking the web services to extract data out of ICIS-NPDES via CDX and import the data to the State database.
- Create the ability on the state side to consume ICIS-NPDES reference table, permit, effluent, inspection, compliance and enforcement data in XML format and use it for their individual state needs.
- Create the ability on the state side to consume ICIS-NPDES limit data for use in deriving anticipated DMRs in XML format into their individual state eDMR systems.

*Note: All activities are eligible for funding as **Tier 3** priorities provided that the project proposal commits to deploying the outbound data flow in production.*

## Network Electronic Discharge Monitoring Reports (NetDMR)

### Description:

Electronic transmission of discharge monitoring reports (DMR's) allows NPDES permitting authorities to get out of the business of printing and mailing hard copy paper DMR forms to thousands of facilities, sorting the paper forms received, keypunching results by hand, and filing the paper forms. The National Installation of NetDMR has been developed collaboratively among a group of states (led by Texas), OECA and OEI to be a common, centrally-hosted electronic DMR application closely integrated with EPA's ICIS-NPDES system. The Central Data Exchange (CDX) is used for the exchange of data between NetDMR and ICIS-NPDES.

Version 1.0 of the National Installation of NetDMR was released for use by permittees of select pilot states and EPA Regions in June 2009, and Release 1.3.3, put into production in June 2011, includes many additional improvements. Eleven states and eight EPA Regions now have their own customized instance within the National Installation of NetDMR, and additional instances can be created. States that elect to use NetDMR must also be users of ICIS-NPDES, as NetDMR is closely integrated with EPA's ICIS-NPDES system. NetDMR provides no connection to EPA's Permit Compliance System (PCS), and PCS is scheduled to be retired in Quarter 3 of Fiscal Year 2013 after development of the ICIS-NPDES full batch capability is complete.

States that have specific business reasons why an instance within the National Installation of NetDMR cannot meet their programmatic requirements may wish to develop and deploy an alternative electronic DMR (eDMR) system within their state environment. State-hosted eDMR systems can be used to ensure timely and accurate reporting of DMRs by permittees to the regulatory authority and EPA's ICIS-NPDES system, using CDX and the Exchange Network.

<b>Exchange Network Program Office Activities</b>	
<b>Milestone</b>	<b>Target Completion Date</b>
Readiness for complete end-to-end testing by facilities for the NetDMR Flow to EPA.	Complete
XML schema for NetDMR is final.	Complete
NetDMR centrally-hosted instance pilot facility demonstration completed and application approved for production.	Complete
NetDMR centrally-hosted instance ready for testing with authorized states slated for Group I, II, or III production.	Complete
NetDMR operational for facilities where EPA is permitting authority. Readiness to receive production facility data for the NetDMR Flow from EPA-permitted facilities.	Complete
NetDMR centrally-hosted instance ready for Group I and Group II authorized states to move into production.	Complete
NetDMR centrally-hosted instance ready for Group III authorized states to move into production.	December 2012 *

\* Note: production implementation dates can be staggered in time, per state and EPA consultation

## **Activities to be Considered by the Grant Applicants:**

The 2013 Exchange Network grant process could support efforts by states, in consultation with their EPA Regions, to: pilot test and launch their instances within the National Installation of NetDMR (Area 1); or develop, test, and implement their own eDMR system (Area 2).

### *Area 1 – Testing and Implementation of State Instance within NetDMR National Installation*

Effective implementation includes development of all the business processes to move from a paper-based system to an electronic system, with the understanding that a paper-based system will need to be maintained for several years until all permittees are converted to the electronic system. Applicants could describe the efforts needed by the state to effectively test and launch the use of their instance within the National Installation of NetDMR, and discuss their adoption rate goals and milestones. Applications could also assist states in converting from paper to electronic processes, ensuring that Subscriber Agreements are properly handled according to CROMERR requirements, and ensuring that permit limits are up to date in ICIS-NPDES. Applicants could identify specific production implementation dates that the state preferred for their implementation within the National Installation of NetDMR tool.

### *Area 2 – Development, Testing and Implementation of eDMR System Within a State Environment*

Some states have specific business reasons why an instance within the National Installation of NetDMR cannot meet their programmatic requirements; thus they need an alternative eDMR system. For states with these requirements, this area will provide support for technical activities that lead to successful implementation of an eDMR system within the state environment. In these cases, applicants might explain why it is advantageous to develop and deploy a stand-alone system (which requires state operation and maintenance). Applicants could discuss costs and milestones associated with deploying and testing the application to ensure it works properly and sends required data to ICIS-NPDES using the approved schema and methodology.

*Note: A state's participation in either Area 1 or 2 is contingent upon its completion of data clean up and migration from PCS to ICIS-NPDES. Under either Area the grantee could indicate whether the state plans to require mandatory use of electronic submission of DMR's for permits that are renewed after the project is completed. Additionally, these activities are eligible for funding as **Tier 2** priorities provided that the project proposal commits to deploying the NetDMR instance or the eDMR system into production.*

## **Electronic Reporting of Notices of Intent (eNOI) and Special Regulatory Program Reports**

**Description:**

Electronic transmission of notices of intent (NOIs) and special regulatory program reports allow NPDES permitting authorities to transition away from entering thousands of permits and reports by hand and storing paper forms. OECA is in the process of promulgating a NPDES Electronic Reporting Rule (eReporting Rule) that will make electronic reporting of NPDES data mandatory. As a result, OECA is developing a national electronic reporting tool (eNOI) for the regulated community to use in filing the NOIs and associated reports that will be required under this rule. The eNOI tool will populate the ICIS-NPDES system with general permit covered facilities and their associated limit data. Ultimately, the tool will be able to electronically transmit CAFO, biosolid, CSO event, annual pretreatment, SSO event, industrial user compliance, and MS4 storm water program report information.

The eNOI tool will use existing schema developed under the ICIS-NPDES Full Batch Integrated Project Team (IPT). CROMERR compliant Central Data Exchange (CDX) services are being used for the eNOI tool’s user registration process, handling of user account information, digital signature, copy of record (COR) storage, and submission of data to ICIS-NPDES. States with NPDES data in ICIS will be able to use this eNOI tool for electronic reporting to save on development, hosting, and maintenance costs. In addition, states with their own data systems may want to consider using a state “instance” of EPA’s national tool to save on resources. EPA will work with these states to ensure the appropriate data flow is in place. State with their own data systems that use the National eNOI tool will have to populate ICIS-NPDES with the master general permit conditions to enable use of the tool.

States that have specific business reasons why the National NPDES eNOI tool cannot meet their programmatic requirements may wish to develop and deploy an alternative electronic NOI or special regulatory program reporting system within their state environment. State-hosted systems can be used to ensure timely and accurate data from the regulated community are transferred to EPA’s ICIS-NPDES system using CDX and the Exchange Network in an XML format that matches the existing schema developed under the ICIS-NPDES Full Batch IPT.

<b>Exchange Network Program Office Activities</b>	
<b>Milestone</b>	<b>Target Completion Date</b>
Production release of electronic reporting tool to initially support EPA Region 6’s Gulf of Mexico master general permit NOIs for Offshore Oil Drillers	October 2012
Proposed deadline* for electronic reporting of state CAFO NOI data to EPA	January 2014
Proposed deadline* for electronic reporting of all other state NOIs and special regulatory program report data to EPA	January 2015

\* Note: deadline is included within EPA’s proposed NPDES electronic reporting rule and is subject to change depending on final promulgation of the NPDES Electronic Reporting Rule.

## **Activities to be Considered by the Grant Applicants:**

The 2013 Exchange Network grant process could support efforts by states, in consultation with their EPA Regions, to: pilot test and launch their eNOI and special regulatory report forms and processes within OECA's National NPDES electronic reporting tool (Area 1); develop, test, and implement their own NOI and program report electronic reporting system (Area 2); or modify their system to align with forthcoming requirements of the proposed NPDES Electronic Reporting Rule (Area 3).

### *Area 1 – Test and Implementation of State Forms and Business Processes within OECA's National NPDES Electronic Reporting Tool*

Effective implementation often requires development of all the business processes to move from a paper-based system to an electronic system, with the understanding that a paper-based system will need to be maintained for several years until all permittees are converted to the electronic system. Applicants could describe the efforts needed by the state to effectively define business process flows, test and launch the use of their notices of intent and program reports within the National NPDES electronic reporting tool, and discuss their adoption rate goals and milestones. Applicants could also assist states in converting from paper to electronic processes, ensuring that Subscriber Agreements are properly handled according to CROMERR requirements, and ensuring that permit limits are up to date in ICIS-NPDES. Applicants could identify specific production implementation dates that the state preferred for their implementation within the NPDES electronic reporting tool.

### *Area 2 – Development, Testing and Implementation of a NPDES Electronic Reporting System within a State Environment*

Some states have specific business reasons why an instance within the National NPDES electronic reporting tool cannot meet their programmatic requirements; thus they need an alternative electronic reporting system. For states with more specific state requirements, this area will provide support for technical activities that lead to successful implementation of an eNOI and special regulatory program report electronic reporting system within the state environment. In these cases, applicants might explain why it is advantageous to develop and deploy a stand-alone system (which requires state operation and maintenance). Applicants could discuss costs and milestones associated with deploying and testing the application to ensure it works properly and sends required data to ICIS-NPDES using the approved schema and methodology.

### *Area 3 – Upgrade of State System with Data Elements Required by EPA's NPDES Electronic Reporting Rule*

This area provides support for states to modify their state systems to ensure that they can capture, store, and transmit to EPA any new data that will become required under Appendix A of 40 CFR 127 when the proposed NPDES Electronic Reporting Rule becomes final. Applicants could discuss the costs and milestones associated with upgrading their state system to ensure it can send the required data to ICIS-NPDES using the approved schema and methodology.

*Note: A state's participation in these areas is contingent upon its completion of data cleanup and migration from PCS to ICIS-NPDES. Additionally, these activities are eligible for funding as **Tier 1** priorities provided that the project proposal commits to deploying the data flow into production.*

## Air Facility System (AFS)

**Description:** EPA’s Air Facility System (AFS) supports the Clean Air Act (CAA) stationary source compliance and enforcement program. AFS tracks detailed facility, compliance monitoring, and enforcement information. It supports implementation of EPA’s CAA stationary source Compliance Monitoring Strategy (CMS) and High Priority Violator (HPV) policy. Responsibility to implement the CAA stationary source compliance and enforcement program is delegated to states, territories, tribes, and local government entities. Over 90 delegated agencies report information to AFS, and most of these agencies have their own data systems. Currently, they send data to legacy AFS (housed on the EPA mainframe) via traditional, 80-column card formatted batch methods. Many of the agencies use the AFS Universal Interface – a customized data submission/validation software tool that is installed and operated within the delegated agency’s computing environment.

In the future, delegated agencies will send their data to the modernized AFS, using approved XML schema, via the Exchange Network and the Central Data Exchange. Preparations to both migrate data to the modernized AFS, and to reliably report data to modernized AFS on an ongoing basis, need to begin in 2013.

EPA will modernize AFS by integrating it with the existing Integrated Compliance Information System (ICIS), since there is a significant overlap in functionality between the two systems. In 2012, EPA will complete the requirements analysis and confirmation process. Subject to availability of funding, EPA will complete detailed design of the new system in 2013 and complete development of modernized AFS in 2014. If that schedule holds, modernized AFS will become operational in the late 2014 to early 2015 timeframe. In early 2013, EPA intends to initiate an Integrated Project Team (IPT) to create the XML schema that will enable the flow of CAA stationary source data from state, local, tribal and territorial government systems to the modernized AFS.

<b>Exchange Network Program Office Activities</b>	
<b>Milestone</b>	<b>Target Completion Date **</b>
Complete system requirements for modernized AFS	September 2012
Initiate Integrated Project Team (IPT) for schema development	March 2013
Release draft XML schema for CAA stationary source dataflows *	June 2013
Test XML schema for CAA stationary source dataflows *	August 2013
Final conformance review of XML schemas for reporting to modernized AFS *	September 2013
Completion of migration logic for legacy AFS data	March 2014
Start of internal integration testing**	April 2014
Readiness for complete end-to-end testing by States/ Locals**	July 2014
System readiness to receive production data at EPA **	January 2015

\* Schema development may be divided into groups, based on resource availability and workload

\*\* All target completion dates may change subject to availability of resources



### **Additional Activities to be considered by Grant Applicants:**

The FY 2013 Exchange Network grant process could support efforts by delegated agencies (states, territories, tribes or locals), in consultation with their EPA Regions, to:

- Participate in data migration activities, such as defining conversion rules and fixing AFS data to properly migrate into modernized AFS, in coordination with EPA Headquarters, Regions, States, and data migration workgroup participants;
- Participate in node testing processes for new submissions to EPA;
- Develop feasibility studies to determine how delegated agencies will be able to format and transfer their data to modernized AFS consistent with the to-be-developed XML schemas for reporting AFS data (consistent with EPA policies and guidance such as the CMS, and the HPV policy);
- Develop data quality processes to ensure that the legacy AFS data to be migrated from delegated agencies to modernized AFS is of the highest quality prior to data migration;
- Extract and convert the data from State stationary air source systems into the XML format needed to submit data to modernized AFS via batch;
- Perform mapping and extractions of federal and delegated agency regulatory citations in order to facilitate accurate and consistent reporting of data within various CAA programs (e.g., State Implementation Plans, New Source Performance Standards, National Emissions Standards for Hazardous Air Pollutants); and/or
- Participate on an Integrated Project Team (IPT), to assist and monitor the schema development and testing of AFS data families to EPA.

*Note: These activities are eligible for funding as **Tier 1** priorities provided that the project proposal commits to deploying the data flow into production.*

**Resource Conservation and Recovery Act Information  
(RCRAInfo)**

**Description:**

RCRAInfo is a national, Web-based system which provides data entry, data management, and data reporting functions used to support the implementation and oversight of the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984 as administered by EPA (through its Regions) and authorized States. RCRAInfo identifies and categorizes hazardous waste handlers, and includes high quality information about regulated activities, permit/closure status, compliance with Federal and State regulations, and cleanup activities. Only those that are a delegated authority under RCRA Subtitle C can submit data to RCRAInfo, however, non-delegated states or tribes can receive data from RCRAInfo via RCRAInfo outbound services. EPA encourages recipients to evaluate and explore the use of outbound web services and to partner with EPA to identify outbound service needs and requirements. Additionally, States that are currently performing double-data entry should seek to use either RCRAInfo inbound or outbound services to eliminate that double-data entry.

<b>Exchange Network Program Office Activities</b>	
<b>Milestone</b>	<b>Target Completion Date</b>
Convert Load Error Report to XML format	01/2012 (completed)
Minor release of schema, version 5.3	01/2013
Phase II Outbound Web Services Testing	06/2012
Phase III Outbound Web Services Implementation (CM&E supportive services)	09/2012
Phase III Outbound Web Services Testing	11/2012
GIS and CM&E upgrade/enhancements including schema revision	05/2014

**Additional Activities to be considered by Grant Applicants**

Participants are encouraged to develop innovative ways for interacting with RCRAInfo Data including mobile application to be used “in the field.”

*Note: This activity is eligible for funding as a **Tier 1** activity provided that the project plan commits to deploying a production application that consumes RCRAInfo outbound services.*

## eBeaches

### **Description:**

eBeaches is the electronic data transmission system that allows EPA to securely receive and display state beach water quality and swimming advisory data an hour after state and local agencies send the data. eBeaches supports the Beaches Environmental Assessment and Coastal Health (BEACH) Act requirement to collect, store, and display beach public right-to-know pollution occurrence data. States should submit spatial representations of the beaches reported in the Beach Notification (PRAWN) and monitoring stations in Beach Monitoring (WQX) submissions using the NHDEvent data flow.

### **Activities and Suggestions to be considered by Grant Applicants:**

Applicants should consider the following steps prior to data submissions.

- Read all support documentation at <http://www.epa.gov/waterscience/beaches/grants/datausers/index.htm> (*this activity is not eligible for funding*)
- Map systems to the approved national XML schemas. <http://www.exchangenetwork.net/communities-of-interest/water/> (*Tier 2\**)
- Begin linking beach locations consistent with the NHD and the Geospatial One Stop Hydrography Standard. Implement NHDEvent data flow for BEACON beach locations that have been geo-referenced to the NHD. (*Tier 3*)
- Verify in WQX/STORET organization name (org\_id) to sample station (station\_id) to beach name (project\_id aka beach\_id and national project id (EPABEACH) relationship/links to ensure correct stations are linked to corresponding beach. (*Tier 2\**)
- Check with other internal state offices for existing Node capability and before developing Node capability for each beach data flow. (*this activity is not eligible for funding*)
- Validate XML instance documents prior to submission via CDX (node or ENSC). (*Tier 2\**)
- Participate in biweekly/monthly Beach conference calls. (*this activity is not eligible for funding*)

*\*Applications will be scored as Tier 2 proposals provided that this is a new data flow for the applicant and that the project proposal commits to deploying the eBeaches dataflow into production.*

## Safe Drinking Water Information System (SDWIS)

**Description:**

SDWIS State is an EPA-provided system designed to assist primacy agencies in managing their Public Water System Supervision (PWSS) programs under the Safe Drinking Water Act (SDWA). SDWA Data flows use XML from state primacy agencies using SDWIS State or some other PWSS management system to EPA and to/from other stakeholders (such as laboratories and other agencies) to the primacy agencies. SDWA data flows may include, at the discretion of the primacy agency, Compliance Monitoring data. SDWA data flows will use the SDWA 4.0 XML schema.

<b>Exchange Network Program Office Activities</b>	
<b>Milestone</b>	<b>Target Completion Date</b>
Report out on compliance with data standards	06/14/2012
Test XML schema - (SDWA 4.0)	06/30/2012
Release XML Schema – (SDWA 4.0)	07/21/2012
Availability of database or system for testing	9/1/2012
Availability of Node services for testing	6/30/2012
Readiness for complete end-to-end testing by States/ Tribes	8/15/2012
System readiness to receive production data to EPA	9/30/2012
Flow configuration document completed or updated	7/21/2012
Testing of other flows between/within States/Tribes/EPA Regions	TBD

**Additional Activities to be considered by Grant Applicants:**

**Tier 1 Activity:**

**Collaborative Opportunity:** partnership application consisting of multiple state, territorial and tribal partners working to share drinking water data, including Compliance Monitoring Data, with and between other state, tribal, territorial, and federal agencies/organizations using the SDWA 4.0 XML schema. (*Tier 1*)

**Tier 2 Activities:**

To be included in Tier 2 Activities, 2013 EN grant applications proposing SDWIS Laboratory data exchanges that do not fall under Tier 1:

- SDWA laboratory data exchange must deliver an EN data flow of drinking water analysis results to the primacy agency using the eDWR XML data schema (if the primacy agency is using SDWIS State) or the SDWA 4.0 XML data schema (if the primacy agency is using a system other than SDWIS State). (*Tier 2*)

- SDWA laboratory data exchange proposals must demonstrate that the state agency with primacy for SDWA reporting supports the proposal and will coordinate closely with the applicant during the grant performance period. (*Tier 2*)
- New stand-alone Laboratory Information Management Systems (LIMS) will not be funded under 2013 SDWA Laboratory data exchanges proposals unless they are part of a state-wide enterprise solution for multiple lab entities to support SDWIS lab reporting, or part of a solution that will be directly utilized by multiple jurisdictions as either a COTS solution or shareware application. Any new LIMS under this activity for multiple labs must also accommodate the SDWIS 4.0 XML schema. Grant funding for modifications to existing LIMS is limited to \$50,000 per applicant. (*Tier 2*)
- Applicants choosing to focus on lab data flows to SDWIS NextGen must demonstrate close coordination with OGWDW supported pilots for these exchanges. (*Tier 2*)
- States, Tribes and Territories not using SDWIS State seeking to automate SDWA laboratory data flows should submit proposals that demonstrate support from the agency with primacy for SDWA reporting and a commitment from that agency to work closely with the applicant during the grant performance period. (*Tier 2*)

**Tier 3 Activity:**

A SDWA laboratory provides a data exchange delivery of an EN data flow of drinking water analysis results, including the additional new SDWIS 4.0 xml laboratory-supplied data elements, to the primacy agency using the:

- eDWR XML data schema (if the primacy agency is using SDWIS State), or
- SDWA 4.0 XML data schema (if the primacy agency is using a system other than SDWIS State). (*Tier 3*)

## Underground Injection Control (UIC) Information System

**Description:**

EPA launched new a UIC national information system in Dec 2007 and immediately began accepting data through EPA’s Exchange Network. The UIC data system is designed to provide high quality, consistent, and complete information to support EPA’s objective to manage and oversee the national and regional delegated program. Data fields are at well level, with fields for UIC inventory (linked to FRS), permits, geospatial coordinates, inspections, mechanical integrity, violations, and enforcement actions.

As of end of 2011, 25 of the 69 state and regional UIC programs were submitting data quarterly to the UIC database, with six other programs submitting in test and expecting to submit by mid-2012 to production. Currently, ten additional UIC programs are mapping their data to EPA XML schema and should start submitting by the end of 2012 or early 2013. EPA is following a strategy and schedule to engage the remaining 28 programs to start mapping their data by end of 2012 and begin flowing data by 2013.

A revised XML document (Version 2.0) was released under the same UIC data model to improve performance. All UIC data submitters after May 14, 2010 mapped their data to the new schema.

Each state is expected to transition from existing reporting to a single quarterly submission to the UIC database once it meets the data quality and completeness requirements outlined in a transition data policy memorandum issued in March 2009.

<b>Exchange Network Program Office Activities</b>	
<b>Milestone</b>	<b>Target Completion Date</b>
Release revised XML Schema – (Version 2.0)	Completed
Revised flow configuration document, other documentation completed	Completed
<i>Other:</i> Successful mapping, conversion of state data consistent with EPA mapping instructions, and node to node submission (for all 69 UIC programs)	2013
<i>Other:</i> Validation of data received in EPA’s database after each quarterly submission to address data quality/completeness issues, to continue until transition requirements are met.	Ongoing

**Additional Activities to be considered by Grant Applicants**

- EPA will support activities to build local data systems for Class V state programs with no effective existing database, to support efficient data transfer to EPA’s database. EPA has existing data templates and data transfer tools available.
- EPA requests that UIC applicants include participation in existing EPA Integrated Project Teams (IPTs).

- Since the objective is to phase out non-Exchange Network reporting, EPA requests UIC applicants to address the resolution of QA/QC issues raised during quarterly data submission cycles.

*Note: These activities are eligible for funding as **Tier 2** priorities provided that the project proposal commits to deploying the data flow into production.*

## Water Quality Exchange (WQX)

### Description:

WQX defines the framework by which EPA compiles water quality monitoring data (physical, chemical, biological and habitat) into the STORET Data Warehouse ([http://www.epa.gov/storet/dw\\_home.html](http://www.epa.gov/storet/dw_home.html)). Data from multi-jurisdictional entities (including State and Tribal agencies) are shared with EPA via the WQX schema and made available from STORET at a national level via a seamless collection of monitoring data. For more information about WQX, please visit <http://www.epa.gov/storet/wqx/index.html> or <http://www.exchangenetwork.net/exchanges/water/wqx.htm>.

<b>Exchange Network Program Office Activities</b>	
<b>Milestone</b>	<b>Target Completion Date</b>
System readiness to receive test and production data to EPA (WQX v1.0, WQX v2.0 and WQX v2.1)	Completed
WQX Web Tool in production (WQX Web is an XML generation tool that supports all WQX schema data elements)	Completed
STORET Warehouse Catalog, Monitoring Location, and Results Web Services available	Completed
Launched Water Quality Portal with USGS in Spring 2012. Additional STORET Warehouse Web Services also released with USGS NWIS Web Services alignment.	Completed
STORET Warehouse web mapping services available**	Completed
New web services for biological metrics and indexes.	Spring 2014

\*\* The STORET Warehouse web mapping services are available at the following URL: [http://www.epa.gov/waters/geoservices/docs/waters\\_mapping\\_services.html](http://www.epa.gov/waters/geoservices/docs/waters_mapping_services.html). Note that two separate services exist for STORET: STORET\_NAD83 and STORET\_WMERC.

### Additional Activities to be considered by Grant Applicants:

- Utilize WQX v2.0 or v2.1 to flow biological and habitat monitoring parameters. (*Tier 3*)
- Develop applications that use EPA STORET Warehouse web services (data and spatial) for data integration and analysis (e.g., establish links to water impairment, water permit facilities, watershed resource planning). (*Tier 1*)
- Adopt and encourage all applicable data standards for data submission and sharing. (*Tier 2 or Tier 3\**)
- Identify innovative ways for sharing monitoring data (*Tier 1*), such as:
  - Expand within-state data partners flowing data including ambient monitoring, cyclic/periodic/event monitoring, surveys, utilities/facilities
  - Encourage capacity with small data providers through WQX and WQX Web
- Encourage the development of common catalogue services that provide standard water quality data discovery and publishing to the Exchange Network community. (*Tier 3*)
- Build tools using Exchange Network technologies, services and specifications that integrate water quality data from various sources (e.g., USGS data) to present a common view of water quality data. (*Tier 1*)



- Begin linking station locations consistent with the NHD and the Geospatial One Stop Hydrography Standard. Implement NHDEvent data flow for STORET/WQX monitoring locations that have been geo-referenced to the NHD. (**Tier 3**)

*\*Eligible for funding as a Tier 2 priority (for partners implementing new flows) or Tier 3 priority (for partners upgrading existing flows), provided that the project proposal commits to deploying the new (or upgraded) flow into production.*

**Assessment TMDL Tracking & Implementation System (ATTAINS)  
(Integrated Reporting (303(d)/305(b))**

**Description:**

EPA maintains the Assessment TMDL Tracking & Implementation System (ATTAINS) to document assessment decisions reported by States under the Clean Water Act Sections 303(d) and 305(b) and to track Total Maximum Daily Loads (TMDLs). This information is critical to measure environmental outcomes under the EPA Strategic Plan and the Office of Water National Water Program Guidance. The Office of Water Integrated Reporting (OWIR) data exchange meets EPA’s current Integrated Reporting guidance and meets the reporting specifications in the most recent version of EPA’s Assessment Database [<http://www.epa.gov/waters/adb/tools.htm>]. The OWIR-ATT data flow provides the means for States to submit Integrated Reporting (303(d)/305(b)) water quality assessment data. States should submit spatial representations of the water assessment units reported in the OWIR-ATT submission using the NHDEvent data flow.

For more information on the OWIR-ATT data flow, please visit <http://www.exchangenetwork.net/exchanges/water/owir.htm> , and for the NHDEvent data flow, please visit <http://www.exchangenetwork.net/data-exchange/nhdevent/>.

<b>Exchange Network Program Office Activities</b>	
<b>Milestone</b>	<b>Target Completion Date</b>
Release XML OWIR-ATT, Attribute Schema – (Version 2.0)	Completed
Separate, update, and rename the OWIR-EVT data flow as NHDEvent with updated schema and Flow Configuration Document, NHDEvent Version 2.0	Completed
Receive production attribute data and populate EPA’s ATTAINS IR Regional Review Website	Completed
Launch Integrated Project Team (IPT) to evaluate system data flow and data elements (outreach)	Spring 2013
Evaluate IPT feedback	Fall 2013
Other Exchange Network activities: Development of Water Quality Conditions and Integrated Reporting Data Standard	Spring 2014

**Additional Activities to be considered by Grant Applicants:**

- Utilize OWIR-ATT to flow Integrated Reporting (303(d)/305(b)) information
- Participate in dialogue about using the Exchange Network as a tool for States to submit Integrated Reporting data via an Integrated Project Team.
- EPA will begin working on the Water Quality Conditions and Integrated Reporting Data Standard. The Data Standard will not apply to the 2014 Integrated Report.
- Identify innovative tools that may enhance the interaction between EPA Regions and States during the 303(d)/IR review and approval process.
- Identify innovative ways to share geospatial information related to Integrated Reporting data and utilize Web-based services and applications.

*Note: All activities are eligible for funding as **Tier 3** priorities provided that the project proposal commits to deploying the ATTAINS data flow into production.*

## Facility Registry System (FRS)

### **Description:**

The Facility Registry System (FRS) is EPA's centrally managed database that provides access to the names, locations, associated program IDs, industrial classification, affiliation, and other information for facilities subject to environmental regulations and for other sites of environmental interest. These integrated facility identification records allow EPA, its state and tribal partners, web application owners, and the public to access environmental information reported from and about facilities and sites. The Facility Id 3.0 (FACID 3.0) schema is now available and allows EN partners to publish and access facility identification information more easily. FACID 2.3 is still available and supported for those partners not yet ready to move to FACID 3.0.

Applicants that wish to take advantage of FRS web services should periodically check RCS (see Appendix J for a description), a catalog of IT resources from EPA and its state and tribal partners. Resources will be added to this location on a regular basis.

### **Additional Activities to be considered by Grant Applicants:**

- Work with the FRS team to develop uses for data extracts and web services by state ID and/or sub facility component. (*Tier 3*)
- Use the newly redesigned Facility Linkage Application (FLA) to correct and analyze data. (*Tier 3*)
- Use the soon to be implemented, "flag data by source" capability to identify data needed for emergency response and other field collection and publishing purposes. (*Tier 1\**)
- Encourage state programs to use the FRS Lookup service in order to integrate data by FRS ID. (*Tier 3*)
  - This activity can also include integrating other state/tribe/territory programs in order to incorporate additional environmental interests (e.g., air, water, waste, etc.) for partner use.
  - Partners that integrate their facility information can use this service to develop tools for retrieving additional value-added data fields into their facility records, including geocoded addresses, NAICS codes, applicable census information, hydrologic unit codes (HUC), and congressional boundary information.
  - Partners that integrate their facility information can also use this service to develop tools for retrieving FRS data for comparative analysis and reconciliation.
- Enhancing an FRS flow to include linear and polygonal values, along with necessary metadata. (*Tier 3*)

*\*This activity is eligible for funding as a Tier 1 priority if the project proposal commits to deploying into production an application or publishing service that utilizes this capability.*

## Toxics Release Inventory System (TRIS)

**Description:**

The TRI System is an annual reporting requirement for industries with toxic chemical releases (deadline is July 1st of every year). The TRI Data Exchange (TDX) provides for simultaneous submission of TRI reports to both EPA and states via CDX. Benefits of the TRI Data Exchange include:

- For participating states and EPA, elimination of duplicative data entry, reduction of state data reconciliation, and faster access to the data
- For facilities, reduced burden through simultaneous submission to both EPA and the state to meet EPCRA Section 313 reporting requirements

<b>Exchange Network Program Office Activities</b>	
<b>Milestones</b>	<b>Target Completion Date</b>
Load/Update XML Schema (if necessary) for FY 2013	11/30/2012
Continue to investigate use of additional Web services for further application functionality	Ongoing
Test and Support operational Node-to-Node data exchanges between CDX and States	Ongoing

**Additional Activities to be considered by Grant Applicants:**

- Work with the TRI Program to test XML schema on the state node to accept TRI data from EPA.
- States should develop procedures that enable the import of TRI data into their systems. The procedures should support data in XML format received via their state node.
- Encourage environmental state program office employees at TDX states to take advantage of the benefits offered by the TDX Viewer tool. More information can be found at [http://www.epa.gov/tri/stakeholders/state/state\\_exchange/index.htm](http://www.epa.gov/tri/stakeholders/state/state_exchange/index.htm)
- Use the TRI XML schema to develop loading/converter tools to populate the state database directly from incoming data sources via CDX.
- Leverage existing tools and services developed by states already on the TRI Data Exchange. [http://www.epa.gov/tri/stakeholders/state/state\\_exchange/index.htm](http://www.epa.gov/tri/stakeholders/state/state_exchange/index.htm)
- Collaborate with states on the TRI Data Exchange and other states interested in joining by developing sharable code (i.e., monthly conference calls)

*Note: These activities are eligible for funding as **Tier 1** priorities provided that the project proposal commits to deploying the outbound data flow into production.*

## Enabling Geospatial Data Exchange

### Description:

Geospatial data represent features on the Earth expressed as points, lines, or polygons and are used in tandem with programmatic data, through geospatial information systems and browsers, to support programmatic analysis using a geographic or place-based context.

Office of Management and Budget (OMB) Circular A-16 “Coordination of Geographic Information and Related Spatial Data Activities” identifies 34 critical geospatial data themes that are essential components of the National Spatial Data Infrastructure (NSDI) ([http://www.whitehouse.gov/omb/circulars/a016/a016\\_rev.html](http://www.whitehouse.gov/omb/circulars/a016/a016_rev.html)). The A-16 geospatial data theme categories encompass a wide variety of place-based data sets which are essential to environmental analysis and decision-making. These include, but are not limited to data related to biodiversity, geology, cultural resources, administrative units and boundaries, parcels and cadastre, wetlands, watershed boundaries, soils, hydrography, imagery, transportation, and elevation.

The Exchange Network can be particularly useful for publishing geospatial data when any of the following conditions apply:

- data need to flow securely
- large payloads of data, requiring automated machine-to-machine delivery
- data need to be delivered to multiple locations simultaneously (such as inspections, enforcement, or facilities data collected in the field that ends in a flow to one or more state programs, an EPA program office, and the Facility Registry Service)
- the data are already accessible through a node
- the data are needed immediately for disaster and emergency response
- data are used to update and maintain large national datasets (see activity below)

### Additional Activities to be considered by Grant Applicants:

- Development of schema that are reusable by other partners to enable the flow of large geospatial datasets through the Exchange Network, particularly those that fall under themes within Appendix E of OMB circular A-16: “Coordination of Geographic Information and Related Spatial Data Activities.” (*Tier 3*)
- Develop and implement capabilities to extract, transform, and publish data from grantees’ node(s) into open geospatial data formats (geo databases and web services) for use by Exchange Network partners and, where appropriate, the public. Demonstrate functionality through use-cases such as web maps and tools. Data flows need to be documented in ENDS. (*Tier 1\**)

*\*This activity is eligible for funding as a Tier 1 priority if the project proposal commits to deploying the publishing service into production.*

## **Agricultural Non-Point Source Best Management Practice Data Exchange (NPS BMP)**

### **Description:**

Accurate, consistent, and spatially explicit non-point source best management practice data is a critical data flow for assessment of load reduction and corresponding water quality benefits. BMP's are components of Tributary Strategies for analyzing Total Maximum Daily Loads (TMDL's). BMP data aids the strategic targeting of environmental actions required to protect and restore the water quality conditions necessary to sustain a number of aquatic species.

Pennsylvania Department of Environmental Protection led the project that developed the data exchange templates, schema, and services that standardize the exchange on behalf of the Chesapeake Bay Program Partnership. On a national scale, NPS BMP will provide a database of information on best management practices suitable to reduce loads and improve water quality in different geographic settings.

### **Additional Activities to be considered by Grant Applicants:**

Applicants are encouraged to do any of the following activities:

- Expand the current Regional exchange by leveraging the existing schema and standards. *(Tier 3\*)*
- Develop the suite of services to support geographically and temporally based exchanges of BMP data. *(Tier 3)*
- Build out the schema to include geo-spatial data exchange elements and develop additional validation and/or analytical tools to support this data flow. *(Tier 3)*

*\*Eligible for funding as a Tier 3 priority provided that the project proposal commits to deploying the BMP data flow into production.*

# Appendix C

## Cloud Transition Grants for EN Partners

The Exchange Network Grant Program encourages projects that promote efficiency through the reuse of *shared* systems and resources. As cloud-based computing continues to grow and mature, EPA is exploring opportunities to offer cloud-based Exchange Network nodes to Network partners. Sharing node software and hardware in the cloud may help partners — particularly small and medium-sized organizations — find even more cost efficient ways to manage their nodes and decrease development and operational costs. The Exchange Network governance established an integrated project team (IPT) consisting of states, tribes, and EPA to review the feasibility of and develop requirements for cloud-based nodes.

EPA has researched cloud models for the Exchange Network and has prototyped a multi-tenant application model called the Virtual Node, which is analogous to a central shared node platform that can be individually configured by each partner to handle its different data flows. The purpose of this prototype is to assist the IPT and other participants in preparing requirements for a production-ready Virtual Node. EPA anticipates establishing and maintaining a Virtual Node infrastructure in a central shared cloud environment. This model was in response to existing and potential small and medium sized Exchange Network partners who would likely receive the most value and establish more cost efficient ways to manage their nodes and decrease costs. However, this does not preclude a Network partner from applying for grant funding if it improves efficiency and experience based on their unique requirements. This new approach has potential to significantly simplify development and maintenance using inheritance features and plug-in support. The specific design details of this model are being developed and tested now in coordination with the Network Operations Board Virtual Node Workgroup.

The focus of this solicitation is to cover the transition cost for partners to move from a physical node implementation to the multi-tenant (shared) node implementation. Funding for Virtual Node adoption will not exceed \$70,000. Actual award amounts will be based upon the complexity of moving individual nodes and associated data flows (*e.g.*, number of active data flows) to this environment.

### Virtual Node Application

EPA is interested in working closely with partners to leverage this new model for a shared node implementation (partners sharing a common scalable node). Installations of this type would provide a simplified solution for any partner (particularly partners lacking adequate resources for a dedicated node environment). Much of the basic administration would be done centrally, so that partners are able to concentrate on configuring data flows instead of administering application servers.

Under the Multi-Tenant Node solution:

- Partners would configure data flows on the new centrally-hosted virtual cloud node, but partner databases could stay in place.

- State databases would connect to the Cloud Node through a new secure channel or backend bridge.
- Node administrators would retain complete control of all aspects of their Node, their data flows, and the manner in which the virtual node accesses their staging tables or databases.
- Much of the administration would be done centrally, thereby reducing the amount of effort necessary to participate in the Network.
- Work is ongoing to add wizard-driven functionality for creating data flows in order to minimize the effort to create and transition data flows to the virtual node.

The virtual node may offer some significant advantages over current nodes. It eliminates software licensing costs, server costs, and much of the administration costs for partners, while providing a simplified development model and greater economies of scale.

Applications for transitioning to the virtual node should focus on development activities such as:

- a) Dataflow configuration
- b) Testing
- c) Security Plan Requirements
- d) Virtual Node Training

### **New Node Communication Model**

Another key goal of the solicitation is to explore various ways of interconnecting from the partner staging tables or database servers (backend) to the virtual node in the cloud environment. The following technical options are being evaluated:

- **Backend Proxy:** A small component will be deployed in the partner environment (backend) which makes outgoing connections, accepts/processes requests and returns XML results to the node in the cloud.
- **TCP/IP Relay:** A P2P style component will be installed in the backend environment. The component enables direct connections from the node in the cloud and relays TCP/IP to the partner backend database environment.
- **Internet Service Bus (ISB):** A component will be installed in the partner backend database environment which establishes a connection with the ISB for relaying network activity to/from the node in the cloud.
- **Secure Virtual Private Network (VPN):** This is a secure network connection from the partner's node in the cloud to the partner backend database environment. Once the connectivity is established, the node can make direct database connections through the secure channel.



Partners are encouraged to evaluate one or more of these options with their security team to ensure that a communication model can be approved for their virtual node implementation. Partners should include their target models in their grant applications.

# Appendix D

## Detailed Instructions for Submitting Applications

Applicants for the FY 2013 Exchange Network Grant program must submit an application package to EPA by November 9, 2012. EPA will accept applications for National Environmental Information Exchange Network grants in one of two ways: 1) an application submitted electronically through the grants.gov website; or 2) a hardcopy mailed or delivered application, including one original and two copies. Applicants who submit a hard copy are encouraged to also submit an electronic courtesy copy of the application by email, to Salena Reynolds at [ENGrantProgram@epa.gov](mailto:ENGrantProgram@epa.gov). EPA will confirm receipt of each application with an e-mail to the contacts listed in the cover letter.

EPA will notify applicants of its selection decisions in or around April 2013. The notification letters will include further instructions to successful applicants for submittal of additional or updated documents. EPA plans to award all grants by July 31, 2013.

**The following forms and documents are required under this announcement** (fillable forms can be obtained from <http://www.epa.gov/ogd/AppKit/application.htm>):

1. Application for Federal Assistance (SF-424)
2. Budget Information for Non-Construction Programs (SF-424A)
3. Assurances for Non-Construction Programs (SF-424B)
4. Certification Regarding Lobbying Form
5. EPA Key Contacts Form 5700-54
6. EPA Form 4700-4 – Preaward Compliance Review Report
7. Project Narrative
8. Detailed Itemized Budget
9. Disclosure of Lobbying Activities (SF-LLL), if applicable
10. Negotiated Indirect Cost Rate Agreement, if applicable
11. Programmatic Resources and Personnel
12. Cover Letter
13. Exchange Network Implementation Plan Form (for states only)
14. Additional Information for Inter-tribal Consortium, if applicable
15. Formal Project Partners Roles and Responsibilities, if applicable
16. List of Federally and/or Non-federally Funded Assistance Agreements

### **1. Standard Form (SF) 424, Application for Federal Assistance**

Complete the form. Please note that the organizational Dun and Bradstreet (D&B) Data Universal Number System (DUNS) number must be included on the SF-424. Organizations may obtain a DUNS number at no cost by calling the toll-free DUNS number request line at 1-866-705-5711.

## **2. SF-424A, Budget Information for Non-Construction Programs**

Complete the form. The total amount of federal funding requested for the project period should be shown on line 5(e) and on line 6(k) of SF-424A. If indirect costs are included, the amount of indirect costs should be entered on line 6(j). The indirect cost rate (i.e., a percentage), the base (e.g., personnel costs and fringe benefits), and the amount should also be indicated on line 22. If indirect costs are requested, a copy of the Negotiated Indirect Cost Rate Agreement must be submitted as part of the application package. (See instructions for document 10 below.)

## **3. SF-424B, Assurances for Non-Construction Program**

Complete the form.

## **4. EPA Lobbying Form – Certification Regarding Lobbying**

Complete the form.

## **5. EPA Form 5700-54, Key Contacts Form**

Complete the form.

## **6. EPA Form 4700-4, Pre-Award Compliance Review Report.**

Complete the form.

## **7. Project Narrative**

Applications must include a project narrative including: goals, outputs with dates, and outcomes that lead to environmental results. **The project narrative must address each of the Evaluation Criteria (Section V-A) of this Solicitation Notice.** Applicants must limit the project narrative to 10 single spaced pages. The ten-page limit does not include the required application forms (e.g., SF-424, SF-424A, SF-424B, SF-5700-54, etc.), cover letter, description of programmatic resources and personnel, description of roles of project partners, list of previously awarded assistance agreements, detailed itemized budget, or the Exchange Network Implementation Plan Form described in section III-B. ***EPA will not review pages beyond the first ten pages of the project narrative.*** Highly scoring applications will include within the ten-page project narrative a description of:

- project goals, outputs, and outcomes that lead to environmental results, including a plan that allows the applicant to track and report progress toward achieving the project's proposed goals (Appendix E provides an example of project goals, outputs, outcomes);
- project roles and responsibilities for the applicant and any partners included in the project;
- programmatic involvement in the development and management of the project, including a listing of programmatic participants, positions, and roles in the project;
- applicant's commitment to re-use existing EN tools, or to share new tools with EN partners by registering any newly developed resources in ENDS or RCS as appropriate;
- the business need for this grant proposal
- detailed budget narratives for each goal; and
- summarized qualifications of the project manager and other key personnel and the applicant's resources which would contribute to project success.

The narrative should describe the major goal or goals, outputs and outcomes leading to environmental results of the three-year project. To achieve outcomes that lead to environmental

results, applicants should propose a project that contains one or more goals (for example, implement a WQX data exchange or publishing AQS data to neighboring partners) that will have outcomes supporting timely access to high quality environmental data. Projects can also support environmental results by improving the efficiency and security of data sharing (for instance, making state electronic reporting systems CROMERR compliant for priority reports). EPA will evaluate the major technical and non-technical outputs of the proposed work and the outcomes, leading to environmental results, these outputs support. The schedule of outputs must be detailed enough to demonstrate an applicant's ability to track progress toward each goal. Each proposed goal must have at least one outcome leading to an environmental result.

Examples of project outputs might include technical products such as schema or EN data access tools and services. Non-technical outputs might include the creation of workgroups, issuance of RFPs or other major project actions or events. Examples of outcomes that support environmental results include: improving the timeliness and accuracy of environmental data; reducing the burden and costs of data management and reporting; strengthening environmental decision making by enhancing data access for environmental professionals and the public. Applicants can find a sample narrative with goals, outputs and outcomes in Appendix E.

### **8. Detailed Itemized Budget**

Applicants should describe *both the total project budget and the costs associated with each major goal* in a detailed itemized budget. *The goal-specific budget information is important, because EPA may wish to consider partially funding some projects (i.e., funding only some goals for a project but not others).* The budget must include any relevant item listed below:

- A. Personnel – List all staff positions by title. Give the annual salary of each person, the percentage of their time devoted to the project, the amount of each person’s salary funded by the grant and the total personnel cost for the budget period.
- B. Fringe Benefits – Identify the fringe benefit rate and total amount.
- C. Travel – Specify the mileage, per diem, estimated number of in state and out of state trips other costs for each type of travel. EPA suggests that applicants include funds for travel to national, regional and area Exchange Network conferences.
- D. Equipment – Identify each item of equipment to be purchased which has an estimated acquisition cost of \$5,000 or more per unit and a useful lifetime of more than one year. List the quantity and unit cost per item. Items with a unit cost of less than \$5,000 are supplies.
- E. Supplies – Supplies include all tangible personal property other than “equipment.” The detailed budget should identify categories of supplies (such as laboratory supplies or office supplies). List the quantity and unit cost per item.
- F. Contractual – Identify each proposed contract and specify its purpose and estimated cost. Applicants who request in-kind services should list them here.

- G. Other – List each item in sufficient detail for U.S. EPA to determine whether the costs are reasonable or allowable. List any item, such as training, not covered elsewhere here.
- H. Indirect Charges – If indirect charges are included in the budget, include the approved indirect cost rate with a copy of the Indirect Cost Rate Agreement, a description of the base used to calculate indirect costs and total cost of the base, and the total indirect charges requested. **Before an applicant can incur any costs under the indirect cost category, the Indirect Cost Rate Agreement must be approved and current.** If you do not have a current rate, you may submit a copy of the submitted application to the cognizant fiduciary agency.
- I. Management Fees – When formulating budgets for applications, applicants must not include management fees or similar charges in excess of the direct costs and indirect costs at the rate approved by the applicants cognizant audit agency, or at the rate provided for by the terms of the agreement negotiated with EPA. The term "management fees or similar charges" refers to expenses added to the direct costs in order to accumulate and reserve funds for ongoing business expenses, unforeseen liabilities, or for other similar costs that are not allowable under EPA assistance agreements. Management fees or similar charges may not be used to improve or expand the project funded under this agreement, except to the extent authorized as a direct cost of carrying out the scope of work.

#### **9. SF-LLL, Disclosure of Lobbying Activities, if applicable**

This form is required if your organization is involved in lobbying. Complete the form if your organization is involved in lobbying activities. Applicants that do not have to submit this form should state so in their application.

#### **10. Negotiated Indirect Cost Rate Agreement**

This form is required if indirect costs are included in the project budget. You must submit a copy of your organization's Indirect Cost Rate Agreement as part of the application package if your proposed budget includes indirect costs.

#### **11. Programmatic Resources and Personnel:**

Briefly describe the programmatic resources and personnel involved in the project for the recipient and any participating partner. Highlight any expertise or past experiences that may be particularly helpful in carrying out the project. Include biographical sketches or resumes of the lead and any partner Project Manager(s). Each biographical sketch should outline the education, work history, and knowledge/expertise of the individual that will be managing the proposed project. **(For proposals seeking funding for tribal capacity building who propose to use funding from this grant to hire key personnel and/or the project manager only -- submit a statement of knowledge, skills, abilities, and qualifications from the recruitment package for that position.)**

## **12. Cover Letter**

Applications must include a cover letter signed by an authorized organizational representative (AOR) who, by virtue of their position, is able to obligate staff time on the proposed project (a suggested cover letter template is available at the end of Appendix D) including:

- a. recipient information;
- b. project title;
- c. type of vehicle requested (grant/cooperative agreement/ Performance Partnership Grant);
- d. proposed amount of grant (broken down into direct funding and in-kind assistance if relevant);
- e. partners on the grant (if applicable);
- f. brief project summary including a statement of project goal(s);
- g. contact information for the project lead; and
- h. signature of executive level Authorized Organizational Representative (AOR).

**13. Exchange Network Implementation Plan.** All state applicants must include a copy of the completed and printed Implementation Plan form described in Section III-B.

**14. Additional Information for Inter-tribal Consortium:** An inter-tribal consortium applying for an FY 2013 Exchange Network Grant must include documentation that shows:

- a formal partnership exists among the Indian tribal governments that are members of the inter-tribal consortium, and the majority of the members are federally recognized Indian tribes; and,
- the consortium's federally recognized tribal members have authorized the consortium to apply for and receive assistance from the Exchange Network Grant Program.

**15. Formal Project Partners – Roles and Responsibilities and Distribution of Funds:** If the proposed project involves formal project partners who will actively participate in implementing the project, provide a description of the roles and responsibilities of each partner in carrying out each of the project goals. Describe how the recipient would coordinate work among the partners using methods such as regular teleconferences, meetings, or written status reports. If the recipient plans to distribute funding to other partners, describe the method for doing so. Exchange Network grant projects that include one or more formal partners can have budgets up to \$500,000.

Partnerships formed from within a single state, territorial, or tribal government (e.g., a “partnership” limited to the Environment and Public Health Departments within a state) are not eligible partnerships and are limited to the \$300,000 maximum funding for a single-jurisdiction grant.

## **16. List of Federally and/or Non-federally Funded Assistance Agreements**

Provide a list of previously awarded assistance agreements from the past three years.

## **Submitting a Hard-Copy Application Package**

Applicants should submit one original and two paper copies of all of the documents listed above (EPA has provided a checklist of required application documents in Appendix G). Hard-copy

applications must be postmarked or delivered to an overnight mail or courier service at or before 11:59 PM (Eastern Standard Time) on November 9, 2012. *EPA recommends the use of overnight delivery or courier services to reduce the chance of delays.* Applicants should send their hard-copy applications to one of the following addresses depending on the delivery method:

**Mailing Address:**

Salena Reynolds  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, NW, (2823-T)  
Washington, DC 20460

**Physical Address** *(for overnight, or courier deliveries):*

Salena Reynolds  
U.S. Environmental Protection Agency  
1301 Constitution Avenue, NW  
6<sup>th</sup> Floor, Room 6143N  
Washington, DC 20004

Applicants who submit a hard copy are encouraged to also submit an electronic copy of the application by email, to Salena Reynolds at [ENGrantProgram@epa.gov](mailto:ENGrantProgram@epa.gov).

EPA will provide electronic acknowledgement of receipt of each application. If you do not receive acknowledgement of receipt from EPA regarding the submission of your grant application within 30 days of the application deadline, please contact Salena Reynolds, Exchange Network Grants Manager, at (202)-566-0466 or [reynolds.salena@epa.gov](mailto:reynolds.salena@epa.gov). Failure to do so may result in your application not being considered. Please retain documentation that shows that you submitted your application by the deadline.

## **Submitting an Electronic Application Package through Grants.gov**

Electronic application packages can also be submitted through the grants.gov website, <http://www.grants.gov>. The Funding Opportunity Number for this announcement is **EPA-OEI-13-01**. Electronic applications must be submitted to this website by 11:59 pm on November 9, 2012. EPA advises applicants to submit their electronic applications early, so that if any technical difficulties arise, there will still be time to address them before the application deadline.

If you wish to apply electronically via grants.gov, the electronic submission of your application must be made by an official representative of your institution who is registered with grants.gov and authorized to sign applications for Federal assistance. For more information, go to <http://www.grants.gov> and click on “Get Registered” on the left side of the page. ***Note that the registration process may take a week or longer.*** If your organization is not currently registered with grants.gov, please encourage your office to designate an AOR and ask that individual to begin the registration process as soon as possible.

To begin the application process under this grant announcement, go to <http://www.grants.gov> and click on “Apply for Grants” on the left side of the page. Then click on “Apply Step 1: Download a Grant Application Package” to download the Adobe viewer and obtain the application package. **To apply through grants.gov you must use Adobe Reader applications and download the compatible Adobe Reader version** (Adobe Reader applications are available to [download for free on the Grants.gov website](#)). For more information on Adobe

Reader please visit the [Help section](#) on grants.gov at <http://www.grants.gov/help/help.jsp> or [http://www.grants.gov/aboutgrants/program\\_status.jsp](http://www.grants.gov/aboutgrants/program_status.jsp)).

Once you have downloaded the viewer, you may retrieve the application package by entering the Funding Opportunity Number, EPA-OEI-13-01, or the appropriate CFDA number (CFDA 66.608), in the appropriate field. Then complete and submit the application package as indicated. You may also be able to access the application package by clicking on the Application button at the top right of the synopsis page for this announcement on <http://www.grants.gov> (to find the synopsis page, go to <http://www.grants.gov> and click on the “Find Grant Opportunities” button on the left side of the page and then go to “Search Opportunities” and use the “Browse by Agency” feature to find EPA Opportunities.

Please be sure to review the additional instructions below before applying electronically under this announcement through use of grants.gov that are available for download on grants.gov.

Application materials submitted through grants.gov will be time/date stamped electronically. If you have not received a confirmation of receipt from EPA (not from grants.gov) within 30 days of the application deadline, please contact Salena Reynolds, Exchange Network Grant Program Manager, at (202)-566-0466 or [reynolds.salena@epa.gov](mailto:reynolds.salena@epa.gov). Failure to do so may result in your application not being reviewed.

The forms and documents that comprise the applications will be either completed on-line in grants.gov or submitted as an attachment per **Figure D-1** below.



**Figure D-1: Submission Instructions for Application Forms and Documents**

<b>Form/Document</b>	<b>Submission Instruction</b>
1. Application for Federal Assistance (SF-424)	Complete on-line
2. Budget Information for Non-Construction Programs (SF-424A)	Complete on-line
3. Assurances for Non-Construction Programs (SF-424B)	Complete on-line
4. Certification Regarding Lobbying Form	Complete on-line
5. EPA Key Contacts Form 5700-54	Complete on-line
6. EPA Form 4700-4 – Preaward Compliance Review Report	Complete on-line
7. Project Narrative	Attach document
8. Detailed Itemized Budget (Budget Narrative Attachment Form)	Attach document
9. Disclosure of Lobbying Activities (SF-LLL), if applicable	Complete on-line
10. Negotiated Indirect Cost Rate Agreement, if applicable	Attach document
11. Programmatic Resources and Personnel	Attach document
12. Cover Letter	Attach document
13. Exchange Network Implementation Plan Form (for states only)	Attach document
14. Additional Information for Inter-tribal Consortium, if applicable	Attach document
15. Formal Project Partners Roles and Responsibilities, if applicable	Attach document
16. List of Federally and/or Non-federally Funded Assistance Agreements	Attach document

**Additional Application Preparation and Submission Instructions**

**Documents 1 through 6** listed under Application Materials above should appear in the “Mandatory Documents” box on the Grants.gov Grant Application Package page. For documents 1 through 6, click on the appropriate form and then click “Open Form” below the box. The fields that must be completed will be highlighted in yellow. Optional fields and completed fields will be displayed in white. If you enter an invalid response or incomplete information in a field, you will receive an error message. When you have finished filling out each form, click “Save.” When you return to the electronic Grant Application Package page, click on the form you just completed, and then click on the box that says, “Move Form to Submission List.” This action will move the document over to the box that says, “Mandatory Completed Documents for Submission.”

**For documents 7 and 8**, you will need to attach electronic files. Prepare your project narrative and detailed itemized budget as described above and save the documents to your computer as an MS Word or PDF file. When you are ready to attach your documents to the application package, click on “Project Narrative Attachment Form,” and open the form. Click “Add Mandatory Project Narrative File,” and then attach your documents (previously saved to your computer) using the browse window that appears. You may then click “View Mandatory Project Narrative File” to view it. Enter a brief descriptive title of your project in the space beside “Mandatory

Project Narrative File Filename;” the filename should be no more than 40 characters long. If there are other attachments to submit to accompany your application, you may click “Add Optional Project Narrative File” and proceed as before. When you have finished attaching the necessary documents, click “Close Form.” When you return to the “Grant Application Package” page, select the “Project Narrative Attachment Form” and click “Move Form to Submission List.” The form should now appear in the box that says, “Mandatory Completed Documents for Submission.” Follow the same general procedures for attaching document 8 – the Detailed Itemized Budget – using the “Budget Narrative Attachment Form.”

**Documents 9 through 16** are listed in the “Optional Documents” box, but *please note that these so-called “optional” documents must also be submitted as part of the application package, if applicable to your organization.* To attach documents 9 through 16, use the “Other Attachments Form” in the “Optional Documents” box. After attaching the documents, please remember to highlight the “Other Attachments Form” and click “Move Form to Submission List” in order to move the documents to the box that says, “Optional Completed Documents for Submission.”

Please note that applicants are limited to using the following characters in all attachment file names. Valid file names may only include the following UTF-8 characters: **A-Z, a-z, 0-9, underscore ( \_ ), hyphen (-), space, period.** If applicants use any other characters when naming their attachment files their applications will be rejected by grants.gov.

Once you have finished filling out all of the forms/attachments and they appear in one of the “Completed Documents for Submission” boxes, click the “Save” button that appears at the top of the web page. *It is suggested that you save the document a second time, using a different name, since this will make it easier to submit an amended package later, if necessary.* Please use the following format when saving your file: “Applicant Name – FY 2013 Exchange Network – 1<sup>st</sup> Submission” or “Applicant Name – FY 2013 Exchange Network – Back-up Submission.” If it becomes necessary to submit an amended package at a later date, the name of the 2<sup>nd</sup> submission should be changed to “Applicant Name – FY 2013 Exchange Network – 2<sup>nd</sup> Submission.”

Once your application package has been completed and saved, send it to your AOR for submission to U.S. EPA through grants.gov. Please advise your AOR to close all other software programs before attempting to submit the application package through grants.gov.

In the “Application Filing Name” box, your AOR should enter your organization’s name and the words, “FY 2013 Exchange Network.” The filing name should not exceed 40 characters (i.e., abbreviate where possible). From the “Grant Application Package” page, your AOR may submit the package by clicking the “Submit” button that appears at the top of the page. The AOR will then be asked to verify the agency and funding opportunity number for which the application package is submitted. If problems arise during the submission process, the AOR should reboot the computer before trying to submit the application package again. [It may be necessary to turn off the computer (not just restart it) or change computers before attempting to submit the package again.] If you continue to experience submission problems, the AOR may contact grants.gov for assistance at 1-800-518-4726 or email at <http://www.grants.gov/help/help.jsp> or call Salena Reynolds at 202-566-0466. You are encouraged to submit your application early, in case problems are encountered that result in delays.

## Suggested template for cover letter

*[Organizational Letterhead]*

Ms. Salena Reynolds  
U.S. Environmental Protection Agency  
Office of Environmental Information  
1200 Pennsylvania Ave., NW, Mail Code 2823-T  
Washington, DC 20460

Dear Ms. Reynolds:

I am pleased to submit the [state, tribe or territory name here] [Name of Department or Agency]'s application for a [**type of assistance:** grant, cooperative agreement, Performance Partnership Grant or Consolidated Grant amendment], entitled [project name], under the FY 2013 Exchange Network Grant Program. This application is seeking [dollar amount] in direct grants funding and [dollar amount of Funds] in in-kind support. We have ['no' or number of partners] formal partners in this grant application. [Our partners are: name partners].

[short narrative description of project including a statement of project goal(s)]

The contact for this grant application is:

Name and Title of Project Lead  
Name of Office or Division  
Name of Department or Agency  
Full Mailing Address  
Phone Number(s)  
Email address

If there are any questions, please feel free to call either myself or the contact named in this letter.

Sincerely,

**[Name/Title of Authorized Organizational Representative]**

Attachment

# Appendix E

## Sample Project Goals, Outputs, and Outcomes

### Goals

#### 1. Emissions Inventory System (EIS) & Greenhouse Gas (GHG) Data Flows

Freedonia DEP has been sending NEI data to EPA using the Exchange Network. However, as EPA moves to a new database, called the Emissions Inventory System, this data flow will need to be upgraded to meet the new schema, CERS.

Freedonia requires Title V facilities to provide Greenhouse Gas (GHG) data to the state, unless they are providing data directly to The Climate Registry (TCR). Currently three Freedonia companies have agreed to supply data to TCR. The remainder of the Title V facilities must supply GHG data to Freedonia DEP annually using the same online system as NEI data. This system is called the **Permitting and Air Reporting System of Freedonia (PARSOF)**.

##### 1.1. Map EIS & GHG data elements to the CERS XML Schema.

This includes detailed analysis and specifications for transferring data from PARSOF to CERS schema.

##### 1.2. Implement the **production EIS data flow**. This includes:

- Develop the Extract, Transform and Load (ETL) process to load PARSOF data to staging tables
- Develop an EIS node plug-in to transfer the data from the staging tables to XML
- Configure the node data flow
- Test the data flow and perform quality assessment

##### 1.3. Implement the **GHG data flow** to production.

Repeat step 1.2 with minor adaptations for GHG data.

##### 1.4. **Improve GIS Locations** for emission points from Title V facilities, including preparation of geospatial metadata for the Latitude/Longitude Data Standard and meeting EPA's minimum accuracy of 25 meters for most points. This will improve the accuracy of data in both EIS and GHG.

This includes obtaining and entering locations and stack parameters for approximately 9,500 emission points into the PARSOF database. Some of these data will need to be transformed from the Breeze modeling software, and some obtained from paper maps and checked against aerial photos. Also if time allows, other locations and associated web applications for environmental assessment/integration may be improved.

##### 1.5. **Add application module** to the Facility Explorer web application **to allow easy access to emission point locations** and associated data. This will be used to evaluate emission rates of surrounding major facilities within a given radius of a proposed construction project.

This is a required assessment under the Prevention of Significant Deterioration (PSD) permitting program.

Currently when a construction project is proposed, the applicant contacts DEP who then queries the database for nearby sites, and manually finds the emission point data for each site to send to the applicant. The proposed web application module will allow the applicant to run a simple query themselves, thus obtaining the data immediately, and completely eliminating the need for DEP staff to find data.

The proposed application module includes programming to load the emission point locations as sub-entities into Freedonia's Environmental Facilities Database (EFD) warehouse, request the search, do the GIS query, retrieve needed report data from EFD and PARSONS, and build the report using SQL Reporting Services. The report will include:

- **facility** name, address, and plant ID;
- permitted or potential facility-wide **emission rates** in tons per year for: SO<sub>2</sub>, NO<sub>x</sub>, CO, Pb, PM<sub>10</sub>, and (if available) PM<sub>2.5</sub>;
- a list of **emission point locations** with XY coordinates in UTM;
- permitted or potential **emission rates** and the most recent two years of actual emissions for each emission point for: SO<sub>2</sub>, NO<sub>x</sub>, CO, Pb, PM<sub>10</sub>, and (if available) PM<sub>2.5</sub>; and
- **stack parameters**, including stack ID, height, diameter, temperature, flow rate, emission point type, bypass stack (Y/N), and obstructed (Y/N).

## 2. Water Quality Exchange (WQX) Flow

The replacement database for STORET, AWQMS (Ambient Water Quality Management System) is being developed by several states and Region 8, including Illinois, Minnesota, Utah, the National Park Service, and possibly Alaska. Freedonia is planning to implement this database to replace Freedonia STORET as the state database.

- 2.1. **Map** the data elements to the XML Schema. This includes detailed analysis and specifications for transferring data from the state database to WQX schema.
- 2.2. **Implement** the data flow to CDX (EPA's Node). This includes:
  - adapt the 4.1 WQX Windsor node plug-in to transfer the data from the state database to XML;
  - set up and configure the node; and
  - test the data flow and perform quality assessment.
- 2.3. **Document the flow implementation** for use by other states using AWQMS and the same type of Node. Illinois and Minnesota use a Windsor .NET node. Other agencies have also mentioned the possibility of using the Windsor Node by the time this is implemented. Freedonia DEP will develop the documentation and provide any applicable code to these other agencies for streamlined implementation.
- 2.4. Publish a **web service** which will allow applications to pull water quality monitoring data. This web service will allow applications to query water quality monitoring data from the

state’s database. Initial plans are for at least two staging tables which can be populated using an automated DTS/SSIS or other script.

At a minimum, the staging tables should include the following elements and any other required elements in the WQX schema.

The output will be in WQX standard XML and include all elements in the staging tables. This grant will focus on making this work with Freedomia data. However, this can be extended later in two ways:

- add data to Freedomia’s staging tables from other sources, such as USGS, the Freedomia Pesticide Monitoring database (FPEST), and raw water samples from the Safe Drinking Water Information System (SDWIS). This will allow applications to pull easily pull monitoring data from a variety of sources; or
- share the code and documentation with other states using AWQMS.

**Figure E-1: Goals, Outputs, Target Dates, and Outcomes**

Goal	Output	Target Date <sup>1</sup>	Outcome
EIS & GHG Data Flows	1.1 CERS data mapped to XML schema	Jan. 1, 2014	Increased availability of timely, high quality data to other Exchange Network partners will improve environmental decision-making.
	1.2 EIS flow to EPA becomes operational	June 1, 2014	
	1.3 GHG flow to EPA becomes operational <sup>2</sup>	Dec. 31, 2014	
	1.4 Improve GIS locations & geospatial metadata for air release points <sup>3</sup>	Sept. 30, 2015	
	1.5 Add Assessment Module <sup>3</sup> to evaluate air emissions near new construction projects	Mar. 31, 2016	
WQX <sup>4</sup>	2.1 Data mapped to XML schema <sup>2</sup>	Mar. 31, 2014	Increased availability of data to other Exchange Network partners Electronic availability of standardized, timely, high quality data over the Exchange Network will improve the analysis of water quality monitoring data and lead to better decision-making.
	2.2 Implement WQX Flow <sup>3</sup>	Sept. 30, 2014	
	2.3 Written documentation of implementing WQX with multi-state AWQMS database	Jan. 31, 2015	
	2.4 Publish web service	Sept. 30, 2015	

<sup>1</sup> Estimated Grant Period: October 1, 2013 through Sept. 30, 2016. If DEP is notified of the grant award by August 1or before, dates will be shifted so they fall within the grant period.

<sup>2</sup>These tasks also accomplish the following intermediate outcome:

- **Improved business processes** that facilitate **burden reduction** on the regulated community.

<sup>3</sup>These tasks also accomplish the following two intermediate outcomes:

- **Increased speed and timeliness of data exchange** by allowing data exchanges to happen more frequently, thereby decreasing the lag between partner systems;
- **Increased efficiency** of data exchange by reducing administrative burden, including reducing or eliminating manual intervention for tasks such as scheduling, resubmissions, or security.

<sup>4</sup>This goal also accomplishes the following intermediate outcomes.

- Economies of scale through shared infrastructure to achieve **reduced costs and expanded functionality**.

Please see our attached Detailed Budget which links expected investments under this agreement to each goal to support and complete the proposed work referenced in this Narrative.

# Appendix F

## Contracts and Subawards

### **Can funding be used for the applicant to make subawards acquire contract services or fund partnerships?**

EPA awards funds to one eligible applicant as the recipient even if other eligible applicants are named as partners or co-applicants or members of a coalition or consortium. The recipient is accountable to EPA for the proper expenditure of funds.

Funding may be used to provide subgrants or subawards of financial assistance, which includes using subawards or subgrants to fund partnerships, provided the recipient complies with applicable requirements for subawards or subgrants including those contained in 40 [CFR](#) Parts 30 or 31, as appropriate. Applicants must compete contracts for services and products, including consultant contracts, and conduct cost and price analyses to the extent required by the procurement provisions of the regulations at 40 CFR Parts 30 or 31, as appropriate. The regulations also contain limitations on consultant compensation. Applicants are not required to identify subawardees/subgrantees and/or contractors (including consultants) in their application. However, if they do, the fact that an applicant selected for award has named a specific subawardee/subgrantee, contractor, or consultant in the application EPA selects for funding does not relieve the applicant of its obligations to comply with subaward/subgrant and/or competitive procurement requirements as appropriate. Please note that applicants may not award sole source contracts to consulting, engineering or other firms assisting applicants with the application solely based on the firm's role in preparing the application.

Successful applicants cannot use subgrants or subawards to avoid requirements in EPA grant regulations for competitive procurement by using these instruments to acquire commercial services or products from for-profit organizations to carry out its assistance agreement. The nature of the transaction between the recipient and the subawardee or subgrantee must be consistent with the standards for distinguishing between vendor transactions and subrecipient assistance under Subpart B Section .210 of [OMB Circular A-133](#) , and the definitions of subaward at 40 CFR 30.2(ff) or subgrant at 40 CFR 31.3, as applicable. EPA will not be a party to these transactions. Applicants acquiring commercial goods or services must comply with the competitive procurement standards in 40 CFR Part 30 or 40 CFR Part 31.36 and cannot use a subaward/subgrant as the funding mechanism.

### **How will an applicant's proposed subawardees/subgrantees and contractors be considered during the evaluation process described in Section V of the announcement?**

Section V of the announcement describes the evaluation criteria and evaluation process that will be used by EPA to make selections under this announcement. During this evaluation, except for those criteria that relate to the applicant's own qualifications, past performance, and reporting



history, the review panel will consider, if appropriate and relevant, the qualifications, expertise, and experience of:

(i) an applicant's named subawardees/subgrantees identified in the application if the applicant demonstrates in the application that if it receives an award that the subaward/subgrant will be properly awarded consistent with the applicable regulations in 40 CFR Parts 30 or 31. For example, applicants must not use subawards/subgrants to obtain commercial services or products from for profit firms or individual consultants.

(ii) an applicant's named contractor(s), including consultants, identified in the application if the applicant demonstrates in its application that the contractor(s) was selected in compliance with the competitive Procurement Standards in 40 CFR Part 30 or 40 CFR 31.36 as appropriate. For example, an applicant must demonstrate that it selected the contractor(s) competitively or that a proper non-competitive sole-source award consistent with the regulations will be made to the contractor(s), that efforts were made to provide small and disadvantaged businesses with opportunities to compete, and that some form of cost or price analysis was conducted. EPA may not accept sole source justifications for contracts for services or products that are otherwise readily available in the commercial marketplace.

EPA will not consider the qualifications, experience, and expertise of named subawardees/subgrantees and/or named contractor(s) during the application evaluation process unless the applicant complies with these requirements.

# Appendix G

## Checklist of Documents to Submit

The following documents are required under this Solicitation Notice and constitute the full application to EPA for assistance agreement funding. Fillable forms can be obtained from <http://www.epa.gov/ogd/AppKit/application.htm>). All applicable forms and documents must be submitted and validated within grants.gov, postmarked, or delivered by an overnight courier service **at or before 11:59pm on November 9, 2012**. To confirm applicant eligibility and/or applicability of any of the listed forms or documents below, please contact Salena Reynolds at (202) 566-0466 or [reynolds.salena@epa.gov](mailto:reynolds.salena@epa.gov).

- Standard Form 424, “Applications for Federal Assistance”
- Standard Form 424A, “Budget Information for Non Construction Programs”
- Standard Form 424B, “Assurances for Non Construction Programs”
- Certification Regarding Lobbying Form
- Standard Form 5700-54, “Key Contacts Form”
- EPA Form 4700-4, “Preaward Compliance Review Report”
- Project Narrative
  - No more than 10-pages, single-spaced.
  - Must address Evaluation Criteria [Section V-A] and link activities to results/outcomes.
  - Must include short statement of Business Need.
- Detailed Itemized Budget
  - Describe both total project budget and the costs associated with each major goal.
  - If budget includes indirect costs, an approved IDC Agreement is required.
- Standard Form LLL, “Disclosure of Lobbying Activities”, if applicable
- Negotiated Indirect Cost Agreement, if applicable
- Programmatic Resources and Personnel
- Cover Letter
  - Recipient Information
  - Project Title
  - Type of Assistance Vehicle identified [Section II-B]
  - Partners, if applicable [Section III-C]
  - Brief Project Summary
  - Contact Information for Project Lead
  - Signature of Executive as Authorized Organizational Representative
- Exchange Network Implementation Plan Form (for states only) [Section III-B-4]
- Description of Inter-Tribal Consortium Eligibility, if applicable
- Formal Project Partners, if applicable
  - Project Narrative [above] details roles and responsibilities of lead and partners in carrying out each project goal.
  - If lead will distribute funding to partners, describe methodology or state no distribution.
  - Letters of support and intent included from all proposed partners.
- List of Federally and/or Non-federally Funded Assistance Agreements

# Appendix H

## Sample Implementation Plan Form

### State Exchange Network Grant Application Implementation Plan Form

EN Data Exchange	Delegated to Implement Program	Current Status of Reporting Using the EN	Reporting, Please Enter Date of Most Recent Report	If Planning to Start or Restart Reporting -- Expected Date	If Not Planning to Start or Restart, Please Provide a Brief Rationale
Water Quality Exchange	YES	REPORTING	09/12/11		
Safe Drinking Water Information Systems	NO				
Underground Injection Control	YES	DO NOT PLAN TO START			Do not have enough sites to make automated reporting cost effective
Beach Notification	NO				
ICIS-NPDES	YES	REPORTING	03/15/12		
Air Quality System	YES	PLAN TO START		12/30/12	
Emissions Inventory System	YES	REPORTING	03/31/12		
RCRAinfo	YES	STOPPED - DO NOT PLAN TO RESTART			Will use outbound services when available
Facilities - FRS	YES	REPORTING	12/31/12		
Toxic Release Inventory	NO				

<b>U.S. ENVIRONMENTAL PROTECTION AGENCY</b> <b>Quality Assurance Reporting Form</b> <b>for Use by Recipients of Assistance Agreements</b>				
<b>Recipient Organization:</b>		<b>EPA Award Number:</b>		
<b>Name:</b>		<b>Project/Program Period(starting and ending dates, mm/dd/yyyy):</b>		
<b>Address:</b>				
<b>Activity Group:</b> <input type="checkbox"/> Infrastructure Development <input type="checkbox"/> Planning, Mentoring, and Training <small>(check all that apply)</small> <input type="checkbox"/> Data Exchange, Analysis and Integration <input type="checkbox"/> Challenge				
Goal	Task	Output	Outcome	Quality Assurance Measures
<b>Instructions:</b> - Please submit electronically to your project officer within 90 days of award. - For Quality Assurance Measures, please refer to current Solicitation Notice for Quality Assurance Guidelines. - For Goals, please refer to goals outlined in your assistance agreement work plan.				
<b>Paperwork Reduction Act (PRA) Burden Statement:</b> The public reporting and recordkeeping burden for this collection of information is estimated to average one hour per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.				

# Appendix J

## Reusability: RCS and ENDS

### What is Reusability?

Reusability, as related to the Exchange Network and the grants, has a broad definition. It could mean exact reuse, such as employing a widget or mobile application as developed and available, or simply discovering similar tools that are out there and perhaps seeking best practices therein. It is difficult to deem an asset reusable or not because reusability is only limited by the willingness and creativity of its developers and users.

Some examples of reusability include:

- using components of an existing CROMERR compliant tool to develop your own tool that is CROMERR compliant
- modifying existing java code to perform a similar function
- learning best practices in the development of your new REST web service from someone who has developed similar web services
- pooling resources to develop a software tool that will benefit multiple states
- using existing web services to authenticate access to CDX instead of developing your own

### Benefits of Reusability

- Cost: adapting and integrating costs less than building. Saves taxpayer dollars
- Speed: faster than building from scratch. Reusable assets have been implemented before and comply with requirements and security restraints
- Quality: reuse leads to the discovery and correction of defects and overall product improvement
- Environmental: reusing tools and building tools for future reuse saves resources

### Tips for Creating Reusable Tools

The extent to which a resource is considered reusable varies widely. However, when developing a new resource, there are certain principles one can follow to make the resource more available for reuse:

- the resource and its architecture have comprehensive documentation
- the resource is ‘portable’ in that it does not rely heavily on a specific hardware or technology
- the resource is flexible and can perform multiple functions
- the resource is compliant with existing standards
- the resource is reliable and free of defects

*Please visit [www.epa.gov/rcs](http://www.epa.gov/rcs) to begin searching for reusable resources.*