National Telecommunications and Information Administration
Broadband Technology Opportunities Program
Finding of No Significant Impact
OnWav, Inc., Five County Broadband Interconnected Training Access

Summary

OnWav, Inc. (OnWav) applied to the Broadband Technology Opportunities Program (BTOP) for a grant to establish three new telecommunication sites, construct a tower on each new site, place new telecommunications equipment on the new towers, and add wireless equipment to seven existing towers and structures. The new network will extend wireless broadband access to approximately 150 community anchor institutions (CAIs) and the region's businesses and residents. The proposed action includes five counties in north central Tennessee, and is referred to as the Five County Broadband Interconnected Training Access (Project).

The National Telecommunications and Information Administration (NTIA) awarded a grant for the Project to OnWav 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.

OnWav completed an EA for this Project in June 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 wireless broadband network across five counties (Fentress, Pickett, Clay, Jackson, and Overton) in north central Tennessee;
- Establishing three telecommunication sites and connecting them to the network;

- Constructing one non-guyed, self-supporting, 250 foot tall towers on the three new telecommunication sites;
- Installing access roads to two of the new telecommunication tower sites;
- Installing a tower foundation at each new telecommunication tower site;
- Constructing a prefabricated equipment hut at each new telecommunication tower site;
- Connecting new telecommunication tower sites to the existing power grid;
- Providing backup generators at each new tower site, if necessary;
- Placing new antenna equipment on four existing towers and three water towers, and the three new towers; and
- Providing enhanced broadband connectivity for 150 CAIs, businesses and residents with the Project area.

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/) 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 north central Tennessee. Current broadband service in the area is inadequate or unavailable to many residents and institutions, particularly within the counties of Fentress, Pickett, Clay, Jackson, and Overton. The Project will create a broadband wireless network where, to date, it has not been economically feasible to install telecommunications infrastructure.

The areas served by the Project include 4,500 households, 725 businesses, and 150 CAIs, including training centers, schools, health care facilities, emergency care providers, public safety facilities, and other anchor institutions.

Project Description

The Project will establish three telecommunication sites, construct a tower at each new site, place new telecommunications equipment on the new towers, and install wireless network equipment on four other existing towers and three existing water towers. Specifically, new wireless equipment will be collocated on four existing towers (Freeze Street, Cookeville CH22, Jump Tower 1, and Jump Tower 2) and three existing water towers (Allardt Downtown, Jamestown City Hall, and Livingston East). For these seven sites, OnWav will use existing power equipment to the greatest extent practicable. New antennas will be placed on these existing towers at positions and heights for optimal network connectivity. The four existing towers to be used by the Project are registered with the Federal Communications Commission (FCC) Antenna Structure Registration database and meet the criteria for collocation of antennas on towers constructed after March 16, 2001, as identified in the *Nationwide Programmatic Agreement for the Collocation of Wireless Antennas*. OnWav will file FCC Form 621 to record the collocation of additional licensed band services on these four existing towers.

The project will construct new telecommunication sites in Gainesboro Smith, Celina Town, and Byrdstown. These three new sites will each be equipped with a self-supporting, non-guyed tower that is 250-feet above ground level (AGL), as well as a prefabricated equipment hut and back-up power generator, if necessary. Ground disturbance for each new tower site will be approximately 100 feet by 100 feet, and the tower footprints will measure 40 feet by 40 feet. Construction and maintenance access to the Gainesboro Smith tower will be along an existing access road. For the Celina Town site, OnWav will clear woody vegetation along a 500-foot section of an existing grassy trail. The Byrdstown site will require a 100-foot long extension to an existing access road that will require clearing of grasses and woody vegetation. Power supply to each new tower site will run along existing and proposed access roads, to the greatest extent practicable. Soil disturbance at each tower site will include the installation of access roads, power line trenching or utility pole placement, and excavation for tower foundations. Except for the tower foundations and roads extensions, disturbed areas will be restored to original grade. Disturbed soils outside the compounds and roadways will be reseeded.

The network will provide enhanced broadband service delivery to 150 CAIs, businesses and residents in the Project area that use wireless access points and wide area networks. No end user equipment will be provided under this Project.

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.

Wireless Network Installation (Preferred Alternative). The Project involves constructing three new telecommunication sites (including the towers, equipment huts, access roads, and power connections) and installing wireless network equipment on four existing towers and three existing water towers. The network will provide broadband service to 150 CAIs and the region's businesses and residents.

No Action Alternative. No action was also considered. This alternative represents conditions as they currently exist in north central Tennessee. Under the no action alternative, new wireless infrastructure would not be constructed. Residents and institutions in the five 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. OnWav considered several alternatives for the proposed broadband network. OnWav reviewed existing tower locations within the Project area to determine if collocation of equipment on only existing structures would meet the need, and concluded that existing sites do not have sufficient elevation for microwave backhaul paths to connect to the network. Therefore, this alternative was not carried forward because it did not meet the purpose and need of the Project. Similarly, OnWav considered buried and aerial fiber alternatives. Due to the rural surroundings and mountainous terrain of the Project area, and few existing utility corridors, these alternatives were rejected because construction activities would cause substantially greater environmental impacts than the Preferred Alternative. The wireless network was determined to be the most cost-effective and practical solution for this underserved 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, 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. Equipment used to prepare access roadways, excavate tower foundations, install power lines, erect towers, and install antennas will cause short-term increases in ambient noise in the Project area. Noise from backup

power generators, if installed at the three new telecommunication sites, will be low and intermittent over the long-term. The three new telecommunication sites are located in rural areas surrounded by wooded areas with low residential populations. Based on these assessments, no significant noise impacts are expected to occur as a result of this Project.

Air Quality

Potential impacts on air quality associated with this Project will be primarily limited to the construction period. Construction activities will have only a negligible, short-term impact to the area from construction equipment and vehicle emissions and no long-term impacts to ambient air quality. Limited fugitive dust emissions will be generated during construction of the three new telecommunication sites. A short-term minor increase in the use of fossil fuel and associated greenhouse gas (GHG) emissions will occur as a result of Project construction, but the emissions will be below established thresholds. There may also be long-term impacts on air quality from diesel or propane powered emergency generators, if installed as the backup power source for the three new telecommunication sites. Construction and operation of the planned network is not expected to have significant adverse impacts on air quality.

Geology and Soils

This Project will require ground disturbance to excavate foundations at three new telecommunication sites, build access roads, and to trench power lines or install utility poles. At each of the three new compounds, approximately 10,000 square feet of soil, including 1,600 square feet for each new tower footprint, will be disturbed. BMPs will be implemented to prevent sedimentation and erosion impacts on the Project area. All disturbed areas, except for tower compounds and access roads, will be reseeded and re-vegetated following Project construction. The Project is not expected to result in significant adverse impacts on geology or soils.

Water Resources

All three planned telecommunication sites for this Project are on mountain ridge tops. None of the new towers or existing collocation sites are in or near rivers, streams, wetlands, ponds, floodplains, or Coastal Management Zones. For this reason, it is unlikely that sediment from the Project will reach waterways. In addition, BMPs will be implemented to prevent sedimentation and erosion. No Clean Water Act permits are applicable to the Project. Based on these assessments, the Project is not expected to impact water resources.

Biological Resources

The Preferred Alternative may result in minor impacts on biological resources. Some disturbance to the ground surface will occur during construction activities, including access roads to the Celina Town and Byrdstown tower sites. Approximately 10,000 square feet will be disturbed for each of the three new telecommunication sites. Noise and human activity associated with tower construction and antenna installation are expected to disturb some wildlife species, but these effects will be minor and temporary. Some vegetation and tree clearing may be

necessary for the new tower sites and access roads. Long-term effects and disturbances from placement of the towers are expected to be minimal due to their locations and the small footprint of these structures.

Several State listed threatened and endangered species are present within or near the three telecommunication sites including, Butternut (*Juglan cinerea*), Golden Eagle (*Aquila chrysaetos*) and Short's Bladderpod (*Lesquerella globosa*). Although no evidence of these species was observed during an on-site review conducted by Trileaf on January 13, 2011, potential habitat for these species may be present within the Project area.

OnWav consulted with the U.S. Fish and Wildlife Service (USFWS) and Tennessee Department of Environment and Conservation (TDEC) regarding potential impacts of the Project on biological resources. In response letters dated February 15, 2011, the USFWS concluded that, based on the information provided by OnWav, no federally listed or proposed endangered or threatened species are known to occur within the Project area and no further consultation is required under Section 7 of the Endangered Species Act (ESA). However, the USFWS recommended installing migratory bird exclusion devices on the Celina Town tower site to prevent any nesting or perching of bald eagles (*Haliaeetus leucocephalus*) on the tower. The USFWS also requested additional consultation if significant changes are made in the Project plans change or if additional information of listed species or critical habitat becomes available.

In a letter dated February 18, 2011, the TDEC provided information on State-listed rare, threatened, and endangered species within the Project area. TDEC determined that there are records of State listed rare species near the proposed tower sites. However, due to the upland locations of the three new telecommunication sites, TDEC does not expect that construction activities will significantly impact these State listed rare species. TDEC requested that OnWav protect any cave or other karst habitat that is found at any of the tower sites.

Migratory bird species also use habitats across the Project area, including open water bodies, rivers and streams, riparian areas, and forests. To minimize Project impacts on migratory birds, OnWav will follow USFWS guidance to the greatest extent possible when designing and constructing the new towers to minimize potential impacts on migratory birds. The Project maximizes collocation opportunities by installing new equipment on seven existing towers and structures to complete the planned network. The Project will include non-guyed, self-supporting 250-foot towers and will limit the development of access roads to that necessary to build and maintain the three new sites.

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

Historic and Cultural Resources

In a letter dated October 27, 2010, NTIA initiated consultation on behalf of OnWav with the Tennessee Historical Commission (State Historic Preservation Office [SHPO]). In this correspondence, NTIA notified the SHPO that the project includes telecommunication facilities licensed by the 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. Three new telecommunication sites funded by the grant will be individually registered with the FCC; consequently, the towers at these sites fall under the NPA and the FCC is the lead agency. NTIA also provided a full project description and associated photographs of the Project area.

Following the initiation letter, OnWav engaged Midsouth Cultural Resource Consultants (MCRC) to survey archeological and architectural resources within the Project's area of potential effect (APE). A desk review identified one previously reported cemetery site and five previously identified architectural/historic properties listed on the National Register of Historic Places (NRHP) within the 1.5-mile visual area of potential effect (APE) of the three telecommunication sites. One potentially eligible NRHP resource was also identified near the Celina Town tower site.

On January 20, 2011, MCRC conducted a Phase I Archaeological Survey of the three proposed telecommunication sites. The Phase I Archaeological Survey was submitted to the SHPO in January 2011. The Phase I study summarized research conducted and field reconnaissance results, identified sites of interest, and provided recommendations regarding the potential for the proposed undertaking to impact historic properties or resources.

In letters dated January 25 and January 27, 2011, the SHPO responded that the Project, as currently proposed, may adversely affect properties that are eligible for listing in the NRHP and requested further consultation regarding the Project. In response, OnWav conducted a more detailed desk review and field survey of existing and eligible NRHP properties within the APE of the proposed tower sites. Photographs and the results of each tower site were provided to the SHPO on February 25, 2011.

In separate letters dated March 11, 2011, the SHPO confirmed that, based on the information provided, the Byrdstown and Gainesboro Smith tower sites will not adversely affect any property on or eligible for the NRHP. Based on the information provided on February 25, 2011 for the Celina Town tower site, the SHPO responded that the tower site, as currently proposed, may adversely affect properties that are eligible for listing on the NRHP and requested further consultation. On March 31, 2011, a clarifying letter was provided to the SHPO for the two NRHP-listed properties within the APE for the Celina Town tower site. The SHPO concluded that, based on the additional information provided, the Celina Town tower site will not adversely affect any property on, or eligible for the NRHP.

Nine NRHP resources were also identified within the 0.5-mile visual APE of the seven collocation sites. A cultural resource review was conducted for the seven collocation sites, which was submitted to the SHPO in January 2011. The SHPO requested additional information for the Cookeville CH22, Jamestown City Hall, and Jump Tower 2 sites, which was provided in February 2011. The SHPO determined that, based on the information provided, there are no NRHP listed or eligible properties affected by the collocation sites.

Through the Tower Construction Notification System (TCNS), NTIA provided Project details to eight Tribes interested in the Project's geographical location (Tennessee). OnWav received responses from seven of these Tribes. Two Tribes responded (via TCNS) that they have no interest in the Project, but requested that the SHPO and the Tribe be notified in the event of unanticipated discoveries. Five other Tribes requested additional information on the Project, which OnWav provided. After review of the additional detail, the five Tribes requested that, in the event of inadvertent discovery of archaeological artifacts or historic resources, OnWav would stop construction at the discovery location and notify the Tribe's Tribal Historic Preservation Office (THPO). The remaining Tribe originally notified of the Project through TCNS has not responded as of June 27, 2011. (TCNS notifications for specific tower coordinates were also provided to Tribes in conjunction with the associated FCC NPA consultations.)

If any cultural material is discovered by OnWav, construction will be stopped immediately, the SHPO notified, and a qualified archaeologist will be retained to assess the cultural materials. Construction will also be stopped if any human skeletal remains or protected Native objects are discovered, and appropriate authorities will be informed, including law enforcement agencies, the SHPO, and interested Tribes.

Based on these consultations, the Project is not expected to have significant adverse impacts on historic and cultural resources.

Aesthetic and Visual Resources

The planned telecommunications network will include three new towers and wireless network equipment on four existing towers and three existing water towers, which are on ridge tops, rural areas, or within city limits. Placement of additional wireless antennae on seven existing towers and structures will not significantly diminish visual quality. These existing four towers are 240 - 800 feet tall, have been in place for many years, and comply with local planning and zoning ordinances and permits. The effects of viewing an additional antenna on these towers will have minimal impact on local aesthetics and visual resources. The new towers planned for this Project will be 250-feet high and self-supporting, and free of guy wires to minimize potential visual impacts. The three new towers are expected to blend in with existing development, other towers, and trees. 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 will install equipment on seven existing towers and structures; land use at these sites will not change. The Project will also construct three new telecommunication sites; long-term land use in these locations will not change significantly. Changes in land use will impact approximately 10,000 square feet at each tower site. Therefore, the Project will have no significant adverse impact on land use.

Infrastructure

This Project will construct three new telecommunications towers and add wireless equipment to four existing towers and three existing water towers. Electric utilities will be extended from existing locations to provide power to the new tower sites. Access roads will be constructed at the Celina Town and Byrdstown tower sites. Traffic will temporarily increase on local roadways and access roads due to Project construction activities. The construction of new tower sites and wireless equipment will introduce new broadband infrastructure to areas that are not currently served, thereby providing a positive impact on infrastructure at these locations. Overall, the Project will have a positive impact on infrastructure in Tennessee, and is not anticipated to result in significant adverse impacts on infrastructure.

Socioeconomic Resources

The Project will expand the region's existing wireless broadband networks across five counties in Tennessee. The project will create jobs and provide greater broadband access for libraries, local governments, educational institutions, health care facilities, emergency care providers, public safety facilities, and many other anchor institutions 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 adverse impacts on socioeconomic resources.

Human Health and Safety

Hazardous waste sites have been identified near the Freeze Street and Allardt Downtown collocation sites. However, these sites do not include recognized environmental conditions (REC) and are located outside of the Project area. If contaminated soils are encountered during the project, OnWav will stop construction work in that affected section immediately, inform the relevant authorities and regulators, and, if needed, contract with an environmental consultant to determine best management and control of the contaminated soil. Based on these assessments, Project implementation will result in negligible adverse impacts to health and safety in the region.

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.

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Decision

Based on the above analysis, NTIA concludes that constructing and operating the Project as defined by the preferred alternative, identified BMPs, and identified protective measures 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:

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6/30/2011
Date