U.S. Environmental Protection Agency
Open Government Plan 4.0

OPEN GOV

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Open Government Plan 4.0

Table of Contents

Open Government Plan 4.0

List of Figures

Open Government Plan 4.0

I. Executive Summary

Open Government is a crucial component in helping the Environmental Protection Agency (EPA) meet its mission of protecting human health and the environment. The better the Agency can inform the public and major stakeholders on what, how, and why the Agency is performing, the better it can work together with its major partners, such as the states, tribes, other agencies, and the general public, to meet our common goals.

The *EPA Open Government Plan 4.0* updates Agency progress to implement the tenets of open government set forth in the *Open Government Directive* (M-10-06). It also presents the goals and implementation details for new areas of focus in the open government arena. The approach described supports the implementation of the *EPA 2014-2018 Strategic Plan*[1] and aligns with the goals and objectives laid out in the *FY2015-2018 EPA Information Resources Management Plan*[2].

Since the development of its initial Open Government Plan in April 2010, EPA has fostered a culture of transparency, participation, and collaboration. This includes developing new environmental information management approaches and employing advanced information and monitoring technologies to respond creatively, flexibly, and effectively to today's increasingly complex environmental problems. The Agency is modernizing its business practices to make its data development and management more transparent so it is more accessible and understandable. EPA is also pursuing advances in new tools and technologies to better serve the needs of the public.

The Agency has also expanded the conversation with a broad range of stakeholders on planning and implementing EPA mission activities by using multiple forms of outreach and collaboration. In keeping with its objective to strengthen partnerships, EPA emphasizes sharing information and working with its partners to develop innovative approaches that leverage all available resources to achieve its environmental and human health goals, as well as transparency and clarity in its communications. EPA strives for the fullest possible public participation in decision-making by remaining open and accessible to those representing all points of view and taking affirmative steps to solicit the views of those who will be affected by its decisions. Strengthening EPA's partnerships with states, tribes, local governments, and the global community through consultation, collaboration, and shared accountability are central to the success of the national environmental protection program.

The *EPA Open Government Plan 4.0* addresses the requirements laid out in the *2016 Agency Open Government Plans Memorandum M-16-16*[3] issued on July 14, 2016. The Plan highlights the ongoing

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[1] https://www.epa.gov/sites/production/files/2014-09/documents/epa_strategic_plan_fy14-18.pdf

[2] https://www.epa.gov/sites/production/files/2015-08/documents/irmstrategicplan.pdf

[3] https://www.whitehouse.gov/sites/default/files/omb/memoranda/2016/m-16-16.pdf

and planned programs, activities, and initiatives that illustrate EPA's overall approach to integrating the open government principles of transparency, participation, and collaboration into its core mission and how the Agency will continue to support this goal in the future. In developing this Plan, EPA solicited stakeholder input, reviewed major initiatives listed in preceding plans, and identified new initiatives that will further support open government principles.

EPA established the following objectives and sub-objectives to guide the development and implementation of this Plan:

- Improve Information Management to effectively support Agency mission implementation and stakeholder requirements.
    - Plan and manage data according to defined lifecycle processes.
    - Establish authoritative information sources and services to facilitate data access by promoting data interoperability.
    - Catalogue and label information with metadata.
    - Develop and maintain information using established standards and in machine readable formats.
    - Make and maintain information to be open and publicly accessible unless covered by National Security Act or Controlled Unclassified Information (CUI) Requirements.
    - Increase the ability of internal and external stakeholders to analyze accessible data.
- Proactively disclose information to advance transparency, accountability, and the presumption of openness.
- Provide the public with information on EPA's National Privacy Program.
- Achieve United States Office of Special Counsel (OSC) certification under the Whistleblower Protection Act certification program.
- Provide access to the Agency's Digital Government Strategy.
- Report on all domains registered to EPA via analytics.usa.gov.
- Increase the strategic use of open innovation.
- Increase access to the results of EPA-funded scientific research.
- Adopt open source practices and repositories.
- Increase public access to custom software code developed for EPA where appropriate.
- Implement the Digital Accountability and Transparency Act (DATA).
- Expand EPA financial data available to the public on USAspending.gov.
- Comply fully with the participation requirements of the Office of Management and Budget (OMB) transparency initiatives.
- Enhance mechanisms for informing the public about significant Agency activities.
- Comply fully with existing records management requirements.
- Improve the timeliness of EPA responses to Freedom of Information Act (FOIA) Requests.

- Reduce EPA FOIA backlog by 10% each year.

- Strengthen procedures for analyzing and responding to congressional requests for information.

- Increase the public's ability to learn about EPA's Declassification Programs.

- Broaden opportunities for public participation in policymaking, decision making, and program feedback.

- Expand collaboration to fulfill the Agency's core mission.

- Operationalize flagship initiatives begun in the 2014-2016 Open Government reporting cycle.

- Initiate additional flagship initiatives that emphasize collaboration with states, tribes, and the regulated community to improve business practices and leverage technology to ensure the protection of human health and the environment.

This Plan focuses on EPA's commitment to increasing accountability, promoting informed participation by the public, and creating economic opportunity. Details on the specific open government initiative selected for the Plan are described in sections III and IV of this plan. Not every open government effort underway at the Agency is included in this Plan, but those presented will enable EPA to continue to strengthen a culture where open government is part of its daily business.

Organization of this Plan

For clarity, this Plan is organized as closely as possible to the general framework provided in the July 15, 2016 OMB Memorandum M-16-16. For each plan component listed in the memo, the Plan contains an EPA objective(s) and the on-going or planned programs, activities or initiatives to meet the objective(s). The synopsis of each includes achievements, status, future steps, action items, and milestones, as well as links to existing public information wherever possible. In cases where EPA has fully complied with the stated objective, the synopsis for the government effort details how EPA continues to fulfill the open government requirements. For some of the components, the OMB guidance simply requires a short status report or linkages to a Web site versus the articulation of goals, objectives, and milestones traditionally associated with a plan. For 508 compliance and document readability, URLs are presented as footnotes throughout the document and in Appendix B.

The milestones listed at the end of each section reflect the action items planned for the three years following the last published EPA Open Government Plan in 2014 (i.e. 2016 - 2017). Planned activities and milestones for 2018 will be addressed in progress reports for this EPA Open Government Plan.

II.   New and Expanded Open Government Reporting Requirements

A.   Open Data

Goal: Manage data as a capital asset integral to mission implementation and public participation.

With this Plan, EPA reaffirms its commitment to meeting the requirements set forth in the White House *Open Data Policy – Managing Information as an Asset Memorandum M-13-13*[4] by establishing a goal to increase publicly accessible EPA data to support citizens' participation in government and promote transparency and accountability of Agency operations. Data is central to implementing the Agency's mission. It is used in every facet of Agency operations including developing and enforcing regulations, conducting studies on environmental issues, and publishing information to inform the public about EPA activities. The Agency and its stakeholders recognize that EPA's information could meet other organizational and public needs beyond the original intent under which it is collected or produced, further increasing the value of the information. By providing releasable information in open and machine-readable formats, EPA enables the public and other organizations to better leverage the rich wealth of information available.

Objective 1: Improve Information Management to effectively support Agency mission implementation and stakeholder requirements.

Enterprise Information Management Policy (EIMP)

Since the information collected and managed by the Agency holds significant interest and value to the public, EPA has started institutionalizing Open Data principles into all aspects of its data management practices. EPA made a major step towards systematizing Open Data as a key tenet of the Agency's operating principles by issuing the **Enterprise Information Management Policy** (EIMP) (CIO Policy 2135[5]) in 2015. The EIMP enables the Agency to comply with key requirements of the Open Data Policy as shown in **Figure 1**.

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[4] https://www.whitehouse.gov/sites/default/files/omb/memoranda/2013/m-13-13.pdf
[5] https://www.epa.gov/sites/production/files/2015-05/documents/2135-p-01_0_eimp_catal_epa_info_proc_final_2015_03_25.pdf

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Management Practice	Open Data Policy	EIMP
Addresses all information types	In definitions only (same info definition as in EIMP)-data focus; all info addressed in Executive Order	Yes
Lifecycle management	Yes	Yes
Machine readable	Yes	Yes*
Open Formats as appropriate - documented and shared data dictionaries/schema	Yes	Yes**
Data standards	Yes	Yes
Common core and extensible metadata	Yes	Yes
Maintain internal and external data asset Inventory	Yes	Yes***
Internal and external needs considered throughout lifecycle, including potential uses not in the original design	Yes	Yes
Ensure Privacy and confidentiality are fully protected	Yes (includes risk assessments)	Yes (risk assessment not addressed)
Incorporate new interoperability and openness requirements into core Agency processes	Yes	Yes
Coordinate with the Records Management Officer	Yes	Yes

*   As appropriate/feasible
**   Requirement in a variety of data-related procedures and guidance
*** Requirement in the EIMP Cataloguing Information Procedure (March 2015)

Figure 1: Comparison of the Requirements for the Open Data Policy to the EPA Enterprise Information Management Policy (EIMP)

The EIMP, which encompasses both structured and unstructured data, establishes a standard approach to manage information produced by, funded by, or received per regulated reporting and/or federal-wide requirements and subsequently held or cataloged in all types of Agency information management systems. The policy directs EPA organizations to ensure that information is easy to discover, understand, access, and reuse in a secure manner so it can be leveraged by a broad array of applications and analytics used to support EPA's mission and stakeholder needs. The EIMP is

supported by the *EIMP Cataloguing Information Procedure* (2135-P-01.0[6]), which requires cataloguing for advancing the discovery, access, and sharing of information, and by the *EIMP Minimum Metadata Standards* (2135-S-01.0[7]), which defines a consistent set of required and recommended metadata elements for information and is extensible to accommodate the multiple information domains at the Agency. Over the next several years, EPA will continue to develop procedures and guidance directed by the EIMP, align existing information management policies and guidance with the EIMP, and work with specific information domains to incorporate the principles of the EIMP into their program-specific guidance and operations.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Develop EIMP roadmap and implementation plan						X		

The EIMP and associated implementation procedures and standards provide the framework for achieving the Agency's goals to be transparent with information management, to share data to the greatest extent allowable under laws and regulations, and to be responsive to public requests as standard Agency practices. Based on EIMP guidance, EPA established the following Open Data sub-objectives to ensure information is managed as a strategic asset consistent with Executive and Legislative acts, orders, directives, strategies, and guidance:

- Sub-Objective 1a: Plan and manage data according to defined lifecycle processes.
- Sub-Objective 1b: Establish authoritative information sources and services to promote data interoperability.
- Sub-Objective 1c: Catalogue and label information with metadata.
- Sub-Objective 1d: Develop and maintain information using established standards and in machine readable formats.
- Sub-Objective 1e: Make and maintain information to be open and publicly accessible unless covered by National Security Act or Controlled Unclassified Information (CUI) Requirements.
- Sub-Objective 1f: Increase the ability of internal and external stakeholders to analyze accessible data.

The significant investment EPA made over the last two years and plans for the future to meet the EIMP objective and associated sub-objectives is summarized below according to the sub-objective it supports. The activities resulting from this investment illustrate how EPA uses or plans to use Open

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[6] https://www.epa.gov/sites/production/files/2015-08/documents/cio-2135-p-01-0.pdf

[7] https://www.epa.gov/sites/production/files/2015-08/documents/cio-2135-s-01-0.pdf

Data to further its core mission; increase its accountability, responsiveness, effectiveness, and efficiency; spur innovation and collaboration; and create economic opportunity. Together, these activities support the implementation of the EIMP whose goal is to promote Open Data across EPA.

- *Sub-Objective 1a: Plan and manage data according to defined lifecycle processes.*

The Agency creates, collects, receives, analyzes, and disseminates huge amounts of information as part of its regular business processes. Data is central to EPA's mission. EPA uses data to develop and enforce regulations, conduct studies on environmental issues and publish information to inform the public about our activities. Meeting EPA Open Data goals depends upon having quality data that supports the business processes for which it is developed, is documented in a manner that enables potential secondary users to determine whether the data can be used for their purposes, and incorporates standards and open formats so the information can be shared. Using a repeatable lifecycle management process that can accommodate evolving domain-specific business requirements and incorporates quality assurance (QA) and control principles into each of its phases is instrumental to developing high quality data.

EIMP Data Lifecycle Management Procedure

A high-level lifecycle management procedure will be issued in FY2017 that information providers can use as a framework to develop their domain specific technical reference specifications and guidelines. This will help ensure that the Agency is positioned to collect and assemble, store and find, release and discover, and analyze information quickly while maintaining data quality and legal defensibility. This will increase data discovery and access for stakeholders and the public.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Complete Lifecycle Management procedure								**X**

Quality Program

The goal of EPA's **Quality Program** is to ensure that EPA's decisions are supported by data of known and documented quality. The program oversees the quality of information being collected, produced, and used by EPA organizations. Some information is directly reported to EPA by regulated entities, by states and tribes or by contractors and grantees conducting work on EPA's behalf.

The draft lifecycle management process proposed during the EIMP development process acknowledges the central role of quality in every lifecycle phase and aligns with the continual improvement processes promoted by the Quality Program, as shown in **Figure 2**.
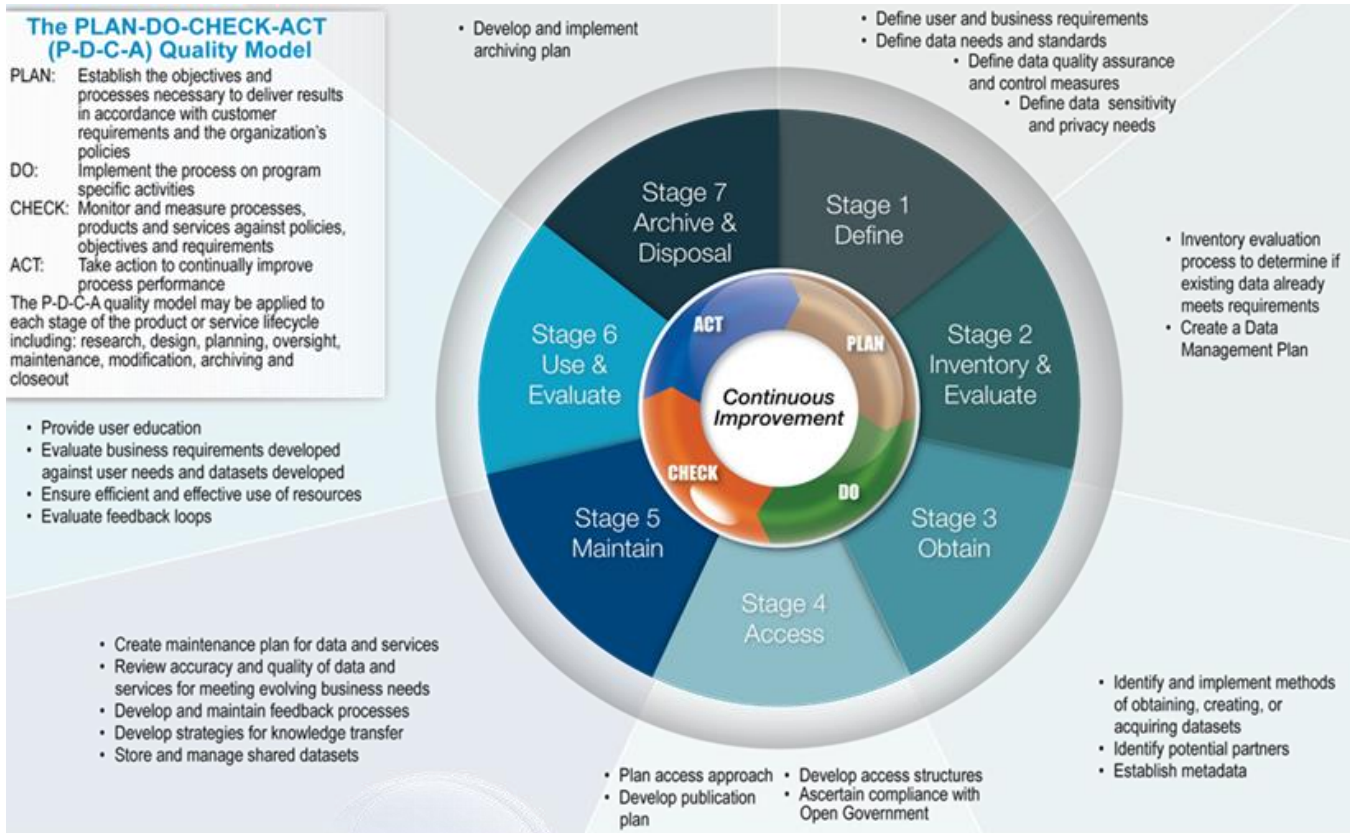
Figure 2: Integration of Data Management Lifecycle with Continuous Improvement Lifecycle

EPA's Quality Program provides requirements and oversight for conducting quality management activities for all environmental data collection and environmental technology programs performed by or for EPA. Historically, the Quality Program has relied on paper-based processes and cumbersome internal annual QA reporting processes. The Office of Environmental Information (OEI) is making strategic modifications to its Quality Program to ensure it is responsive and efficient. In FY2017, EPA plans to implement internal processes that will allow EPA to more effectively manage an optimal Quality Program and respond to emerging user requirements. To accomplish this goal, EPA plans to implement an enterprise QA reporting system, revise its internal Quality System Assessment process to focus on key areas that pose the greatest risk to Agency decision-making, and oversee external audits of EPA organizations who conduct field activities to ensure data is being collected using appropriate field operations. The Quality Program will also be a critical participant in the development of the lifecycle management procedure.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Implement QA Program internal processes to allow more effective management of the Program								**X**

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Implement an enterprise QA reporting system							X	
Conduct a Mini Kaizen LEAN process of EPA's Quality Systems Assessment process and develop recommendations to stream-line process						X		
Revise internal Quality System Assessment process to focus on key areas that pose the greatest risk to Agency decision-making							X	
Oversee external audits of EPA organizations conducting field activities to ensure data is being collected using appropriate field operations					X			

Scientific Data Management Program

EPA's Office of Science and Information Management (OSIM) in the Office of Research and Development (ORD) is working to implement a framework for managing the large volumes of complex scientific data created and used by ORD. In the course of this work, OSIM established the **Scientific Data Management (SDM) Program**, through which OSIM created the Scientific Data Management Policy, issued in February 2016, and procedural guidance for Scientific Data Management Plans (SDMP) for ORD intramural research projects, issued in August 2015. The Policy requires scientific data to be managed in a manner that recognizes scientific data as an asset, considers data value and costs, and is consistent across the organization. The SDMP requires researchers to describe information about their research data that serves as a guide to help users locate, understand, and use the data. The SDMP also collects the physical location of the data, how the research data will be managed and maintained, access restrictions for protected information, and any plans for sharing the research data. The EIMP Team will partner with ORD SDM teams to consider how to best include or reference SDM-related items as the EIMP Lifecycle Management Procedure is developed. Such documentation is critical as EPA continues to open its data to secondary users and the public. Moreover, when scientific data is managed in this way, it becomes much more accessible to the research community and increases collaboration and re-use opportunities.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Implement Phase One of SDM Policy (journal article data available through ScienceHub to the Environmental Dataset Gateway)	X							
Implement Phase Two of SDM Policy (require a SDMP when QA project plan is written and register effort in ScienceHub)						X		

- ▪ *Sub-Objective 1b: Establish authoritative information sources and services to facilitate data access by promoting data interoperability.*

Enabling different information technology systems and software applications to communicate, exchange data, and use the information that has been exchanged to facilitate the sharing of information among EPA and its partners is dependent upon achieving a common understanding of the data. The use of authorativative information sources to improve information consistency along with services that help users retrieve information more easlity increases the interoperability of environmental information.

System of Registries (SoR)

The **System of Registries** (SoR) and associated services are critical to meeting the objective of improving information management to more effectively support the Agency's mission and stakeholder requirements as well as implementing EPA's EIMP and Open Data strategy. The SoR is an umbrella of interrelated tools, data and system registries, data repositories, automated services, look up tables, and system components. Collectively, they increase data discovery and access, raise user understanding of EPA data, improve data quality, and expand data interoperability for improved analytics. SoR is supported by a team that assists users by facilitating the development of data standards and terminology, promoting identification of reusable components, and supporting the stewardship of system inventories, data dictionaries, and other important EPA metadata resources. Information about data standards can be accessed on the separate Data Standards Web Site[8].

SoR's seven registries and four associated services support many of the objectives and sub-objectives throughout this Open Government Plan. The following list provides the names and a brief description of these registries and services. Several registries and services that directly support open government requirements – the Environmental Dataset Gateway (EDG), Reusable Component Services (RCS), Facility Registry Service (FRS), Laws and Regulation Services (LRS), Substance Registry Services (SRS), and Linked Open Data (LOD) Services – are highlighted in this Plan. References to the sections in which these registries and services are discussed are provided in lieu of a brief description.

- Registries
    - Environmental Dataset Gateway (EDG) (see section II.A)
    - Substance Registry Services (SRS) (see section II.A)
    - Registry of EPA Applications, Models and Data Warehouses (READ)

        The Agency's authoritative inventory of information applications and models. There are over 1400 information resources with records in READ. The public can use READ to find those applications that contain information of interest.

    - Data Element Registry Services (DERS)

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[8] https://www.epa.gov/data-standards

The repository for EPA's data dictionaries, data standards, and commonly used value lists that enables individuals working with EPA data to understand what precisely that data represents by ensuring field definitions are described in plain English to the extent possible.

- Terminology Services

  A suite of tools and services consisting of a repository of environmental terms, their relationships, definitions, and other relevant information; a tool to create and manage vocabulary resources; a platform for collaborative vocabulary development; and Web services to import/export vocabularies.

- Facility Registry Services (FRS) (see section II.A)
- Reusable Component Services (RCS) (see section II.H)

- Associated Services
  - North American Industry Classification System (NAICS) Service

    A code set of industrial processes used in various EPA systems and regulations for information management.

  - TRIBES Web Services

    A standardized list of tribal entity information (federally recognized tribe names and codes) for use in EPA systems and partner data exchanges of tribe related information.

  - Source Classification Code (SCC) Service

    Used by facilities, states, and EPA to classify different types of emissions activities, and provide a way for EPA and state systems to maintain the current list of SCCs in a central location and ensure access to most up-to-date codes.

  - Linked Open Data (LOD) Service (see section II.F)

Data standards are an integral part of these services.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Develop SCC Web service				X				
Launch DERS enhanced capabilities						X		
Integrate NAICS service into the E-Enterprise Portal							X	
Complete SCC Web service development				X				
Complete SCC search page development					X			
Conduct outreach to four Agency system owners to encourage use of the TRIBES Web Services for adopting the Tribal Identification Data Standard				X				

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Conduct outreach to four additional Agency system owners to encourage use of the TRIBES Web Services for adopting the Tribal Identification Data Standard								**X**

- *Sub-Objective 1c: Catalogue and label information with metadata.*

The EIMP requires that all information under its scope be catalogued and labeled with metadata in EPA and federal-wide registries, repositories, and other information systems. The intent is to enhance discovery and access to Agency information by staff, partners, and the public, and expand their understanding of EPA's data holdings and how they might meet user business requirements.

Environmental Dataset Gateway (EDG)

The **Environmental Dataset Gateway** (EDG) supports OMB's Open Data Policy by cataloging publicly available data in a way that enables the metadata to be fully discoverable and usable by end users, especially the public. As the Agency's enterprise registry for metadata about EPA datasets and associated services, as well as the Agency's tool for generating the Enterprise Data Inventory (EDI) required by Data.gov, EDG provides users with a central access point to datasets and geospatial tools that have been created by EPA program offices, regions, and labs. The public datasets catalogued in the EDI allow the public, lawmakers, and other groups to analyze EPA data and better understand the effectiveness of environmental regulations and programs.

The *EIMP Cataloguing Information Procedure* requires all EPA organizations to register their datasets in EDG in response to Project Open Data requirements. This involves creating metadata for both public datasets and those that have restricted access. Where there is restricted access to datasets, the Agency employs a standard set of definitions from the National Archives and Records Administration (NARA) CUI Registry for use within its metadata so users know why a particular dataset is restricted. The EDG Team works with the Agency's Information Management Officers (IMOs), the EDG's Stewardship Network, and other key data owners to ensure that as many Agency datasets as possible are identified for registration.

A key EDG activity over the next several years will be working with all Agency organizations to increase the number of their datasets with metadata registered in EDG. The EDG Team holds quarterly meetings and training sessions with IMOs and other key data owners to educate them on Open Data requirements and metadata best practices as well as to encourage them to continue cataloguing their datasets. Targeted outreach, based on new entries in READ are conducted to ensure that all datasets are listed in the EDI. This includes working with offices that have CUI, including Confidential Business

Information (CBI[9]), to ensure that EDG has a full registration of all Agency datasets, even those not shared with the public. EPA's Security Office is planning an audit of all Agency data systems and is coordinating with the EDG Team to ensure that any uncatalogued datasets discovered in their process are registered in EDG and become part of EPA's EDI.

EPA is developing several dashboards that will improve the quality of Agency metadata resources, improve data search capabilities and more tightly tie together registries and mapping tools/services contained in the EPA GeoPlatform. EPA also plans to make the most current EPA information of record from across all Agency systems accessible by integrating the EDG with the E-Enterprise Portal (see section III.I).

Recently the Agency launched an online public data forum to communicate with the public about its data in a fully transparent manner[10]. This forum enables two-way, transparent feedback between the Agency and the public and can be accessed through three different Web pages: the EDG Web page, the Developer Central Web page, and EPA's Digital Strategy Web page. The forum shows both the public user's question and the Agency's answer and categorizes questions to increase discoverability about specific topics. Development work is underway to embed the forum into the Agency's metadata style sheet. This would allow people to ask questions about a specific dataset directly from a metadata record and have that question routed to the metadata owner for response.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Increase the number and coverage of EPA datasets publicly available in real time through standard application programming interfaces					X	X	X	X
Enhance the Public Data Forum to integrate the Forum into meta data records and train EDG data owners and Stewards on Standard Operating Procedures (SOPs) and new functionality		X	X	X				
Develop new EDG dashboard functionality (requirements, testing, etc.)	X	X	X	X	X	X	X	
Register uncatalogued datasets discovered during Security Office audit					X	X	X	X

Substance Registry Services (SRS)

Much of EPA's work focuses on regulating, tracking, permitting, or monitoring substances at a facility. The **Substance Registry Services** (SRS) is the catalog of the chemicals, biological organisms, and

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[9] Under the forthcoming CUI rule, the term CBI is expected to change to Proprietary Business Information (PBI).

[10] http://developer.epa.gov/forums/forum/dataset-qa/

other substances tracked or regulated by EPA or its partners. EPA created the SRS to centralize discovery of chemical data at EPA, enable integration of EPA data by substance, improve data quality of substance identity information, and promote standardization of substance names.

EPA programs are using SRS Web services to integrate SRS into their systems and into their online reporting forms. By using this shared service, EPA helps industry and other partners submit accurate chemical identification information. For example, ChemView (see section II.B) has integrated SRS into its search function, using the synonyms in SRS to help users find the wealth of information available in the system. The user does not need to know a single synonym, but can search using any number of synonyms and find the information about a chemical. Further integration of SRS into systems and online reporting forms is a priority for EPA and for the E-Enterprise initiative. By taking this step, EPA is improving the accuracy of the information that is available to the public.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Increase number of chemicals from other federal agency programs into SRS	Ongoing							
Incorporate selected information from state programs into SRS				X				

Laws and Regulation Services (LRS)

EPA is creating a new registry that will catalog environmental statutes and regulations. The **Laws and Regulation Services** (LRS) will identify the statutes that are relevant for EPA and the associated regulations that implement those laws. LRS will also identify the EPA programs that manage those regulations and the URLs for further information about those programs and regulations. EPA has worked with the General Printing Office (GPO) to streamline the collection of the laws and regulations from two separate GPO systems.

Users will be able to search by NAICS code (NAICS Registry), industrial process, keyword (Controlled Vocabulary), or substance (SRS) to find potentially relevant regulations. For example, an industry representative would be able to enter "Benzene," discover those regulations that specifically regulate that chemical, and then find a URL to the program that manages that regulation. Similarly, an individual from the public would be able to search LRS by "Oil spill" and find related regulations and EPA Web sites.

LRS is a keystone for the rest of the registries within SoR. It will be possible to link the registries together to, for example, find out the systems (READ) that support a particular regulation, the substances (SRS) targeted by that regulation, the datasets (EDG) available from that system, the data elements (DERS) collected in support of that regulation, and Web services or widgets (RCS) used in support of that system. Further linking to EPA systems that track grants or that manage proposed rules

or Information Collection Requests (ICRs) will make it possible for the public to search EPA data for a wide range of interrelated information.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Model all of 40 CFR with EPA programs, keywords, and substance lists where possible in LRS					X			
Launch LRS								X

- *Sub-Objective 1d: Develop and maintain information using established standards and in machine readable formats.*

As part of the effort to make Agency data more discoverable and accessible, EPA will develop, maintain, and preserve information in open and machine readable formats using established standards. EPA will standardize the information it collects which will enable potential partners, from both within and outside the Agency, to discover each other's work and collaborate on innovative projects that propel the environmental protection enterprise.

Application Program Interface (API) Strategy

EPA is committed to making APIs its default for datasets. The Agency supports efforts to promote and document API usage through the development of an Agency-wide **API Strategy**. The proposed strategy is based on 18F's API standards and best practices and aims to standardize these best practices across the Agency. The strategy advocates for the use of api.data.gov's API Management Platform to track all traffic to Agency APIs and provide API owners with tools to analyze API usage to help gauge their value. As part of the strategy, EPA is also improving its API documentation by using one of the common specification formats to describe the Representational State Transfer (REST) APIs it produces. Using a common specification format ensures that REST API documentation produced by EPA allows developers to understand the value that EPA's APIs deliver immediately, and go from learning to integration in as short of a timeframe as possible. As part of the proposed Agency-wide API strategy, EPA is exploring ways to make it easier to create REST API endpoints for datasets that EPA generates.

An Agency-wide communication plan is being developed in tandem with the API strategy. It will include Standard Operating Procedures (SOPs) that require API developers to register dataset APIs in EPA's EDG, which will allow these APIs to become part of EPA's EDI and Public Data Listing, greatly increasing their accessibility to the public.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Release Agency-wide API Strategy communication plan					X	X	X	X
Improve API documentation by piloting the development of Swagger specification files for certain FRS endpoints and cross-origin resource sharing (CORS) enabling all FRS endpoints				X				
Test the use of General Service Administration's (GSA) API management tool by configuring the Source Classification Code API to be accessed through api.data.gov/epa/scc				X				
Accelerate the development of APIs by working with the Developers Guild to more effectively share data through services	Ongoing							
Release a pilot version of the SQL Builder/API Builder User Interface								X

- *Sub-Objective 1e: Make and maintain information to be open and publicly accessible unless covered by National Security Act or Controlled Unclassified Information (CUI) requirements.*

Providing the public with ready access to environmental information is a longstanding Agency commitment. The Open Data Policy requires EPA to ensure that only appropriate data are released to the public and made available online. EPA considers all information to be releasable, unless a statute, regulation or other federal government order requires its release to be controlled. EPA's data registration, evaluation and publication processes are being developed as part of the implementation of the Agency's EIMP. Key Agency public access systems and tools are summarized in the following section.

Public Access/Envirofacts

Envirofacts provides access to several different EPA databases containing information about environmental activities that might affect air, water, and land. Associated with Envirofacts are several EPA-public access tools to help the public retrieve information about environmental conditions, EPA regulated facilities, and other environmental factors in their neighborhoods. For example, Envirofacts provides access to the Toxics Release Inventory (TRI) database that contains information on toxic chemical releases and other waste management activities in the United States reported to EPA by industrial and federal facilities. Also associated with Envirofacts is the EnviroMapper for Envirofacts mapping tool, which allows users to map regulated entities and obtain specific data associated with those facilities. The MyEnvironment tool allows users to not only view regulated entities in their neighborhoods but look at other environmental conditions with information provided from a variety of other sources such as the United States Geological Survey.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Continue Operation of Envirofacts	Ongoing							
Modernize Envirofacts to take advantage of emerging big data technologies				X	X	X	X	X
Deliver new versions of EnviroMapper for Envirofacts and MyEnvironment							X	X

Facility Registry Service (FRS)

The **Facility Registry Service** (FRS) responds to the increasing demand for access to high quality information and the public need for a central source of comprehensive environmental information about a location. A core component of the System of Registries, FRS integrates data from 90 databases on facilities, sites, or places subject to environmental regulations or of environmental interest. Containing almost four million records, the information stored in FRS is subjected to rigorous verification and data management QA procedures, and continuously reviewed and enhanced by a Regional Data Steward network and active state partners. FRS plays a critical role in the Agency's public access strategy by making comprehensive and up-to-date facility information available to the public through the delivery of integrated information services and QA validation tools to the many publicly available Agency applications and services.

FRS is also a foundational shared service for the E-Enterprise initiative (see section III.I) that will provide integrated information on the identity and features of interest at all locations subject to environmental management, at all levels of government. The FRS components in the E-Enterprise Portal will provide additional services that assist with data collection, standardization, and quality validation and greatly facilitate access by the regulated community, co-regulators and the public to EPA data.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Complete phase one of new facility data model to better accommodate access to structural and process information associated with facilities					X			
Expand data model enhancements to accommodate additional National Program Offices' requirements	Ongoing							

Toxics Release Inventory (TRI)

The **Toxics Release Inventory** (TRI) tracks the management of certain toxic chemicals that might pose a threat to human health and the environment. U.S. facilities in different industry sectors must

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report annually on how much of each chemical is released to the environment and/or managed through recycling, energy recovery and treatment. TRI plays a critical role in the Agency's public access strategy and supports informed environmental decision making by making comprehensive and up-to-date information on facilities and their management of toxic chemicals, including releases to the environment, available to industry, government, non-governmental organizations and the public.

TRI-MEweb is a Web-based application that enables facilities to file a paperless TRI report, significantly reducing data errors and allowing instant receipt confirmation of submissions. TRI Facilities have a dual obligation to report to their state agency as well as EPA. TRI-MEweb enables facilities to simultaneously submit their TRI report, which eliminates the need for state reconciliation and resources needed by the state to process/manage their data. TRI-MEweb leverages existing EPA services including the Central Data Exchange (CDX) for user authentication, FRS for facility information, and SRS to retrieve chemical names. TRI-MEweb was also designed using flexible architecture to align with E-Enterprise and Portal participation.

TRI data access and analysis tools enable the public to evaluate potential risks to the health and the environment in their communities by identifying nearby industrial facilities that release toxic chemicals into the air, water, and land. By providing releasable information in open and machine-readable formats, information can be analyzed on a national scale or local scale, including information about facilities in Indian Country. The *TRI National Analysis* is EPA's annual interpretation of TRI data. It highlights how toxic chemical wastes were managed, where toxic chemicals were released, and how the data compares to data from previous years. TRI data access and analysis tools also enable the public and other organizations to conduct their own analysis of TRI data to determine:

- Which chemicals each facility releases and how much
- Pollution prevention (P2) activities that reduce toxic releases
- Which facilities are reducing toxic releases
- Potential health effects linked to the chemicals released

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Deploy new modernized/streamlined version of TRI-MEweb					X			

Developer Central

Developer Central is a resource for developers who want to build applications using EPA data and Web services. EPA created this site as a mechanism to collaborate with universities and external developers on EPA-sponsored app ideas in order to actively promote the use of EPA Data and APIs. As part of Developer Central, EPA participates in various external hackathon events to encourage teams to work on EPA application ideas that use EPA Data and APIs. At the National Day of Civic Hacking on June 4, 2016 for example, the Developer Central team proposed a challenge to develop an

application that allows citizen scientists to submit pollinator species sightings to EPA and state environmental agencies to help scientists better understand the health of honey bees and monarch butterflies on a large geographic scale.

The site was redesigned in 2016 with an updated user interface to improve the Web site's functionality and consolidates information to make it easier for developers to find the resources they need. For example, Developer Central links to RCS for various reusable components, and highlights and provides access to the most frequently used datasets in EDG. The site now contains a public forum on which the Agency receives feedback from developers. The forum is also linked to EPA's Open Government Web pages and to the EDG Web page to provide expanded opportunities for the public to provide feedback on EPA open government activities and datasets. The focus for FY2016-2017 will be to increase public input to the site and continue to participate in externally facing events to promote EPA Data and APIs.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Expand public forum to enable comments on specific datasets in EDG via metadata pages				X				
Enhance Developer Central functionalities	Ongoing							

Controlled Unclassified Information (CUI) Program

Executive Order (EO) 13556 *Controlled Unclassified Information*[11] established the **Controlled Unclassified Information** (CUI) program to standardize and simplify the way the Executive branch handles unclassified information that requires safeguarding or dissemination controls pursuant to and consistent with law, regulations, and Government-wide policies[12]. The program emphasizes the openness and uniformity of government-wide practices. Its purpose is to address the current inefficient and confusing patchwork that leads to inconsistent marking and safeguarding as well as restrictive dissemination policies that are often hidden from public view. The program promotes transparency by exposing the reason data is restricted, and makes data more available to the public.

The rule proposed by the NARA in May 2015 to establish policies for managing CUI was approved by OMB in August 2016. As the CUI Executive Agent, NARA is assisting affected departments and agencies to implement the new regulation by conducting courtesy assessments on preparedness. EPA asked NARA to conduct courtesy assessments in OEI, Office of Pollution Prevention and Toxics (OPPT), and Region 5, which will consist of document reviews, online surveys, and on-site interviews.

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[11] https://www.gpo.gov/fdsys/pkg/FR-2010-11-09/pdf/2010-28360.pdf
[12] CUI encompasses Sensitive but Unclassified (SBU), For Official Use Only (FOUO), Confidential Business Information (CBI) and Personally Identifiable Information (PII). NOTE: Under the forthcoming CUI rule, more of these terms will disappear.

EPA will also develop an enterprise-level CUI Management Procedure in FY2017 that reflects requirements outlined in the government-wide CUI regulation. EPA organizations will tie their more specific program guidance to this enterprise procedure.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Conduct OEI CUI Assessment				X				
Conduct Region 5 CUI Assessment				X				
Conduct OPPTS CUI Assessment				X				
Complete enterprise-level CUI Management Procedure					X			

- *Sub-Objective 1f: Increase the ability of internal and external stakeholders to analyze accessible data.*

Robust analytical capabilities enable EPA, its partners, and the public to explore data and reports to extract meaningful insights and promote effective environmental management decision-making. Timely access to and understanding of information improves the ability to develop priorities for federal/state compliance strategies, enforce regulatory compliance, and predict environmental phenomena before they become health or economic threats. The improved data collection, tagging, and standardization decreed within the EIMP is intended to ensure that stakeholders have quality information that enables them to better analyze and understand environmental issues with new perspectives.

Data Analytics Program

EPA's **Data Analytics Program** focuses on providing the latest data analytics techniques and technologies for assessing health and environmental issues. The Data Analytics Platform is the core of this program. The Platform will make use of efficient, market-driven, high performance computing centers with an elastic cloud computing environment to increase effectiveness and decrease costs of analytics. By using elastic commercial computing systems, EPA can maintain flexibility of the size of the system and its underlying software components. This flexibility allows the Agency to respond to new analytical demands and employ innovations that will improve the quality of the analysis. Moreover, by increasing its ability to analyze high volumes of environmental health and administrative data, EPA will be better positioned to achieve its core mission and communicate more fully with stakeholders and the public.

Many components of EPA's Data Analytics Platform currently reside within a variety of testing environments. Throughout FY2016 and FY2017 the Agency will grow the platform and test different technology components to evaluate what best meets user needs. This process will involve using these

technologies on EPA's Open Data stores and evaluating new ways of analyzing those data, particularly those that support meeting Agency goals set forth in the *EPA FY2014-2018 Strategic Plan*.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Create a data analytics toolset (platform, analytics tools, metadata and API standards)					Ongoing			
Share the results of analyses that fit regional and programmatic business to demonstrate the power of data across EPA and with partners					X			
Deliver pilot and early adopter projects to demonstrate advanced data analytics techniques					X			
Accelerate the inventory of datasets by identifying central EPA and partner data stores and bringing them into the analytics platform	X	X	X	X	X	X	X	X

B.   Proactive Disclosures

Objective 2: Proactively disclose information to advance transparency, accountability, and the presumption of openness.

EPA seeks to proactively make information of significant public interest available electronically before individual requests for it are made. These disclosures are an integral part of the Freedom of Information Act (FOIA)[13]. EPA operates under the premise that most information should be made publicly available and works to make proactive releases when appropriate. In keeping with this emphasis on disclosing information proactively, EPA has made a great deal of information available throughout the Agency's FOIA Web site, on individual organizational Web sites, and on Data.gov.

FOIAonline

EPA continues to serve as the managing partner of the **FOIAonline** application—a multi-agency Freedom of Information Act solution that allows the public to make and track a FOIA request, search other requests, and access responsive documents posted by participating agencies. The public can create a FOIA log for all requests that were received by EPA during any fiscal year through FOIAonline. FOIAonline contributed to the success of EPA's FOIA Program (see section III.D), by offering expanded workflow enhancements that resulted in improved access and quicker responses to public requests.

The benefits offered by FOIAonline are becoming more widely known through the federal community. In addition to EPA, the current partnership includes: Department of Commerce, United States Department

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[13] https://www.foia.gov/

of the Navy, Customs and Border Protection, Pension Benefit Guaranty Corporation, United States Merit Systems Protection Board, Federal Labor Relations Authority, the Office of General Counsel at the National Archives and Records Administration, General Services Administration, Federal Communications Commission, Small Business Administration, the Office of Information Policy of the Department of Justice, Defense Logistics Agency, and the Office of Inspector General of the Department of Defense. From these agencies, FOIAonline makes available approximately 400,000 requests for tracking purposes, and provides access to over 600,000 responsive records for discovery and access. FOIAonline also provides agencies with a means to meet their 508 accessibility requirements by applying a text layer to certain documents when this is lacking. EPA continues to actively work with agencies who are interested in joining the partnership to meet their FOIA needs.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Continue to work with agencies interested in joining the FOIAonline partnership	X	X	X	X	X	X	X	X

ChemView

Proactive disclosures by EPA were significantly expanded by the release of **ChemView** in 2013. ChemView is an enterprise data system that makes health and safety chemical data received by EPA readily accessible to the public, as well as EPA's assessments and regulatory actions for specific chemicals under the Toxic Substances Control Act (TSCA). ChemView is part of an ongoing effort to provide and streamline public access to information on 10,000 TSCA chemicals collected by OPPT and uses SRS Web services to help enable quality.

To help guide improvements to ChemView, a customer satisfaction survey was launched in 2014 that asked users how they use ChemView and how it can be improved to advance chemical safety. In response, OPPT developed a variety of enhancements and improved search capabilities intended to expand access to chemical health and safety information. For example, ChemView recently opened a portal to other federally sourced databases such as the National Library of Medicine's ChemIdPlus, the Occupational Safety and Health Administration's (OSHA) Occupational Chemical Database, and the National Center for Biotechnology Information's PubChem. This portal makes it easier for users to move between EPA's TSCA chemical information and data collected by other federal sources.

To more effectively communicate chemical export notification requirements, the list of chemicals subject to TSCA section 12(b) export notification has also been made accessible via the ChemView user interface. Users are now able to find all relevant requirements to export notification such as notification name, regulatory action (linking to regulation.gov), regulatory citations (linking to gpo.gov when available), identifiers, and TSCA inventory references.

Over the next two years, ChemView will continue to increase openness to promote and protect public health by developing new templates for chemical risk assessments and reviews that will make

information on potential health or ecological risks more readily available to the public. The Agency will also consolidate OPPT's other chemical databases and source documents (e.g., Toxic Substance Control Act Test Submissions (TSCATs), the Chemical Data Access Tool (CDAT), and High Production Volume Information System (HPVIS) into ChemView to provide a truly universal and comprehensive source of chemical information to the public.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Release Other Resources Portal	X							
Provide list and source documents of TSCA section 12(b) chemicals subject to export notification requirements	X							
Develop and release risk assessment, new chemical reviews, and chemicals under TSCA regulatory templates				X				
Consolidate multiple OPPT database sources into ChemView					X	X	X	X

C.   Privacy

Objective 3: Provide the public with information on EPA's National Privacy Program.

EPA places stringent requirements on the collection, access, use, dissemination, and storage of personally identifiable information (PII) and Privacy Act[14] information to prevent unwarranted invasions of personal privacy. EPA continually updates its privacy policies, procedures, practices, standards or guidance to address emerging issues resulting from the introduction of new technologies.

Privacy Program

EPA's **National Privacy Program** (NPP) provides the public with information regarding EPA's privacy program on EPA's Privacy Web site[15]. Individuals wanting to know how EPA implements the Privacy Act, other governing statutes, and privacy regulations are able to access this resource from the Privacy Web site. The EPA Privacy Act systems of records and privacy impact assessments are also accessible on this page. Individuals can also file a PA request, as well as request access to and amend PA records from this location.

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[14] http://www.gpo.gov/fdsys/pkg/USCODE-2013-title5/html/USCODE-2013-title5-partI-chap5-subchapII-sec552.htm

[15] www.epa.gov/privacy

EPA prepares and submits all required compliance reports in support of privacy. Required reporting includes:

- Annual Federal Information Security Modernization Act (FISMA) of 2014 reports on implementation of Privacy Act.

- Federal Register notices for system of records as required by the Privacy Act.

- Biennial report on computer matching activities submitted to OMB.

- Annual FISMA reports on privacy data specified by OMB.

- Privacy Impact Assessments, as required by section 208 of the E-Government Act.

- Privacy Act On-site Reviews.

- Privacy Controls – NTIS 800-53 Appendix J Revision 4.

D.   Whistleblower Protection

Objective 4: Achieve United States Office of Special Counsel (OSC) certification under the Whistleblower Protection Act certification program.

Office of Special Counsel (OSC) Certification

The OSC established a "2302(c) Certification Program" to provide agencies and agency components with a process for meeting the statutory requirement that employees are informed of the rights and remedies available to them under the Civil Service Reform Act (CSRA), the Whistleblower Protection Act (WPA), the Whistleblower Protection Enhancement Act (WPEA) [16], and related laws. On March 2, 2016, the Agency submitted the OSC 2302 (c) Certification Program registration form.

EPA has met all five criteria necessary for OSC certification:

- Placing informational posters at Agency facilities.

- Providing information about the 13 Prohibited Personnel Practices (PPPs) and whistleblower disclosures to new employees as part of the new employee orientation process.

- Training supervisors on the 13 PPPs and whistleblower disclosures. Agency senior managers received in person training in June 2016 and Agency supervisors will take a required online course beginning in FY 2017.

- Displaying a link to OSC's Web site on the Agency's Web site and intranet (http://workplace.epa.gov/whistleblowerprotection.html).

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[16] https://www.congress.gov/112/bills/s743/BILLS-112s743enr.pdf

- Issuing an annual notice to current employees about the 13 PPPs and whistleblower disclosures. In July 2016, the EPA sent out a mass mailer to all employees with information about the 13 PPP's and whistleblower disclosures, as well links to specific OSC informational materials. EPA senior managers were advised of these requirements in March 2016.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Place informational posters at EPA facilities		X	X	X	X	X	X	X
Provide information on the 13 PPPs to new employees as part of the orientation process		X	X	X	X	X	X	X
Train supervisors on the 13 PPPs and whistleblower disclosures			X	X	X	X	X	X
Display a link to the OSC's Web site on the Agency's intranet page		X	X	X	X	X	X	X
Draft a memorandum informing employees about the 13 PPPs and whistleblower disclosures			X	X	X	X	X	X

Whistleblower Protection Ombudsman Program

Established by the WPEA, the EPA Office of Inspector General designated a whistleblower protection ombudsman to be responsible for educating employees about whistleblower protections, rights and remedies.

E.   Web Sites

Objective 5: Provide access to the Agency's Digital Government Strategy.

Objective 6: Report on all domains registered to EPA via analytics.usa.gov.

Digital services transform the way EPA delivers partner and public facing technology as well as mission-related technology. EPA's Digital Government Strategy seeks to deliver better digital services, including Web sites and data, to the public. EPA provides insight on how people are interacting with Agency Web sites through its participation in Analytics.USA.gov.

Web Site Management

EPA provides the public with information on Open Government and Open Data initiatives through the Web sites prescribed by OMB. For example, the Agency's Open Initiative[17] site is routinely updated with progress reports, spotlights of innovation, and the most current version of documents such as this Plan. EPA's Digital Strategy Milestones and implementation progress are posted on the Agency's Digital Strategy site[18]. Quarterly updates on EPA's progress in promoting data for public use by updating its dataset inventory and meeting other aspects of the Open Data Policy are posted on this site.

EPA invested significant time and energy to enhance its Web presence with an emphasis on improving the user's experience. The transformation of EPA's Web site to a topic-based site was undertaken to better meet the needs of Web site visitors. The Agency's Web site is managed within a Drupal-based Web Content Management System (WebCMS) and designed to facilitate a visitor's top tasks. EPA leverages quantitative Web analytics to focus resources on the most popular and frequently accessed pages. EPA.gov also uses site-wide standards to give visitors a more consistent user experience with a single point of Internet presence, centralized governance, and distributed content development. As of FY2016, EPA transformed the majority of its content pages and published the information in formats designed around users' top tasks. The Agency also continues to enhance site search capabilities, as over half of its Web site access comes from query results from external search engines.

The Agency fully participates in Analytics.USA.gov with 100% reporting on all eight domains registered to EPA. In addition to Google Analytics, EPA uses a range of Web analytics tools to understand visitor behavior and interest, evaluate site metrics, and listen to voice of customer comments. EPA was the first federal agency to achieve full compliance with OMB's https directive to ensure secure access to the Agency's online resources. The Agency implemented https months ahead of OMB's December 31, 2016 deadline and scored an A+ SSL Labs grade. Additional information on EPA's progress towards integrating Web best practices is posted on https://pulse.cio.gov/.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Maintain content and information quality effectively using the WebCMS tools for link management, automated review cycles and adherence to EPA standards and One EPA guiding principles	X	X	X	X	X	X	X	X
Leverage WebCMS capabilities, such as dynamic lists and additional content types, to integrate information across topical areas	X	X	X	X	X	X	X	X

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[17] https://www.epa.gov/open

[18] https://www.epa.gov/open/digital-strategy

F.   Open Innovation Methods

Objective 7: Increase the strategic use of open innovation.

The Agency prides itself on its strategic use of open innovation, fueled by many open innovation projects and challenges, to improve its effectiveness and ability to accomplish its mission of environmental protection. EPA actively seeks open innovation and crowdsourcing solutions to find better ways to solve today's environmental challenges.

GreenSpark Program

The **GreenSpark** program gives EPA's diverse and distributed workforce a voice in solving organizational and Agency-wide challenges sponsored by senior leaders through Ideas Challenge Events. GreenSpark is also a vehicle for sharing knowledge and best practices through the EPA Administrator-sponsored Aim High Campaigns. All GreenSpark events are developed using a thoughtful, intentional design process that focuses on employees and the needs of the Agency.

- GreenSpark Ideas Challenge Events

    Since 2014, EPA launched five Agency-wide and 12 office-level challenges. Over 1000 ideas were shared through GreenSpark ranging from actions to make the workplace more sustainable to identifying the most important challenges to help inform strategic planning efforts. Agency leadership used GreenSpark ideas to improve onboarding, leave management, communications, data analytics, and risk assessment and management.

- Aim High: Behind Every Success is a Great Story

    The Aim High Campaign, sponsored by the EPA Administrator, is a dynamic, innovative, and employee-driven approach to recognizing the valuable contributions that EPA employees make to advance the Agency's mission and goals. Launched in 2014, Aim High facilitates knowledge sharing through the capture and dissemination of success stories using the GreenSpark platform. Through seven Aim High events, EPA staff shared over 1100 stories and celebrated the work of others by adding over 4500 "likes" and 400 "comments." Stories designated as the Aim High "High Five" are shared with the general public via the EPA Connect blog.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Hold the Office of Administration and Resources Management (OARM) Ideas Challenge Event		X						
Conduct Part One of the Aim High Campaign – Addressing Climate Change and Air Quality		X						
Conduct Part Two of the Aim High Campaign – Working Toward a Sustainable Future			X					
Hold the OP Ideas Challenge Event – Regulatory Review			X					

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Hold the OCSPP Ideas Challenge Event – Innovation Series							X	

The Agency also leverages external partnerships across the federal government to drive innovative change. For example, EPA's Acting Chief Innovation Officer serves as co-chair of the Federal Community of Practice for Crowdsourcing and Citizen Science (CCS), a grassroots community of over 250 members representing 50 governmental organizations. As a leader in CCS, ORD played a significant role in the design and content development of the Federal Crowdsourcing and Citizen Science Toolkit, an effort led by jointly by the White House Office of Science and Technology Policy and CCS. Additionally, EPA supports the development of a government-wide catalog for federally supported citizen science and crowdsourcing projects. EPA coordinated the entry of over a dozen EPA-supported projects into this database.

Innovation Team

The **Innovation Team** leads EPA's citizen science and crowdsourcing efforts to build partnerships with other federal agencies, external organizations, and the general public. These efforts include:

- Implementing the new generic ICR for EPA citizen science and crowdsourcing projects. The OMB-approved framework will allow for a streamlined approval process for many citizen science and crowdsourcing projects at EPA and provides a mechanism for ORD scientists to pursue flexible, innovative research methods that involve the public. EPA is developing an implementation plan that will allow any EPA organization to use this streamlined process for new citizen science projects.

- Continuing to convene an internal community of practice on citizen science (established in 2011) for staff in program and regional offices. The community of practice supports EPA capacity-building activities including: education for EPA staff on citizen science, including workshops, webinar speaker series and training on working with volunteers.

- The coordination of internal competitions for EPA researcher-led projects that incorporate citizen science tools. This process uses ideation platforms to allow applicants to share ideas with colleagues as a way to further idea development and identify potential collaborators. In 2015, the National Health and Environmental Effects Research Laboratory researchers were awarded for their project proposals for Show Me the Honey and CyanoScope. In 2016, EPA's National Exposure Research Laboratory researchers were awarded seed funding for three projects: Micro CSI-Urban Edition: A Microbial Citizen Science Initiative in Urban Watersheds, Social Values Assessment of Waters of the United States, and Community-led Air Sensor Evaluation. An additional competition is planned for the National Risk Management Research Laboratory in late 2016 and early 2017.

- Working with Region 2 to develop a OneEPA Web page[19] for citizen science across EPA.

- Continuing work with EPA Regional and Program offices to support new projects and increase understanding of how to use citizen science and crowdsourcing to support EPA's mission.

Additional key innovation projects include:

- Air Sensor Toolbox for Citizen Scientists

  The Air Sensor Toolbox for Citizen Scientists is a resource for citizens, researchers and developers containing information and guidance on how to effectively collect, analyze and communicate air quality data. The Toolbox includes a host of resources including an air sensor guidebook, sensor evaluation reports, and community air monitoring training videos among other high-demand information.

- Next Generation Air Monitoring

  Next Generation Air Monitoring technology is providing lower-cost, portable and easy to use monitors for the public to learn about local air quality. New technologies are being discovered and evaluated for performance characteristics. Emerging technologies are being applied in select studies to meet a wide range of stakeholder needs.

- Village Green Project

  The Village Green Project is a collaborative project including multiple EPA Offices (ORD, Office of Air and Radiation (OAR), Office of Enforcement and Compliance Assurance), EPA regional offices, state/local agencies, and community organizations to pilot test solar-powered air and weather monitoring stations in community outdoor areas. The station design incorporates research-grade monitors into a park bench and prototypes are currently located in areas ranging from the National Zoo in Washington, D.C. to an elementary school in southeast Chicago. The data are shown to the public in real-time through a project Web site[20].

- The Challenging Nutrient Coalition

  Challenging Nutrients, a collaboration of federal agencies, universities, and non-profit organizations, tackles the intractable issues preventing significant progress on nutrient pollution. The coalition recognizes that lack of available data was one of the major problems and launched an effort to develop a suite of effective and affordable sensors to measure nutrients in water and soil. These sensors are being further developed to eventually reach the hands of the public users.

- Real Time Geospatial Data Viewer (RETIGO)

  The Real-Time Geospatial Data Viewer (RETIGO) is an interactive Web-based application that overcomes technical barriers to exploring complex field datasets. Emerging measurement technologies are producing data that might vary with location and time, such as community groups adding air quality sensors to bicycles and measuring while biking. RETIGO allows users to upload their data and interactively explore the data over

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[19] www.epa.gov/citizenscience

[20] www.airnow.gov/villagegreen

map and multiple graph interfaces. Tutorials and the Web tool are available at the Real Time Geospatial Data Viewer (RETIGO) site[21].

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Finalize implementation plan for the generic information collection request (ICR) for EPA citizen science and crowdsourcing projects.					X			
Continue to convene an internal EPA community of practice on citizen science for staff in program and regional offices	Ongoing							
Outreach to promote Air Sensor Toolbox for Citizen Scientists	X	X	X	X	X	X	X	X
Evaluate new technologies for inclusion in Next Generation Air Monitoring	X	X	X	X	X	X	X	X
Pilot test solar-powered air and weather monitoring stations through the Village Green Project	X	X	X	X				
Release the Real-Time Geospatial Data Viewer			X					

Linked Open Data (LOD)

EPA publishes a number of datasets that cut across multiple program interests and are regulated by multiple statutes. Publishing key EPA business objects such as facilities and substances as **Linked Open Data** (LOD) provides hubs for linking EPA program data together. Others can then link to EPA data and query/combine to yield new information.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Launch Linked Open Data Service cloud application					X			

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[21] www.epa.gov/retigo

G.   Access to Scientific Data and Publications

Objective 8: Increase access to the results of EPA-funded scientific research.

In 2013, the Office of Science and Technology Policy (OSTP) directed[22] federal agencies that spend more than $100 million per year on research and development (R&D) to develop plans for increasing public access to the results of the research they support, specifically scholarly publications and digital data. Making EPA R&D information publicly available expands opportunities for new scientific knowledge to be applied to environmental protection and to catalyze innovative breakthroughs that drive economic growth and prosperity.

Public Access Plan

EPA is currently finalizing a plan to increase public access to EPA-funded peer-reviewed, scientific research publications and related research data per the February 22, 2013, the White House OSTP memorandum *Increasing Access to the Results of Federally Funded Scientific Research* (OSTP Memo). Once approved by OSTP the plan will be published on the Agency's Open Government Web page[23], linked to the *EPA Open Government Plan 4.0*, and implemented in phases.

As part of its efforts to increase public access to its data, ORD recently subscribed to PubMed Central, the National Institute of Health's publication repository. ORD intramural research publications published after January 1, 2016, are eligible for placement into PubMed Central which will enable the public to obtain access to the articles free of charge. The underlying metadata for the data in these publications will be provided to EDG for public access via the ORD ScienceHub.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Publish EPA's Public Access Plan					X			
Establish agreement with PubMed Central			X					
Initiate implementation phases – determined upon Plan approval								

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[22] https://www.whitehouse.gov/sites/default/files/microsites/ostp/ostp_public_access_memo_2013.pdf

[23] https://www.epa.gov/open

Health and Environmental Research Online (HERO) Web Site

The Office of Research and Development also makes research information available to the public through its **Health and Environmental Research Online** (HERO) database. HERO supports the National Center for Environmental Assessment (NCEA) scientific users, stakeholders, and partners who develop and review assessments used in Agency regulatory decisions. Other programs leveraging HERO include IRIS Toxicological Reviews, Integrated Science Assessments (Clean Air Act), and Provisional Peer Reviewed Toxicity Values for Superfund.

The following improvements to existing HERO modules will make it even easier for the public to access scientific data:

- LitScreener: Analysis of individual scientific studies for appropriate and relevant use (citation) in a scientific assessment or EPA Report.
- LitExtractor: Facilitates collection of relevant scientific "facts" about the methods, results, and numerical data within a scientific study, via a user interface and future automatic tools.
- LitReporter: Reporting of the collected scientific data extracted from the scientific studies by both individual study and by aggregated data across similar studies.

Tox21

Toxicology in the 21st Century (**Tox21**) is a federal collaboration among EPA, the National Institutes of Health (including National Center for Advancing Translational Sciences and the National Toxicology Program at the National Institute of Environmental Health Sciences), and the Food and Drug Administration. Tox21 researchers are focused on developing better toxicity assessment methods to quickly and efficiently test whether certain chemical compounds have the potential to disrupt processes in the human body that might lead to negative health effects. EPA's primary contributions to Tox21 are the chemical screening results from ToxCast, a data processing pipeline to process data, and software to manage and disseminate the data via a series of publicly accessible Web sites (known as dashboards). EPA released the following outputs as Open Data:

- Tox21 screening results for the full Tox21 library, processed through EPA's open source data analysis pipeline, along with all of the assay results generated for EPA's ToxCast library. As a result all Tox21 assay results, along with ToxCast results, are available as Open Data and as data downloads[24].

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[24] https://www.epa.gov/chemical-research/toxicity-forecaster-toxcasttm-data

- The Tox21-associated assay data (including ToxCast results) are available through Open Web sites (ToxCast Dashboard[25] and Endocrine Disruptor Screening Program (EDSP) dashboard[26]) for people to use, interrogate and download. ToxCast data have been integrated to the new iCSS CompTox dashboard[27] released in August 2016.

All Tox21 data are linked to registered DSSTox[28] chemical content (chemical IDs, structures, properties). These data are searchable and associated with computed chemical properties from within the CompTox Dashboard.

In support of both Open Data and reproducibility, scientific publications will include Open Data as Supplementary Data files. These data files will link to standardized EPA chemical identifiers that will link to the CompTox dashboard and through to other EPA dashboards. These files will be made available in a form that is consumable by third party informatics platforms for the purpose of linking directly into our databases. Specifically, DSSTox chemical identifiers will be searchable via multiple EPA Web sites and provide linkages across datasets via the Open Web sites mentioned.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Integrate Tox21-associated assay data to the iCSS CompTox dashboard		X						
Provide the full Tox21 chemical structure inventory, mapped to all associated identifiers (including PubChem IDs) as a downloadable file in a later release of the dashboard.			X					
Provide ToxCast Data Analysis Pipeline R package (TCPL)		X						
Provide access to Tox21 analytical quality control (QC) results for all processed chemicals as downloadable files linked to DSSTox chemical IDs via the Chemistry Dashboard. The dashboard will also link to PDF summaries of liquid chromatography (LC), gas chromatography (GC) and, where available, to nuclear magnetic resonance (NMR) results.			X					
Absorb ToxCast dashboard into chemistry Dashboard				X				
Introduce advanced Search functionality (structure/substructure search) to Chemistry Dashboard					X			

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[25] http://actor.epa.gov/dashboard/

[26] http://actor.epa.gov/edsp21/

[27] https://comptox.epa.gov/dashboard

[28] https://www.epa.gov/chemical-research/distributed-structure-searchable-toxicity-dsstox-database

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Provide Web services and embeddable components for data viewing						X		
Absorb EDSP21 dashboard into chemistry Dashboard							X	
Include Open Data as Supplementary Data files in scientific publications								X

H.   Open Source Software

Objective 9: Adopt open source practices and repositories.

Objective 10: Increase public access to custom software code developed for EPA where appropriate.

Adopting open source practices and repositories for use in environmental management figures prominently in EPA's _FY2015-2018 IRM Strategic Plan_. From advanced data analytics to Web modernization, open source provides a cost-effective way to introduce innovation into the Agency. EPA also provides public access to its custom-developed software code by making it available to the public as open source software. Public access to custom code helps EPA improve its custom-developed projects by creating a collaborative environment that makes it easier to conduct software peer review and security testing, to reuse existing solutions, and to share technical knowledge.

Digital Services Program

As part of the effort to ensure the requirements enacted by the Federal Information Technology Acquisition Reform Act (FITARA) are met in full, the Agency created a **Digital Services Strategy** and Architecture Roadmap that outlines how EPA will meet its IT goals and objectives under FITARA. Two central components of the roadmap are the creation of an open source code repository and the adoption of open source code and tools.

The Agency has started using GitHub as an open source code repository that reduces costs and paves the way to migrate efficiently to a cloud environment, where long-term capacity concerns would be easily accommodated. GitHub supports the Agency as it moves towards adopting open source practices, exemplified by projects such as the RCS and E-Manifest.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Examination of open source repository options						X		

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Adoption of open source code and tools	**X**	**X**	**X**	**X**	**X**	**X**		

Reusable Component Services (RCS)

EPA's **Reusable Component Services** registers and catalogs many types of resources of interest to software developers, including software tools, programming code, data models, extensible markup language (XML) schema, Web services and APIs. RCS also serves as infrastructure for E-Enterprise's Service Catalog, Developer Central, the Exchange Network, and api.data.gov.

Over 70% of the resources catalogued in RCS are available for the general public to access and download. EPA foresees a 200% increase per year in resources made available to the public through RCS over the next several years.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Improve API documentation by generating Swagger specification files for REST APIs and interactive API documentation via Developer Central using Swagger UI				**X**				
Implement support for Local Government portal					**X**	**X**		
Begin adding REST APIs to api.data.gov to take advantage of developer registration, improved analytics and rate limiting						**X**		

E-Manifest

E-Manifest is a national electronic manifest system that will enable the regulated community to electronically prepare, manage, and submit manifests for hazardous waste transport. The system will replace 2.1 to 5.1 million manual manifest transactions annually, result in annual cost savings exceeding $75 million, and reduce reporting burden by at least 300,000 hours annually. Moreover, the entire application will be source-controlled in a public repository, making it fully available for any member of the general public to download. Release of the e-Manifest application is contingent upon FY2017 and FY2018 funding.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Release e-Manifest application (contingent upon FY2017 and FY2018 funding)								**X**

I.   Spending Information

Objective 11: Implement the Digital Accountability and Transparency Act (DATA).

Objective 12: Expand EPA financial data available to the public on USAspending.gov.

Making information on its federal expenditures more easily accessible and transparent via USASpending.gov Web site will improve the public's ability to track and understand how EPA is spending their tax dollars. Full and easy access to information on government spending promotes accountability by allowing detailed tracking and analysis of the deployment of government resources. Such tracking and analysis allow both the public and public officials to gauge the effectiveness of expenditures and to modify spending patterns as necessary to achieve the best possible results.

DATA Act Implementation

As required by the OMB Memorandum M-15-12 *Increasing Transparency in Federal Spending by Making Federal Spending Data Accessible, Searchable, and Reliable*, the Agency submitted an implementation plan in September 2015 and an updated plan in August 2016. The plan outlines how EPA will execute the OMB and Treasury's 8-step **DATA Act implementation** strategy. As an initiative to increase financial transparency and improve access to spending data, EPA's implementation of the DATA Act and its efforts to foster a culture of openness at the Agency are one in the same. By improving and standardizing access to spending information across the federal government, EPA will provide the public with a more consistent and transparent view of the Agency financial operations that will increase public confidence in the Agency as an integral piece of an open American government.

The volumes of financial, performance, and programmatic data that will be made available to the public through the DATA Act implementation are used on a daily basis to inform executive level decisions. For instance, EPA's financial data track nine appropriations (plus additional funding from settlements, special accounts, and fees) and over 100 program projects. In addition, Superfund expenses must be tracked with precise detail to enable recapturing of these costs in future settlements, and EPA must identify, report and track all IT spending. All six major national programs (air, water, land, toxics, enforcement, and research) track and analyze detailed performance metrics and reporting, and EPA works with states to maintain extensive air, water, and other environmental monitoring data nationwide networks.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Document systems, processes, and identify gaps				X				
Submit updated EPA Implementation Plan to Treasury				X				

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Implement Award ID linkage to financial system					X			
Go-live: Submit file A, partial files B and C (NOTE: File A contains appropriation summary level data that are aligned to the SF133 reporting; File B includes obligation and outlay information at the program activity and object class level; File C reports the obligations at the award and object class level)							X	
Submit full files A, B, and C (NOTE: File A contains appropriation summary level data that are aligned to the SF133 reporting; File B includes obligation and outlay information at the program activity and object class level; File C reports the obligations at the award and object class level)								X

III.   Ongoing Open Government Reporting Requirements

A.   Participation in Transparency Initiatives

Objective 13: Comply fully with the participation requirements of the Office of Management and Budget (OMB) transparency initiatives.

The Open Government Directive detailed transparency as a cornerstone of an open government. Transparency promotes accountability by providing the public with information about what the Government is doing. EPA continues to actively support and participate in federal-wide transparency initiatives.

Data.gov

EPA's EDG (see section II.A) is the mechanism by which the Agency creates its OMB-required EDI and provides information to the **Data.gov** site[29]. This information in EDG is updated daily. The EDG Team works with a data steward network from across the Agency to increase the number of EPA datasets registered in the EDG and build data collections, maintain links in EPA metadata records, incorporate OMB-required licensing information, and include documented data APIs for all datasets In addition, the Agency's Public Data Forum, a two-way public feedback mechanism, allows the public to comment on EPA datasets. All of these activities improve the information about EPA datasets and collections on Data.gov.

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[29] https://www.data.gov/

EPA regularly receives high ratings on its Open Data scorecard from OMB on its accomplishments related to its EDI, Public Data Listing, Public Engagement, Privacy and Security, Human Capital, and Use and Impact. In Q3 of FY2016, EPA was one of only four agencies out of 26 to receive greens in all six performance areas.

eRulemaking Program / Regulations.gov

The **eRulemaking** Initiative provides a one-stop shop for the federal rulemaking process, allowing departments and agencies to work together to provide the public with greater access to comments on proposed rulemakings and notices on Regulations.gov[30]. The eRulemaking Program Management Office (PMO) under EPA manages and maintains the eRulemaking program and serves nearly 150 federal departments, agencies, commissions, and sub agencies[31]. The vision of the eRulemaking Program is to enable the public ease of access to participate in a high quality, efficient, and open rulemaking process.

Analytics are regularly reported to stakeholders via submissions to the analytics.gov Web site in an effort to increase program transparency. These analytics are essential to examining how the effectiveness of Regulations.gov, a government transparency initiative resource, provides regulatory information to the public. In addition, the PMO is creating an API widget to introduce another way for the public to access and comment on proposed regulations.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Examination of Regulations.gov analytics	X	X						
Presentation of analytics to advisory board		X	X	X				
Finalize reporting analytics			X	X	X			
Improve system search capabilities, making it easier for the public to find, review and comment on rulemaking, public notices or other dockets					X			
Research API widget requirements		X	X					
Approve requirements/design				X				

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[30] https://www.regulations.gov/

[31] https://www.fdms.gov/fdms-web-agency/component/loginInfo?page=faq#2

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Test API widget				X	X			
Validate results						X		

IT Dashboard

The OMB **IT Dashboard** provides federal agencies and the public with an online window into the effectiveness of government IT programs. Through the IT Dashboard, users can access details of federal IT investments and track the progress of investments over time. EPA provides monthly updates to the IT Dashboard with the CIO's assessment of risk for each of EPA's Capital Planning and Investment Control major investments. The CIO requires monthly narratives from the investment owners to substantiate her ratings, and where needed, meets with the investment owners to ensure completeness and accuracy of the narratives.

Grants.gov

EPA provides the public with lists of all current EPA grants that are open opportunities on **Grants.gov**, as well as on the Agency grants Web site.

Catalog of Federal Domestic Assistance (CFDA.gov)

EPA recently initiated the FY2016 update cycle for the **Catalog of Federal Domestic Assistance**. The Agency now lists over 100 programs with their associated objectives, eligibility requirements, application and award processes, and financial information on the CFDA Web site.

FSRS.gov

In 2014, EPA participated in a government-wide focus group for the Federal Funding Accountability and Transparency Act (FFATA) Subaward Reporting System (**FSRS**) to better understand current user issues and goals for the system. The focus group proposed a complete system redesign that will facilitate increasing subaward stakeholder engagement. EPA's comments will help GSA create a roadmap for developing the modernized FSRS, which will incorporate public feedback as part of the system's future design.

USAspending.gov

EPA submits Agency obligation data to usaspending.gov, including details on procurements over the micro-purchase threshold.

Notice of Intent to Sue EPA

Many of the environmental statutes that govern EPA actions contain provisions that allow citizens to sue EPA when EPA fails to perform an act or duty required by the statute. These citizen suit provisions usually require a potential plaintiff to first provide EPA with **notice of intent to sue** (NOI) in advance of filing the lawsuit. In an effort to maximize transparency, EPA maintains a list of all intent to sue notices received by EPA's Office of General Counsel on or after January 1st, 2013 on the Agency's NOI Web site[32]. The Web site is updated with newly received notices on an ongoing basis.

B.   Public Notice

Objective 14: Enhance mechanisms for informing the public about significant Agency activities.

The Agency actively works to notify citizens of its actions and to seek input through many avenues. The public can find information on EPA's Web site for a particular program or geographic location, as well as subscribe to targeted newsfeeds or alerts from EPA's Newsroom. EPA continually share information with and update the public about its work through the Agency's digital and social media platforms. In addition, EPA provides information on upcoming and highlighted opportunities to participate and collaborate with the Agency in its Open Government progress reports, which have been posted quarterly or bi-annually since the Open Government program was launched. Examples include public meetings, webinars, congressional appearances, and stakeholder meetings.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Continue public notice activities	Ongoing							

C.   Records Management

Objective 15: Comply fully with existing records management requirements.

EPA has established policies and procedures for the management and security of records, files, data and information systems and technology. Records serve a number of purposes including: planning for administrative and program needs, providing evidence of EPA activities, protecting legal and financial rights, enabling oversight by Congress and other authorized agencies, documenting the Agency's history, and continuing key functions and activities in the event of an emergency or disaster. Records

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[32] https://www.epa.gov/noi

capture the Agency's institutional memory and preserve the historical record; they are of critical importance in ensuring that the organization continues to function effectively and efficiently.

Records Program

EPA's **National Records Management Program** (NRMP) provides guidance to all EPA staff on records management requirements via their intranet pages[33] as well as supporting and providing training to Records Liaison Officers (RLOs) and records contacts assigned to each headquarters program and region. NRMP also provides information on records management policies and final records retention schedules to the public via the NRMP's Internet pages[34].

The Agency's vision is to provide staff with seamless electronic access to the records and information needed to protect human health and the natural environment by reducing records management burdens on employees through automated approaches or other means, which will make it easier for employees to identify, save, find and use their records as part of their everyday business.

To meet the requirement to manage e-mail records electronically by the end of 2016, EPA developed the EZ E-mail Records tool to identify Microsoft Outlook and Lotus Notes e-mails for transfer to the Agency's enterprise records management repository, which meets NARA requirements. EPA will explore the feasibility and associated risks of implementing an automated content-based and/or role-based e-mail records management approach. Either approach could reduce the burden on employees, but a role-based approach could also reduce the need for content-based auto-categorization of potentially huge volumes of e-mail records in the Agency's enterprise records management repository. EPA will research and consider piloting the use of SharePoint Records Centers and/or supplemental records management interfaces to better integrate records management into everyday document/knowledge management. An auto-categorization tool that will review e-mails saved in the Agency's records repository and apply the appropriate disposition based on EPA's records retention schedules is currently in development. Anticipating NARA's 2019 Directive to manage all permanent records electronically for eventual transfer and accessioning by NARA,[35] the Agency will evaluate the feasibility of transitioning to an open source and/or cloud-based environment to enhance the cost-effectiveness of the records management repository over time and facilitate automated transfers from e-mail and potentially other document locations. Moreover, furthering the digitization of existing paper records and electronic access to those records, while also reducing physical document storage needs, will ensure EPA meets NARA's 2019 Directive.

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[33] http://intranet.epa.gov/records/

[34] https://www.epa.gov/records

[35] Managing Government Records Directive (M-12-18), https://www.whitehouse.gov/sites/default/files/omb/memoranda/2012/m-12-18.pdf

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Develop a plan for implementing an automated role-based and/or content-based e-mail records management approach					X			
Evaluate and pilot the use of SharePoint Records Centers and/or supplemental records management interfaces to better integrate records management into everyday document/knowledge management							X	
Continue to train/test an auto-categorization tool to match documents stored in the enterprise records management repository to the appropriate records schedules								X
Develop a plan for providing a centrally coordinated digitization service that supports Agency programs/regions in digitizing and storing their records, where appropriate and cost effective								X
Evaluate the feasibility of transitioning to an open source and/or cloud-based records management repository to enhance the cost-effectiveness of the system over time and facilitate automated transfers from e-mail and potentially other document locations								X

D.   Freedom of Information Act (FOIA) Requests

Objective 16: Improve the timeliness of EPA responses to Freedom of Information Act (FOIA) Requests.

Objective 17: Reduce EPA FOIA backlog by 10% each year.

FOIA gives the public the right to make a request for federal agency records. Like all federal agencies, EPA is responsible for answering FOIA requests. EPA and regional offices receive approximately 10,000 FOIA requests annually. EPA provides the public with tools to electronically submit and track FOIA requests, and is investigating new tools and technologies to help improve the timeliness of its responses to FOIA requests and reduce its FOIA backlog. EPA reduced its FOIA request backlog by approximately 20% between FY2014 and FY2015. In FY2014, EPA's FOIA request backlog contained 1,688 requests which was reduced in FY2015 to 1,355 backlogged FOIA requests. EPA anticipates reducing the number of backlogged requests at least another 10% by the end of FY2016.

FOIA Program

In the Center for Effective Government's recent assessment of FOIA programs at the 15 federal agencies that receive the most FOIA requests[36], EPA was commended for the quality of its FOIA Web

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[36] http://www.foreffectivegov.org/access-to-information-scorecard-2015

site[37] and for having the second highest rate of fully granted FOIA requests of any government department or agency. EPA also continues to serve as a founding partner of the FOIAonline application, described in more detail in the proactive disclosures section, which serves as the cornerstone of the Agency's **FOIA program**. By allowing the public to make and track FOIA requests electronically, FOIAonline has enhanced the speed of Agency FOIA workflows resulting in quicker response times and increased information sharing with the public. The public can also create a FOIA log for all requests that were received by EPA during any fiscal year through FOIAonline, EPA's FOIA case management solution. The same is true for any other agency using the FOIAonline application.

Though the Agency is pleased with the progress its program has made, it strives to strengthen its response processes and reduce its FOIA backlog through several improvements to its MyProperty tool[38]. MyProperty allows real estate agents, mortgage banks, engineering and environmental consulting firms and the public to determine if EPA databases have records on a specific property without filing a FOIA request. The results of the search are identical to the information the user would receive by filing a FOIA request with EPA for the same records. As site-specific FOIA requests related to real estate transactions comprise 40% of all FOIA requests received by the Agency, EPA estimates that FOIA requests will be reduced significantly as a result of the upgrade.

In addition to slowing the flow of incoming requests, the Agency plans to reduce its backlog by:

- Providing EPA program and regional offices with access to electronic tools and services to help identify documents that are responsive to FOIA requests.
- Working with program and regional offices to improve the processing time of complex and high-profile FOIA requests.

EPA has also undertaken, or will initiate, the following actions to implement the FOIA Improvement Act of 2016:

- Develop a proposed rule with a direct final rule that is consistent with the FOIA Improvement Act of 2016.
- Update the Agency's appeal language to extend the appeal deadline to 90 days and given notice of EPA's FOIA Public Liaisons and their contact information to the NARA's Office of Government Information Services, as required by the Act.
- Mandatory FY17 FOIA training for all employees.

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[37] https://www.epa.gov/foia

[38] https://www3.epa.gov/enviro/html/fii/myproperty/index.html

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Develop new FOIA regulations, consistent with the FOIA Improvement Act of 2016					X			
Provide mandatory FOIA training for all employees				X	X			
Develop MyProperty 2.0	X	X	X					
Release MyProperty 2.0				X				
Provide EPA program and regional offices with access to electronic tools to identify documents responsive to FOIA requests	X	X	X	X	X	X	X	X
Work with program and regional offices to improve processing time of complex and high-profile FOIA requests	X	X	X	X	X	X	X	X
Implement an intake process to identify similarities across requests, reduce search duplication and streamline the collection and processing of information					X	X	X	X
Provide responses through FOIAonline to give the public access to all records released though FOIA	Ongoing							

E.   Congressional Requests

Objective 18: Strengthen procedures for analyzing and responding to congressional requests for information.

In addition to FOIA requests, EPA is responsible to answering Congressional requests/inquiries for information. In 2015 alone, Congress sent EPA 884 letters seeking a response, 60 separate document requests and received back more than 276,000 pages of documents.[39]

Office of Congressional Affairs

Since early 2015, the **Office of Congressional and Intergovernmental Relations** (OCIR) has used the Lean methodology to design more effective and sustainable procedures for handling congressional and gubernatorial correspondence. Using this methodology, OCIR identified and began eliminating redundant and wasteful correspondence processes that impeded timely responses.

In May 2015, the OCIR Lean Team conducted a three-day Lean event, to analyze the current correspondence process and identify opportunities for substantive improvements. The Lean event

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[39] http://www.bna.com/hundreds-congressional-inquiries-n57982069896/

included mapping the current process, staff engagement through questionnaires/meetings, and consultations with the program offices. Phase II of the project is underway. It includes a meeting with the OAR and the Office of Water (OW) during which correspondence that falls within OAR's and OW's portfolios will be processed using OCIR's leaned correspondence procedures.

Staff at all levels of OCIR have been instrumental in shaping the Leaned correspondence process and moving the project forward. The OCIR Lean Team has remained committed and engaged throughout the project, briefing staff and management on several occasions on progress. OCIR staff continue to provide input on the process and will provide support during implementation, serving as resources to the program offices with which they work. Program staff from OAR and OW have been instrumental in helping to develop the process, providing insight and recommendations that have been implemented Additional information about OICR's staffing and organizational structure can be found on the program's Web site[40] as required by the Open Government directive.

The "Leaned" correspondence process continues its implementation with several components successfully executed:

- Standardized Topic Areas in the Correspondence Management System – for easier and more accurate search results by OCIR portfolio managers.
- ocirmail@epa.gov[41] – An e-mail box has been placed on OCIR's Web site for use by congressional staff and the staff of governors that eliminates the use of a fax machine for sending correspondence.

Staff will continue to look for opportunities to expand the Lean process for congressional correspondence.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Conduct LEAN activities to improve Congressional Correspondence Process	X	X	X	X	X	X	X	X

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[40] https://www.epa.gov/aboutepa/about-office-congressional-and-intergovernmental-relations-ocir

[41] ocirmail@epa.gov

F.   Declassification

Objective 19: Increase the public's ability to learn about EPA's Declassification Programs.

To expand health and safety information available to the public, EPA has undertaken efforts to limit and reduce CBI[42] claims associated with the data it collects. As of December 2014, EPA has declassified a total of 643 chemical identities, increased the number of publicly available health and safety studies, and completed reviews of just under 24,000 declassification cases.

TSCA Voluntary Declassification Challenge Program

While the Agency rarely manages classified information, it oversees the daily collection of a type "controlled unclassified information" known as "confidential business information." Under a number of laws EPA administers, companies may claim information as CBI that then limits public distribution of this material except as authorized by applicable statutes and implementing regulations.

The Agency has received a significant number of CBI claims in filings made pursuant to the requirements of the Toxic Substances Control Act (TSCA). Some of these claims are viewed as overbroad, inconsistent with the requirements of TSCA or as a result of time or other factors no longer necessary.

Since 2010, the Agency has engaged in outreach to major industry trade associations and their membership to reduce prospectively CBI claims in TSCA filings and to review old filings and declassify materials. This engagement, the **TSCA Voluntary Declassification Challenge** challenges industry to reconsider existing CBI claims and limit future CBI claims whenever possible.

The TSCA Declassification Challenge has been one of the most significant contributing factors to date for declassifications that have vastly increased the public availability of health and safety study data. This data can be easily accessed by the public through EPA's ChemView search tool (see section II.B). The public can also visit EPA's TSCA CBI site[43] for up to date information on EPA's TSCA declassification efforts.

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[42] Under the forthcoming CUI rule, CBI is expected to change to PBI.

[43] https://www.epa.gov/tsca-cbi

G.   Public Participation

Objective 20: Broaden opportunities for public participation in policymaking, decision making, and program feedback.

Citizen participation in public affairs builds trust and helps the Government develop better policy and implementation decisions, and achieving desired outcomes. Public participation is a process and involves informing the public as well as obtaining input from them. When conducting meaningful public participation, an agency will gather input from a wide spectrum of stakeholder interests, resulting in a wide range of views and concerns. EPA uses multiple tools to effectively reach all audiences about opportunities for public participation. For example, the Agency utilizes the Environmental Justice Screening and Mapping Tool (EJSCREEN), an enterprise tool that contains demographic and environmental information, to scan for geographical areas that might be candidates for additional outreach as the Agency develops programs, policies.

Public Participation Opportunities Promoted via the Public Affairs Office

EPA continually provides the public with many avenues to learn about, participate in, and collaborate with the Agency on realizing its EPA's mission, including public meetings, webinars and conferences. The Agency shares information on opportunities for public participation through EPA's social and digital media tools. These include the electronic Newsroom, Developer Central, Agency social media accounts, and regional and program-specific Web pages.

EPA's Public Participation Guide

EPA endeavored to become a world leader in public participation with the creation of the **Public Participation Guide**. The guide is an online toolkit that provides means for public participation and public outreach in environmental decision-making. It is designed with government agencies in mind, to help decision-makers design and implement an effective and meaningful public participation process. The Guide is translated into English, Spanish, French, Arabic, and Simplified and Traditional Chinese.

The Agency also works in collaboration with the international government community to encourage public participation as part of their environmental decision-making efforts. The Agency delivers Public Participation workshops in many areas of the world. These workshops include expert presentations, interactive discussions, small group break-out sessions on best practices and case studies, and group deliberations on various public participation strategies and tools. The objectives of these workshops are to:

- Share the key features and foundations of EPA's Public Participation Guide.
- Share best practices, challenges, and strategies in engaging the public.
- Discuss different tools and techniques used throughout the country/region.

- Build a network of people to help strengthen public participation by creating a community of support and practice.

EPA is developing additional resources to enhance the international workshops including an online Public Participation study guide similar to the one used at the international on-site training. This will enable the Agency using limited funds to reach more audiences and train hundreds of people around the globe. The online training will:

- Enable a self-study that can be done in groups throughout the world where EPA cannot travel.
- Serve as an online refresher course for individuals who have already taken the in-classroom training, which will establish a corps of facilitators around the world that can help guide people through the materials.
- Encourage the establishment of a corps of facilitators around the world that can help guide people through the materials.

Components of the online training will include video instruction, workbooks, exercises and discussions, a Facilitator guide, and webinars, as well as incorporating Environmental Justice tools and best practices and conflict resolution concepts.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Develop online Public Participation study guide					X			
Integrate Environmental Justice tools, best practices, and conflict resolution concepts								X
Continue to deliver EPA's Public Participation in-classroom training to other government agencies and non-governmental organizations, domestically and internationally	Ongoing							

H. Collaboration

Objective 21: Expand collaboration to fulfill the Agency's core mission.

Collaborating and coordinating across the Agency and with external partners is central to accomplishing EPA's mission to protect human health and the environment. EPA works closely with states, tribes, local partners, federal agencies, and industry leaders to more effectively address increasingly complex environmental challenges. Examples of some key collaboration tools and efforts

are summarized below. Information on additional collaboration initiatives at EPA is available on the Agency's collaboration Web site[44].

National Environmental Information Exchange Network

The **National Environmental Information Exchange Network** (Exchange Network) is a communication, data, and services platform for sharing environmental information managed under the collaborative leadership of EPA, states, territories, and tribes. The Exchange Network facilitates data-sharing by enabling automated data exchanges, providing real-time access through the Internet, standardizing data structures and formats, automated QA checks, and offering guidance, software, and tools for implementing Exchange Network solutions. Network partners exchange data from nearly every major environmental program administered or delegated by EPA. Recently, E-Enterprise for the Environment adopted the Exchange Network's joint governance model of federal, state, territorial, and tribal partners working together, and on December 1, 2015, the Exchange Network Governance became part of E-Enterprise. In order for external trading partners to maintain autonomy and meet their individual data needs and requirements, the common practice in developing and sustaining the Network since its inception has been based on a service-oriented architecture (SOA) and open standards for performing machine-to-machine and human-to-machine data exchanges. Exchange Network technology is foundational to the E-Enterprise, and these principles and practices are planned to be even more robust and widespread throughout the Agency and among its partners through more standardization and leveraging EPA and other data registries and services.

The Exchange Network enables its partners to better fulfill their organizational missions by delivering better data through the use of standard QA and data structures that reduce faulty data types and incorrect data structures; delivering timely data through the use of a secure Internet connection to enable real-time access to data; and streamlining the data-sharing process through the use of existing tools and software to establish new Exchange Network solutions in a timely and cost efficient manner. By making data more accessible, the Exchange Network is building the foundation for better environmental decision-making.

EPA's Central Data Exchange (CDX) is point of presence on the Exchange Network and additionally the gateway through which environmental data is submitted/reported from industry directly to the Agency. Much like the Exchange Network, CDX reporting services are primarily implemented using SOA principles that have broken down stovepipe systems, resulting in reduced cost for development and operations as well as increasing speed to making data publicly available. EPA intends to leverage both CDX and Exchange Network services for an E-Enterprise Portal that will ultimately enable EPA

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[44] https://www.epa.gov/innovation/ways-collaborate-epa

customers to report and access data and conduct all business with the Agency through a single interface.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Transition Exchange Network Governance model to become part of E-Enterprise for the Environment	X							
Integrate CDX reporting services into E-Enterprise Portal						X		

Office 365

EPA recently implemented a cloud-based e-mail and collaboration suite to promote better communication and coordination among employees across the Agency, as well as with external partners. The new tool suite, which is based on Microsoft's **Office 365** technology, will allow employees to leverage tools that support professional networking, collaborative document editing, online team sites, discussion boards, newsfeeds, video conferencing, document and video libraries, and light-weight third party and custom-built apps to promote better collaboration in pursuit of EPA's mission.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Establish and promote a SharePoint Center of Excellence to support SharePoint development and migration of apps out of Lotus Notes						X		

EPA GeoPlatform

EPA's **Geospatial Platform** (GeoPlatform) is a suite of geospatial tools, data, and services that increases collaboration among individuals both within and outside the Agency. It consolidates and coordinates mapping activities, geospatial applications development, and geospatial data management as a mature, shared service across the Agency. As of May 2016, the platform integrated 581 Web maps, 1573 applications, and 4735 services. As the GeoPlatform expands it seeks to foster collaboration by:

- Utilizing tools that will help developers share knowledge and code, including GitHub, EPA's RCS, and EPA's Developer Central Web site.

- Working with developers to analyze areas where geospatial applications enable entirely new capabilities, such as real-time tracking of emergency responders deployed to a hot zone.

- Supporting Agency and public access through interactive mapping capabilities and standard maps templates.

The Climate Ready Water Utilities (CRWU) initiative, which will provide water sector utilities a tool to explore climate adaptation case studies through an interactive map, is an example of how the GeoPlatform supports public access. The map allows users to review potential adaptation strategies filtered by utilities of similar type, location, or climate threat. The platform also encourages utilities to submit their own adaptation case studies through a built-in Web form, helping utilities connect with one another for information on how their communities can pursue similar adaptation strategies.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Examine open source tools that will help developers share knowledge and code	X	X	X	X	X	X	X	X
Increase the number of shareable maps, geo-data services and applications available for use by 25% over the previous fiscal year.	**Ongoing**							
Deploy public version of EPA's GeoPlatform-based EJSCREEN with significant enhancements to the existing interim version	X	X	X					
Improve integration of GeoPlatform capabilities into EPA's other collaboration tools and platforms.	**Ongoing**							
Coordinate with the E-Enterprise Portal development team to further enhance the integration of geospatial data and mapping tools into the E-Enterprise portal					X	X	X	X
Coordinate with the ongoing development of EPA's Data Visualization Platform to integrate geospatial data and analysis into a broader analytic and visualization capability to support EPA's mission				X	X	X	X	X
Coordinate with the National GeoPlatform effort managed by the Department of Interior to prototype one or more community/thematic sub-sites (e.g., a place-based focus area like Chesapeake Bay, or an interagency resource for Environmental Justice)							X	X

Environmental Data Platform (EDP)

EPA's **Environmental Data Platform** (EDP) provides a central infrastructure for storing, managing, and accessing EPA databases (structured data) and documents, Web sites, and publications (unstructured data). The EDP allows users to access data from one location to gain better insights and understanding through visualization and analytics and provides intelligent search capabilities using Natural Language Processing and machine learning. A working prototype of the EDP utilizing open-source software is in development and will be available soon. Although currently an internal application, in the future this platform will be an important component of the Agency's open and public access strategies.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Release EDP prototype								**X**

Facility Identification Integrated Project Team

Through the **Facility Identification Integrated Project Team** (IPT), a component of E-Enterprise, EPA works with state, local, and tribal agencies to cooperatively streamline data collection and reporting requirements to bridge disparate sources of facility data across the nation. The IPT is exploring, identifying, and testing possible approaches for integrating or sharing facility information across programs and agencies. This streamlining will allow the agencies to more quickly assemble the multi-media environmental data they need for consolidated reports, permits, and inspections and lead to improved facility data quality by accommodating data correction as it is being reported to environmental regulators. With an understanding of current EPA, state, and tribal efforts to integrate facility data, the IPT has identified a shared set of goals for supporting more comprehensive facility integration, and will pilot several options for achieving those shared goals.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Pilot several facility technical solutions with state and tribal agencies							**X**	

Inter-Governmental Data Partnerships

EPA is more of a data consumer than a data developer. Thus it participates in many data partnerships to fill data gaps, develop critical datasets, and improve data consistency necessary for both partner and public data sharing. Since environmental data is often organized by geographic location in many EPA applications and tools (e.g., MyProperty, Envirofacts), the Agency actively participates in and leads domestic and international efforts to build a spatial data infrastructure. The OMB Circular A-16, *Coordination of Geographic Information and Related Spatial Data Activities*, calls for coordination in the development and use of spatial data. Much of this work is accomplished through the Federal Geographic Data Coordination (FGDC) Committee.

EPA is a leader within FGDC to develop the A-16 National Geospatial Digital Asset (NGDA) Portfolio Management process that expedites the coordination of federal geospatial data assets and investments to efficiently support national priorities and government missions. As a result of EPA's leadership role, there are now 177 nationally significant geospatial datasets, known as National Geospatial Data Assets (NGDAs), registered in Data.gov. Additionally, for all NGDAs, there is a standard lifecycle management procedure approved by OMB, a NGDA maturity assessment process and metrics in place, and a dashboard that provides the public with the maturity of each NGDA on the National Geospatial

Platform. Strategic planning is now under way by FGDC and its partners for expanding the development and management transparency and public access to these critical geospatial datasets.

EPA intends to continue its leadership role in this and other data collaboration partnerships in the support of Open Data and government in the coming years. This strong commitment was validated by the Agency's selection of a Chief Data Scientist in FY2016.

I.   Flagship Initiative

Objective 22: Operationalize flagship initiatives begun in the 2014-2016 Open Government reporting cycle.

Objective 23: Initiate additional flagship initiatives that emphasize collaboration with states, tribes, and the regulated community to improve business practices and leverage technology to ensure the protection of human health and the environment.

The four flagship initiatives featured increase access to and use of EPA information to better meet the business needs of stakeholders, the regulated community, and the public. All four incorporate extensive stakeholder interaction to identify needs and adequately address those needs in project and technology design. The use of cutting-edge development and management practices by these initiatives allows EPA to simultaneously improve its operational efficiency and provide the public with quicker access to more environmental information.

AirNow-Domestic and International Expansion

EPA's **AirNow** program provides the public real time air quality data and forecasts – actionable information citizens can use to protect their health. Collecting data from state, local, tribal, and federal agencies, AirNow is the only national repository of real time air quality data and forecasts. The system contains ambient measurements from thousands of monitoring stations around the United States, Canada, and Mexico, as well as forecasts from over 400 U.S. cities. AirNow engages the public by offering real-time air quality data and forecasts with health messages so the public can make choices to reduce exposure. The site also has a very active Frequently Asked Questions (FAQ) system with constant public input.

Since 2014, the scope of the AirNow program expanded to include air quality data and forecasts for the international community. In 2015, the United States Department of State (DoS) signed an agreement with EPA to work together to install air quality monitors at DoS posts around the world, with AirNow as the public interface. In August 2015, AirNow's "Embassies and Consulates" page went live with five sites in India, expanding to 13 by April 2016. AirNow's sustainability depends upon strong partnerships and collaboration with air quality agencies. Over the next two years, the emphasis will be on expanding the domestic and international community of partners that share air quality data. The domestic program is built upon the efforts of more than 130 state, local, tribal, and federal agencies, and the international program leverages the DoS and foreign environmental agencies, such as EPA-Taiwan.

AirNow will also move towards a cloud-based infrastructure, allowing partners to adopt AirNow without purchasing hardware and software beforehand. This configuration will present a much lower barrier to entry for developing countries and therefore dramatically increase the level of publicly shared air quality data and public health information available to the global public. Development of this cloud-based Data Management System component is already underway with several sub-modules available for beta testing.

The AirNow program has several metrics to measure success and indirectly determine public interest. The AirNow API measures how much AirNow data is flowing into other applications and Web sites by tracking users and data flow. Using Google Analytics on the airnow.gov site allows an in-depth analysis of user demographics, showing what aspects of the site get the most usage and what kinds of users visit the site, which informs future program and system directions.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Expand AirNow monitoring stations to 14 locations around the world				X	X	X		
Develop and deploy cloud-based Data Management System		X	X	X	X	X	X	X

Enforcement and Compliance History Online

The **Enforcement and Compliance History Online** (ECHO) System is well established as a groundbreaking initiative to increase public access to information about environmental inspections, violations, and enforcement actions for more than 800,000 EPA-regulated facilities. Building on ECHO's early successes, the following efforts expanded the scope of the project:

- ECHO Enhanced Mobile Interface

  ECHO's enhanced mobile interface features optimized displays for its popular facility searches and reports. The enhanced, responsive tool has a new "Use My Location" feature that offers the ability to search for regulated facilities near the user's current location. Search results with key compliance information can be viewed in map or list form.

  ECHO's enhanced mobile interface increases transparency of regulated facilities to the public by enabling them to search and view compliance information on their mobile devices. The updated usability enhancements give users the option to switch between the mobile view and the full version of the Web site, which was implemented in response to user feedback and allows users to access the full functionality of the Web site on their mobile device. The initiative seeks to improve Agency operations by allowing the public to search and view environmental compliance information from a wider range of technology and address the public's increased interest and consumption of data from mobile sources.

- Air Pollutant Report

  ECHO's Clean Air Act Pollutant Report for the first time allows users to view facility emissions data from the National Emissions Inventory, TRI, Greenhouse Gas Reporting Tool, and Acid Rain Program in one report.

The new report decreases barriers to finding and viewing air pollution data. The Air Pollutant Report improves Agency operations by combining air pollution emissions for regulated facilities into a single, easy-to-use Web page. Previously, users would have had to search four different Web sites and combine data themselves to view the same information.

- Integrated Public Criminal Case Data

  While public information about criminal enforcement has been available on EPA's Web site, it was separate from the civil case data available through ECHO. This significant enhancement allows ECHO users to access all public EPA case data in one place without needing to know whether enforcement actions were civil or criminal in nature. Users can enter a geographic region of interest on the Case Search form and receive a map and a list of all public EPA cases that meet their criteria. The new report decreases barriers to finding and viewing the Agency's enforcement actions. This feature enhances Agency operations by combining all public EPA case data into a single, user-friendly search.

- Drinking Water Data Enhancements

  EPA plans to significantly improve ECHO's Drinking Water system search offerings with new transparency tools. EPA is exploring a range of potential enhancements, aimed at making Drinking Water violations easier to find and access. The Drinking Water data enhancements upgrade Agency operations by providing ECHO stakeholders with more transparency in Safe Drinking Water Act compliance information.

EPA engages interested stakeholders and the public in dialogs about ECHO tools through its online feedback forms and trainings on its user-friendly transparent Web site. EPA's response to its users' requests for higher transparency in environmental regulatory compliance and enforcement data can been measured by the increased number of ECHO tools and enhancements, available data, and Web site visits since 2003. EPA regularly measures improved transparency via Google Analytics Premium usage statistics, as well as assessment of user feedback, to ensure continued usefulness and improvement. The feedback form provides useful feedback from citizens regarding what does and does not meet their needs.

In 2016, EPA increased the number of live and recorded trainings about the ECHO site and expanded its communication about ECHO via listserv and Twitter. These changes help ensure users are quickly able to use and understand new resources available in ECHO. ECHO is developed in an agile environment with biweekly deployments, which allows for timely changes in services that both meet user requirements and ensure quality services.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Release ECHO Enhanced Mobile Interface	X							
Integrate Public Criminal Case Data			X					
Incorporate drinking water data enhancements						X		

E-Enterprise for the Environment

E-Enterprise for the Environment is a new model for collaborative leadership among environmental co-regulators aimed at simplifying, streamlining and modernizing the implementation of environmental programs. E-Enterprise is about streamlining and modernizing business processes, introducing technology where appropriate to maximize efficiency, and ensuring shared ownership and adoption of streamlined processes through joint governance.

E-Enterprise has three goals:

- Goal 1: Improve environmental protection through better program performance.

  E-Enterprise will improve the effectiveness of current programs by streamlining and modernizing business processes and promoting the use of advanced information and monitoring technologies.

- Goal 2: Enhance services to stakeholders and Agency partners.

  E-Enterprise will reduce transaction costs and burdens for the regulated community and governmental agencies and improve the transparency of environmental conditions and performance.

- Goal 3: Operate our partnership as a transformative model for joint governance.

  The governance of E-Enterprise sets a new paradigm of EPA, states and tribes working together to set strategic direction, solve problems, and promote the use of innovative solutions.

Over the past four decades, federal, state and tribal environmental programs have achieved dramatic improvements in the quality of public health and the environment in America. However, the evolution of these programs over decades has resulted in a patchwork of requirements and programs that can lead to inefficiencies and confusion for regulated entities and the public. E-Enterprise seeks to accelerate the nation's environmental progress through modernized and streamlined business processes, increased access to information, and improved convenience for the regulated community and the public. In a time of constrained resources, a collaborative national enterprise of environmental protection is needed now more than ever to meet the nation's environmental challenges.

At the heart of E-Enterprise is a commitment by the state and federal co-regulators in the national enterprise for environmental protection to operate this partnership as a transformative model for joint governance. EPA is committed to the principle of early engagement and collaboration among EPA, state, and tribal partners; working together to streamline, modernize and integrate our shared business processes and management approaches. E-Enterprise is led and managed by the E-Enterprise Leadership Council (EELC), a council of ten senior EPA executives and ten state commissioners and soon to add 10 tribal representatives.

Listed below are some of the featured E-Enterprise projects:

- Water Quality Tribal Roadmap

  The Water Quality Tribal Roadmap project seeks to support tribes in submitting and maintaining data submissions to the Water Quality eXchange. The excel-based tools generates a road map document, in rich text format (.rtf), that guides a tribe through working with water quality data and how they can approach data

management and submissions. The customized tribal roadmap is based on answers to a series of questions and can provide value to a tribe whether they are just beginning to report water data or have been reporting it for a decade or more. Excel was used as a tool to generate the guide because it is commonly-owned software that is Internet independent. Other data summarization functions are also in the tool to support tribes in maintaining knowledge of water quality on tribal lands. The Water Quality Tribal Roadmap team consisted of EPA headquarters and regional staff and representatives from eight tribes.

- Combined Air Emissions Reporting – Integrating and streamlining air emissions reporting

The Combined Air Emissions Reporting (CAER) project seeks to streamline multiple emissions reporting processes and to establish a single, authoritative data repository. Currently, air emissions information is collected by EPA and state or local air agencies through numerous separate regulations, in a variety of formats, according to different reporting schedules, and using multiple routes of data transfer. In the to-be state, the CAER project is expected to reduce the cost to industry and government for providing and managing important environmental data and to improve decision-making capacity through more timely availability of data.

- Interoperable Watershed Monitoring – Availability and use of water data for water resource protection

The Interoperable Watersheds Monitoring project supports the advancement of watershed monitoring networks to consolidate data from diverse sources into an interoperable and accessible data platform. Development of an integrated and interoperable watershed monitoring program will expand the data available for water quality, support integrated water resource management, promote citizen science, incorporates continuous monitoring with traditional monitoring techniques, increases efficiency, and increases scientific knowledge of water quality (e.g., nutrient loading impacts). The first phase of the project focuses on aligning monitoring data from three to five watersheds from the array of available data sets. The longer term goal is to expand this to a national framework that other watersheds could implement.

- Smart Tools for Inspectors – Improving field inspection processes through mobile tools

The Smart Tools for Inspectors project seeks to streamline environmental inspection processes and develop software solutions that will enable EPA and state inspectors to efficiently prepare for, conduct, and report on field inspections. Currently, inspectors must rely on time consuming and labor intensive methods to collect background and field information and to generate inspection reports. Moreover, data points, such as potential violations, are often not in a consistent or easily-interpretable format and must be manually entered into the systems of record. Smart tools software will enable inspectors to electronically enter data during an inspection, enable the use of a standard checklist to ensure consistent inspections, pre-populate facility and other data, capture inspector and facility signatures, and transmit data to national and state systems in a standard format, among other features. Overall the software will reduce the time spent per each inspection, allow inspectors to target a larger universe of facilities, and increase the quality of decision-making based on better data.

- Pesticides Label Matching – Improve accuracy, effectiveness and safe pesticide use

The Pesticides Label Matching project seeks to modernize and streamline the decades-old work process for conducting pesticide product label inspections. Currently, the process of manually sampling and reviewing a limited number of pesticide labels creates significant, longstanding problems for pesticide consumers, inspectors, and registrants. The project will develop a "smart label" for pesticide products and a mobile application of optical character recognition technology that can be used by regulated entities, the states, and EPA. This "Smart Pesticide Label" project will dramatically improve inspectors' efficiency, a larger universe of

labels will be inspected, and compliance rate will improve over time. The Pesticides Label Matching project is described in more detail below.

- Local Government Portal – Compliance assistance tool for local governments

  The Local Government Portal project seeks to overcome endemic local government capacity limitations, especially within small communities, in complying with environmental regulations while fulfilling their responsibilities to own/operate environmental services and infrastructure needed by their citizens. This project will also be designed to help communities of all sizes to have easier access to information aimed at improving environmental and public health outcomes and help local governments make their town, city, or county more sustainable.

- The E-Enterprise for the Environment Portal

  The E-Enterprise for the Environment Portal is a new user-friendly Web platform that will modernize the way the public, the regulated community, and environmental co-regulators find and exchange important information and conduct two-way environmental transactions. The Portal was launched in October 2015, and is already providing a variety of information and other resources. The E-Enterprise Portal provides an important new means by which users can customize the types of information presented to them, find and select tools and other resources that might be of value, and in some cases, report information and conduct transactions with EPA. New capabilities are being added on a continual basis. The Agency received direct input from the general public on the design of the E-Enterprise Portal by requesting comments through a Federal Register notice, hosting three public Internet informational webinars, tribal consultation, and roundtables.

EPA has established the following criteria to measure the success of E-Enterprise:

- Reduce reporting burden of the regulated community, state, and EPA by one million additional hours by September 30, 2017.

- Begin development on two EELC-selected projects – the Local Government Portal and the Combined Air Emissions Reporting in FY2016 and FY2017.

- Introduce additional functionality to the E-Enterprise Portal with the integration of Compliance and Emissions Data Reporting Interface (CEDRI), the Local Government Portal, Air Now, and two state systems.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
E-Enterprise for the Environment								
Effectively manage integrated project teams through shared governance with states, tribes and other partners	X	X	X	X	X	X	X	X
Prioritize and deliver shared services and capabilities to support E-Enterprise priorities in collaboration with EPA program offices, states and tribes	X	X	X	X	X	X	X	X
Participate in and implement the results of the Facility IPT to develop a common structure for identifying facilities						X	X	X

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Participate in and implement the results of the Identity Management Integrated Projects Team to produce a framework for EPA and co-regulators to collaboratively manage identity management	X	X	X	X	X	X	X	X
Evaluate opportunities for E-Reporting efficiencies across EPA programs	X	X	X	X				
E-Enterprise Portal								
Phase One release	X							
Link different EPA reporting systems to the E-Enterprise Portal to enable easier reporting for the regulated community	X	X	X	X	X	X	X	X
Collaborate with states, tribes, and other partners to enhance the capability of the Portal	X	X	X	X	X	X	X	X

Highlighted E-Enterprise Project: Pesticides Label Matching Project

The **Pesticides Data Accessibility and Label Matching Project**, will transform the decades-old process of inspecting pesticide labels for compliance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) that relies on manual sampling and reviewing a limited number of labels. Through extensive stakeholder collaboration, EPA developed a mobile app, the Pesticides Label Matcher, which can be used by regulated entities, the states, and EPA. The app leverages optical character recognition technology to convert an image of a label to text, and then compares it with the approved federal master label. This approach will:

Dramatically improve inspectors' efficiency.

- Enable a larger universe of labels to be inspected.
- Reduce the pesticide label inspection program's complexity and cost, while improving its efficiency through reengineered business processes.
- Increase proactive regulatory compliance by providing easier access to information on pesticide product labels that have been accepted by EPA.
- Provide greater protection of human health (e.g., farm workers and children) and the environment by increasing the number of labels containing accurate information of the product's content and proper usage.

The project involves building new partnerships and leveraging the talents and assets of experts in multiple EPA programs, regional offices, states, and the GSA. EPA conducted outreach to a diverse set of internal and external stakeholders, including the Association of American Pesticide Control Officials (AAPCO), the State FIFRA Issues Research and Evaluation Group (SFIRREG), Pesticide Program

Dialogue Committee (PPDC), and EPA pesticide managers, via list serves and the project Web site. The project team worked directly with federal and state enforcement officers and inspectors from five states to gather requirements. The Agency completed a draft feasibility study in FY2016, and convened a workshop in March 2016 that included observation of state inspections and a presentation of federal case development. Based upon the outputs generated during this workshop, and on feedback provided by a project working group during user acceptance testing, the project team conducted a series of sprints to further enhance the development of the label matching project application. In Q4 FY2016 development is scheduled to be completed and the application made available for field testing nation-wide by EPA and state inspectors via the Apple and Google Play application stores. During the field testing phase, the project team will hold demos, webinars, and a forum for testers to provide feedback that will be translated into future features to improve capabilities of the application.

In parallel to the Pesticides Label Matcher App development, the relevant offices within EPA have initiated discussions on potential regulatory changes that might further enhance the value of the new application, and started to reexamine how EPA approaches pesticide labeling and label design. This ongoing dialog is likely to lead to further improvements in pesticide labeling program effectiveness and efficiency.

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Conduct discovery phase activities		X						
Develop user stories		X						
Participate in 18F workshop		X						
Conduct/complete beta testing of the Minimum Viable Product				X	X	X		
Create APIs to access pesticide data in the Office of Pesticide Program's Information Network/Pesticide Registration Information System	X	X	X	X				
Release completed prototype			X					
Make the Pesticides Label Matcher App available on the E-Enterprise Portal						X		
Publish the application to the Apple and Google Play stores						X		
Enhance the Pesticides Product Label System, which houses the scanned and digitized copies of master labels	X	X	X	X				
Enhance the existing Section Seven Tracking System	X	X	X	X	X			

Initiative and Related Milestones	FY2016				FY2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Enable offline downloads of the Pesticide Label Matching Tool from the Pesticide Product Label System							X	X
Create a plan to integrate the Pesticides Label Matcher App with the Smart Label initiative					X	X	X	X
Create a plan to integrate the Pesticides Label Matcher App with EPA Shared Services							X	X
Create a plan to integrate the Pesticides Label Matcher App with state (marketplace) label databases and establish potential partnership agreement					X	X	X	X

Appendix A: List of Terms

Acronym	Name
AAPCO	Association of American Pesticide Control Officials
API	Application Program Interface
CAER	Combined Air Emissions Reporting
CBI	Confidential Business Information
CCS	Crowdsourcing and Citizen Science
CDAT	Chemical Data Access Tool
CDX	Central Data Exchange
CEDRI	Compliance and Emissions Data Reporting Interface
CFDA	Catalog of Federal Domestic Assistance
CORS	Cross-origin resource sharing
CRWU	Climate Ready Water Utilities
CSRA	Civil Service Reform Act
CUI	Controlled Unclassified Information
DATA	Digital Accountability and Transparency Act
DERS	Data Element Registry Services
DoS	Department of State
ECHO	Enforcement Compliance History Online
EELC	E-Enterprise Leadership Council
EDG	Environmental Dataset Gateway
EDI	Enterprise Data Inventory
EDP	Environmental Data Platform
EDSP	Endocrine Disruptor Screening Program
EIMP	Enterprise Information Management Policy
EJSCREEN	Environmental Justice Screening and Mapping Tool
EPA	Environmental Protection Agency

Acronym	Name
FAQ	Frequently Asked Questions
FFATA	Federal Funding Accountability and Transparency Act
FGDC	Federal Geographic Data Coordination Committee
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FISMA	Federal Information Security Modernization Act
FITARA	Federal Information Technology Acquisition Reform Act
FOIA	Freedom of Information Act
FRS	Facility Registry Service
FSRS	FFATA Subaward Reporting System
FY	Fiscal Year
GPO	General Printing Office
GSA	General Services Administration
HERO	Health and Environmental Research Online
HPVIS	High Production Volume Information System
IMO	Information Management Officer
ICR	Information Collection Request
IPT	Integrated Project Team
IT	Information Technology
LOD	Linked Open Data
LRS	Laws and Regulation Services
NAICS	North American Industry Classification System
NARA	National Archives and Records Administration
NEIEN	National Environmental Information Exchange Network
NGDA	National Geospatial Digital Archive
NOI	Notice of Intent to Sue
NPP	National Privacy Program

Acronym	Name
NRMP	National Records Management Program
OAR	Office of Air and Radiation
OARM	Office of Administration and Resources Management
OCIR	Office of Congressional and Intergovernmental Relations
OEI	Office of Environmental Information
OMB	Office of Management and Budget
OPPT	Office of Pollution Prevention Toxics
ORD	Office of Research and Development
OSC	Office of Special Counsel
OSHA	Occupational Safety and Health Administration
OSIM	Office of Science and Information Management
OSTP	Office of Science and Technology Policy
OW	Office of Water
PII	Personally Identifiable Information
PMO	Program Management Office
PPDC	Pesticide Program Dialogue Committee
PPP	Prohibited Personnel Practice
QA	Quality Assurance
R&D	Research and Development
RCS	Reusable Component Services
READ	Registry of EPA Applications and Databases
REST	Representational State Transfer
RETIGO	Real Time Geospatial Data Viewer
RLO	Records Liaison Officer
SCC	Source Classification Code
SDM	Scientific Data Management

Acronym	Name
SDMP	Scientific Data Management Plans
SFIRREG	State FIFRA Issues Research and Evaluation Group
SOA	Service Oriented Architecture
SOP	Standard Operating Procedures
SoR	System of Registries
SRS	Substance Registry Services
TRI	Toxics Release Inventory
TSCA	Toxic Substances Control Act
TSCAT	Toxic Substance Control Act Test Submissions
URL	Uniform Resource Locator
WebCMS	Web Content Management System
WPA	Whistleblower Protection Act
WPEA	Whistleblower Protection Enhancement Act
XML	Extensible Markup Language

Appendix B: List of Resource URLs

Related Project/Activity	Web site/Document Name	Resource URL
Executive Summary		
N/A	EPA 2014-2018 Strategic Plan	https://www.epa.gov/sites/production/files/2014-09/documents/epa_strategic_plan_fy14-18.pdf
N/A	FY2015-2018 EPA Information Resources Management Plan	https://www.epa.gov/sites/production/files/2015-08/documents/irmstrategicplan.pdf
N/A	2016 Agency Open Government Plans Memorandum M-16-16	https://www.whitehouse.gov/sites/default/files/omb/memoranda/2016/m-16-16.pdf
Open Data		
N/A	Open Data Policy – Managing Information as an Asset Memorandum M-13-13	https://www.whitehouse.gov/sites/default/files/omb/memoranda/2013/m-13-13.pdf
Enterprise Information Management Policy (EIMP)	EIMP	https://www.epa.gov/sites/production/files/2015-05/documents/2135-p-01_0_eimp_catal_epa_info_proc_final_2015_03_25.pdf
	EIMP Cataloguing Information Procedure (2135-P-01.0)	https://www.epa.gov/sites/production/files/2015-08/documents/cio-2135-p-01-0.pdf
	EIMP Minimum Metadata Standards (2135-S-01.0)	https://www.epa.gov/sites/production/files/2015-08/documents/cio-2135-s-01-0.pdf
Quality Program	EPA Quality Program	https://www.epa.gov/quality
Scientific Data Management Program	EPA Scientific Data Management Program	http://intranet.ord.epa.gov/science/scientific-data-management
System of Registries (SoR)	SoR	https://ofmpub.epa.gov/sor_internet/registry/sysofreg/home/overview/home.do
	EPA Data Standards Web Site	https://www.epa.gov/data-standards
	Registry of EPA Applications, Models and Data Warehouses (READ)	https://ofmpub.epa.gov/sor_internet/registry/systmreg/home/overview/home.do

Related Project/Activity	Web site/Document Name	Resource URL
	Data Element Registry Services (DERS)	https://iaspub.epa.gov/sor_internet/registry/datareg/home/overview/home.do
	Terminology Services	https://iaspub.epa.gov/sor_internet/registry/termreg/searchandretrieve/home.do
	North American Industry Classification System (NAICS) Service	https://iaspub.epa.gov/sor_internet/registry/datastds/findadatastandard/epaapproved/sicnaics/
	TRIBES Web Services	http://www.exchangenetwork.net/data-exchange/epa-tribal-identification-tribes/
	Source Classification Code (SCC) Service	https://ofmpub.epa.gov/sccwebservices/
Environmental Dataset Gateway (EDG)	EDG	https://edg.epa.gov/metadata/catalog/main/home.page
	Public Data Forum	http://developer.epa.gov/forums/forum/dataset-qa/
Substance Registry Services (SRS)	SRS	https://iaspub.epa.gov/sor_internet/registry/substreg/searchandretrieve/substancesearch/search.do
Laws and Regulation Services (LRS)	LRS	N/A
API Strategy	API Strategy	https://www.epa.gov/open/digital-strategy
Public Access/Envirofacts	Envirofacts	https://www3.epa.gov/enviro/
Facility Registry Service (FRS)	FRS	https://www.epa.gov/enviro/facility-registry-service-frs
Toxics Release Inventory (TRI)	TRI	https://www.epa.gov/toxics-release-inventory-tri-program
Developer Central	Developer Central	https://developer.epa.gov/
Controlled Unclassified Information (CUI) Program	CUI Program	https://www.archives.gov/cui/
	Executive Order (EO) 13556 "Controlled Unclassified Information	https://www.gpo.gov/fdsys/pkg/FR-2010-11-09/pdf/2010-28360.pdf
Data Analytics Program	Data Analytics Program	N/A
Proactive Disclosures		

Related Project/Activity	Web site/Document Name	Resource URL
FOIAonline	Freedom of Information Act (FOIA)	https://www.foia.gov/
	FOIAonline	https://foiaonline.regulations.gov/foia/action/public/home
ChemView	ChemView	https://java.epa.gov/chemview
Privacy		
Privacy Program	5 U.S.C. §552	http://www.gpo.gov/fdsys/pkg/USCODE-2013-title5/html/USCODE-2013-title5-partI-chap5-subchapII-sec552.htm
	National Privacy Program (NPP)	www.epa.gov/privacy
Whistleblower Protection		
Office of Special Counsel (OSC) Certification	Whistleblower Protection Act (WPA)	https://www.congress.gov/112/bills/s743/BILLS-112s743enr.pdf
	EPA OIG - Whistleblower Protection	https://www.epa.gov/office-inspector-general/epa-oig-hotline#protection
	EPA Whistleblower Intranet Web page	http://workplace.epa.gov/whistleblowerprotection.html
Web sites		
Web site Management	Open Initiative	https://www.epa.gov/open
	Digital Strategy	https://www.epa.gov/open/digital-strategy
	Analytics.USA.gov	https://pulse.cio.gov/.
Open Innovation Methods		
GreenSpark Program	GreenSpark	N/A
Innovation Team	Innovation Team Web page	https://www.epa.gov/innovation
	Citizen Science Intranet Web page	www.epa.gov/citizenscience
	The Village Green Project	www.airnow.gov/villagegreen

Related Project/Activity	Web site/Document Name	Resource URL
	The Challenging Nutrient Coalition	https://www.epa.gov/sites/production/files/2015-08/documents/shaw.pdf
	Real Time Geospatial Data Viewer (RETIGO)	www.epa.gov/retigo
Linked Open Data (LOD)	LOD	https://opendata.epa.gov
Access to Scientific Data and Publications		
N/A	Office of Science and Technology Policy (OSTP) Public Access Memorandum	https://www.whitehouse.gov/sites/default/files/microsites/ostp/ostp_public_access_memo_2013.pdf
Public Access Plan	EPA Open Government Web page	https://www.epa.gov/open
Health and Environmental Research Online (HERO)	HERO	https://hero.epa.gov/hero/
Tox21	Tox21	https://www.epa.gov/chemical-research/toxicology-testing-21st-century-tox21
	Toxicity ForeCaster (ToxCast) Data	https://www.epa.gov/chemical-research/toxicity-forecaster-toxcasttm-data
	ToxCast Dashboard	http://actor.epa.gov/dashboard/
	EDSP Dashboard	http://actor.epa.gov/edsp21/
	iCSS CompTox Dashboard	https://comptox.epa.gov/dashboard
	DSSTox	https://www.epa.gov/chemical-research/distributed-structure-searchable-toxicity-dsstox-database
Open Source Software		
Digital Services Program	Digital Strategy Web page	https://www.epa.gov/open/digital-strategy
Reusable Component Services (RCS)	RCS	https://ofmpub.epa.gov/sor_internet/registry2/reusereg/searchandretrieve/

Related Project/Activity	Web site/Document Name	Resource URL
E-Manifest	E-Manifest	https://www.epa.gov/hwgenerators/hazardous-waste-electronic-manifest-system-e-manifest
Spending Information		
DATA Act Implementation	DATA Act Implementation	https://www.epa.gov/office-inspector-general/notification-epas-data-act-implementation-efforts
Participation in Transparency Initiatives		
Data.gov	Data.gov	https://www.data.gov/
eRulemaking Program/Regulations.gov	Regulations.gov	https://www.regulations.gov/
	FDMS.gov	https://www.fdms.gov
IT Dashboard	IT Dashboard	https://www.itdashboard.gov/
Grants.gov	Grants.gov	http://www.grants.gov/
Catalog of Federal Domestic Assistance (CFDA)	CFDA	https://www.cfda.gov/
Federal Subaward Reporting System	FSRS	https://www.fsrs.gov/
USAspending.gov	USAspending.gov	https://www.usaspending.gov
Notice of Intent to Sue EPA	Notice of Intent to Sue EPA	https://www.epa.gov/noi
Public Notice		
Public Notice	EPA Newsroom	https://www.epa.gov/newsroom
Records Management		
Records Program	National Records Management Program (NRMP)	https://www.epa.gov/records
	NRMP Intranet Web page	http://intranet.epa.gov/records/

Related Project/Activity	Web site/Document Name	Resource URL
	Managing Government Records Directive (M-12-18)	https://www.whitehouse.gov/sites/default/files/omb/memoranda/2012/m-12-18.pdf
FOIA Requests		
FOIA Program	Center for Effective Government's Access to Information Scorecard	http://www.foreffectivegov.org/access-to-information-scorecard-2015
	EPA's FOIA Web page	https://www.epa.gov/foia
	MyProperty Tool	https://www3.epa.gov/enviro/html/fii/myproperty/index.html
Congressional Requests		
Congressional Requests	"Hundreds of Congressional Inquiries Flood EPA"	http://www.bna.com/hundreds-congressional-inquiries-n57982069896/
	Office of Congressional and Intergovernmental Relations (OCIR)	https://www.epa.gov/aboutepa/about-office-congressional-and-intergovernmental-relations-ocir
	OCIR Mail Box	ocirmail@epa.gov
Declassification		
TSCA Voluntary Declassification Challenge Program	TSCA Voluntary Declassification Challenge Program	https://www.epa.gov/tsca-cbi/voluntary-challenge-declassify-confidential-business-information-cbi
	Confidential Business Information under TSCA	https://www.epa.gov/tsca-cbi
Public Participation		
Public Participation Opportunities Promoted via the Public Affairs Office	Office of Public Affairs (OPA)	https://www.epa.gov/aboutepa/about-office-public-affairs-opa
EPA's Public Participation Guide	Public Participation Guide	https://www.epa.gov/international-cooperation/public-participation-guide
Collaboration		
N/A	Ways to Collaborate with EPA	https://www.epa.gov/innovation/ways-collaborate-epa

Related Project/Activity	Web site/Document Name	Resource URL
National Environmental Information Exchange Network (NEIEN)	NEIEN	https://www.epa.gov/exchangenetwork
EPA GeoPlatform	GeoPlatform	https://www.epa.gov/geospatial
Environmental Data Platform	Environmental Data Platform	N/A
Facility Identification Integrated Project Team	Facility Identification Integrated Project Team	http://www.exchangenetwork.net/facility-data-ipt/
Inter-Governmental Data Partnerships	Federal Geographic Data Coordination Committee (FGCD)	https://www.fgdc.gov/
Flagship Initiatives		
AirNow	AirNow	https://www.airnow.gov/
Enforcement and Compliance History Online (ECHO)	ECHO	https://echo.epa.gov/
E-Enterprise for the Environment	E-Enterprise	https://www.epa.gov/e-enterprise
E-Enterprise for the Environment	E-Enterprise Projects Spotlight	https://www.epa.gov/e-enterprise/e-enterprise-projects-spotlight