



Environmental Protection Agency (EPA)

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Prepared for Congress per the requirements of section 3(b)(2) of Public Law 115-336.

21st Century Integrated Digital Experience Act - Report to Congress on Modernizing Agency Websites and Digital Services

As required by section 3(b)(2) of Public Law 115-336,¹ the 21st Century Integrated Digital Experience Act (21C IDEA), this report includes a list of key websites and digital services operated by EPA that have been prioritized and targeted for modernization.

Background

The 21st Century IDEA requires each federal executive branch agency to provide a prioritized list of the agencies' "most-viewed or utilized by the public or are otherwise important" public websites and digital services in compliance with section 3(a) of the law, and to provide an estimation of the cost and schedule to modernize those sites and services.

Overview of EPA's Web Presence

The EPA's primary public website is www.epa.gov. It is our most important channel for sharing environmental information with the American public, and it receives approximately 13 million hits and 3 million unique visitors per month. www.epa.gov is managed by EPA's Office of the Administrator (OA) / Office of Public Affairs (OPA) / Office of Web Communications (OWC) and the Office of Mission Support – Environmental Information (OMS-EI) / Office of Information Management (OIM) / Web Content Services Division (WCSD). Rigorous governance and management controls have been implemented to optimize adherence to 21C IDEA and other federal web management requirements. As a result, www.epa.gov maintains strict adherence to the 21C IDEA requirements (see Table 3: Summary of 21st Century IDEA Requirements).

EPA also owns 12 other domains and hundreds of subdomains which serve more specialized needs for more specific audiences. Of the 12 other domains identified, 6 were either no longer active, in development, or managed by another organization. The active domains and subdomains are managed by the individual program offices within EPA. OWC and OMS lead a central web governance council which provides agency-wide policies, procedures, standards, and guidance to help the program offices implement web management best practices.

Measuring Compliance

¹ 132 Stat. 5025-5028.

EPA's Web Analytics Program uses industry standard tools to track compliance with Federal web management requirements on our primary website, www.epa.gov. We are exploring opportunities to expand compliance monitoring efforts to include EPA's other domains and subdomains.

Data was collected for this report by surveying all EPA domain owners across the Agency. Each domain point of contact (POC) was asked to provide their best estimate of the degree to which the web pages on their domain complied with the 21C IDEA and other federal web management requirements. A summary of these results can be found in Table 3: Summary of the 21st Century IDEA Requirements.

Key Websites and Digital Services

EPA has identified the following websites and digital services as high-traffic and/or important for public engagement:

Table 1: Prioritization of EPAs Websites

Priority	DotGov Domain	Description
1	EPA.GOV	EPA.GOV is EPA's primary public access communication channel to communicate environmental and human health information to the American public.
2	AIRNOW.GOV	AirNow is the vehicle for providing timely Air Quality Index (AQI) information to the public, media outlets, other federal agencies and their applications, and to the research community.
3	ENERGYSTAR.GOV	ENERGY STAR is EPA's voluntary program that helps businesses and individuals save money and protect our climate through superior energy efficiency.
4	FOIAONLINE.GOV	FOIAonline is a shared service that supports a diverse number of federal agencies meet their responsibilities under the Freedom of Information Act.
5	E-ENTERPRISE.GOV	E-Enterprise for the Environment is a new model for collaborative leadership among environmental co-regulators, engaging with all interested and affected parties, to achieve positive environmental, human health, and economic outcomes.
6	FEDCENTER.GOV	FedCenter.gov is the Federal government's home for comprehensive environmental stewardship and compliance assistance information for Federal facility managers and their agencies.
7	FRTR.GOV	The Federal Remediation Technologies Roundtable (FRTR) works to build a collaborative atmosphere among federal agencies involved in hazardous waste site cleanup.

Table 2: Excluded Domains

The table below shows the domains and reasons for which they were excluded from the estimates.

Domain Name	Reason for exclusion
cbi-epa.gov	No longer active
glmpo.gov	Under development; not active yet
greengov.gov	No longer active; managed by the Council on Environmental Quality (CEQ)
relocatefeds.com	Redirect
sustainability.gov	This domain is managed by the Council on Environmental Quality (CEQ)
urbanwaters.gov	Redirect

Table 3: Summary of 21st Century IDEA Requirements

The table below lists the website modernization requirements of the 21C IDEA, and shows, for each domain, the estimated percentage of pages that comply with the requirements based on the domain owner's best estimate.

Legend:

✓ domain owners stated 100% compliance with the specific requirement

% domain owners best estimate of the percentage of compliant pages on the domain.

#	Requirement	AirNow	E-enterprise	Energy Star	Fed Center	FOIA Online	FRTR	www.EPA.gov	*.epa.gov
1	Accessibility <i>Section 3(a)(1)</i>	70%	90%	80%	90%	80%	60%	70%	?
2	Consistent Look & Feel <i>Section 3(a)(2)</i>	90%	90%	90%	✓	80%	60%	✓	?
3	Eliminate Redundancy* <i>Section 3(a)(3)</i>	10%	0%	40%	0%	10%	40%	10%	?
4	Search <i>Section 3(a)(4)</i>	90%	0%	90%	✓	10%	0%	✓	?
5	Secure Connections <i>Section 3(a)(5)</i>	✓	✓	✓	✓	✓	✓	✓	94%
6	Data Driven Design <i>Section 3(a)(6)</i>	✓	✓	70%	40%	20%	0%	90%	?
7	Customization <i>Section 3(a)(7)</i>	-	-	-	-	-	-	-	-
8	Mobile-Ready <i>Section 3(a)(8)</i>	90%	90%	✓	90%	80%	✓	✓	?

*The "Eliminate Redundancy" score represents the percentage of content that could be considered redundant.

Note: Estimates for items 1,2,4, 5, 6, and 8 based on actual web analytics data. Other estimates are based on the domain owner's best estimates. As part of our modernization effort, EPA will obtain and implement tools to obtain web analytics data for the 12 other domains and 250+ other subdomains.

Implementing Requirements

The section below explains how EPA complies with each of the 21C IDEA requirements.

Section 3(a)(1) Ensure Accessibility for Individuals with Disabilities

EPA is committed to the principle that people with disabilities should have comparable access to accessible information and communication technology. EPA's Web Analytics Program is dedicated to ensuring implementation of this requirement on EPA's primary domain, www.epa.gov. EPA is exploring opportunities to expand Web Analytics reporting and tracking to include EPA's other domains and subdomains. Initiatives that support this requirement include:

- **Section 508 Program** - EPA's Section 508 Program provides agency-wide coordination and oversight to ensure compliance with federal accessibility requirements.
- **The EPA Section 508 Executive Council** - EPA's Section 508 Executive Council provides strategic guidance for the implementation of EPA's 508 Program.
- **EPA Section 508 Compliance Assessment and Remediation Plan** - The goal of EPA's Section 508 Compliance Assessment and Remediation Plan is to assess and enhance the accessibility of EPA's existing Information and Communications Technology (ICT), while also developing a baseline from which to measure improvements and providing a framework for focusing EPA's Section 508 efforts over the next few years. Section 508 compliance and remediation activities are coordinated with the Office of Mission Support and the EPA Web Council.
- **Drupal WebCMS** - EPA's agency-wide, content management system has a section 508 compliance certification requirement before publishing to www.epa.gov.
- **Accessibility Requirement for Web-Related Procurements** - There is a Section 508 review required for each purchase request (PR) for web-related tools or services.
- **Web Analytics Program** - EPA's Web Analytics program supports the agency's 508 goals by providing tools to help measure and remediate 508 compliance of pages on www.epa.gov.

Section 3(a)(2) Ensure a Consistent Look and Feel Across Websites

All of EPA's public content pages or web applications are required to use the One EPA Web look and feel which is based on the [United States Web Design System: USWDS](#). The "look and feel" enables each web page to be clearly identified on EPA's public access website as belonging to EPA and ensures that each page has required navigational and other design elements. The EPA has tools and staff dedicated to ensuring implementation of this requirement on www.epa.gov, and additional tools and resources are discussed in the Modernization Priority section. Initiatives that support this requirement include:

- [EPA Content Review and Approval Process](#) - EPA's Office of Web Communications reviews all new or redesigned web content before it is published. This review helps ensure a consistent look and feel across EPA's websites.
- [Procedure: Complying with EPA.gov "Look and Feel"](#) - This procedure defines the requirement to use a standard layout for EPA's public access webpages and Web applications so that they are published with a consistent "Look and Feel." The steps for requesting a waiver or exemption from using required specifications of the EPA "Look and Feel" are also included in this Procedure. The following types of pages are exempt from the "Look and Feel" specifications and require registration, but do not need a waiver: Partnership Sites, Kid Pages, Tracking Statistics, and Extranet Sites.
- [Web Standards: Look and Feel Template](#) - This standard template provides the look and feel for the top and bottom of each EPA web page. The WebCMS produces this look and feel automatically. All applications should use the standalone template.
- [Standalone Template for Applications](#) - EPA maintains a Standalone One EPA Web Template with the EPA Look and Feel which can be used for all data and content not in the Drupal WebCMS. Content owners can wrap this template around application code, to apply the EPA look and feel to their applications.
- [EPA Native and Hybrid Mobile App Look and Feel Guidance](#) - Describes the look and feel requirements for mobile hybrid and native mobile applications.

Section 3(a)(3) Eliminate Redundancy

Identifying and treating content that is redundant, outdated, or trivial (ROT) is an important part of regular review, because ROT: interferes with search results and makes it harder for people to find what they are looking for; erodes the credibility and authority of EPA.gov content; makes maintenance, especially backup and data storage more costly, and makes updating sites time-consuming and burdensome. The EPA has tools and staff dedicated to ensuring implementation of this requirement on www.epa.gov, and additional tools and resources are discussed in the Modernization Priority section. Initiatives that support this requirement include:

- [EPA ROT Guidance](#) - Domain owners must follow this EPA guidance which explains steps that content owners must take to review the content and remove redundant, outdated, and/or trivial information.
- [EPA Content Review and Approval Process](#) - EPA's Office of Web Communications reviews all new or redesigned web content before it is published. This review helps prevent redundant content from being published.

Section 3(a)(4) Make Information Searchable and Discoverable

Search functions are important to improving the web visitor experience. Furthermore, search engine optimization is critical to reaching users who primarily rely on commercial search engines to find information. EPA Initiatives that support this requirement include:

- **EPA Search Engine** - EPA is currently using an industry standard Search Engine. The Search interface is built into the standard template, so search appears on every page. EPA's search collection is available to both EPA's search engine and external search engines such as Google and Bing.
- **[Guidance on Coding forms for Metadata Search](#)** - EPA provides content owners with guidance on coding their content to include the proper metadata to improve discoverability.
- **Best Bets** – EPA reviews the user feedback and Web Analytics data to find popular search terms and manually updates the list of “Best Bets” to ensure that best results show up 1st.

Section 3(a)(5) Use Secure Connections (HTTPS)

EPA take steps to ensure that all offices within the Agency meet the minimum-security requirements defined in the Federal Information Processing Standards (FIPS) Publication 200. Existing sites on www.epa.gov have been transitioned to HTTPS and any new ones will be HTTPS as well.

- **[Pulse Report for HTTPS](#)** - EPA runs the HTTPS Pulse report quarterly for www.epa.gov to measure EPA's compliance with HTTP requirements. Any new non-compliant sites are remediated immediately.
- **Information Security Program** - EPA's Information Security Program oversees and coordinates implementation of policies, procedures, standards and guidance to ensure that EPA's websites meet minimum federal website security management requirements.
- **[EPA's Information Security Policy](#)** - This policy establishes a security policy for the Environmental Protection Agency's (EPA's) national data communications network (EPA network).
- **[Procedure: Obtaining an EPA.gov Subdomain](#)** - EPA recently implemented a new subdomain registration procedure which helps ensure that all new sites comply with the HTTPS requirement.

Section 3(a)(6) Data Driven Design

EPA is dedicated to using quantitative and qualitative data to drive improvements to our website. All 13 of EPA's domains contain the code necessary to report limited usage data to GSA's Web Analytics tool as required by the Digital Analytics Program (DAP). In addition, EPA has its own licenses for industry standard Web Analytics tools that allow us to collect more detailed usage data on www.epa.gov. We have a procedure requiring web analytics code on all public pages. Our modernization plan will help ensure that this code is applied to all public pages. We are also exploring the acquisition of additional tools to track usage data

about requirements such as redundancy, 508 compliance, etc. across the 12 other domains and 250+ subdomains.” These tools could then be used to develop reports, interpret the data, make recommendations for actionable website design improvements. The following initiatives support this requirement:

- [Pulse Report for DAP](#) – EPA reports web stats to the GSA Digital Analytics Program (DAP).
- [Procedure: Event Tracking](#) - EPA has a procedure that requires Web Analytics code on all public web content so we can provide usable data to DAP.
- **Web Analytics** – EPA’s Web Analytics Program also uses industry standard tools to track web traffic and user feedback.
- **Web Analytics Training** - EPA offers a variety of courses on web management best practices and using web analytics data to drive website improvements.
- **Bad Links Initiative** – EPA recently implemented an Agency-wide initiative to reduce broken links and internal temporary redirects. The Agency surpassed all targets and expectations by reducing the number of bad links from over 13,000 in September 2018, to under 3,000 in September 2019 by improved oversight and management controls. We continue to implement these controls to keep the number of broken links low.
- **Expired Pages** – EPA is currently implementing an Agency-wide initiative to reduce the number of pages that are unintentionally unpublished by the WebCMS due to lack of timely review. New tracking, reporting, and management oversight procedures have already resulted in a significant reduction in the number or expired pages.

Section 3(a)(7) Customization

EPA has several websites which provide a more customized digital experience by allowing users to login and complete digital transactions in an efficient and accurate manner. Examples include the E-Enterprise and the Central Data Exchange (CDX) sites.

Section 3(a)(8) Provide Access to Government Information on Multiple Devices; Mobile-Ready

Mobile sites and applications can provide increased visibility to the Agency’s mission, while also helping us provide value to our external stakeholders.

- **Mobile Application Development Strategy** - EPA’s Mobile Application Development Strategy provides guidance on mobile app development and outlines the various development options including Mobile Web App Development, Hybrid App Development, and Native Mobile App Development.

- [Web Standards: Look and Feel Template](#) - EPA's standard template provides the EPA users a responsive design so that EPA web content can be displayed on a variety of devices and window or screen sizes.
- [EPA Native and Hybrid Mobile App Look and Feel Guidance](#) - Describes the look and feel requirements for mobile hybrid and native mobile applications.

Modernization Priorities

Cost Estimation Methodology

EPA used standard web analytics tools to help with the estimates for the www.epa.gov subdomain. Additional analysis is planned to obtain estimates for the other 250+ other subdomains on EPA.gov. Estimates for EPA's 12 other domains were provided by the domain POCs based on their best judgement of the compliance status (see Table 3: Summary of the 21st Century IDEA Requirements), combined with assumptions about the average level of effort required to remediate the issue.

The EPA would need to acquire additional tools and devote additional resources to obtain accurate measurements for each of the other 12 domains and 250+ subdomains (with the exception of www.epa.gov, which already has dedicated tools and resources). With these resources, we could provide a more accurate estimate in future reports.

The 1st step in the EPA's website modernization plan will be to take a more detailed inventory of EPA's websites, digital services, and applications so that we can truly understand the scope of the effort. The next step would be to acquire the necessary tools and resources to get more accurate data about compliance and develop a more precise cost and schedule.

Table 4: Domains Estimated Costs and Schedules

From Table 1, EPA has prioritized the following websites and digital services. The table below includes an estimated cost of modernization to comply with the requirements in section 3(a) of the 21st Century IDEA, as well as other federal web management requirements (such as: Privacy, Quality, Records Management, Plain Language, Multilingual Content, Mandatory Content, and IPv6). It also includes an estimation of the required level of effort.

Website/Digital Service Requiring Modernization	Estimated FTE per FY (FY 2020 - FY 2023) ¹
EPA.GOV	5.6
AIRNOW.GOV	0.3
ENERGYSTAR.GOV	0.5
FOIAONLINE.GOV	0.0
E-ENTERPRISE.GOV	0.2
FEDCENTER.GOV	0.0

FRTR.GOV	0.0
GLNPO.GOV*	0.0
SUSTAINABILITY.GOV****	0.0
RELOCATEFEDS.GOV***	0.0
CBI-EPA.GOV**	0.0
GREENGOV.GOV**	0.0
URBANWATERS.GOV***	0.0
Total	6.6

¹EPA will determine if the work will be supported with federal or contractor FTE

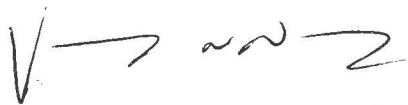
* Domain still under development. Not active yet.

** Domain no longer active

*** Redirect

****Domain managed by CEQ

The figures listed in this document indicate the anticipated level of effort and resources that would be needed to modernize each site and are not intended as a request for funding or a commitment by EPA to obligate such sums.



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