High Priority Chemicals Data System & Data Flow

Request for Proposals (RfP)

INTERSTATE CHEMICALS

IC₂

CLEARINGHOUSE

A Program of
The Northeast Waste Management Officials' Association
(NEWMOA)

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1   List of Acronyms and Abbreviations

AQB	Advanced Query Builder
CASRN	Chemical Abstracts Service Registry Number
CDX	Central Data Exchange
CHCC	Chemicals of High Concern to Children
COTS	Commercial off-the-shelf
CSPA	Washington Children's Safe Products Act
DET	Data Exchange Template
Ecology	Washington Department of Ecology
ENDS	Exchange Network Discovery Services
EPA	U.S. Environmental Protection Agency
FCD	Flow Configuration Document
HPC	High Priority Chemicals
HPCCCH	High Priority Chemicals of Concern for Children's Health
HPCDS	High Priority Chemicals Data System
HTML	Hypertext Markup Language
IC2	Interstate Chemicals Clearinghouse
JSON	JavaScript Object Notation
NEIEN	National Environmental Information Exchange Network
NEWMOA	Northeast Waste Management Officials' Association
NGO	Non-Governmental Organization
OHA	Oregon Health Authority
REST	Representational State Transfer
RfP	Request for Proposals
TFKA	Oregon Toxic-Free Kids Act
TPA	Trading Partner Agreement
TSCA	Toxic Substances Control Act
VDH	Vermont Department of Health
XML	Extensible Markup Language

2   Background

2.1   State Chemical-Use Disclosure Laws

American consumers have access to millions of different products, and product manufacturers have done a remarkable job of developing products to satisfy consumers' needs and desires. In doing so, manufacturers draw on thousands of available chemicals with a vast number of performance properties. Researchers, health advocates, consumers, retailers, manufacturers, and state officials are paying increasing attention to the potential health effects of chemicals regulated under the federal Toxic Substances Control Act (TSCA) and by many states. These programs and their stakeholders have identified certain chemicals and chemical groups as being of particular concern. However, identifying the ingredients used in consumer products is difficult without laws that require ingredient disclosure. To help fill this gap, Maine, Oregon, Vermont, and Washington have enacted laws that:

- Require identification of chemicals of concern that have the potential to impact health

- Require manufacturers of certain classes of products (such as those used by children) to disclose whether they contain these chemicals of concern

Similar laws have been introduced in Connecticut, Massachusetts, Minnesota, and New York. California has a Safer Consumer Products Program which could, for a much more limited set of product types, generate information of a related nature.

To implement the Washington State Children's Safe Products Act (CSPA – RCW 70.240), the Washington State Department of Ecology (Ecology), in consultation with the Washington State Department of Health, developed a list of 66 Chemicals of High Concern to Children (CHCC) on which manufacturers must report (CHCCs are listed in the CSPA Reporting Rule -WAC 173-333-130). Ecology adopted rules to detail the process for manufacturer reporting on the use of these chemicals in children's products in 2011 and launched an online CSPA Reporting Application in 2012. In September 2017, Ecology updated the Children's Safe Products Reporting Rule to add 20 chemicals, remove 3 chemicals, and separate one chemical group into three individual listings. To date, approximately 700 companies have registered to use the CSPA Reporting Application, with approximately 300 companies submitting reports. The CSPA database contains approximately 9,300 reports comprising 55,000 records (i.e., chemical/brick combination) of CHCCs in children's products. Traffic to Ecology's webpages that provide access to published data is 100 to 200 users/sessions per month.

Vermont's Act 188, Relating to the Regulation of Toxic Substances, enacted in 2014, established a similar reporting protocol for manufacturers that use chemicals designated by the State as Chemicals of High Concern to Children in children's products. "Chemical of High Concern to Children" (CHCC) means a chemical listed under 18 V.S.A. chapter 38A § 1773 or designated by the Department of Health as a chemical of high concern by rule under §1776 of this title. Vermont adopted Washington's list of CHCCs and has proposed rule updates that would add 20 and remove 1 chemical from the list. The Vermont Department of Health (VDH) developed a Chemical Disclosure Program Online Reporting System that went online in July 2016. Vermont's first reporting deadline was January 1, 2017. To date, approximately 150 companies have registered to use Vermont's reporting system, and Vermont has received approximately 1,000 separate reports comprising nearly 6,000 unique

chemical-product combinations. Unlike Washington or Oregon, Vermont also requires manufacturers to report at the product model level (versus the more general product category or "brick" level), Vermont has received approximately 4.2 million such records, submitted via spreadsheets uploaded through Vermont's online reporting system.

In 2015, the Oregon Legislature passed SB 478 (Oregon Laws 2015, chapter 786), better known as the Toxic-Free Kids Act (TFKA). This law requires the Oregon Health Authority (OHA) to maintain a list of "high priority chemicals of concern for children's health" (HPCCCHs) used in children's products. Beginning on January 1, 2018 and biennially thereafter, manufacturers of children's products sold in Oregon must submit information to OHA about their products that contain these chemicals. The TFKA mandates that OHA adopt Ecology's CHCC list when identifying HPCs for Oregon; thus, Oregon adopted Ecology's 66 CHCCs, as listed in 2015.

While many aspects of Oregon's, Vermont's, and Washington's laws are substantially similar, there are also important differences, including reporting frequency, assessment and payment of reporting fees, classes of products subject to reporting, the amount of product detail that must be reported, and treatment of information claimed by reporters as confidential business information (CBI). In addition, the individual state CHCC lists may diverge over time as each state adds and removes listed chemicals, as Washington did in September 2017.

The scale of collecting information on chemicals in a wide array of products from hundreds of manufacturers makes implementation of reporting programs challenging for the states and the regulated community alike. However, a single reporting portal would have many advantages, including:

- Greater efficiency and cost effectiveness for participating state agencies

- Decreased reporting burden and better services for the regulated universe

- Increased opportunities for interstate involvement in data analysis and presentation

- Improved access for federal, state, and non-governmental stakeholders to robust data

- Coordinated sharing of information with the public

2.2   The Interstate Chemicals Clearinghouse (IC2)

Under the Toxic-Free Kids Act, OHA is given authority to write rules establishing a process by which manufacturers may submit this information to the Interstate Chemicals Clearinghouse (IC2). Oregon and 10 other states formed the IC2 in 2010 to fulfill this and other roles. Today, the IC2 is an association of 15 state and local government agencies and 14 non-governmental organizations, businesses, and academic centers that promotes a clean environment, healthy communities, and a vital economy through the development and use of safer chemicals and products. The IC2's goals are to:

- Avoid duplication and enhance efficiency and effectiveness of agency initiatives on chemicals through collaboration and coordination

- Build governmental capacity to identify and promote safer chemicals and products

- Ensure that agencies, businesses, and the public have ready access to high-quality and authoritative chemicals data, information, and assessment methods

IC2's purpose is to serve states and other stakeholders across the U.S. It is a program of the Northeast Waste Management Officials' Association (NEWMOA), which provides management and staff support and serves as its fiscal agent.

The IC2 Board of Directors oversees its programs and activities, conducts strategic planning, sets priorities and budgets, establishes the Clearinghouse's annual workplan, and manages other critical matters affecting the IC2. The IC2 Council includes representatives of the IC2 Members and Supporting Member organizations and provides a forum for collaboration and sharing of professional advice. IC2 workgroups generally implement and manage the IC2's functions and activities. The Database Workgroup assesses IC2 members' chemical data needs and priorities and develops information systems to address those priorities and includes representatives of the:

- California Department of Toxic Substances Control
- California Office of Environmental Health Hazard Assessment
- Citizens' Environmental Coalition
- Clean and Healthy New York
- Clean Production Action
- Lowell Center for Sustainable Production
- Massachusetts Department of Environmental Protection
- Massachusetts Office of Technical Assistance and Technology
- Massachusetts Toxics Use Reduction Institute
- Minnesota Department of Health
- Minnesota Pollution Control Agency
- New York State Department of Environmental Protection
- Oregon Department of Environmental Quality
- Oregon Health Authority
- Oregon Metro Regional Government
- Vermont Department of Health
- Walmart
- Washington Department of Ecology

OHA submitted a grant application to the U.S. Environmental Protection Agency's (EPA) National Environmental Information Exchange Network (NEIEN) in partnership with NEWMOA (on behalf of the IC2) and the Washington State Department of Ecology. The purpose of the grant is to fund the development of a High Priority Chemicals Data System (HPCDS) to meet the reporting needs of the states of Oregon, Washington, and Vermont and establish an Exchange Network data flow. The IC2 Database Workgroup is overseeing the creation of this multi-state HPCDS and data flow. The IC2 Database Workgroup will help define the requirements of the new System and will be involved in beta testing but will not participate in the day-to-day management of the project.

The Database Workgroup will consult the IC2 Board of Directors regarding the selection of an IT Contractor to build, deploy, and host the HPCDS, as described below. If there is a

dispute or issue that cannot be resolved by the IC2 Board, it will consult the NEWMOA Board of Directors for a final decision.

Once the grant was awarded, OHA entered into an agreement with NEWMOA. As part of its responsibilities, NEWMOA/IC2 is issuing this RfP and will execute a contract with the firm selected to develop and deploy the System and data flow.

The IC2's HPC Data System will set the standard for reporting of chemicals-in-products data and create the framework for additional states to implement similar reporting programs at greatly reduced cost. Product manufacturers and distributors will benefit from a reduced burden through "one-stop" reporting that satisfies multiple state requirements. Compared with independent systems in multiple states, a single system is likely to result in fewer reporting errors and inconsistencies and thus a higher-quality dataset. A shared system will also remove the need for other states to build and maintain their own systems. Ultimately, the system (including a flexible, Web-based search interface) will provide ready public access to this data, allowing perspectives on the presence of chemicals of concern in products nationally. Analyses of these data could drive development of more effective chemicals policy and lead to reductions in exposures to chemicals of concern, with resultant benefits to human and ecological health, including reduced potential risk, health care costs, and preservation of valuable ecosystem services. Finally, a national dataset of this type could help reveal insights regarding the movement of chemicals through manufacturing supply chains.

NEWMOA seeks a contractor to support its IC2 HPC Data System and Data Flow Project to:

1. Develop a Web-based data system (collectively, the "System") through which

   a. Product manufacturers, retailers, and related entities can submit data on chemicals in products to states (the "Reporting System")

   b. NEWMOA and participating state agency staff can administer the data system (the "Admin System")

2. Establish a presence on the EPA Exchange Network through a virtual node and create an Exchange Network data flow

3. Publish data through a RESTful web service

4. If possible within the project budget, create an interface (the "advanced query builder", or "AQB") to allow external users to easily query the database and download data in several common data formats—e.g., XML, HTML, tab-delimited, and Excel

To aid in proposal preparation, available documentation on states' online reporting systems and database schema are available to potential vendors upon request.

3   Proposal Guidelines

NEWMOA/IC2 seeks competitive bids to address the proposal guidelines and scope of work defined in this document. Applicants may propose solutions that use third-party off-the-shelf software, but the cost to purchase these products must be included in the price proposal.

NEWMOA/IC2 will conduct a best value evaluation for this IT investment. NEWMOA will consider as part of the best value evaluation all possible solutions, including open standards-compliant, open-source, proprietary software as well as open standards-compliant, public-sector code sharing at the local, state, and federal levels. This evaluation will also consider, at a minimum, total cost of ownership over the entire period the IT solution is required; how it delivers identified business requirements; reliability, performance, scalability, security, and maintenance requirements; legal risks; ease of customization; and ease of migration.

3.1   Critical Dates

The project's deadlines are driven by the NEIEN grant schedule and by the next state reporting deadline: the NEIEN grant period of performance ends on September 30, 2019, and Washington's next CSPA reporting deadline is January 31, 2019. (Although it is not essential that the HPCDS is online in time to meet Washington's reporting deadline, it would be ideal.)

Activity	Date and Time Due
RfP posted	March 26, 2018
Vendor conference	April 2, 2018
Vendors' questions due	April 6, 2018
NEWMOA responses to questions	April 10, 2018
Proposals and bids due	May 9, 2018
Finalist interviews	May 24, 2018
Vendor selected	June 7, 2018
Project begins	Upon contract execution (Target: June 21, 2018)
Kick-off meeting	July 6, 2018
Deploy the Reporting System	February 16, 2019
Implement flow of reported data to EPA and states	August 15, 2019
Deploy public-facing advanced query builder (AQB)	TBD (optional task)
Project complete	August 31, 2019

3.1.1   Vendor Conference

NEWMOA will hold a conference to provide vendors with an opportunity to present questions arising from this RfP. It will be held on Monday, April 2, 2018, from 1:00 to 3:00 PM EDT at NEWMOA's office in Boston (complete address below). Please visit http://theic2.org/hpcds for directions.

Vendors unable to attend the conference in person can participate via conference call. Please inform NEWMOA of your interest in participating in the vendor conference in person or by phone.

3.2   RfP Communications and Questions

All questions about this document must be addressed in writing and submitted via e-mail, USPS, or fax to NEWMOA by Friday, April 6, 2018 at 5:00 PM EDT. The vendor is responsible for confirming receipt of all enquiries. Written enquiries should not contain pricing information. All questions should be addressed to:

Topher Buck
IC2 Project Manager
Northeast Waste Management Officials' Association
89 South Street, Suite 600
Boston, MA 02111
tbuck@newmoa.org
Fax: 617-367-0449

All communications, responses, and documentation must be in English; all bids must be in U.S. dollars.

Vendors are prohibited from direct communication with any NEWMOA employee or participating state agency employees about the RfP, except the official contact, Topher Buck, identified above. No other NEWMOA employee or representative may provide any information or respond to any questions about this RfP, unless charged to do so by the official contact. NEWMOA will post all vendor questions (without attribution) and responses on the IC2 website as quickly as possible.

3.3   Proposal Submission

Please submit one (1) original electronic copy and five (5) paper copies of the proposal before Wednesday, May 9, 2018 at 5:00 PM EDT. Proposals received after the deadline will not be considered. The electronic copy must be submitted with the paper copies on USB data stick, CD-R, or DVD-R in searchable format (e.g., Microsoft Word, searchable PDF). E-mail submissions will not receive consideration. The pricing proposal must be sealed and separate from the technical proposal.

NEWMOA requests that the originals and copies be printed double-sided on recycled paper and encourages applicants to use products containing post-consumer or easily recyclable material. Unnecessary samples, attachments, or documents not specifically requested in the RfP should not be submitted. This saves paper and encourages concise proposals.

Send proposals to:

Topher Buck
IC2 Project Manager
Northeast Waste Management Officials' Association
89 South Street, Suite 600
Boston, MA 02111

All submissions in response to this RfP are considered public documents, and any statements that reserve confidentiality or privacy rights in submitted responses will be void and disregarded.

At NEWMOA's sole discretion, an applicant may be disqualified from this solicitation if they:

- Choose not to respond
- Fail to submit a proposal by the given deadline
- Submit an incomplete proposal
- Do not submit the pricing/cost information in a separate, sealed envelope

3.4   Proposal Conditions

The vendor's proposal and cost information must remain in effect for at least 60 calendar days from the deadline for submission.

This RfP may be modified or withdrawn at any time at NEWMOA's discretion.

If, in NEWMOA's opinion, none of the vendor proposals is acceptable, then NEWMOA may decide to reject all vendors.

By the issuance of this RfP, NEWMOA is not obligated to award a contract.

NEWMOA reserves the right to amend the contents of this RfP—including critical dates—during the quote solicitation, evaluation, and selection process. Any changes will be communicated to vendors in writing via e-mail or fax.

3.5   Contract Term

The contract will run from time of signature until the completion date, estimated to be August 31, 2019.

3.6   Subcontractor(s)

NEWMOA requires a single point of contact resulting from this RfP. The selected vendor (the Contractor) must accept full responsibility for any subcontractor's performance. The Contractor must provide a list of all subcontractors that are part of the Contractor's team; a description of each subcontractor's responsibilities; and signed letters of agreement between the Contractor, as the Prime Contractor, and its subcontractor(s) identifying their responsibilities and their relationship to the Prime Contractor. The Contractor must notify NEWMOA of any subcontractor changes, additions, or deletions throughout the term of the contract. NEWMOA has the right to reject any subcontractor.

The Contractor shall be responsible for meeting all the terms of any contract resulting from this RfP.

3.7   Contractual Obligations

The selected vendor (the Contractor) will assign to NEWMOA, as of the date on which NEWMOA reimburses the Contractor for such deliverables, all intellectual property rights that it may possess related to deliverables and all derivative works thereof. The Contractor will also agree to execute all documents and take all actions that may be necessary to confirm such rights, including providing any code used exclusively to develop deliverables for NEWMOA and the documentation for such code.

The Contractor shall comply with all grant conditions in the federal grant award from EPA to OHA (EPA grant number OS-83640001, dated September 1, 2016) and all terms and conditions in Grant Agreement 152342 between the Oregon Health Authority and NEWMOA, dated February 22, 2018.

3.8   Third-Party Software

The Contractor must warrant to NEWMOA that it has obtained all rights, grants, assignments, conveyances, licenses, permissions, and authorizations necessary or incidental to any materials owned by third parties supplied or specified by it for incorporation in the

IC2 HPC Data System and Data Flow Project. Said rights, grants, assignments, conveyances, licenses, permissions, and authorizations necessary or incidental to any materials owned by third parties supplied or specified by it for incorporation in the IC2 HPC Data System and Data Flow Project must be transferred to NEWMOA at the completion of the project.

3.9   Web Accessibility Requirements

NEWMOA shall enter into an agreement with the Contractor that includes contract language related to meeting Accessibility Standards. Work under this project will be subject to the Section 508 Standards for Electronic and Information Technology Accessibility (36 C.F.R. §1194, issued under Section 508 of the Rehabilitation Act of 1973), including the 1998 amendments (29 U.S.C. § 794(d), "the Federal Accessibility Requirements"), and the Final Rule published on January 18, 2017 (collectively, the "Section 508 Standards"). The Contractor must meet Web accessibility standards for all custom developed software as well as commercial off-the-shelf (COTS) products. The contract language for custom software that will be incorporated into the Statement of Work agreement includes the following:

Compliance with Standards

The Contractor shall ensure that all deliverables that are part of the finished HPCDS, including help files, under this agreement adhere to the Section 508 Standards for Electronic and Information Technology Accessibility, 36 C.F.R. §1194, issued under Section 508 of the Rehabilitation Act of 1973, as amended (29 U.S.C. § 794(d)) (the "Section 508 Standards") and the Final Rule. The Section 508 Standards may be modified from time to time, and the Contractor is responsible for compliance with the version that is current as of the execution date of this Agreement.

3.10   Vendor Response Costs

All vendor pre-contract costs, including—but not limited to—proposal preparation and presentation, system demonstrations, documentation, site visits, briefings, debriefings, and negotiation meetings are entirely the responsibility of the vendor and shall not be chargeable in any manner to NEWMOA.

3.11   Communications

The Contractor shall submit monthly progress reports to NEWMOA within one week of the end of each month. All proposed Scopes of Work must include a mechanism for monthly progress reporting. These updates must include a summary of costs incurred per task, with supporting documents that detail specific project costs during the invoicing period and a description of tasks initiated, tasks completed, and tasks planned for the next reporting/invoicing period.

In addition to monthly project updates, the Contractor shall interact with the IC2 Project Manager via e-mail or telephone at least once every two weeks to discuss progress and coordinate on activities and outcomes described in the project Statement of Work and contract.

NEWMOA requires a single point of contact for communication with the Contractor during the project.

Unless otherwise delegated in writing, required communications and notices to NEWMOA shall be directed to the IC2 Project Manager.

3.12 Terms of Payment

Monthly project updates, as described above, will be required in support of invoicing.

NEWMOA also requires a final project report in support of the final invoice. This final invoice will represent 10 percent of the total project cost. NEWMOA will withhold payment of the final invoice until the Contractor has submitted all deliverables and reports to the satisfaction of the IC2 Project Manager. In the final project report, the Contractor shall briefly describe the completed project, summarize the findings of the Contractor, and describe any problems experienced, along with their resolutions. The Contractor shall submit a final report to NEWMOA, including a summary of project results and financial statement indicating total project expenditures over the project period, within 15 days of the project end date.

Deliverables submitted for acceptance will be reviewed and either responded to with feedback or accepted within ten (10) business days, unless otherwise stated by NEWMOA at the time of submission.

3.13 Warranty

The Contractor will be required to provide a warranty of one year on the entire system/application at no additional cost to NEWMOA. The warranty will cover all work completed by the Contractor, without modification by NEWMOA technical staff, per the terms and conditions of a signed contract.

3.14 Public Documents

Vendor proposals become public documents. If requested, NEWMOA will share all vendor proposals. Anyone who requests copies of vendor proposals will be charged a reasonable administrative and duplication fee for all materials requested.

4   Technical Requirements

NEWMOA will select a single vendor that will perform the tasks described below in the statement of work section. Vendors are encouraged to identify additional tasks, milestones, and deliverables as appropriate. The target dates for Key Deliverables are listed below. Vendors are encouraged to develop project plans to meet this project schedule, recognizing that dates for individual milestones may vary.

Due Date	Key Deliverables
August 15, 2018	Completed requirements and system design documents (including requirements for data publishing through a public-facing interface that allows users to query the database and download results)
August 15, 2018	Trading Partner Agreements (TPA) with EPA programs and states, as appropriate
September 15, 2018	Gap analysis report and recommendations

Due Date	Key Deliverables
November 1, 2018	Alpha version of the Reporting and Admin System, along with an efficient bug-tracking system through which NEWMOA/IC2 staff can submit bug reports
November 15, 2018	Beta version of the Reporting and Admin system
December 15, 2018	Import of Ecology's and OHA's existing data, QA of data import, and move data into production 1. Document(s) mapping Ecology's CSPA data and OHA's TFKA data to the System database 2. Ecology's CSPA data and OHA's TFKA data held in System, with IT Developer and Ecology and OHA QA/QC reviews complete **Optional:** Import of Vermont Department of Health's existing data
February 15, 2019	Complete Reporting and Admin Systems, free of critical bugs
February 16, 2019	Deploy the Reporting System: complete Reporting and Admin Systems in production
March 15, 2019	Defined REST URL structure and formatting standards
July 15, 2019	A RESTful web service in conformance with the Exchange Network REST Guidance
August 30, 2019	REST Service registered with the Exchange Network Discovery Services (ENDS)
May 22, 2019	A virtual node presence established on an existing, hosted Exchange Network node
March 15, 2019	Develop XML schema for HPCDS data flow
May 15, 2019	Successful Exchange Network review of XML schema
June 15, 2019	A node plugin to flow data from the IC2 database to the virtual node
July 15, 2019	Data from staging tables converted into XML. The XML payload generated or processed and transmitted to the virtual node.
August 15, 2019	Data flow authenticated with the Exchange Network Central Data Exchange (CDX)

Due Date	Key Deliverables
To be determined	**Optional:** Public-facing advanced query builder (AQB) for data publishing in production
To be determined	**Optional:** A set of defined reports, including reports to show trends in frequency of reported chemicals
To be determined	**Optional:** A mobile-ready web application deployed on the IC2 website
August 31, 2019	Project complete

4.1   Statement of Work

4.1.1   Create a shared, interstate data system for reporting by manufacturers of chemicals-in-products data

The IC2 has begun to document functional requirements for the HPCDS. Documents developed to date include a draft data dictionary and outline of business processes that the System will support. The business processes will also describe how the IC2 staff, regulated community, and participating state agency staff will interact with the System. The Contractor will work with NEWMOA's IC2 Project Manager and the IC2 Database Workgroup to document the IC2's requirements and the System design, from which they will then develop and implement the Reporting System. (Note that "IC2 Project Manager" and "NEWMOA Project Manager" may be used interchangeably in this RfP.)

The Contractor will evaluate whether Ecology's code can be used as the basis for the HPCDS. If the Contractor finds that this is the case, it may allow them to produce the desired system more quickly, inexpensively, or both. The CSPA Reporting Application is a 3-tier ASP.NET Web Forms application targeting .NET Framework 4.6.1 written in C# with a SQL Server 2014 database backend. All create, update, and delete operations are performed by parameterized stored procedures.

IC2 staff and Database Workgroup and possibly other members will assist with testing of the reporting and administrative features prior to releasing the application.

4.1.1.1   *Gather and document system requirements*

The scope of Reporting System requirements includes product manufacturer (reporter) business processes, including identification of entities and users within the System, entities authorized to report on behalf of other entities, reporting frequency, reporting fees, review and approval of submitted data by IC2 and state staff, policies regarding CBI claims, provision or sharing of collected data to/with participating states, and presentation of collected data to the public. To facilitate and accelerate this subtask, the IC2 Database Workgroup has begun to document system requirements by outlining relevant business processes. The Workgroup will continue to refine this document until the selected vendor (Contractor) begins work on this task. The Contractor will gather and document requirements for the reporting programs in Oregon, Vermont, and Washington.

Participating states' requirements will include the ability to restrict the data subject to disclosure or sharing (either through the Exchange Network or public search interface). Limits on data publication and sharing must be explored during requirements gathering.

4.1.1.2 Develop a data schema that encompasses the reporting requirements of all participating states

The IC2 Database Workgroup has developed a draft data dictionary to facilitate and accelerate this subtask. Following the requirements gathering, the vendor will review the data dictionary and CSPA data schema, considering multi-tenancy, and use it as the basis for the project data schema.

4.1.1.3 Develop system design documentation

This subtask will translate the business processes and other requirements into a detailed design to guide system development.

4.1.1.4 Perform a gap analysis between the requirements gathered and the code and data model for Ecology's CSPA reporting application

Ecology will share its reporting system's code and data model to reduce the effort, time, and expense involved in building an interstate system. The Contractor will review the components of Ecology's application, compare the system functions to the requirements gathered, and make a recommendation regarding the suitability of and overall benefit to be derived from using Ecology's CSPA application code as the basis for the IC2 HPCDS. If appropriate and so directed, the Contractor will also describe the modifications needed to Ecology's data model and online reporting application in the system design documents.

4.1.1.5 Develop and test the HPC Data System (HPCDS)

The scope of this task includes the Reporting System and Admin System. Inclusion of the public-facing search interface (AQB) is a "stretch goal" and is desired but not required.

Requirements for the Reporting and Admin Systems (subsystems) have not been fully articulated. The administrative functions shall include, at a minimum, user authentication, the ability for a user with appropriate permissions to view, add, edit, flag, and (possibly) delete individual records, users, contacts, organizations, and relationships. Additional features might include the ability for NEWMOA/IC2 and state agency staff to annotate reports by commenting on specific data points and to export these annotations (e.g., as a PDF).

The data viewed or modified through this application will ultimately be flowed through the node and shared with EPA, states, and others, as discussed below. A user with the appropriate permissions should be able to flag records for publishing to the node, and there should be a visible indicator that a record has been published.

NEWMOA staff and the members of the IC2 Database Workgroup (including, but not limited to, representatives of OHA, Ecology, and the Vermont Department of Health) will work closely with the Contractor to confirm that the System includes all required attributes and functions during a preliminary (alpha) round and to test the System during a second (beta) round. The Contractor shall deploy an efficient bug-tracking system and provide NEWMOA/IC2 staff with the ability to easily report issues—preferably directly in the bug-tracking system.

4.1.1.6 Import existing data from OHA's HPCCCH Biennial Notice Reporting System

In late 2017, OHA deployed an interim reporting system (the HPCCCH Biennial Notice Reporting System) using the Smartsheet platform and Excel templates to enable manufacturers to comply with the first TFKA Biennial Notice, January 1, 2018. The Contractor will migrate OHA's existing TFKA data to the new system's database. Steps needed to achieve this output include mapping OHA's data to the tables and fields in the new database, writing and testing database scripts to import OHA's data, executing the import, and performing quality assurance tests on the data in the new database. NEWMOA will not consider this subtask complete until OHA's entire TFKA dataset has been imported into the new database and OHA is satisfied with the quality and integrity of the imported data.

4.1.1.7 Import existing data from Ecology's CSPA database

For Ecology to transition to the shared System, the Contractor will migrate the data in Ecology's CSPA Reporting Application database to the new System's database. Ecology will provide a copy of the production CSPA database to the Contractor. Steps needed to achieve this output include mapping the data fields in the CSPA database to those in the new database, writing and testing database scripts to extract the data from the CSPA database and import it into the new database, executing the paired export-import, and performing quality assurance tests on the data in the new database. NEWMOA will not consider this subtask complete until Ecology's entire CSPA dataset has been imported into the new database and Ecology is satisfied with the quality and integrity of the imported data.

4.1.1.8 Import existing data from Vermont's Chemical Disclosure Program Online Reporting System

The Vermont Department of Health deployed an Online Reporting System for its Chemical Disclosure Program for Children's Products. Ideally, the Contractor would also import VDH's existing data into the HPCDS, following the process described above for Ecology and OHA. The IC2 considers this a value-added outcome or stretch goal.

4.1.1.9 Perform user acceptance testing of new system and imported data

This is the final step in validating that the HPCDS as built meets users' needs and is free of critical bugs. A critical or major software bug is one that makes a vital feature inoperable and has no practical workaround, including any problems with essential System functions that prevent users from deploying those functions correctly.

4.1.1.10 Deploy the new system

Make the System available online to participating state agency staff and regulated entities.

4.1.2 Establish a virtual Exchange Network Node and implement a RESTful web service and data flow

EPA programs that assess and manage chemicals under TSCA or conduct research on the hazards and exposure of chemicals in commerce and safer alternatives are likely consumers and beneficiaries of a shared, interstate system that would allow the states, through the IC2, to flow data on the presence of chemicals of concern in products to EPA. NEWMOA's selected contractor will establish a virtual node on the Exchange Network to facilitate the exchange of reported chemicals-in-products data among Exchange Network partners,

including IC2-member states and U.S. EPA. This node shall be created, configured, and validated in accordance with all Exchange Network specifications, requirements, and procedures. The Contractor shall also develop a Data Flow of reported data to allow states and EPA to access the data through the IC2 Exchange Network virtual node. This task shall be accomplished in accordance with all relevant Exchange Network procedures.[1] The Contractor should be familiar with Exchange Network's guidance for developing a new data exchange.

In the Exchange Network, several documents are used to describe data flows. A Trading Partner Agreement (TPA) focuses on the legal and procedural elements of a data flow, while the Flow Configuration Document (FCD), Data Exchange Template (DET), and XML Schema focus on the mechanical aspects of the data flow.

In addition to establishing a traditional node data flow for the HPCDS, the Contractor will establish a RESTful web service for this data.

As noted above, not all data may be shared through the Exchange Network due to state-specific requirements. Limits on data publication and sharing must be explored during requirements gathering.

4.1.2.1   Develop Trading Partner Agreements (TPA) with EPA programs and states

Within the Exchange Network, the exchange of data through nodes is governed by agreements that meet Partners' legal and programmatic obligations for sharing data. The Trading Partner Agreement (TPA) is intended to document and formalize the business processes and contractual aspects related to the exchange of data across the Exchange Network. It allows the parties to declare that they have a vested interest and commitment to making the relationship and the data exchange work and provides a vehicle to define the points of contact within their organizations with responsibility for managing a successful information exchange.

The Contractor will assist in drafting Trading Partner Agreements (TPA) for the required data flow, in a manner consistent with the Exchange Network standards and schemas. Because the IC2 has not yet identified an Exchange Network trading partner, the Contractor should plan for two eventualities:

1. One or more trading partners are identified as the project progresses and data will be successfully flowed to those partners through the virtual node as part of the project, or

2. No trading partner is identified, and the flow will be tested against the CDX.

For several sample TPAs, see "Tools for Developing a TPA" on the Exchange Network's Trading Partner Agreements page. The TPA outlines all activities that the reporting entity and the EPA will undertake as partners in sharing data through the exchange network, partner roles and responsibilities, the frequency of data exchange, the types of datasets (full vs. partial), and the points of contact for each partner in the exchange. The TPA is not a technical document; it illustrates flow logistics.

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[1] See http://www.exchangenetwork.net/essential-technical-documentation/ for more information.

4.1.2.2   Define REST URL structure and formatting

Define a REST service in conformance with the Exchange Network REST URL structure and formatting standards. See REST Guidance. Ideally, there should be RESTful endpoints that expose a bulk data dump of all published data, each table in the database, and simple flat file views of the most important information. The web service should support basic queries to filter the returned results by appropriate parameters.

4.1.2.3   Develop a RESTful web service in conformance with the Exchange Network REST Guidance

The web service shall conform to all Exchange Network REST URL structure and formatting standards (see the Exchange Network's REST Guidance). The web service shall be well documented and clearly define the parameters supported. The REST service shall support XML, JSON, HTML, tab-delimited, and Microsoft Excel formats.

4.1.2.4   Establish a virtual node presence on an existing network node hosted by the IT contractor

The Contractor will support NEWMOA/IC2 in establishing an Exchange Network Node to facilitate the exchange of collected data among Exchange Network partners, including the IC2's members and EPA. NEWMOA presently believes that the most efficient means to this end will be creation of a Virtual Node.

4.1.2.5   Develop XML schema set, Data Exchange Template, and Flow Configuration Document for IC2 data flow

The Contractor will develop an XML schema and Data Exchange Template for the HPCDS data, in accordance with all relevant Exchange Network data guidance. The schema and all supporting documentation will be submitted to the Exchange Network leadership for review and approval. The Contractor will write a Flow Configuration Document (FCD), discussing the technical aspects of the data flow between the reporting node and the partner node, in accordance with the guidance in the Exchange Design Rules and Conventions and following the FCD Template.

4.1.2.6   Prepare Data for the Exchange Network

Once the XML schema has been approved, data from staging tables must be converted into XML. The XML payload will be generated or processed to conform with the XML schema so that it may be transmitted through the virtual node. A node flow plugin will be developed to flow data from the HPCDS to the IC2 virtual node staging tables.

4.1.2.7   Authenticate the flow with the Exchange Network Central Data Exchange (CDX)

Once the data flow to the virtual node is established, flow of the data will be tested against the CDX and validated.

4.1.2.8   Register the data flow with the Exchange Network Discovery Services (ENDS)

Registering the data flow with ENDS will include registering the server, services, and parameters supported, as well as mapping the data flow items to the ENDS XML.

4.1.3   Publish data through a public-facing interface that allows users to query the database and download results

Other state agencies, concerned citizens, academic researchers, non-governmental organizations (NGOs), and institutes have an interest in fast, easy access to chemicals-in-products data. This unique dataset on chemicals in products could empower consumers and institutional purchasers to make more informed purchasing decisions and help drive the adoption of safer alternatives. The data could inform priority setting for future state and federal policy initiatives. Therefore, the IC2 desires a responsive browser-based query tool that allows users to search, display, and download the entire published dataset or selected portions thereof in several formats.

4.1.3.1   *Gather requirements for data publishing*

NEWMOA plans to engage a representative sample of the potential target users of the data through the IC2 membership. This stakeholder group will help NEWMOA better understand their data needs. With NEWMOA's assistance, the Contractor will determine and capture these needs in the system Functional Requirements Document in a section covering an advanced query builder (AQB) as well as static reports that the system will be designed to generate. As emphasized above, NEWMOA expects participating states to require that they can restrict the data subject to disclosure through a public search interface. This must be explored during requirements gathering. *The AQB should be treated as a value-added component of the System (stretch goal) and not a requirement. Whatever is proposed related to this should not detract from any other requirement described in this RfP.* The desired scope of the AQB includes:

- A robust search interface
- Users' ability to export their query results in several data formats (e.g., XML, HTML, tab-delimited, Excel)
- Comprehensive in-line help and online tutorials
- Responsive (i.e., mobile-friendly) design that would allow consumers to learn about chemicals-in-products by company or product category
- Connections to other data layers, such as the IC2 Chemicals of Concern and Chemical Hazard Assessments Databases, NIH's ChemID*plus*, and EPA's ChemView

4.1.3.2   *Optional:* *Develop AQB for data publishing*

As described above, the advanced query builder (AQB) is a public-facing search interface to allow external users to easily query the database and download data in several common data formats.

4.1.3.3   *Optional:* *Develop pre-defined reports*

This could include reports to show trends in frequency of reported chemicals, as well as any reports needed by state agencies to report to their legislatures.

4.1.3.4   *Optional:* *Deploy a responsive web application on the IC2 website*

4.1.4   Testing

The Contractor shall conduct testing of the following in the test environment:

- The node flow to a trading partner or the CDX
- The HPCDS Reporting System
- The HPCDS Admin System
- **Optional:** the HPCDS advanced query builder (AQB)
- Accessibility requirements as described in §3.9 - Web Accessibility Requirements

All XML data will be validated through the appropriate schemas, and data must be checked against their point of origin.

The data maintenance application will be tested for ease of interface use, including accessibility, and validity of rendered data.

As stated above, NEWMOA staff and the members of the IC2 Database Workgroup (including, but not limited to, representatives of OHA, Ecology, and the Vermont Department of Health) will work closely with the Contractor to confirm that the System includes all required attributes and functions during a preliminary (alpha) round and to test the System during a second (beta) round. The Contractor shall deploy an efficient bug-tracking system and provide NEWMOA staff with the ability to easily report issues—preferably directly in the bug-tracking system.

4.1.5   Training and Documentation

The Contractor shall provide System administration/maintenance and user-orientation training through a training session, an Administrator's Guide, and online help; each will target a different audience.

All documents, tools, models, and manuals produced by the Contractor during the contract period shall be submitted to the IC2 Project Manager in electronic format.

All source code and documentation shall be collectively owned by the Exchange Network.

4.1.5.1   Training Session

The Contractor shall provide an overview for NEWMOA/IC2 and participating state agency staff. It should be concise, lasting four (4) hours or less.

4.1.5.2   Administrator's Guide

The Contractor shall provide an online help guide for the Admin System, written for NEWMOA/IC2 and state agency staff.

4.1.5.3   Online Help Guide for Reporting

The Contractor shall provide an online help guide for the Reporting System. It should be integrated into the relevant System Web page(s) and be downloadable as a fully Accessible (§508 Standards for Electronic and Information Technology Accessibility-compliant) PDF file.

4.1.6   Evaluation Document

The Contractor shall produce a post-project evaluation document, also known as a "post-mortem" or "lessons learned" document for an internal NEWMOA/IC2 audience. This review will address what worked well during the project, what could have been improved,

and should include recommendations for improving the efficiency of similar projects conducted in future.

4.1.7   Summary of Project Deliverables

NEWMOA and the Contractor will develop a complete and precise list of project deliverables, based, in part, on those identified above and the Contractor's proposed approach (see §5 - Proposal Requirements). In general, however, NEWMOA/IC2 expects the Contractor to produce and deliver the following:

1. Requirements document (including requirements for data publishing through a public-facing interface that allows users to query the database and download results)

2. System design document

3. Gap analysis report and recommendations

4. Alpha version of the Reporting and Admin Systems, along with an efficient bug-tracking system

5. Beta version of the Reporting and Admin systems

6. OHA's complete TFKA dataset in place in the new database

7. Ecology's complete CSPA dataset in place in the new database

8. **Optional:** VDH's complete dataset in place in the new database

9. Complete Reporting and Admin Systems, free of critical bugs

10. Complete Reporting and Admin Systems in production

11. Trading Partner Agreements (TPA) with EPA programs and states, as appropriate

12. A virtual node presence on an existing, hosted Exchange Network node

13. Defined REST URL structure and formatting

14. A RESTful web service in conformance with the Exchange Network REST Guidance

15. REST Service registered with the Exchange Network Discovery Services (ENDS)

16. Successful Exchange Network review of XML schema, Data Exchange Template, and Flow Configuration Document

17. A node plugin to create XML data payload for transmission to the IC2 virtual node

18. Data flow authenticated with the Exchange Network Central Data Exchange (CDX)

19. **Optional:** A public-facing advanced query builder (AQB) for data publishing, featuring responsive design, deployed on the IC2 website

20. **Optional:** A set of defined reports, including reports to show trends in frequency of reported chemicals

Deliverables submitted for acceptance will be reviewed and either responded to with feedback or accepted within ten (10) business days, unless otherwise stated by NEWMOA at the time of submission.

4.1.8   Provide Support

During the one-year warranty period, the Contractor must support NEWMOA/IC2 staff in Exchange Network flow operation and maintenance, and all related software and applications specified in this RfP. The support must be available during standard business days and will have a 48-hour response time to critical problems, which are defined as those which:

1. Prevent product manufacturers or retailers subject to state reporting requirements from creating and submitting reports;
2. Prevent data from being accessed through the Admin System; or
3. Render the Exchange Network Node totally inoperative.

A one-week response time is acceptable for non-critical issues.

4.2   Project Phases[2]

4.2.1   Planning

In this planning phase, the contractor must:

- Host a project kick-off meeting to introduce project principals and review the project goals and baseline assumptions

- Provide a walk-through and Q&A of the contractor software development methodology described in the proposal and provide samples of the deliverables that will be used in the project and that are described in the proposal

4.2.2   Requirements Gathering

- Identify documentation that will be needed, or need to be created, for all project phases. Examples: risk assessment, business processes, and specifications of existing technologies.

- Identify additional tasks or deliverables needed

- Create and refine a detailed project plan (provided in Microsoft Project format) with a baseline that will be maintained and updated throughout the life of the project. The plan shall include all deliverables described in the project plan that was included with the Contractor's proposal. Examples: Project Plan, Architectural Design, Functional Requirements, Use Cases, and Test Plans. The project plan must also include deliverable review periods.

- Establish schedules for periodic and non-periodic review meetings. Identify key topics to be reviewed and meeting dates for key topic reviews. Example meeting topics include: Functional Requirements, Use Cases, Business Process flow diagrams, Entity Relationship Diagrams (ERD)/database schemas, Test Plan, and Post Project Evaluation.

- Finalize metrics to measure project success.

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[2] We recognize that different vendors use different development models. The intent here is to capture the elements involved in delivering the project, without prescribing a specific process.

4.2.3   Development

In this phase the Contractor designs and develops code for each required feature. All source code must be documented to explain each function/method.

4.2.4   Feature/System Test

This phase of the process will be repeated during the project as each feature (for example: each flow) goes on-line. In this phase, the Contractor must:

1. Deliver a test release and deploy in a test environment
2. Execute the feature test plan for the release
3. Develop and perform a performance benchmark test for the System and document the results of the test

4.2.5   Feature/System Acceptance

This phase of the process will be repeated during the project as each feature (for example: each data flow) is deployed. In this phase, the Contractor must:

1. Deliver a final release meeting all the major functional requirements and with all known major bugs corrected. A critical or major software bug is one that makes a vital feature inoperable and has no practical workaround, including any problems with essential System functions that prevent users from deploying those functions correctly.
2. Execute the full system test plan in the production environment.
3. Execute a performance benchmark test for the System in the production environment.
4. Deliver a release notes and known issues document for each phase of the project.
5. Deliver a document outlining all test results and testing tools utilized during the testing.
6. Deliver source code, executables, and scripts, which shall become the unrestricted property of the Exchange Network.

4.2.6   Deploy System

Move system from test (or staging) to production.

5   Proposal Requirements

5.1   Minimum Requirements

The scope of a vendor's proposal must include, at a minimum:

- An explanation of the vendor's proposed strategy for analysis and assessment and design of the System

- An explanation of the vendor's software development process, identifying key phases and deliverables and how the methodology will be applied to this project

- An explanation/presentation of any off-the-shelf software solutions, if applicable

- A description of the vendor's experience in performing similar projects of comparable size, scope, and complexity

- A description of key high-level tasks, specific vendor deliverables, and assumptions

- A description of the vendor's project management practices

- A high-level project plan that includes initial estimates of time and dates to complete tasks of the project (i.e., assessment/analysis, scope/design, plan/specifications, prototype, development, test, production, implementation, knowledge transfer, documentation, etc.), along with base assumptions to explain the estimates

- A description of the vendor's quality assurance methodology

- Resumes for all proposed vendor project team members and a list explaining each member's role on the project

- Pricing information and approach (the pricing information must be sealed and separate from the rest of the proposal)

See the Business Requirements section and the Statement of Work section for additional details and requirements.

5.2   Vendor References and Qualifications

5.2.1   References

Vendors must provide references for work performed that is similar in nature to the scope of this RfP. In responding to this question, vendors should provide: Reference Company Name (company/agency name), Contact Person, Address, Phone number, Fax number, E-mail address, and a description and dates of services provided. Vendors should anticipate that phone contact with the reference would be made during the reference check period. The NEWMOA/IC2 selection team may deem the vendor or the vendor's proposal non-responsive if a provided reference does not meet the selection team's full satisfaction.

Subcontractors must also supply references as stated above.

5.2.2   Qualifications

NEWMOA prefers vendors with the following qualifications:

- Demonstrable experience with the Exchange Network and EPA standards and services such as the Substance Registry Services (SRS).

- A minimum of five (5) years' experience consulting, analyzing, designing, and developing web-based information systems.

- A minimum of five (5) years' experience with Object Oriented Analysis and Design.

- To facilitate the gap analysis of the CSPA System, demonstrable experience with C#, ASP.NET, .NET 3.5/4.x, Webforms, Transact-SQL, HTML, JavaScript, SQL Server 2008/2012, Unit Testing, Web Services/WCF, and XML/XSLT.

5.3   Project Plan

Vendors must provide a project plan with their responses to this RfP. This initial project plan, generated in Microsoft Project (or similar) format, must include all tasks defined within this RfP and identify other recommended tasks, milestones, and key deliverables. The estimated start and finish time for each task is to be identified.

The project plan must contain milestones that directly correlate to the itemized prices in the price proposal.

5.4   Project Manager

Vendors must provide the resume of the project manager who will be the selected vendor's main interface with NEWMOA/IC2's Project Manager. Vendors should also include qualification statements or resumes of other proposed project team members. NEWMOA desires that the vendor's project manager has experience with projects similar in size, scope, and complexity to this one.

5.5   Quality Assurance Requirements

The IC2 HPC Data System and Data Flow Project must be managed to ensure a quality product for NEWMOA/IC2 and its partners. To that end, the NEWMOA selection team requires that vendors identify their Quality Assurance methodology that encompasses a description of roles and responsibilities, techniques utilized to monitor the project, walkthroughs and reviews, independent project audits, and risk management planning.

See §7 - Business Requirements for additional details and requirements.

5.6   Pricing Proposal

The pricing information must be submitted on a fixed-price basis. **The total price for this project must not exceed $250,000**. The pricing proposal must be itemized. At a minimum, the vendor must provide those items identified in Business Requirements and Technical Requirements sections. Each item or feature must be associated with a deliverable. Payments will be made per deliverable.

In their response to this RfP, vendors must describe the approach or method that will be applied in meeting the deliverables. Vendors must describe the process that will be used in the submission of deliverables for review and approval.

In describing their approach, vendors must specify the hosting configuration proposed and any associated costs. Costs associated with hosting options, including technical support, should also be enumerated.

The pricing proposal must be sealed and separate from the rest of the vendor response (the technical proposal). Only one copy of the pricing proposal is required.

Costs that are not specifically identified in the vendor's response and accepted by NEWMOA as part of a contract will not be compensated under any contract awarded pursuant to this RfP.

6   Evaluation of RfP Responses

The NEWMOA/IC2 selection team will only evaluate responses that are submitted on or before the RfP response due date of Wednesday, May 9, 2018 at 5:00 PM EDT.

6.1   Vendor Evaluation and Selection Process

The NEWMOA/IC2 selection team will:

1. Screen all proposals for completeness. Any proposal that fails to address the minimum requirements of this RfP may be disqualified from further consideration. In such cases, the selection team will determine whether to request the additional information needed to fulfill the minimum requirements of the RfP. An individual who is not a member of the selection team will examine the pricing proposals to view the total prices. Any pricing proposal that exceeds the total price specified above will be eliminated.

2. Score all proposals on content.

3. Call references listed by the vendor and factor responses from references into the overall score.

4. Review and score pricing proposals.

5. At NEWMOA's discretion, schedule a final interview and presentation with the top candidate vendors, either in person or via Webinar. The highest scoring vendor will have first choice of time to present. The next highest will select next, and so on, until all finalists are scheduled. Score the interviews and presentations.

6. Calculate final score totals after the interviews are completed. Select a vendor. Award contract.

7. Contact the selected vendor and announce the selection on the IC2 website.

8. Schedule debriefings, if requested.

6.2   Types of Requirements

For evaluation purposes, the requirements of this RfP will be grouped into three types:

- Mandatory requirements—examples of this use words such as "must", "shall", "will", "will not", etc.
- Optional System components (a.k.a. stretch goals)—examples of this use words such as "may", "could", "desirable", etc.
- Additional services/features that are not in the scope of work but that the vendor believes to be necessary to achieve success

The goal of this RfP is to provide the best value to achieve the goals of this project. Vendors proposing alternatives that provide substantially better or more cost-effective performance than achievable under a stated RfP specification or vendors that propose discounts, uncharged services, or other benefits in addition to the RfP specifications may receive a preference or additional points.

The NEWMOA selection team will evaluate each response on each requirement and assign merit points according to a numerical rating scale. Points will be awarded using predefined metrics where requirements are measured in a qualitative manner. The NEWMOA/IC2 selection team will evaluate responses to the specifications designated as optional (i.e., stretch goals or desirables) and assign points based on how well the response addresses the desired task and demonstrates that the vendor's efforts will contribute to the successful completion of the project in a timely manner.

6.3   Relative Importance of Criteria

The NEWMOA/IC2 selection team will consider five evaluation criteria plus the pricing proposal during its review of vendor proposals. The evaluation criteria, in the order of importance to the team are listed below:

6.3.1   Technical Requirements

The selection team will evaluate the vendor's proposal to deliver the items specified in the Statement of Work, considering the vendor's proposed problem resolution methodology and the vendor's proposed approach to developing and deploying the solution in stages.

6.3.2   Business Requirements

The selection team will review and assess the vendor's Project Management Plan and Quality Assurance plan. Evaluation will consider the vendor's ability to complete the project on time, furnish logical timelines, monitor project progress, and develop contingency plans where warranted. The selection team will consider the vendor's Software Quality Assurance methodology, risk assessment techniques, and risk mitigation measures.

6.3.3   Interviews, Oral Presentations, and Demonstrations

From the review of the vendor's RfP responses, the selection team may invite the highest scoring vendors to meet with NEWMOA/IC2 for an interview, oral presentation, and demonstration. This meeting will include, but is not limited to, a discussion of the vendor's proposed approach (choice of database and application technologies, etc.) and the vendor's development methodology (including bug tracking system), a review of the vendor's project plan and Software Quality Assurance plan, and a demonstration from the vendor.

6.3.4   Qualifications and References

The selection team will review the references, considering the vendor's ability to meet the requirements of the RfP by reviewing the vendor's experience with projects similar in size, scope, and complexity; the vendor's track record for delivering similar services on time; and the technical qualifications of the vendor's project manager and related staff.

6.3.5   Pricing Proposal

The selection team will evaluate the pricing proposal. This criterion is based on the proposal providing the best overall value to NEWMOA/IC2 that also meets the RfP's requirements in a timely manner.

7   Business Requirements

The vendor's proposal and project plan should clearly identify what documents, models, and deliverables will be created in the normal course of the vendor's software development. The software development methodology and deliverables described by the vendor in response to the RfP will be used in the vendor selection process. The vendor's response to this RfP should outline the methodology that the vendor will use to develop the technical requirements.

7.1   Project Management

NEWMOA will be responsible for comprehensive oversight of the project. NEWMOA will provide a full-time, primary point of contact (the NEWMOA/IC2 Project Manager) for all project communications. NEWMOA's IC2 Project Manager will be responsible for the day-to-day management of this project. The IC2 Project Manager will serve as the technical expert for the HPCDS and as the principal conduit between the Contractor and the members of the IC2 Database Workgroup, which will help guide the design of the System. The current IC2 Project Manager has four years of experience working with the IC2 and is knowledgeable about the relevant business processes and how the reporting processes work in the participating states. The IC2 Project Manager will be central to designing and testing the HPCDS.

The selected vendor (the Contractor) shall appoint a project manager who will be the Contractor's main contact with the NEWMOA/IC2 Project Manager.

7.1.1   Project Manager Responsibilities

The Contractor will appoint a project manager who will perform, at a minimum, the following functions:

- Serve as the point of contact between the NEWMOA Project Manager and all Contractor personnel participating in this engagement.

- Communicate with the NEWMOA Project Manager. This will be in a combination of telephone, e-mail, and in-person communications/meetings. The Contractor will provide status reports/updates biweekly (i.e., once every two weeks) throughout the project and weekly updates during periods of concentrated activity (e.g., requirements documentation and system development), review of the project plan's performance against the baseline, and ensure timely communications and reporting.

- Prepare and submit monthly progress reports, as described in §3.11 - Communications.

- Refine and revise the project plan as necessary based on information gathered during status meetings and distribute them to the NEWMOA Project Manager and other members of the project team.

- Identify and establish key meeting dates in advance that are mapped against the project plan for scheduling purposes and to ensure everyone knows the topics, purpose, and outcomes of key meetings.

- Facilitate weekly to biweekly team and project status meetings and subsequently issue a written summary of the status, identifying key tasks, responsible parties, and due dates.

- Deliver to the NEWMOA/IC2 Project Manager at status meetings, a written report/certification stating the Contractor's good faith evaluation of the likelihood (if any) of any deliverable hereunder not being delivered on or before the date specified in the project plan, or on a date specified in an earlier report/certification.

- Assist in resolution of project issues and escalate problems within the Contractor's organization.

NEWMOA may require the Contractor to relieve and replace the project manager if in NEWMOA's opinion it appears that:

- The project manager does not perform at a level required to ensure the contract specifications are met

- The project manager does not deliver work which conforms to the performance standards stated in the Contract

- Personality conflicts with NEWMOA's Project Manager hinder smooth and effective implementation or execution of the Contract

7.1.2   Project Plan and Schedule

The Contractor must provide an initial project plan, as previously described. The Contractor's project manager will work with NEWMOA's Project Manager to refine the initial project plan, adding more detail and establishing the Work Breakdown Structure (WBS) for the project. The WBS must include a breakdown of the tasks required to implement each feature and produce its deliverable. The schedule may also be refined to account for this new level of detail, but the milestone delivery dates must correspond to those dates identified in the Contractor's initial project plan.

7.1.3   Risk Management Plan

It is highly desirable that vendors identify the top issues that represent risk to the project's success in terms of schedule, price, functionality, and quality. The Contractor should provide a contingency plan for mitigating each of these risk factors. NEWMOA intends to co-manage this risk mitigation effort with the Contractor throughout the project life cycle.

7.1.4   Project Status Reporting

The Contractor will be required to provide biweekly (i.e., once every two weeks) status reports and an updated project plan to the NEWMOA/IC2 Project Manager throughout the project and weekly updates during periods of concentrated activity (e.g., requirements documentation and system development). The project plan will show performance against a baseline and be supplemented by additional reports as needed. The status reports must include a listing of the tasks performed and the findings for that time period. These status reports should also highlight any discrepancies in previously collected data (e.g., Ecology's legacy CSPA data), identify any issues or concerns that the Contractor has, and list the tasks to be completed during the following week(s). The Contractor shall provide status reports in writing to the NEWMOA/IC2 Project Manager and any additional persons specified by NEWMOA. Progress reports shall also summarize meetings at scheduled intervals with the NEWMOA/IC2 Project Manager and project team. The Contractor shall address questions that arise regarding any past action to NEWMOA's satisfaction.

7.1.5   Project Change Orders

The Contractor will enter into a fixed price contract with NEWMOA to perform the tasks outlined in this document. If changes in scope are required, the project manager requesting a change in scope will provide the suggested change in writing to the other team's project manager. The project managers will jointly determine whether the change impacts the schedule. The parties can mutually agree to the change through a written amendment to the

statement of work, which must be approved by the NEWMOA Executive Director and chief executive (or an authorized representative) of the contracting entity.

If applicable, prices estimated by the Contractor's project manager must be agreed upon and approved by both the Contractor and NEWMOA prior to any actual change implementation.

7.2 Quality Assurance

NEWMOA requires that the Contractor identify its Quality Assurance methodology and that said methodology comprises a description of roles and responsibilities, techniques utilized to monitor the project, walkthroughs and reviews, independent project audits, and risk management planning.

The Contractor should include a description of the Quality Policy of the organization expressed by top-level management. It is desirable that the Contractor describes the standards and metrics (internal or industry) used for estimating work effort and for quality judgment.

The Contractor should identify the roles and responsibilities of its staff working on the project. This may be done utilizing specific individuals identified for project management and may also include staff who are not specifically identified but whose responsibilities are evident due to the nature of the project.

The Contractor will identify its methodology for the review of its tasks prior to approval and acceptance by its customers. This includes walkthroughs of tasks and reviews of any specific function. This task also requires the Contractor to identify any milestones where demos and reviews are required that have not already been identified by NEWMOA. These reviews, walkthroughs, and all milestones will be reviewed during the initial review of the detailed plan.

The Contractor must provide a quality assurance audit plan for this project. NEWMOA desires that the audit plan includes when and how audits are conducted independent of the IC2 HPC Data System and Data Flow Project and whether the results of these independent audits are available to NEWMOA. NEWMOA expects to be given access to the vendor's internal project audit reports that pertain to this project.