EPA INFORMATION PROCEDURES

OFFICE OF ENVIRONMENTAL INFORMATION

EPA Classification No.: CIO 2133-P-3 (formerly2128-p-3)	**Approval Date:**	06/28/07
CIO Transmittal No.: 07-002	**Review Date:**	06/2010

Issued by the EPA Chief Information Officer,
Pursuant to Delegation 1-19, dated 07/07/2005

DATA STANDARDS IMPLEMENTATION

1. PURPOSE

These procedures establish the key steps to follow for implementation of EPA data standards.

2. SCOPE AND APPLICABILITY

These procedures apply to all EPA organizations and their contractors engaged in the design, development, operation, or maintenance of Agency information systems or applications.

3. AUDIENCE

The audience for these procedures includes all EPA programs, regions, laboratories, offices, and contractors/grantees developing and maintaining systems for the Agency.

4. BACKGROUND

Data standards are documented agreements on the format and definition of common data. Consistent use of data standards across the enterprise and with our information exchange partners promotes the efficient sharing of information. Employing common terminology and common data element definitions enables the integration of databases, and promotes environmental assessment and analysis of data from disparate sources, improves data integrity, and maximizes the use of shared resources.

As stated in the Data Standards Policy, EPA shall develop, implement, maintain and oversee two types of data standards:

1. Data exchange within an EPA Program Office, by two or more EPA offices, between EPA and federal agencies, or between EPA and international partners. These data standards are developed, approved, and promulgated by EPA according to the Chief Information Officer (CIO) mandated approval process.

2. Data exchange with partners across the Exchange Network. These standards are developed, approved, and promulgated through the Exchange Network in collaboration with Network partners and promulgated by EPA using the CIO mandated approval process. EPA shall use Exchange Network Data standards in Exchange Network data exchange flows and tools. Development and maintenance of Exchange Network standards is governed under the policies and procedures of the Exchange Network and not by these procedures.

5. **AUTHORITY**

   a. **US EPA Data Standards Policy (http://www.epa.gov/irmpoli8/policies.htm)**

   b. **US EPA Enterprise Architecture Policy (http://www.epa.gov/irmpoli8/policies.htm)**

6. **PROCEDURES**

   a. Development of Implementation Guidance for a Data Standard.

      1. **The data standard steward and Data Standards Branch (DSB) create a data standard community of interest. Programs through the Information Management Officials (IMOs) and regions through the Information Resources Management Branch Chiefs (IRM BCs) must be notified of development or revision of implementation guidance and offered an opportunity for involvement**

      2. **Identify Community of Interest. Programs (IMOs) and regions (IRM BCs) must be notified of development process and offered an opportunity for involvement.**

      3. **DSB convenes an action team which will be chaired in subsequent meetings by the chair or co-chair.**

      4. **Develop implementation guidance with data standards development action team or, if the standard was developed by the Exchange Network process, by the EPA members of the Exchange Network data standard Development Action Team.**

      5. **Open a controlled collaborative space for action team deliberations.**

      6. **DSB trains action team in data standards implementation guidance development.**

      7. **Action team develops draft implementation guidance for the data standard.**

   b. Review/Approval of Implementation Guidance for a data standard

      1. **Draft implementation guidance is posted on the controlled collaborative site for review.**

      2. **The community of interest is notified of availability for review.**

      3. **Action Team reviews comments from community of interest and develops a matrix for resolution of any issues identified.**

      4. **Action Team resolves comments and submitters are notified.**

      5. **Implementation guidance is approved through the QIC process with the data standard and is promulgated by the CIO with the data standard (see Data Standards Development Procedures). It includes a date by which all relevant systems in EPA must implement the data standard called the "required implementation date."**

      6. **Implementation guidance is published with the data standard on the appropriate website and in the Environmental Data Registry. [see Data Standards Development Procedures].**

   c. Conformance Assistance

      1. **DSB provides guidance and technical assistance, upon request, to anyone with implementation questions. This includes support on the development of system/application specific business rules for data standards implementation and provision of contractor support for formal conformance reviews of a system/application.**

      2. **Data Standard Steward(s) are appointed to oversee the accuracy and currency of each**

        data standard and serve as resources for correct use. Cross media data standards may have more than one Data Standard Steward.

    3. **DSB provides formal data standards implementation training courses.**

    4. **An inventory of implementation resources and examples of best practices will be maintained on the Data Standards Web site.**

  d. Conformance Measurement

    1. **System owners shall record applicable data standards for their systems and self-assess status of conformance in the Register of EPA Applications and Databases (READ).**

    2. **The semi-annual "Data Standards Systems Implementation Progress Measurement Matrix" reports the status of data standards conformance in all major EPA systems to the CIO and Office Managers.**

    3. **The CIO can issue waivers to data standards conformance (see the Procedures for Requesting Data Standard Conformance Waivers).**

7. RELATED DOCUMENTS

8. ROLES AND RESPONSIBILITIES

  a. Chief Information Officer (CIO), or designee shall:

    1. **monitor and encourage adherence to data standards;**

    2. **arbitrate conflicts and issues related to data standards conformance; and,**

    3. **issue waivers to data standard conformance when appropriate (see Procedures for Requesting Data Standard Conformance Waivers).**

  b. Senior Information Officer shall:

    1. **promote the use of data standards;**

    2. **monitor and encourage adherence to data standards, and;**

    3. **submit a signed concurrence on any waiver requests for systems/applications that are regulated under the CPIC process.**

  c. Data Standards Branch (DSB) shall:

    1. **oversee data standards conformance monitoring and reporting;**

    2. **provide expertise and administrative support to implementation guidance development;**

    3. **shepherd data standard implementation guidance through the review/approval process;**

    4. **post final implementation guidance with data standard on the Data Standards Web site and in the Environmental Data Registry;**

    5. **provide data standard implementation guidance training and technical assistance;**

    6. **In consultation with the program director and the SIO or designee appoint a data standard steward for each approved data standard; and,**

    7. **report any conformance conflicts to the CIO and resolve those conflicts based on the CIO's guidance.**

    d.   Data Standard Steward shall:

        1. perform assessments of data standard quality, accuracy, and assess need for revision no less than once every two years;

        2. convene community of interest for input as appropriate; and,

        3. alert the DSB to any implementation issues which shall be conveyed to the CIO through the agreed process.

    e.   Information Management Officers (IMOs) and Regional Information Resources Management Branch Chiefs (IRM BCs) shall:

        1. promote conformance with approved data standards; and,

        2. **prepare application specific data standard waiver packages (see Requesting Data Standard Conformance Waiver Procedures**).

    f.   Quality Information Council shall:

        1. review the draft revised data standard and implementation guidance and make recommendation to the CIO for approval.

9. DEFINITIONS

    a. Business Rules**: Rules developed for implementation of a data standard in a specific system/application.**

    b. Chief Information Officer (CIO**): The senior Agency official, currently the Assistant Administrator for Environmental Information, responsible for establishing an innovative center of excellence that advances the creation, management and use of information as a strategic resource at EPA.**

    c. Community of Interest**: A group that can be defined by their common interests, needs or goals, e.g., a group of scientists, database designers, analysts, librarians with a common interest in drinking water monitoring data.**

    d. Conformance Assistance**: Lending technical expertise to assist a party to accurately implement a data standard according to the data standard specifications and rules agreed upon in the implementation guidance document.**

    e. Conformance Measurement**: The degree to which a system/application accurately uses a data standard according to the specifications of the data standard and the guidance implementation document.**

    f. Conformance Review**: An assessment of the accuracy and completeness of an implementation of a data standard according to data standard specifications and the guidance implementation document (also called compliance).**

    g. Data Standard**: documented consensus-based agreement on the format and definition of common data.**

    h. Data Standards Branch (DSB)**: organization that manages EPA's data standards program to promote efficient sharing of environmental information among EPA, states, tribes and other information partners through the cooperative development of data standards. DSB is located in the Office of Environmental Information, Office of Information Collection.**

    i. Data Standard Steward**: A subject matter or data standards expert responsible for the quality, accuracy and revision of a data standard.**

    j. Exchange Network**: A partnership of states, tribal entities, and US EPA for the purpose of creating a network for the exchange of environmental information. The governance of the**

network is shared by US EPA and the states.

k. Implementation Guidance: **General guidance for implementation of a data standard for all systems/applications within the Agency. It may contain common business rules applicable to all systems/applications.**

l. Information Management Official (IMO): **Management official responsible for the oversight of the information resources management in the program or administrative office.**

m. Information Resources Management Branch Chief (IRM BC): **Management official responsible for the oversight of the information resources management in a EPA region.**

n. Quality Information Council (QIC): **EPA senior level managers that advise and assist the CIO with formulation of policies on major cross-cutting quality and information issues.**

o. Required Implementation Date: **The date, stated in the data standard, by which the data standard must be incorporated into all applicable agency systems (directly or by mapping system/application data elements to the standardized data elements).**

p. Retirement Date: **The data upon which a version of a data standard has been superseded by a new version. The old version should no longer be used unless a waiver is obtained and recorded.**

q. Senior Information Official (SIO): **The SIO in each Headquarters and Regional Office will be the primary, central point of accountability for the effective oversight, coordination and management of information, information technology, and related issues.**

r. Waiver: **An official approval issued by the CIO which exempts a system from the requirement to conform to a data standard.**

10. WAIVERS

See Procedures for Requesting Data Standard Conformance Waivers

11. RELATED POLICIES, STANDARDS AND GUIDANCE

a. **Procedures for Requesting Data Standards Conformance Waiver**
b. **Procedures for Data Standards Development**
c. **Procedures for Data Standards Maintenance**

12. MATERIAL SUPERSEDED

None

13. ADDITIONAL INFORMATION

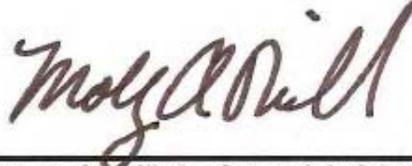**For further information, please contact the Office of Environmental Information, Office of Information Collection, Data Standards Branch.**

Molly A. O'Neill, Assistant Administrator
and Chief Information Officer
Office of Environmental Information