

# U.S. Nuclear Regulatory Commission



## Web Improvement Plan

**Step 1: Current State of the NRC's  
Agencywide Web Improvement Efforts**

**October 11, 2011**

## Background

In issuing [Executive Order \(EO\) 13571](#), “Streamlining Service Delivery and Improving Customer Service,” dated April 27, 2011, President Obama stated that, “with advances in technology and service delivery systems..., the public’s expectations of the Government have continued to rise,” and the Government “must keep pace with and even exceed those expectations.” Toward that end, EO 13571 and the related [guidance](#) from the Office of Management and Budget (OMB) instructed Federal agencies to improve the design and management of agency websites that provide services or information to the public, and to use innovative technologies to improve customer service at lower costs and with greater efficiency, consistent with President Obama’s [Campaign to Cut Waste](#).

Building on the President’s [Open Government Initiative](#), the OMB guidance stated, “To simplify access to Federal services, the Government needs a comprehensive and consistent strategy for managing its web resources efficiently and assuring that valuable content is available online and is readily accessible.” The [.Gov Reform Initiative](#) is one of the first steps in fulfilling that direction. In doing so, Federal agencies will enhance the public’s online experience by eliminating redundant websites, and improving those that are outdated, hard to use, or poorly maintained.

As an independent regulatory agency that prides itself on openness, transparency, participation, and collaboration, the U.S. Nuclear Regulatory Commission (NRC) is pleased to take a leading role in the .Gov Reform Initiative. In fact, we have embraced the precepts of this initiative for nearly 20 years through our use of a single website as our primary means of keeping the public and other agency stakeholders informed of — and involved in — our regulatory, licensing, and oversight activities. This steadily expanding resource currently encompasses more than 40,000 pages of information on a variety of mission-related activities, and we regularly incorporate more than 650 updates and additions each month to ensure that our online content remains current, accurate, and relevant to our site visitors. In addition, we continually implement innovative technologies as part of an incremental improvement cycle to efficiently manage our web resources and ensure that valuable content is available and readily accessible through our public website.

## Responses to Questions About the Current State of Agencywide Web Improvement

Consistent with OMB guidance for the .Gov Reform Initiative, this initial Web Improvement Plan is the first step in communicating the NRC’s strategy for managing our web resources more efficiently, improving online content, and enhancing the public’s experience of our agency websites. As such, this plan responds to specific questions regarding the management of our websites in the .gov domain. As we continue to iteratively develop this plan over the next several months, we will address additional questions regarding our web improvement strategy, actions, measurements, and timelines.

**QUESTION 1: DOES YOUR AGENCY CURRENTLY HAVE AN AGENCYWIDE WEB STRATEGY?**

Our agencywide web strategy is set forth in the context of the overall “NRC Information Technology/Information Management (IT/IM) Strategic Plan for Fiscal Years 2008 – 2013” ([NUREG-1908, Volume 1](#)). This publicly available plan describes how IT/IM activities at the NRC contribute to the agency’s mission, and presents the foundation for directing and assessing the performance and results of those activities over a 5-year period. Section 1 covers the NRC’s mission and responsibilities, Federal requirements for IT/IM planning, benefits of IT/IM strategic planning, and the relationship of this plan to other planning documents. Section 2 provides the environment and context for the plan. Sections 3 and 4 discuss the planning outcomes—the objective, vision, and strategic goals of the IT/IM program, and the strategies and measures associated with each goal. Section 5 describes the relationship of IT/IM strategic planning to other agency planning processes and the Federal E-Government Program.

To augment this overall strategy, [Management Directive/Handbook 3.14](#), “U.S. Nuclear Regulatory Commission Public Web Site,” establishes the governance for consistent design and efficient management of the [www.nrc.gov](http://www.nrc.gov) domain and other NRC-sponsored (non-nrc.gov) web domains. In particular, this governance addresses the site privacy policy, requirements for developing and publishing content, accessibility standards, and roles and responsibilities of NRC staff who participate in developing and publishing content.

**QUESTION 2: HOW DOES YOUR AGENCY CURRENTLY ENSURE THAT AGENCYWIDE WEB RESOURCES ARE MANAGED EFFICIENTLY (E.G., GOVERNANCE, TECHNOLOGY/INFRASTRUCTURE, HOSTING, STAFFING, OPERATIONS)?**

As a small agency, the NRC efficiently manages a single, centralized website as our primary conduit for delivering a wealth of online information to the public. This site is locally hosted at NRC headquarters in Rockville, Maryland, enabling us to manage automated backups of the site content through a centralized electronic system. We also ensure efficient content delivery and continuity of operations (COOP) for the primary website through a global distributed computing network, which comprises more than 65,000 secure servers deployed in 70 countries. This network monitors the Internet in real time and gathers information about Internet congestion and vulnerability problems as they arise. Using this intelligence, the network dynamically optimizes routing across the Internet to avoid trouble spots, replicate packets, and compress web content and applications. In that way, the network ensures fast, reliable, and secure delivery of web content from distributed servers in close proximity to the NRC’s public website visitors, while allowing agency staff to retain control over how content is deployed and handled.

Because of the efficiency and reliability of this global distributed computing network, we are able to effectively manage more than 40,000 pages of public site content, and incorporate more than 650 updates and additions each month. In so doing, we adhere strictly to [Management Directive/Handbook 3.14](#), “U.S. Nuclear Regulatory Commission Public Web Site,” which governs consistent design and efficient management of the [www.nrc.gov](http://www.nrc.gov) domain and other NRC-sponsored (non-nrc.gov) web domains. In particular, this governance addresses the site privacy policy, requirements for developing and publishing content, accessibility standards, and roles and responsibilities of NRC staff who participate in developing and publishing content.

In addition, to improve our use of technology, we are diligently working toward the goals set forth in the [25 Point Implementation Plan to Reform Federal IT Management](#). Implementing this plan is helping us modernize our operations, create new efficiencies, save resources, and improve effectiveness. One of the most important aspects of this reform plan is moving toward cloud-based systems, such as cloud-based online meeting resources and the private cloud hosting platform administered by the General Services Administration. For additional detail, see [NRC Meeting Challenges with Improved Technology](#).

**QUESTION 3: HOW DOES YOUR AGENCY CURRENTLY ENSURE THAT WEBSITE CONTENT  
IS READILY ACCESSIBLE, UPDATED, ACCURATE, AND ROUTINELY IMPROVED?**

For nearly 20 years, the NRC has embraced the precepts of the .Gov Reform Initiative through our use of a single website as our primary means of keeping the public and other agency stakeholders informed of — and involved in — our regulatory, licensing, and oversight activities. This steadily expanding resource currently encompasses more than 40,000 pages of information on a variety of mission-related activities, and we regularly incorporate more than 650 updates and additions each month.

In accordance with [Management Directive/Handbook 3.14](#), “U.S. Nuclear Regulatory Commission Public Web Site,” our subject matter experts (SMEs) regularly review content under their purview. Our Web Content Services Group monitors, coordinates, and implements all site updates, and periodically notifies the SMEs of their responsibility to ensure that our online content remains readily accessible, updated, accurate, and relevant to our site visitors.

We also periodically redesign our public website to implement current best practices in web design. The most recent redesign, deployed in April 2011, features a modern look-and-feel, streamlined navigation, and rich features and functionality to make it quicker and easier to find the information users want. Many of the upgrades and changes reflect public input that the agency received through online surveys, interviews, and focus groups. In addition, improved search capabilities allow site visitors to use a single search string to easily retrieve information from the NRC’s entire public website, as well as the extensive collection of more than 665,000 publicly available documents in the Agencywide Documents Access and Management System (ADAMS).

Since the redesign, the site’s scores on the [American Customer Satisfaction Index](#) have continued to improve:

- Content Satisfaction reached a new high of 83 in August (up 4 points since March).
- Look-and-Feel reached a new high of 79 in August (up 5 points since March).
- Online Transparency reached a new high of 78, and ForeSee Results ranked the NRC 11<sup>th</sup> out of 32 Federal agencies in this key Open Government metric.
- Overall Satisfaction reached a new high of 75 (exceeding the Federal Government score of 74 and the Regulatory Agency score of 68).

In addition, we continually implement innovative technologies as part of an incremental improvement cycle to efficiently manage our web resources and ensure that valuable content is available and readily accessible through our public website. In introducing these innovations, we adhere to the agencywide web strategy set forth in the “NRC Information Technology/Information Management (IT/IM) Strategic Plan” (see our response to Question 1), as well as interim guidance developed to address the unique considerations associated with emerging technologies such as social media.

In 2011, the NRC has enhanced relationships with stakeholders by promoting a sense of community through social networking technologies. The NRC implemented the use of a new public blog, Twitter, and a YouTube channel to offer even more ways to interact with and inform the public and raise awareness about the agency and its mission. In fact, these new communications channels have achieved greater levels of interest than originally anticipated.

The [NRC Blog](#) debuted on January 31, 2011, with a [welcome message](#) from NRC Chairman Gregory Jaczko. In addition to traditional Internet access, the blog is available using mobile devices (such as smartphones). Since its establishment, the blog has had more than 130,000 views and has proven especially useful in enabling quick public communications during and after the events at the nuclear facilities in Fukushima, Japan, and during U.S. events this year:

- On average, the blog has just under 500 views per day; immediately after the event at Fukushima, views peaked at just over 5,700 in one day.
- During the week of August 22, 2011, blog posts provided information on earthquake response and hurricane preparation at nuclear power plants.
- Daily views of the blog peaked at more than 1,000 during the Missouri River flooding event.

In August 2011, the NRC began sending news and information via Twitter. The NRC Twitter account can be reached at <http://www.twitter.com/NRCgovor> through the [NRC website](#). Tweets announce new blog posts and press releases, speeches, reports, public meeting notices, and other content posted on the NRC website. Other information, such as important notices in the *Federal Register*, is also tweeted. Within 2 days of its introduction, the NRC had 400 followers, and many different organizations and individuals were “retweeting” agency tweets, greatly expanding the reach of the agency.

In September 2011, the NRC began posting videos on YouTube. The agency’s YouTube channel joins the blog and Twitter as another social media outlet the NRC is using to enhance communication, collaboration, and information exchange in support of the agency mission. The NRC YouTube account can be reached at <http://www.youtube.com/NRCgov> or through the [NRC website](#).

In addition, in our ongoing effort to improving online content and enhance the public’s experience, we’ve implemented the following recent enhancements:

- New subscription-based services and Really Simple Syndication (RSS) feeds to enable stakeholders to stay abreast of the most current news
- Expanded use of web-based virtual meeting technologies to enhance outreach and stakeholder involvement in public meetings
- Use of web conferencing technologies to expand collaboration within industry and government workgroups
- Enhanced Facility Information Finder for operating nuclear power plants

Among our planned enhancements, we’re currently conducting a pilot to assess the value of using Quick Response (QR) codes to enable the public to quickly and easily access NRC information and websites from their smartphones during public meetings or other events. QR codes are two-dimensional bar codes that can be read or scanned by smartphones with a bar code reader application. These barcodes can be placed on publications, marketing materials, posters, websites, or any medium that provides sufficient contrast to be scanned by the smartphone reader. An individual can use a smartphone with a camera and reader to quickly access content such as a website (via a URL), contact information, a text message, or a video (via a URL).

**QUESTION 4: HOW DOES YOUR AGENCY CURRENTLY ENSURE THAT WEBSITES ARE MEETING USER EXPECTATIONS AND NEEDS, AND THAT THE CUSTOMER EXPERIENCE IS CONTINUALLY ENHANCED?**

The NRC routinely solicits, receives, and responds to feedback on our public website through the following targeted mechanisms to inform our incremental site improvements and periodic redesigns:

- First, our [Index of All Contact Pages](#) lists more than 60 electronic forms that site visitors can use to send questions, comments, criticisms, and ideas to NRC staff in specific subject areas.
- Second, the [NRC Blog](#) is an easy-to-use citizen-engagement tool, which enables site visitors to share ideas with the NRC in a moderated forum. It also serves as a vehicle for informing, explaining, and clarifying the actions, roles, and responsibilities of the NRC, and raising awareness about our agency and its mission. (See our response to Question 3 for usage statistics that substantiate the popularity of this new feedback mechanism.)
- Finally, the NRC uses a web measurement survey to enable site visitors to share feedback regarding their experience with our site, in a manner consistent with the [American Customer Satisfaction Index](#). This standardized approach allows the NRC's site performance to be objectively benchmarked against that of other Federal agencies and private industry. We use this feedback to assess and inform our continuous incremental improvements. Toward that end, an independent third-party provider administers the survey in accordance with OMB Guidance for [Measuring Customer Satisfaction](#), and the survey instrument provides the current OMB control number. In addition, our public website provides a [notice](#) to inform site visitors about the survey and explain how the data will be collected and used.

The web measurement survey is offered randomly, so that the results can be generalized to the overall population of site visitors. Site visitors who choose not to participate may opt out simply by closing the dialogue box in which the survey invitation appears. Completing the survey is entirely voluntary, and site visitors who opt out of completing the survey are still able to access all information and services provided on the site.

Ratings collected from site visitors relate to their experiences on the site, including ease of navigation, look-and-feel of the design, ability to find what the visitor is looking for, overall satisfaction with the site, and whether the visitor would return and/or recommend the site to others. Additional questions of a descriptive nature are sometimes asked to aid in understanding the interests and needs of site visitors. Site ratings are aggregated for analysis and reporting purposes and retained in the aggregate to facilitate change/improvement tracking over time. (See our response to Question 3 for recent survey trends.)

In addition to these targeted feedback mechanisms, the NRC goes to great lengths to solicit public input as a basis for site redesigns. For example, in preparation for the April 2011 redesign, the NRC sponsored a 4-month study, which involved 10 focus groups to obtain an understanding of how the American public perceives the NRC. These included eight in-person sessions and two teleconferenced sessions, involving residents living near four U.S. nuclear power plants, as well as nuclear energy activists. A total of 82 people participated in this study, which resulted in the Information Experts' report, entitled "Gauging Public Perception: External Focus Group Findings, Analysis, and Communications Recommendations for the U.S. Nuclear Regulatory Commission." Similarly, during Phase 1 of the redesign, the content assessment team analyzed the NRC-supplied survey data and usability audit reviews to identify the demographics of site users, and assess their perceptions of the site's strengths and weaknesses. In addition, the assessment team conducted usability testing with a pool of test subjects representing the spectrum of site visitors, and the test results formed the basis for the team's redesign recommendations.