EPA INFORMATION PROCEDURES

OFFICE OF ENVIRONMENTAL INFORMATION

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

DATA STANDARDS DEVELOPMENT

1. PURPOSE

These procedures establish the key steps to follow for development and approval 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 and information systems or applications.

3. AUDIENCE

The audience for these procedures includes all EPA programs, regions, laboratories, and offices and contractors 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. Common terminology and data element definitions enables the integration of databases, 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 according to the CIO mandated approval process. EPA shall use Exchange Network Data standards in Exchange Network data exchange flows and tools. The 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. Data Standard Proposal Procedures

1. Any office or region (through their IMOs or IRM BCs) may propose a data standard by discussing the proposal with Data Standards Branch (DSB) who will communicate the proposal to the CIO.
2. CIO [designee] commissions a feasibility analysis.
3. CIO [designee] reviews the feasibility analysis and makes one of the following recommendations: 1) requests additional information from the proposing party, 2) postpones the development, 3) rejects the request or 4) orders data standard development to proceed.
4. CIO [designee] notifies requestor of recommendation.

b. Data Standards Development Procedures

1. The office or region and DSB notify the community of interest in the subject area of the data standard. Programs (IMOs) and regions (IRM BCs) are notified of the development process and offered an opportunity for involvement.
2. CIO [designee] authorizes the creation of a data standard action team.
3. The office or region and DSB creates an action team from the community of interest.
4. Data standard action team opens a controlled collaborative space on the data standards Web site for action team deliberations, document sharing, and threaded discussions.
5. Data standard action team develops a charter outlining the scope of work and level of effort.
6. DSB trains data standard action team in data standards development and in the use of the approved data standards template.
7. Data standard action team develops draft data standard.

c. Draft Data Standards Review Procedures

1. Data standard action team posts the draft data standard on the controlled collaborative space and on the data standards Web site for review.
2. Data standard action team notifies community of interest that draft data standard is available for review.
3. Data standard action team reviews comments from community of interest and develops a matrix for resolution.
4. Data standard action team resolves comments and notifies submitters.
5. Data standard action team develops implementation guidance or, if the standard was developed through the Exchange Network process, the EPA members of the Exchange Network data standards development action team develop implementation guidance (see Data Standards Implementation Procedures).   The implementation guidance must include a "required implementation date", all relevant systems in EPA must implement the data standard by this date.
6. Data standard action team forwards draft through the Quality Information Council (QIC) process to the CIO for approval for submission for public comment.
7. CIO [designee] approves draft for public comment.

8. DSB publishes a federal register notice if standard affects external data exchanges with links to the standard on the data standards web site.

9. Data standard action team reviews pubic comments and develops a comment matrix for resolution.

10. Data standard action team resolves comments and notifies submitters.

11. Data standard action team forwards revised draft data standard and implementation guidance to QIC for recommendation to CIO.

d. Data Standard Approval Procedures

1. Quality Information Council (QIC) reviews and sends draft data standard and the implementation guidance to CIO with recommendation.

2. CIO approves and promulgates final data standard and implementation guidance.

3. DSB publishes final data standard and implementation guidance on appropriate Web sites and registers data standard in the Environmental Data Registry (EDR).

7. RELATED DOCUMENTS

None

8. ROLES AND RESPONSIBILITIES

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

1. designate standards development priorities;

2. approve draft data standards, affecting external data exchanges, for Federal Register public review; and,

3. approve and promulgate final data standards.

b. Senior Information Official (SIOs) shall:

1. promote the use of data standards, and;

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

c. Information Management Officers (IMOs), Information Resources Management Branch Chiefs (IRM BCs) shall:

1. recommend the need for new data standards to be developed,

2. assist in the selection of data stewards for standards relevant to their program concerns, and;

3. assist in the nomination of action team members for standards development and revision in subject areas relevant to their program concerns.

d. Data Standards Branch (DSB) shall:

1. perform feasibility analysis of standards proposed for development;

2. provide expertise and administrative support to Action Teams;

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

4. conduct any required Federal Register announcement and review processes; and,
5. post final data standard on Web site and in the Environmental Data Registry (EDR).

    e. Quality Information Council shall:
1. review the draft data standard and make a recommendation to 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. **Data Standard:** A documented consensus-based agreement on the format and definition of common data.
e. **Data Standards Action Team:** A team of subject matter experts that develops or modifies a data standard and/or data standard implementation guidance document.
f. **Data Standards Branch (DSB):** The EPA organization responsible for managing the 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.
g. **Data Standard Action Team Charter:** developed by the Action Team to define the scope and the level of effort needed for the development of a proposed data standard.
h. **Data Standard Website:** A website where all developers and users of data standards can find information about EPA data standards and guidance on their implementation; and, collaborate on development, revision of data standards and/or implementation issues.
i. **Environmental Data Registry (EDR):** A metadata repository used to record information about data and data standards. http://www.epa.gov/edr.
j. **Exchange Network (EN):** 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. **Feasibility Analysis:** An analysis to discover issues that may be associated with development, modification, or implementation of a proposed data standard. Usually the activity begins with an assessment of Agency business needs and a review of relevant existing standards (International, National, EPA, etc.)
l. **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.
m. **Information Management Officer (IMO):** Management official responsible for the oversight of the information resources management in the program or administrative office.
n. **Information Resources Management Branch Chiefs (IRM BCs):** Management official responsible for the oversight of the information resources management in an EPA region.

o. **Promulgate:** Publication of a policy, guidance document, data standard, etc. through an official memorandum distributed by the appropriate US EPA official (for data standards the CIO).

p. **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.

q. **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.)

r. **Retirement Date:** The date 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.

s. **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.

10. WAIVERS

See Procedures for Requesting Data Standards Conformance Waivers

11. RELATED PROCEDURES, STANDARDS AND GUIDANCE

a. Procedures for Requesting Data Standards Conformance Waivers
b. Procedures for Data Standards Implementation
c. Procedures for Data Standards Maintenance

12. MATERIAL SUPERSEDED

13. ADDITIONAL INFORMATION

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

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and Chief Information Officer
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