

K-12 Project - Sac County Barn Quilts Project

GISCorps Volunteer assists Local 4-H'ers in using GPS/GIS to map Barn Quilts of Sac County, Iowa

In September 2007, Carol Ehlers, Northwest 4-H Youth Field Specialist from Iowa State University (ISU) Extension office requested assistance for their Sac County Barn Quilts project. They needed a GIS volunteer to assist their Tech team with software selection, application training and linking the data points to the Sac County Barn Quilts website.

Figure 1: A Barn Quilt in Sac County, Iowa - Photo taken by Barn Quilts

Based on the request, Leeanne Pacatte of GISCorps K-12 team recruited Brandon Haas of NewCom Technologies, Inc. in Des Moines, Iowa and put him in contact with the ISU extension staff in October 2007. In November 2007, the 4-H'ers began discussing the project through utilizing webcast meetings with ISU Extension GIS Specialist, Alan Jensen and GISCorps' Brandon Haas. Two months later all of the needed equipment and volunteers were in place and they conducted a workshop on Saturday, January 28th, 2008.

Figure 2: Twelve 7th thru 12th graders attended the workshop

Figure 3: Brandon Haas teaching 4-H students at the workshop

The workshop was attended by 22 Northwest Iowa 4-H Technology Team youth grades 8th through 12th and adults who learned how to use their new found Global Positioning Systems (GPS) and GIS skills to map Sac County's historic Barn Quilts. You can see a copy of the Registration Form [here](#).

The technology savvy 4-H'ers used Garmin eTrex GPS receivers collecting the latitude and longitude positions of over 50 historic barns with colorful painted wooden quilt blocks. A Barn Quilt Driving team guided the youth in collecting GPS data points both at the road sign and at the barn. The 4-H'ers and Barn Quilt Drivers returned to a computer lab to download the valuable data into Google Earth files. The 4-H'ers refined their computer skills with an introductory GIS lesson that required using their field notes of barn locations and quilt names.

Figure 4: Brandon Haas and a 4-H student GPSing the location of a barn

According to Ehlers, "The 4-H Technology Team's goal was to develop a Geospatial technologies project that would provide useful information for a community that might impact economic growth. The county's new tourist attraction needed help with data gathering and processing. The 4-H youth benefited from learning about geospatial technologies and careers in a real-world project, and the county's communities benefited from having these historic barns mapped for tourists using GPS technology. This was an example of a terrific community partnership and a win-win situation for everyone."

Ehlers said 4-H families and volunteers have already collectively invested over 180 hours in preparing and using GPS technology to secure each barn's data point. The technology savvy youth were also instructed in using GIS software to develop an internet based driving tour of the historic barns. Because of the 4-H Technology Team's work the paper map will soon come to life on the project's website. A survey was conducted after the event and the results of the survey can be viewed from [here](#).

Figure 5: Location of barns on Google Earth

The NW 4-H Technology Team project was made possible with the help of Iowa State University's Extension Community and Economic Development Unit; Extension, Science, Engineering and Technology (E-SET) program and 4-H Operation Military Kids, which makes GPS hand-helds and computer labs available to ISU Extension 4-H Technology projects. E-SET, a 4-H Youth Development program, specializes in science and technology education for youth. The 4-H'ers also received technical support from ISU Women In Science and Engineering students attending the event from Ames.

Figure 6: Location and photos of barns on Google Earth

Carol Ehlers and Sue Peyton have acquired release documents for photos of all 'youth' participating and for all Sac County Barn Quilts.

To see other K-12 projects, click [HERE](#).