

**National Telecommunications and Information Administration  
Broadband Technology Opportunities Program  
Finding of No Significant Impact  
University of Wisconsin-Extension  
Building Community Capacity through Broadband**

**Summary**

University of Wisconsin-Extension (UW-Extension) applied to the Broadband Technology Opportunities Program (BTOP) for a grant to construct 590 miles of new fiber, 12 Worldwide Interoperability for Microwave Access (WiMAX) tower sites, and four equipment huts. The Project would also incorporate 40 miles of existing fiber (for a total of 630 miles) and add WiMAX equipment to three existing towers. The new network will serve 182 facilities operated by 74 community anchor institutions (CAIs) in 39 municipalities. The proposed action passes through 16 counties in Wisconsin, and is referred to as the Building Community Capacity through Broadband (BCCB) (Project).

The National Telecommunications and Information Administration (NTIA) awarded a grant for the Project to UW-Extension through BTOP as part of the American Recovery and Reinvestment Act (ARRA). The funding must be obligated and the Project completed within three years. This timeline will comply with the laws and regulations governing the use of this ARRA grant funding.

BTOP supports the deployment of broadband infrastructure in unserved and underserved areas of the United States and its Territories. As a condition of receiving BTOP grant funding, recipients must comply with all relevant Federal legislation, including the National Environmental Policy Act of 1969 (NEPA). Specifically, NEPA limits the types of actions that the grantee can initiate prior to completing required environmental reviews. Some actions may be categorically excluded from further NEPA analyses based on the specific types and scope of work to be conducted. For projects that are not categorically excluded from further environmental review, the grant recipient must prepare an Environmental Assessment (EA) that meets the requirements of NEPA. After a sufficiency review, NTIA may adopt the EA, use it as the basis for finding that the project will not have a significant impact on the environment, and issue a finding of no significant impact (FONSI). Following such a finding, the BTOP grant recipient may then begin construction or other activities identified in the EA as the preferred alternative, in accordance with any special protocols or identified environmental protection measures.

UW-Extension completed an EA for this Project in May 2011. NTIA reviewed the EA, determined it is sufficient, and adopted it as part of the development of this FONSI.

The Project includes:

- Installing a hybrid broadband network of buried fiber optic cable and wireless towers in 16 Wisconsin counties;

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- Installing 590 miles of new fiber in existing State-owned and local rights-of-way (ROWs) with associated pedestals, vaults, and hand holes;
- Installing one half-mile of fiber in US 45 ROW in the Ho-Chunk Nation;
- Installing lateral underground connections to 74 CAIs;
- Constructing 12 WiMAX tower sites on publicly-owned lands and connecting them to the network;
- Installing WiMAX equipment on three existing towers;
- Incorporating 40 miles of existing fiber and the three existing towers sites into the new network; and
- Constructing four equipment huts in existing ROWs along the Project route.

Based on a review of the analysis in the EA, NTIA has determined that the Project, implemented in accordance with the preferred alternative, and incorporating best management practices (BMPs) and protective measures identified in the EA, will not result in any significant environmental impacts. Therefore, the preparation of an EIS is not required. The basis for this determination is described in this FONSI.

Additional information and copies of the Executive Summary of the EA and FONSI are available to all interested persons and the public through the BTOP website ([www2.ntia.doc.gov/](http://www2.ntia.doc.gov/)) and the following contact:

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### **Purpose and Need**

The purpose of the Project is to bring affordable broadband service to unserved and underserved communities within 16 Wisconsin counties. Current broadband service in the area is inadequate or unavailable to many residents and institutions, particularly in rural parts of the 16-county area. The Project will bring broadband service where, to date, it has not been economically feasible to install telecommunications infrastructure. The modernize infrastructure will support long-term

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economic development and stability in rural Wisconsin. The area to be served by the Project includes 139,000 homes, 9,000 businesses, and 74 CAIs, including schools, colleges and universities, health care facilities, and municipal and government facilities.

**Project Description**

The Project involves constructing 590 miles of new fiber, 12 WiMAX tower sites, and 4 equipment huts; incorporating 40 miles of existing fiber; and adding WiMAX equipment to three existing towers. Fiber will be installed primarily underground in the existing road ROWs. A ½-mile section of fiber will be installed underground along the US 45 ROW in the Ho-Chunk Nation. Where existing conduit is available, fiber will be pulled through it via conduit access points. If conduit is not available, fiber will be buried via plowing, directional drilling, or trenching. The 15 WiMAX tower sites will provide wireless service to city and county public safety agencies in the Project area.

The majority of the fiber optic cable will be installed underground, by plowing or directional boring in existing roadway ROWs. UW-Extension will install fiber optic cable through existing conduit, where possible, primarily in urban areas.

The plow method of fiber installation involves creating a rip-line 36 inches deep and approximately 6 inches wide. The fiber optic cable is inserted into the rip-line as the plow moves forward, without excavating soil materials. After the cable is inserted, the plow compacts the ground over the rip-line. A trailer with spools of fiber will remain on the shoulder of the roadway during construction. Directional boring will be used to cross roadways and bodies of water, such as wetlands, streams, or rivers. This method involves drilling a horizontal cable pathway from one access point along the route to another, installing conduit to house the cable, and then pulling the cable back through the conduit. The fiber optic cable will be installed approximately 10 feet below the bottom of water bodies. Limited trenching will be used to connect the directional bore areas to the plow areas. UW-Extension will also install hand holes, pedestals, and vaults along the route. The CAIs supported by the Project will be connected to the mainline fiber optic cable through lateral underground connections.

The Project will use 15 WiMAX tower sites to deliver wireless service to city and county public safety agencies in the Eau Claire/Chippewa Valley Region. Three existing tower sites (in Eagle Point, Bloomer, and Colfax, WI) will be equipped with WiMAX equipment. Twelve of the 15 sites will be new construction on city-owned or county-owned parcels. Each new WiMAX tower site will be 40-by-40 foot clearing near an existing dirt or gravel road, and include a self-supporting monopole tower on a 20-foot square concrete reinforced pad, a 10-by-12-foot equipment shelter, backup electrical generator, fuel tank, and connections to the commercial electric service provider. The new monopole towers will be 43 to 195 feet above ground level (AGL).

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UW-Extension will also install four new equipment huts within existing road ROWs to house mechanical equipment. The huts will be factory-built, pre-assembled, all-steel, noncombustible structures with a footprint of 9 feet by 13 feet and a height of 9 feet and 6 inches. No new access roads will be built to install or operate the huts. The foundations of the equipment huts will be either 9 feet by 13 feet concrete pads (the size of the hut) or concrete posts.

### **Alternatives**

The EA includes an analysis of the alternatives for implementing the Project to meet the purpose and need. NTIA also requires that an EA include a discussion of the no action alternative. The following summarizes the alternatives analyzed in the EA.

*Hybrid Fiber and Wireless Installation (Preferred Alternative).* The Project involves constructing 590 miles of new fiber, 12 WiMAX tower sites, and 4 equipment huts; incorporating 40 miles of existing fiber; and adding WiMAX equipment to three existing towers. The network will provide broadband service to 74 CAIs. The new fiber optic cable will be installed underground by plowing or directional boring in existing ROWs, or pulling the fiber through existing underground conduit, where available.

*No Action Alternative.* No action was also considered. This alternative represents conditions as they currently exist in Wisconsin. Under the no action alternative, new fiber and wireless infrastructure would not be constructed. Residents and institutions of the 16 counties would continue to be unserved or underserved with respect to broadband internet access. Additionally, broadband services would not be provided to CAIs in the Project area. The EA examined this alternative as the baseline for evaluating impacts relative to other alternatives being considered.

*Alternatives Considered But Not Carried Forward.* UW-Extension considered three additional Project alternatives that were not carried forward through the NEPA evaluation: All-Aerial, All-Wireless, and All-Underground. The All-Aerial alternative would have installed the Project's entire fiber route aerially. This alternative was eliminated from further consideration due to the potential of widespread network outages caused by severe winter weather typical of Wisconsin. Ice and wind damage could break the cable or utility poles and cause widespread network outages. Additionally, the high cost of maintaining overhead cable infrastructure makes this alternative prohibitive for this project. UW-Extension also considered and rejected the All-Wireless alternative because it would have required sitting several hundred radio towers, caused considerable negative aesthetic and visual disturbance across the State and did not meet the Purpose and Need of the project as microwave technology does not currently support the high-speed/high-capacity bandwidth required to transmit the large amounts of data needed to service the anchor institutions. . Finally, UW-Extension considered and rejected the All-Underground alternative, because it would have caused more ground disturbance than the Preferred

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Alternative, and it could not provide uninterrupted wireless/ WiMax service to public safety agencies and emergency response vehicles in the Eau Claire/Chippewa Valley Region.

### **Findings and Conclusions**

The EA analyzed existing conditions and environmental consequences of the preferred alternative and the no action alternative in 11 major resource areas, including Noise, Air Quality (including greenhouse gases [GHG]), Geology and Soils, Water Resources, Biological Resources, Historic and Cultural Resources, Aesthetic and Visual Resources, Land Use, Infrastructure, Socioeconomic Resources, and Human Health and Safety.

#### ***Noise***

This Project will have short-term and long-term impacts on noise. The short-term increases in ambient noise levels are expected during the construction period. Noise created by machinery used during installation will be temporary and localized in nature. UW-Extension may need to coordinate with the Wisconsin Department of Natural Resources (WDNR) to address Federal and State eagle and osprey nesting season timing restrictions to avoid potential noise impacts. Although some of the CAIs may be sensitive noise receptors, construction-related noise will be temporary and similar to other roadway and light construction work experienced routinely across Project area. Noise associated with maintenance of the network will be similar to existing noise conditions for utility maintenance. Based on these assessments, no significant noise impacts are expected to occur as a result of this Project.

#### ***Air Quality***

Potential impacts to air quality will primarily be limited to the construction period. Dust could be generated by construction equipment but would be considered temporary and short-term. Additionally, where the fiber will be installed underground, directional drilling and plowing will result in minor disturbance of the ground surface and therefore negligible amounts of fugitive dust emissions. Air quality will also be affected by exhaust emission from delivery vehicles, construction equipment, and by testing and operation of the backup power equipment and stand-by generators at the 12 new tower sites.

In summary, the Project will cause a short-term, minor increase in the use of fossil fuel and associated greenhouse gas (GHG) emissions, and de minimis fugitive dust emissions from ground excavation is expected. Therefore, construction of the planned network is not expected to have significant adverse impacts on air quality.

#### ***Geology and Soils***

The Project's fiber route will be installed underground, in existing ROWs, using directional drilling and plowing. The installation will result in minor, temporary disruption of the soils. Directional drilling will be used to cross roadways and in areas that contain shallow bedrock. In

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addition, approximately 1,600 square feet of soil will be disturbed at each WiMAX tower site compound and 117 square feet for each new equipment hut. No access roads will be required for the new huts or towers. These structures will be pre-constructed and staged for installation on existing roadway shoulders and access roads. Appropriate best management practices (BMPs) will be implemented to prevent sedimentation and erosion impacts on the Project area. These BMPs include deployment of sediment barriers, such as properly toed-in silt fences, tightly placed hay bales, and the use of temporary mats for construction equipment when working near water sources. The Project is not expected to result in significant adverse impacts on geology or soils.

***Water Resources***

Project construction activities could result in short-term minor impacts on water resources within the Project area. The fiber route will cross water bodies at approximately 433 locations, including nine navigable river crossings. Water crossings for intermittent streams will be conducted by plowing, if the streambed is dry at the time of installation. Otherwise, directional boring will be used for stream and river crossings. Project implementation will include design features such as culverts to prevent impediments to navigation. BMPs, such as the use of temporary mats when working within or crossing waters, will be used to avoid and minimize disturbances within these resources. To the extent practicable, wetlands will be avoided during the installation of the fiber optic cable.

UW-Extension will develop a wetland mitigation plan if wetland disturbance or loss cannot be avoided. WDNR will be consulted prior to construction to determine whether plowing or directional boring should be used at each wetland location. If the plowing method is selected, and construction equipment, or the placement of bore pits, vaults, pedestals, or handholes will result in excessive disturbance within wetland areas, a water quality certification (WQC) will be required. Directional boring may be necessary in some high quality wetlands. Effects on wetlands are considered short-term and minimal because the disturbances are relatively short in duration and will not substantially alter wetland hydrologic functions. There are no aquatic or wetland resources near the 12 new WiMAX tower sites or the 4 equipment huts.

UW-Extension consulted with the U.S. Army Corps of Engineers (USACE) and WDNR regarding potential impacts of the Project on water resources, and is consulting with these offices to obtain applicable Section 404 and Section 10 permits for all river, stream, and wetland crossings. In an email dated November 24, 2010, the USACE confirmed that the project would likely require permitting under Section 404 for work in Waters of the United States. In addition, the USACE recommended that a skilled wetland delineator complete a review of counties in the northern portion of the Project area. UW-Extension will coordinate with the USACE to discuss installation locations and methods and the need for Section 404 and Section 10 permits. In a letter dated January 20, 2011, the WDNR confirmed that construction of the Project would likely require permits from their office. UW-Extension will also coordinate with WDNR for all water

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crossings, issuance of a WQC, and to receive coverage under Wisconsin Pollutant Discharge Elimination System (WPDES) for stormwater management. At the request of WDNR, UW-Extension will use an Environmental Monitor (e.g. a consulting biologist or ecologist) to perform wetland determinations and sensitive species habitat assessments to identify wetlands, including any available Wisconsin Department of Transportation (WisDOT) delineations, local soil surveys, etc. This assessment will include recommendations for installation locations, methods, and mitigation measures for review by WDNR. UW-Extension will work with WDNR and USACE to establish a schedule for resource review that will allow staff sufficient time to carry out the review of the final design and any required mitigation efforts.

The Project will cross two Wild and Scenic Rivers, the Namekagon River and the St. Croix River, at locations along US 53. In a letter dated December 21, 2010, the National Park Service (NPS) confirmed that the fiber optic cable will be installed in existing road ROWs along the Namekagon River and will not require permitting from their office. The NPS also confirmed that the St. Croix River is not considered a Wild and Scenic River at the Project's cable crossing location. The following avoidance measures will be implemented by UW-Extension along the Namekagon River.

- The entry and exit points for the directional bore should be set back far enough from the river so that there is no disturbance to the riverbank.
- The drilling and exit pits must be properly contained so there is no drilling mud runoff or from other materials into the Namekagon River.
- The drilling itself must be conducted to minimize the potential for leakage caused by fracture.

A portion of the project also passes through Douglas County, which is part of the Lake Superior Coastal Zone. None of the WiMAX tower sites or equipment hut sites are in the coastal zone. The fiber optic cable will be installed in existing road ROWs along US 53 in the City of Superior, which is on the shores Lake Superior. By avoiding construction in waterways, and implementing erosion and sediment control measures, UW-Extension will be able to construct the network with no significant adverse impacts on water resources.

***Biological Resources***

UW-Extension consulted with the U.S. Fish and Wildlife Service (USFWS) and WDNR regarding biological resources. The Project will result in minor impacts on biological resources. Noise and human activity associated with fiber installation are expected to disturb some wildlife species, but these effects will be minor and temporary. Disturbance of the ground surface and vegetation associated with the Project will be primarily limited to public ROWs that are previously disturbed areas. Some vegetation and tree clearing may be necessary along the fiber route. UW-Extension will comply with the WisDOT permitting requirements for fiber installation and implementation of appropriate mitigation measures, including re-seeding

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construction areas once the installation is complete. The Project will not result in permanent changes in the natural environment and species habitats. The construction of 12 WiMAX tower sites will disturb approximately 1,600 square feet at each new tower site and approximately 117 square feet of soil will be disturbed for each new equipment hut site within existing ROWs. Long-term effects and disturbances from placement of the towers and equipment huts are expected to be minimal due to their locations and the small footprint of these structures.

Installation of the fiber optic cable, and construction of the WiMAX tower sites and equipment huts, has the potential to spread invasive plants in upland and wetland areas. Mitigation measures to reduce the potential spread of invasive plant species will include cleaning equipment when moving from areas that contain invasives, and working in areas without invasives present before moving to areas that contain these species. Use of BMPs and following the provisions of Wisconsin's Invasive Species Rule NR 40 can control the introduction or spread of invasive plant species.

In order to avoid impacts to herptiles, UW-Extension will bore underneath waterways and wetlands, complete work within 1,000 feet of waterways in areas of herptile habitat during the inactive season from November 1 to March 15, and/or implement other avoidance measures, such as monitoring or exclusion fencing. The WiMAX tower sites and equipment huts will not be in areas of herptile habitation, and therefore there would be no effects on these species.

During a meeting held on December 7, 2010, WDNR recommended that areas with State-listed animal species be avoided, if possible, as well as areas with rare plants and special concern animal species to the extent feasible. Maps and lists of threatened and endangered species for each of the affected counties are available from the online version of the Wisconsin National Heritage Inventory (NHI) database. Prior to construction, UW-Extension will have a qualified person review mapped NHI data to identify potential locations of threatened and endangered species near the Project fiber route and WiMAX tower sites and equipment hut locations. UW-Extension will also request a confidential Endangered Resources Review from the WDNR and identify locations within the Project area where rare species or their habitat may exist. Field verification along portions of the route may be necessary to verify the presence or absence of rare species or their habitat. UW-Extension will provide the results of this study and avoidance recommendations to WDNR for their review. UW-Extension will work with the WDNR to develop avoidance and minimization measures and meet the requirements of the Wisconsin Endangered Species Law and all other applicable laws and regulations. In some areas, it may be necessary to have a monitor on-site during construction.

Although this project will occur primarily in existing public lands and ROWs, WDNR notes that rare plant species can be found in these areas. The following measures will be implemented to minimize effects on rare plants.



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- Prior to initiating construction, a biologist or botanist who is familiar with natural community types crossed by the project will review the project route to identify diverse or relatively undisturbed natural communities that may support rare plants.
- Prefer that construction activities occur on the side of the road that is more developed or cultivated, if possible.
- Schedule as much work as possible during frozen conditions or outside the growing season. (Note: Project schedule would likely require work during the growing season but this preference can be considered in areas of special sensitivity.)
- Work from the road as much as possible.
- Avoid removal of trees and woody vegetation in natural community forests, except in barrens communities. Trees and large woody vegetation are not likely to be encountered in ROWs.
- Ensure strict adherence to erosion control measures.

UW-Extension will adhere to the USFWS guidelines when designing and constructing the new WiMAX towers to minimize potential impacts on migratory birds. The USFWS guidance recommends towers be less than 200 feet in height, the minimal use of illumination only when necessary for FCC/FAA regulatory compliance, and the use of monopole design towers without guyed wires.

In a letter dated November 22, 2010, the USFWS noted the potential presence of the Karner blue butterfly (*Lycaeides melissa samuelis*) in the Project area. The Karner blue butterfly is listed as a Federally endangered species, and although is rare nationwide, it is relatively common in Wisconsin. Within the Project area, the Karner blue butterfly is located in the following high potential range counties: Clark, Eau Claire, Portage, Shawano, Washburn, and Wood. The USFWS recommended UW-Extension conduct a survey for wild lupine (*Lupinus perennis*), the host plant for the Karner blue butterfly, prior to construction activities. The survey should be conducted from mid-May through the end of July. If lupine is found in the Project area, then surveys should be conducted for the presence of the Karner blue butterfly either during late May through mid-June, or mid-July to mid-August. UW-Extension will consult the WDNR's Karner Blue Butterfly Habitat Conservation Plan (HCB) and Habitat Conservation Partners (HCPs) to identified potential Karner blue butterfly habitat within the Project area. In cooperation with the USFWS, UW-Extension will hire qualified staff to conduct these surveys. If surveys indicate no butterflies are present, no further consultation is required with the USFWS under Section 7 of the Endangered Species Act (ESA). If applicable, UW-Extension will follow protocols outlined in the HCB for fiber installation in areas where the Karner blue butterfly occurs. Also, any significant disturbance to roadside areas will be restored to the pre-construction condition, thereby further limiting the potential for long-term impacts on any potential Karner blue butterfly habitat. No long-term impacts to these habitats are anticipated to result from the Project.

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Based on this analysis and by implementing recommended protective measures, UW-Extension will be able to construct the network with no significant adverse impacts on biological resources.

***Historic and Cultural Resources***

In a letter dated October 13, 2010, NTIA initiated National Historic Preservation Act (NHPA) Section 106 consultation with the Wisconsin State Historic Preservation Officer (SHPO) on behalf of UW-Extension, and notified the SHPO that the project includes telecommunication facilities licensed by the Federal Communications Commission (FCC) and subject to the *Program Comment for Streamlining Section 106 Review for wireless Communication Facilities Construction and Modification Subject to Review Under the FCC Nationwide Programmatic Agreement (NPA) and/or the Nationwide Programmatic Agreement for the Co-location of Wireless Antennas*, issued on November 25, 2009. Twelve (12) new WiMAX tower sites funded by the grant will be individually registered with the FCC; consequently NTIA is lead agency for fiber and associated infrastructure while consultations for the towers fall under the FCC NPA.

Following the initiation letter, UW-Extension engaged the Commonwealth Cultural Resources Group, Inc. (CCRG) to identify archeological and architectural resources within the Project's area of potential effect (APE). After consultation with SHPO, it was determined that UW-Extension would review previous cultural resource investigations, previously recorded archaeological and cemetery/burial sites, and previously recorded architectural/historic resources within the APE. A desk review identified 151 previously reported archaeological and cemetery/burial sites and 112 previously identified architectural/historic properties situated within the 0.5-mile visual APE of five of the WiMAX tower sites. Of the 151 previously reported archaeological and cemetery/burial sites listed in the National Register of Historic Places (NRHP), four are cataloged burial sites that are protected under Wisconsin Stats. 157.70. Of the identified architectural/historical properties, 56 are currently listed in the NRHP, including 48 sites in the Bridge Street Commercial Historic District. In December 2010, the CCRG submitted a cultural resource report to the State Historic Preservation Officer (SHPO) at the Wisconsin Historical Society.

In a letter dated January 10, 2011, the SHPO responded that the literature search report provided by CCRG listed all of the archaeological sites, burial sites, and historic resources that could be affected by the proposed Project. The SHPO also indicated that NTIA's Best Management Practices (BMP) for the attachment of broadband equipment to historic buildings could be incorporated into a Programmatic Agreement to ensure that the Project will have no adverse effect on historic structures.

In a letter dated November 22, 2010, NTIA initiated National Historic Preservation Act (NHPA) Section 106 consultation with the Ho-Chunk Nation. NTIA provided the Ho-Chunk Nation with a map of the proposed fiber route in Shawano County, where proposed installation will impact Tribal Trust land. In an email dated November 29, 2011, The Ho-Chunk Nation confirmed that

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their interest in the project, and requested archaeological studies for the WiMAX tower sites. Following the Tribe's email response, UW-Extension provided the Tribe with a copy of CCRG's cultural resource report and requested concurrence on the results of identification for the Project.

On April 28, 2011, UW-Extension, Wisconsin SHPO, the Ho Chunk Nation, and NTIA entered into a PA establishing protocols to ensure that the Project has No Adverse Effect on Historic Properties, and documenting that UW-Extension will complete Section 106 consultations under the FCC NPA for the 12 WiMAX new towers before construction.

In addition to requiring UW-Extension, or an agent thereof, to conduct an archaeological survey before any construction activities on Ho-Chunk Nation Trust lands in the APE in Section 28, T22N-R4E, Wood County, WI, the PA stipulates agreement that construction of the 590 miles of new fiber (plus 40 miles of existing fiber) and associated huts should have no adverse effect on historic properties provided that UW-Extension complies with the recommendations outlined in the CCRG report *Building Community Capacity through Broadband (BCCB Initiative Barron, Buffalo, Chippewa, Clark, Dane, Douglas, Dunn, Eau Claire, Grant, Iowa, Layette, Langlade, Marathon, Portage, Shawano, Washburn, and Wood Counties* and allows NTIA to immediately approve construction of the 590 miles of new fiber and associated huts upon execution of the PA.

To ensure that NRHP-eligible archaeological sites are not affected by the Project, UW-Extension will ensure that all project activities are conducted outside the boundaries of the NRHP-eligible sites. Areas to be avoided will be fenced off during construction to ensure that there is not inadvertent disturbance to these sites.

UW-Extension will comply with Wisconsin Stats. § 157.70 and Wisconsin Administrative Code § HS 2.04 in constructing BTOP Project #5710. Prior to initiation of any ground disturbing activities that occur within the boundary of an un-catalogued burial site(s), the UW-Extension, or its agent, will consult with the SHPO to receive authorization to work with these areas. All ground disturbing work within the limits of the un-catalogued burial site(s) will be monitored by a qualified archaeologist as stipulated in Wisconsin Stats. § 157.70 and Wisconsin Administrative Code § HS 2. Should human remains or items related to the burial be identified, and removal be required, the UW-Extension, or its agent, will proceed in accordance with Wisconsin Administrative Code § HS 2.04.

UW-Extension will formally submit information regarding the 12 WiMAX tower sites through the FCC's E-106 process. Construction activities at the Project's tower sites will not commence until the FCC's Section 106 review process is complete and adverse effects, if identified, resolved through the PA such that the project will have no significant adverse impacts to historic or cultural resources.

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Through the Tower Construction Notification System (TCNS), NTIA provided Project details to thirty tribes interested in the Project's geographical location (Wisconsin). UW-Extension received responses from twenty four of these tribes. Eleven responded (via TCNS) that they have no interest in project, but requested that the SHPO and the Tribe be notified in the event of unanticipated discoveries. Thirteen other tribes requested additional information on the Project, which UW-Extension provided. After review of the additional detail, eight tribes requested that, in the event of inadvertent discovery of archaeological artifacts and/or historic resources, UW-Extension cease all activity in proximity to the discovery location and notify the Tribe's Tribal Historic Preservation Office (THPO).

One tribe responded that they do not have any objections to the Project. The Menominee Indian Tribe of Wisconsin requested that work occurring near un-catalogued burial sites be monitored. To date, no response has been received from the other two tribes to which UW-Extension sent additional information. (TCNS notifications for specific tower coordinates were also provided to tribes in conjunction with the associated FCC NPA consultations.)

Most construction will be restricted to previously disturbed areas. If any cultural material is discovered during construction, the SHPO will be notified immediately and all activities halted until a qualified archaeologist assesses the findings. If any human skeletal remains or protected Native objects are uncovered during construction, construction will stop immediately, and all consulting parties will be contacted.

Based on these consultations and the implementation of protective measures and PA requirements, the Project is not expected to have significant adverse impacts on historic and cultural resources.

***Aesthetic and Visual Resources***

The Project primarily involves installing fiber optic cable underground in existing ROWs. Fiber installation will have a short-term, minor, and temporary impact on aesthetic and visual resources due to the presence of construction equipment and limited soil disturbance. During the construction period, the Project may have visual impacts on two National Scenic Trails, the North Country National Scenic Trail and the Ice Age National Scenic Trail. The fiber route will cross the North Country National Scenic Trail near Solon Springs and the Ice Age National Scenic Trail in three locations: Dane County near the City of Verona at US 18/151, Langlade County near Summit Lake at US 45, and Marathon County near Hatley at WIS 29. In an email response dated December 27, 2010, the NPS stated that no long-term effects should result from the crossings along both of these trails. The NPS requested that the trails not be impeded while the cable is being installed.

Construction of the WiMAX tower sites and equipment huts are expected to result in minimal long-term visual and aesthetic effects within the Project area. The Project WiMAX towers will

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be slim, self-supporting, monopoles without large satellite dishes or other large equipment attachments. The huts will also be relatively small. The New Auburn tower site in northwestern Chippewa County may be visible from the Interpretive Center for the Ice Age National Scientific Reserve, Chippewa Moraine Unit, located at County M about 1.5 miles east of WIS 40. Consultation was initiated by UW-Extension with the NPS to address the potential visual impact of the New Auburn WiMAX tower site. On December 27, 2010, NPS responded that the New Auburn tower site might be visible from the Ice Age National Scientific Reserve. They acknowledged that WiMAX tower heights will be less than 200 feet, are of monopole construction, and will not be lit. The NPS acknowledged that the visual impact of the tower was not certain nor could they recommend mitigation measures that might lessen the impact.

The Project will use existing State-owned road ROWs and locally owned road ROWs, with portions of the route adjacent to or crossing through the State-owned parks and trails. Since fiber installation activities will occur in existing ROWs, only minor, temporary impacts are anticipated to result within these areas. No towers or equipment huts will be construction on State parks or lands.

The construction of the WiMAX tower sites will require zoning height approval from the City of Eau Claire, the City of Menomonie, counties of Eau Claire and Chippewa, notification to Federal Aviation Authority (FAA), and registration with the FCC. There are two public-use airports in the project area: Chippewa Valley Regional Airport in the City of Eau Claire and the Menomonie Municipal Airport in the City of Menominee. City and county ordinances require that any tower within three miles of the two airports is subject to height limitation zoning ordinances. Five of the new towers are within three miles of the Chippewa Valley Regional Airport: Hallie, Wheaton Fire Station, Mr. Tom, Mt. Washington, and Pinehurst. These five new towers also meet at least one of the criteria requirements used to determine if FAA should be notified of new tower construction. Due to the proximity to local airports, UW-Extension will provide the FAA with a notification of tower construction at least 30 days prior to construction. Accordingly, the Project is not expected to have a significant adverse impact on aesthetic and visual resources in the Project area.

***Land Use***

The Project's fiber route will be installed in existing ROWs. There will be no change in the existing land use due to the underground fiber installation. The 12 WiMAX tower sites will be on publicly owned land. The Project will permanently alter the current land use at the tower sites. Changes in land use will impact approximately 1,600 square feet at each tower site. Therefore, the Project will have no significant adverse impact on land use.

***Infrastructure***

Access roads will not be needed for the new tower or equipment hut sites. Installation of the fiber optic cable, and construction of the WiMAX tower sites and equipment huts would use the

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roadway shoulder as a staging area for equipment. For underground fiber installation, UW-Extension will work with WisDOT and the utility owners to identify the location of utilities to avoid disturbing these existing utilities. There will be minor, short-term construction impacts on roadways as a result of any underground utility crossings. The construction of new WiMAX tower sites will introduce new broadband infrastructure to areas that are not currently served, thereby providing a positive impact to infrastructure at these locations. Overall, the Project will have a positive impact on infrastructure in Wisconsin, and is not anticipated to result in significant impacts on infrastructure.

***Socioeconomic Resources***

The Project will expand the region's existing fiber optic networks across 16 counties in Wisconsin. The project will create jobs, provide greater broadband access for educational institutions, and advance health care innovation in unserved and underserved areas. Additional benefits include affordable broadband access for local consumers and businesses. The Project will have positive impacts on socioeconomic resources, and is not anticipated to result in significant impacts on socioeconomic resources.

***Human Health and Safety***

Hazardous waste sites have been identified along the Project's fiber route outside of incorporated areas within 100 feet on either side of the existing road ROW. Prior to construction, contractors will confirm if reported contamination has been documented within the area of work. If contamination is confirmed, UW-Extension, or its contractor, will coordinate with WDNR to determine what measures should be taken to avoid the site or to provide appropriate monitoring during fiber installation. In the event that contaminated materials are encountered during construction activities, activities would be terminated in the immediate area and the engineer and WDNR will be notified. Potentially contaminated soil will be evaluated by an environmental consultant. In areas where contamination was present in the past or is discovered during excavation, an environmental consultant will be present during excavation activities. With implementation of the protection measures, the Project will not generate any significant adverse worker or safety issues.

The completed Project will offer higher bandwidth services to critical community healthcare facilities and increase access to improve overall healthcare services. Specifically, the new network would improve the speeds at which medical images can be transferred and reviewed by specialists outside the community. Similarly, the WiMAX towers will increase communication and increase efficiency of services delivered by city and county public service agencies in the Eau Claire/Chippewa Valley Region.

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***Cumulative Impacts***

As described above, the Project will not have significant adverse impacts on any of the environmental resource areas evaluated in the EA. As such, no cumulative impacts on the environment are anticipated.

**Decision**

Based on the above analysis, NTIA concludes that constructing and operating the Project as defined by the preferred alternative, identified BMPs, identified protective measures, and planned consultation studies, will not require additional mitigation. A separate mitigation plan is not required for the Project. The analyses indicate that the proposed action is not a major Federal action that will significantly affect the quality of the human environment. NTIA has determined that preparation of an EIS is not required.

Issued:



Wayne Ritchie  
Chief Administrative Officer  
Office of Telecommunications and Information Applications  
National Telecommunications and Information Administration

5/23/2011  
Date