

## **PROGRESS REPORT – Annual Report for 2004**

To: Kenneth E. Martin

From: Jacquelyn M. Strager, Research Coordinator, NRAC  
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CC: Paul Becker, Michael Dougherty, Jerald Fletcher, Larry LeFlore, Debbie McDonald, Jennifer Williams

Date: December 15, 2004

Re: NRAC support for Extension  
Progress Report through December 2004

### **Overview**

The Natural Resource Analysis Center (NRAC) has continued to provide Geographical Information Systems (GIS) support and training for the West Virginia University Extension Service. The following outlines progress and ongoing work for the period of January through December 2004.

### **Completed Tasks**

- Wrote new one day “Highlights of ArcGIS” review class specifically for Extension
- With assistance from Mike Dougherty, Becky Casteel (Extension), Deloris Ratliff (Extension), and Kelly Street (NRAC), facilitated one session of the two day training class, and one session of the one day review class (see separate summary of training activities)
- Updated West Virginia statewide GIS data layer CD from 2003 version to include additional data layers
- Assembled West Virginia county GIS data layer CDs for three additional counties since 2003
- Wrote grant proposal for CSREES Geospatial Extension Specialist program for West Virginia (unsuccessful)
- Coordinated upgrade of GIS software to latest version for county and WVU extension offices, providing software and detailed installation instructions to past class participants
- Continued to provide GIS support to contacts throughout Extension as needed

### **Extension Contacts**

NRAC has coordinated or completed GIS related tasks for the following individuals within the WVU Extension Service. A total of 10 individuals with Extension contacted NRAC in 2004 and received GIS assistance with their needs, including three individuals

within Community, Economic and Workforce Development, three associated with 4-H Youth Development, one with Families and Health, one Community Design Team, and one with Agriculture and Natural Resources.

Examples of completed GIS related tasks:

- Assistance/advice for county community index map (Harrison County – Pat Gruber)
- GIS data assembly and assistance (Morgan County – Bob Knight)
- Scanned and printed large format maps/landscape architecture designs for new county conference center (Wetzel County – Mindy Mall)
- Provided county census data and ongoing technical support for county VISTA volunteer who was assembling data for grant applications for after-school programs (Marion County – Robbie Edalgo, Jeff Himes)
- Assembled regional datasets and final map figures used in application for Appalachian Forest Heritage region designation, including 16 counties in WV (Community Design Team – Jeremy Morris)
- Assembled and printed large poster of floodplain areas in Mud River watershed (Lincoln County – Ric MacDowell)
- Assembled spatially-based climate data summaries (Tom Basden)
- Updated and printed reference maps for WVU farm properties (Bill Jones)
- Various mapping tasks (Mike Dougherty)
- Provided basemap layers for use with Farm Works precision agriculture farming application (Pendleton County – Janice Dever)

**GIS Training Class Summary**

GIS training classes for Extension were held in August and December 2004:

- 10 total attendees
- 6 on-campus attendees
- 4 county-based attendees

Class attendee breakdown by program group:

- 4 Agriculture and Natural Resources
- 2 Community, Economic and Workforce Development
- 2 Families and Health
- 1 4-H Youth Development
- 1 Graduate student

Class participants received:

- Class notebook containing lectures (slides, notes) and hands-on exercises
- CD of class data (so they could re-do the exercises on their own office computers)
- CD containing 79 different West Virginia statewide datasets
- CD for software installation with instructions (if off-campus)
- County personnel also given county data CDs containing aerial photographs, topographic maps, soils data, and other datasets of interest at the smaller county level

## **Future Tasks**

Expand awareness and visibility of geospatial technology within Extension: The current training program has allowed me to provide an introduction to geospatial technologies (GIS software and related datasets) to many extension faculty and staff. However, many individuals within Extension do not have the time or resources to devote to attending training sessions or to continuing to use GIS on their own. These individuals still may have a use for geospatial information in their work.

I would like to explore alternative methods of extending my GIS related activities to reach a broader audience within Extension. These methods may include short presentations at annual Extension meetings, and printed or web-based fact sheet type materials etc. I will also investigate the use of less software-intensive GIS capabilities for county level Extension needs, such as the use of ESRI's ArcReader data viewer as an alternative to the full ArcGIS software package.

There are a few ongoing projects within Extension that will rely heavily on new and emerging geospatial technologies. For example, Pendleton County recently acquired the Farm Works software package and is planning to use this software in combination with GPS units for precision agriculture type operations. Marion County has made extensive use of census datasets and maps of demographic statistics within the county in grant applications. The use of GIS and geospatial technologies in these two counties could be offered as useful examples to others throughout the state.

Future training: Many in Extension have expressed an interest in receiving more information and training in Global Positioning Systems (GPS) technology. I would like to expand my training offerings beyond GIS software to include GPS as well. I would also like to be better able to provide technical assistance and advice regarding GPS.

GES program: The nationwide Geospatial Extension Specialist program, sponsored by USDA and NASA, will likely issue a request for funding proposals in early 2005. In 2004, NRAC and Extension submitted an unsuccessful proposal for funding from this program. However, we still have a strong interest in securing future funding, and attended a GES program meeting in November 2004. In anticipation of the 2005 request for proposals, I would like to outline some steps that will hopefully increase the likelihood of acceptance of future WVU GES proposals. These steps include establishing necessary partnerships within the state and more precisely identifying research needs of interest to the funding agencies for the GES program.

Future GIS assistance: I would like to continue to offer GIS support as needed, and would like to take steps to increase the level of interest in GIS support for Extension if possible. I feel that providing the training was a valuable first step, and would like to encourage and assist any Extension faculty that are interested in pursuing future projects with a GIS component.

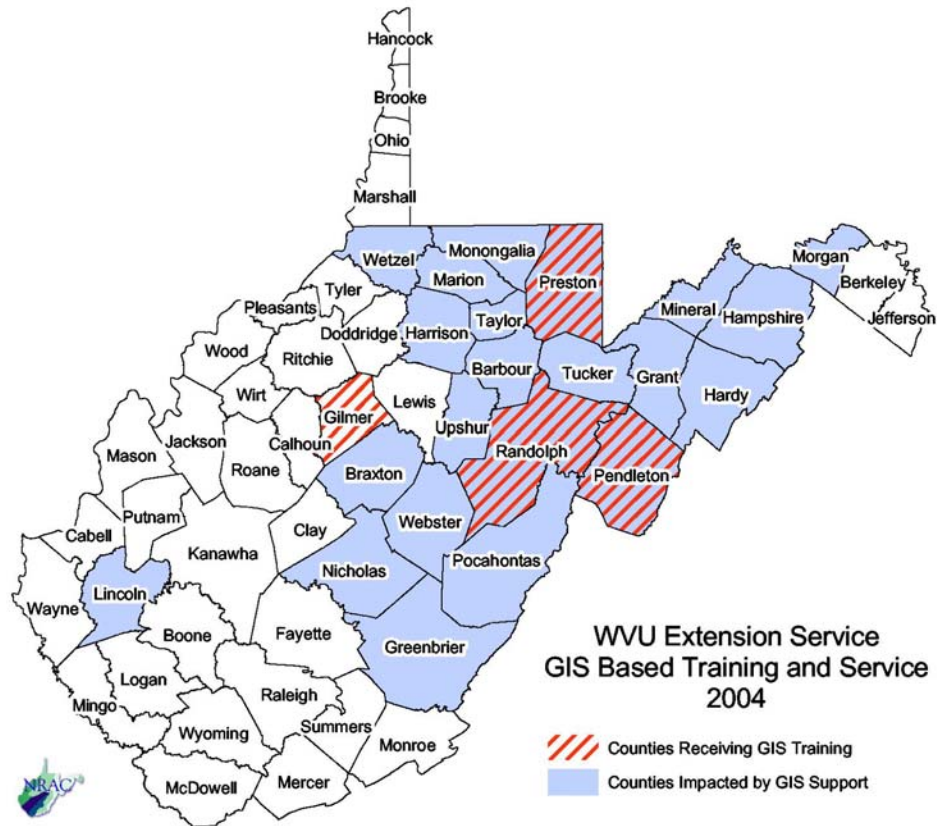


Figure 1. GIS based training and service provided by NRAC to individual counties for 2004. Counties receiving GIS training are highlighted, as well as all counties either directly or indirectly impacted by GIS support.

## GIS Training Class Participants, 2004

### Agriculture and Natural Resources

Hanham, Alison  
 Helmondollar, Ronnie  
 Seymour, Dave  
 Shockey, Bill

### Community, Economic and Workforce Development

Dougherty, Mike  
 Runnions, Glenn

### Families and Health

Bartron, Mary  
 Nichols, Allison

### 4-H Youth Development

Dean, Jason \*  
 Hawkins, Stacey

\* - graduate student