



**Environmental Protection Agency (EPA)
Public Law 115-336, “21st Century Integrated Digital
Experience Act”
December 2022 Report**

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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. In FY22 www.epa.gov received approximately 17 million hits per month (down from 20.9 million in 2021; 20 million in 2020 and 13 million in 2019) and 4.6 million unique visitors per month (down from 5.8 million in 2021; 5 million in 2020 and 3 million in 2019). 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 (see Table 3: Summary of 21st Century IDEA Requirements).

In addition to www.epa.gov, EPA owns 12 other domains and hundreds of subdomains which serve more specialized needs for more specific audiences. These 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. This report shows that EPA's primary website, www.epa.gov, complies with all requirements of the 21C IDEA and it also describes the steps that EPA is taking to improve compliance on all domains.

¹ 132 Stat. 5025-5028.

Modernization Priorities

Progress Since Last Report

In Fiscal Year (FY) 2022, EPA undertook several major initiatives to bring its web presence into compliance with the 21C IDEA.

EPA Web Inventory

In 2020 the Agency conducted its first comprehensive inventory of all web properties by compiling data from various sources including GSA's Digital Dashboard, Google Analytics, EPA's HTTPS Tracking Report, and EPA's Registry of Environmental Applications and Databases. In 2020, EPA reported over 450 internal and external website URL's (subdomains). For last year's report, the inventory identified over 500 internal and external website URL's (subdomains) belonging to EPA. For this year's report, the inventory identified over 600 internal and external website URL's (subdomains) belonging to EPA. EPA continues making significant progress identifying points of contact for each website.

WebCMS Upgrade

EPA began work to upgrade its Web Content Management System (WebCMS) to Drupal 10, incorporating a new administrative theme, an update to PHP version 8, and a new WYSIWYG editor for making content edits easier for its users. EPA also switched from Akamai, a Content Delivery Network (CDN) to Amazon Web Services (AWS) CloudFront and Web Application Firewall. Moving to AWS resulted in a cost avoidance of over \$20 thousand per month due to lower AWS costs. The switch to CloudFront also improved the publication time: content editors and the public saw updates much faster and more consistently than on Akamai. The application was updated nine times with over 100 feature enhancements, over 50 bugfixes and security updates, and over ten accessibility improvements. EPA's flagship website, www.epa.gov, which is managed in the WebCMS, ranked in the top 1% of the top 1,000,000 website home pages with zero accessibility errors. The enhanced codebase allowed EPA staff to build single-page applications, including the COVID-19 Facility Screener, fully in the WebCMS with no external dependencies. EPA continues to promote the expansion of the USWDS 3.0 implementation from www.epa.gov to additional domains and subdomains.

Intranet Modernization

In FY19, EPA established an Intranet Council to oversee the implementation of an enterprise intranet governance framework. In FY20, EPA embarked on an Intranet Modernization effort to: improve communications through consistent local and national messaging; improve collaboration by leveraging O365; increase productivity by providing easy, seamless access to information, tools and services; and improve efficiency by implementing industry-leading web management best practices. In FY21, EPA conducted an Enterprise Content Management System (Intranet CMS) pilot based on the newly released US Web Design System 2.0. In FY22, EPA successfully launched its new Intranet CMS which fully complies with the 21C IDEA by using an open-source Drupal-based platform to implement internal web management directives including procedures, standards and guidance. The new design also uses the USWDS 2.0 code library, tools, guidance, user research, and modern best practices to make it easier to manage, organize, and present EPA's internal enterprise content in a way that meets evolving information needs. In FY23 EPA will begin work to upgrade its Intranet CMS to Drupal 10, incorporating a new administrative theme and an update to PHP version 8.

Web Compliance Monitoring

EPA will expand its Web Analytics capabilities to more subdomains in FY23 to provide more granular data to monitor and track improvements in compliance with 21C IDEA. Additionally, to track EPA's subdomains (both internal and external), EPA modified its [procedures for requesting new subdomains](#) to stop the uncontrolled proliferation of new websites and to require that new subdomains are created in compliance with 21C IDEA and other Federal Web management requirements.

EPA is serving as the first Agency to participate in a pilot with GSA to report out on the status of 21C IDEA compliance at the subdomain level on [digitaldashboard.gov](#) (DD). The subdomain pilot went live on April 2022 which included 20 EPA subdomains on GSA's Digital Dashboard. The subdomain DD pilot provides greater insight on the status of EPA's website compliance, and the ability to prioritize improvements needed. In FY23, EPA will be adding 10+ public subdomains to DD.

All of EPA's public web domains and subdomains on GSA's Digital Dashboard have achieved full compliance with the Digital Analytics Program (DAP) using EPA Google Tag Manager. WCSD will continue to monitor, track and assist programs as new subdomains are added to DD.

In FY23, WCSD will focus on improving 508 accessibility requirements for both its public and intranet websites in partnership with the Office of Enterprise Information Programs (OEIP). Units of measure to track progress are in the process of being developed.

Lastly, EPA will assess the utility of the Digital Dashboard to replace any existing quality or compliance services managed internally to see if cost savings can be achieved through leveraging the results of Dashboard services as an alternative.

Data Collection Methodology

The 2019 data was collected for this report by surveying all EPA domain owners across the Agency. Each domain point of contact 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.

Since 2020 EPA started collecting data using web analytics tools, [digitaldashboard.gov](#), and EPA's Web Governance Framework and on-site reviews. EPA used [digitaldashboard.gov](#) to collect objective data for 2 out of the 8 requirements from the 21C IDEA. They include accessibility and mobile-ready. [Digitaldashboard.gov](#) is a federal website managed by GSA that provides information about Federal Websites' compliance with OMB directives and conformance to best practices and industry standards. EPA used the U.S. Department and Homeland Security (DHS) [Cybersecurity and Infrastructure Security Agency \(CISA\)](#) Report to collect the secure connection data. The CISA Report is intended to assist Agencies to comply with the web security aspects of [Binding Operational Directive \(BOD\) 18-01](#). EPA's Web Governance Framework was used for eliminating redundancy and on-site reviews for identifying consistency, search, data driven design and customization. A summary of results can be found in Table 3: Summary of the 21st Century IDEA Requirements – EPA Domains; Table 4: Summary of the 21st Century IDEA Requirements – EPA Subdomains. In FY22, EPA began using these tools to measure compliance with the 21C IDEA requirements on EPA's subdomains as well.

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 EPA's 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	AIRKNOWLEDGE.GOV	AirKnowledge is a partnership training program in the U.S. Environmental Protection Agency's (EPA's) Office of Air Quality Planning and Standards (OAQPS). AirKnowledge develops training material focused on the Clean Air Act program areas managed by OAQPS.
3	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.
4	ENERGYSTAR.GOV	ENERGY STAR is a U.S. Environmental Protection Agency voluntary program that helps businesses and individuals save money and protect our climate through superior energy efficiency.
5	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.
6	FOIAONLINE.GOV	FOIAonline is a shared service that supports a diverse number of federal agencies meet their responsibilities under the Freedom of Information Act.
7	FRTR.GOV	The Federal Remediation Technologies Roundtable (FRTR) works to build a collaborative atmosphere among federal agencies involved in hazardous waste site cleanup.
8	GREENGOV.GOV	GreenGov.Gov mirrors the Office of Federal Sustainability (OFS) domain.
9	SUSTAINABILITY.GOV	The Office of Federal Sustainability (OFS) coordinates policy to promote energy and environmental sustainability across federal government operations.

Table 2: Excluded Domains

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

Domain Name	Reason for exclusion
cbi-epa.gov	This is not a public website
glnpo.gov	Under development; not active yet
relocatefeds.gov	Redirect
urbanwaters.gov	Redirect

Table 3: Summary of 21st Century IDEA Requirements – EPA Domains

The table below lists the website modernization requirements of the 21C IDEA, and shows, for each domain, whether it complies with the requirements based on scores from [digitaldashboard.gov](https://www.epa.gov/digitaldashboard), EPA’s Web Governance Framework and on-site reviews accordingly.

Legend:

- ✓ 100% compliance with the specific requirement
- × 0% compliance with the specific requirement
- Data not available

EPA Domains Website URL’s	Requirements of 21C IDEA							
	Accessibility Section 3(a)(1)	Consistent Look & Feel Section 3(a)(2)	Eliminate Redundancy Section 3(a)(3)	Search Section 3(a)(4)	Secure Connections Section 3(a)(5)	Data Driven Design Section 3(a)(6)	Customization Section 3(a)(7)	Mobile-Ready Section 3(a)(8)
airknowledge.gov	✓	✓	✓	✓	✓	✓	×	✓
airnow.gov	×	✓	✓	✓	✓	✓	×	✓
energystar.gov	×	✓	✓	✓	✓	✓	×	✓
epa.gov	×	✓	✓	✓	✓	✓	×	✓
fedcenter.gov	×	×	✓	✓	✓	✓	✓	-
foiaonline.gov	✓	✓	✓	✓	✓	✓	✓	-
frtr.gov	×	✓	✓	✓	✓	✓	×	✓
greengov.gov	×	✓	✓	✓	✓	✓	×	✓
sustainability.gov	×	✓	✓	✓	✓	✓	×	-

Table 4: Summary of 21st Century IDEA Requirements – EPA Subdomains in DD

The table below lists the website modernization requirements of the 21C IDEA, and shows, for each subdomain included in GSA’s DD Subdomain Pilot, whether it complies with the requirements based on scores from digitaldashboard.gov, EPA’s Web Governance Framework and on-site reviews accordingly.

Legend:

- ✓ 100% compliance with the specific requirement
- × 0% compliance with the specific requirement
- Data not available

EPA Subdomains in DD Website URL’s	Requirements of 21C IDEA							
	Accessibility Section 3(a)(1)	Consistent Look & Feel Section 3(a)(2)	Eliminate Redundancy Section 3(a)(3)	Search Section 3(a)(4)	Secure Connections Section 3(a)(5)	Data Driven Design Section 3(a)(6)	Customization Section 3(a)(7)	Mobile-Ready Section 3(a)(8)
cdx.epa.gov	✓	✓	✓	✓	✓	✓	✓	✓
chemview.epa.gov	✓	✓	✓	✓	✓	✓	×	✓
comptox.epa.gov	×	✓	✓	✓	✓	✓	×	×
echo.epa.gov	×	✓	✓	✓	✓	✓	✓	✓
edg.epa.gov	×	✓	✓	✓	✓	✓	✓	×
encromerr.epa.gov	✓	✓	✓	×	✓	✓	✓	✓
enviro.epa.gov	✓	✓	✓	✓	✓	✓	×	×
espanol.epa.gov	×	✓	✓	✓	✓	✓	×	✓
fishadvisoryonline.epa.gov	✓	✓	✓	✓	✓	✓	×	✓
ghgdata.epa.gov	×	✓	✓	✓	✓	✓	×	✓
hero.epa.gov	✓	✓	✓	✓	✓	✓	×	✓
lew.epa.gov	✓	✓	✓	✓	✓	✓	×	✓
lookforwatersense.epa.gov	×	✓	✓	✓	✓	✓	×	✓
mywaterway.epa.gov	×	✓	✓	✓	✓	✓	×	✓
nepis.epa.gov	×	✓	✓	✓	✓	✓	×	✓
radnet.epa.gov	✓	✓	✓	✓	✓	✓	×	✓
rcrapublic.epa.gov	✓	✓	✓	✓	✓	✓	×	✓
sab.epa.gov	×	✓	✓	✓	✓	✓	×	✓
semspub.epa.gov	×	✓	✓	✓	✓	✓	×	✓
sor.epa.gov	×	✓	✓	✓	✓	✓	✓	-

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 has tools and staff dedicated to ensuring implementation of this requirement on www.epa.gov however additional tools and resources are required to accurately measure and track remediation on all EPA domains and subdomains. The programs and resources that support this requirement include:

- **Section 508 Program** - EPA's Section 508 Program provides agencywide coordination and oversight to ensure compliance with federal accessibility requirements.
- **EPA Section 508 Compliance Assessment and Remediation Plan** - EPA's Section 508 Compliance Assessment and Remediation Plan assesses and enhances the accessibility of EPA's existing Information and Communications Technology, while also developing a baseline from which to measure improvements and providing a framework for focusing EPA's Section 508 efforts moving forward.
- **Drupal WebCMS** - EPA's agencywide, content management system has a section 508 compliance certification requirement before publishing to www.epa.gov.
- **Web Analytics Program** - EPA's Web Analytics program supports the Agency's 508 goals by providing tools to help identify and recommend solutions regarding the conformance of www.epa.gov webpages.

The results for accessibility were collected from Digital Dashboard (DD) and compliance was determined by the total number of accessibility issues. Websites without any accessibility issues were considered compliant. Websites with accessibility issues were considered non-compliant. DD accessibility module scans for certain common accessibility issues such as color contrast issues, HTML attribute issues and missing image description.

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.

The results for consistency were determined by an on-site review. All domains were manually inspected. Numerous pages from each domain were spot checked, determining a consistent look and feel. Domains with a consistent header and footer throughout all pages were considered compliant. Domains without a consistent header and footer were considered non-compliant.

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 webpage. 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 eliminating content that is redundant, outdated, or trivial (ROT) is an important part of regular review. 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 web content, increases costs for maintenance and data storage, and makes site management more time-consuming and burdensome.

EPA’s Web Governance provides a framework for reviewing and approving websites before they are set up. The EPA has provided tools and resources to staff to ensure implementation of this requirement and to prevent redundancy. EPA will remain focused on acquiring and implementing Web Analytics tools to provide more detailed measurements of ROT.

Initiatives that support this requirement include:

- [EPA ROT Guidance](#) - Domain owners and web content managers must follow this EPA guidance which explains steps that content owners must take to review 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 and for reaching users who primarily rely on commercial search engines to find information.

Search compliance was determined by on-site reviews. Websites with search engines were considered compliant and ones without it non-compliant.

Initiatives that support this requirement include:

- **EPA Search Engine** - EPA is currently using the Lucid Works Fusion 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.
- **Reducing Search Exits** – EPA uses web analytics data to identify the number of search exits so we can take step to improve our search engine. Reductions in search exits indicate that website visitors are finding the information they need using the search engine.
- **Reducing Search Refinement** - EPA uses web analytics data to identify the number of search refinements to improve the agency's search engine. Reductions in search refinements indicate that website visitors are finding the information they need with fewer searches.
- **Best Bets** – EPA reviews the Foresee survey results and Google Analytics data to find popular search terms and manually updates the list of "Best Bets" to ensure that best results show up first.

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

EPA takes 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 sites will be HTTPS as well. The EPA has tools and staff dedicated to ensuring implementation of this requirement on www.epa.gov.

The secure connections compliance was determined by using the U.S. Department and Homeland Security (DHS) [Cybersecurity and Infrastructure Security Agency \(CISA\)](#) September 2022 Report. The websites secure connections compliance was measured by different metrics such as: using and enforcing HTTPS; using strong HSTS; free of: Secure Socket Layer version 2.0 (SSLv2), Secure Socket Layer version 3.0 (SSLv3), Triple Data Encryption Algorithm (3DES), and Rivest Cipher 4 (RC4). Websites that satisfied these metrics above were considered compliant.

Initiatives that support this requirement include:

- **DHS CISA Report** - This report measures the presence and enforcement of HTTPS for Environmental Protection Agency's publicly accessible domains and subdomains.
- **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 EPA's national data communications network.
- **[Procedure: Obtaining an EPA.gov Subdomain](#)** - EPA's procedure for registering new subdomains 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.

The data driven design compliance was determined by on-site reviews. Websites with the [Agency's Google Tag Manager Code](#) were considered DAP compliant and websites without it were considered non-DAP compliant.

Initiatives that support this requirement include:

- [Digital Dashboard Report for DAP](#) - Google Analytics reports EPA web stats to the GSA Digital Analytics Program (DAP).
- [Procedure: Google Analytics \(GA\) Event Tracking](#) - EPA has a procedure that requires google analytics code on all public web content so we can provide usable data to DAP.
- **Web Analytics** - EPA also uses Google Analytics for web traffic and the foresee survey for user feedback. Both tools are on the list of GSA-approved tools, so they comply with the OMB requirements and are approved for federal use.
- **Web Analytics Training** - EPA offers a variety of courses on web management best practices and using web analytics data to drive website improvements.

Section 3(a)(7) Customization

EPA's Central Data Exchange (CDX) is the only domain that provides a more customized digital experience by allowing users to login and complete digital transactions in an efficient and accurate manner.

The customization compliance was determined by on-site reviews. Websites with a login screen were considered compliant and the ones without it non-compliant.

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.

The mobile-ready results were collected from [digitaldashboard.gov](#) September 2022 report. The results were based on a usability status (i.e., mobile friendly, not mobile friendly). Mobile friendly websites were considered compliant and not mobile friendly non-compliant.

- **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 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.

Cost Estimation Methodology

The numbers of hours estimated to bring websites into compliance were projected based on best estimates from the domain owners. The dollar estimates were calculated based on an assumption of an average of \$157 per hour contracting rate. As EPA moves forward with website modernization, the Agency will refine these estimates.

Table 5: 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).

Website/Digital Service Requiring Modernization	Estimated Cost	Estimated Schedule
EPA.GOV	\$7,159,828	45,604 hours of effort
AIRNOW.GOV	\$385,749	2,457 hours of effort
ENERGYSTAR.GOV	\$690,800	4,400 hours of effort
FOIAONLINE.GOV	\$33,598	214 hours of effort
FEDCENTER.GOV	\$0	N/A
FRTR.GOV	\$62,800	400 hours of effort
GLNPO.GOV *	\$0	N/A
SUSTAINABILITY.GOV ****	\$0	N/A
RELOCATEFEDS.GOV ***	\$0	N/A
CBI-EPA.GOV **	\$0	N/A
GREENGOV.GOV ****	\$0	N/A
AIRKNOWLEDGE.GOV	\$0	N/A
URBANWATERS.GOV ***	\$0	N/A
Total	\$8,332,775	53,075 hours of effort

* Domain still under development. Not active yet.

** Domain is not public.

*** Redirect.

****Domain managed by CEQ; cost estimate is unknown.

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Appendix A

The following is a list of EPA's external domains and subdomains. This report contains objective data about domains and subdomains included in GSA's Digital Dashboard Subdomain Pilot. EPA used data from digitaldashboard.gov to provide objective data about domain and subdomain compliance with Federal web management requirements. EPA needs to acquire additional tools and devote additional resources to obtain accurate measurements for 600+ internal and external subdomains (except for www.epa.gov, which already has dedicated tools and resources).

19january2017snapshot.epa.gov	enviroatlas.epa.gov	owlspub.epa.gov
19january2021.snapshot.epa.gov	enviroflash.epa.gov	owshiny.epa.gov
3dhrs.epa.gov	enviro-new.epa.gov	owsrf.epa.gov
aams.epa.gov	enviro-staging.epa.gov	owsrfprod.epa.gov
acres5.epa.gov	epa.gov	ozone.epa.gov
acres6.epa.gov	epamap03.epa.gov	ozoneairqualitystandards.epa.gov
actor.epa.gov	epamap13.epa.gov	p2grantsplus.epa.gov
actorws.epa.gov	epamap17.epa.gov	p2rmis.epa.gov
adam.epa.gov	epamap18.epa.gov	partek-dev.epa.gov
ags.response.epa.gov	epamap31.epa.gov	partek-prod.epa.gov
airknowledge.gov	epamap32.epa.gov	partek-stg.epa.gov
airnow.epa.gov	epamap33.epa.gov	pasteur.epa.gov
airnow.gov	epamap36.epa.gov	pasteur-stg.epa.gov
airnow2.epa.gov	epamap37.epa.gov	patt.epa.gov
airnow-cdn.epa.gov	epamap9.epa.gov	peopleplus.epa.gov
ampd.epa.gov	epaoasacd.epa.gov	pexip-dc-dmz1.video.epa.gov
ampd-admin.epa.gov	epaoig.gov	pexip-dc-dmz2.video.epa.gov
anote.epa.gov	eportal.epa.gov	pexip-rtp-dmz1.video.epa.gov
anoteuser.epa.gov	erc.epa.gov	pexip-rtp-dmz2.video.epa.gov
aopdb.epa.gov	es-beta.epa.gov	pgp.epa.gov
api.epa.gov	eses.energystar.gov	pinter01.epa.gov
api-ccte.epa.gov	esml.epa.gov	pinter02.epa.gov
api-ccte-stg.epa.gov	esound.epa.gov	portal.epa.gov
app.epa.gov	espanol.epa.gov	portfoliomanager.energystar.gov
aps.epa.gov	espfl.epa.gov	prod-jboss2.regulations.gov
aqs.epa.gov	essearch.energystar.gov	pubsearch1.epa.gov
aqsdr1.epa.gov	estar6.energystar.gov	pubsearch2.epa.gov
aqstest.epa.gov	estar7.energystar.gov	pubsearch3.epa.gov
archive.epa.gov	estar8.energystar.gov	pubweb.epa.gov
arms.epa.gov	es-wcms.epa.gov	qed.epa.gov
aspprox1.epa.gov	esws.energystar.gov	qlikgateway.epa.gov
aspspprox.epa.gov	etss.epa.gov	qlikviz.epa.gov
aspspprox.lbd.epa.gov	exchangenetwork.net	r10data.response.epa.gov
attains.epa.gov	faprd.epa.gov	r1data.response.epa.gov
attainsprod.epa.gov	fatst.epa.gov	r1-gis-web.r1.epa.gov
auk.epa.gov	fedcenter.gov	r2data.response.epa.gov

auk.rtnccad.epa.gov	fiat.epa.gov	r2webapps.r02.epa.gov
auth.epa.gov	fishadvisoryonline.epa.gov	r3data.response.epa.gov
auth.lbd.epa.gov	foiaonline.gov	r4data.response.epa.gov
authhqproxy.epa.gov	forms.epa.gov	r4intra.epa.gov
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awseatlas2.epa.gov	frs-ets.epa.gov	r7atwork.r07.epa.gov
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bap.epa.gov	gaftp.epa.gov	rcrapublic.epa.gov
beacon.epa.gov	geocode.epa.gov	regfinder.epa.gov
beaconvt.epa.gov	geodata.epa.gov	region6.epa.gov
benmap.epa.gov	geogateway.epa.gov	regulations.gov
beta.epa.gov	geoplatform1.epa.gov	relocatefeds.gov
bfs.epa.gov	geoplatform2.epa.gov	remoteaccess.epa.gov
bids.rtpnc.epa.gov/bids	geoplatform3.epa.gov	remoteassist.epa.gov
binational.net	geoplatform4.epa.gov	remoteassist2.epa.gov
bitbucket.epa.gov	geoplatform5.epa.gov	remoteworkplace.epa.gov
blog.epa.gov	geopub.epa.gov	remoteworkplacedr.epa.gov
blt.epa.gov	geosecure.epa.gov	response.epa.gov
bmds.epa.gov	geosecureprd1.epa.gov	risk.epa.gov
bmdsonline.epa.gov	ghgdata.epa.gov	riverstreamassessment.epa.gov
bpauthhqproxy.epa.gov	ghgreporting.epa.gov	rsaaa-as.epa.gov
bpauthproxy.epa.gov	gispub.epa.gov	rtfusion.rtp.epa.gov
bpworkplace.epa.gov	gispub1.epa.gov	rtor.epa.gov
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cadlink.epa.gov	gispub2.epa.gov	rtp-dom-evdi-callback.epa.gov
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campd.epa.gov	globalchange.epa.gov	sabappstg.epa.gov
caribou.epa.gov	glri.us	scienceftp2.epa.gov
caribout.epa.gov	goanyd01.epa.gov	scotch.epa.gov

casac.epa.gov	gpdashboard.epa.gov	Scribenet.response.epa.gov
cbi-epa.gov	greengov.gov	sdwis.epa.gov
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cdxnodenaas.epa.gov	hero.epa.gov	search.energystar.gov
cdxnodengn.epa.gov	heronet.epa.gov	search.epa.gov
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echotest.epa.gov	obistgext.epa.gov	watersgeo.epa.gov
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