National Telecommunications and Information Administration
Broadband Technology Opportunities Program
Finding of No Significant Impact
MCNC, Golden LEAF Rural Broadband Initiative (GLRBI) Project

Summary

MCNC applied to the Broadband Technology Opportunities Program (BTOP) for a grant to install 1,340 miles of new fiber optic cable, lease 248 miles of existing fiber from the Indefeasible Rights of Use (IRU), upgrade 106 miles of fiber donated by Albemarle Pamlico Economic Development Corporation (APEC), and install 20 telecommunication huts. The new middle mile infrastructure will connect up to 2.32 million households, 160,000 businesses, and 188 community anchor institutions (CAIs). All of the new fiber optic cable will be installed either aerially or buried within existing utility right-of-ways (ROWs) along roadways. The 20 telecommunication huts will be installed at key regeneration points, primarily located within the boundaries of previously disturbed CAI property. The proposed action passes through 69 counties in North Carolina, and is referred to as the Golden LEAF Rural Broadband Initiative (GLRBI) Project (Project).

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

MCNC 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 new broadband network of fiber optic cable along existing Federal, State, city or county utility ROWs through 69 counties in North Carolina;
- Installing 1,274 miles of cable buried underground, in conduit, and 66 miles aerially;

- Leasing 248 miles of existing fiber from the IRU;
- Upgrading 106 miles of fiber donated by APEC;
- Installing hand holes and pull boxes along the underground sections of the Project;
- Installing 19 new telecommunication huts at key regeneration points located within the boundaries of previously disturbed CAI property and one hut on leased, private property; and
- Providing fiber optic connectivity from the middle mile backbone to 188 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 the Project is to bring affordable broadband service to unserved and underserved communities in North Carolina. The Project will deploy fiber in areas where, to date, it has not been economically feasible to install telecommunications infrastructure. The middle mile infrastructure will deliver broadband service to 69 counties, providing opportunities associated with broadband technology to 2.32 million households, 160,000 businesses, and 188 CAIs.

Project Description

The Project involves installing 1,340 miles of new fiber optic cable, leasing 248 miles of existing fiber from the IRU, upgrading 106 miles of fiber donated by APEC, and installing 20 telecommunication huts across North Carolina. Approximately 1,163 miles of the Project cable will form the backbone network, and the remaining 177 miles of new cable will be lateral distribution lines that connect the backbone to 188 CAIs. Nearly all (99 percent) of the network

will be installed underground in conduit, using directional boring, plowing, or trenching. The remaining 1 percent of the fiber will be installed aerially on existing utility poles. The fiber will be installed within public highway ROWs, along existing electrical distribution or telecommunication cable routes. The huts will be installed on previously disturbed land.

MCNC will install cable underground using plowing, trenching, and directional boring. The plowing technique involves pulling a plow equipped with a vibrating blade that can cut a six- to 12-inch wide and 36-inch deep trench. Upon installation of the conduit, the trench will be backfilled and the disturbed area restored, stabilized, and seeded. In rough terrain, MCNC may also install buried cable via trenching. For example, a rock saw and mechanical trencher will be used in rocky areas. A typical rock saw is a six-inch diameter wheel that will be used to cut a 4-inch wide and 24- inch deep trench. Conduit within innerducts will be placed in the trench. The trench will then be backfilled and the disturbed area stabilized and seeded (as required in rough terrain). No open burning or blasting will occur. MCNC will use directional boring to avoid wetlands, streams, culverts, utilities, road crossings, downtown areas, bridges, constrained ROW (guardrail and steep slopes), or other obstacles. Entrance and exit bore pits (4x4x3 feet) will be established approximately 60 to 700 feet away from the obstacle. A drill machine will be set up to bore at least 36 inches underground between the bore pits. Conduit with innerduct will be installed between the bore pits. Upon installation, the bore pits will be backfilled and the disturbed area restored, stabilized, and seeded.

MCNC will install approximately 66 miles of aerial fiber on existing utility poles, and will use aerial fiber installations to tie into existing aerial fiber routes. MCNC will work with the pole owners to identify available space to hang the new fiber optic cable and will obtain Right of Attachment lease agreements from the pole owners prior to installation of the fiber. Pole replacements are not anticipated. However, if space is not available on existing poles, poles may be replaced; new, longer poles may be installed; or a new pole line paralleling the existing pole line may be constructed. North Carolina Department of Transportation (NCDOT) has approved the hanging of fiber cable along five existing bridges (Virginia Dare Memorial Bridge in Dare County; US 17 in Edenton over Albemarle Sound Chowan and Bertie Counties; Washington Baum Bridge/US 64, in Dare County; NC94 Bridge over Intercoastal Waterway Hyde and Tyrell Counties; and Wright Memorial Bridge/US 158 in Dare and Currituck Counties). In these instances, the fiber will be encased in fiberglass, high density polyethylene (HDPE) plastic or steel conduit.

The Project will include the placement of hand holes and pull boxes along the route, at intervals of less than every 7,000 feet, around turns, at intersections, and where lateral routes tie into fiber backbone. These boxes and holes will allow access to make necessary repairs, install splice points for connections, and provide storage of 100 to 200 feet of extra fiber cable for repairs and splice points. The majority of pull boxes will measure 36 x 36 x 48 inches and will be installed below ground and flush with the ground surface. However, boxes at NCDOT bridge crossings will be of varying sizes and installed above ground determined on a case-by-case basis. NCDOT will approve the box appearance and placement to ensure the aesthetics are consistent with the bridge.

The Project will also include the installation of 20 telecommunication huts at key regeneration points along the Project route. The prefabricated huts will measure 10 feet wide by 20 feet long by 8 feet high. Nineteen of these huts will be located within the boundaries of previously disturbed CAI properties (e.g., community colleges, universities, and research institutions). One hut will be located in the northwest quadrant of the U.S. Highway 1 and Newton Farm Road in Henderson, NC. This hut will require an enclosure of 20x35 feet on land to be leased from the current, private landowner. This hut will be placed on previously disturbed farm land adjacent to the NCDOT ROW. All proposed telecommunication huts will provide a splice point for fiber cable to tie into existing fiber and contain electronics to regenerate signal points throughout the system. The huts will also have a battery-operated, continuous uninterruptible power supply (UPS). To provide power during grid outages, the huts will be equipped with backup emergency generators. The generators may be powered by natural gas (preferred fuel), or by external fuel tanks, such as propane or hydrogen fuel cells.

Approximately 177 miles of new lateral miles will provide cable to the 188 CAIs along the Project route. These fiber routes to the CAIs will be single threaded fiber buried in HDPE conduit along existing ROWs.

On May 19, 2011, prior to final review and acceptance of the EA by NTIA, MCNC was informed that one of its sub-recipients, ERC, had constructed four fiber segments of their BTOP project. The four segments constructed totaled approximately 10,620 feet (2.01 miles) and were located along Merrimon Avenue, Fairview Road, and Hayward Road in Asheville, North Carolina. The Merrimon Avenue segment deployed approximately 1,377 feet of aerial fiber following Merrimon Road north from the intersection with Edgewood Road. The Fairview Road segment deployed approximately 5,000 feet of aerial fiber east from the intersection with Sweeten Creek Road. The Haywood Road segment deployed approximately 3,535 feet of fiber cabling including approximately 3,325 feet of aerial fiber along Haywood Road west beginning at the intersection of Sand Hill Road and 200 feet of buried fiber that was directionally bored under an existing driveway to reach an industrial facility along Crayton Road.

After ERC notified MCNC of this activity, MCNC instructed ERC to stop all fieldwork on these routes. MCNC notified their Federal Program Officer (FPO) of this activity on May 20, 2011. The FPO reiterated the instruction that all construction activity must cease, and MCNC and ERC both provided documentation of their compliance with that instruction. Additionally, at the FPO's request, MCNC and ERC provided specific documentation including detailed narratives and mapping of the construction activity at each segment. The requested information was provided to and project activities confirmed by the FPO.

Subsequently, the documentation submitted by MCNC and ERC was provided to the Project's assigned Federal environmental reviewer to determine the environmental impact of the construction. After evaluating the documentation submitted by MCNC and ERC and comparing it with project activities described in the EA, it was determined by the Federal environmental reviewer that the four segments constructed were sufficiently accounted for and evaluated in the

EA and no additional mitigation measures would be necessary. The additional documentation provided by the recipient and communications from the BTOP Program Office have been added as an addendum to the EA.

In addition to review of documentation by the Federal environmental reviewer, NTIA required MCNC to implement a Performance Improvement Plan (PIP) requiring MCNC to (1) acknowledge they will not attempt to recover engineering, material, or construction cost associated with the four fiber segments; (2) deliver a plan to reprogram the costs originally associated with these segments to other project purposes or reduce the award amount by subtracting these costs; and (3) provide a formal sub-recipient monitoring plan that includes specific oversight of construction and environmental compliance in order to evaluate ERC's ongoing performance on the 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.

Alternative 1 – Hybrid Fiber Installation (Preferred Alternative). This alternative includes installation of 1,340 miles of new fiber optic cable underground (99%) and aerially (1%), leasing 248 miles of existing fiber from the IRU, upgrading 106 miles of fiber donated by APEC, and installing 20 telecommunication huts. Most of the new fiber optic cable will be buried within existing utility ROWs along roadways.

Alternative 2 – Direct Buried Fiber Installation Alterative. This alternative considered burying fiber cable in a trench without conduit and not hanging any fiber on existing utility poles or bridges. The Buried Fiber Installation Alterative is similar to the Preferred Alternative, except the fiber cable would not be protected by conduit, and would therefore be more susceptible to damage. Also, direct buried fiber cannot be installed via directional bore, resulting in impacts to jurisdictional water resources. This is a lower cost alternative, but was determined to be unreliable and result in greater environmental impacts.

Alternative 3 – Aerial Installation Alterative. This alternative considered installing all 1,340 miles of fiber optic cable aerially on existing poles. While the initial installation is inexpensive, higher costs associated with regular maintenance and obtaining right of attachment lease agreements would be cost prohibitive in the long run.

No Action Alternative. No action was also considered. This alternative represents conditions as they currently exist in North Carolina. Under the no action alternative, new middle mile infrastructure would not be constructed. Many rural communities 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. MCNC considered two alternatives that were not carried forward: Copper Cable and Wireless Alternative Installation. MCNC considered installing copper cable along the proposed Project route. However, this alternative would diminish reliability, require more ground disturbance, and therefore increase disturbance of environmental resources. The Wireless Alternative would use microwave technology instead of fiber-optic cable. MCNC determined that this alternative would not meet the purpose and need for the project because microwave technology does not currently support high-speed broadband service. Additionally, this alternative requires construction of hundreds of towers across the Project area, which would cost considerably more and cause greater environmental impacts than the Preferred Alternative.

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

Short-term increases in ambient noise levels will occur during the Project construction period. Noise created by construction machinery used during installation will be temporary and localized, and comparable to typical traffic noise from the adjacent roadways. Aerial portions of the route will result in additional future direct noise impacts associated with the recurring maintenance activities, such as tree trimming and removing limbs damaged during storms, In addition, minor, long-term noise impacts are anticipated due to the operation of the backup power generators at the 20 new telecommunication huts. However, the generators will only be operated during commercial power outages. Based on these considerations, no significant impacts on noise are expected to occur as a result of Project implementation.

Air Quality

The Project will impact air quality during the construction period, and during testing and operation of the backup generators at the equipment shelters. Fiber optic cable installation will generate fugitive dust emissions from equipment for aerial fiber installation and due to trenching and directional boring that will disturb and expose surface soils. Similarly, there is potential for temporary dust emissions during site preparations for the telecommunication foundations. Air quality will also be affected by exhaust emission from delivery vehicles, construction equipment, and by testing and operation of the backup power generators at the 20 telecommunication huts.

BMPs, such as reseeding to reestablish ground cover, will be used to control air emissions and fugitive dust during the construction phase of the Project. Additionally, all construction equipment and vehicles will be maintained in good operating condition to minimize exhaust emissions. The operation of the 20 generator units will contribute negligible air emissions due to their infrequent use.

The Project will constitute a short-term minor increase in the use of fossil fuel and associated greenhouse gas (GHG) emissions during construction. It is estimated that this Project will result in the release of approximately 1,800 to 3,000 metric tons equivalent of carbon dioxide emissions. This estimate is well below the Council on Environmental Quality's presumptive effects threshold of 25,000 metric tons of carbon dioxide equivalent emission from an action.

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 are expected. With the implementation of BMPs, construction and operation of the planned network are not expected to have significant adverse impacts on air quality.

Geology and Soils

The Project will be installed in previously disturbed public ROWs, within CAI property boundaries, and adjacent private property. The cable will be installed in these locations to, among other considerations, minimize impacts on geologic and soil resources. In rough terrain, MCNC will install buried cable via trenching. For example, a rock saw and mechanical trencher will be used in rocky areas, as previously described. Telecommunication huts will be installed on previously disturbed land within the boundaries of CAI properties (i.e., within parking lots at universities). All installation methods will result in minor, temporary disruption of the soils. Erosion control measures and BMPs will be implemented before, during, and after construction activities. BMPs, for underground installation, such as restoration and reseeding of drilling and receiving pits, and installation of silt fences, will be followed throughout the Project. The Project will also provide a Sediment Erosion Control plan, which will help alleviate construction erosion impacts. Consequently, the Project is not expected to result in significant adverse impacts on geology or soils.

Water Resources

The Project will not result in direct impacts to surface waters or wetlands because the cable will be installed along previously disturbed ROW. Therefore, requirements established under Sections 401 and 404 of the Clean Water Act are not applicable to this Project. To avoid surface water, MCNC will install fiber adjacent to the edge of pavement on the upper shoulder, utilize directional boring methods, hang fiber cable along bridges, or install fiber cable on the opposite side when a stream is present. Entrance and exit pits associated with directional bores will be placed outside of protective riparian buffers. MCNC will implement best management practices (BMPs) such as using silt fences, and backfilling, compacting, stabilizing, and reseeding affected areas to avoid soil erosion and sedimentation into the surface waters. Storage of equipment and materials will be kept within the ROW limits or within the CAI property.

The Project will have minimal impacts on groundwater, except where groundwater is shallowest at jurisdictional areas and in coastal counties. As is true with all directional drilling, there is the potential to release drilling fluids into the surface environment through frac-outs. MCNC will develop and implement a Frac-Out Contingency Plan to prevent, contain, and clean up frac-outs associated with directional drilling. The plan will include practices and appropriate responses to

minimize the likelihood of and manage frac-outs, including the use of hay bales, terminating bore activities, contacting project authorities, and informing environmental agencies within 24 hours.

The Project may also impact coastal zone water resources regulated by the Coastal Zone Management Act (CZMA), compliance for which is managed by the MC Division of Coastal Management (DCM). Specifically, buried fiber cable installed in existing ROWs in designated coastal counties will result in minimal, temporary direct impacts to coastal zone water resources. However, aerial portions of the Project will not have any direct impacts. MCNC will minimize impacts on coastal resources by using existing buried fiber, donated by APEC, to complete the segment along the Outer Banks Loop. In addition, directional bore methods will be used to avoid impacts to coastal zone water resources. BMPs, such as silt fences, will be installed at jurisdictional crossings and directional bore entrance/exit pits and storage equipment and materials will be kept within the ROW limits or within CAI properties. Affected areas will be immediately backfilled, compacted, stabilized, and seeded to avoid soil erosion and sedimentation. A Coastal Area Management Act (CAMA) Major Permit, through the NC DCM, will be required for all routes located in designated coastal counties. NC CAMA permits are required if the project meets the following criteria:

- Is in one of the 20 counties covered by CAMA;
- Is considered 'development' under CAMA;
- Is in, or it affects, an area of environmental concern (AEC) established by the Coastal Resources Commission (CRC); and
- Does not qualify for an exemption.

In correspondence dated May 9, 2011, NC DCM indicated that Area of Environmental Concern (AEC) boundary mapping is not available due to the continual coastal changes and that a local NC DCM representative will be available to determine these boundaries in the field. MCNC will work with NC DCM and their representative to coordinate actions associated in obtaining the CAMA Major Permit, following receipt of this FONSI.

The Project route will cross one Wild and Scenic River, the Lumber River. At this crossing, MCNC will use directional boring, which will therefore not result in significant impacts.

Portions of the Project will traverse designated trout counties (Graham, Buncombe, Madison, McDowell, Mitchell, Avery, Alleghany Surry, and Stokes). Trout waters are managed and regulated by NC Wildlife Resources Commission (WRC), National Park Service (NPS), and the Eastern Band of the Cherokee Indians. These counties are subject to trout moratoriums, 25-foot vegetative undisturbed buffers along trout waters, and specific sediment and erosion control measures. In-stream work and disturbance within the 25-foot buffer are prohibited during the trout spawning season, from October 15 through April 15. This prohibition is extended from January 1 through April 15 if wild rainbow trout are present. On April 20, 2011, the NCWRC responded stating that significant impacts to aquatic wildlife species are not anticipated because the proposed fiber route will follow existing NCDOT ROW, sediment and erosion control measures will be implemented, and impact streams wetlands will not be impacted. In

correspondence dated April 5, 2011, the NOAA National Marine Fisheries Service (NMFS) stated that their main concern was potential impacts to streams and rivers used by anadromous fish for spawning and maturation. NOAA NMFS referenced a guide that includes streams and rivers that are subject to a moratorium periods for in-water work to reduce adverse affects to the fish:

- Established by the NMFS from February 1 through June 30
- Established by the NC Division of Marine Fisheries (DMF) from February 1 through September 30 (February 15 through October 31 in the Roanoke River Basin); and
- Established by the NC WRC from February 15 through June 30 that extends through September 30 if located within a designated Anadromous Fish Spawning Area.

Additionally, NOAA NMFS indicated their concern regarding frac-outs that may occur during directional boring operations. NMFS indicated that frac-outs have the potential to release drilling mud into receiving waters and harm anadromous fish habitat. NOAA NMFS also provided avoidance measures to protect fish spawning and maturation habitat:

- No directional drilling installation on streams and rivers subject to fish spawning and maturation moratoriums
- Directional drilling contractor will be specialized in conducting directional drill installation techniques
- Prepare and abide by a Frac-Out Contingency Plan, which will be included in the construction specifications:
  - ✓ Establish berms around directional drill entrance/exit areas
  - ✓ Stop activities when pressure of the drill indicates a frac-out occurred
  - ✓ Install silt fencing, stockpiling straw bales and sand bags, and storing shovels and buckets so that the migration of the frac-out at the entrance/exit points can be controlled.
  - ✓ Reuse drilling mud to reduce waste
  - ✓ Use an extra pump and hose to pump released mud back to pit
  - ✓ Maintain a vac truck onsite
  - ✓ Establish and immediately contract with an Environmental Response Team to report on-site and assess the frac-out and act accordingly

In addition, the Project will adhere to the NC Division of Water Quality (DWQ) implementation of NC Riparian Buffer Rules along sensitive aquatic systems. These rules protect fishery resources and water quality from non-point source pollution associated with activities including agriculture, development, and forestry. A 50-foot wide riparian buffer is regulated by NC DWQ to help protect the commercial seafood and recreational fisheries adjacent to surface waters.

By implementing industry standard BMPs and installing fiber optic cable by directional boring under waterways, using existing buried fiber, or attaching fiber to existing bridges, MCNC will

be able to construct the network with little or no impact on water resources in the Project area, and the Project is not expected to result in significant impacts on water resources.

Biological Resources

The Project will result in minor impacts on biological resources. Noise and human activity associated with fiber installation along the ROWs are expected to disturb some wildlife species. However, these effects will be minor and temporary, and comparable to typical roadway traffic noises. Some disturbance to the ground surface and vegetation will also occur during construction activities. This disturbance will be largely limited to previously disturbed ROWs.

In a letter dated March 9, 2011, the U.S. Fish and Wildlife Service (USFWS), Asheville Field Office requested additional information to make a determination of the effects of the Project. Specifically, the USFWS had few concerns with the proposed Project, but noted that some federally listed plants frequently occur in the maintained ROWs along the proposed Project route. USFWS was concerned about potential impacts on three vegetative species: Michaux's sumac, Schweinitz's sunflower, and Smooth Coneflower. In an email to USFWS dated March 7, 2011, MCNC indicated that the 1,340 mile route was surveyed for potential species and habitat between October 2010 and January 2011. USFWS indicated that the surveys were conducted outside of the recommended survey windows for the species (i.e. May to October) and requested additional information. MCNC provided the requested information in a subsequent letter to USFWS dated March 29, 2011.

In letters dated, April 11, 2011 and April 13, 2011, the USFWS Asheville Field Office and Raleigh Field Office, concurred that the project is not likely to adversely affect any species federally listed as endangered or threatened and concluded that MCNC has fulfilled requirements under Section 7 of the Endangered Species Act for this Project.

A portion of the Project parallels critical habitat for the Appalachian elktoe, a freshwater mussel, in the Cheoah River. The Project will be installed along the northern side of the ROW, furthest away from the Cheoah River, and will not encroach the limits of the critical habitat. Also, the Project will not cross the Cheoah River.

The North Carolina Wildlife Resources Commission (NCWRC) provided comments in accordance with the provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and North Carolina General Statutes (G.S. 113-131 et seq.). NCWRC does not anticipate significant impacts on aquatic and terrestrial wildlife resources because the proposed route will follow existing NCDOT ROWs, and will not directly impact streams or wetlands. In addition, MCNC will implement sediment and erosion control measures. NCWRC also recommended that MCNC coordinate further with NCWRC should installation require any impact to game lands. In addition, any in-stream work and land disturbance within the 25-foot wide buffer zone in NC Counties that contain trout resources are prohibited during the trout spawning season of October 15 through April 15, as regulated by NCWRC, NPS, and the Eastern Band of the Cherokee Indians. This prohibition is extended from January 1 through

April 15 if rainbow trout are present. These limitations are necessary to protect the egg and fry stages of trout.

Based on this analysis and following the guidance of the USFWS and NCWRC, MCNC will be able to construct the fiber network with no significant impacts on biological resources.

Historic and Cultural Resources

NTIA initially contacted the NC State Historic Preservation Office (SHPO) on September 22, 2010 to initiate Section 106 consultation for the Project. In a letter dated October 22, 2010, the SHPO responded to NTIA that they look forward to working with MCNC in completing the Section 106 compliance process.

MCNC, through their environmental consultant, S&ME, sent the NC SHPO a letter on January 18, 2011 to serve as notification that the preliminary design plans and field work had been completed. This correspondence stated that the final proposed project corridor and proposed telecommunication huts will remain within existing ROW and will not require new ground disturbance. On February 9, 2011, the NC SHPO responded and determined that the Project, as proposed, will not have an effect on any historic structures and no archaeological investigations will be needed.

In an April 7, 2011 letter, the NC SHPO requested further information regarding three hut locations that are proposed within historic districts: Fayetteville State University, Gaston Community College, and UNC-Pembroke. The SHPO requested that the huts be located in such a way that they will not impact the visual appearance of the historic properties. They requested additional information about these huts for further determination. They also concluded that it is unlikely that any archaeological resources along the Project route may be eligible for inclusion on the National Register of Historic Places and affected by the project. Therefore, no archaeological investigation is needed.

On April 29, 2011, S&ME followed up with additional information regarding the visual impacts and proximity to historic districts and/or structures of the three telecommunication huts in question. In a letter dated May 11, 2011, NC SHPO concluded that the three telecommunication huts are outside of any historic district and will have no effect on historic properties.

On September 30, 2010, NTIA notified eight Native American tribes of the Project through the Tower Construction Notification System (TCNS). To date, all of the Tribes responded to the notification and requested more information about the project. MCNC responded by providing additional information. After reviewing the additional information, seven Tribes responded that there will be no impact to their religious, cultural, or historical assets. One of the tribes has not responded. Four of the eight Tribes requested that if any human skeletal remains or any protected Native objects are uncovered during construction, construction should stop immediately, and State and Tribal representatives should be contacted.

All construction will be restricted to previously disturbed areas. If any cultural material is discovered during construction, the SHPO will be notified immediately and construction halted until a qualified archaeologist assesses the cultural remains. 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 guidance, the Project is not expected to have significant adverse impacts on historic and cultural resources.

Aesthetic and Visual Resources

The MCNC Project primarily involves installing underground fiber optic cable within utility and road ROWs and aerial fiber optic cable on existing poles within previously disturbed ROWs. In a letter dated March 23, 2011, S&ME notified the NPS that portions of the Project will traverse the Blue Ridge Parkway, the Cape Hatteras National Seashore, and the Wright Brother's National Monument. In an email dated April 6, 2011, The Blue Ridge Parkway responded that prior to obtaining a ROW access permit for this crossing, a Standard Form 299 must be prepared and submitted to the NPS. On April 22, 2011, NPS responded to S&ME that the Project will have no impact on Cape Hatteras National Seashore or the Wright Brothers National Monument.

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. These impacts will only occur during the construction phase of the Project. The 20 new telecommunication huts will be installed in the ROWs or on adjacent properties leased by MCNC. No huts or CAI connections are planned to be located in or near protected areas, State parks, or national parks. Telecommunication hut exteriors will be compatible with the existing landscape and surrounding buildings. Accordingly, the Project is not expected to have a significant adverse impact on aesthetic and visual resources.

Land Use

All fiber optic cable will be installed in previously disturbed ROWs or adjacent properties. During a January 20, 2011 telephone communication, the NC DCM stated that this Project will require a CAMA Major Permit. A CAMA Major Permit is required if development is within an AEC. This Project requires a permit to evaluate the direct impacts to coastal zone land use. Additionally, MCNC will work with NC DCM to determine if portions of the Project area are located within any AECs (estuarine and ocean systems, ocean hazard systems, public water supply, and natural and cultural resources). Typically utility projects in ROW are consistent with CAMA requirements. However, a variance is required because portions of the Project may be located within Ocean Hazard System AECs that are subject to set backs to minimize erosion.

Buried fiber optic cable extends through portions of Nantahala, Pisgah, and Croatan National Forests. MCNC may not begin construction on the portions of the route or Project on these lands until a permit is obtained from the U.S. Department of Agriculture – Forest Service (USDA-FS). Scoping letters, dated January 31, 2011 were sent to the Appalachian, Cheoah, Grandfather, and Supervisors Offices. Written responses have not been received; however, MCNC held a conference call with the USDA-FS Asheville, NC office on February 16, 2011. The USDA-FS

stated that MCNC will need to conduct a biological evaluation (BE) and complete Standard Form 299 as part of the application package to use the ROWs over USFS lands.

MCNC will also acquire ROW access permits for use over Federal Energy Regulatory Commission (FERC) Alcoa Power Generating Inc. (APGI) Tapoco Hydroelectric Project and APGI-owned lands. The permitting process for these land uses is outlined in the Tapoco Shoreline Management Plan (SMP). Communications between MCNC and APGI have been ongoing since February 24, 2011. APGI indicated that they will use the final EA to facilitate their review of the Project in FERC and APGI lands. The Agency Consultation Process in accordance with the SMP will be necessary prior to easement agreement approvals. In addition, ROW access permits through Land Trust for the Little Tennessee (LTLT) conservation easements will be reviewed and issued by the LTLT and will be subject to the North Carolina Riparian Lands Conservation Easement and Declaration of Restrictive Covenants between APGI and LTLT.

The 20 new telecommunication huts will be established on previously disturbed CAI properties and private land leased by MCNC. Areas at drilling and exit pits, and around the 20 new huts, will be restored as close as practicable to original conditions. There will be minimal short-term effects and no long-term impacts on existing use or zoning. Therefore, the Project will have no significant impact on land use.

Infrastructure

The Project will augment and not adversely impact any existing infrastructure. The new fiber optic cable will provide additional broadband capacity throughout North Carolina. Project construction activities will result in a temporary interruption of traffic flow along the Project route. These interruptions are short-term and will subside when installation of the fiber is complete. The 20 new telecommunication huts will use battery power, and have on-site backup generators and fuel tanks. There are no plans to create new roadways, temporary or otherwise, during the Project and all existing roadways, sidewalks, and bike trails will be crossed either aerially or underground using directional boring techniques. The Project will improve communications infrastructure and is expected to result in improved transfer of information between CAIs, businesses, and individuals within the communities along the Project route. Overall, the Project will have a positive impact on infrastructure in North Carolina, and is not expected to result in significant impacts on infrastructure resources.

Socioeconomic Resources

The Project will improve communications infrastructure to residents who do not have access to broadband services in North Carolina. The middle-mile fiber backbone will also benefit these communities by providing broadband capabilities to 188 CAIs. An increase in both short-term and long-term employment opportunities are expected to result from the Project. Overall, the Project will have net positive impacts on socioeconomic resources and is not expected to result in significant impacts on such resources.

Human Health and Safety

All construction activities associated with the Project will be conducted by qualified, licensed contractors. The contractors will follow applicable safety regulations, including all Federal, State, and local safety and health laws, and NCDOT guidance for providing a safe working environment. Workers will be required to meet NCDOT standards for worker visibility, equipment signage, and licensing requirements. Work within urban areas shall maintain safe pedestrian routes. With implementation of these protocols, the Project will not generate any significant adverse worker or traffic-related health or safety issues.

It is unlikely that hazardous wastes will be encountered during Project installation, because most construction will be done by boring or trenching the fiber cable at least 36 inches underground or attaching fiber to existing utility poles. If contaminated soil and groundwater are suspected to be encountered, sampling and testing will be conducted to avoid any adverse health and safety impacts. If any contaminated soil is identified, it will be handled and properly disposed of at a licensed treatment or disposal facility. In the event that contaminated groundwater is extracted during directional boring, response action protocol will be followed, including use of hay bales at pits, terminating bore activities, contacting contractor authorities, and informing environmental agencies within 24 hours. In addition, a Frac-out Contingency Plan and crew training and response will be implemented.

In the event that orphaned underground storage tanks are identified within the Project corridor, MCNC will notify the proper regional office of NC Department of Environment and Natural Resources (DENR).

Further, the new fiber will provide broadband service and directly connect medical facilities. The Project will enhance emergency and medical services and improve human health and safety throughout the Project area, and is not expected to result in significant impacts to human health and safety.

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, 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:

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

Date

Issued:

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

6/22/2011
Date