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Developing a County Web Site to Assist Local Planning and Facilitate Citizen Involvement

Michigan State University Cooperative Extension Service

Victor Institute for Responsible Land Development and Use

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Issued June 2003

4 pages

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Developing a County Web Site to Assist Local Planning and Facilitate Citizen Involvement

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Overview

County web sites can serve many purposes, from communicating meeting information to providing valuable tools for community planning. An interdisciplinary university management team began work with Wexford County in April of 2001 to develop and evaluate a prototype natural resource information decision support system (DSS) for the Internet, funded by a grant from the United States Forest Service. The team included the Victor Institute, the Institute of Water Research, the Departments of Forestry and Resource Development, and the Michigan Natural Features Inventory (MNFI). Wexford County had already started development of a comprehensive master plan, and county officials wanted to incorporate natural resource information into the decision-making process. The decision support system (DSS) was designed to provide access to relevant information and tools in one easy-to-use interface. The resulting web site, available at www.wexfordcounty.org, is a valuable example for other counties seeking similar solutions to assist their planning.

Initial Planning

Initial steps to develop a web site for planning consist of identifying the information planners and citizens need. A broad range of stakeholders – county officials, natural resource managers, geographic information system (GIS) specialists, and city planners – provided insight and identified priority areas of information needs.

Development of the web site started with five main components, including a:

- *Home* page describing the purpose of the web site;
- *Meetings and Events* page with minutes from planning meetings and the meeting schedule;
- *Resources* page providing links to sites offering natural resource and planning information;
- *Decision Support Tools* page including downloadable maps and information on free mapping software;
- *Fact Book* page providing access to an extensive document of county data.

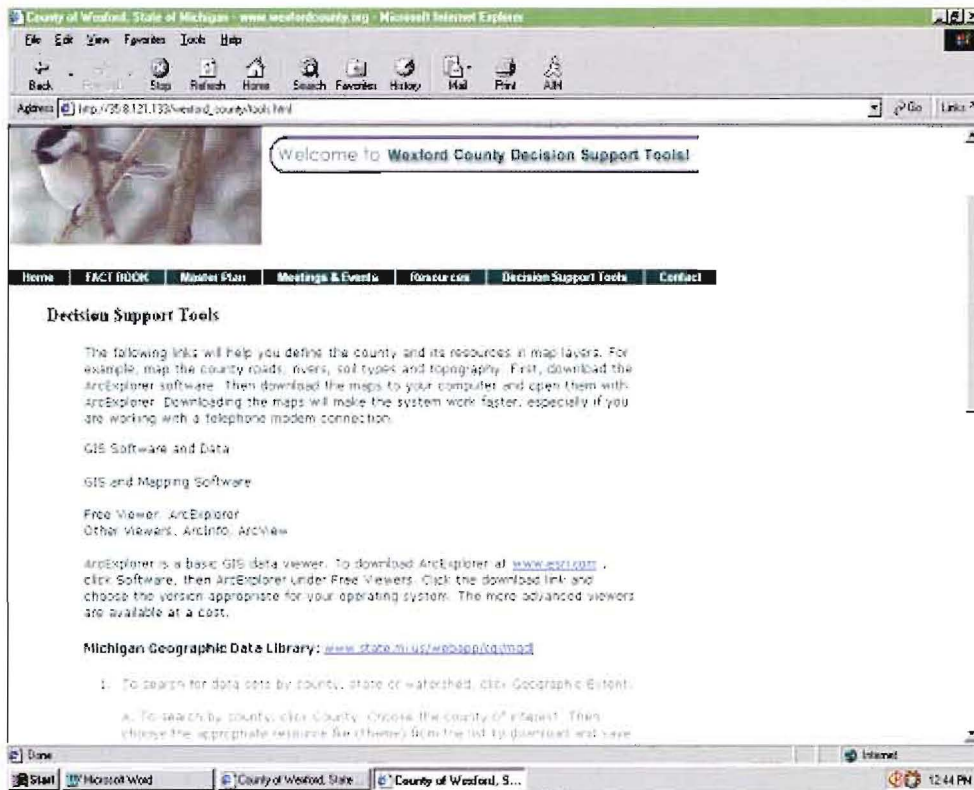
A copy of the draft comprehensive master plan was also posted to encourage citizen review and comment.

Establishing an Online Geographic Information System (GIS)

To assist planners, citizens, and developers in viewing spatial data, the team developed an online geographic information system (GIS) as a component of the Decision Support Tools section. Four data layers were included in the GIS:

- Digital Soils Data
- Digital Orthophoto Mosaic
- Land Use/Land Cover circa 1978
- Land Use/Land Cover circa 1998

Development of the online GIS involved gathering data from three different sources. Wexford County provided land use and land cover data and the Natural Resource Conservation Service Soil Survey Geographic Database (NRCS SSURGO) provided digital soils data. The Institute of Water Research developed the orthophoto mosaic.



Wexford County Decision Support Tools Page

These datasets were converted into the same projection and coordinates so they could be compared effectively with the mapping software. For the purpose of geographic orientation, the datasets were also overlaid with basic geographic layers including roads, township boundaries, and basic hydrology (rivers, lakes, and streams).

After the datasets were prepared for posting to the Internet, ArcView™ software (available from Environmental Systems Research Institute at www.esri.com) was used to incorporate the four data layers.

The web-accessible GIS features three basic functions; *zoom*, *pan*, and *identify*. These functions enable users to focus on geographic areas of interest. The *identify* tool allows users to view the databases and tables associated with each data layer. Access to this spatial information can greatly assist any participant in the planning process.

Web Site Setup

The following steps are useful for creating a web site:

- Choose a domain name for the site.
- Contact a domain provider such as Network Solutions to determine whether the domain name is available and reserve the name immediately.

- Contact a domain host provider or county server administrator to obtain the necessary Internet provider (IP) addresses to finalize setup.
- Develop a flow chart with the information to be displayed on the web site, keeping in mind the site's purpose and audience.

Data Organization

Software is the key for the smooth conversion of information for display on the web. The software used must be able to handle the complexity of the information. This is a particular concern when manipulating large spatial datasets that may require storage in a database. Whenever possible, large documents should be

divided into smaller segments to facilitate posting to the web site. Smaller documents also allow faster downloads by web site users.

The following tips may also be helpful when organizing documents intended for a web site:

- Include the cover page and the table of contents in the main document.
- Each chapter of a large document, such as a fact book, should be a stand-alone document.
- Save graphics in .jpg or .gif format for use in the original document as well as on the web, using a photo editor such as Adobe Photoshop®.
- Saving documents as PDF or HTML files may not work well with some software programs because formatting may not be preserved.
- If a document contains footnotes, the information should be stored in a database to eliminate the massive amounts of web pages that would otherwise be needed. Using the database method requires the creation of only two pages.

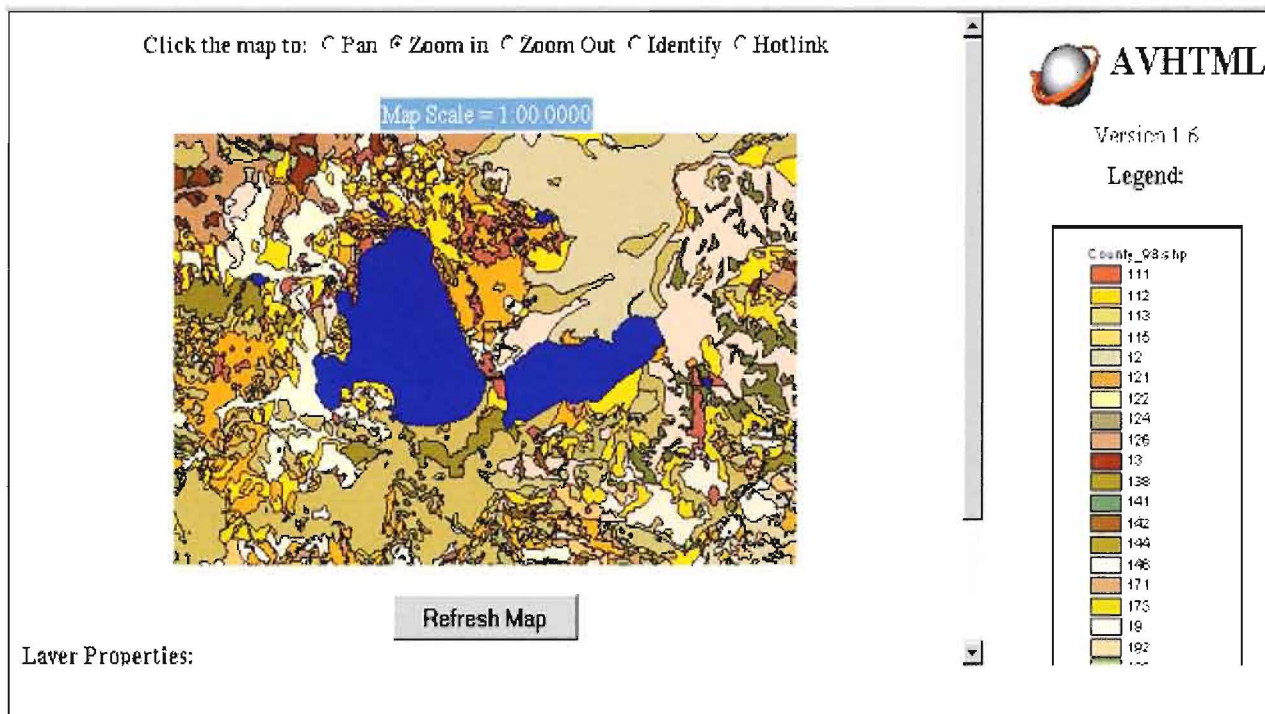
Another suggestion for displaying information on the web is to use a database such as Microsoft® Access and incorporate Active Server Pages (ASP). This method requires less server space and fewer pages to display the information.

Lessons Learned in Development of the Wexford County Web Site

Some challenges arose in developing the web site. The management team discovered that Internet access and network infrastructure in many rural counties are dependent on older technologies such as telephone modem connections. The web site was formatted to load quickly to accommodate modem users. As many county offices were not connected, coordination of information between natural resource managers and city or county planning departments was virtually nonexistent. In the Wexford County planning process, coordination of local stakeholders was improved because

However, using software intended specifically for web publishing simplifies the process of presenting information.

Project participants also learned from the web site development process. The Michigan Natural Features Inventory (MNFI) benefited from the opportunity to communicate with county officials and citizens. This allowed MNFI specialists to discuss analysis and formatting of the information with web site users. MNFI also helped identify obstacles and hurdles that must be overcome to incorporate natural resource information into planning efforts. This understanding led to major structural and content changes in the MNFI web site.



Wexford County Web Site: GIS Showing Digital Soils Data

natural resource managers were included in the planning process and could see how county planning would affect natural resources.

The management team also learned that some documents do not translate well into a web-based format. Intensive work was required to transform the fact book and master plan into easily downloadable files. Many software programs – Adobe PageMaker®, Adobe Acrobat®, Microsoft® Word, Microsoft® Publisher, Microsoft® Front Page, or WordPerfect® – can be used to create HTML or PDF files for the web.

Conclusion

The Wexford County web site provides local officials easy access to key information and valuable tools, allowing for effective use of relevant information in the planning process. Citizen access to the web site increased their involvement in the planning process.

With these suggestions and observations, other counties can create similar web sites as effective tools for use in their county planning efforts. 🐼



Wexford County

The USDA Forest Service funded a project to develop a Web-Accessible Natural Resource Information/Decision Support System. The management team included the following MSU collaborators: the Victor Institute for Responsible Land Development and Use, the Institute of Water Research, the Department of Resource Development, the Department of Forestry, and the Michigan Natural Features Inventory. Working with Wexford county officials and citizens, the team developed a web site providing natural resource information to facilitate comprehensive local planning. This publication describes the development of the web-accessible decision support system and is intended to assist the development of similar web sites.

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VI 1020, June 2003 3M-JvB/LP, Price \$.00*

What's inside this issue:
**Developing a Web Site for
County Planning**

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www.iwr.msu.edu
www.wexfordcounty.org
www.networksolutions.com
www.esri.com
<http://web4.msue.msu.edu/mnfi>

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