

Northern Illinois University  
Illinois Broadband Opportunity Partnership – Northwest Region



## *Environmental Assessment*

Prepared for:

National Telecommunication and Information Administration

Broadband Technology Opportunities Program (BTOP)

EGIN 6681

April 18, 2011

Prepared by:

Baxter & Woodman, Inc.  
1788 Sycamore Road  
DeKalb, Illinois 60115



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**Northern Illinois University**

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## **1. EXECUTIVE SUMMARY**

Northern Illinois University was awarded a grant by the National Telecommunications and Information Administration (NTIA) to provide broadband infrastructure to communities throughout northwestern Illinois. Under the National Environmental Policy Act of 1969, the NTIA must conduct an Environmental Assessment of the proposed action and evaluate environmental consequences of the proposed action against alternative actions that meet the purpose and need of the project.

The Proposed Action includes installation of approximately 637 miles of fiber optic cable primarily within 9 counties and connection to over 500 Community Anchor Institutions. Approximately 628 miles of cable will be installed underground and 9 miles of cable will be hung from existing utility poles. The new cable will be placed within existing roadway and utility rights-of-way and easements. Nine new wireless transceivers will be installed on existing water towers and ten new transceivers will be constructed on new monopole towers. Underground installation methods include vibratory plow-in, horizontal directional drill, and open-cut trench. For the aerial installation, the cable will be placed on existing utility pole structures.

An Aerial Alternative was also evaluated. This alternate provides connections to the same 500 plus Community Anchor Institutions, and installs 637 miles of fiber optic cable along the same routes; however, the proposed installation method is completely aerial construction on existing and new utility pole lines as opposed to buried fiber. This alternate method of construction will meet the purpose and need of the project.

The third alternate evaluated is the No Action alternate. This alternate will not meet

the purpose and need for this project. The analysis is conducted to serve as a baseline for comparison of the Proposed Action and Aerial Alternate.

This Environmental Assessment reviews the impacts of the three alternates to various aspects of the environment. Areas of the natural and built environment considered in this analysis include: Noise, Air Quality, Geology and Soils, Water Resources, Biological Resources, Historic and Cultural Resources, Aesthetic and Visual Resources, Land Use, Infrastructure, Socioeconomic Resources and Health and Human Safety.

The Proposed Action showed limited impacts in the areas of:

- Noise due to the occasional running of backup generators,
- Aesthetic and Visual resources as well as Land Use due to construction of towers for wireless transceivers, and
- Socioeconomic resources (positive impacts) due to the broadband capacity which the project brings to the project area

Due to winter conditions, a field evaluation for cultural resources could not be completed. An agreement has been reached with the State Historic Preservation Office (SHPO) whereby certain areas within the project limits that were identified as having a high probability for containing cultural resources based on a literature review will have a field investigation completed prior to the start of construction. The findings of the investigation must be approved by SHPO prior to the start of construction within the designated areas. The agreement anticipates that any cultural resources discovered during the course of this investigation can be avoided. If they cannot, appropriate mitigation efforts will be required.

The remaining resource areas which were investigated showed no significant impacts

as a result of the Proposed Action.

The Aerial Alternate was also evaluated against the same criteria. The impacts were found to be similar, with added impacts to the Aesthetic and Visual resources due to the number of utility poles which would need to be added to the visual landscape to construct an aerial system.

The No Action alternative had no impacts to the built environment; however, it has a negative impact to Socioeconomic resources. If the system is not built, it is unlikely that rural communities within the project area will be able to obtain broadband access at competitive rates through commercial providers. Consequently, the educational, healthcare and economic development opportunities would not be available to these areas.

The analysis of the project, constructed using the methods described, showed no significant adverse impacts during construction or operation for the Proposed Action or Aerial Alternate to any of the resource areas described above. While a considerable number of environmental resources exist within the project area, the flexibility of the various installation methods allow for avoidance of any significant impacts. As there are no significant impacts, the Proposed Action is recommended for construction.