

Chapter 19 - INFORMATION AND DATA MANAGEMENT

1. PURPOSE. The purpose of this chapter of the Environmental Protection Agency's (EPA's) IRM Policy Manual is to:
 - a. Assure the utility of EPA's information and data in meeting legislative and mission requirements.
 - b. Establish principles for EPA's management of information and data.
 - c. Implement those components of Federal information management policy relating to information and data management as articulated in OMB Circular A-130, Management of Federal Information Resources.
 - d. Assign organizational responsibilities for EPA's management of information and data.
 - e. Establish the EPA Information and Data Management Program to implement this policy and to enable integration of information and data across environmental programs.
2. SCOPE AND APPLICABILITY.
 - a. This policy applies to all EPA employees and their agents involved in EPA's information and data management activities. These activities include management of information and data from planning, through creation, processing, dissemination, use, and storage to disposition. They also include all activities related to sharing and integration of information and data.
 - b. This policy explicitly applies to the implementation of any information or data management related requirement in any EPA enabling legislation or regulation.
 - c. This policy explicitly applies to all information or data management related activities encountered in the preparation of proposed legislation and regulations by EPA officials and staff.
3. AUTHORITIES.
 - a. The Paperwork Reduction Act of 1980 (44 U.S.C. Chapter 35) as amended.

- b. Office of Management and Budget Circular A-130, Management of Federal Information Resources.

4. BACKGROUND.

- a. The Environmental Protection Agency, like other governmental agencies and private organizations working to protect the environment worldwide, relies upon the availability of accurate information in fulfilling its mission. Some information used by EPA is created by the Agency itself. Other information, equally critical to EPA's mission, is created by State and local governments or private industry and submitted to or shared with EPA according to agreements.

Fulfillment of EPA's environmental mission requires the active, coordinated efforts of partners within government, private industry and the public. Sharing of information and data with all organizations and individuals working for protection of the environment enhances the effectiveness of EPA and its partners in fulfilling that mission. EPA information once considered of interest to only one media area (such as water or air) is now understood to be of importance Agencywide. Identification and documentation of Agency information requirements will help make integration and sharing of information and data feasible, effective and efficient.

- b. The Paperwork Reduction Act established a broad mandate for agencies to perform their information management activities in an efficient, effective, and economical manner. It also assigned the Director of the Office of Management and Budget responsibility for maintaining a comprehensive set of information resources management policies, and for promoting the application of information technology to improve the use and dissemination of information in the operation of Federal programs. To fulfill these responsibilities, OMB issued and maintains Circular No. A-130, Management of Federal Information Resources.

Circular A-130 requires agency heads to develop and implement internal agency information policies that conform to the policies set forth in the Circular. These Circular A-130 policies address the twofold definition of information resources management as stated in the Circular (i.e., information itself and the resources associated with information). These policies are further titled "Information Management" -

the management of Federal information; and "Information Systems and Information Technology Management" - the planning, acquisition, operation, and management of Federal information systems and technology.

Further, Circular A-130 assigns to the Department of Commerce responsibility for the development and issuance of Federal Information Processing Standards and guidelines necessary to ensure the efficient and effective management and use of information technology. Those standards and guidelines are published by the National Institute of Standards and Technology.

This chapter of the IRM Policy Manual addresses information and data management aspects of EPA's internal management practices for information, information activities, information systems, and information technology as specified in Circular A-130. It is responsive to the following broad objectives:

- (1) managing information as a valuable strategic resource, as important as financial and personnel resources;
- (2) enhancing the value of data by assuring its accuracy, integrity and availability;
- (3) performing information and data management activities in an integrated, efficient, effective, and economical manner;
- (4) maximizing the usefulness of information and data, improving service delivery to the public, reducing information collection burden on the public, and lowering the cost of program administration; and
- (5) recognizing changes in the technical, legal and operational environment EPA faces when managing information technology.

c. This policy is intended to be read in the context of the entire IRM Policy Manual. It is not comprehensive in covering the requirements of Circular A-130, and it is not intended to be considered in isolation from other EPA IRM policies articulated in this manual.

5. POLICY.

- a. ***EPA information and data resources will support Agency missions and programs as agreed upon in Agency***

strategic plans. EPA shall collect or create only that information and data necessary for the proper performance of agency functions and which has practical utility. Practical utility is understood to include such qualities of information as accuracy, adequacy, and reliability.

- b. **EPA information and data resources will be treated as Agency resources and managed in a reasonable, efficient, effective, and economical manner.** EPA will plan in an integrated manner for managing information and data throughout its life cycle. Agency information and data management plans will consider the creation, collection, processing, dissemination, use, storage, and disposition of information and data resources.
- c. **EPA information and data requirements will be identified, defined, and documented.** Agency information and data requirements, including appropriate security requirements, will be identified and defined in the routine course of system development, re-engineering, or enhancement. The information requirements that each information system is intended to meet will be documented.
- d. **Information and data collected and stored by EPA will be identified, defined and documented.** EPA will maintain an inventory of the information and data in Agency information systems.
- e. **Documentation of EPA information and data requirements and collections will be shared.** To the extent permitted by the confidentiality requirements of Federal law, regulation, and policy, EPA will share Agency metadata in order to improve the compatibility and efficiency of Agency information systems and improve access to Agency information and data resources for all potential users, including the public.
- f. **Documentation of EPA information and data requirements and collections will address the quality of the data.** To enable the fullest use of EPA information and data resources, all necessary steps will be taken to ensure that data are of known and specified quality. Quality is understood to include such characteristics as accuracy, adequacy, and reliability.
- g. **EPA will promote information and data exchange and sharing.** To the extent permitted by the

confidentiality requirements of Federal law, regulation, and policy, the Agency will support efficient use and effective stewardship of information and data resources by exchanging and sharing information and data both within and outside the Agency.

- h. ***EPA will use Agency-wide standards to establish essential information and data resources management controls.*** The Agency will adopt applicable international, national and Federal Information Processing Standards for data where appropriate or required. When needed, Agency-specific standards will be developed. All preparation of legislation and regulations as well as information system designs, developments, redesigns, modernizations, implementations, and life cycle management will comply or ensure compliance with Agency data standards.
- i. ***EPA employees will be adequately trained to effectively manage and use information and data resources.*** Decentralization of information technology has placed the management of information and information technology directly in the hands of nearly all EPA personnel. The Agency will ensure that EPA employees who work with EPA information and data resources have appropriate knowledge of how to manage and use information and data.

6. RESPONSIBILITIES.

- a. The EPA Designated Senior Official for IRM shall:
 - (1) Ensure that the Agency Strategic Plan addresses information management, including information and data sharing, and includes high-level information requirements.
 - (2) Organize and lead the ongoing development of an Agencywide information architecture identifying the information and data required to support Agency missions.
 - (3) Lead the compilation and ensure the availability of an inventory of information and data in Agency information systems.
 - (4) Lead the development and promulgation of Agency-wide standards to establish essential management controls for information and data.

- (5) Implement this policy by establishing and supporting an EPA Information and Data Management Program and appoint an Information and Data Management Officer for EPA who shall be responsible for administration of the Program.
 - (6) Ensure the coordination required for development of training responsive to the specific needs of the EPA Information and Data Management Program.
- b. The Information and Data Management Officer shall:
- (1) Administer the Information and Data Management Program.
 - (2) Participate in the IRM strategic planning and budgeting process and work to see that sufficient funds are allocated for information and data management activities through the budget process.
 - (3) Develop and promulgate Agencywide standards and management controls for data resources, working with the National Institute of Standards and Technology, other Federal agencies, and non-Federal organizations, as appropriate, in the development of data standards.
 - (4) Direct efforts to develop those components of an information architecture focusing on data.
 - (5) Develop and oversee centralized coordination of mission-related data standardization efforts Agencywide.
 - (6) Create a repository to manage and control essential Agency metadata resources and make these resources easily accessible within and outside the Agency.
- c. Each EPA Primary Organization Head (see definition) shall:
- (1) Ensure active and appropriate participation of the Primary Organization in development of the Agency IRM Strategic Plan.
 - (2) Ensure that the Primary Organization Strategic Plan addresses information management, including information and data sharing, and includes high-level, Primary Organization information

requirements.

- (3) Sponsor and support the ongoing development of a Primary Organization information architecture identifying the information and data required to support Primary Organization missions.
- (4) Implement the EPA Information and Data Management Program within the Primary Organization and ensure that information and data management activities performed for the Primary Organization by contractors adhere to Agency information and data management policy and program requirements.
- (5) Contribute to the development of standards by directing appropriate Primary Organization management and staff to actively participate in such development efforts.
- (6) Share documentation of information and data requirements and collections of the Primary Organization with other EPA Primary Organizations.
- (7) Ensure that documentation of EPA information and data requirements and collections addresses the quality of the data.
- (8) Ensure that Primary Organization employees are appropriately trained to effectively manage and use information and data resources.

7. DEFINITIONS. All definitions are taken from Office of Management and Budget's Circular A-130 or the National Institute of Standards and Technology's Special Publication 500-208 (March 1993) unless otherwise noted.

- a. **Data.** Facts or figures from which a conclusion can be drawn. Representation of facts, concepts, or instructions in a formalized manner suitable for communication, interpretation, or processing by humans or by automatic means. Any representations such as characters or analog quantities to which meaning is, or might be, assigned.
- b. **Data (Resources) Management.** The responsibilities for planning and controlling the data resources and functions of an organization which relate to collecting, cataloging, processing, storing, communicating, and disposing of data consistent with the overall goals and objectives of an enterprise.

- c. **Data Requirement.** A documented need, determined through analysis, for data resources to meet an agency's information requirements. (Adapted from "A Guide for Requirements Analysis and Analysis of Alternatives," Information Resources Management Service, U.S. General Services Administration, January 1990)
- d. **Data Resources.** All data created manually or by automated means that an enterprise treats as a resource for information used in decision making and problem solving. (Adapted)
- e. **Designated Senior Official for IRM.** An agency official with broad responsibility and accountability for information resources management as defined by the Office of Management and Budget in Circular A-130. Within EPA, that official is the Assistant Administrator for Administration and Resources Management. (EPA Delegations Manual, Chapter 1-84. Information Resources Management, 1200 TN 343, 11/29/93.)
- f. **Information.** Any communication or representation of knowledge such as facts, data, or opinions in any medium or form, including textual, numerical, graphic, cartographic, narrative, or audiovisual forms.
- g. **Information Architecture.** A collection of logical constructs used to define and control the integration of information systems.
- h. **Information Life Cycle.** The stages through which information passes, typically characterized as creation or collection, processing, dissemination, use, storage, and disposition.
- i. **Information Management.** The application of general management principles including planning, budgeting, directing, and controlling the processing, the handling, and the uses of an organization's information.
- j. **Information Requirement.** A documented need, determined through analysis, for information resources to perform an agency's mission. (Adapted from "A Guide for Requirements Analysis and Analysis of Alternatives," Information Resources Management Service, U.S. General Services Administration, January 1990)

- k. **Information Resources.** All information created manually or by automated means that an enterprise treats as a resource for decision making and problem solving.
 - l. **Information System.** The organized collection, processing, maintenance, transmission, and dissemination of information in accordance with defined procedures, whether automated or manual.
 - m. **Metadata.** Information about an organization's information and data activities. This includes the characteristics, resources, usage, activities, systems, and holdings of data.
 - n. **Primary Organization.** A component of EPA managed by a Primary Organization Head (namely, the EPA Deputy Administrator, Assistant Administrator, Regional Administrator, the Inspector General and the General Counsel.) (Derived from EPA Order 1000.24)
 - o. **Primary Organization Head.** The EPA Deputy Administrator, Assistant Administrators, Regional Administrators, the Inspector General and the General Counsel. (Derived from EPA Order 1000.24)
8. STANDARDS AND PROCEDURES: EPA data standards and procedures implementing this policy will be issued under separate cover.