



Heartland Inventory and Monitoring Network

Seasonal Training in the Parks

2011

The summary of each slide is bolded in the notes. The summary may be used with all employees, including those that will have little contact with HTLN staff, monitoring activities, and visitors.

The green typeface is an expanded version of the training that details more about the Heartland I&M Network and may be most appropriate for employees in resource management.

The Heartland I&M Network





What is the Heartland Inventory and Monitoring Network?

How does the network affect park management and interpretation?

What do you need to know about the network?



For All:

The Heartland I&M Network provides science-based information to the parks so that the park managers can make well informed decisions and park interpreters can address topics and issues using high quality, park specific information. The network focuses on monitoring of certain select resources that indicate the health of natural systems in the park.

This slide show will provide a history of the Inventory and Monitoring Program and information as to how it affects the park and park staff.

Expanded version:

You can learn more by accessing <http://science.nature.nps.gov/im/units/htln/index.cfm>. You will find information about the monitoring program, reports from inventories and monitoring, and educational and interpretation resources.

Cultural and Natural Significance of Heartland Network Parks



Protecting the Habitat of Our Heritage



- Free Flowing Rivers and Streams
- Presidents
- Deciduous Forests
- Civil War battlefields
- Prairies and Savannas
- Native Americans
- Wetlands
- Westward Expansion



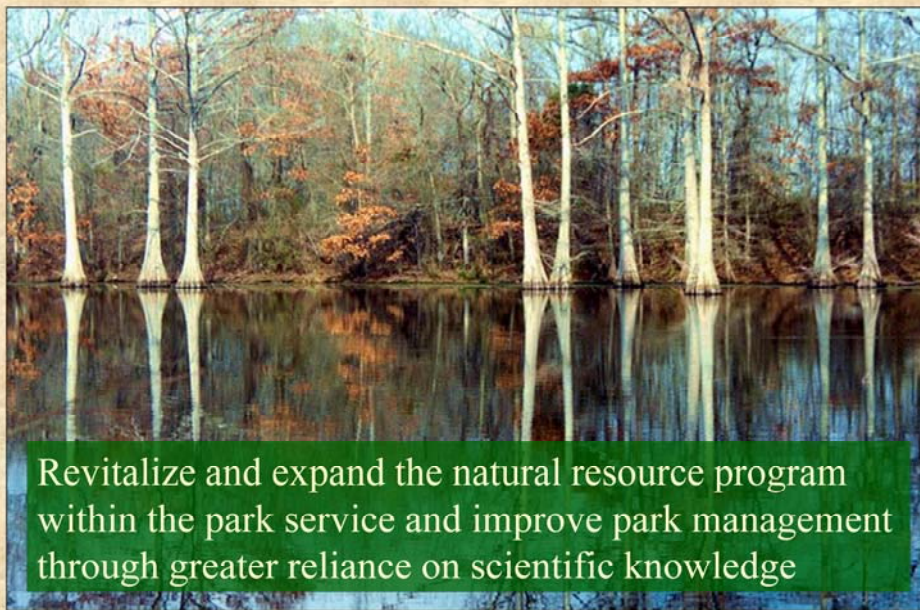
For All:

The heartland of our country has several cultural parks based on historic events or people, and natural parks based on extraordinary land or water features. Often the natural landscapes help support a historic story and so parks must keep those natural landscapes in good condition to support the cultural landscape.

Expanded version:

The public generally considers the keystones of the NPS to be the large, natural resource parks of the west like Yosemite, Yellowstone, and the Grand Canyon. However, the Great Plains and Ozark Plateau possess their share of natural resource jewels, such as Buffalo National River, Ozark National Scenic Riverways, and Tallgrass Prairie National Preserve. Other heartland parks are the home of many significant stories in our American history, and preserve important natural landscapes in addition to the cultural history that they preserve. In order to preserve our heritage for future generations, we must not only know about and record the cultural history, we must also better understand the natural history that played a significant role in the development of the United States.

Natural Resource Challenge



Revitalize and expand the natural resource program within the park service and improve park management through greater reliance on scientific knowledge

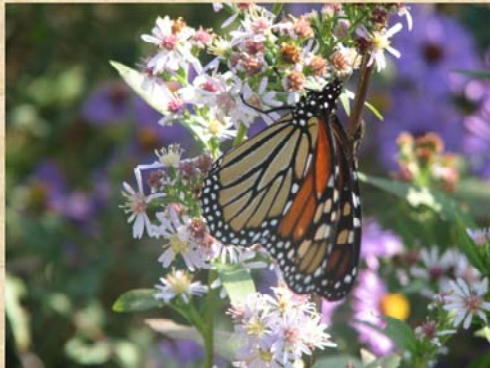
For all:

The State of the Parks Report 2000 highlighted many deficiencies in park management. Since the State of the Parks Report, the NPS has emphasized using science and scholarship as a basis for making management decisions on how to maintain resource conditions in the parks. This resulted in the Natural Resource Challenge, a Congressional initiative to make resource preservation and conservation a consideration in all management actions. The Natural Resource Challenge funds inventories and monitoring in parks that provides the science information needed for management decisions. This funding supports the Inventory and Monitoring Program and the Heartland I&M Network.

For more information on the Natural Resource Challenge, go to www.nature.nps.gov/challenge/



Looking at systems on an ecological scale



For All:

A primary role of the Inventory and Monitoring (I&M) Program is to make natural resource data available and to help make data understandable for resource managers. This is a major part of the National Park Service's effort to "improve park management through greater reliance on scientific knowledge."

There are many components to the Challenge's long-term goals, but the most obvious is the monitoring of Vital Signs. Vital Signs are those characteristics of the natural environment that indicate general health. The term spins off of human medicine, where vital signs, heart rate, blood pressure, etc., tell the doctor about your general health.

Expanded version:

The goals of the I&M Program are to:

1. Inventory the natural resources and park ecosystems, creating a resource baseline for monitoring change.
2. Monitor park ecosystems to better understand their dynamic condition and to provide reference points for comparisons with other environments.
3. Integrate natural resource inventory and monitoring information into National Park Service planning, management, and decision making.
4. Incorporate tools, such as Geographical Information System, to organize and make information available to parks. An example of a tool that makes information available is the Natural Resources Portal, where natural resource information can be found and downloaded for each park. These data are found at <http://science.nature.nps.gov/im/datamgmt/IRMA.cfm>.
5. Share National Park Service accomplishments and information with other natural resource organizations and form partnerships for attaining common goals and objectives.

Purpose of Monitoring



Determine the status/trends in resource condition

- Assess the effects of management and restoration efforts
- Provide early warning of impending threats
- Provide a basis for understanding change in natural systems.

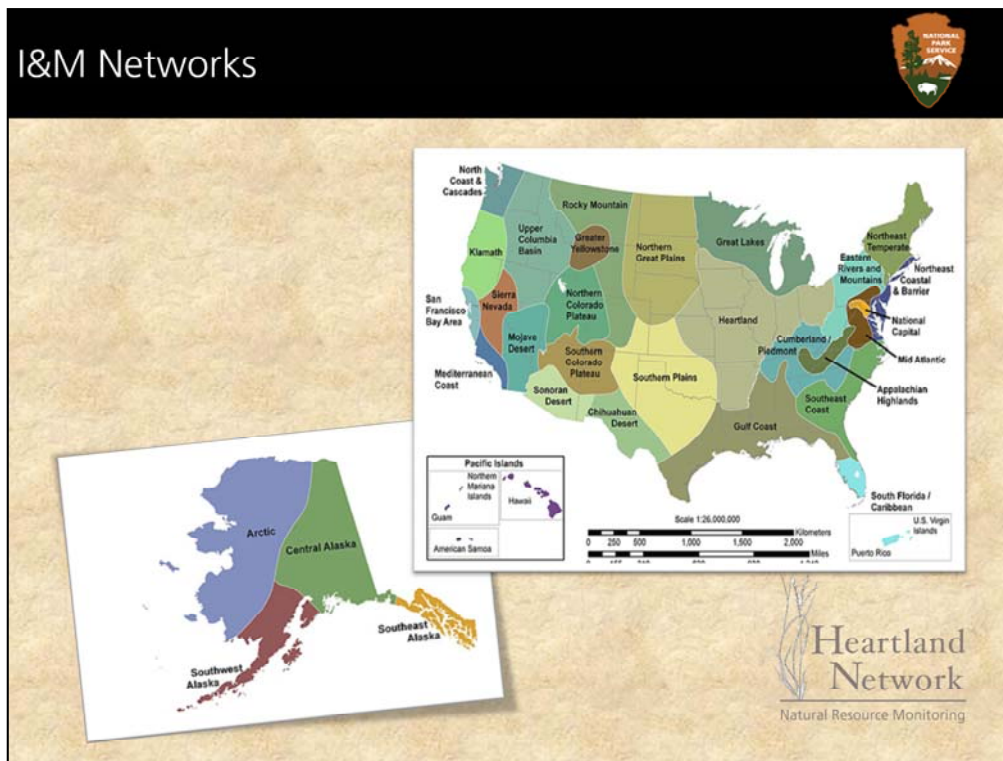


For All:

The monitoring programs allow park managers to detect changes and quantify trends in the condition of resources, as well as understand the linkages between changes in resource condition and their cause.

Expanded:

Read slide



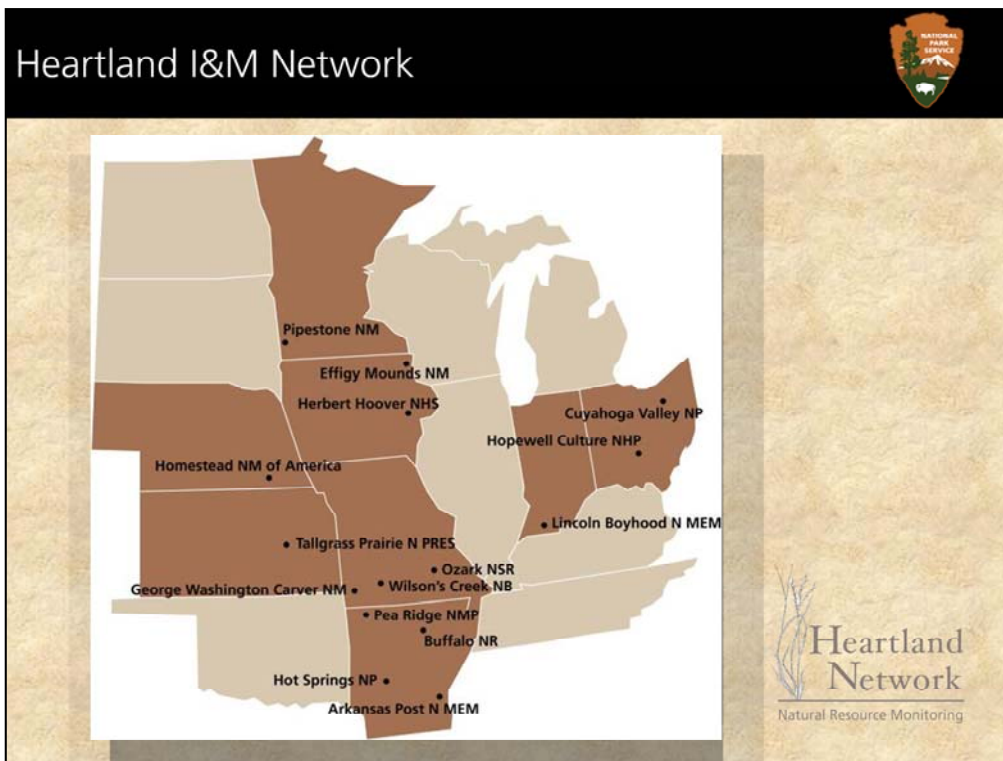
For All:

The monitoring is known as Park Vital Signs Monitoring, and is the organization of approximately 270 park units (only those with natural resources) into 32 monitoring networks to conduct long-term monitoring for key indicators of change, or “vital signs.” Vital signs are measurable, early warning signals that indicate changes that could impair the long-term health of natural systems.

Expanded:

Website with more information

<http://www.nature.nps.gov/protectingrestoring/IM/vitalsignsnetworks.cfm>



For All:

Our network, the Heartland I&M Network, covers the largest geographic area of the 32 networks and is among the largest in number of member parks. The Heartland I&M Network's 15 parks reside in eight Midwestern states representing tallgrass prairie, Ozark highlands, and eastern deciduous forest eco-regions.

Vital Signs Monitoring – 3 Characteristics



1. Long-term, monitoring
2. Integration and coordination
3. Information management






Heartland Network
Natural Resource Monitoring

For All in bold (expanded in regular type):

There are three characteristics of Vital Signs Monitoring in the Heartland parks.
They are

1. A long-term, ecological monitoring perspective

Expanded: This perspective takes a systems approach to provide information for decision-making and to report on the condition of selected park resources. This is not short-term monitoring looking at changes within the year, between seasons, etc. It is looking for general trends and status.

2. The integration and coordination among parks, programs, and agencies

Expanded: Vital Signs monitoring is only one small part of larger science effort in some parks. There is also a focus on inter-park collaboration, and collaboration with park-funded projects, Learning Centers, Fire Program, Exotic Plant Management Teams, etc.

3. An emphasis on Information Management

Expanded: Approximately 1/3 of staff time is spent managing and analyzing data to guarantee data integrity through careful handling and archiving. This information is then made available and useful for management decision-making, research, and education through the <http://science.nature.nps.gov/im/datamgmt/IRMA.cfm> website.

Monitoring for Park Managers use



Inventory and monitoring are critical for cost effective, accountable resource management informed by scientific information.



For All:

The staff conducts monitoring that park managers need in order to implement adaptive management – management actions that change with the needs of the ecosystem and the ecosystem response to the actions. The park managers selected the appropriate Vital Signs for their parks. This year, the network will monitor . . .

INPUT SPECIFIC PARK INFORMATION THAT INCLUDES VITAL SIGNS FOR YOUR PARK AND WHAT IS BEING MONITORED THIS YEAR.

Your park website should have a link to the network website. At the Heartland website, you can find reports, resource briefs, and educational material to improve your understanding of park resources.

Expanded:

The Heartland Network staff is a multi-disciplinary team of scientists, support personnel, and seasonal field technicians. Vital Signs represent both terrestrial and aquatic ecosystems at the population, community, and landscape scales.

Input ways that data or findings have been applied to your park's interpretive or management programs. Contact the network for examples, or see resource briefs and reports at <http://science.nature.nps.gov/im/units/htln/articles.cfm>

Management Needs for Information



Recreation, Health and Safety



Restoration and Exotic Plant Management



Maintaining Landscapes



Effects of Prescribed Fire

 **Piedmont Network**
Natural Resource Monitoring

For All:

Some of the Vital Signs relate to recreation, health and safety, fire effects, restoration, wildlife management, maintaining natural landscapes, and invasive species.

Connecting through Communicating



Plan: importance and methods of communication.

Containing a CD/DVD with ready to use products and templates



“People will only protect what they love,
love what they understand, and
understand what they are taught.”

(Senegalese saying)

Heartland
Network
Natural Resource Monitoring

For All:

The way to make the public care about our public trust resources is to connect individuals to the resources through good communication. The Heartland I&M Network Communication Plan is a comprehensive strategy to convey information about the purposes and objectives of the program as a whole.

Example of Matrix Entry



Interpretive Service or Product: Bird Checklist	
Target Audience: External	
Purpose/Need	
<i>Critical Natural Resource Issue</i>	Bird species especially those that are Threatened and Endangered and/or monitored by the HTLN
<i>Human Dimension Component</i>	Birding is a popular, non-consumptive experiential activity in which people observe and study a number of species located in an area. Bird species are most often threatened by habitat loss caused by development. Birders could be engaged in the monitoring process by encouraging them to report observations of birds that HTLN is monitoring observation and study of species could be used to engage them in the monitoring process by encouraging them to report birds that the HTLN is monitoring to park staff or directly to HTLN via email.
<i>Goals & Objectives</i>	Goal: Increase awareness of the bird species within the Heartland, those that are threatened and endangered, and how the HTLN conducts monitoring activities to understand changes in the bird populations. - Disseminate checklists through visitor center displays and an online version. - Recipients will develop an appreciation for the diversity of bird species within the HTLN. - Recipients will be concerned about the wellbeing of native bird species.
Product Summary Information	
<i>Description /Summary (including duration)</i>	A tri-fold brochure listing a variety of bird species found in the area. Birds monitored by the HTLN will be highlighted in some manner (e.g., italics, bolded). The brochure will provide an explanation of how these birds are monitored and contain a message about the purpose of monitoring these species. Contact information will be included to guide the reader to more information about the HTLN and its inventory and monitoring activities.
<i>Message/Theme</i>	HTLN is inventorying and monitoring the health of the bird species throughout the network. Theme: Protecting our feathered friends by teaming sound science and management.
<i>Making Connections</i>	Bird species have been a subject of awe for many cultures throughout the world. Images of birds can be found on everything from stamps to wine labels to currency. The bird shows up in mythology and story telling in many religions and is often associated with inspiration and omens.

Heartland
Network
Resource Monitoring

For All:

The project matrix within the Communication Plan provides project information in a format that easily transfers into a grant proposal or a PMIS statement.

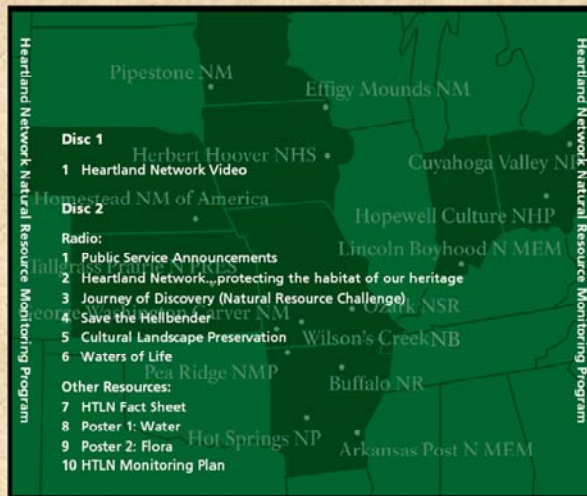
Expanded:

The NRPP funding requires an interpretive component for all projects over \$100K (PAC component). The matrix projects can be copied from and pasted into funding requests for PAC, Eastern National, or others. It also contains how the projects fit into Interpretive Competencies.

For a copy, go to

http://science.nature.nps.gov/im/units/htln/library/EdOutrch/EdOutrch_InetrpC_CommPlan_200706.pdf Or ask your lead ranger.

DVD with audio, video, and publications for all HTLN parks



To familiarize
stakeholders,
partners and the
public with NPS
monitoring
activities



For All:

The Heartland Network developed a DVD with a video and several audio spots that could be played through the Traveler Information System, public service announcements, local access on cable TV, in the visitor center, etc.

Expanded:

Video

Watch a video depicting the work being conducted to protect the cultural and natural history of the parks within the Heartland Network.

This is recommended for your training session.

Radio Spots

Listen to public service announcements about the Heartland Network and its parks. All files are in wav format.

Heartland Network - Protecting the Habitat of Our Heritage

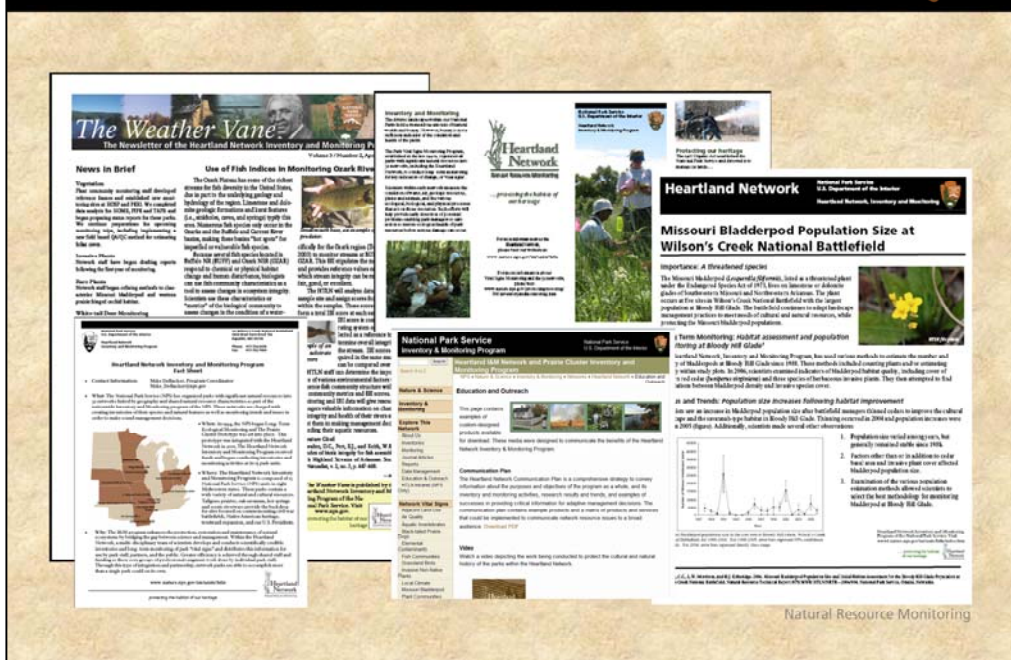
Journey of Discovery (Natural Resource Challenge)

Save the Hellbender

Cultural Landscape Preservation

Waters of Life

Examples: Materials for staff communication



For All:

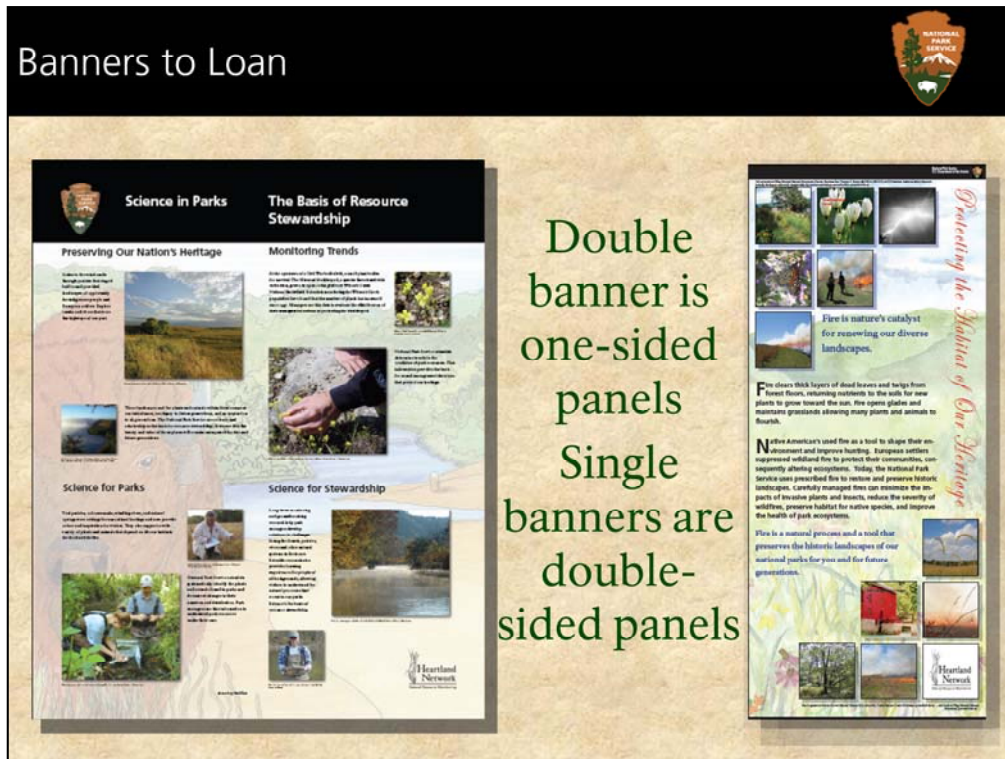
Templates and finished versions of various products are available. Heartland Network materials can provide the template for your own project, or use any of the network's finished products to distribute. Download products from the network web site, <http://science.nature.nps.gov/im/units/htln/edoutrch.cfm>.

Expanded:

- **Brochures and Site Bulletins** -- View brochures for information about the Heartland Network Inventory & Monitoring Program, climate change, and other topics.
- **Posters** -- Print Heartland Network posters on 8 ½" x 14" paper.
- **Resource Briefs** -- Read a one page summary of the findings from monitoring reports.
- **Newsletters** -- Read The Weather Vane, internal newsletter of the Heartland Network, to learn about the latest projects, successes, and trends. Go to <http://science.nature.nps.gov/im/units/htln/edoutrch.cfm> for copies.



Heartland Network has artwork that is a by-product of developing some projects for park use. A PowerPoint presentation on the Heartland I&M Network can be used by parks in programs. Please see the web site for products or ask the Heartland staff.



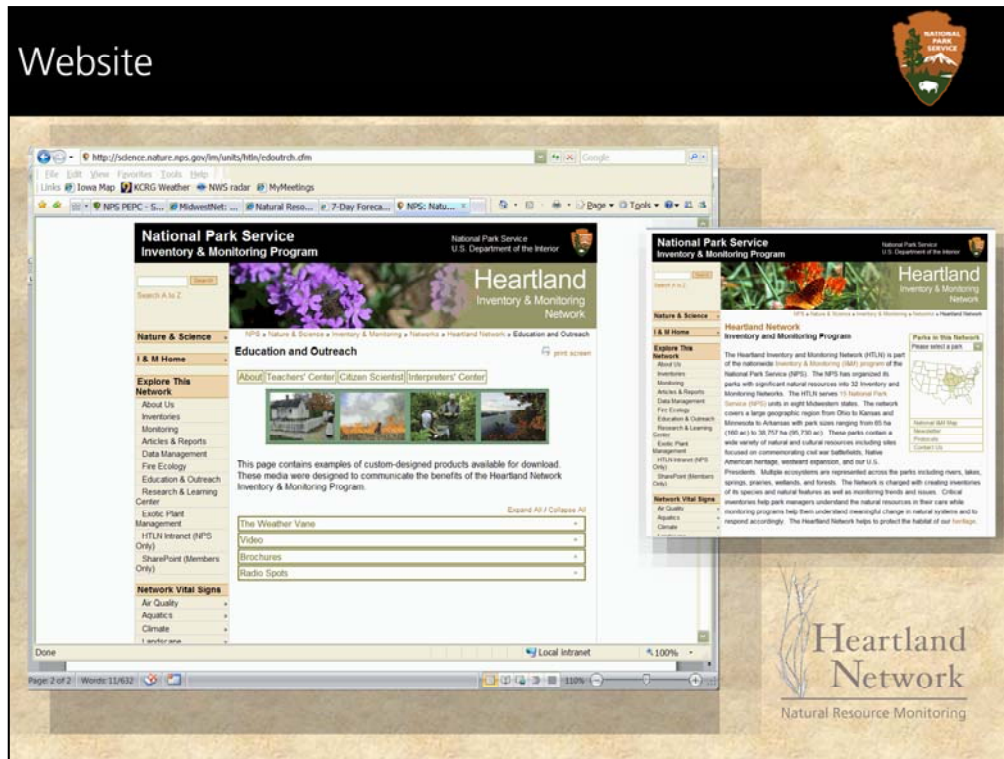
For All:

Several 3' X 6' self supporting banners are available to parks for display in visitor centers or at special indoor events.

Expanded:

The network ships the banners to the park and asks that the park ship them back to the Heartland Network or to the next park that has reserved them. The panels may be borrowed for up to a month, but if the banners are not reserved, they may be kept longer. Contact Michelle_Lee@nps.gov to reserve the banners. Banners are:

- **Science in Parks** – two separate, complementary banners give an overview of the role of science in resource management (above, left)
- **Biodiversity/Invasive Species** – the biodiversity side shows brightly colored artwork of a natural site with many plants and animals; the invasive species side uses the same artwork that is faded and washed out with overlay photos of invasive species. The theme is “color my world with biodiversity.”
- **Cultural Landscapes/Prescribed Fire** – the cultural landscape side uses our slogan, “Protecting the Habitat of Our Heritage” to connect science with preserving history and pre-history; the fire side again invokes our slogan and show’s how fire is nature’s catalysts for renewal and restoration (above, right).



For All:

An easily navigated web site allows park personnel to learn about HTLN and find information or products that may be used in decision making or in interpretation.

Expanded:

The web site should be linked from your park web page, but it can also be found at: <http://science.nature.nps.gov/im/units/htln/aboutus.cfm>. Note that the web site has left menu navigation and tabs in the main body. The site is multi-layered, allowing the user to narrow their search to subjects and categories within subjects. Reports and education and outreach information and products are located here.

Please Become Part of the Effort



- Read The Weather Vane
- Peruse the HTLN web site
- Use Communication Plan and DVDs
- Create new materials or project ideas
- Borrow or request materials from HTLN
- Accompany Heartland staff into the field



For All:

Read the slide

Expanded:

- Read The Weather Vane to remain current on Heartland Network programs.
- Visit <http://science.nature.nps.gov/im/units/htln/education.cfm> for more ideas and visit <http://science.nature.nps.gov/im/units/htln/index.cfm> for information on the Heartland Network Inventory and Monitoring Program
- Your park has two or more copies of the Communication Plan and DVDs. Please take a look at how the network intends to communicate with you and the park.
- Work with the Heartland Network to create new materials or project ideas. The network welcomes fresh ideas and can assist with new projects. Projects meet the requirements of the Interpretive Competencies.
- Borrow or request materials already available for your use. The Matrix will give you an idea of what is available. Don't hesitate to ask for extra copies.
- Accompany Heartland staff into the field. If you are interested in learning more about science in the parks and Heartland Network activities, join the researchers in the field when they visit your park.