

NASA Advisory Implementing Instructions (NAII)

SUBJECT: Website Requirements, Standards, and Best Practices

RESPONSIBLE OFFICE: Office of the Chief Information Officer (OCIO)

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Change Log

Revision	Date	Description
0.1	02/23/2024	Initial draft created with content from APS Handbook v3.6 Appendix B; additional content, checklist added by NASA Web Working Group (W-WG)
1.0	09/19/2024	First version of guidance finalized alongside NID 2800.147

Preface

The National Aeronautics and Space Act of 1958, as amended, requires NASA to “provide for the widest practicable and appropriate dissemination of information concerning its activities and the results thereof.” This shall be accomplished in a manner consistent with U.S. laws and regulations, Federal information policy, intellectual property rights, and technology transfer protection requirements.

The purpose of this guidance document is to ensure that NASA's information shared via the web is easy to find, available to stakeholders, and managed per Federal and Agency policies and procedures to protect NASA's information assets.

This NAI summarizes the procedures and best practices for creating, revising, reviewing, approving, publishing and decommissioning Agency websites in accordance with NASA Interim Directive (NID) 2800.147, Public Web Experience. This document is a snapshot in time and will continually evolve as new requirements and policies are introduced, retired, or undergo significant change.

While this document is quite lengthy, we encourage NASA website owners and stakeholders to start with the [checklists in Appendix C](#) to get a high-level overview of Federal and Agency requirements. You can then reference the relevant chapters in the main text to get more details where needed.

The superscript ^(INT) indicates an internal NASA-only link.

Chapter 1. Introduction

1.1 NASA Web Strategy

Every day, NASA communicates groundbreaking and life-changing accomplishments in science, exploration, technology and research. As an Agency, our content is compelling, visually appealing, and reaches millions of Americans and people around the world, making NASA one of the best-known and most popular organizations on the planet.

The National Aeronautics and Space Act of 1958, as amended, requires NASA to "provide for the widest practicable and appropriate dissemination of information concerning its activities and the results thereof." That founding charter of our Agency says we must tell the world what we do and what we've discovered, and share that message as widely as possible. NASA's websites are invaluable in accomplishing just that. As an international leader on digital content with a strong online presence, we must continually self-evaluate and ensure that we reflect NASA's priorities and activities, along with ensuring we stay atop changes to the web, in general.

To do so, we must follow the core principles given to us in 14 CFR Part 1213:

"Release of public information concerning NASA activities and the results of NASA activities will be made in a timely, equitable, accurate, and complete manner."

These four requirements are all best served by a trusted, stable, and direct source of Agency information for the public, and NASA's web strategy is critical to meeting them:

- **Timely:** Release Agency information, data, multimedia, and other content immediately on our websites, with no delays, downtime, or throttled services. Clearly indicate when webpages were last updated so that audiences can evaluate the relevancy of older content.
- **Equitable:** Ensure NASA's web content is free and available to anyone in the world with an internet connection. Maintain websites that are fully accessible and usable across mobile devices, screen sizes, web browsers, and bandwidth speeds. Use plain language to share our stories with audiences of all ages and educational backgrounds.
- **Accurate:** Follow the Agency's rigorous processes to verify content and protect scientific integrity when posting or editing web content. Consolidate duplicate content into one trustworthy, authoritative, and up-to-date source of truth on any given topic. Regularly audit older pages and update or archive content that is no longer accurate.
- **Complete:** Present information in the formats best suited to the content and audience, united by a consistent design and user experience. Tear down content silos and reorganize into a cohesive NASA-wide information architecture. Empower audiences to easily find relevant content via commercial search engines, global navigation, site search, content tags, and links.

The web is one of NASA's most powerful ways to provide a clear source of truth in words unfiltered by external interpretation and available to all. To support this, we must also continue working to protect our users through a proactive and resilient cybersecurity and privacy posture,

combat misinformation, archive the Agency’s rich historical content, and consolidate our sprawling web footprint.

In short, the mission of NASA websites is to be a trusted source that informs and inspires humanity through a unified world-class web experience. NASA’s continued investment in our flagship public websites www.nasa.gov and science.nasa.gov is the Agency’s primary strategy to serve the needs of our global audience while meeting requirements, guidance and best practices outlined in this document.

1.2 Types of Websites

A **website** is a group of interlinked web pages under a unique host name that is accessible via a web browser. Per OMB M-23-22 and NID 2800.147, all **web applications** (software programs accessible via a web browser) are also considered websites. This guidance document uses the term **website** to include both websites and web applications interchangeably, except where explicitly noted.

However, **web services** (a subset of web applications that only interact with other web applications over the internet, typically not designed for human users) are considered distinct and generally not subject to the guidance below, except where explicitly noted.

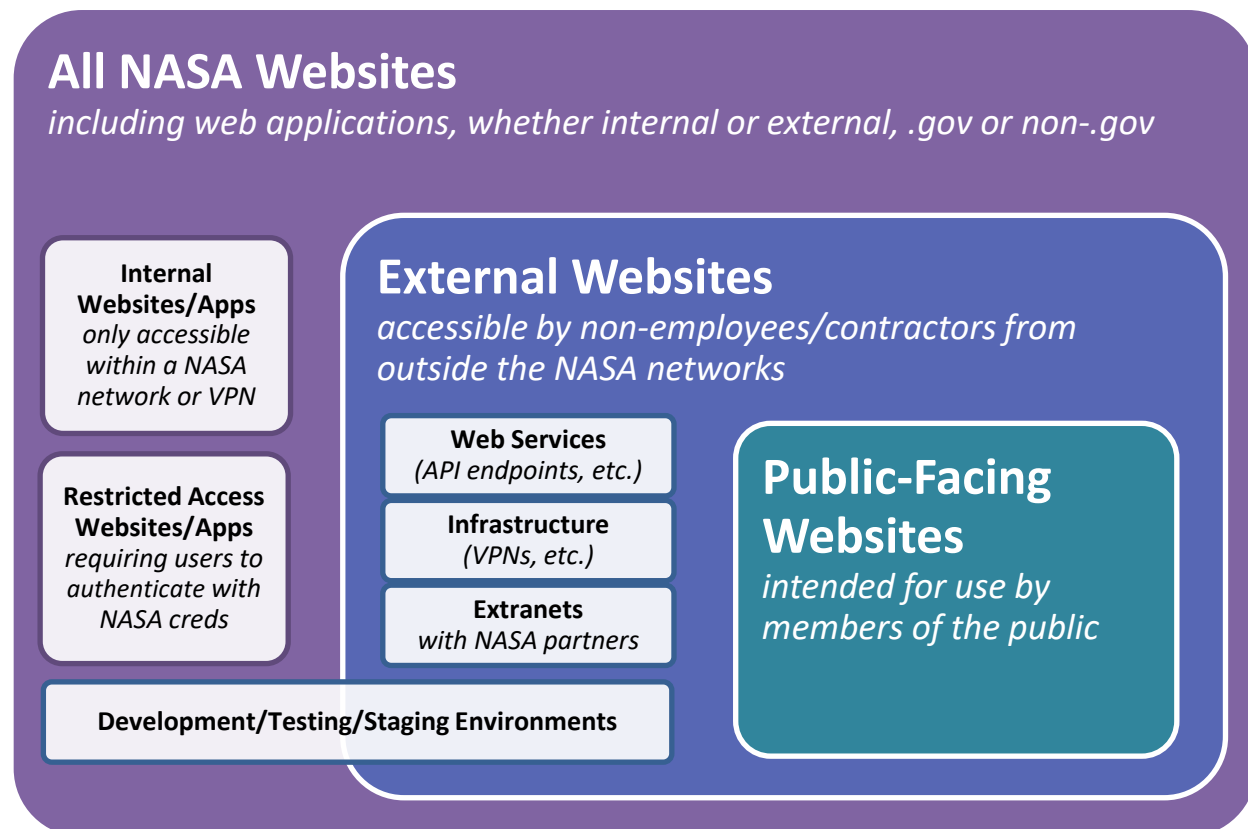


Figure 1.1, NASA Website Types and Examples

As shown in Figure 1.1, **internal websites** are only accessible from a NASA network or Virtual Private Network (VPN) connection, while **external websites** are accessible from anyone inside or outside of NASA.

NID 2800.147 outlines Federal and Agency requirements for **public-facing websites** that are intended for use by the public. All public-facing websites are also considered external websites, but not all external websites are considered public-facing (e.g., infrastructure, extranets, dev/test/stage environments).

For a high-level guide to which Federal/Agency policy areas and NAII sections apply to which types of websites (public-facing, external, and/or internal), see NID 2800.147, Attachment C, Applicability Matrix.

For detailed checklists of requirements for the different types of websites, see [Appendix C of this NAII](#).

Chapter 2. Accessibility and Section 508

Section 508 of the Rehabilitation Act of 1973, as amended in 1998, requires each Federal department or agency to make all Electronic and Information Technology (EIT) developed, procured, maintained, or used by the agencies accessible to Federal employees and members of the public with disabilities, unless doing so would impose an undue burden. Section 508 covers all types of EIT in the Federal sector. Section 508 does allow for some exceptions, such as for national security systems.

NASA is fully committed to ensuring that its EIT complies with Section 508 requirements, and has put in place a strong management structure for implementing the provisions of Section 508 within the Agency.

Both internal and external NASA websites are considered EIT and shall conform to Section 508 requirements. These requirements apply to NASA websites developed and maintained both by NASA civil service employees and by NASA contractors, and to contractor websites hosting NASA web content under contract to NASA.

2.1 Section 508 Standards for Websites

The U.S. Access Board is responsible for developing Information and Communication Technology (ICT) accessibility standards to incorporate into regulations that govern Federal procurement practices. The [Section 508 ICT Testing Baseline for Web](#) is a set of baseline tests for conformance to the Revised 508 Standards for Web.

The Revised 508 Standards for Web incorporate by reference the [Web Content Accessibility Guidelines \(WCAG\) 2.0](#) Level A and AA Success Criteria.

The Office of Management and Budget (OMB) encourages website owners to apply the most current version of the WCAG specification published by the World Wide Web Consortium (W3C) whenever possible. This is currently [WCAG version 2.2](#), published in October 2023.

This guidance document includes more detailed guidance on using accessible language in web content ([Chapter 5.12](#)) and writing alternative text (or “alt text”) for web images and graphics ([Chapter 10.7](#)).

Type: Federal Mandate

Applicability: All Websites/Web Apps (Public-Facing, External and Internal)

Requirement 2(a):
Entire website (inc. both code and content) meets or exceeds all WCAG 2.0 A and AA success criteria.

Requirement 2(b):
Section 508 standards are incorporated into the acquisition lifecycle for web development and content management (inc. market research, solicitations, evaluations, and contract management).

Requirement 2(c):
Accessibility testing is incorporated from the beginning of the site’s design and development, and integrated throughout every step of the site’s lifecycle.

Mandated by:

- [OMB M-24-08](#) (2023)
- [FAR and NFS](#) (2021)
- [OMB M-17-06](#) (2017)
- [Revised Section 508 EIT Standards](#) (2017)
- [Section 508 EIT Standards](#) (2000)

NASA Contact:
[Section 508 Program Manager](#) ^(INT),
CEO, OCIO

2.2 Manual Accessibility Testing

Reserved for future implementation guidance on OMB M-24-08.

2.3 Automated Accessibility Testing

Reserved for future guidance on best practices.

Chapter 3. Analytics

The OMB’s national digital strategy requires agencies to provide tools and guidance for measuring performance and customer satisfaction for digital services.

To meet this requirement and measure our ability to serve our stakeholders, all NASA-funded public-facing websites are required to implement the Federal government’s [Digital Analytics Program \(DAP\)](#) that utilizes Google Analytics.

For internal websites, [Piwik](#) ^(INT) and [Pulse](#) ^(INT) are open-source analytics platforms available to NASA websites and web applications that are internal to NASA. Piwik is hosted within NASA Web Services Office’s Managed Cloud Services environment. Pulse is developed and maintained by the Center for Internal Mobile Applications (CIMA).

3.1 Digital Analytics Program (DAP)

Implementing DAP on a public-facing NASA website is a simple process of adding a few lines of code to the site header on all public-facing pages. The DAP code snippets and instructions can be found on the Web Services Office (WSO) SharePoint site:

<https://nasa.sharepoint.com/sites/webservices/SitePages/How-do-I-start-collecting-analytics-.aspx> ^(INT)

To explore high-level DAP analytics across all Federal websites, visit analytics.usa.gov.

To gain direct access to the full DAP analytics for your NASA website, submit a request through the NASA Access Management System (NAMS):

<https://nams.nasa.gov/nams/asset/269709/> ^(INT)

3.2 User Feedback

Reserved for future implementation guidance on OMB M-23-22.

3.3 Other Analytics Tools

Reserved for future guidance on best practices.

Type: Federal Mandate

Applicability: Public-Facing Websites/Web Apps

Requirement 3(a):

The DAP [tracking code](#) is installed and active on all non-authenticated public web pages.

Requirement 3(b):

The website collects qualitative feedback from users via a survey, feedback form, email link, or other mechanism.

Mandated by:

- [OMB M-23-22](#) (2023)
- [21st Century IDEA](#) (2018)
- [OMB M-17-06](#) (2017)

NASA Contact:

[Web Services Office](#) ^(INT), APS, OCIO

Chapter 4. Branding

The NASA Brand is governed by the [NASA Graphics Standards Manual](#) ^(INT). These graphic standards are designed to establish a clear and consistent visual identity in keeping with general brand standards. Issued under the authority of 14 Code of Federal Regulations (CFR) 1221, the standards illustrate the branding elements and their appropriate placement for producing approved NASA communications materials as well as markings on websites, imagery, videos and other digital products.

NASA’s logos when used correctly build the agency’s brand by combining the most recognized existing elements—the agency’s name and NASA Insignia (Meatball)—with supporting elements like the NASA Logotype (Worm), mission emblems, etc. When used correctly, uniform graphic elements provide the framework for establishing a general visual identity that keeps the agency visually relevant. Designers and developers can use this architecture to create materials that enhance public knowledge of NASA’s work as the agency continues to inspire and explore.

The following sections of this chapter are generally relevant to the web, but for full details, please refer to the [NASA Graphics Standards Manual](#) ^(INT).

4.1 NASA Insignia

The primary symbol for the agency is the NASA Insignia (commonly referred to as “the meatball”) and should be used on all NASA external communications as laid out in the NASA Graphics Standards Manual.

Use of the NASA Insignia is governed by [14 CFR 1221.1](#). The Agency’s branding policies are designed to ensure that the public recognition of the NASA Insignia is not diluted by other NASA identities:

- The NASA Insignia shall be included on all Agency websites and web publications, including PDFs, unless a website is approved by the Office of Communications to use an alternative branding schema (e.g., multiagency or international initiatives).
- The NASA Insignia is not to be recreated, distorted, stretched, or otherwise altered.
- In order to protect its use, the Insignia is not authorized to be made available on public websites for download.
 - For example, do not create an image asset page with options for high-resolution download of the logo files or explicit “download” links or buttons.

Type: Agency Mandate

Applicability: All Websites/Web Apps (Public-Facing, External and Internal)

Requirement 4(a):

The NASA Insignia (“meatball”) is the only logo used in the site header. If hyperlinked, it sends users to www.nasa.gov, not any other URL.

Requirement 4(b):

Any mission, partner, and third-party logos are used according to the [NASA Graphic Standards Manual](#).

Mandated by:

- [OMB M-23-22](#) (2023)
- [21st Century IDEA](#) (2018)
- [14 CFR 1221.1](#) (1993)
- [NASA Graphics Standards Manual](#) ^(INT)

NASA Contact:

[Agency Design Lead](#) ^(INT), OCOMM

- The NASA Insignia shall be reproduced only from electronic files that can be obtained from the Headquarters Office of Communications or each center’s printing and design office.
- Always use a NASA Insignia that is properly proportioned to the size of the page or panel to which it is being applied.
 - The minimum size for the reproduction of the NASA Insignia is 5/8 inch (37px) for the diameter of the sphere (not including the points of the vector).
- Requirements for usage and the protected space that surrounds the NASA Insignia, when it is used, shall follow the guidelines regarding uniformity of background and appropriate use of color outlined in the Graphics Standards Manual.
- Unless the Office of Communications has approved a specific agreement for NASA Insignia use, the NASA Insignia shall not appear in conjunction with or secondary to commercial logos.
 - Review of proposed uses and approval can be obtained from the Office of Communications.
- The NASA insignia shall always link to <https://www.nasa.gov>, and never link to a different website’s homepage.

4.2 Other NASA Emblems, Identifiers, and Logos

A mission, project, or program Identifier is a custom mark and/or typeface created for team morale and communications purposes. They do not replace the NASA Insignia or NASA Identifier (combination of agency name, insignia, and web address).

In general, consult the latest edition of the [NASA Graphics Standards Manual](#) ^(INT) for the most up-to-date guidance and rules on the use of other NASA emblems, identifiers, and other logos. A summary of these graphic standards (with examples) may be found on the internal [NASA Branding](#) ^(INT) page and the external [NASA Brand Guidelines](#) page.

- The NASA Logotype (also called “the worm”) is a supporting graphic element in only certain instances and will never be used in a way that takes away from the primacy of the NASA Insignia (“meatball”).
- The NASA Seal is reserved for use by the NASA Administrator.
- From time to time, new symbols for program logos and mission emblems do spring up, but they are never intended to replace the NASA Insignia on a website or web publication, and must be reviewed on a case-by-case basis by the Office of Communications.
- According to [14 CFR 1221.112](#), the use of program identifiers shall have the preapproval of the Associate Administrator for Communications or designee.
- The development and use of anniversary logos on external products will be evaluated by the Associate Administrator for Communications or designee.

- Office logos are not permitted at all in order not to dilute our general brand, and shall not be used on any external NASA websites or web publications.

4.3 Non-NASA Commercial, International, and Third-Party Logos

4.3.1 Co-Sponsor and Partner Logos

A co-sponsor is defined as a co-funding partner who is not a NASA contractor. Logos of co-funding partners may be used on external NASA websites or web publications if they have advance approval by the Associate Administrator for Communications or designee.

When creating a logo grouping for a NASA website, the Insignia must be the first logo to appear—farthest left in a horizontal configuration or topmost in a vertical one. The NASA Insignia and other logos must be of the same height and width so that they all carry the same visual weight, and the protected space of the Insignia must be maintained.

Websites and web publications developed and published by co-sponsors and partners are not considered official NASA communications; therefore, the above guidelines for the identifier configuration may not apply. However, co-sponsors must still request usage of the NASA Identifier.

Chapter 5. Content

A guiding principle for NASA websites is balancing the widest possible dissemination of information with appropriately protecting NASA's assets. Personnel who publish content on NASA's websites and servers are accountable for the compliance of the site content with governing policies and guidelines.

Specific requirements apply for various types of web content. Generally, you shall create content that's accurate, relevant, easy-to-use, and conveyed in plain language. Maximize the quality, objectivity, utility, and integrity of information and services provided to the public and make information and services available on a timely and equitable basis.

NASA websites are for official business only. Website content and all associated information, whether public or private, shall be directly related to the official responsibilities of individuals and organizations fulfilling their assigned missions and charters consistent with their individual Center, NASA, and the Federal government.

5.1 Plain Language

The [Plain Writing Act of 2010](#) requires Federal agencies to use clear government communication that the public can understand and use. Plain language is a way of communicating more effectively with the public. The practice employs numerous guidelines, but the goal is simple: make sure our audience understands what we're telling them the first time they read or hear it.

Communications about NASA's work obviously involves using scientific and technical terms. The plain language requirement doesn't mean we shouldn't use those terms, but it does require us to explain them in terms the general public can understand.

The use of plain language is not only the law; it's the right thing to do.

NASA has multiple audiences with different characteristics and expectations for communications. When thinking about the "general public," remember that [Census data](#) shows that 62 percent of Americans over 25 do not have college degrees, including 37 percent who never attended school after high school. We cannot assume our general audience will understand NASA jargon or advanced technical concepts unless we explain them clearly.

Type: Federal Mandate

Applicability: Public-Facing Websites/Web Apps

Requirement 5(a):

Plain language is used on any web page that either: (1) is necessary for obtaining a NASA service or benefit; (2) provides information about that service or benefit; or (3) explains to the public how to comply with requirements that NASA administers or enforces.

Requirement 5(b):

Website content is directly related to the official responsibilities of Agency individuals and organizations fulfilling their assigned missions.

Requirement 5(c):

If website content is no longer actively maintained but is kept online for historical purposes, a warning message is displayed to users.

Mandated by:

- [5 CFR 2635.701-705](#) (2024)
- [OMB M-23-22](#) (2023)
- [21st Century IDEA](#) (2018)
- [OMB M-17-06](#) (2017)
- [Plain Writing Act](#) (2010)
- [NASA Stylebook and Comms Manual](#)

NASA Contact:

[Communications Web Modernization Lead](#) ^(INT), OCOMM

Our Agency’s founding charter from 1958 says we must tell the world what we do and what we’ve discovered, and share that message as widely as possible. Plain language helps that mission, because it reminds us to put our audience first – identify them, and speak at their level of expertise. But plain language is not “dumbing down” – it’s explaining and illuminating the information we share, and conveying why it’s important or unusual or amazing.

It’s important what we call things and how we relate them to each other, especially when they represent different aspects of a complex set of ideas. Research shows that when people are looking for information about the Sun, for example, they’re most frequently thinking about it as the star in our solar system. Using a term like “Heliophysics” as a navigation label under “The Solar System” won’t be the most helpful way to get them to that general content about the Sun. However, our audience does understand “Heliophysics” as a scientific approach to studying the Sun, so the term is appropriate to use in that context as a navigation label under the “Science” category.

The NASA Stylebook includes plain language guidelines such as:

- Recognize your audience and craft your message for them.
- Spell out terms that are not part of everyday language.
- Avoid using jargon or acronyms.
- Showcase our projects and accomplishments, not our internal terminology.
- Use a tone that’s more conversational than academic or scientific.
- Enliven your writing with clear subjects and active verbs, not the ambiguity of passive voice.
- Use plain language to explain specific hardware and scientific experiments.
- Include the big-picture context (“why this matters”) and answer the “so what?” within the first couple of paragraphs.
- Consider how you might explain the concept or tell the story to a friend or relative outside of the space industry that may be unfamiliar with what you’re describing.

Plain language is straightforward, but not easy – it takes creativity and skill to swear off jargon and technical language. But don’t make the audience work to decipher your message.

There is Plain Language training available on SATERN that can be taken by members of the web community. For more guidance, examples, and trainings on how to write clearly using plain language and test your content with users, visit plainlanguage.gov.

5.2 Information Quality and Integrity

The public places a high degree of trust in government content and considers it an authoritative source. Under the Information Quality Act of 2000, website owners and content creators must maximize the quality, objectivity, utility, and integrity of information and services provided to the public.

With digital information dissemination products, users must reasonably ensure suitable information and service quality consistent with the level of importance of the information. Reasonable steps include clearly identifying the benefits and limitations inherent in the information dissemination product (e.g., possibility of errors, degree of reliability, and validity), and taking reasonable steps to remove the limitations inherent in the product or information produced. Content creators and agency management should ensure that the Agency position, rather than one person's opinion, is reflected in all communications.

5.2.1 Periodic Content Review and Maintenance

To maintain the quality and integrity of all NASA websites, the Responsible NASA Official is required to arrange for periodic searches of websites under their responsibility to find content deficiencies that must be corrected.

The following example categories should be evaluated:

- Section 508 non-compliance ([Chapter 2.1](#))
- Empty or "under construction" pages ([Chapter 5.7.2](#))
- Orphaned pages ([Chapter 5.7.3](#))
- Inappropriate use of NASA's Horizon Design System ([Chapter 7.2.1](#))
- External links that do not conform to NASA's linking policy ([Chapter 8.2](#))
- Redirects that should be retired ([Chapter 8.3](#))
- Broken links and 404 error pages ([Chapter 8.6](#))
- Potential privacy policy violations ([Chapter 15.2](#))
- Inappropriate or non-use of appropriate meta tags or title tags ([Chapter 17.4](#))

Any deficiencies found on pages should be corrected in a timely manner. This list is not meant to be exhaustive and other periodic searches of other categories can and should occur.

5.3 Prohibition of Lobbying

The U.S. Code prohibits the use of appropriated funds to lobby a member of Congress. You can't use these funds "...directly or indirectly to pay for any personal service, advertisement, telegram, telephone, letter, printed or written matter, or other device, intended or designed to influence in any manner a Member of Congress, a jurisdiction, or an official of any government to favor, adopt, or oppose, by vote or otherwise, any legislation, law, ratification, policy, or appropriation, whether before or after the introduction of any bill, measure, or resolution proposing such legislation, law, ratification, policy, or appropriation."

Type: Federal Mandate

Applicability: Public-Facing and External Websites/Web Apps

Requirement 5(d):

No website content gives the appearance of lobbying or engaging in partisan political activity.

Mandated by:

- [Anti-Lobbying Act](#) (1913)
- [NPD 2540.1](#)

NASA Contact:

[Agency Counsel for Fiscal and Appropriations Law](#) ^(INT), OGC

Appropriated funds can extend to pay for employees' salaries, equipment, office space, and so forth. These restrictions also apply to NASA-funded public-facing and external websites. Refer any questions to NASA's [Office of the General Counsel \(OGC\)](#) ^(INT).

5.4 Public Release of Information

NASA websites are subject to the same accountability and dissemination policies and guidelines governing the release of Agency information, including 14 CFR 1213.

Prior to publishing content on an external NASA website, the Responsible NASA Official (RNO) shall ensure that the content is reviewed and approved for publication through the appropriate Center- or Directorate-level processes responsible for ensuring that public-facing websites are properly and consistently communicating the NASA message and receive necessary and appropriate Scientific and Technical Information (STI) and Export Control reviews.

Documents not cleared for public release, including documents in development or draft, shall not be viewed by the public and shall be properly protected and separated from documents posted on a public website.

5.4.1 Federal Advisory Committees

Since many web technologies excel at enabling information-sharing across the Internet, government programs may use them to share ideas on current and future plans, to gather opinions about a variety of issues and to strengthen the relationship between the public and government. Depending on circumstances (such as targeting specific experts for an online discussion of proposed policy), some of these efforts may meet the functional definition of a virtual or electronic advisory group. Those would fall under the purview of the [Federal Advisory Committee Act \(FACA\) of 1972](#). An advisory group meeting held in virtual space instead of office space isn't exempt from the government's rules on such activities.

FACA requirements apply when:

- A Federal agency establishes or uses an advisory group that has at least one member who is not a federal employee; and
- The government is managing and controlling the group in any way, such as selecting members, setting an agenda or consolidating results generated by the group of participants.

Type: Agency Mandate

Applicability: Public-Facing and External Websites/Web Apps

Requirement 5(e):

All web content available to the public has been reviewed and fully authorized for public release through the appropriate Agency and/or Center process.

Mandated by:

- [14 CFR 1213](#) (2006)
- [FACA](#) (1972)
- [NPD 2540.1](#)

NASA Contacts:

[Communications Web Modernization Lead](#) ^(INT), OCOMM

FACA requirements do not apply when Federal agencies seek input and suggestions from the general public on various issues.

To find out if a web activity for a group comes under FACA, contact NASA's Advisory Committee Management Division: <https://www.nasa.gov/advisory-committee-management-division/>

5.5 Space Act Agreement

NASA partnerships with other organizations are formalized by entering into Space Act Agreements. These agreements provide a way for NASA to partner with industry, foundations, universities, and other non-Government organizations, as well as other Government agencies. In these agreements, no goods or services are provided to NASA. Instead, NASA provides data, facilities, services, and personnel to the paying party. These agreements can be done on a fully reimbursable, partially reimbursable, or non-reimbursable basis.

Space Act Agreement information shall not be published on any NASA website, unless by the [NASA Partnerships Office](#) pursuant to [Pub. L. 115-10](#) and related direction by Congress. Check with your Center's Chief Counsel prior to publication of any content obtained through a Space Act Agreement.

Type: Agency Mandate

Applicability: Public-Facing and External Websites/Web Apps

Requirement 5(f):

No Space Act Agreement information is available to the public unless approved by the NASA Partnerships Office.

Mandated by:

- [Pub. L. 115-10](#) (2017)
- [Space Act](#) (1958)

NASA Contacts:

[Center Partnership Offices](#) ^(INT)

5.6 Scientific & Technical Information

STI is defined as the results (analyses of data, facts and resulting conclusions) of basic and applied scientific, technical, and related engineering research and development. STI also includes management, industrial, and economic information relevant to this research.

STI shall be reviewed and approved per prior to being posted to external NASA websites. Check with your [Center's STI representative](#) ^(INT) for more guidance on this approval process.

Type: Agency Mandate

Applicability: Public-Facing and External Websites/Web Apps

Requirement 5(g):

Any STI has been reviewed and approved through the NF-1676 process prior to publication on the website.

Mandated by:

- [NPD 2200.1](#)
- [NPR 2200.2](#)

NASA Contacts:

[Center STI Representatives](#) ^(INT),
IDAS, OCIO

5.7 NASA Internet Publishing Guidelines

5.7.1 Internet Publishing Standards

In order to balance NASA's Space Act mandate to disseminate information with the requirement to protect certain classes of information, NASA's Office of Communications has developed content standards for internet publishing. These standards are outlined in detail in [Appendix D](#).

This list provides detailed information on categories of information that shall not be released to the public as well as information that is acceptable for release. This guidance covers not just the World Wide Web, but all Transmission Control Protocol/Internet Protocol (TCP/IP) connections.

5.7.2 "Under Construction" Pages

New webpages, revisions to page sections, and/or applications are not to be published, i.e., available to public access, until cleared and ready for use. NASA site owners and content creators should not post any pages containing an "under construction" or similar notice.

5.7.3 Orphaned Pages

An orphan page is a page of a website which does not point to any link from another site. The only way to access an orphan web page is to know its address (URL) as it is generally not indexed in search engines nor linked anywhere. Site owners and content creators should ensure orphan pages don't occur in the first place, but upon discovery, are cleaned up in a responsible manner, such as linking to them from the appropriate parent pages.

5.8 Social Media and User-Generated Content

When including social media on your website, mention only official NASA social media outlets or direct the reader to a www.nasa.gov website, such as <https://www.nasa.gov/social-media>. User-generated content on platforms such as forums, wikis, and blogs shall be moderated and approved prior to publication.

Federal-compatible Terms of Service (TOS) are special agreements negotiated between the Federal government and vendors who offer free social media, mobile, business, and other digital tools. These Federal-compatible TOS modify or remove problematic clauses in standard TOS, and allow Federal employees to legally use these tools.

The General Services Administration (GSA) works with a broad range of providers of no-cost social and digital media products to develop Federal-compatible TOS. However, a GSA TOS does not authorize the tools for use at NASA. Our General Counsel must also negotiate a TOS with the vendors prior to use at the Agency, to ensure compliance with regulations on security, privacy, accessibility, records retention, ethical use, and other Agency policies and requirements.

The Office of Communications maintains a list of third-party tools for which NASA has a negotiated TOS: <https://communications.nasa.gov/socialmedia/tools> ^(INT). Tools other than those

listed are not authorized for use by NASA.

5.9 Content Syndication and Third-Party Embeds

Reserved for future guidance on best practices from OMB M-23-22.

5.10 One-Time or Short Duration Campaigns

Reserved for future guidance on best practices from OMB M-23-22.

5.11 Content Guidance for www.nasa.gov

For the latest guidance regarding content for the www.nasa.gov flagship website, visit <https://website.nasa.gov/> ^(INT)

5.11.1 Reading Time and Word Count

Research conducted by the NASA Web Modernization Team suggests that the time people are likely to spend on a web page may be more important to consider than an article's word count.

According to the research, readers are likely to spend 3 to 5 minutes on an item that is purely news, and 5 to 8 minutes on a more feature-oriented article. Multiplying those figures times by an average reading speed of 200 words per minute for teenagers and 200 to 300 words per minute for adults gives a range of:

- 600 to 1,500 words for news
- 1,000 to 2,400 words for features

That is a wide range, but readership metrics suggest aiming toward at the lower end of each. The average time readers spend on www.nasa.gov is one minute, 42 seconds. At those reading speeds, the average reader will consume 325 to 500 words. Even more dramatic, 75 percent of sessions last less than a minute.

Given the short time readers spend on the page, it's imperative to get your message across clearly and quickly. The longer a web article is, the more you should consider an introductory paragraph that gives the gist of the article, especially if you've started it with feature-style lead.

5.11.2 Subheadings

Research shows that readers will continue to read as long as they're interested in the topic, so if you can pique their interest with an introductory sentence, you can then start to offer them more detailed information. One way to do that is with subheadings (level H2 or lower, depending on the heading structure on the page). Putting an important concept from the next section of the story in a subheading can help draw readers from section to section.

Concrete words associated with NASA like “Mars,” “space travel,” and “supersonic flight” will be more successful in that than general concepts like “study,” “consider,” “partnership,” “addresses,” “hails,” “meets,” “facilities,” or “long-term,” which could apply to any organization. Subheadings can also pique the interest of readers scanning the whole article before deciding whether to read.

Remember that your subheadings must follow the accessibility requirements referenced in [Chapter 2.1](#). They must be semantic headings in code (not merely bolded text), and must always descend in order without skipping levels. For example:

- Page Title – Heading Level 1 (H1)
 - Subheading A – Heading Level 2 (H2)
 - Subheading B – H2
 - Subheading B.1 – Heading Level 3 (H3)
 - Subheading C – H2

The [Accessibility Checker](#) ^(INT) built into the www.nasa.gov and science.nasa.gov page editors will alert you if there’s an issue with your subheading levels.

5.11.3 No Dead Ends

Research shows that 80 percent of people who read to the end of an article will click on something else, so keeping people engaged has the added benefit exposing other NASA content to them. We recommend using an HDS [Related Articles](#), [Topic Cards](#), or [Featured Link List](#) ^(INT) block at the end of your page to encourage readers to explore related web content.

5.11.4 Use of Appropriate Graphics

NASA imagery, whether photos, graphics or videos, are among our greatest assets as story tellers. Use multiple compelling and relevant graphics and videos to help tell the story. Describe, in the caption, what the user is seeing clearly and relate it to the story. This is especially important when using historical photos. Unless the article is a historical profile, portraits and group photos don’t generally add to the story because readers aren’t as interested in the “who” as the “what,” “how” and “why.”

5.11.5 Providing Context

As good as we are at telling a discrete story, we sometimes struggle to provide a “big picture”—why is doing this research or launching this mission important to NASA, and how does it relate to what we’ve done before? The web offers an ideal medium to add context by linking to relevant materials. A story on a development milestone for a particular mission can link back to an explainer on the mission’s goals, or to a historical piece on an earlier related mission.

Research shows that links to existing material are preferable to repeating boilerplate information in multiple stories about a topic. Search engines can discount content that contains material repeated from elsewhere, thinking it’s repetitive and/or spam. If we’re using the same boilerplate language repeatedly, it’s probably time to change strategies. We will be more effective if we

develop basic content once and link back to it from new content.

5.12 Accessible Language

When writing content for websites or other digital channels, we should use language that doesn't assume an ability or device and is more accessible to all:

- **Avoid sense-specific verbs like “view,” “watch,” “hear,” and “listen.”** A person viewing a screen would “view” the information of the screen, while a person using a screen reader or listening to an interactive voice response experience would “hear” the information, instead. As a result, we should use language that focuses on the intent of the action rather than the sensory experience. This becomes especially important as we create flexible and reusable content that can work across different channels. For example:
 - “Go to the report”
 - “Review the results”
 - “Check on your application”
 - “Read the letter”
 - “Play the video”
- **Avoid device-specific verbs like “click,” “press,” and “tap.”** People can use several different types of interactions for the same task. So, we use “select” instead of “click,” “press,” or “tap.” For example:
 - In buttons, use “Select Submit” instead of “Tap the Submit button”.
 - In links and navigation, use “Select My NASA” instead of “Click on My NASA”.
- **Avoid directional language like “right,” “left,” “above,” and “below.”** Content won't always be in the same place on a screen for all people, so we should avoid directional language in instructions or descriptions. Different screen sizes on mobile devices, different assistive devices, and different text size settings can all affect the placement of content. For example:
 - Use “Keep reading” instead of “Read below”
 - Use “Select the link from the main menu” instead of “Select the link on the top right corner of the screen”
- **Avoid color references in instructions.** Many people have colorblindness, so we should avoid referencing colors when giving directions to the user. We can still reference colors in other parts of our web content, including alternative text for images ([Chapter 10.7](#)). For example:
 - Use “Select submit” instead of “Select the blue submit button”

Chapter 6. Content Security

6.1 Sensitive But Unclassified and Controlled Unclassified Information

Sensitive But Unclassified/Controlled Unclassified Information (SBU/CUI) is official NASA or other government information and material, of a sensitive but unclassified nature, which does not contain National Security Information (and therefore cannot be classified); nonetheless, shall still be protected against unauthorized disclosure.

No SBU information shall be published on any external NASA website. When in doubt, check with your Center's [Privacy Managers and CUI Liaisons](#) ^(INT).

6.2 Export Control (ITAR & EAR)

Export Control laws and regulations establish restrictions pertaining to the export of proprietary U.S. goods including, but not limited to, encryption software, computer hardware, software applications, and technology-oriented products. Access to Export Control information by foreign nationals is strictly regulated.

External websites may provide only clearly identified public domain information. When in doubt, check with your Center's [Export Control representatives](#) ^(INT).

Type: Federal Mandate

Applicability: Public-Facing and External Websites/Web Apps

Requirement 6(a):

No SBU or CUI is available to the public unless properly decontrolled.

Mandated by:

- [NPR 2810.7](#) (2021)
- [NPD 2521.1](#) (2007)
- [14 CFR 1213](#) (2006)

NASA Contacts:

[Center CUI Liaisons](#) ^(INT), CSPD, OCIO

Type: Federal Mandate

Applicability: Public-Facing and External Websites/Web Apps

Requirement 6(b):

No EAR or ITAR sensitive content is available to the public.

Mandated by:

- [14 CFR 1213](#) (2006)
- [NPD 2190.1](#) (2001)
- [EAR](#) (1996)
- [ITAR](#) (1976)

NASA Contacts:

[Export Administrators](#) ^(INT), OIIR

6.3 Unclassified Controlled Nuclear Information

Unclassified Controlled Nuclear Information (UCNI) is sensitive unclassified Government information concerning nuclear material, weapons, and components, whose dissemination is controlled under Section 148 of the Atomic Energy Act. It is to be accessed only by personnel with a need-to-know. Foreign Nationals are not authorized access without approval of the Department of Energy. UCNI shall be stored to prevent unauthorized disclosure. Use of encryption is mandatory for electronic transmission.

No UCNI shall be published on any external NASA website.

6.4 Classified National Security Information

In accordance with NPR 1600.2, NASA Classified National Security Information (CNSI); Executive Order 12958, Classified National Security Information, as amended; and Section 148 of the Atomic Energy Act, websites and web applications are not authorized to contain information which constitutes CNSI or UCNI.

No CNSI shall be published on any external NASA website.

6.5 Personnel Information and Employee Locator Data

Agency and Center employee locator data and other personnel information covered by the Privacy Act or Freedom of Information Act (FOIA) Exemption 6 shall not be published on external NASA websites. Employee locator data includes building numbers, room numbers, or other information which could be used to determine personnel whereabouts at a given point in time.

If necessary for members of the public to contact an individual NASA employee, it is preferable to use a generic shared work email (e.g., office-name@mail.nasa.gov) or office mailing address.

Non-work-related personal information (including links to personal websites, resumes, or social media profiles) shall not be published on external NASA websites.

Type: Federal & Agency Mandate

Applicability: Public-Facing and External Websites/Web Apps

Requirement 6(c):
No UCNI or CNSI is available to the public.

Requirement 6(d):
No employee locator data, non-work-related personal information or links, or other sensitive personnel information are available to the public.

Requirement 6(e):
Any Agency facility maps, aerial views, schematics, blueprints, or similar sensitive infrastructure information on the website only contain a level of detail that could be found using publicly available tools such as Google Maps, unless explicitly required by law or regulation.

Requirement 6(f):
No internal Agency or Center policies are available to the public unless published in NODIS.

Mandated by:

- [NPR 1600.1](#) (2013)
- [ITS-HBK-2810.11-02](#)^{INT} (2012)
- [NPR 1600.2](#) (2011)
- [14 CFR 1213](#) (2006)
- [E.O. 12958](#) (1995)
- [Atomic Energy Act](#) (1954)

NASA Contacts:

[Center Physical Security Officers](#)
(^{INT}), OPS

Work-related biographies and official social media profiles of NASA personnel may be published on external websites as long as they do not compromise any sensitive information concerning PII or any aspect of a project with which the individual may be associated.

6.6 Maps

Internal Center maps and aerial views of Agency facilities shall not be published on external NASA websites.

If it is necessary to provide an internal map or aerial view, it shall only contain a level of detail that could be found using publicly available tools or data such as Google Maps or OpenStreetMap, unless that level of detail is explicitly required to be published by law or regulation. Approval from IT Security and/or the Center's Physical Security Officer (as appropriate) is advised prior to publication of this information.

It is appropriate to publish directions to a Center and related information that meets the legitimate needs of the public who want to visit our Centers.

6.7 Infrastructure & Facilities

Detailed schematics, drawings, and other information regarding Center or Agency infrastructure such as utilities, networks, airfields, buildings, etc. shall not be published on external NASA websites.

For research systems/facilities, no detailed drawings, schematics, physical locations, staffing levels, or hours of operations shall be published on external websites, unless that information can be found using a publicly available tool such as web-based business directories.

If it is necessary to provide this information, it shall only contain a level of detail that could be found using a publicly available tool such as Google Maps or OpenStreetMap, unless that level of detail is explicitly required to be published by law or regulation. Approval from IT Security and the Center's Physical Security Officer (as appropriate) is advised prior to publication of this information.

6.8 Publication of Internal Policies

No internal Center policies and procedures shall be published on external NASA websites, except for policy documents made available via the NASA Online Directives Information System (NODIS): <https://nodis3.gsfc.nasa.gov/>.

Chapter 7. Design and User Experience

7.1 Federal Website Standards

According to 21st Century IDEA, all public-facing websites and digital services launched after 2018 must comply with the Federal website standards published by the GSA's Technology Transformation Services: <https://designsystem.digital.gov/website-standards/>

OMB M-23-22 has directed GSA to review and update the existing Federal website standards, including guidelines for branding ([Chapter 4](#)), content ([Chapter 5](#)), and search ([Chapter 17](#)). As those standards are updated, this NAII's corresponding chapters will be updated as well.

7.2 Consistent Look and Feel

Using common content, terminology, and placement is a best practice for managing your website. When an Agency's websites present content in similar ways, it helps the user easily find information and services across our sites. Consistency helps NASA's websites look professional, and clearly indicates to the public that the website is a trusted source of information from NASA.

Usability studies have shown that people who frequently use our websites can find information more quickly and easily if we use a common look and feel for our websites. Utilization of a Content Management System (CMS) such as WordPress or the creation of standardized templates is recommended.

7.2.1 Horizon Design System

NASA's Horizon Design System (HDS) is the style portfolio that establishes the look and feel of the Agency's public-facing websites and digital experiences. Built atop the strong foundations of the [U.S. Web Design System \(USWDS\)](#), HDS is a flexible, modular toolkit designed to evolve and unify www.nasa.gov, science.nasa.gov, and all their constituent elements. Its adaptable system of building blocks and templates was built to provide responsible versatility as we present the text, visuals, interactive elements, and all other current and future digital assets that comprise NASA's digital presence.

Per 5i(1) of NID 2800.147, the adoption of HDS on a new or existing NASA website should be carried out in collaboration with the [Agency Design Lead](#) ^(INT) and [Communications Web Modernization Lead](#) ^(INT) from the Office of Communications.

Type: Federal Mandate

Applicability: Public-Facing Websites/Web Apps

Requirement 7(a):
Website complies with GSA's [Federal Website Standards](#).

Requirement 7(b):
Website employs a clear and consistent visual design, including proper use of NASA's brand identity.

Requirement 7(c):
Website is fully functional and usable on common mobile devices such as smartphones and tablets.

Requirement 7(d):
Website is continually tested to ensure that user needs are addressed.

Mandated by:

- [OMB M-23-22](#) (2023)
- [21st Century IDEA](#) (2018)

NASA Contact:

[Agency Web Modernization Lead](#) ^(INT), APS, OCIO

Explore HDS foundations, elements, components, modules, and templates:
<https://website.nasa.gov/horizon-design-system/> ^(INT)

7.3 Responsive Design and Mobile Device Support

Reserved for implementation guidance on OMB M-23-22.

7.4 Web Browser Support

Reserved for future guidance on best practices from OMB M-23-22.

7.5 Site Performance

Reserved for future guidance on best practices from OMB M-23-22.

7.6 Typography and Fonts

- Use clean, readable fonts. NASA’s HDS specifies Inter, Public Sans and DM Mono for fonts: <https://website.nasa.gov/hds/foundations/typography/> ^(INT). USWDS recommends Source Sans Pro, Public Sans and Merriweather: <https://designsystem.digital.gov/components/typography/>. Although no specific font is prescribed, these suggestions indicate the type of font that is preferred.
- Overly decorative and/or playful fonts (e.g., Comic Sans, Papyrus or Curlz). should be avoided. They may be used sparingly on a website whose target is young audiences.
- Bold, italic, and/or uppercase text shall not be used for long sections of text, as they significantly degrade readability.
- For most text, including body text, use at least an effective font size of 16px. Smaller and larger text can be used sparingly for special purposes such as headings, captions, photo credits, footnotes, data tables, or specialized UI elements.
- More than half of all public visitors to NASA’s websites are using mobile devices or tablets. Responsive typography that dynamically adjusts font sizes based on screen size is a recommended best practice.
- Most lines of text should be 45-90 characters wide for maximum readability.
- Body text should be consistently left-aligned (not justified, right-aligned or centered).
- At least 1em of whitespace should be used to separate paragraphs; do not indent.

7.7 UX Research and Testing

Reserved for future guidance on best practices from OMB M-23-22.

Chapter 8. Domains, URLs and Links

8.1 Domain Names

NASA Mission Directorates, Programs and Centers shall use the nasa.gov domain for their websites per [OMB M-23-10](#), The Registration and Use of .gov Domains in the Federal Government.

New non-.gov domains (.com, .org, .edu, .net, .biz, .tv, etc.) shall not be registered for public-facing NASA websites in scope of NID 2800.147, unless an exception is granted in a waiver or Authority to Operate (ATO) document signed by the NASA CIO.

Per 2e and 5o(1) of NID 2800.147, any existing non-.gov domains for public-facing NASA websites that fall under the policy's scope must be reported and tracked in the MCDT ([Chapter 9.1.3](#)).

For non-NASA-branded websites created on behalf of multiagency or international initiatives, the NASA CIO may grant a rare exception for a non-nasa.gov second-level domain or a non-.gov top-level domain. However, all new second-level .gov domains must be reviewed and approved by Cybersecurity and Infrastructure Security Agency (CISA), and are subject to strict Federal requirements and naming conventions: <https://get.gov/registration/requirements/>

See [Chapter 9.2](#) for more details on the process to request new domain names.

Type: Federal Mandate

Applicability: All Websites/Web Apps (Public-Facing, External and Internal)

Requirement 8(a):

Website is published on a .gov domain, or (in limited cases) on an approved non-.gov domain listed in GSA's [registry](#).

Requirement 8(b):

Domain name meets all [.gov naming requirements](#): it is short, memorable, and unambiguous.

Mandated by:

- [DOTGOV Act](#) (2020)
- [OMB M-23-10](#) (2023)
- [OMB M-22-09](#) (2022)

NASA Contact:

[Agency Web Modernization Lead](#)
(INT), APS, OCIO

8.2 External Linking Policy

NASA websites may link to external websites that belong to other government agencies (both domestic and international), public and private educational institutions (such as universities and museums), and NASA industry partners. Avoid direct links to vendor websites when those links could reasonably be interpreted to represent NASA recommendations or endorsements of commercial products or companies.

Appropriately limit external links to information or services necessary for the proper performance of the website function.

Label external links (i.e., to non-.gov websites) appropriately, either through explicit labeling in the link itself, or through a visual cue with appropriate indicators for accessibility compliance, such as opening a new browser window which provides the site visitor with an indication that the user is leaving the NASA website and thus the nasa.gov domain.

Web information should not bring discredit to the organization providing the website, either through its content or through the content to which it may link. NASA website content and links to websites that include any of the following types of content are considered inappropriate:

- Promotion or advertisement of alcohol or tobacco or e-cigarette products
- Encouragement or facilitation of illegal activities
- Pornography
- Encouragement of discrimination against particular groups of people
- Collection of data that violates NASA’s Privacy Policy or Forms Policy
- Content giving the appearance that NASA is violating the legal prohibition against lobbying Congress or takes overt partisan political positions.

8.3 URLs and Redirects

Reserved for future guidance on best practices from OMB M-23-22.

Type: Federal Mandate

Applicability: All Websites/Web Apps (Public-Facing, External and Internal)

Requirement 8(c):

External links to third-party websites not owned by the Federal government are clearly identified with iconography, “(external)” link text, or other methods.

Requirement 8(d):

Website does not link to any of the following types of inappropriate content: (1) Promotion or advertisement of alcohol or tobacco or e-cigarette products; (2) Encouragement or facilitation of illegal activities; (3) Pornographic or sexually oriented materials; (4) Encouragement of discrimination against groups of people; (5) Collection of data that violates NASA’s Privacy Policy or Forms Policy; or (6) Content giving the appearance that NASA is violating the legal prohibition against lobbying Congress or taking overt partisan political positions.

Mandated by:

- [5 CFR 2635.701-705](#) (2017)
- [OMB M-10-23](#) (2010)
- [NPD 1420.1](#)
- [NPD 2540.1](#)

NASA Contact:

[Agency Web Modernization Lead](#)
(INT), APS, OCIO

8.4 URL Shorteners and QR Codes

NASA maintains a branded link shortening service (go.nasa.gov) to create short links and QR codes for campaigns, printed materials, and other use cases. Short, NASA-branded links can be useful to keep URLs from appearing unruly, decrease the appearance of spammy links, allow for the introduction of custom Google Analytics campaign tags and allows for integration with tools that use URL shorteners. This service is managed by the HQ Social Media team and powered by Bit.ly under contract to NASA.

Meanwhile, QR codes (or Quick Response codes) are two-dimensional codes that you can scan with a smartphone. The code contains information, usually a site address, and once you scan it, the code connects you with a resource on the web.

Two things to keep in mind when using both short links and QR codes:

- To track any metrics on clicks or scans of your links and QR codes, you can use **UTM campaign codes** to report this activity in Google Analytics. Ensure any UTM codes for Google Analytics are appended to the URL before converting to a short URL or QR code.
 - Google UTM code generator: <https://ga-dev-tools.web.app/campaign-url-builder/>
- Posting QR codes as an image onto a website may not be the best user experience. If a user is looking at a web page on a mobile device, they may not have a camera accessible since it would be on the other side of the same device they are on. As such, a link that can be selected would be a preferable user experience.

To learn more about NASA's URL shortening service and request a go.nasa.gov short URL: <https://communications.nasa.gov/socialmedia/go> ^(INT)

To learn more about QR codes, find approved QR code tools, and more: <https://communications.nasa.gov/socialmedia/guidance/qr> ^(INT)

8.5 Linking and Linked Text

We use links to connect website visitors with related information that may be helpful. We also use links to help us centralize information, rather than repeating content in multiple places. This helps us update content more efficiently and keep content accurate.

Too many embedded links can be distracting or overwhelming to people with traumatic brain injuries or other cognitive impairments. External links can be disorienting for all people, but especially people who use screen readers. We want to be clear about where links are taking people and that's why the linked text are incredibly important.

When linking text:

- Use natural and descriptive language.
- Describe the purpose of the link and the destination if it's taking the reader outside of a NASA website.
- Don't make the link so long that the relevant words get lost.

- Avoid generic link text like “Learn more” and “Read more” by themselves.
- Use accessible language ([Chapter 5.12](#)). Avoid using words that assume certain abilities, like “See,” “Hear,” and “Watch”, as well as device-specific words like “Click here”, since not all people are physically clicking links.

Always create space between different links. Clustering links together can make it hard for users to select the intended link, especially on a touch screen device like a smartphone. In general, put a link on a separate line to help it stand out. There may be some exceptions to this, like putting a link at the end of a sentence if space is limited, such as in intro copy or alerts.

Always link to the canonical URL of the page. When we use the canonical URL in links, it reduces the risk of links breaking when sub-URLs in a form or flow change. It also helps tell search engines our preferred URL for search indexing ([Chapter 17](#)). This can add search value to the canonical URL by eliminating the split of search value between multiple pages.

Chapter 9. Governance

NID 2800.147 directs NASA’s Office of the Chief Information Officer (OCIO) to establish Agency-wide processes for web governance, which are managed by the Agency Web Modernization Lead in collaboration with the Agency-wide **Web Working Group (W-WG)**.

Current governance processes outlined in this chapter will be updated by the W-WG as they evolve. For any questions or feedback on how we can improve them, please reach out to your [W-WG representatives](#) ^(INT).

9.1 Agency Inventories and Registration of Websites

9.1.1 AART

The Agency Applications Rationalization Tool (AART) is NASA’s official tool to register web applications, mobile apps, and other applications: <https://aart.nasa.gov> ^(INT). All fields are expected to be completed. At a minimum, the Domain Name Service (DNS) registration (public or private) must be recorded and along with other data information types as required by AART.

Website RNOs must declare to the best of their knowledge that their websites have been reviewed for compliance with Government policies and guidelines in each of the indicated Policy Compliance and Site Content areas that AART tracks. The RNO must also acknowledge that they understand that they are responsible for conducting a self-assessment of compliance (either directly or indirectly) and achieving compliance to the greatest extent possible. The list of policies and guidelines is established by Agency and Center Offices of the CIO.

AART registration approval workflows vary by NASA Centers. Some NASA Centers include compliance checks for Section 508 and Export Control within their workflows. Site registrants shall receive approval of their site registrations prior to releasing websites outside the Center firewall.

Annual registration renewals are required for all public-facing websites. AART will send email notifications prior to the expiration of the registration.

Accounts for registering and modifying assets in AART are requested and provisioned through NAMS: <https://nams.nasa.gov/nams/asset/253767/> ^(INT)

Type: Agency Mandate

Applicability: All Websites/Web Apps (Public-Facing, External and Internal)

Requirement 9(a):
Website is registered in [AART](#) as a website or web application, with all required fields up to date.

Requirement 9(b):
Website is registered in [RISCS](#) with an approved ATO and SSP.

Requirement 9(c):
Website is listed in the [MCDT](#) as a public-facing website, with all required fields up to date (inc. AART and SSP record locators).

Requirement 9(c):
Compliance with Federal and Agency requirements is [revalidated and documented](#) in the MCDT at least once per fiscal year.

Mandated by:

- [NPD 2800.1](#)
- NID 2800.147

NASA Contact:

[Agency Web Modernization Lead](#) ^(INT), APS, OCIO

9.1.2 RISCS

NASA uses the Risk Information Security Compliance System (RISCS) to aid users in defining the requirements necessary for registering and marking sensitive unclassified information: <https://riscs.nasa.gov> ^(INT). This information is captured while conducting the NIST 800-53 control set and assembling the security package for review. The responses provided in RISCS will dictate the Federal and NASA requirements needed to complete the entry.

Included within RISCS as part of the System Security Package (SSP) is the Initial Privacy Threshold Analysis (PTA) or Privacy Impact Analysis (PIA) which is required for all websites, web apps, and forms.

9.1.3 MCDT

The [NASA Web Domains SharePoint site](#) ^(INT) hosts the **Modernization and Consolidation Domain Tracker (MCDT)**, which is the Agency's official internal inventory of all Agency public-facing domain names, websites, and digital services, per 5a(6) and 5o(1) of NID 2800.147. The MCDT also tracks many external, internal, and decommissioned domains for ease of reference.

Everyone at NASA has full view access to the MCDT, including the scan results from various [data sources](#) ^(INT) for each domain. Anyone may [submit missing domains](#) ^(INT) to the tracker.

Only W-WG representatives and core team members under the Agency Web Modernization Lead, Communications Web Modernization Lead, and Science Web Modernization Lead can edit existing MCDT entries at this time. Please contact your [W-WG representative](#) ^(INT) if you see missing or incorrect information about your domain in the MCDT.

9.2 Requesting a New Domain

In keeping with 21st Century IDEA, NASA is working to reduce the number of our existing public-facing websites as part of the Agency-wide web modernization effort. Per 5a(4)(a) of NID 2800.147, requests for new domain names for public-facing websites must be approved by the NASA CIO or designee. The existing process described here will be matured in a later NASA Interim Directive on managing domains and DNS records.

Currently, the website RNO or technical lead must submit a "DNS Service Request" for a new external domain name using the Enterprise Service Desk (ESD) service portal catalog: <https://esd.nasa.gov/esdportal> ^(INT). Generally, external domain requests belonging to NASA infrastructure (firewalls, VPN appliances, PTR records, SSL validation via DNS, etc.) that are not categorized as a website and do not add to the overall public-facing web footprint are approved after a quick review.

New domain requests for public-facing websites are currently reviewed by the Agency, Communications, and Science Web Modernization Leads, with support from other NASA subject matter experts as needed, for suitability and evaluation of whether the public content can be hosted on an existing web application, thereby not adding to the overall website count.

The review team may ask for confirmation that the Official in Charge (OIC) or designee of the requesting organization has concurred with the request, per 5o(7) of NID 2800.147. They may also ask for a link or demo of a beta or staging environment (if available) in order to assess compliance with Federal and Agency requirements, per 5i(3), 5l(4) and 5o(2) of NID 2800.147.

For NASA Science projects and missions, please reference SPD 29, SPD 26-B, and SPD 41-a before submitting a request to the OIC.

More information and FAQs: <https://nasa.sharepoint.com/sites/nwmt/SitePages/Making-New-Domain-Requests.aspx> ^(INT)

9.3 Annual Domain Revalidation

Reserved for future implementation guidance on new Agency process.

9.4 Reporting and Data Calls

Reserved for future implementation guidance on new Agency process.

9.5 Decommissioning Websites

Reserved for future implementation guidance on new Agency process.

Chapter 10. Images and Videos

10.1 Still and Motion Imagery Standards

Reserved for future guidance on [NASA-STD-2821](#), Audio and Video Standards for Internet Resources.

10.2 Media Release Forms

Reserved for future guidance on best practices. In the interim, please refer to the current edition of the [Media Release Form \(NF-1859\)](#) for both adults and minors.

10.3 Image Credit

Reserved for future guidance on best practices.

10.4 Image and Video Metadata

Reserved for future implementation guidance on OMB M-13-13 and [NASA-STD-2822](#), Still and Motion Imagery Metadata Standard.

10.5 Video and Livestreaming

Existing livestreaming and on-demand video repositories shall be leveraged on Agency or Center websites, instead of creating additional streaming platforms or video repositories.

In order to preserve bandwidth and ensure a satisfactory viewing experience for our users, use an appropriate public-facing repository such as [NASA+](#) and/or the [NASA Image and Video Library](#) (AVAIL/Dalet MAM) as the canonical home of the video or livestream.

In addition to these canonical versions hosted in public Agency repositories, public Agency videos and livestreams may be cross-posted on third party platforms such as YouTube or social media channels from official Agency accounts.

10.6 Creating Website Graphics

- Web graphics should always focus on the message NASA is trying to communicate, and the design should never distract from the content.

Type: Agency Mandate

Applicability: All Websites/Web Apps (Public-Facing, External and Internal)

Requirement 10(a):
Official NASA imagery, videos, and other multimedia posted on the website adhere to NASA-STD-2821 and NASA-STD-2822.

Requirement 10(b):
Any external persons who are visible and identifiable in posted images or videos have granted their permission (through [NF-1859](#) or equivalent) to be interviewed, photographed, or videoed by NASA and our representatives or partners.

Mandated by:

- [Privacy Act](#) (1974)
- [NPD 1383.1](#)
- [NASA-STD-2821](#)
- [NASA-STD-2822](#)

NASA Contacts:

[NASA Imagery Experts Program](#)
(INT) and [NASA Creative Community](#) (INT)

- The NASA insignia shall never be added to an image or artist’s concept that will appear on content within the flagship websites, because the insignia already appears on all web pages. The only exception is when the insignia appears on an object in the image.
- The small text “National Aeronautics and Space Administration” shall not be used within web graphics, as it is usually very difficult to read in that format.
- Elements of the insignia shall not be used in creating other logos; there shall be no “cannibalizing” of the insignia.
- The NASA insignia colors shall not be used when creating other logos.
- If necessary to include text in a website graphic, alternative text and captions must be added that include the full text in the image in order to ensure that anyone using the website with a screen reader or on a mobile device can still read or hear the text.
- Fonts used in graphics shall be clearly readable when the graphic is viewed on a web page. It is best practice for fonts to be clearly readable even when the graphic is viewed on a mobile device’s small screen.

10.7 Writing Alternative Text

Alternative text (also known as “alt text”) is descriptive text which conveys the meaning and context of a visual item in a digital setting, such as on an app or web page. This helps us make sure that everyone on our website gets the same information—no matter how they interact with our site. When screen readers read digital content with alt text, they will read the alt text and emojis aloud, allowing people to better understand what is on the screen. Additionally, when users have low bandwidth and images don’t load, they will still have an understanding of the image.

Well-written, descriptive alt text dramatically reduces ambiguity and improves user experience. Additionally, per Section 508 of the Rehabilitation Act (29 U.S.C. § 794d), as amended by the Workforce Investment Act of 1998 (P.L. 105-220), all federal agencies must develop, procure, maintain, and use information and communications technology (ICT) that is accessible to people with disabilities – including alternative text.

Alt text should serve three major goals:

1. Explain what the subject is.
2. Convey why it’s important (in our case, scientifically).
3. Describe what it looks like.

Type: Federal Mandate

Applicability: All Websites/Web Apps (Public-Facing, External and Internal)

Requirement 10(c): Meaningful text alternatives (inc. image alt text, chart descriptions, transcripts, and captions) are provided for all non-text web content and multimedia, unless a WCAG exception applies.

Mandated by:

- [OMB M-24-08](#) (2023)
- [Revised Section 508 EIT Standards](#) (2017)
- [Section 508 EIT Standards](#) (2000)

NASA Contact:

[Section 508 Program Manager](#) ^(INT), CEO, OCIO

How to achieve these goals:

- **Overview:** The user is approaching the image with little-to-no background knowledge, so the image description needs to include not just what the image looks like, but what it shows.
- **Organize and elaborate:** Include more details, elaborate on the phenomena pictured in detail.
- **Add details:** Ensure that the mental image is complete. Try reading the description to someone who hasn't seen it. Include similes and analogies to beef up descriptions.

General tips:

- Be concise. Use short sentences for maximum clarity.
- Use nouns, not pronouns.
 - For example, repeat “the nebula” rather than using “it” on second reference.
- Connect visuals (the literal description) with elements of the phenomenon.
- Describe colors.
- Use punctuation liberally, to indicate pauses for the screen reader. But no dashes!
- If possible, test your page with an actual screen reader.
 - The Chrome browser’s built-in screen reader, ChromeVox, can be turned on or off by pressing Ctrl + Alt + z.
- There’s no such thing as too much repetition or restating within the descriptions.
- If the alt text is for a social post, try to avoid repeating text from the social post’s main content.
- Directly transcribe any text shown in the image.
- Do not use the caption text as alt text. Each serves a different purpose.

Chapter 11. Intellectual Property (IP)

The use and management of web technologies raises several questions about the legal concepts of copyright, fair use, and intellectual property ownership. NASA website owners and content creators should be diligent to ensure they consider existing intellectual property laws when implementing web technologies.

Government content can sometimes be free from copyright per 17 U.S.C. 105, but this is not always the case, especially where images are concerned, especially if the government is using the images under license. In addition, government websites may have names or logos that are protected under trademark law. Thus, content on Federal websites cannot automatically be assumed to be free of intellectual property rights and available for any individual or site provider wishing to use it.

The Agency's media use policy governs the public use of publicly available content from NASA:

<https://www.nasa.gov/nasa-brand-center/images-and-media/>

Additionally, collaborative and interactive technologies that allow public contribution of content may also create challenges about the protection of intellectual property contributed by visitors. NASA website owners and content creators must post clear disclaimers detailing the copyrights that nongovernment contributors may retain, and provide clear guidance on the reuse of trademarked phrases or logos. You should also post clear disclaimers detailing liability if a member of the public's post violates another's intellectual property.

11.1 Copyright

Copyright is a form of protection provided by the laws of the United States ([Title 17, U.S. Code](#)) to the authors of "original works of authorship," including literary, dramatic, musical, artistic, and certain other intellectual works. This protection is available to both published and unpublished works.

No copyrighted materials may be used on NASA websites without the copyright owner's permission unless an exception applies. When in doubt, credit shall be given as if the material was copyrighted.

Type: Federal/Agency Mandate

Applicability: All Websites/Web Apps (Public-Facing, External and Internal)

Requirement 11(a):

The copyright owner's permission or license has been obtained for any copyrighted material (including stock images) used on the website, unless an exception applies.

Requirement 11(b):

All copyrighted material is clearly identified as copyright protected with the name of the third-party copyright owner.

Requirement 11(c):

No information regarding potentially patentable creations or trade secrets is available to the public.

Requirement 11(d):

No proprietary or confidential information as identified by NASA partners or vendors is available to the public.

Mandated by:

- [Copyright Law](#) (U.S.C. Title 17)
- [Patent Law](#) (U.S.C. Title 35)
- [NPD 1900.9](#)
- [NPR 7500.2](#)

NASA Contact:

[Agency Counsel for Intellectual Property](#) ^(INT), OGC

If copyrighted materials are used with permission, the copyright status shall be clearly indicated.

11.2 Potentially Patentable

A potentially patentable creation is an item which may be, but is not yet, patented. The claimed invention shall be useful, novel, and nonobvious; the subject matter shall be a product (apparatus, article of manufacture, etc.) or process (series of steps to accomplish some end result) or distinct improvements on any existing product or process. Certain things are excluded from patenting, such as mathematical algorithms or naturally occurring substances or phenomena.

No information regarding a potentially patentable creation or trade secret shall be published or similarly made available on external NASA websites and web pages that are accessible to computer networks outside of NASA and available to non-NASA personnel.

11.3 Proprietary and Trade Secret Information

Proprietary information is defined as material and information relating to or associated with a company's products, business, or activities, including but not limited to financial information; data or statements; trade secrets; product research and development; existing and future product designs and performance specifications; marketing plans or techniques; schematics; client lists; computer programs; processes; and know-how that have been clearly identified and properly marked by the company as "proprietary information," trade secrets, or company confidential information. The information shall have been developed by the company and not be available to the Government or to the public without restriction from another source.

No proprietary information shall be published or similarly made available on external NASA websites and web pages that are accessible to computer networks outside of NASA and available to non-NASA personnel.

11.4 Licensing and Usage Rights

Reserved for future guidance on best practices.

Chapter 12. IT Security

12.1 Secure Connections (HTTPS, HSTS)

[OMB M-15-13](#), Policy to Require Secure Connections across Federal Websites and Web Services, mandates that all external Federal websites and web services serve all traffic through a secure connection. The strongest privacy and integrity protection currently available for public web connections is Hypertext Transfer Protocol Secure (HTTPS).

Websites and web services inside the Agency firewall (i.e., internal websites) must also use TLS and enforce HTTPS, as required by [OMB M-22-09](#), Moving the U.S. Government Toward Zero Trust Cybersecurity Principles.

More information on implementation and compliance with M-15-13 can be found in OMB's Compliance Guide to the HTTPS-Only Standard: <https://https.cio.gov/guide/>

12.1.1 TLS Certificates

HTTPS today uses the Transport Layer Security (TLS) network protocol, which is the direct successor and more secure replacement for the outdated Secure Sockets Layer (SSL) protocol.

NASA's requirements and processes for obtaining a commercial TLS certificate for an external or public-facing website are outlined on ICAM's SharePoint page:

<https://nasa.sharepoint.com/sites/PKI/SitePages/Commercial-Certificate-Guidance.aspx> ^(INT)

As those instructions explain, all commercial TLS certificates for external NASA websites must be registered in ICAM's Public Key Infrastructure (PKI) management tool:

<https://idmax.nasa.gov/tools/pki> ^(INT)

Type: Federal Mandate

Applicability: All Websites/Web Apps (Public-Facing, External and Internal)

Requirement 12(a):

All web traffic (inc. internal-facing traffic) is encrypted as HTTPS, and all HTTP requests are redirected to HTTPS.

Requirement 12(b):

If not using a subdomain under nasa.gov (already compliant), domain is "preloaded" as HTTPS-only (HSTS) with a max age of one year.

Requirement 12(c):

Domain has a non-expired TLS certificate that conforms with NASA-SPEC-2650, including registration in ICAM's [PKI tool](#).

Mandated by:

- [OMB M-22-09](#) (2022)
- [OMB M-15-13](#) (2015)
- [NASA-SPEC-2607](#) ^(INT)
- [NASA-SPEC-2650](#) ^(INT)

NASA Contacts:

[Cybersecurity Services](#) ^(INT), CSPD;
[PKI Team](#) ^(INT), ICAM, WCS, OCIO

12.2 Technical Standards

Per [OMB M-23-22](#), Delivering a Digital-First Public Experience, Federal agencies must employ the latest stable versions of HTTP (i.e., HTTP/2, HTTP/3, and successors), HTML, and other relevant standards and protocols.

12.2.1 IPv6

[OMB M-21-07](#), Completing the Transition to Internet Protocol Version 6 (IPv6), specifically requires external websites and public infrastructure supported by Federal agencies to support “native IPv6” traffic. For more information, refer to the [May 21, 2021 memo](#) from CIO.

All existing public infrastructure hosting the Agency’s public-facing and external websites must be at least IPv6-enabled, which is a prerequisite to native IPv6. All public-facing or external NASA websites deployed since 2021 must operate in IPv6 mode only (native IPv6) or have an approved [NF 1835](#) ^(INT), IPv6 Compliance Procurement Waiver.

12.3 Linking to Data on File Shares

Public-facing websites shall not link to content or files stored on Agency file sharing platforms (e.g., Microsoft 365, BOX), as this could allow unintended information transfer via shared system access if a user edits or replaces the file without realizing it is shared publicly.

12.4 APIs and Integrations

Reserved for future guidance on best practices.

12.5 Data Encryption

Reserved for future guidance on best practices.

12.6 Security of Information

Website RNOs must ensure that their websites and web applications meet the requirements in [NPR 2810.1](#), Security of Information and Information Systems.

Type: Federal Mandate

Applicability: Public-Facing and External Websites/Web Apps

Requirement 12(d):

Website uses the latest stable versions of HTTP, HTML, and other relevant technical standards.

Requirement 12(e):

Website operates in native IPv6-only mode.

Mandated by:

- [OMB M-23-22](#) (2023)
- [OMB M-21-07](#) (2021)
- [NASA CIO Memo on IPv6](#) (2021)
- [OMB M-05-22](#) (2005)
- [FAR Case 2005-041](#) (2005)

NASA Contact:

[Cybersecurity Services](#) ^(INT), CSPD

Type: Federal Mandate

Applicability: Public-Facing and External Websites/Web Apps

Requirement 12(f):

There are no links to content or files hosted on Agency file sharing platforms (e.g., Microsoft 365, BOX).

Requirement 12(g):

Website does not embed static, unchanging web assets that are hosted on third-party services outside NASA’s control.

Mandated by:

- [OMB M-23-22](#) (2023)
- [CISA BOD 20-01](#) (2020)
- [NIST SP 800-44](#) (2007)

NASA Contact:

[Cybersecurity Services](#) ^(INT), CSPD

Appropriate security mechanisms, such as encryption or multifactor authentication (MFA), are required to protect the information from access by anyone other than its intended audience. Security mechanisms preclude certain classes of information from being made available to foreign nationals, whether they work on-site at a NASA Center or access NASA IT resources from a remote location. See [NPR 2841.1](#), Identity, Credential, and Access Management, for additional information on ICAM requirements.

RNOs are responsible for ensuring the remediation or mitigation of all vulnerabilities in accordance with [ITS-HBK-2810.04-01](#) ^(INT), Risk Assessment, Vulnerability Scanning, and Expedited Patching. They are also responsible for ensuring website components and dependencies are up-to-date with all applicable patches which may impact the security of information as appropriate for the operating environment and accepted risks.

IT security incidents are managed in accordance with the designated incident response method written in the approved IT Security Plan. IT security incidents may result in the deactivation, either temporary or permanent, of the website.

12.7 IT Security Plan

NPR 2810.1 requires an IT Security Plan for all NASA systems. NASA uses an SSP template that specifies the set of information controls that shall be considered for each system. The plan content for a specific system is governed by a risk assessment of the particular threats facing the system and a tailoring of security controls to meet those threats.

12.8 Third-Party Tools and Plugins

Reserved for future guidance on best practices.

12.9 Web Development

Reserved for future guidance on best practices.

12.10 Development/Testing/Staging Environments

Reserved for future guidance on best practices.

Type: Federal/Agency Mandate

Applicability: All Websites/Web Apps (Public-Facing, External and Internal)

Requirement 12(h):

The SSP in [RISCS](#) includes all relevant information controls for the specific website tenant (if different from host system/platform).

Requirement 12(i):

Any active third-party tools or plugins incorporated or embedded in the website meet all security, privacy, and accessibility requirements, and are specifically addressed in the website's PIA, SSP, and/or Privacy Policy.

Mandated by:

- [OMB M-10-23](#) (2010)
- [NPR 2810.1](#)
- [ITS-HBK-1382.06-01](#) ^(INT)

NASA Contact:

[Cybersecurity Services](#) ^(INT), CSPD

Chapter 13. Multilingual

13.1 Access for People with Limited English Proficiency

[Executive Order 13166](#), "Improving Access to Services for Persons with Limited English Proficiency," requires Federal agencies to examine the services they provide, identify any need for services to those with Limited English Proficiency (LEP), and develop and implement a system to provide those services so LEP persons can have meaningful access to them. It is expected that agency plans will provide for such meaningful access consistent with, and without unduly burdening, the fundamental mission of the agency. Written materials and website content are included in this Executive Order.

To ensure meaningful access by people with limited English proficiency, an agency must conduct an assessment that balances several factors including the number or proportion of eligible people with limited English proficiency, the frequency of contact, the nature and importance of the program or activity, and the availability of resources. If necessary (based on this four-factor analysis), an organization must develop and implement a limited English proficiency plan.

For more guidance on how to implement this at NASA, [see this memo from the Office of Diversity and Equal Opportunity \(ODEO\)](#).

13.2 Spanish Web Content

For more information about Spanish-language web content, please contact NASA's Spanish-language communicators team: <https://nasa.sharepoint.com/teams/NASASpanish-LanguageCommunications/SitePages/Home.aspx> ^(INT)

13.2.1 Agency Name in Spanish

The Agency's official name in Spanish is *Administración Nacional de Aeronáutica y el Espacio*.

13.2.2 Machine Translation

Under Executive Order 13166, we're not supposed to use machine translation as a tool to provide services in languages other than English unless we can ensure the accuracy and veracity of all information published in all languages to any government website. The government is held responsible and accountable under the act for anything published.

Since machine translations cannot be guaranteed to be accurate, we have been following the guidance from ODEO as they are the responsible group for carrying out NASA's implementation

Type: Federal Mandate

Applicability: Public-Facing and External Websites/Web Apps

Requirement 13(a):

Web content is translated for users with limited English proficiency when required by law.

Mandated by:

- [OMB M-23-22](#) (2023)
- [68 CFR 70039](#) (2003)
- [E.O. 13166](#) (2000)

NASA Contacts:

[Center ODEO Programs](#)

of Executive Order 13166. Their guidance and the agency's LEP plan submitted to the Department of Justice states we are to use human translation to ensure what is published is in fact correct given we are such a technical and scientific agency – topics machine translation tend to not be as adept on.

Additionally, there are limits to machine translation in general. It may not “see” tables, images that contain text, menu items, and headers as content that requires translation. In addition, since the machine-translated content is not actually available on the website, the translated content cannot be found by placing non-English terms in a search engine, reducing the overall availability of the content.

13.2.3 Links Between English and Spanish Content

It is important to link English and Spanish content to each other to improve the discoverability of multilingual versions of the same piece of content by audiences that speak either language. To do so, it is recommended to link the two stories back and forth, with this text on top:

- **On the English page:** [Lee esta \[historia\] en español aquí](#) [links to Spanish page]
- **On the Spanish page:** [Read this story in English here](#) [links to English page]

Example: <https://www.nasa.gov/news-release/la-nasa-decide-traer-de-vuelta-la-nave-starliner-a-la-tierra-sin-tripulacion/>

There are more options to *historia* in Spanish that could be used, depending on the product (news release, media advisory, blog post, etc.), but *historia* is pretty general.

Chapter 14. Navigation, Headers, and Footers

14.1 Required Footer Links

[OMB M-23-22](#) (and OMB [M-17-06](#) before it) outlined the links required in the footer of Federal websites.

For NASA public-facing and external websites, use the following NASA-specific footer links:

- [About NASA](#)
 - <https://www.nasa.gov/about/>
- [Accessibility](#)
 - <https://www.nasa.gov/accessibility/> or expanded site-specific policy
- [FOIA](#)
 - <https://www.nasa.gov/foia/>
- [No FEAR Act](#)
 - <https://www.nasa.gov/odeo/no-fear-act/>
- [Privacy Policy](#)
 - <https://www.nasa.gov/privacy/> or expanded site-specific policy
- [Vulnerability Disclosure Policy](#)
 - <https://www.nasa.gov/vulnerability-disclosure-policy/>

Internal NASA websites should ensure they include the Accessibility and Privacy Policy links in their footers at minimum.

In the future, NASA will be developing and providing an HDS version of the USWDS [Identifier](#) component (a second Agency-wide footer that sits below the website-specific [Footer](#)) to help NASA websites more easily comply with these footer link requirements.

Type: Federal Mandate

Applicability: All Websites/Web Apps (Public-Facing, External and Internal)

Requirement 14(a):

“About NASA” links to www.nasa.gov/about/ in site footer on each page.

Requirement 14(b):

“Accessibility” links to www.nasa.gov/accessibility/ (or expanded site-specific policy) in site footer.

Requirement 14(c):

“FOIA” links to www.nasa.gov/foia/ in site footer.

Requirement 14(d):

“No FEAR Act” links to www.nasa.gov/odeo/no-fear-act/ in site footer.

Requirement 14(e):

“Privacy Policy” links to www.nasa.gov/privacy/ (or expanded site-specific policy when applicable) in site footer.

Requirement 14(f):

“Vulnerability Disclosure Policy” links to www.nasa.gov/vulnerability-disclosure-policy/ in site footer.

Mandated by:

- [OMB M-23-22](#) (2023)
- [OMB M-17-06](#) (2017)
- NID 2800.147

NASA Contact:

[Agency Web Modernization Lead](#)
(INT), APS, OCIO

14.2 Identification of Website RNO and Site/Page Editor

Preserving public trust and welcoming feedback from our website users is critical to supporting NASA’s mission through the Agency’s public web presence. Transparently sharing the names and contact information of each website’s Responsible NASA Official (RNO) and Content Lead strengthens the public’s trust in the authority of the website, and encourages users to submit valuable qualitative feedback to the Agency. This information is also critical for internal stakeholders to quickly reach the appropriate points of contact to request a content update or report an issue.

Per 5r(4) of NID 2800.147, all public-facing NASA websites must list the full names of the current “Responsible Official” (RNO) and either “Site Editor” (Website Content Lead) and/or “Page Editor” in their site footer. For example:

Responsible Official: Dr. Jane Smith
Site Editor: Alex Gray
Page Editor: Bob Brown

As a best practice, at least one of these names should link to a shared inbox or contact form that is monitored regularly for user feedback.

If technical restrictions prevent the placement of the date in the site footer, the “Responsible Official” and “Site/Page Editor” should be identified at the end of the body content.

For web applications that require users to log in, the “Responsible Official” and “Site/Page Editor” only need to be listed on the main public-facing homepage and authentication page.

14.3 Last Updated Date

Including a last updated date on a web page strengthens the public’s trust in the accuracy and timeliness of the content. This information is also critical for internal stakeholders to ensure that all public-facing web content is regularly validated and updated.

Per 5r(4) of NID 2800.147, all public-facing NASA websites must provide the “Last Updated” date for each web page in their site footer, including the day, month, and year. For example:

Last Updated: September 4, 2024

This information is ideally placed below the “Responsible Official” and “Site/Page Editor” information.

Type: Agency Mandate

Applicability: All Websites/Web Apps (Public-Facing, External and Internal)

Requirement 14(g):
Full name of RNO is listed as “Responsible Official” in site footer.

Requirement 14(h):
Full name(s) of “Site Curator” and/or “Page Editor” are listed in site footer.

Requirement 14(i):
Each page’s “Last Updated” date is listed in site footer.

Mandated by:
• NID 2800.147

NASA Contact:
[Agency Web Modernization Lead](#)
(INT), APS, OCIO

If technical restrictions prevent the placement of the date in the site footer, the “Last Updated” date should be placed at the end of the body content. For web applications that require users to log in, the “Last Updated” date only needs to be listed on the main public-facing homepage and/or authentication page.

14.4 Headers and Navigation

Reserved for future guidance on best practices.

Chapter 15. Privacy

15.1 Privacy Clearances (PIAs and PTAs)

The [E-Government \(e-Gov\) Act of 2002](#) requires that Privacy Impact Assessments (PIAs) shall be conducted and made publicly available for each Information Technology (IT) system, including websites, which gather and/or maintain information in identifiable format (IIF) on members of the public.

All external NASA websites that collect information about individuals must comply with these requirements.

15.2 Website Privacy Policy

NASA is committed to protecting the privacy of individuals from and about whom it collects, maintains, uses, and disseminates information. The RNO for a NASA website shall ensure the collection of personal information via their sites complies with the requirements specified in current NASA privacy policy guidance.

All external NASA websites are required to include a link in the site footer that reads “Privacy Policy”.

If the website adheres to NASA’s standard website privacy use cases, the “Privacy Policy” link should point to the current NASA Web Privacy Policy found at www.nasa.gov/privacy/.

If the website uses additional third-party tracking methods or collects other information in ways not specified in or exceeding the NASA Web Privacy Policy, the “Privacy Policy” link must point to a unique web page that includes the full NASA Web Privacy Policy with additional site-specific clauses.

The RNO is responsible for ensuring that their website’s site-specific privacy policy remains up to date with the latest NASA Web Privacy Policy.

Type: Federal Mandate

Applicability: All Websites/Web Apps (Public-Facing, External and Internal)

Requirement 15(a):

Website has an approved PTA and, if required, PIA.

Requirement 15(b):

Website’s PTA (and PIA if applicable) are re-evaluated following any significant modifications to the website, including the addition of new third-party services.

Requirement 15(c):

If website exceeds NASA’s standard privacy use cases, the required “Privacy Policy” footer link points to a unique web page that includes the full NASA Web Privacy Policy with additional site-specific clauses.

Mandated by:

- [E-Gov Act](#) (2002)
- [Privacy Act](#) (1974)
- [NPR 1382.1](#)

NASA Contact:

[Agency Chief Privacy Officer](#) ^(INT),
CSPD, OCIO

15.3 Children’s Online Privacy Protection Act (COPPA)

The Children’s Online Privacy Protection Act (COPPA) of 1998 regulates the Agency’s operation of websites or online services directed to children under age 13 when the website or service collects personal information from children. Operators of websites or online services for children under 13 or that knowingly collect information from children under 13 are subject to the requirements of COPPA.

Additional COPPA requirements are included in [NPR 1382.1](#), NASA Privacy Procedural Requirements.

CSPD’s SharePoint site includes guidance for RNOs: <https://nasa.sharepoint.com/sites/privacy/SitePages/Childs-Online.aspx> ^(INT)

15.4 Cookies and User Tracking Technology

The E-Government (e-Gov) Act of 2002 prohibits use of persistent tracking technology or persistent cookies on Federal government public-facing websites. OMB has provided additional guidance in M-10-22 and M-10-23.

Many website tools, apps and infrastructure use "persistent cookie" technology by default. A persistent cookie is a small text file that a website places on a visitor's computer so that it can remember the visitor when they show up again later. In general, websites use cookies for things like a "Remember Me" checkbox that lets you quickly log into a website, or to get metrics on site usage to understand how people are using the site.

Web content managers shall seek approval of the Agency CIO to use persistent tracking technology. A waiver request to the CIO shall include a description of a compelling need to gather the data on the site, as well as the clear notice to be posted on the site describing (1) its use of cookies or other automatic means of collecting information and (2) the privacy safeguards for how information derived from cookies will be handled and maintained.

The NASA Privacy Policy (www.nasa.gov/privacy) addresses the required cookies used by the Federal-wide Digital Analytics Program (DAP), which utilizes Google Analytics ([Chapter 3.1](#)).

Type: Federal Mandate

Applicability: Public-Facing and External Websites/Web Apps

Requirement 15(d):

If website collects PII and is intended to be used by children under age 13, COPPA requirements must be met.

Requirement 15(e):

Website does not use cookies or other technologies to track an individual user’s internet activity outside that website, and does not share user data with other departments/agencies without the user’s consent.

Requirement 15(f):

If website uses multi-session web measurement and customization technology to track users (e.g., persistent cookies) that includes PII, a waiver has been granted by the NASA CIO and the technology requires the user’s explicit “opt-in” consent.

Mandated by:

- [OMB M-10-22](#) (2010)
- [E-Gov Act](#) (2002)
- [COPPA](#) (1998)
- [NPR 1382.1](#)
- [ITS-HBK-1382.06-01](#) ^(INT)

NASA Contact:

[Agency Chief Privacy Officer](#) ^(INT), CSPD, OCIO

Chapter 16. Records and Archiving

Digital government records and publications available on NASA websites are subject to the same legal and regulatory guidelines and policies that apply to hard copy materials and publications.

16.1 Records Schedule and Retention

When you use electronic media, whether it's a blog, a website, or any other type of electronic communication, the regulations that govern proper management, archival and release of records still apply. The National Archives and Records Administration (NARA) offers resources and guidance to agencies to ensure proper records management.

Websites allow agencies to share content, likely resulting in the creation of Federal records. The Federal Records Act defines Federal records as any material that is recorded, made or received in the course of Federal business, regardless of its form or characteristics, and is worthy of preservation. Web content that meets this definition must be managed according to the applicable laws and regulations.

This non-exhaustive list of questions will help determine the record status of web content:

- Does it contain evidence of an agency's policies, business, or mission?
- Is the information only available on the website?
- Does the agency use the application to convey official agency information?
- Is there a business need for the information?

If the answers to any of the above questions are yes, then the content is likely to be a Federal record. Also, web content may be a Federal record when the use of the website provides added functionality, such as enhanced searchability, opportunities for public comment, or other collaboration from the public. A complete Federal record must have content, context, and structure along with associated metadata (e.g., author, date of creation). The complete record must be maintained to ensure reliability and authenticity.

The RNO is responsible for ensuring that all official records associated with the website and all associated data are retained in accordance with [NRRS 1441.1](#), NASA Records and Retention Schedules, and the NARA Guidance on Managing Web Records:

<https://www.archives.gov/records-mgmt/policy/managing-web-records-index.html>.

Type: Federal Mandate

Applicability: All Websites/Web Apps (Public-Facing, External and Internal)

Requirement 16(a):

Any web content or files that meet the definition of a Federal record per NPR 1441.1 (and are not copies of records maintained elsewhere) are retained and disposed of according to [NASA Records Retention Schedules](#).

Requirement 16(b):

Website has been appraised for historical significance by the NASA Archivist; if marked “Keep” in the [MCDT](#), all web content has been properly scanned and archived prior to full decommission.

Mandated by:

- [Federal Records Act](#) (1950)
- [NPD 1440.6](#)
- [NPR 1441.1](#)
- [NRRS 1441.1](#)

NASA Contact:

[Agency Records Officer](#) ^(INT),
Information, Data, and Analytics
Services (IDAS), OCIO

RNOs are responsible for managing the applicable NASA Records Retention Schedules for their website. For a formal ruling on if something constitutes a record, please contact the [NASA Records Officer](#).

16.2 Historical Assessment and Archival

Reserved for future guidance on best practices.

Chapter 17. Search and SEO

17.1 Site Search Functionality

Reserved for future implementation guidance on OMB M-23-22.

17.2 Visibility to Search Engines and Web Scrapers (inc. Sitemap, Robots.txt)

Reserved for future implementation guidance on OMB M-23-22.

17.3 Search Engine Optimization

Search engine optimization (SEO) is the practice of enabling search engines to index and surface content.

Strong SEO fosters transparency, enables discovery, and enhances user experience. It empowers the public to navigate complex programs, and find the information they need quickly. Accurate and informative search results also minimizes frustration by reducing wasted time on irrelevant pages. Creating a search experience that directs users to the information they seek reduces reliance on other support channels, such as email and social media. Optimizing content to be discovered by search engines and thus users is essential because almost 50 percent of traffic to NASA's websites comes from search engines.

Follow SEO best practices to help search engines discover your content:

- Write content that is clear, concise, unique, and authoritative, to increase page rankings on commercial search engines.
- Use semantic HTML, which helps search engines differentiate types of content on a page, such as the title, description, or headings, delivers more descriptive search results, and increases the effectiveness of assistive technologies, such as screen readers.
- Properly structure headings. Include only one H1 on a page, and use it for your page title. Use H2, H3, etc. to organize content into sections and subsections.
- Create an XML sitemap that includes all URLs that you want to be discoverable through search.

For more information about SEO at NASA, visit [website.nasa.gov/seo](https://www.nasa.gov/seo) ^(INT).

Type: Federal Mandate

Applicability: Public-Facing Websites/Web Apps

Requirement 17(a):

Website contains a site search function that allows users to easily search content intended for public use.

Requirement 17(b):

There is no limit in robots.txt on which commercial search engines or crawlers can access or archive web content.

Requirement 17(c):

Web scraping bots and archival services are allowed to operate unimpeded without CAPTCHAs or similar restrictions.

Requirement 17(d):

Website is structured well; contains rich, descriptive metadata; features machine-readable content to the extent practicable; and follows SEO practices.

Mandated by:

- [OMB M-23-22](#) (2023)
- [21st Century IDEA](#) (2018)

NASA Contact:

[Agency Web Modernization Lead](#)
^(INT), APS, OCIO

Additional resources are provided by the search engines themselves:

- [Bing's Collection of SEO-Related Documents](#)
- [Google's SEO Starter Guide & How Search Works](#)
- [Moz's The Beginner's Guide to SEO](#)
- [Search Engine Land's Guide to SEO](#)

17.3.1 Focus Keyword

As content is written, it is important to choose a “focus keyword,” a single term that a member of the public is likely to use as a search query to find this content. Although it will not always be possible, make the focus keyword unique. Avoid choosing a NASA acronym or jargon as a keyword, as the public is unlikely to know it and use it as a search query. If we have a new mission to Jupiter, the public will use “Jupiter” as a search term far more often than the new mission name. What about the new mission is unique related to Jupiter?

Remember to never use “NASA” as the focus keyword. Its frequent use causes search engines to ignore it and NASA’s authority for this content is reflected in our domain, even when used with a subdomain such as [science.nasa.gov](#).

Include the focus keyword in:

- The page title
- Preview text/meta description
 - This is the excerpt or description of a page (often in hidden metadata not shown to users) that search engines will pick up as explanatory or preview text for a page
- The first 10 percent of content
- Alternative text attached to the main image

17.3.2 Search Engines and Content Strategies

Every new piece of Internet content starts with zero authority with search engines, which in part prioritizes content based on how long it has been online, how useful users find the content, how often searchers click on one result over others, how frequently it is updated and how many other web properties link to it. Like many organizations, NASA has focused on new content, rather than updating older material. As a longer-term strategy, it makes sense to build foundational pieces of authoritative content that can rise in search rankings as the URL remains constant while frequently updating the content.

NASA already provides one means of easily doing so via blogs. Blog URLs stay the same (e.g., [blogs.nasa.gov/spacestation](#)) but the content is regularly updated with news. As content from the old [blogs.nasa.gov](#) is integrated with the new [NASA.gov](#) website, we’ll be able to start pulling blog updates into web pages and develop approaches to microblogging (very short updates, usually during live events) that will allow us to build relevance for search engines.

As mentioned above, another approach would be to build an authoritative reference background piece of content that would include links to updates. To use our example earlier, a page on

Jupiter which is frequently updated with new information will retain evergreen authority for that subject. To increase its relevance for search engines, promote the reference content's URL, linking to it throughout the site on relevant pages in lieu of copying the same content to other pages.

17.4 Metatags, Schemas, and Open Graph Tags

Reserved for future guidance on best practices.

Chapter 18. Surveys and Forms

Agencies must, when practicable, use electronic forms and filing to conduct official business with the public.

However, Federal websites must also ensure information collected from the public minimizes burden and maximizes public utility.

The [Paperwork Reduction Act \(PRA\) of 1995](#) covers all collections of data from the public, including webforms and online surveys. The PRA requires OMB approval of all surveys or forms where identical questions are given to 10 or more participants, which by definition includes any form or survey on a public-facing NASA website.

There are some [exceptions](#) ^(INT) to this rule, including anonymous submission forms where users can provide open-ended comments or suggestions without any sort of government guidance on the content. The [Agency Forms Management Office](#) ^(INT) can assist with these exceptions.

Remember that the NASA Web Privacy Policy only covers standard privacy use cases on informational websites like www.nasa.gov, and does not automatically cover all NASA websites ([Chapter 15.2](#)). Websites with surveys or forms require particular scrutiny, and may need to link to their own site-specific privacy policy in coordination with the Agency Privacy Officer ([Chapter 14.1](#)).

Websites with surveys or forms must conduct a PIA if they collect personally identifiable information (PII) such as full names, dates of birth, addresses, etc. ([Chapter 15.1](#)).

COPPA has additional rules about communication and collection of data from children younger than 13 ([Chapter 15.3](#)).

18.1 Information Collections and the Paperwork Reduction Act (PRA)

Web surveys that NASA employees or contractors publish on external Agency websites are considered "information collections from the public," and accordingly, fall under the regulation of the PRA. The PRA assures that all proposed collections minimize the paperwork burden on the public, consistent with the Federal Government's need for information, including through the use of automated collection techniques or other forms of IT.

Any NASA employee proposing collection of information from the public, including from NASA contractors, needs to justify the requirement, take steps to minimize the collection burden,

Type: Federal Mandate

Applicability: Public-Facing and External Websites/Web Apps

Requirement 18(a):

All owner-maintained web forms and surveys hosted on or linked to via the website are either (1) cleared through NASA's [PRA process](#), or (2) fall into an [exception category](#).

Requirement 18(b):

Every owner-maintained web form or survey in scope of the PRA displays a current, valid OMB Control Number directly above or below the form fields.

Requirement 18(c):

If providing a digital service through the website, there is an accessible (physically available) method for completing that digital service through in-person, paper-based, or other means.

Mandated by:

- [PRA](#) (1995)
- [OMB M-23-22](#) (2023)
- [NPD 1420.1](#)
- [NAII 2800.1](#)

NASA Contact:

[Agency Forms Officer](#) ^(INT), IDAS, OCIO

and comply with PRA clearance and reporting procedures. This means that every web survey of 10 or more members of the public covered by the PRA shall be cleared first by the Center PRA Clearance Coordinator, then by the NASA PRA Clearance Officer, and finally by OMB in the form of a “control number”. This OMB Control Number must be clearly visible to users of the published webform. The full PRA clearance process typically takes about 6 months to complete.

OMB also provides a generic fast-track clearance for simple user surveys intended to measure customer satisfaction and/or collect anonymous feedback from the public. This fast-track PRA clearance process typically takes about 1 month to complete. The NASA PRA team will decide which type of clearance is needed for each use case.

Additional information on the PRA clearance process can be found on OMB’s Guide to the Paperwork Reduction Act: <https://pra.digital.gov/>

NASA-specific processes and guidance can be found in [NAII 2800.1](#) and on the Agency’s internal PRA resource page: [https://nasa.sharepoint.com/sites/IDAS/SitePages/Paperwork-Reduction-Act-\(PRA\).aspx](https://nasa.sharepoint.com/sites/IDAS/SitePages/Paperwork-Reduction-Act-(PRA).aspx) ^(INT)

18.2 Privacy Act Systems of Record for PII/IFF

Reserved for future implementation guidance.

18.3 Privacy Act Statements and Notices

Reserved for future implementation guidance.

Type: Federal Mandate

Applicability: All Websites/Web Apps (Public-Facing, External and Internal)

Requirement 18(d):

If website is an SOR with information on individuals not limited to work-related information, it has a signed SORN published in the Federal Register.

Requirement 18(e):

A Privacy Act statement is posted on every web page or form that asks individuals to supply information that will become part of a system of records under the Privacy Act.

Requirement 18(f):

A privacy notice is posted on any web page or form where a Privacy Act statement is not required but members of the public could still provide PII to NASA.

Mandated by:

- [OMB M-23-22](#) (2023)
- [Privacy Act](#) (1974)
- [NPD 1420.1](#)
- [NPR 1382.1](#)
- [ITS-HBK-1382.03-01](#) ^(INT)
- [ITS-HBK-1382.06-01](#) ^(INT)

NASA Contact:

[Agency Chief Privacy Officer](#) ^(INT),
CSPD, OCIO

18.4 Digital Signatures

For online forms that require electronic signatures, customers should be obtaining these forms from the [Agency Forms Management Office \(AFMO\)](#) ^(INT), which ensures that all Federal and Agency requirements and policies are met before posting.

18.5 NASA Forms Management

All information collections are subject to [NPD 1420.1](#), NASA Forms Management. New information collections/forms and changes to existing ones should be submitted to the AFMO prior to publication on any website.

The AFMO is tasked with verifying that all official information collections adhere to all laws, regulations, memos, and other policies that apply to information collections. If the information collection is not within the purview of the NASA Forms Management policy, the AFMO provides guidance on applicable laws and policies.

Type: Agency Mandate

Applicability: All Websites/Web Apps (Public-Facing, External and Internal)

Requirement 18(g):

If an owner-maintained web form uses electronic signatures, it must be approved by AFMO to ensure all legal and security requirements are met.

Requirement 18(h):

All official numbered NASA or Center forms that appear on the website are either (1) direct links to [NEF](#), or (2) approved by the [Agency/Center Forms Manager](#) to be displayed via alternative methods.

Mandated by:

- [OMB M-23-22](#) (2023)
- [GPEA](#) (1998)
- [NPD 1420.1](#)

NASA Contact:

[Agency Forms Officer](#) ^(INT), IDAS, OCIO

Chapter 19. User Login and Authentication

19.1 Multi-factor Authentication (MFA)

Reserved for future implementation guidance on OMB M-23-22.

19.2 Internal NASA Users

Reserved for future implementation guidance on OMB M-23-22.

19.3 External Non-NASA Users and Members of the Public

Reserved for future implementation guidance on OMB M-23-22.

19.4 User Customization and Personalization

Reserved for future guidance on best practices.

Type: Federal Mandate

Applicability: All Websites/Web Apps (Public-Facing, External and Internal)

Requirement 19(a):

If the website or a site section requires a login, MFA is required for all users.

Requirement 19(b):

No users are required to periodically rotate their passwords.

Requirement 19(c):

No user accounts are automatically deactivated or penalized for inactivity according to an expected use schedule.

Requirement 19(d):

NASA employees and contractors are required to log in using their PIV card or another phishing-resistant MFA method.

Requirement 19(e):

External non-NASA users with login accounts have the option to use phishing-resistant MFA methods such as FIDO or WebAuthn.

Requirement 19(f):

The login process is compatible with password managers and does not prevent the “pasting” of passwords.

Mandated by:

- [OMB M-23-22](#) (2023)
- [OMB M-22-09](#) (2022)
- [NPR 2810.1](#)

NASA Contact:

[ICAM Subject Matter Experts](#) ^(INT),
WCS, OCIO

Appendix A. Definitions.

Digital Service. A transactional service (e.g., online form, account management tool) or an informational service that is delivered over the internet across a variety of platforms, devices, and delivery mechanisms (e.g., mobile applications, text/SMS). Digital services are typically designed to be read or used by a human user. Digital services are separate and distinct from what are commonly referred to as “web services” as defined below.

Domain Name. A unique name that can resolve to IP addresses and other informational attributes, as defined by the DNS protocol. On the internet, domain names help to identify companies, organizations, institutions, or individuals and the networked resources they manage. In this directive, “domain name” and “domain” are used interchangeably as shorthand for “fully qualified domain name”. This definition includes both top-level domains (e.g., nasa.gov, globe.gov, spaceappschallenge.org) as well as subdomains (e.g., science.nasa.gov, data.globe.gov).

External Website. A website with an external DNS record that any member of the public can access from outside NASA networks. This definition includes, but is not limited to, “public-facing” websites as defined below. For example, some “external websites” (accessible from non-NASA networks) are only used as development, testing or staging environments, and are not intended for use by the public; these would not be considered “public-facing websites”.

Flagship Websites. Collective term for two specific websites: www.nasa.gov (maintained by OCIO) and science.nasa.gov (maintained by SMD). The flagship websites are part of the Agency’s “unified public web experience” as defined below.

Internal Website. A website intended to be accessed and used by Federal Government employees or contractors on behalf of the Agency. For the purposes of this directive, an “internal website” is only accessible: (1) from within a NASA network (e.g., webtads.nasa.gov) and/or (2) after authenticating the user as a NASA employee or contractor (e.g., id.nasa.gov).

Public-Facing Website. A website intended to be accessed and used by a member of the public or a customer. A website that is primarily used by federal employees, contractors, or other business partners (such as regulatory stakeholders) but that is accessible to the public may be considered “public-facing” if the website content is of significant public value (e.g., for transparency purposes). All public-facing websites are also “external websites” as defined above.

Responsible NASA Official (RNO). The NASA civil service employee responsible for an Agency website and accountable for both its content and technical infrastructure.

Unified Public Web Experience. Websites authorized by the CIO to provide unique functionality and content through subdomains of nasa.gov in adherence with the unified design system and global navigation of the Agency flagship websites (e.g., plus.nasa.gov, ciencia.nasa.gov). This may be achieved through a variety of web platforms, backends and technologies as long as the public’s user experience on the frontend is seamless.

Web Application. A software program that is accessible using a web browser. All web applications are considered “websites” as defined below for the purposes of Agency and Federal requirements and standards, unless explicitly noted.

Web Service. A specific type of web application (or web application component) that uses a standardized format like XML to interact with other web applications over the internet. A web service is often designed to be machine-readable and used for applications to interact with each other. Web services are separate and distinct from “digital services” as defined above.

Website. A group of globally accessible interlinked web pages under a unique host name that is accessible using a web browser, typically designed to be read or used by a human. This term includes (but is not limited to) all “web applications” as defined above.

Website Technical Lead. The NASA civil service employee or contractor (typically a senior web developer) responsible for maintaining and updating a website’s code, database, hosting platform, dependencies, integrations, and other technical infrastructure, under the oversight of the website’s RNO.

Website Content Lead. The NASA civil service employee or contractor (typically a senior web editor) responsible for maintaining and updating a website’s text, metadata, multimedia, uploaded files (including PDFs), links, and other content shown on rendered web pages, under the oversight of the website’s RNO.

Appendix B. Acronyms.

AART	Agency Application Rationalization Tool – aart.nasa.gov ^(INT)
AFMO	Agency Forms Management Office (IDAS, OCIO)
API	Application Programming Interface
APS	Applications and Platform Services (OCIO)
ATO	Authority To Operate
AVAIL	Agency Video And Image Library – images.nasa.gov
BOD	Binding Operational Directive (issued by CISA)
CEO	Customer Engagement Office (OCIO)
CFR	Code of Federal Regulations
CIMA	Center for Internal Mobile Applications
CIO	Chief Information Officer
CISA	Cybersecurity and Infrastructure Security Agency
CMS	Content Management System
CNSI	Classified National Security Information
COPPA	Children's Online Privacy Protection Act
CSPD	Cybersecurity and Privacy Division (OCIO)
CUI	Controlled Unclassified Information
DAP	Digital Analytics Program
DNS	Domain Name System
EAR	Export Administration Regulations
EIT	Electronic and Information Technology
E.O.	Executive Order
ESD	Enterprise Service Desk – esd.nasa.gov ^(INT)
FACA	Federal Advisory Committee Act of 1972

FAR	Federal Acquisition Regulation
FISMA	Federal Information Security Modernization Act
GPEA	Government Paperwork Elimination Act of 1998
GPRA	Government Performance and Results Act of 1993
GSA	General Services Administration
HDS	Horizon Design System
HTTP	Hypertext Transfer Protocol
HTTPS	Hypertext Transfer Protocol Secure
HSTS	HTTP Strict Transport Security
ICAM	Identity, Credential, and Access Management (WCS, OCIO)
ICT	Information and Communication Technology
IDAS	Information, Data, and Analytics Services (OCIO)
IDEA	21 st Century Integrated Digital Experience Act of 2018
IIF	Information in Identifiable Form
IP	Intellectual Property
IPv6	Internet Protocol version 6
ISP	Internet Service Provider
ITAR	International Trafficking of Arms Regulations
LEP	Limited English Proficiency
KDP-D	Key Decision Point – Decommission (NPD 7120.4)
KDP-F	Key Decision Point – Formulation (NPD 7120.4)
KDP-I	Key Decision Point – Implementation (NPD 7120.4)
KDP-O	Key Decision Point – Operations (NPD 7120.4)
MAM	Multimedia Asset Management (type of system)
MCDT	Modernization and Consolidation Domain Tracker – nasa.sharepoint.com/sites/domains ^(INT)
MFA	Multi-Factor Authentication
NAMS	NASA Account Management System – nams.nasa.gov ^(INT)
NEF	NASA Electronic Forms – nef.nasa.gov
NFS	NASA FAR Supplement
NID	NASA Interim Directive
NIST	National Institute of Standards and Technology
NODIS	NASA Online Directives Information System – nodis3.gsfc.nasa.gov
OCIO	Office of the Chief Information Officer (NASA)
OCOMM	Office of Communications (NASA)
ODEO	Office of Diversity and Equal Opportunity (NASA)
OGC	Office of the General Counsel (NASA)
OIC	Official(s) in Charge
OIIR	Office of International and Interagency Relations (NASA)
OMB	Office of Management and Budget (White House)
OPS	Office of Protective Services (NASA)
PIA	Privacy Impact Assessment
PII	Personally Identifiable Information
PKI	Public Key Infrastructure
PRA	Paperwork Reduction Act
PTA	Privacy Threshold Analysis
PTR	Pointer Record (in DNS)
RISCS	Risk Information Security Compliance System – riscs.nasa.gov ^(INT)
RNO	Responsible NASA Official
SBU	Sensitive But Unclassified information
SEO	Search Engine Optimization
SMD	Science Mission Directorate (NASA)
SPD	SMD Policy Document
SSL	Secure Sockets Layer

SSP	System Security Plan
STI	Scientific and Technical Information
TCP/IP	Transmission Control Protocol/Internet Protocol
TLS	Transport Layer Security
TOS	Terms of Service
UCNI	Unclassified Controlled Nuclear Information
USWDS	U.S. Web Design System – designsystem.digital.gov
UX	User Experience
VPN	Virtual Private Network
W3C	World Wide Web Consortium – www.w3.org
WCAG	Web Content Accessibility Guidelines
WCS	Workforce and Collaboration Services (OCIO)

Appendix C. Checklists of Federal and Agency Requirements

These checklists are provided as a quick reference tool for website owners and teams with high-level summaries of requirements from their source policy documents. The omission of a Federal or Agency requirement on these checklists does not exempt NASA websites from compliance. Each checklist item includes:

- NAII chapter that contains more details and guidance on the requirement (e.g., “2.1”)
- Summary of the requirement with a unique checklist identifier (e.g., “2(a). Entire website...”)
- Citations of authoritative laws, regulations, and Federal/Agency policy documents that reference the requirement
- When to implement and validate the requirement according to project life-cycle phases and key decision points defined by [NPD 7120.7](#), NASA Engineering and Program/Project Management Policy (e.g., “Implementation (KDP-O)”)
 - All requirements shall continue to be validated on an annual basis during the Operations phase
- Whether the requirement can be detected via automated scans and reported in the MCDT (“Yes”, “Partially”, or “No”)

C.1 Checklist for Public-Facing NASA Websites

Requirements for Public-Facing NASA Websites		Mandated by	Project Phase (Validation)	Scannable?
Accessibility and Section 508				
2.1	2(a). Entire website (including both code and content) meets or exceeds all WCAG 2.0 A and AA success criteria.	Section 508; OMB M-24-08	Implementation (KDP-O)	Partially
2.1	2(b). Section 508 standards are incorporated into the acquisition lifecycle for web development and content management (inc. market research, solicitations, evaluations, and contract management).	48 CFR §§ 11.002(f) and 39.203 (FAR); OMB M-24-08	Pre-Formulation (KDP-F)	No
2.2-2.3	2(c). Accessibility testing is incorporated from the beginning of the site’s design and development, and integrated throughout every step of the site’s lifecycle.	Section 508; OMB M-24-08	Formulation (KDP-I)	No
Analytics				
3.1	3(a). The DAP tracking code is installed and active on all non-authenticated public web pages.	21 st Century IDEA; OMB M-23-22	Implementation (KDP-O)	Yes
3.2	3(b). The website collects qualitative feedback from users via a survey, feedback form, email link, or other mechanism.	21 st Century IDEA; OMB M-23-22	Implementation (KDP-O)	Partially
Branding				
4.1	4(a). The NASA Insignia (“meatball”) is the only logo used in the site header. If hyperlinked, it sends users to www.nasa.gov , not any other URL.	14 CFR 1221	Formulation (KDP-I)	No
4.2-4.3	4(b). Any mission, partner, and third-party logos are used according to the NASA Graphic Standards Manual .	14 CFR 1221	Implementation (KDP-O)	No
Content				
5.1	5(a). Plain language is used on any web page that either: (1) is necessary for obtaining a NASA service or benefit; (2) provides information about that service or benefit; or (3) explains to the public how to comply with requirements that NASA administers or enforces.	Plain Writing Act; OMB M-23-22; NASA Stylebook and Comms Manual	Implementation (KDP-O)	No
5.2	5(b). Website content is directly related to the official responsibilities of Agency individuals and organizations fulfilling their assigned missions.	5 CFR 2635.701-705	Pre-Formulation (KDP-F)	No
5.2	5(c). If website content is no longer actively maintained but is kept online for historical purposes, a warning message is displayed to users.	OMB M-23-22	Operations (Annual)	No

Requirements for Public-Facing NASA Websites		Mandated by	Project Phase (Validation)	Scannable?
5.3	5(d). No website content gives the appearance of lobbying or engaging in partisan political activity.	Anti-Lobbying Act; NPD 2540.1	Implementation (KDP-O)	No
5.4	5(e). All web content available to the public has been reviewed and fully authorized for public release through the appropriate Agency and/or Center process.	14 CFR 1213; NPD 2540.1	Implementation (KDP-O)	No
5.5	5(f). No Space Act Agreement information is available to the public unless approved by the NASA Partnerships Office.	Space Act; Pub. L. 115-10	Implementation (KDP-O)	No
5.6	5(g). Any STI has been reviewed and approved through the NF-1676 process prior to publication on the website.	NPD 2200.1	Implementation (KDP-O)	No
Content Security				
6.1	6(a). No SBU or CUI is available to the public unless properly decontrolled.	14 CFR 1213; NPD 2521.1; NPR 2810.7	Implementation (KDP-O)	Partially
6.2	6(b). No EAR or ITAR sensitive content is available to the public.	EAR; ITAR; 14 CFR 1213; NPD 2190.1	Implementation (KDP-O)	No
6.3-6.4	6(c). No UCNI or CNSI is available to the public.	Atomic Energy Act; E.O. 12958; NPR 1600.2	Implementation (KDP-O)	No
6.5	6(d). No employee locator data, non-work-related personal information or links, or other sensitive personnel information are available to the public.	14 CFR 1213; NPR 1600.1; ITS-HBK-2810.11-02	Implementation (KDP-O)	No
6.6-6.7	6(e). Any Agency facility maps, aerial views, schematics, blueprints, or similar sensitive infrastructure information on the website only contain a level of detail that could be found using publicly available tools such as Google Maps, unless explicitly required by law or regulation.	14 CFR 1213; NPR 1600.1; ITS-HBK-2810.11-02	Implementation (KDP-O)	No
6.8	6(f). No internal Agency or Center policies are available to the public unless published in NODIS.	14 CFR 1213; NPR 1600.1; ITS-HBK-2810.11-02	Implementation (KDP-O)	No
Design and UX				
7.1	7(a). Website complies with GSA's Federal Website Standards .	21 st Century IDEA; OMB M-23-22	Formulation (KDP-I)	Partially

Requirements for Public-Facing NASA Websites		Mandated by	Project Phase (Validation)	Scannable?
7.2	7(b). Website employs a clear and consistent visual design, including proper use of NASA’s brand identity.	21 st Century IDEA; OMB M-23-22	Formulation (KDP-I)	No
7.3	7(c). Website is fully functional and usable on common mobile devices such as smartphones and tablets.	21 st Century IDEA; OMB M-23-22	Formulation (KDP-I)	Partially
7.7	7(d). Website is continually tested to ensure that user needs are addressed.	21 st Century IDEA; OMB M-23-22	Operations (Annual)	No
Domains, URLs and Links				
8.1	8(a). Website is published on a .gov domain, or (in limited cases) on an approved non-.gov domain listed in GSA’s registry .	DOTGOV Act; OMB M-23-10; OMB M-22-09	Pre-Formulation (KDP-F)	Yes
8.1	8(b). Domain name meets all .gov naming requirements : it is short, memorable, and unambiguous.	DOTGOV Act; OMB M-23-10	Pre-Formulation (KDP-F)	No
8.2	8(c). External links to third-party websites not owned by the Federal government are clearly identified with iconography, “(external)” link text, or other methods.	OMB M-10-23	Implementation (KDP-O)	No
8.2	8(d). Website does not link to any of the following types of inappropriate content: (1) Promotion or advertisement of alcohol or tobacco or e-cigarette products; (2) Encouragement or facilitation of illegal activities; (3) Pornographic or sexually oriented materials; (4) Encouragement of discrimination against groups of people; (5) Collection of data that violates NASA’s Privacy Policy or Forms Policy; or (6) Content giving the appearance that NASA is violating the legal prohibition against lobbying Congress or taking overt partisan political positions.	5 CFR 2635.701-705; NPD 1420.1A; NPD 2540.1	Implementation (KDP-O)	No
Governance				
9.1	9(a). Website is registered in AART as a website or web application, with all required fields up to date.	NID 2800.147; APS Handbook	Formulation (KDP-I)	Partially
9.1	9(b). Website is registered in RISCS with an approved ATO and SSP.	NPD 2800.1; NID 2800.147	Implementation (KDP-O)	No

Requirements for Public-Facing NASA Websites		Mandated by	Project Phase (Validation)	Scannable?
9.1	9(c). Website is listed in the MCDT as a public-facing website, with all required fields up to date (inc. AART and SSP record locators).	NID 2800.147	Implementation (KDP-O)	Yes
9.3	9(d). Compliance with Federal and Agency requirements is revalidated and documented in the MCDT at least once per fiscal year.	NID 2800.147	Operations (Annual)	Yes
Images and Videos				
10.1	10(a). Official NASA imagery, videos, and other multimedia posted on the website adhere to NASA-STD-2821 and NASA-STD-2822.	NPD 1383.1; NASA-STD-2821; NASA-STD-2822	Implementation (KDP-O)	No
10.2	10(b). Any external persons who are visible and identifiable in posted images or videos have granted their permission (through NF-1859 or equivalent) to be interviewed, photographed, or videoed by NASA and our representatives or partners.	Privacy Act; NF-1859	Operations (Annual)	No
10.7	10(c). Meaningful text alternatives (inc. image alt text, chart descriptions, transcripts, and captions) are provided for all non-text web content and multimedia, unless a WCAG exception applies.	Section 508; OMB M-24-08	Implementation (KDP-O)	Partially
Intellectual Property				
11.1	11(a). The copyright owner’s permission or license has been obtained for any copyrighted material (including stock images) used on the website, unless an exception applies.	U.S. Copyright Law; NPD 1900.9	Implementation (KDP-O)	No
11.1	11(b). All copyrighted material is clearly identified as copyright protected with the name of the third-party copyright owner.	U.S. Copyright Law; NPD 1900.9	Implementation (KDP-O)	No
11.2	11(c). No information regarding potentially patentable creations or trade secrets is available to the public.	U.S. Patent Law	Implementation (KDP-O)	No
11.3	11(d). No proprietary or confidential information as identified by NASA partners or vendors is available to the public.	NPR 7500.2	Implementation (KDP-O)	No
IT Security				
12.1	12(a). All web traffic (inc. internal-facing traffic) is encrypted as HTTPS, and all HTTP requests are redirected to HTTPS.	OMB M-22-09; NASA-SPEC-2607	Implementation (KDP-O)	Yes
12.1	12(b). If not using a subdomain under nasa.gov (already compliant), domain is “preloaded” as HTTPS-only (HSTS) with a max age of one year.	OMB M-22-09; NASA-SPEC-2607	Implementation (KDP-O)	Yes
12.1	12(c). Domain has a non-expired TLS certificate that conforms with NASA-SPEC-2650, including registration in ICAM’s PKI tool .	OMB M-15-13; NASA-SPEC-2650	Operations (Annual)	Yes

Requirements for Public-Facing NASA Websites		Mandated by	Project Phase (Validation)	Scannable?
12.2	12(d). Website uses the latest stable versions of HTTP, HTML, and other relevant technical standards.	OMB M-23-22	Implementation (KDP-O)	No
12.2	12(e). Website operates in native IPv6-only mode.	OMB M-21-07; FAR Case 2005-041; NASA CIO Memo on IPv6	Implementation (KDP-O)	Yes
12.3	12(f). There are no links to content or files hosted on Agency file sharing platforms (e.g., Microsoft 365, BOX).	NIST SP 800-44	Implementation (KDP-O)	No
12.4	12(g). Website does not embed static, unchanging web assets that are hosted on third-party services outside NASA's control.	CISA BOD 20-01; OMB M-23-22	Implementation (KDP-O)	No
12.6-12.7	12(h). The SSP in RISCS includes all relevant information controls for the specific website tenant (if different from host system/platform).	NPR 2810.1	Implementation (KDP-O)	No
12.8	12(i). Any active third-party tools or plugins incorporated or embedded in the website meet all security, privacy, and accessibility requirements, and are specifically addressed in the website's PIA, SSP, and/or Privacy Policy.	OMB M-10-23; ITS-HBK-1382.06-01	Implementation (KDP-O)	No
Multilingual				
13.1	13(a). Web content is translated for users with limited English proficiency when required by law.	68 CFR 70039; E.O. 13166; OMB M-23-22	Formulation (KDP-I)	No
Navigation, Headers, and Footers				
14.1	14(a). "About NASA" links to www.nasa.gov/about/ in site footer on each page.	E-Gov Act; OMB M-23-22	Implementation (KDP-O)	Partially
14.1	14(b). "Accessibility" links to www.nasa.gov/accessibility/ (or expanded site-specific policy) in site footer.	Section 508; OMB M-24-08	Implementation (KDP-O)	Partially
14.1	14(c). "FOIA" links to www.nasa.gov/foia/ in site footer.	Freedom of Information Act; OMB M-23-22	Implementation (KDP-O)	Partially
14.1	14(d). "No FEAR Act" links to www.nasa.gov/odeo/no-fear-act/ in site footer.	No FEAR Act; OMB M-23-22	Implementation (KDP-O)	Partially

Requirements for Public-Facing NASA Websites		Mandated by	Project Phase (Validation)	Scannable?
14.1	14(e). “Privacy Policy” links to www.nasa.gov/privacy/ (or expanded site-specific policy when applicable) in site footer.	E-Gov Act; OMB M-03-22; NPR 1382.1; ITS- HBK-1382.06-01	Implementation (KDP-O)	Partially
14.1	14(f). “Vulnerability Disclosure Policy” links to www.nasa.gov/vulnerability-disclosure-policy/ in site footer.	FISMA; OMB M-20-32	Implementation (KDP-O)	Partially
14.2	14(g). Full name of RNO is listed as “Responsible Official” in site footer.	NID 2800.147	Implementation (KDP-O)	No
14.2	14(h). Full name(s) of “Site Curator” and/or “Page Editor” are listed in site footer.	NID 2800.147	Implementation (KDP-O)	No
14.3	14(i). Each page’s “Last Updated” date is listed in site footer.	NID 2800.147	Implementation (KDP-O)	No
Privacy				
15.1	15(a). Website has an approved PTA and, if required, PIA.	E-Gov Act; NPR 1382.1	Implementation (KDP-O)	No
15.1	15(b). Website’s PTA (and PIA if applicable) are re-evaluated following any significant modifications to the website, including the addition of new third-party services.	E-Gov Act; NPR 1382.1	Operations (Annual)	No
15.2	15(c). If website exceeds NASA’s standard privacy use cases, the required “Privacy Policy” footer link points to a unique web page that includes the full NASA Web Privacy Policy with additional site-specific clauses.	NPR 1382.1	Implementation (KDP-O)	No
15.3	15(d). If website collects PII and is intended to be used by children under age 13, COPPA requirements must be met.	COPPA; NPR 1382.1; ITS- HBK-1382.06-01	Implementation (KDP-O)	No
15.4	15(e). Website does not use cookies or other technologies to track an individual user’s internet activity outside that website, and does not share user data with other departments/agencies without the user’s consent.	OMB M-10-22; NPR 1382.1; ITS- HBK-1382.06-01	Implementation (KDP-O)	No
15.4	15(f). If website uses multi-session web measurement and customization technology to track users (e.g., persistent cookies) that includes PII, a waiver has been granted by the NASA CIO and the technology requires the user’s explicit “opt-in” consent.	OMB M-10-22; NPR 1382.1; ITS- HBK-1382.06-01	Implementation (KDP-O)	No

Requirements for Public-Facing NASA Websites		Mandated by	Project Phase (Validation)	Scannable?
Records and Archiving				
16.1	16(a). Any web content or files that meet the definition of a Federal record per NPR 1441.1 (and are not copies of records maintained elsewhere) are retained and disposed of according to NASA Records Retention Schedules .	Federal Records Act; NPR 1441.1; NRRS 1441.1	Operations (Annual)	No
16.1	16(b). Website has been appraised for historical significance by the NASA Archivist; if marked “Keep” in the MCDT , all web content has been properly scanned and archived prior to full decommission.	NPD 1440.6	Decommission (KDP-D)	No
Search and SEO				
17.1	17(a). Website contains a site search function that allows users to easily search content intended for public use.	21 st Century IDEA; OMB M-23-22	Formulation (KDP-I)	Yes
17.2	17(b). There is no limit in robots.txt on which commercial search engines or crawlers can access or archive web content.	21 st Century IDEA; OMB M-23-22	Implementation (KDP-O)	Yes
17.2	17(c). Web scraping bots and archival services are allowed to operate unimpeded without CAPTCHAs or similar restrictions.	21 st Century IDEA; OMB M-23-22	Implementation (KDP-O)	Partially
17.3-17.4	17(d). Website is structured well; contains rich, descriptive metadata; features machine-readable content to the extent practicable; and follows SEO practices.	21 st Century IDEA; OMB M-23-22	Implementation (KDP-O)	Partially
Surveys and Forms				
18.1	18(a). All owner-maintained web forms and surveys hosted on or linked to via the website are either (1) cleared through NASA’s PRA process , or (2) fall into an exception category .	PRA; NPD 1420.1; NAI 2800.1	Formulation (KDP-I)	No
18.1	18(b). Every owner-maintained web form or survey in scope of the PRA displays a current, valid OMB Control Number directly above or below the form fields.	PRA; NPD 1420.1; NAI 2800.1	Implementation (KDP-O)	No
18.1	18(c). If providing a digital service through the website, there is an accessible (physically available) method for completing that digital service through in-person, paper-based, or other means.	OMB M-23-22	Formulation (KDP-I)	No
18.2	18(d). If website is a SOR with information on individuals not limited to work-related information, it has a signed SORN published in the Federal Register.	Privacy Act; NPR 1382.1; ITS-HBK-1382.03-01	Implementation (KDP-O)	No

Requirements for Public-Facing NASA Websites		Mandated by	Project Phase (Validation)	Scannable?
18.3	18(e). A Privacy Act statement is posted on every web page or form that asks individuals to supply information that will become part of a system of records under the Privacy Act.	Privacy Act; OMB M-23-22; NPR 1382.1; ITS- HBK-1382.03-01	Implementation (KDP-O)	No
18.3	18(f). A privacy notice is posted on any web page or form where a Privacy Act statement is <u>not</u> required but members of the public could still provide PII to NASA.	Privacy Act; OMB M-23-22; NPR 1382.1; ITS- HBK-1382.06-01	Implementation (KDP-O)	No
18.4	18(g). If an owner-maintained web form uses electronic signatures, it must be approved by AFMO to ensure all legal and security requirements are met.	GPEA; OMB M-23-22; NPD 1420.1	Formulation (KDP-I)	No
18.5	18(h). All official numbered NASA or Center forms that appear on the website are either (1) direct links to NEF , or (2) approved by the Agency and/or Center Forms Manager to be displayed via alternative methods.	NPD 1420.1	Formulation (KDP-I)	No
User Login and Authentication				
19.1	19(a). If the website or a site section requires a login, MFA is required for all users.	OMB M-22-09; NPR 2810.1	Formulation (KDP-I)	Partially
19.1	19(b). No users are required to periodically rotate their passwords.	OMB M-22-09	Implementation (KDP-O)	No
19.1	19(c). No user accounts are automatically deactivated or penalized for inactivity according to an expected use schedule.	OMB M-23-22	Implementation (KDP-O)	No
19.2	19(d). NASA employees and contractors are required to log in using their PIV card or another phishing-resistant MFA method.	OMB M-22-09	Formulation (KDP-I)	No
19.3	19(e). External non-NASA users with login accounts have the option to use phishing-resistant MFA methods such as FIDO or WebAuthn.	OMB M-22-09	Implementation (KDP-O)	No
19.3	19(f). The login process is compatible with password managers and does not prevent the “pasting” of passwords.	OMB M-23-22	Implementation (KDP-O)	No

C.2 Checklist for Web Content on Flagship Websites (www.nasa.gov & science.nasa.gov)

Reserved for future checklist.

C.3 Checklist for Non-NASA-Branded Public-Facing Websites (inc. Multiagency or International)

Reserved for future checklist.

C.4 Checklist for External NASA Websites (Not Intended for Public Use)

Reserved for future checklist.

C.5 Checklist for Internal NASA Websites

Reserved for future checklist.

Appendix D. NASA Internet Publishing Standards

NASA Internet Publishing Standards fall into two main categories: (1) information that broadly shall not be made available to the public or (2) information that broadly may be made available to the public. This list is not exhaustive but is intended to be illustrative.

The following broad categories of information shall **NOT** be made available to the public:

✘ Information critical to protecting Agency assets and personnel:

- Computer passwords, pass phrases, or PIN codes
- Computer network configurations or designs, including detailed system diagrams
- Identification of operating systems (vendor, product, and version) used on specific servers
- Internet Protocol (IP) addresses
- IT System capabilities (e.g., staffing levels, hours of operation) or limitations
- IT System security plans, risk analyses, system vulnerabilities, procedures, and controls methods
- IT System compromise information, including evidence data
- IT System security/auditing logs
- Names/email addresses/phone numbers that uniquely identify system administrators
- Physical security information such as key codes, cipher lock combinations, or significant badging information, including pictures of NASA badges
- Internal Center maps, including labeled aerial views
- Technically detailed schematics or drawings of utilities, networks, airfields, aircraft, buildings
- Facility information including detailed drawings, schematics, physical locations, staffing levels, and hours of operation
- Specific information on the composition, preparation, storage locations or optimal use of hazardous materials, explosives, or biotoxins
- Detailed disaster recovery plans
- Details on emergency response procedures, evacuation routes, or officials responsible for these issues
- Personnel locators (i.e., building and room numbers, mail stops, or other information which could be used to determine personnel whereabouts at a given point in time, e.g., calendar information)
- Internal Center policies and procedures that have unresolved content publishing issues
- Information on internal NASA-only or Center-only activities or events (e.g., picnics, symposiums), especially those that specify exact locations
- Non-work-related personal information (including links to personal Web pages, social media accounts or resumes)
- Date and time identification of security-sensitive events
- Video streaming or still images of locations where physical vulnerabilities might be exposed

✘ Information protected by law:

- National security information (classified information)
- Personal information prohibited from disclosure by the Privacy Act or FOIA Exemption 6

- This information includes, but is not limited to, Social Security numbers, home telephone numbers, home addresses, and medical data
- Export controlled information
- Technical innovations prior to release approval by patent counsel
- Proprietary information of the Government or others such as:
 - Information disclosing inventions and technical innovations, including software, protected under 35 U.S.C. 205 and FOIA Exemption 3, unless release is approved by Center Patent Counsel
 - Trade secret information protected or prohibited from disclosure under the Trade Secrets Act (18 U.S.C 1905) or FOIA Exemption 4
 - Copyrighted materials unless approved for publication by the copyright owner
- Investigative information
- Commercially licensed software restricted in accordance with the license or agreement under which it was obtained
- Information protected by treaty or agreement
- Invention disclosures
- Source evaluation information
- Confidential financial data relating to contractors
- Other information determined non-releasable under FOIA
- Procurement sensitive information such as vendor quotes (except as part of an electronic auction), attribution information or results, or negotiating positions

✘ Information protected by Government or Agency policy or regulation:

- NASA-developed software (unless authorized)
- Information characterized as 'Administratively Controlled Information' (per recent NASA policy) or previously designated 'For Official Use Only'
- Pre-decisional information such as the Agency budget prior to formal release
- Embargoed scientific, technical, launch, or other mission information
- Launch-related information whose compromise may adversely impact safety or security

The following broad categories of information **MAY** be made available to the Public:

✓ Documents intended for general dissemination:

- The NASA Strategic Plan and related documents
- Personnel locator information not related to physical location (e.g., work email addresses and phone numbers when necessary)
- Organizational information not covered by Privacy Act restrictions
- Directions and related information that meet the legitimate needs of the public wishing to visit our Centers
- Information intended by the Agency to assist the public in better understanding the Agency's history, organization, missions, programs, and projects
- Work-related personal biographies that do not compromise any sensitive aspect of the project with which the individual is associated

✓ **Official Agency websites which provide Agency information:**

- Agency policy documents via NODIS
- Information released by the Agency and Center Public Affairs Offices
- Press releases and similar information
- Public service messages such as anti-drug campaign information
- Official Agency Information Approved for Release

✓ **Published documents:**

- Science and engineering information and data that complies with NASA's STI policy for publication (NPR 2200.2)
- NASA Standards Program information, including official Agency engineering and information technology standards

Appendix E. References.

E.1 United States Code

- a. Plain Writing Act of 2010, 5 U.S.C. § 301.
- b. No FEAR Act of 2002, as amended, 5 U.S.C. ch. 23 pt. 2301 et seq., Pub. L. 107–174, 29 CFR pt. 1614.
- c. Freedom of Information Act (FOIA) of 1967, as amended, 5 U.S.C. § 552.
- d. Privacy Act of 1974, as amended, 5 U.S.C. § 552a.
- e. U.S. Trademark Law, 15 U.S.C. ch. 22.
- f. Children's Online Privacy Protection Act (COPPA) of 1998, 15 U.S.C. §§ 6501–6505.
- g. U.S. Copyright Law, 17 U.S.C. ch. 1-8 and 10-12.
- h. Trade Secrets Act, 18 U.S.C. § 1905.
- i. Anti-Lobbying Act of 1919, as amended, 18 U.S.C. § 1913.
- j. Rehabilitation Act of 1973, as amended, 29 U.S.C § 794d, Pub. L. 93–112 title V section 508.
- k. Government Performance and Results Act (GPRA) Modernization Act of 2010, 31 U.S.C. § 1115 et seq.
- l. Antideficiency Act of 1884, as amended, 31 U.S.C. § 1341, Pub. L. 97–258.
- m. U.S. Patent Law, 35 U.S.C. ch. 26.
- n. Atomic Energy Act of 1954, as amended, 42 U.S.C. §§ 2011–2021, 2022–2286i, and 2296a–2297h-13.
- o. Federal Records Act of 1950, as amended, 44 U.S.C ch. 31 and 35, 36 CFR pt. 1220-1238.
- p. Paperwork Reduction Act (PRA) of 1995, as amended, 44 U.S.C. § 3501 et seq.
- q. Federal Information Security Management Act (FISMA) of 2002, 44 U.S.C. § 3541, et seq.
- r. E-Government Act of 2002, as amended, 44 U.S.C. § 3601 et seq.
- s. National Aeronautics and Space Act, as amended, 51 U.S.C. § 20101 et seq.

E.2 Public Laws

- a. DOTGOV Online Trust in Government Act, Pub. L. 116-260 (2020).
- b. 21st Century Integrated Digital Experience Act (IDEA), Pub. L. 115-336 (2018).
- c. Connected Government Act, Pub. L. 115-114 (2018).
- d. NASA Transition Authorization Act, Pub. L. 115-10 (2017).
- e. Information Quality Act, Pub. L. 106-554 (2000).
- f. Government Paperwork Elimination Act (GPEA), Pub. L. 105-277 (1998).
- g. Workforce Investment Act, as amended, Pub. L. 105-220 (1998).
- h. Government Performance and Results Act (GPRA), as amended, Pub. L. 103-62 (1993).
- i. Federal Advisory Committee Act (FACA), as amended, Pub. L. 92-463 (1972).

E.3 Executive Orders (E.O.)

- a. Transforming Federal Customer Experience and Service Delivery to Rebuild Trust in Government, E.O. 14058, 86 CFR 71357 (2021).
- b. Diversity, Equity, Inclusion, and Accessibility in the Federal Workforce, E.O. 14035, 86 CFR 34593 (2021).
- c. Improving the Nation's Cybersecurity, E.O. 14028, 86 CFR 26633 (2021).
- d. Strengthening the Cybersecurity of Federal Networks and Critical Infrastructure, E.O. 13800, 82 CFR 22391 (2017).
- e. Making Open and Machine Readable the New Default for Government Information, E.O. 13642, 78 CFR 28111 (2013).

- f. Streamlining Service Delivery and Improving Customer Service, E.O. 13571, 76 CFR 24339 (2011).
- g. Classified National Security Information, E.O. 13526, 75 CFR 707 (2010).
- h. Improving Access to Services for Persons with Limited English Proficiency, E.O. 13166, 65 CFR 50121 (2000).
- i. Amendment To Executive Order 12958 - Classified National Security Information, E.O. 13142, 64 CFR 66089 (1999).

E.4 Code of Federal Regulations (CFR)

- a. Standards of Ethical Conduct for Employees of the Executive Branch, 5 CFR 2635.701-705.
- b. FOIA Offices and Electronic Libraries, 14 CFR 1206.900.
- c. NASA Privacy Act Regulations, 14 CFR 1212.
- d. NASA Release of Information to News and Information Media, 14 CFR 1213.
- e. NASA Seal, NASA Insignia, NASA Logotype, NASA Program Identifiers, NASA Flags, and the Agency's Unified Visual Communications System, 14 CFR 1221.1.
- f. Export Administration Regulations (EAR), 15 CFR 730-774.
- g. International Traffic in Arms Regulations (ITAR), 22 CFR pts. 120 - 130.
- h. Federal Acquisition Regulation (FAR), 48 CFR 1.

E.5 OMB Circulars and Memoranda

- a. OMB Circular A-11 Section 280, Managing Customer Experience and Improving Service Delivery, as amended (08/11/2023).
- b. OMB Circular A-130, Management of Federal Information Resources, as amended (07/28/2016).
- c. OMB M-24-08, Strengthening Digital Accessibility and the Management of Section 508 of the Rehabilitation Act (12/21/2023).
- d. OMB M-23-22, Delivering a Digital-First Public Experience (09/22/2023).
- e. OMB M-23-10, The Registration and Use of .gov Domains in the Federal Government (02/08/2023).
- f. OMB M-23-07, Update to Transition to Electronic Records (12/23/2022).
- g. OMB M-22-09, Moving the U.S. Government Toward Zero Trust Cybersecurity Principles (01/26/2022).
- h. OMB M-21-31, Improving the Federal Government's Investigative and Remediation Capabilities Related to Cybersecurity Incidents (08/27/2021).
- i. OMB M-21-07, Completing the Transition to Internet Protocol Version 6 (IPv6) (11/19/2020).
- j. OMB M-21-04, Modernizing Access to and Consent for Disclosure of Records Subject to the Privacy Act (11/04/2020).
- k. OMB M-20-32, Improving Vulnerability Identification, Management, and Remediation (09/02/2020)
- l. OBM M-19-17, Enabling Mission Delivery through Improved Identity, Credential, and Access Management (05/21/2019).
- m. OMB M-18-12, Implementation of the Modernizing Government Technology Act (02/27/2018).
- n. OMB M-17-12, Preparing for and Responding to a Breach of Personally Identifiable Information (01/03/2017).
- o. OMB M-17-09, Management of Federal High Value Assets (12/09/2016).
- p. OMB M-16-21, Federal Source Code Policy: Achieving Efficiency, Transparency, and Innovation through Reusable and Open Source Software (08/08/2016).
- q. OMB M-15-13, Policy to Require Secure Connections across Federal Websites and Web Services (06/08/2015).
- r. OMB M-13-13, Open Data Policy - Managing Information as an Asset (05/09/2013).

- s. OMB M-13-10, Antideficiency Act Implications of Certain Online Terms of Service Agreements (04/04/2013).
- t. Guidance from OMB: Testing and Simplifying Federal Forms (08/09/2012).
- u. OMB M-11-26, New Fast-Track Process for Collecting Service Delivery Feedback Under the Paperwork Reduction Act (06/15/2011).
- v. OMB M-11-15, Final Guidance on Implementing the Plain Writing Act of 2010 (04/13/2011).
- w. OMB M-10-23, Guidance for Agency Use of Third-Party Websites and Applications (06/25/2010).
- x. OMB M-10-22, Guidance for Online Use of Web Measurement and Customization Technologies (06/25/2010).
- y. OMB M-10-06, Open Government Directive (12/08/2009).
- z. Guidance from OMB, Social Media, Web-Based Interactive Technologies, and the Paperwork Reduction Act (04/07/2010).

E.6 Other Federal Policies and Requirements

- a. National Institute of Standards and Technology (NIST) Special Publication (SP) 800-44 Version 2, [Guidelines on Securing Public Web Servers](#) (10/09/2007).
- b. NIST SP 800-53 Revision 5, [Recommended Security Controls for Federal Information Systems and Organizations](#) (12/10/2020).
- c. NIST SP 800-218 Version 1.1, [Secure Software Development Framework \(SSDF\)](#) (02/04/2022).
- d. Cybersecurity and Infrastructure Security Agency (CISA) Binding Operational Directive (BOD) 19-02, [Vulnerability Remediation Requirements for Internet-Accessible Systems](#) (04/29/2019).
- e. CISA BOD 20-01, [Develop and Publish a Vulnerability Disclosure Policy](#) (09/02/2020).
- f. National Response Framework, [Emergency Support Function 15](#) (ESF-15 – External Affairs – Annex R).
- g. Memorandum from the Attorney General, [Strengthening the Federal Government’s Commitment to Language Access](#) (11/21/2022).
- h. GSA [Federal Website Standards](#) (1/22/2020).

Note: OMB M-23-22 requires GSA to review and update these Federal website standards in the future, including specific requirements for branding, content, and search.

E.7 Government-Wide Guidance on Policies and Requirements

- a. GSA [Requirements and Go-Live Checklist for Federal Public Websites and Digital Services](#).
- b. GSA [Requirements for Delivering a Digital-First Public Experience](#).
- c. OMB [Guide to the Paperwork Reduction Act \(PRA\)](#).
- d. GSA [Guide to the Digital Analytics Program \(DAP\)](#).
- e. GSA [Guide to the Site Scanning Program](#).
- f. Guide from the Title VI Interagency Working Group, [Improving Access to Public Websites and Digital Services for Limited English Proficient \(LEP\) Persons](#) (2/7/2011).

E.8 Agency Policy Directives

- a. NPD 1380.1, Managing Agency Communications.
- b. NPD 1382.17, NASA Privacy Policy.
- c. NPD 1383.1, Release and Management of Audiovisual Products.
- d. NPD 1420.1, NASA Forms Management.
- e. NPD 1440.6, NASA Records Management.
- f. NPD 1920.1, NASA Scientific Integrity.

- g. NPD 2081.1, Nondiscrimination in Federally Assisted and Conducted Programs of NASA.
- h. NPD 2200.1, Management of NASA Scientific and Technical Information.
- i. NPD 2540.1, Acceptable Use of Government Furnished Information Technology Equipment, Services and Resources.
- j. NPD 2800.1, Managing Information Technology.
- k. NPD 2810.1, NASA Information Security Policy.
- l. NPD 2830.1, NASA Enterprise Architecture.
- m. NPD 7120.7, NASA Engineering and Program/Project Management Policy.

E.9 Agency Procedural Requirements

- a. NPR 1382.1, NASA Privacy Procedural Requirements.
- b. NPR 1441.1, NASA Records Management Program Requirements.
- c. NPR 1450.10, NASA Correspondence Management and Communications Standards and Style.
- d. NPR 1600.1, NASA Security Program Procedural Requirements.
- e. NPR 1600.2, NASA Classified National Security Information.
- f. NPR 2190.1, NASA Export Control Program.
- g. NPR 2200.2, Requirements for Documentation, Approval and Dissemination of Scientific and Technical Information.
- h. NPR 2210.1, Release of NASA Software.
- i. NPR 2800.2, Electronic and Information Technology Accessibility.
- j. NPR 2810.1, Security of Information and Information Systems.
- k. NPR 2830.1, NASA Enterprise Architecture Procedures.
- l. NPR 2841.1, Identity, Credential, and Access Management.
- m. NPR 7500.2, NASA Technology Transfer Requirements.

E.10 Other Agency Policies and Requirements

- a. NID 2800.147, Public Web Experience.
- b. NAII 2800.1, NASA Paperwork Reduction Act (PRA) Compliance Program.
- c. NRRS 1441.1, NASA Records Retention Schedules.
- d. NASA-STD-2601, Minimum Cybersecurity Requirements for Computing Systems.
- e. NASA-STD-2804, NASA Minimum Interoperability Software Suite.
- f. NASA-STD-2805, Minimum Hardware Configurations.
- g. NASA-STD-2821, Audio and Video Standards for Internet Resources.
- h. NASA-STD-2822, Still and Motion Imagery Metadata Standard.
- i. NASA-SPEC-2607, [Web Server Infrastructure Security](#) ^(INT).
- j. NASA-SPEC-2650, [Transport Layer Security \(TLS\) Security Configuration Specification](#) ^(INT).

E.11 Agency-Wide Guidance on Policies and Requirements

- a. NPI 2081.78, [NASA Policy Guidance on the Prohibition Against National Origin Discrimination as It Affects Persons With Limited English Proficiency](#) (2003).
- b. NPI 2081.79, [NASA Language Access Plan](#) (2011).

Note: An updated NASA Language Access Plan is undergoing Agency and DOJ review.

- c. NASA [Graphic Standards Manual](#) ^(INT).
- d. NASA [Graphic Style Guide for Web and Social Media](#) ^(INT).
- e. NASA [Stylebook and Communications Manual](#) ^(INT).

- f. ITS-HBK-1382.03-01, [Privacy - Collections, PTAs, and PIAs](#) ^(INT).
- g. ITS-HBK-1382.06-01, [Web Privacy Notices and Redress](#) ^(INT).
- h. IT-HBK-1440.01, [Records Management Program & Records Life Cycle](#) ^(INT).
- i. IT-HBK-1441.01-01, [Records Retention and Disposition](#) ^(INT).
- j. ITS-HBK-2810.04-01, [Risk Assessment, Vulnerability Scanning, and Expedited Patching](#) ^(INT).
- k. ITS-HBK-2810.11-02, [Media Protection and Sanitization](#) ^(INT).
- l. APS-NASA-HDBK-001, [Application and Platform Services Handbook](#) ^(INT).
- m. Memo from the NASA CIO, [Complete Transition to Internet Protocol version 6 \(IPv6\)](#) (05/21/2021).

E.12 Science Mission Directorate (SMD) Policies and Requirements

- a. SPD 26-B, [SMD Communications for Flight Missions](#).
- b. SPD 29, [SMD External Websites](#).
- c. SPD 41a, [Scientific Information Policy for the Science Mission Directorate](#).