

Information Quality in a Policy Context: A U.S. EPA Perspective

BIOGRAPHY-----

Reggie Cheatham

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Reggie Cheatham is the Director of EPA's Quality Staff in the Office of Environmental Information (OEI). The Quality Staff is responsible for the implementation and oversight of the Agency's Quality System and the Information Quality Guidelines. Prior to joining the Quality Staff, Reggie served as: the Director of the Environmental Analysis Division in the Office of Information Analysis and Access, OEI; the Deputy Director of the Regional Support Division (Superfund Enforcement), Office of Site Remediation Enforcement in the Office of Enforcement and Compliance Assurance (OECA); and Chief of the Chemical Industry Branch, in the Office of Compliance, OECA.

Prior to joining EPA, Reggie worked as a Quality Control/Civil Engineer in the construction industry and served in the United States Army. Reggie holds a BS Civil Engineering and MS Environmental Engineering from the George Washington University.



Information Quality in a Policy Context: A U.S. EPA Perspective

Reggie Cheatham

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MIT Information Quality Symposium
July 16, 2009

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Presentation

- Organization
- Governance
- EPA Policies
- Quality Policy
- Examples
 - American Recovery & Reinvestment Act (ARRA)
 - Data.gov

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United States Environmental Protection Agency (U.S. EPA)

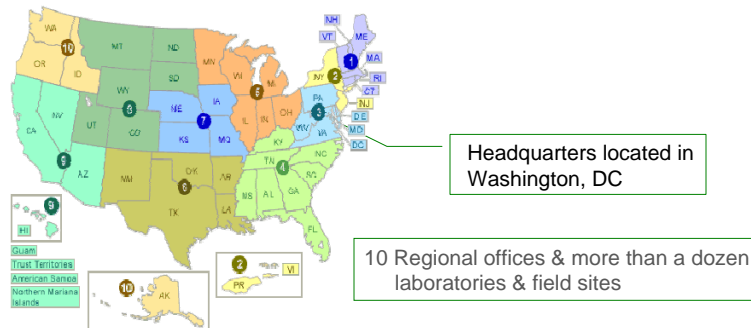
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U.S. EPA



- Established in December 1970
- Mission - To protect human health and the environment
- Workforce - Approximately 17,072 people



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EPA Stakeholders



- Groups that acquire, use, distribute or access EPA information
 - Other federal agencies
 - Tribes
 - State & Local governments
 - Foreign countries
 - Business & industry
 - Nonprofit organizations
 - Environmental groups
 - American public

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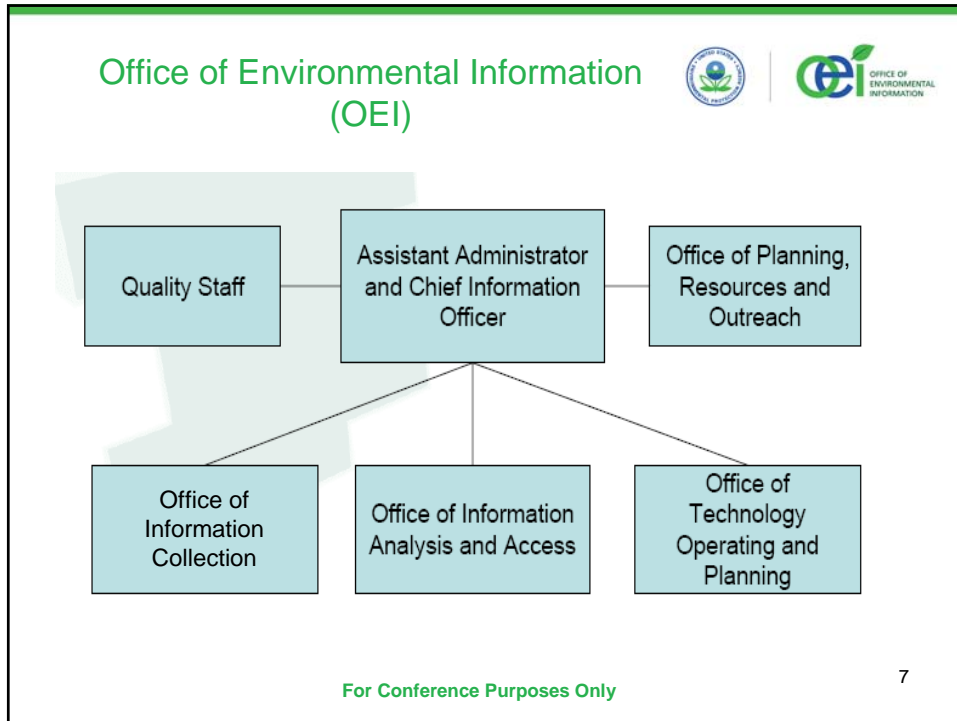
Office of Environmental Information (OEI)



- Established in 1999
- Headed by the Chief Information Officer (CIO)
- Manages the life cycle of information to support EPA's mission of protecting human health and the environment
- Identifies and implements innovative IT and IM solutions that strengthen EPA's ability to achieve its goals
- **Vision** -To provide timely, secure, relevant and integrated information to protect human health and the environment

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Governance

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Chief Information Officer (CIO)

- Advances the creation, management, and use of information as a strategic resource at EPA
- Position initially mandated by the 1996 Clinger-Cohen Act, to ensure consistent agency-wide management of IT, IM & data quality
- EPA was one of the first federal agencies to identify and appoint a CIO
- At EPA, CIO is also designated as the
 - Senior Official for Quality
 - Senior Information Quality Guidelines Official
 - Chair of the EPA Quality and Information Council (QIC)

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Quality Information Council (QIC)

- Composed of from EPA programs offices & the lead and back-up Regions. Chaired by the CIO
- Advises & assists the CIO in developing and implementing the Agency's quality and information goals and policies
- Provides a mechanism through which senior Agency officials can raise and debate strategic information and quality issues facing the Agency
- Fosters the creation of internal partnerships on information strategies, initiatives and opportunities for efficiency

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EPA Director of Quality

- Delegated authority for oversight of EPA Quality Program and the EPA Information Quality Guidelines
- Manages the OEI Quality Staff
- Acts as a champion for quality
- Serves as a resource to the CIO and QIC
- Consults with Program Offices and Regions to enhance the development of an environment of continual improvement in every aspect of the organization's products and services

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Examples of U.S. EPA Policies, Standards, Guidelines That Impact IQ

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Examples of EPA Policies, Standards, Guidelines That Impact IQ



- Information Resources Management (IRM) Policy Manual (CIO 2100.0)
- Quality Policy (2106.0)
- System Life Cycle Management Policy (CIO 2121)
- Data Standards (CIO 2133.0)
- National Geospatial Data Policy (CIO 2131.0)
- Agency Network Security Policy (CIO 2150.0)
- Information Access Policy (CO 2171.0)
- Web Governance and Management (CIO 2180.0)
- EPA Information Quality Guidelines

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OEI Policies



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Policy (<http://www.epa.gov/irmpoli8/policies.htm>)

CIO Number	EPA IM/IT Policy Identification #	Title	Approval Date	Review Date
CIO 2100.0	2100B8	Information Resources Management (IRM) Policy Manual Chapter 3 - State/EPA Data Management (PDF) (9pp, 14 KB) Chapter 9 - Information Collection (PDF) (7pp, 12 KB) Chapter 14 - EPA Rulemaking Docket Policy (PDF) (8pp, 14 KB) Chapter 16 - EPA Internal Electronic Signatures Policy (PDF) (17pp, 26 KB) Chapter 20 - Hardware/Software/Communications Standardization (PDF) (7pp, 13 KB)	06/15/01	06/04
CIO 2101.0	2100.3A1	Limited Personal Use of Government Office Equipment Policy (PDF) (8pp, 144K)	04/02/04	12/05
CIO 2104.0	2165.1	Software Management and Piracy Policy (PDF) (5pp, 60K)	05/15/03	05/06
		Related Procedures, Standards, and Guidance • Guidelines for The Software Management and Piracy Policy (PDF) (6pp, 97K)		
CIO 2105.0	5360.1 A2	Policy and Program Requirements for the Mandatory Agency-Wide Quality System (PDF) (12pp, 94K)	3/5/2000	05/03
		Related Procedures, Standards, and Guidance		

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EPA Quality Policy (CIO 2106)

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Evolution of EPA Quality Program



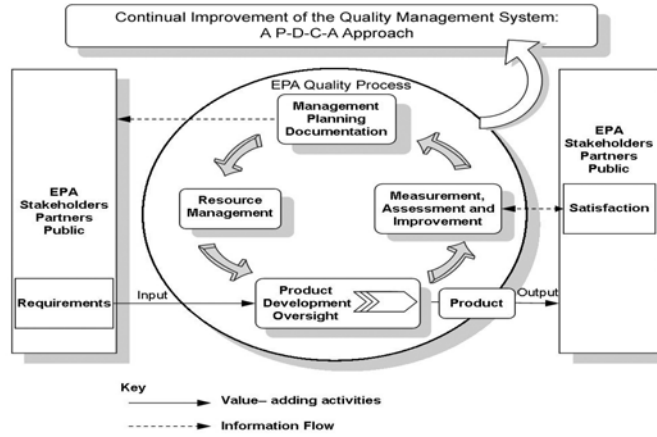
- Laboratory data
- Data collection
- Sampling
- Measurement
- Increasing IT investment
- Increasing demand for information
- Expecting "Good Quality"
- Integration
- Interoperability
- Usefulness
- Credibility

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Quality Policy Framework

Establish standards and guidelines to address quality during the entire lifecycle of all Agency products and service



The figure is adapted from ISO 9001 with the permission of the American National Standards Institute (ANSI) on behalf of the International Organization for Standardization (ISO). Copies of all ISO standards can be purchased from ANSI, 25 West 43rd St. New York, NY 10036, 212-642-4900.

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American Recovery & Reinvestment Act (ARRA)

recovery.gov



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ARRA



- In February 2009, the President signed the American Reinvestment and Recovery Act
- ARRA required the establishment of a public web site where citizens could acquire information about use of funds

The Board shall establish and maintain...a user-friendly, public-facing website to foster greater accountability and transparency in the use of covered funds. The website...shall be a portal or gateway to key information relating to the Act and provide connections to other government websites with related information." -- American Recovery and Reinvestment Act of 2009

- New levels of transparency, oversight, and accountability were established

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Recovery.gov




- In order to accomplish the mission set out in ARRA and provide information for the public to monitor the progress of the stimulus package, Recovery.gov was created
- Recovery.gov features:
 - Weekly updates of each agencies funding notifications and activity reports
 - Map presenting state-by-state funding
 - Graphs charting the weekly progress of agencies' available and paid-out funds
 - Map showing the recipients of funds and the resulting projects
 - Information on Federal contracts, grants & loans
 - A map illustrating the estimates of jobs to be created or saved and links to job information sites
 - Tools for the public to report for waste, fraud and abuse of recovery funds
 - Oversight audits by the Inspectors General of each Agency
- Web site will continue to evolve to reflect additional data as it is collected

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EPA Information on Recovery.gov

AGENCY SUMMARY - ENVIRONMENTAL PROTECTION AGENCY

Environmental Protection Agency

Agency Recovery Site
[View Recovery Site](#)

Agency Recovery Plan
[View Agency Recovery Plan](#)

Recent News
Monday, April 27, 2009
[Environmental Protection Agency Office of Inspector General Recommends Strengthening Management Integrity Processes Affecting the Agency's Recovery Act Activities](#)

Friday, April 3, 2009
[EPA Awards Nearly a Half Billion Dollar Grant to New York to Create Jobs and Protect Human Health and the Environment](#)

Friday, March 27, 2009
[EPA Announces First of Nearly \\$100 Million in Recovery Act Funds to Create Jobs and Protect Colorado's Environment](#)

[More News >](#)

Financial and Activity Report

Financial Status

Available 4.46B

Paid Out 21.43M

Weekly Progress



Source: Agency Financial and Activity Report as of 2009-07-08

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EPA Information on Recovery.gov




Financial and Activity Report

Report Date: 2009-07-03 [View History](#)

Financial Status:

- Total Available: \$4,460,889,213
- Total Paid Out: \$21,428,776

Major Actions Taken to Date:

- EPA awarded ARRA funding for Clean Water infrastructure projects in the State of Delaware (\$19.2M).
- EPA awarded a total of \$15,000,000 in Superfund ARRA funds to the Bunker Hill Site (ID). The funds will be used to accelerate ongoing cleanup activities at this site, boosting the local economy while also protecting public health and the environment. Additional site-specific information for the sites listed may be found at <http://www.epa.gov/superfund/eparecovery/index.html>.

Major Planned Actions:

- EPA will provide ARRA funds for the Targeted Brownfields Assessment (TBA) program over the next few weeks. EPA's TBA program provides EPA contractor assistance for environmental assessment activities at Brownfields in communities that may not have a Brownfields assessment grant. The ARRA funds will be available directly from EPA through the EPA Regional Brownfields offices. A portion of the ARRA funds will be completed on the Headquarters Service Disabled Veterans Owned Small Business National TBA Contract.
- Over the next week, EPA plans to award up to 42 additional grants and contracts across the EPA ARRA programs, totaling over \$149.7 million. Puerto Rico (2 awards), Illinois, Wisconsin, and Arkansas will receive ARRA Water State Revolving Fund resources (approximately \$80.1 million). Massachusetts (2

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How do we ensure the quality of supplier information?

“Management Action Plan: Quality Assuring EPA’s ARRA Grants, Contracts and Interagency Agreements (IAs)” (MAP I)

- MAP 1
 - Reiterates EPA’s existing Quality Policy for QA of environmental data operations performed under grants, contracts and IAs, which states that grants, contracts & IAs that involve environmental data operations must include a clause which requires the submission of appropriate QA documentation
 - Explains the Quality Policy’s role under ARRA
 - Defines roles and responsibilities in the federal and regional programs for execution of QA policy requirements under ARRA
 - Includes an extensive appendix which specifies the ARRA grants, contracts and IAs that have environmental data operation components with requirements for Quality Management Plans and/or Quality Assurance Project Plans

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How do we ensure the quality of performance results?

Management Action Plan II: Quality Assurance EPA’s Data for Performance Measures (MAP II)

- MAP II
 - Documents a baseline of expected quality practices for ARRA performance data and information
 - Establishes requirements for a Data Quality Record for reported information
 - The Data Quality Record includes documentation about:
 - Data Definitions and Source Reporting
 - Database controls
 - Data Transparency in reports
 - Review and Certification
 - Describes an Error Correction Process for ARRA data

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Data Quality Record

1. Data Definition and Source Reporting

1. Data Source
2. Reporting Schedule
3. Reporting Period
4. Data Definitions
5. Meta-Data
6. Reporting Format
7. Quality Documentation

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Data Quality Record

2. Database Controls and Documentation

1. Database Information
2. Data Field Definitions/Standards
3. Data Entry Training/Oversight
4. Meta Data Fields
5. Calculations
6. Database Oversight
7. Risk Management Process

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Data Quality Record



3. Data Transparency in Reports
 1. Reporting Oversight
 2. Data Flow
 3. Data Limitations/Qualifications
 4. Audit Results/Corrective Action
4. Review and Certification
 1. Data Quality and Completeness
 2. Organization-specific roles for Quality practices and review of ARRA data and information
 3. Certification signed (Yes/No)
 4. Explanations/Comments
5. Record Update information

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Data.gov



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Data.gov



- Created as a priority Open Government Initiative to increase the ability of the public to easily find, download, and use datasets that are generated and held by the Federal Government
- Provides descriptions of the Federal datasets (metadata), information about how to access the datasets, and tools that leverage government datasets
- Federal agencies make decision on which datasets to post
- Datasets continue to reside on each agency's Web site
- Data Policy is posted (<http://www.data.gov/datapolicy>)

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Data Policy





- Posted datasets only contain public information
- All information accessed through Data.gov is in compliance with
 - Federal standards for confidentiality, integrity, and availability controls.
 - Federal privacy requirements including OMB guidance
 - Agency's Information Quality Guidelines
 - Federal record retention requirements Secondary Use
- Data accessed through Data.gov do not have controls over its end use. The US Government does not vouch for any analyses conducted with data retrieved from Data.gov
- Agency's preferred citation for each dataset is included in its metadata"

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Example of Highly Rated EPA Dataset

2007 Toxics Release Inventory for Federal Facilities

DATASET SUMMARY


Agency:	Environmental Protection Agency
Category:	Geography and Environment
Date Released:	3/19/2009
Date Updated:	6/10/2009
Time Period:	Calendar Year 2007
Frequency:	Annual
Description:	The Toxics Release Inventory (TRI) is a publicly available EPA database that contains information on toxic chemical releases and waste management activities reported annually by certain industries as well as federal facilities.

DOWNLOAD INFORMATION

Feeds >	XML >
CSV/TXT >	XLS >
CSV <small>5.80MB</small>	
KML/KMZ >	Shapefile >
Maps	

DATASET RATINGS

	Current	Your Rating [?]
Overall	★★★★★ <small>(2 votes)</small>	★★★★★
Data Utility	★★★★★ <small>(2 votes)</small>	★★★★★
Usefulness	★★★★★ <small>(2 votes)</small>	★★★★★
Ease of Access	★★★★★ <small>(2 votes)</small>	★★★★★



Type the two words:

SUBMIT

Comment on these data:



SUBMIT

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Example of Highly Rated EPA Dataset

DATASET INFORMATION

Data.gov Data Category Type	Raw Data Catalog
Specialized Data Category Designation	Administrative
Keywords	TRI, TRI Data, TRI Reporting, Toxic, Toxics, Toxic Release, Toxics Release, Toxic Release Inventory, Toxics Release Inventory, Chemical, Chemicals, Chemical Release, Chemical Pollution, EPCRA, EPCRA 313, section 313, TRI State Data, Hazardous, Right to Know, Form R, Form A, pollution prevention, waste management, source reduction, community, community right to know, toxic chemical release inventory, toxic chemicals release inventory, facility, facilities
Unique ID	308

CONTRIBUTING AGENCY INFORMATION

Citation	2007 Toxics Release Inventory for Federal Facilities, http://www.epa.gov/tri/tridata/tri07/data/federaldata07/FED_2007_v07.exe
Agency Program Page	Toxics Release Inventory Program, http://www.epa.gov/tri/
Agency Data Series Page	2007 Toxics Release Inventory (TRI) Data Files, http://www.epa.gov/tri/tridata/tri07/data/index.htm



DATASET COVERAGE

Unit of Analysis	Quantities and other characteristics of releases and other waste management activities (recycling, energy recovery and treatment) for a single TRI chemical by a TRI qualifying facility.
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Example of Highly Rated EPA Dataset

(recycling, energy recovery and treatment) for a single TRU chemical by a TRU qualifying facility.

Granularity	Longitude/Latitude
Geographic Coverage	Federal Facilities in the United States including facilities in all 50 states, American Samoa, the District of Columbia, Guam, the Mariana Islands, Puerto Rico and the Virgin Islands

DATA DESCRIPTION

Collection Mode	Paper forms, floppy diskettes, CDs and internet submissions
Data Collection Instrument	Paper Forms and Instructions available at http://www.epa.gov/tri/report/index.htm ; Diskette, CD and Internet Submissions via the TRI-ME Desktop Application – Application available at http://www.epa.gov/tri/report/software/trimecd/index.htm ; Internet submission through the TRI-ME web application – Access available through EPA's Central Data Exchange (CDX) at http://cdx.epa.gov
Data Dictionary/Variable List	http://www.epa.gov/tri/tridata/tri07/data/documentation07/States_Doc_2007_v07.pdf
Applicable Agency Information	EPA
Quality Guideline Designation	
Data Quality Certification	Yes
Privacy and Confidentiality	Yes



ADDITIONAL DATASET DOCUMENTATION

Technical Documentation	http://www.epa.gov/tri/tridata/tri07/data/documentation07/States_Doc_2007_v07.pdf
Additional Metadata	

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Importance of Policy in IQ

- Documents approaches and expectations to promote consistency in results
- Organizes disparate Standard Operating Procedures and Quality Controls
- Identifies gaps and inconsistencies
- Establishes roles & responsibilities that support the business
- Eliminates or reduces confusion

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Contact Information

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