



Quality Assurance Plan

Hands on the Land Web Site
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1. Overview

This Quality Assurance (QA) Plan describes the quality assurance procedures, specifications, and other technical activities important to the maintenance of the Hands on the Land web site (<http://www.handsontheland.org>).

The previous QA Plan, provided to Partners in Resource Education members by the Wilderness Technology Alliance (WTA), has been updated. The initial version focused on the public launch of the web site as in addition to content quality and maintenance methods. This revised plan will describe design standards employed on the web site, look into the process of maintaining content and data, and explain the quality control methods implemented on the web site. Changes have been made that reflect changes in technology since 2002.

Modifications to this document also reflect a shift in the target audiences. In the previous plan, the WTA was using the web site to host student-created web sites, with the intention that these students would be teaching younger students about issues facing our public lands. At that time, our intended audience ranged from 5th grade students to program providers in the field offices. It was very challenging to design a site for such a broad audience. Since that time, we have hosted very few student-created web sites, and the site has not been directly marketed toward classrooms. The focal audience has shifted closer to the high school student, teacher, and adult range. The site has gained popularity with general internet browsers and environmental monitoring users. These audiences also have helped to pull the design of this web site toward a more adult-level audience.

2. Design Standards

Because many federal government web sites link directly to the HandsOnTheLand.org, it is imperative that the web site maintains accessibility standards that are equivalent to those guidelines for government web sites. Many partnering federal agencies require that non-government web sites be held to the same standards or direct links are not permitted. The following guidelines will allow Hands on the Land to retain direct links from government web sites. These accessibility standards will not only help those users with impairments, but also allow users with 'primitive' computers to use the web site without technical difficulties. The standards, coupled with content continuity, will also help users interact with the web site with trouble-free navigation.

Accessibility

1. Web site must adhere to Section 508 Guidelines for Government Web Sites.
2. Target browsers and operating systems will be Netscape 4.x and Explorer 4.x, Windows 98 and Macintosh OS/8.
3. The target monitor resolution is 800 x 600.
4. Alt-text tags should be used on all photographs and content-based images.
5. When possible, Flash components will have HTML-based alternatives.
6. Pop-up menus will not be used on the Hands on the Land web site.

Graphics and Style

1. Graphic elements should be targeted towards a teacher and student (9th grade and up) audience. If designed appropriately, users older than the targeted age group should also feel comfortable while browsing the web site.
2. Photographic elements used for design purposes should include students in the field, natural features, or wildlife.
3. All text must be black on a light background. For large text blocks, over one paragraph in length, text should be black on white. Site graphics should conform to the color key on the home.cfm page. If color differentiation in text must be used beyond the standard black, dark green (hex: #006600) should be the preferred choice. Dark-red (hex: #990000) may be used for emphasis. The color standard is that a page's colors should conform to naturally occurring color schemes found within our public lands.
4. The web site and content should adhere to U.S. Government Printing Office Style Manual (<http://www.gpoaccess.gov/stylemanual/index.html>).

Technical Architecture

1. All content should be contained within the 534-pixel width sub-window.
2. Navigation should occur on the left-hand side of the screen. Primary navigation should be separated from the secondary navigation by size and level. Reduce navigation terms to the most simplified and user-recognizable word or phrase.
3. Page titles will be arranged with page title first with higher levels following. Each section will be delineated by a single dash; e.g., Poetry and Essays - Students - Hands on the Land.

4. All background images are to be placed within the TD or TABLE tags. The central region of the secondary window, where text or dynamic results are displayed, will be white.
5. CSS files are located in the hol/ folder. Use H1, H2, H3 tags for headings. P tags will be used for all multi-paragraph text. Captions and tertiary links may be tagged as—the smallest allowed font size—H5.
6. The screen-reading font, Verdana, should be used for all paragraph text.
7. All copyrighted photographs and images will be defined with text below the image with an H5 tag. Credit line will read “[image title] Courtesy of [image provider].”
8. Use JPEG for all photographic images and compress them to medium or 7. Use GIF files for all graphic images and use no more than 80 colors. Images should be no greater than 534 pixels.
9. Design elements are located in the elements/ folder. Photographic elements are located in the image/ folder.
10. Use only lowercase in file names. Underscores may be used to represent spaces.
11. When creating new members sites please follow the *site code* naming convention. If a four-letter code is not widely accepted for the site, borrow the first two letters from the first two words of the site name to create the site code. If only one word exists, borrow the first four letters. For example: Big Thicket National Park is represented as “bith”; Everglades National Park is represented as “ever.” For new member sites, site codes are entered into the profile_post.cfm page. There should be no duplicate site codes.
12. Primary images for each member site are displayed on each site’s profile page as well as randomly shown on the home page. These images are stored in the profiles/profile_images/ folder. The files should be compressed to medium in JPEG format (250 pixels x 200 pixels, horizontal). They should be named by their site code plus a two-digit sequential number following, e.g. seep01.jpg. Files must be managed by the site administrator; users do not have access to upload files to this folder.
13. Photographs used to develop the site tours are located in the sitedata/ folder. Site tours are currently being developed in Flash. Members should submit approximately ten photographs with captions and credit information for each tour. Submitted images should be greater than 534 pixels in width. The web site administrator will create the tour using the original Flash file as a template.
14. Naming Conventions for Dynamic CFM Pages.

<u>Page Type</u>	<u>Convention</u>
Search Page or Results	*_search.cfm or *_results.cfm
Details Page	*_details.cfm
Post/Submit/Contributions	*_post.cfm
Posting Success	*_success.cfm
Choosing Records	*_admin.cfm or *.choose.cfm
Administration Updating	*_update.cfm
15. Welcome.dwt is the primary template.
16. Use only for simple functions, such as rollover images or open window.
17. Database/HTML integration is performed by ColdFusion scripts.

18. Group mail should only be accessible by members who have teacher-level or higher login permissions.

Site-Specific Projects

The Hands on the Land web site allows the posting of site-specific projects. Student-created web sites should be hosted within the classroom/ folder. Member data should be hosted within the corresponding sitedata/ folder, unless the project is relative to a broader scope of member sites.

Because Hands on the Land does not have the architecture in place to manage complex and extensive site-specific projects, it is recommended that allowable projects be small, compact units of information and data, such as:

- Compact classroom web sites
- Adobe Acrobat (PDF) teaching materials
- Flash animations or Flash educational tools
- Custom slide shows

3. Maintenance Plan

As a database-driven web site, Hands on the Land.org has been designed so that it can function with minimal maintenance. Without technical administration, members can log in, post and update database records. The web pages are driven by ColdFusion (CF) which pulls content from the databases and displays that content within the web pages. Besides the need for content management system (CMS) training, content editing of member-posted material, and minimal technical administration, the web site is designed to be self-sufficient.

Technical Maintenance

The web site must be administered by a person or a team who is skilled in HTML, CSS, ColdFusion, Microsoft Access, Javascript, Macromedia (MM) Dreamweaver, MM Flash, and PhotoShop or another image editing tool.

The hosting company MarketMatrix currently maintains server-side technical aspects of the Hands on the Land web site.

Other Technical Aspects

1. All database tables are located in the MS Access file database/holdata.mdb.
2. The access/ folder contains all login and administration pages.
3. For user access from search engines, the web site must be marketed to federal agencies, teacher organizations and other groups. Links must be made to Hands on the Land from other web sites. This is an ongoing, yet essential task.

Content Maintenance

Five categories of content maintenance exist within the Hands on the Land web site:

<i>Maintenance Type</i>	<i>Content</i>	<i>Who</i>
Technical Administration	Database, web page code, site tours, site profile images, site specific projects, passwords, environmental monitoring projects, planning documents, PDF files, and new sections	Web Site Administrator
Dynamic Public Information	Highlights, membership applications, automatic email notification, environmental monitoring sites, site profiles, teaching materials, bulletin board, quizzes and questionnaires, contact directories	PRE members, program providers, teachers, Web Site Administrator
Environmental Monitoring Databases	Environmental monitoring project data	Program providers, teachers, students
Contributed Resources	Glossary, Artwork and Photography, and Poetry and Essays	Web Site Administrator, PRE members, program providers, teachers

Password System

In 2005, the Hands on the Land password and log in system was changed. Members now log in using email-based passwords. The purpose of this change is so that members can update information that is specific to their site or registered to their membership ID. This new system also enables members to retrieve their password using the "Forgot your password" function from the log in page. The new system does not apply to the broad passwords that some of the environmental monitoring sites are using, such as the username "ncsuarbor." The environmental monitoring user assignment database allows for broad passwords, but they may only be defined for specific environmental monitoring sites.

Another new feature that is associated with this change is the ability for members to register new individuals within the Contact Directory. Members can only register members to the access level (see below) at or below which they are currently registered. For example, program providers can register other program providers or teachers in the directory, but they cannot register administrators. Likewise, teachers can register new teachers, but they cannot register program providers. Once a new member has been registered, they can retrieve a randomly-generated password using the "Forgot your password" function.

Access Levels and User Types

Currently four access levels exist within the web site user restriction system.

- Administrator – Administrator-level members may access all database content except passwords.
- Agency – Agency-level access is reserved for agency representatives. They may access membership applications, all site profiles, and most of the lower-level information.
- Environmental Monitoring – Environmental monitoring-level users may manage environmental monitoring sites, data, and any of the lower-level resources.
- Manager – The manager-level access is reserved for program providers (site profile managing members). They may update their site's information and more.
- Teacher – Registered teachers can post articles on the bulletin board and post and approve student contributions.
- Student – Approved student members can post to the student contributions area.

Environmental monitoring member passwords and access must be set up through the Environmental Monitoring Site Administration page. This section is restricted to administrator-level users. It is also possible to create additional user assignments for specific environmental monitoring projects. Access to user assignments is also from this section.

Editor

The automatic email notification page allows an editor and other persons to be notified by email anytime materials are posted by members on to the web site. Currently, the automatic email notification system is set up to deliver emails for these content areas: Feedback, Membership Applications, Bulletin, Glossary, Artwork and Photography, and Poetry and Essays.

CMS Training

The content management system has been developed so that new users should be able to learn the basic methods for posting and updating information within one half-hour training. Training can be administered by any experienced Hands on the Land user.

To use the environmental monitoring databases, a separate training will be necessary. These databases and projects were initially developed by researchers and educators at Great Smoky Mountains National Park.

Quality Control

The quality of content posted into the Hands on the Land web site is determined by the quality of information posted by members on the web site in addition to the time dedicated by an editor to review their work.

Materials posted by students, who are not approved members, within the student contribution area are automatically set to “not public” within the database until a registered member approves the work by checking the “public” check box on each student contribution.

4. Redesign Process

The Hands on the Land web site should be redesigned both dynamically (as needed) and in a comprehensive manner every few years. Both user feedback and usability testing should be employed in dynamic and comprehensive redesigns.

Usability Testing

Currently, administrative-level users have the ability to review usability questionnaires sent to targeted and untargeted audiences. The Search Field and Data Input Usability Survey randomly chooses 1 out of 50 data input users for a usability survey. Chosen users may or may not take the random questionnaire. Results from all of our surveys are recorded in the Quiz and Questionnaire administration page.

The original questionnaire for these usability surveys were developed for Hands on the Land by Macromedia Corporation.

The Feedback Loop

(http://www.handsontheland.org/teachers/feedback/feedback_post.cfm) also allows users to enter general and specific comments into the Hands on the Land feedback database. The Feedback Loop performs the function of a usability test for ad hoc users.

Dynamic Redesign

The Hands on the Land template and architecture allows for simple and easy redesign of a great variety of aspects of the web site. By recoding CSS style sheets, changing graphics, and modifying the Dreamweaver template, a new graphical look may be achieved in a short period of time. This allows the site administrator to increase web site intuitiveness and keep up with the current design trends quickly and easily. It is recommended that a dynamic redesign be employed frequently with small-scale changes.

Comprehensive Redesign

Every two or three years, the full web site code and graphic design should be reassessed, reviewed, and overhauled to keep up with current technological trends and user preferences. Since the web site uses an MS Access database, the site can be fairly easily redesigned. The code and graphics may be changed leaving the database content intact. These aspects of the site should be considered in the redesign: HTML code, CSS styles, graphic design, CF coding, structure, headers, footers, information structure, use of Javascript and Flash, and site navigation methods.