National Telecommunications and Information Administration
Broadband Technology Opportunities Program
Finding of No Significant Impact
EAGLE-Net Alliance
Colorado Community Anchors Broadband Consortium Project

Summary

The Centennial Board of Cooperative Educational Services (CBOCES) applied for and received a Broadband Technology Opportunities Program (BTOP) grant to install fiber-based and microwave infrastructure in Colorado and a portion of southern Wyoming. This BTOP grant award for middle-mile infrastructure development was transferred from CBOCES to the Educational Access Gateway Learning Environment Network (EAGLE-Net) Alliance (of which CBOCES is a member) on February 16, 2011.

EAGLE-Net Alliance will use existing fiber optic and wireless infrastructure in Colorado and a portion of Wyoming to build-out a broadband network, which will ultimately be composed of more than 1,600 miles of terrestrial fiber and 3,000 miles of wireless broadband connectivity. Specifically, EAGLE-Net will use the awarded grant to install 305 miles of new fiber optic cable, build 9 new towers, and install microwave antennas on the new towers as well as on 127 existing towers and 126 existing buildings. The new fiber optic cable will be installed predominantly underground in existing utility, roadway, and railroad rights-of-way (ROWs), by vibratory plowing and directional boring techniques. To avoid built infrastructure and sensitive resources, some sections of the new fiber may be installed via trenching, through attachments to existing bridges, or aerially on new or existing utility poles. The completed network will connect 234 community anchor institutions (CAIs), including 178 school districts, 26 libraries, 15 community colleges, and 3 universities, including several institutions on the Southern Ute Indian Reservation. This effort is referred to as the Colorado Community Anchors Broadband Consortium Project (Project).

The National Telecommunications and Information Administration (NTIA) awarded this grant 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.

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

The Project includes:

- Developing infrastructure and installing new fiber optic and wireless infrastructure to create a network with more than 1,600 terrestrial fiber miles and 3,000 wireless miles in Colorado and southern Wyoming;
- Installing 305 miles of primarily buried fiber optic cable in existing utility corridors and ROWs;
- Erecting 9 new towers with microwave infrastructure in Las Animas, Rio Blanco, Park, and Moffat Counties;
- Installing new microwave antennas on 127 existing towers and 126 existing buildings across the planned service area; and
- Providing direct connection to 234 CAIs.

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 this Project is to provide middle mile infrastructure to connect underserved and unserved rural areas in Colorado and a portion of Laramie County, Wyoming. Colorado is currently ranked 42nd of the 50 States in broadband connectivity. In addition, facilities in rural or remote areas of the State pay approximately 10 times the rate of neighboring States for inferior broadband bandwidth. The planned Project will improve broadband service and internet access for education, healthcare, public safety, and other CAIs Statewide. The Project will provide connectivity for 234 CAIs, including 178 school districts, 26 libraries, 15 community colleges, and 3 universities (the Air Force Academy, Colorado College, and the University of Northern Colorado), as well as a school district and 2 libraries on the Southern Ute Indian Reservation.

Project Description

Under this Project, EAGLE-Net will install 305 miles of new fiber optic middle mile and lateral cable in Colorado and Laramie County, Wyoming. This new fiber will primarily be installed underground in existing public ROWs along previously disturbed roadways, utility corridors, and railroad lines. Underground installation will be principally by vibratory plowing in rural areas and directional boring in urban areas (to avoid impacts to roads, sidewalks, and driveways) and in areas with sensitive surface resources (such as streams and wetlands). Where vibratory plowing and directional boring are not feasible due to access constraints, costs, or other concerns, the new fiber will be installed via trenching. Similarly, fiber will be installed aerially on utility poles where underground installation is not feasible, and attached to existing bridges to avoid impacts to wetlands and streams. The number and location of aerial segments and bridge attachments will be determined during the Project's final design phase.

Vibratory plowing uses a track plow to open a slot into the ground no more than six inches wide. Cable is placed into the slot approximately 36 inches below ground surface. After the cable is installed, excavated soil is compacted back into the slot and re-graded to the original land contour. Directional boring uses a drilling rig to create a bore hole, typically 4-6 inches in diameter, at a depth appropriate for avoiding obstacles such as streams and other impediments. Most bore lengths will be less than 100 feet; however, to avoid large obstacles or sensitive resources (such as wetlands) some bores may be several hundred feet. Bore entry and exit pits may be excavated, if necessary, to facilitate fiber installation via directional boring, and will be at least 30 feet outside the limits of wetlands or riparian habitat. Trenching involves use of a backhoe to open a trench approximately 8-12 inches wide and 36 inches deep. Conduit and fiber, or fiber alone, will be installed in the bottom of the open trench. Following cable installation, the trench will be backfilled with the excavated material and compacted. Hand holes will be installed below-grade at intervals along new underground fiber lines; small excavators will be used for hand hole installation to minimize soil disturbance.

EAGLE-Net will install a small portion of the new fiber on existing or newly constructed utility poles. This new aerial cable will be lashed into place on each pole and pulled into place on an

adjacent pole. Where new utility poles are required, they will be installed in accordance with best practices for the industry.

CAIs will be connected to the new network via underground or aerial fiber. If underground fiber laterals are installed, fiber will be routed into CAI buildings through existing communications conduit (if available) or through a new 2-inch hole penetrating the facility wall. If aerial fiber laterals are used, the new fiber line will parallel existing aerial utilities and enter the building at the same location as existing utilities.

Wireless technology will be used in remote and rural areas where fiber cable placement is not feasible. Nine new towers will be constructed in the Colorado cities of Aguilar, Trinidad (two towers), Kim, Meeker, Branson, Trinchera, Craig, and Bailey. Each new tower compound will include a self-supporting or monopole tower structure less than 200 feet tall, an equipment shed, an access road, and security fencing. Each tower will be constructed on a standard pad and pier reinforced concrete foundation ranging in areal footprint from 40 to 250 square feet. The towers will support microwave antennas and other network telecommunications equipment, including co-axial cable between the antennas and the equipment cabinets. Each equipment cabinet will consist of a prefabricated building placed on a 3-foot-by-3-foot pre-cast pad. Tower compounds will be enclosed by typical security fencing, and access roads will be constructed where existing roads are unavailable. Towers will be connected to existing electrical infrastructure in their respective locations, with the exception of Tower 6 in Branson, CO, which will require extension of electrical service, as well as construction of an access road to the planned tower location. Construction of each of the nine new tower compounds will disturb approximately 0.2 acres of surface area, most of which will be reseeded following construction.

In addition to placing antennas on the nine new towers, EAGLE-Net will install new antennas on 127 existing towers and 126 buildings, in accordance with applicable Federal Communications Commission (FCC) and industry guidelines and regulations. Antenna installations on buildings designated as historic will comply with Colorado State Historic Preservation Office (SHPO) recommendations and applicable BMPs developed by NTIA. EAGLE-Net will obtain leasing agreements from the existing tower owners prior to placing antennas and installing a 3-foot by 3-foot pre-cast concrete pad and network equipment cabinet within each existing tower's fenced compound. These weatherproof cabinets will house power and communication electronics such as batteries, power supplies, and microwave radios. No emergency generators will be installed within the existing compound, and ground disturbance will not occur outside of the existing tower compound footprint. Antenna collocations on existing buildings will involve attaching microwave antennas to rooftops using standard antenna and roof mounts. Co-axial cable will run from the roof to new network equipment to be placed inside the buildings. Collocations on existing structures will not require ground disturbance.

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.

Alternative 1 – Hybrid Fiber and Wireless Network Technologies (Preferred Alternative). This alternative involves installing 305 miles of new fiber optic cable, erecting 9 new towers, and collocating new microwave antennas on 127 existing towers and 126 existing buildings. This alternative leverages existing infrastructure, and involves construction of new facilities only where necessary. Most of the new fiber optic cable will be installed underground within existing ROWs. Bridge attachment and aerial fiber installation will be used for short segments where underground installation is infeasible or impracticable. Where aerial fiber installation is required, fiber optic cable will be added to existing or new poles installed along existing, previously disturbed ROWs. Wireless technology will be used in remote and rural areas where cable placement is not feasible.

No Action Alternative. No action was also considered. This alternative represents conditions as they currently exist in the Project area. Under the no action alternative, no new fiber-based or wireless infrastructure would be installed. As a result, the Project would not meet its intended purposes, including provision of enhanced broadband access to rural communities in the region. The EA examined this alternative as the baseline for evaluating impacts relative to other alternatives being considered.

Alternatives Considered But Not Carried Forward. In addition to the preferred alternative, EAGLE-Net considered limiting broadband connections to a single type of technology (i.e., using either fiber optic cable or wireless technology, but not both) or a single installation type (i.e., underground or aerial installation, but not both). Similarly, EAGLE-Net considered construction of all new towers, or limiting wireless technology to collocations on existing towers. These options were determined to be infeasible or impracticable. Limiting the network to wireless technology would not meet the goals of the Project, as wireless technology is unable to provide the bandwidths and internet speeds available with fiber optic cable. Due to rough terrain and other considerations, limiting the Project to fiber optic cable infrastructure would significantly increase the length of fiber required, as well as the complexity of and time required for installation. Use of aerial installation as a more significant Project component was deemed infeasible due to the susceptibility to damage from severe weather and the need to install additional utility poles in areas where they currently do not exist. However, aerial installation cannot be ruled out entirely because portions of the Project route are not conducive to underground fiber installation. Based on these assessments, only the preferred and no action alternatives were retained for full evaluation in the EA.

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 and Recreation, Infrastructure, Socioeconomic Resources, and Human Health and Safety. Cumulative impacts were also evaluated.

Noise

This Project will have short-term impacts on noise. Use of heavy equipment during the construction phase will result in short-term, temporary increases in ambient noise. However, it is unlikely that construction equipment will be near sensitive noise receptors for more than one to two days. Nevertheless, some noise impact near sensitive receptors is unavoidable because many of the entities to be served by the new network are themselves sensitive receptors (e.g., schools and libraries). Operation of the network will not increase long-term ambient noise levels. Moreover, the use of batteries rather than generators to provide back-up power for the new towers will not increase ambient noise. Based on these assessments, no significant noise impacts are expected to occur as a result of this Project.

Air Quality

During the construction phase of the Project, emissions will be generated by construction equipment, including vibratory plows and directional drilling equipment. Emissions from this construction equipment will be temporary, minor, and transitory as construction activities move along the installation route. Depending upon ambient moisture levels, minor amounts of dust may also be generated during construction operations. Back-up battery power sources are not expected to negatively affect air quality at tower locations. The Project will also result in short-term, minor increases in the use of fossil fuel and associated greenhouse (GHG) emissions during construction. Considering the nature and scope of the planned network expansion, EAGLE-Net estimates that the Project will result in the release of approximately 827 metric tons of carbon dioxide equivalent emissions. Thus, GHG emissions are expected to be well under the Council on Environmental Quality's presumptive effects threshold of 25,000 metric tons of carbon dioxide equivalent emissions from an action. Neither the placement nor operation of the buried fiber optic cable and towers to provide data transmission will create any new, long-term sources of air emissions in the Project area. Based on these assessments, no significant impacts to air quality are expected.

Geology and Soils

Under this Project, fiber optic lines will be installed in previously disturbed ROWs along utility lines, roadways, and railroads. Construction using a vibratory plow or directional drilling will preserve existing soils profiles and will not adversely affect the geology or soils of the area. Areas requiring trenching will be backfilled with soils from the area of excavation and restored to their original condition. In areas requiring hand holes for fiber optic splices or transmitting

equipment, small excavators will be used to minimize soil disturbance. Installing fiber on bridges or utility poles should have negligible impacts on geology and soil. The nine new towers will be located near existing towers and other development to minimize adverse effects on this resource area. Soil disturbance for the tower foundations will range from 40 to 250 square feet. Minor soil disturbance will also occur during fence post installation at new tower locations. Access roads to be constructed at certain tower locations will also result in soil disturbance. The EAGLE-Net estimates that a total of 0.2 acres of surface area will be disturbed during construction of each tower site. In areas where more significant ground disturbance will occur, such as locations of hand hole installations and tower locations, erosion control BMPs approved by the Colorado Department of Transportation (CDOT) will be implemented to minimize disturbance. These BMPs may include silt fences berms and straw bales. Based on these assessments, the Project is not expected to result in significant adverse impacts on the geology or soil in the area.

Water Resources

The Project fiber route will require numerous stream, river, floodplain, and wetland crossings. Impacts to these water resources will be avoided by installing the fiber using directional boring, aerial suspension, or bridge attachment. Aerial installation will avoid placement of new poles in wetland habitats. Most of the new fiber will be installed below grade, and will not result in substantial fills or other grading revisions within floodplains. After consulting with the U.S. Army Corps of Engineers (USACE), EAGLE-Net confirmed that permits are not required for directional boring or aerial installation of fiber, and installation of fiber via vibratory plow is permitted under USACE Nationwide Permit 12 for Utility Line Activities. Nevertheless, EAGLE-Net will prepare a stormwater pollution-prevention plan and implement appropriate CDOT BMPs to reduce potential impacts on surface waters. In addition, fiber and tower foundations will be installed at a shallow depth (approximately three feet). Significant groundwater aquifers are not present at such limited depths and therefore will not be impeded by installation of the new network. Based on these assessments, the Project is not anticipated to result in significant adverse impacts on water resources in the area.

Biological Resources

Based on information provided by the U.S. Fish and Wildlife Service (USFWS), the Colorado Division of Wildlife (CDW), and the Wyoming Game and Fish Department (WYGF), 94 species of concern were identified in the Project area. However, after further review of the list, EAGLE-Net determined that suitable habitat for only 48 of these species may be present near Project sites and subject to potential disturbance.

Based on a conversation with USFWS and documented in an email to USFWS dated June 22, 2011, the Project is expected to have "no effect" on the Black-footed ferret (*Mustela nigripes*), Colorado butterfly plant (*Gaura neomexicana var. coloradensis*), Colorado pikeminnow (*Ptychocheilus lucius*), Greenback cutthroat trout (*Oncorhynchus clarki stomias*), Southwestern willow flycatcher (*Empidonax traillii extimus*), Uncompahgre fritillary butterfly (*Boloria*

acrocnema), Ute ladies' tresses orchid (*Spiranthes diluvialis*), and Whooping crane (*Grus americana*). In a letter dated July 1, 2011, the USFWS determined that the Project "may affect, but is unlikely to adversely affect" Federally listed species, including the Canada lynx (*Lynx canadensis*), Least tern (*Sternula antillarum*), Mexican spotted owl (*Strix occidentalis lucida*), Piping plover (*Charadrius melodus*), and Preble's meadow jumping mouse (*Zapus hudsonius preblei*). The USFWS also concurred that the Project is not likely to impact seven candidate species in the area. Other Federally listed species and their critical habitat were not noted to be present in the area of the Project.

Similarly, in a letter dated May 19, 2011, the WYGF indicated that they have "no terrestrial wildlife or aquatic concerns pertaining to this Project." On June 17, 2011, CDW concluded that potential impacts to wildlife from planned Project activity, including tower construction, would be "minimal" provided that EAGLE-Net implements BMPs to protect wildlife. The protective measures specified by CDW include reclamation of disturbed habitats with native shrubs, grasses, and forbs; implementation of a noxious weed monitoring and suppression program for each disturbed site; keeping construction of new tower site access roads to a minimum; using directional boring to cross all streams and jurisdictional wetlands along the route; and avoiding construction activities at the Meeker tower site during the big game hunting season, from October 1 to November 30.

In addition to considering potential impacts on listed species, EAGLE-Net evaluated potential impacts on migratory birds and other wildlife. Construction of nine new telecommunications towers will result in loss of wildlife habitat (approximately 0.2 acres) at each site, and the tower structures will present a potential collision risk for avian species. To reduce the potential impacts of the towers on avian species protected under the Endangered Species Act, Bald and Golden Eagle Protection Act, and the Migratory Bird Treaty Act, the towers will follow guidelines in the USFWS Interim Guidelines for Communications Tower Siting, Construction, Operation, and Decommissioning Recommendations. Specifically, new antennas will be collocated on existing structures, towers, or buildings where possible. Where new towers are required, the towers will be less than 200 feet tall, free of guy wires, equipped with minimal lighting, and constructed adjacent to existing towers where possible. Moreover, construction activities will minimize the amount of ground disturbance, including using existing roads to the maximum extent possible. Finally, in accordance with recommendations outlined in a USFWS letter dated February 24, 2011, EAGLE-Net will survey all areas of ground disturbance for protected species, burrowing species and their dependent species (e.g., Prairie dogs, Burrowing owls, Mountain plovers, Ferruginous hawks, Black-footed ferrets), and nesting species, if construction activities will occur during the primary nesting season as recommended by the USFWS. If protected species, burrowing species, or nests are observed during construction activities, construction will be temporarily halted to consult with applicable agencies, and sensitive areas will be avoided temporally or spatially when possible.

Based on these assessments, no significant adverse impacts on biological resources are anticipated to result from Project implementation.

Historic and Cultural Resources

NTIA initiated consultation with the Colorado State Historic Preservation Office (SHPO) on October 22, 2010. On October 29, 2010, the Colorado SHPO requested that EAGLE-Net complete a file search to identify potential historic and archaeological resources in the Project's area of potential effect (APE). The file search was completed and additional information on the route and tower locations was provided to the Colorado SHPO on March 2, 2011. The database search indicated that no archaeological resources are within the footprint of the planned tower locations. Although archaeological sites are within the APE, only Site 5MF.4306 is eligible for listing on the National Register of Historic Places (NRHP) – a vandalized historic (c. 1879-1913) sandrocks rock art site in a residential area of Craig, CO. Site 5MF.4306 is in the APE of Tower 8 (formerly identified as Tower 12); however, because the site is more than 90 meters from the planned tower compound, Project construction will have no effect on this site.

In a response letter dated March 29, 2011, the SHPO provided additional comments regarding the proposed project. According to the Colorado SHPO, tower collocations are exempt from review per the *Programmatic Agreement (PA) Among the U.S. Department of Agriculture Rural Utilities Service, National Telecommunications and Information Administration, National Conference of State Historic Preservation Officers, and the Advisory Council on Historic Preservation for the Broadband Technology Opportunities Program and Broadband Initiatives Program.* The letter also states that there are no historic structures within the APE of planned towers, but potential archaeological resources could be located in these areas. Accordingly, the SHPO recommended construction monitoring or pre-construction surveys by a qualified archaeologist. In addition, the Colorado SHPO recommended that EAGLE-Net enter into a PA regarding network connections to existing buildings.

Additional information regarding the Project was provided to the Colorado SHPO in letters dated April 29 and May 23, 2011, and at a meeting on May 4, 2011. The letters states that the majority of identified historic properties are within urban areas, where directional boring will be used to install fiber optic cable. Furthermore, EAGLE-Net will follow appropriately protective BMPs during Project implementation, including avoiding known archaeological resources, and ceasing work within 100 feet of a discovery if unknown archaeological resources are uncovered so that appropriate authorities can be notified and provide further consultation. In addition, EAGLE-Net will submit documentation to the Colorado SHPO regarding connection of existing CAI buildings to the network using underground or aerial installation. In a response letter dated May 25, 2011, the Colorado SHPO determined that, based on the stipulations detailed above, the Project will have no adverse effect on historic and archaeological resources. On July 1, 2011, EAGLE-Net entered into a PA with the Colorado SHPO and NTIA detailing stipulations related to construction monitoring and inadvertent discovery notification.

NTIA initiated consultation with the Wyoming SHPO on January 27, 2011, and EAGLE-Net provided additional information to the Wyoming SHPO on March 2, 2011. In a letter dated March 14, 2011, the Wyoming SHPO concurred that the portion of the Project to be implemented in Wyoming will have no effect on historic properties. Because there is a possibility that prehistoric or historic materials may be found in the Project corridor, the Wyoming SHPO also stipulated that work be halted immediately if any cultural resources are discovered during construction. In such an event, EAGLE-Net must immediately contact NTIA and the SHPO so that the materials can be evaluated by an appropriately qualified archaeologist or historian.

On October 29, 2010, NTIA notified 13 Native American Tribes of the Project through the Tower Construction Notification System (TCNS). NTIA issued another TCNS notification on the Project to nine Tribes on February 4, 2011. This second notification included four of the Tribes previously notified, bringing the total number of Tribal organizations notified to 18. Additional correspondence regarding the Project and requests for comment were issued in February and April 2011. In a letter dated April 14, 2011, the Comanche Nation concluded that the Project would have no effect on historic properties listed on or eligible for the NRHP. However, the Nation recommended that a plan be developed to protect the rock art near Tower 8 (formerly identified as Tower 12). In a letter dated April 19, 2011, the Fort Peck Assiniboine and Sioux Tribes indicated approval of the Project as planned. Five Tribes (the Ponca, Shoshone-Bannock, Ute Mountain, Jicarillo Apache, and Northern Cheyenne Tribes) indicated that they have no interest in the Project.

Connections to three CAIs (the Durango Public Library, Ignacio School District, and the Ignacio Library) will be on the Southern Ute Reservation in Colorado. In their computerized TCNS profile, the Southern Ute Tribe indicated they do not need to review proposed structures (e.g. antennas) located on rooftops or collocations on existing towers. On May 13, 2011, the Southern Ute Tribe, the Ute Tribe, and the Cheyenne-Arapaho Tribes of Oklahoma were referred to the FCC for further government-to-government consultations on the planned towers. The Eastern Shoshone Tribe requested additional information and maps of the Project locations through TCNS on May 10, 2011. No comments on the Project were received from the Lower Brule Sioux, Upper Sioux Community of Minnesota, Navajo Nation, Osage Nation, Pueblo of Zuni, Apache Tribe of Oklahoma, and Northern Arapaho Tribes. Because the stipulated comment period expired on May 31, 2011, EAGLE-Net considers Tribal consultation closed.

EAGLE-Net will ensure that an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards monitors all ground-disturbing activities that occur during Project work near known or suspected archaeological sites and burial sites. If construction work uncovers cultural materials (e.g., structural remains, historic artifacts, or prehistoric artifacts), EAGLE-Net will cease all work immediately, and notify interested Tribes, the SHPOs, and NTIA. If human remains are discovered, EAGLE-Net will cease all work immediately, in accordance with the Native American Graves Protection and Repatriation Act of 1990

(NAGPRA) and relevant State statutes, secure the discovery area, and immediately notify local law enforcement personnel (e.g., police or County Coroner) and NTIA.

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

Aesthetic and Visual Resources

The Project will involve construction adjacent to agricultural fields, natural areas, railroads, and urban streetscapes. Towers will be constructed 0.1 to 3 miles from nearby roads and in the vicinity of previous disturbances (e.g., tower farms, structures, oil and gas development) to minimize impacts on visual resources. Aesthetic disruptions for most areas will be limited to the short-term presence of construction equipment. Permanent aesthetic impacts will be limited because the majority of fiber and splice enclosures will be underground. Where aerial fiber installation is necessary, EAGLE-Net will use existing utility poles to the maximum extent practicable to avoid creating new visual impacts. Visual observation of the towers will be partially masked in some locations by vegetation and surrounding topography (e.g., trees, hills, mountains). Based on these assessments, this Project will not significantly affect aesthetic or visual qualities in the region.

Land Use

Fiber will be installed in previously disturbed utility corridors and ROWs. The planned improvements are consistent with normal uses of ROWs and utility corridors. Leases will be obtained for fiber routes in railroad ROWs. In addition, a Special Use Permit will be obtained from the U.S. Forest Service for a portion of the route that crosses through Comanche National Grassland and San Juan National Forest. Existing land use in the locations of the nine new towers is undeveloped land adjacent to or near existing roads, highways, and urban areas. Although land use changes at the new tower sites will be permanent, the cumulative footprint of these sites will range from 360 to no more than 2,250 square feet. Based on these considerations, this Project will not significantly affect land use in the region.

Infrastructure

Various levels of infrastructure services (e.g., roadways, telephone lines, natural gas, and electric lines) are in place throughout the Project area. Tower 6 in Branson, CO, will require construction of an access road and extension of electricity supply lines. All nine new tower sites will be connected to existing electricity services, and the increased demand on the existing electrical grid is not anticipated to have a negative impact. The Project will not have negative impacts on other infrastructure in the area. Existing utility lines within ROWs in the Project area will be avoided by requiring lines to be marked prior to construction by the Utility Notification Center of Colorado (Colorado One Call) and One Call of Wyoming. In areas where fiber routes must cross other underground utilities, small test pits will be excavated by hand to ensure that installation does not damage existing lines. New antennas will be installed on new towers and existing towers, buildings, and other structures in accordance with FCC guidelines and standard

telecommunications construction practices. Overall, this Project is expected to have a positive impact on infrastructure in Colorado and Laramie County, Wyoming.

Socioeconomic Resources

The Project will provide enhanced broadband access to users in Colorado and Laramie County, Wyoming, particularly within rural and remote parts of the region. Implementation of the Project will provide enhanced broadband services to rural schools, libraries, and universities, including one school district and two libraries on Tribal land. In rural, low income, and Tribal locations, the enhanced bandwidth will have a positive impact on education, economic opportunities, health care, and public safety. The network will help to attract and retain businesses; provide access to educational resources available locally and globally; allow for multi-agency collaboration, coordinated actions, and training for public safety; provide better access to comprehensive health services; and facilitate telecommuting and new internet-based business opportunities. The Project will not disproportionately affect minority and low-income populations. Overall, this Project is expected to have a positive impact on socioeconomics in the planned service area.

Human Health and Safety

The Project is not expected to have direct impacts on human health and safety during normal operation. However, human health and safety concerns may arise during construction when such activities occur in close proximity to traffic along roadways. Because construction activities will occur in ditches and utility corridors along highways and roads, contractors will not be located directly in the path of traffic. In addition, the impact to vehicles traveling on the highways and roads will be minimized because traffic lanes will not need to be rerouted or closed. Contractors will comply with Federal Highway Administration requirements and the Manual on Uniform Traffic Control Devices to promote highway safety and efficiency by providing warning and guidance to all elements of traffic. CDOT and Wyoming Department of Transportation (WYDOT) traffic control standards will be used to establish and maintain a safe work zone. Workers are required to meet Occupational Safety and Health Administration (OSHA) standards for worker visibility, and equipment driven on roadways must meet proper signage and licensing requirements. Work in and around school zones will be coordinated with school district officials to ensure that safe, functional routes are available for pedestrian and bus traffic. By adopting the safety and coordination efforts described above, the Project can be constructed without adverse impacts to human health and safety.

A review of the EPA's National Priorities List, Corrective Action Baseline Database, and Brownfield sites did not reveal areas of concern within the planned Project corridor. Nevertheless, if soils encountered during construction appear visually different from surrounding soil, or petroleum product odors are detected, the soils will be identified as potentially contaminated and work will cease in the area of concern. Further investigation will be conducted to determine the presence and extent of soil contamination. Workers will then be equipped with

appropriate personal protective equipment and follow the required procedures for mitigating identified soil contamination.

Cumulative Impacts

During implementation of the Project, cumulative noise impacts may occur due to concurrent road construction and maintenance, particularly during the summer months. However, because fiber installation is expected to proceed rapidly, the anticipated increase in noise is expected to be minimal and insignificant in duration. Similarly, the presence of multiple construction crews may have a temporary effect on traffic in the area of installation. However, if installation of fiber routes occurs simultaneously with other anticipated construction and maintenance, repeated disturbance to biological resources such as wildlife and vegetation in the area of construction will be reduced. The nine new towers will be near existing towers and other structures. The location of additional structures near existing structures may cumulatively make these features more visually apparent, but will reduce visual impacts in undisturbed areas elsewhere in Colorado. Locating the Project towers near other structures will also reduce the need to construct extensive access roads and disrupt previously undisturbed wildlife habitat. No significant adverse cumulative impacts will result from concurrent implementation of this Project and other routine maintenance or road construction.

Decision

Based on the above analysis, NTIA concludes that constructing and operating the Project as defined by the preferred alternative, identified BMPs, and 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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Office of Telecommunications and Information Applications
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7/26/2011
Date