

## HANDS ON THE LAND MONTHLY REPORT TO PRE, MARCH 2006 THE KEYSTONE CENTER

**1. Develop and implement a business plan for HOL within the sponsoring agencies and nationally to ensure long-term sustainability of the program. Coordinate the interest and environmental education needs of each of the five federal partners.**

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**1.1 Develop a list of potential funders (local and national) and share with PRE.**

- A potential partnership with NEETF and National Public Lands Day was discussed at the January PRE meeting. TKC intends on providing support for this partnership upon NEETF and PRE's direction. Otherwise, this task is completed.

**1.2 Increase and/or stabilize PRE agency contributions to HOL (PRE lead).**

- This task is completed.

**1.3 Develop draft monitoring and evaluation plan for HOL for PRE's approval.**

- The webpage for the evaluation and monitoring can be viewed: <http://www.handsontheland.org/manage/evaluation/methods.cfm>.
- Based on PRE feedback, TKC is in the process of surveying sites to gather actual assessment and evaluation models to be posted to the webpage.

**1.4 Partner with PRE to develop a business plan based on HOL criteria, including necessary resources.**

- Task is completed as per conversation with Drew Burnett, US EPA Office of Environmental Education, 8/25/2005.

**2. Maintain and expand the HOL network, through increased capacity building. Bring additional partners and support into the HOL program at the national and local levels.**

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**2.1 Develop a web-based application and screening process for joining HOL including sites and/or schools without established partnerships.**

- This task is completed.

**2.2 and 2.4 Assess environmental education and website needs for all sites (including those that currently do not meet HOL membership criteria that have applied to participate in the network) and provide technical assistance as appropriate.**

- TKC completed the needs assessment and submitted a report to PRE in February 2006.
- TKC compiled a list of professional development opportunities and organizations based on feedback received in the needs assessment. The list is attached as *Appendix C*.
- The professional development opportunities list has been posted to the HOL website. To view the site, visit: <http://www.handsontheland.org/manage/hub.cfm>

**2.3 And 2.7: Develop an online "How to" manual and other resources to guide individual site participation in HOL.**

**Develop a training program to help new HOL sites with the implementation of HOL at their site.**

- With input from PRE members, TKC created a one-day workshop for HOL site managers to take place at the national NSTA convention in April 2006. The workshop agenda is attached as *Appendix D*.

**2.5 Assure all relevant information is included in the website databases, and other content areas.**

- This task is completed. To view the online membership requirements table, visit: [http://www.handsontheland.org/manage/documents/site\\_info\\_table.cfm](http://www.handsontheland.org/manage/documents/site_info_table.cfm)

**2.6 Conduct usability testing with HOL members on website data input page.**

- This task is completed.
- A report summarizing the Usability Survey on the website data input page is attached as *Appendix E*.

**3. Maintain and improve communication among the sites, and browser/member access to information on the website (<http://www.handsontheland.org>).**

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**3.1 Develop additional online tools that promote coordination and communication among HOL sites.**

- Task completed (see Monthly Report to PRE, September 2005).
- The April Newsletter was sent to the HOL network on March 31, 2006 and is available online by visiting the HOL home page and clicking on Bulletins.

**3.2 Develop search pages for each of the databases on the website and conduct usability testing with HOL browsers and members.**

- A list of the HOL databases with the search function URL is attached as *Appendix F*.
- A report summarizing the Usability Survey on the database search pages is attached as *Appendix E*.

**3.3 Work with PRE to develop a portal webpage of programs and materials focused on high priority resource management issues such as: watersheds, invasive species, forest health, the role of fire etc. Use the EE Guidelines to review the quality of the programs and materials and submit to Drew.**

Note: The last sentence in this item is to be deleted as per conference with Drew Burnett, US EPA Office of Environmental Education, 8/25/2005.

- A Hot Topics webpage has been created. To view the webpage, visit: [http://www.handsontheland.org/teachers/materials/hot\\_topics.cfm](http://www.handsontheland.org/teachers/materials/hot_topics.cfm)
- TKC attempted to solicit information from PRE members to enhance the Fire, Watersheds and Forests pages to make them similar to the Invasives page. To date, no additional information has been received from the PRE members contacted. TKC will continue to attempt to gather the information.

**3.4 Coordinate all revisions to and maintain the website according to PRE's Quality Assurance Plan.**

- TKC revised the Quality Assurance Plan (QAP). See *Appendix G* for the QAP revision.
- TKC compiled a written report detailing the issues with the previous QAP and recommendations for the future. See *Appendix H* for the QAP Recommendations.

**4. Establish partnerships with national education institutions, environmental education monitoring programs and service learning organizations.**

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**4.1 Work with national environmental education monitoring programs (e.g. GLOBE) that allow HOL sites to share environmental monitoring data.**

- TKC is continuing to pursue the partnership between GLOBE and HOL.

**4.2 Identify and investigate partnership opportunities with service learning organizations**

- TKC is in the process of applying to become a formal partner with Take Pride in America (TPA). Once this is achieved, a link to the HOL website will be published to the TPA site.

**5. Administration, Monitoring, and Reporting Requirements**

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**5.1 Update the on-line task table**

**(<http://www.handsontheland.org/access/administrator.cfm>) with the information from this proposal, and every two weeks during the project.**

- TKC has posted the monthly reports under Administrative Monthly Reports to the Admin Hub of the HOL website.
- This task is ongoing. See *Appendices A and B*.



## **APPENDIX A WORKPLAN TASK 5.1 WEBSITE USE STATISTICS**

Unfortunately, the Website Use Statistics were not available to include in this report due to a glitch in the Market Matrix reporting system. TKC was in contact with Market Matrix in December and learned that they are currently updating all of their statistics tracking software. Upon following up with Market Matrix in March, TKC learned that the system for tracking and reporting website was scheduled to be up again in mid-March. TKC expects to include statistics in the April monthly report.

## APPENDIX B

### WORKPLAN TASK 5.1

### UPDATES TO WEBSITE

March Website Updates
Added Program Provider link in left-hand navigation bar with Program Evaluation page
Posted monthly report
Revised the Quality Assurance Plan (QAP) for the website
Created a comprehensive list of recommendations for the QAP
Updated CSS field structure
Added links to Ozone Bio-monitoring page for Susan Sachs
Posted NSTA workshop agenda to the website
Assisted Patrick Pollard with site tour changes and updates to the site
Created tasks for NSTA Web Site Review
Updated favicon
Posted pdf file lesson plan for hefo
Updated permission system to include agency and environmental monitoring members as distinct categories of users
Updated user restrictions
Added Modoc NWR
Made it so that one cannot create a duplicate site code for a new member
Created contact information insert field on membership application review page
Updated quiz to fix minor issues
Fix on hot topics scroll list
Limited access to Educator Resource Admin to the member who posted the material
Administrators and agency reps have access to entire database
Reconfigured Educator Resource database so that logged in users do not need to post their contact information, info is drawn from their user id , added site link on page if Ed Resource is a hot topic a hot topic link appears
Added user id field to bulletin articles; users can now only access their articles or ones that are pending,
Updated bulletin graphic
Posted random 1:100 needs assessment survey on Hands on the Land's home page
Updated contact page
Members can update their own passwords; administrators can update member's password except the web site administrator
Updated restrictions page for usability
Beaver lesson plan pdf conversion and posting
Posted April 2006 Newsletter

## APPENDIX C

### WORKPLAN TASK 2.2 & 2.4

### PROFESSIONAL DEVELOPMENT

### OPPORTUNITIES AND ORGANIZATIONS

#### **General Training Resources:**

The National Association for Interpretation

<http://www.interpnet.com/home.htm>

Association of Nature Center Administrators

<http://www.natctr.org/index.html>

Association of National Park Rangers

<http://www.anpr.org/index.htm>

Association of Outdoor Recreation & Education

<http://aore.org/>

Association of Partners for Public Lands

<http://appl.org/NewSite/Obsolete/index.html>

EPA: Office of Wetlands, Oceans, and Watersheds

<http://www.epa.gov/owow/>

National Science Foundation

<http://www.nsf.gov/index.jsp>

North American Association for Environmental Education

<http://naaee.org/pages/index.html>

#### **Evaluation Training:**

Environmental Education Online Courses at the University of Wisconsin –Stevens Port

<http://www.uwsp.edu/natres/rwilke/ectap/>

Planning an Effective Program Evaluation-Resource for Project Directors

<http://www.the-aps.org/education/promote/promote.html>

Taking Stock: A Practical Guide to Evaluating Your Own Programs

[http://www.horizon-research.com/reports/1997/taking\\_stock.php](http://www.horizon-research.com/reports/1997/taking_stock.php)

#### **Grant Writing Training & Information:**

Foundation Center

<http://fdncenter.org/>

Article: Show Me the Money: Tips and Resources for Successful Grant Writing

[http://www.educationworld.com/a\\_curr/profdev/profdev039.shtml](http://www.educationworld.com/a_curr/profdev/profdev039.shtml)

Online Fundraising Resources Center

<http://www.fund-online.com/>

EPA Grant-Writing Tutorial

[http://www.epa.gov/seahome/grants\\_disclaim.html](http://www.epa.gov/seahome/grants_disclaim.html)

North American Association for Environmental Education (Great resource for grants and grant info.)

<http://naaee.org/pages/index.html>



**APPENDIX D**  
**WORKPLAN TASK 2.3 & 2.7**  
**NSTA WORKSHOP AGENDA**

San Simeon A&B rooms, Hilton Anaheim Hotel  
April 5, 2006

- 8:30 am. Continental Breakfast
- 9:00 am. Introductions & Icebreaker
- 9:30 am. Agenda Review and Goals for the Day
- 9:45 am. HOL Project History & Overview
- 10:00 am. Sharing of Partnership Strategies (Small Group Discussions)
- Current Partnerships  
How are you currently working with schools? Are there other partners that help or could help facilitate the relationships?
  - Successes and Challenges  
What has been most successful in working with schools? What have been your greatest challenges in working with schools?
  - Working with Hands on the Land  
How might you collaborate with other sites through Hands on the Land? How can Hands on the Land help you with your partnerships?
- 11:30 am. Distance Learning with NOAA
- 12:00 Noon Lunch On Own
- 1:30 pm. Educator Activity
- 2:30 pm. Website
- Overview and Review  
How do Hands on the Land sites use the website? Demonstrate the hands-on science tools offered by Hands on the Land.
  - Sharing Secrets: Submitting Activities on the HOL Website  
Sharing activities and educational resources among sites. How are schools using these tools? Discuss appropriate activity posting, e.g., adapted activities, copyright.
- 3:30 pm. Break
- 3:45 pm. Service Learning: What does it mean to your site?  
Marketing service learning opportunities to schools? What connections have sites made with schools? How can sites translate these opportunities to the classroom?
- 4:15 pm. Program Evaluation and Assessment  
Best practices, resources and how to best utilize the Hands on the Land network.  
(What tools would like to help you with program evaluation and assessment?)
- 5:15 pm. Wrap-up and next steps
- 5:30 pm. HOL Reception: Participants Social



## APPENDIX E

### WORKPLAN TASK 2.6 & 3.2

### USABILITY SURVEY REPORT

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In order to assess the usability of the Search Fields and Data Input pages of the Hands on the Land (HOL) website, **The Keystone Center (TKC)** deployed a usability survey via the HOL questionnaire and quiz tool. The survey was sent to ten sites on January 31, 2006. Additionally, a random sampling of website browsers continues to be surveyed. As of April 1, 2006 4 of the 10 sites have responded and one randomly chosen response was received.

The following serves as a report on the Search Field and Data Input usability survey with recommendations going forward.

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#### **HOL Sites**

The following sites were asked to participate in the survey:

Alder Creek Children's Forest	Craters of the Moon National Monument
Great Smoky Mountains National Park	West Eugene Wetlands Education Center
Campbell Creek Science Center	Headwaters Forest Reserve
Clear Lake Education Center	Big Thicket National Preserve
Cradle of Forestry in America	Petrified Forest National Park.

Of these sites, responses were received from the following:

Alder Creek Children's Forest  
Big Thicket National Preserve  
Craters of the Moon National Monument  
Petrified Forest National Park

One randomly chosen response was received from:  
Nevada Outdoor School

#### **Summary of Results**

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The usability survey included a total of 14 questions. The first 10 questions were multiple choice and focused on ease of using the HOL website. The last 4 questions allowed for additional comments. The multiple choice questions had answers that were ranging (similar to a lichert scale with very easy at one end and very frustrating at the other). Of the five responses received, there was not one question in which the two most negative choices were picked. Below is a bulleted summary of the responses to the first 10 questions:

- 3 of 5 responses said it was **very easy** to complete the tasks as requested
- 4 of 5 responses said the search fields were **relevant** to the data sought
- 3 of 5 responses said the data input instructions were **satisfactory**
- 2 of 5 responses said it was **very easy** to navigate through the data input pages; 1 response was **neutral**
- 3 of 5 responses said the overall layout of the search results was **clear**
- 3 of 5 responses said the overall page layout and organization was **clear**

- 2 of 5 responses said the site was **very inviting** to use while the other 3 responses listed it as being **inviting**
- 2 of 5 responses said the form field organization was **very clear**
- 3 of 5 responses said the links and fields were **clearly** named and labeled
- 2 of 5 responses said they would **absolutely** recommend this site to a friend; 1 response said they **might** recommend the site

Additional comments were also gathered. Joe Ross at Alder Creek Children's Forest made the following comments:

“On the HOL home page, add a sentence or two to describe what the various things in the menu are. At the search page, clarify what the differences are between Education Program, Education Manual, Internet Activity, Resource Guide/Catalogue, Supplemental Curriculum, Lesson Plan, Activity Guide, How to Manual, & Resource Management Planning Curriculum. Seems like there could be some overlap and/or redundancy here, and good, clear descriptions might help educators target exactly what they need or want. Provide a link to the various descriptive subject terms used in the "search" parameter. For my test run just now, I tried forest, stream, and water. It might be helpful to be able to actually see a list of all the available terms for exploration. How can we get more materials uploaded? If this service were actually provided by Keystone staff, perhaps we could encourage more being made available...rather than expecting the sites to upload them themselves. I think Dave has already offered to scan and upload items for sites, but perhaps this isn't common knowledge? Maybe quarterly email or calls to site coordinators could solicit additional materials? How about considering the addition of a section entitled "Materials Needed"? If sites could post their activity or curriculum needs, then others might know of an already available resource that could help another site. Thanks for a great tool. Keep up the good work.”

Other comments by participants were:

“I tried some simple searches for our material but I was unable to pull up our educator's guides based on keywords like "volcanoes" and "lava.”

### **Recommendations**

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The information and feedback has been shared with the HOL Webmaster who will make the appropriate updates to the website. The Usability Survey will continue to take random samples from web browsers. Feedback received from these surveys will be used to enhance the website on a continual basis.

## APPENDIX F

### WORKPLAN TASK 3.2

### HOL DATABASES AND URLS

Below is a comprehensive list of the search function URLs for each of the HOL databases.

#### Site Profiles

<http://www.handsontheland.org/profiles/profiles.cfm>

#### Educator Resources

[http://www.handsontheland.org/teachers/materials/materials\\_results.cfm](http://www.handsontheland.org/teachers/materials/materials_results.cfm)

#### Bulletin

[http://www.handsontheland.org/articles/bulletin\\_results.cfm](http://www.handsontheland.org/articles/bulletin_results.cfm)

#### Contact Directory

[http://www.handsontheland.org/contact/directory\\_search.cfm](http://www.handsontheland.org/contact/directory_search.cfm)

#### Hands-on Science Member Projects

<http://www.handsontheland.org/monitoring/checkup.cfm>

#### Hands-on Science Focal Projects:

Ozone Bio-monitoring

[http://www.handsontheland.org/monitoring/projects/ozone/ozone\\_bio\\_search.cfm](http://www.handsontheland.org/monitoring/projects/ozone/ozone_bio_search.cfm)

Slime Mold Inventory

<http://www.handsontheland.org/monitoring/projects/slimemolds/search.cfm>

Water Quality Monitoring

[http://www.handsontheland.org/monitoring/projects/h2o/h2o\\_search.cfm](http://www.handsontheland.org/monitoring/projects/h2o/h2o_search.cfm)

Terrestrial Invertebrates

<http://www.handsontheland.org/monitoring/projects/inverts/search.cfm>

Salamander Monitoring

<http://www.handsontheland.org/monitoring/projects/sallies/search.cfm>

#### Feedback Loop

[http://www.handsontheland.org/teachers/feedback/feedback\\_admin.cfm](http://www.handsontheland.org/teachers/feedback/feedback_admin.cfm)

#### Membership Applications

[http://www.handsontheland.org/manage/membership/member\\_results.cfm](http://www.handsontheland.org/manage/membership/member_results.cfm)

#### Quizzes and Questionnaires

No search function, page released by user

#### Glossary

<http://www.handsontheland.org/glossary/living.htm>

#### Artwork and Photography

[http://www.handsontheland.org/activities/bykids/artwork/artwork\\_results.cfm](http://www.handsontheland.org/activities/bykids/artwork/artwork_results.cfm)

#### Poetry and Essays

[http://www.handsontheland.org/activities/bykids/poetry/poetry\\_results.cfm](http://www.handsontheland.org/activities/bykids/poetry/poetry_results.cfm)



APPENDIX G  
WORKPLAN TASK 3.4  
QUALITY ASSURANCE PLAN REVISION



Hands on the Land Web Site  
Prepared by: The Keystone Center

March 20, 2006

**Quality Assurance Plan**

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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 5<sup>th</sup> 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 (9<sup>th</sup> 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/Contribution s	*_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, HandsontheLand.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	Database, web page code, site tours, site	Web Site
Administration	profile images, site specific projects, passwords, environmental monitoring projects, planning documents, PDF files, and new sections	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.
- 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](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.

## APPENDIX H

### WORKPLAN TASK 3.4

### QUALITY ASSURANCE PLAN RECOMMENDATIONS

#### **Quality Assurance Plan Recommendations**

*Recommendation 1:* Currently, the Hands on the Land web site does not fully conform to U.S. Government Printing Office Style. We recommend that an editor be contracted to perform a thorough edit of member-posted content, glossary, and site tours.

*Recommendation 2:* Funding should be secured or a method of service continuation be established to maintain server costs and maintenance fees. Hands on the Land's ColdFusion-based web site is hosted by MarketMatrix, Inc.

*Recommendation 3:* Funding should be secured or a method of service continuation be established to contract with an editor to perform basic editing services to assure the quality of member-posted materials.

*Recommendation 4:* Funding should be secured or a method of service continuation be established to contract with a web site technical administrator to perform the basic duty of maintaining the architectural, coding, and design integrity of the web site. This person would also perform the task of training new members in the use of the web site's content management system.

*Recommendation 5:* The web site's permission system currently allows any manager-level member to edit any member-posted educator resource or bulletin articles. The editing of educator resources and bulletin articles should be restricted to the members of the site who posted that material. Full-editing privileges of the educator resources should be limited to administrators only.

*Recommendation 6:* Under the current web site architecture, for agency-level users to review membership applications, they must be defined as administrators. A mid-level permission called "agency" should be created so that these users cannot access technically-critical content.

*Recommendation 7:* On-line interactive training tools should be developed to help content managing users learn how to use Hands on the Land's web site. With the current technology that Hands on the Land uses, these tools may be created with Macromedia Flash.

*Recommendation 8:* For the redesign process to be most effective, needs assessment surveys should be done to include all significant audiences of the Hands on the Land web site. A needs assessment survey has already been performed for program providers, but this assessment should be extended to teachers and our other audience base. These should be performed in a direct way to a focus group of teachers and students. A needs assessment survey should also be installed permanently on the web site in a manner similar to the random Search Field and Data Input Usability Survey that is currently posted on the web site.

*Recommendation 9:* To increase the teacher user-base of Hands on the Land, we recommend providing custom Hands on the Land lesson plans for the use of the web site in the classroom. We recommend creating lesson plans for these three usages:

- a) Promote the use and learning within the Hot Topics section. Creating on-line materials for teachers and students will help to foster a deeper understanding of issues critical to the federal agencies.
- b) Encourage students to publish reports, essays and creative materials that increase awareness of issues critical to Hands on the Land member sites. Authorship lesson plans will help increase students' awareness of issues important to member sites.
- c) Support the environmental monitoring activities of member sites through increased awareness of the Hands-on Science databases that Hands on the Land offers. On-line, interactive lesson plans should be created which will encourage students to analyze the data that other classrooms have posted on-line.

*Recommendation 10:* Hands on the Land should partner with other educational organizations, which are closely related to the public and private school system in order to encourage a deeper relationship in the educational community. Having these partners will help improve the quality of the materials that Hands on the Land provides to classrooms.

*Recommendation 11:* On-line interactive training tools should be developed to help program providers learn how to build relationships with students, teachers, and school districts. With the current technology that Hands on the Land uses, these tools may be created with web-based video and Macromedia Flash.