Summary

The Utah Telecommunication Open Infrastructure Agency (UTOPIA) applied to the Broadband Technology Opportunities Program (BTOP) for a grant to install 254 total miles of middle-mile fiber-optic cable facilities in the UTOPIA consortium communities. The new fiber will serve 395 community anchor institutions (CAIs), and also will enable the cities in the area to extend the infrastructure through the sustainable last mile program to a high percentage of their citizens (numbering approximately 400,000). The new network will consist of a hybrid of aerial and buried fiber. The proposed action passes through eight municipalities that are part of the UTOPIA consortium along the Wasatch Front, including Payson and Orem in Utah County; Murray, Midvale, and West Valley City in Salt Lake County; Centerville and Layton in Davis County; and Perry in Box Elder County. The Project is referred to as the Community Partnership Project (Project).

The National Telecommunications and Information Administration (NTIA) awarded a grant for the Project to Utopia, 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 is driven by 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.

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

The Project includes:

 Installing a hybrid broadband network, consisting of approximately 254 miles of aerial and buried fiber (middle-mile distribution rings and middle-mile laterals), through eight municipalities that are part of the UTOPIA consortium along the Wasatch Front;

- Installing the 254 mile network as urban overbuild upon already developed land, on existing overhead lines or in existing utility easements within roadway rights-of-way (ROWs);
- Installing approximately 114 miles of fiber (45%) aerially by attaching to existing poles;
- Installing approximately 140 miles of buried fiber (55%) in existing utility easements within roadway ROWs, via trenching, directional boring, and in existing conduits; and
- Installing approximately 80 10-feet by 10-feet prefabricated structures (huts) with concrete slab foundations in previously disturbed areas within the municipal city limits, for the deployment of the fiber optic network to the anchor institutions, as well as future last mile deployments.

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 along the Wasatch Front in Utah. The Project will deploy fiber in areas where, to date, existing connection speeds and performance is far below what is demanded by consumers and what is needed by the CAIs. The new middle-mile infrastructure will pass through eight municipalities that are part of the UTOPIA consortium along the Wasatch Front, including Payson and Orem in Utah County; Murray, Midvale, and West Valley City in Salt Lake County; Centerville and Layton in Davis County; and Perry in Box Elder County. The Project will provide services to 395 CAIs, government facilities, and other critical community-support organizations within the proposed network boundaries. The middle-mile infrastructure will not

only accommodate the proposed CAIs, but will also enable the cities in the area to extend the infrastructure through the sustainable last mile program to a high percentage of their citizens (approximately 400,000). The Project also is intended to provide an opportunity for the Utah Department of Transportation (UDOT) and the Utah Transit Authority to expand their telecommunications capabilities in the area for such things as providing strategic locations for network access by EMS personnel, police, and fire personal, as well as traffic signal monitoring and synchronization.

Project Description

The Project can be characterized as urban overbuild upon already developed land. It involves installing approximately 254 miles of new, middle-mile fiber (middle-mile distribution rings and middle-mile laterals) and will include both buried and aerial fiber installed overhead on existing poles. Approximately 140 miles (55%) will be installed underground and approximately 114 miles (45%) will be installed aerially. Underground installation will be completed in existing utility easements within roadway ROWs, via trenching, directional boring, and in existing conduits. UTOPIA also will install approximately 80 prefabricated structures (huts) with concrete slab foundations in previously disturbed areas within the municipal city limits. The huts measure 10-feet by 10-feet and will be used for the deployment of the fiber optic network to the proposed 395 CAIs, as well as future last mile deployments. The distribution rings would provide middle-mile infrastructure for potential last-mile deployment of fiber-to-the-premises technology.

UTOPIA will install approximately 114 miles (of the full 254 miles) of broadband cable aerially on existing utility poles. Aerial installation would require the use of a boom lift or bucket truck in order to manually attach the cable to the existing poles. UTOPIA will install aerial cable using overhead attachments to existing power and communications poles owned and operated by third parties. UTOPIA currently has pole attachment agreements in place with all electrical entities in the Project area, as well as with Qwest (who is the second largest owner of overhead poles within the UTOPIA service area). No pole replacement is anticipated to be required. Once installed, maintenance activities on the aerial cable may include reattachment of the cable if it has been disturbed.

UTOPIA will install approximately 140 miles (of the full 254 miles) of underground broadband cable in existing utility easements, within roadway rights-of-way, in order to minimize environmental disturbance. Underground cable construction would occur within areas previously disturbed by other utility installations. Generally, utility easements in the Project area are located under pavement or in disturbed fill/cut slopes associated with the existing roadway. The underground cable would be installed using the following construction methods: trench, install, and backfill; directional bore; and existing conduit installation. The underground cable would be 2 inches in diameter or less and would be installed using techniques that minimize ground disturbance when possible. The hand holes or pulling points would be installed at grade level and extend between 18" and 36" in depth below grade. Hand holes or pulling points would

be placed between every other parcel, not to exceed 500 feet, to facilitate installation and access to the infrastructure for future connections. Directional boring of underground cable would occur at stream crossings when use of existing structures is not feasible, or if impacts to the stream would occur as a result of installation. The equipment associated with the installation of the underground cable would include back-hoes, boring machinery, concrete/asphalt saws, vacuum trucks, and pick-up trucks. No maintenance is anticipated once the underground cable is installed.

UTOPIA also will construct approximately 80 10-feet by 10-feet pre-fabricated structures (huts) with concrete slab foundations for the deployment of the fiber optic network to the anchor institutions, as well as future last mile deployments. All of these structures would be located on previously disturbed land parcels located within municipal city limits. One hut would yield from 5 to 20 fiber cables which are buried underground and connect to the nearest overhead or buried utility line. A back-hoe or crane would be used to remove the huts from a truck and place them on the foundation. Prior to hut construction, all vegetation would be cleared for the foundation. Fencing may be installed surrounding the hut, if deemed necessary for safety. Power would be provided to the hut by connecting to existing electric utilities that occur adjacent to the hut locations. Backup power would be provided by generators using diesel fuel, propane, or natural gas. Once the huts are constructed, maintenance activities may include cable installation and service, generator installation and service, or repairs from potential vandalism.

The cable installation method at CAIs will be based on the configuration and availability of existing utility infrastructure at the facilities. Each anchor institution would connect to a new network access point provided in the mainline construction located at the edge of their parcel, and in the existing ROW. Conduit would be installed to the anchor institution entrance location prior to fiber installation, or an existing end user conduit could also be used. A small fiber drop cable would be installed either through the conduit or using aerial self supporting fiber to the building or facility entrance location, enter through either an existing or new entrance penetration, and in most cases terminate in the existing main network demarcation in the building or facility. In some instances, the end user may need to complete minor upgrades to their facility network devices to accommodate the interface and to effectively use the new broadband connection.

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). As noted in the Project Description, this effort will include installation of approximately 254 miles of new fiber and constructing approximately 80 telecommunication huts. The new fiber optic cable will be

installed aerially on existing pole lines and buried via trenching, directional boring, and in existing conduits along the Project route.

No Action Alternative. No action was also considered. This alternative represents conditions as they currently exist in the UTOPIA consortium along the Wasatch Front. Under the no action alternative, new fiber infrastructure would not be constructed, no additional middle-mile infrastructure would be added to the UTOPIA network, and existing operation and maintenance activities on existing fiber-optic facilities in the area would continue. Many 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 related to other alternatives being considered.

Alternatives Considered But Not Carried Forward. UTOPIA considered various alternatives for the cable installation, including alternatives that would utilize only aerial installation or only underground installation along the proposed cable routes. However, it was determined that the best approach was a hybrid of both aerial and underground installation in order to best utilize existing utility corridors and to avoid unnecessary installation of additional poles (in the case of an all-aerial option) or unnecessary trenching (in the case of an all-underground option). Therefore, both options are eliminated from further discussion. Further, variations in the routes for the fiber optic cable were determined based upon the needs of the areas to be served so alternative routes were not considered, as they would not provide the intended services to the designated areas.

Findings and Conclusions

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

Noise

This Project will have no impacts on noise during long-term operation. However, short-term increases in ambient noise levels are expected during the construction period as a result of using construction equipment. Noise created by machinery used during installation will be temporary and localized in nature. To reduce noise impacts, construction activities will comply with local ordinances concerning noise and will be limited to specific work hours. Based on these considerations, no significant impacts on noise are expected to occur as a result of Project implementation.

Air Quality

Potential impacts to air quality associated with this Project will be associated with the proposed construction activities. Fiber optic cable installation will require the use of heavy equipment

which will temporarily increase levels of localized air pollutants associated with diesel combustion. However, impacts would be negligible because of the short duration, temporary nature of the construction activities, and localized area of impact. The Project would also result in negligible fugitive dust emissions resulting from activities in areas that are not paved and because trenching and directional boring techniques result in minor disturbance of the ground surface. There will also be negligible fugitive dust emissions resulting from the site preparation for the 80 new telecommunication huts. A short-term minor increase in the use of fossil fuel and associated GHG emissions will occur as a result of Project construction, amounting to the release of approximately 429 metric tons of equivalent CO₂ emissions – an amount well below the Council on Environmental Quality's guidance of a presumptive effects threshold of 25,000 metric tons. BMPs will be used to control fugitive dust during the construction phase of the Project. Based on implementation of the BMPs, construction of the planned network is not expected to have significant adverse impacts on air quality.

Geology and Soils

UTOPIA will use trenching and directional boring techniques to install fiber along portions of the route. Trenching and directional boring techniques result in very minor, temporary disruption of the soils. The 80 telecommunication huts also will require excavation and grading activities. All impacts would be temporary in nature and would not alter the geologic features or soil composition in the Project area. Also, erosion control measures and BMPs will be implemented for all construction activities. Consequently, the Project is not expected to result in significant adverse impacts on geology or soils.

Water Resources

Project construction activities associated with underground cable installation could result in minor, indirect impacts on water resources within the Project area. Specifically, during rain/snow events, additional uncontained sediments could enter surface waters and impact water dwelling plants and animals. Therefore, UTOPIA will develop and implement a Storm Water Pollution and Prevention Plan, minimizing the potential to impact surface waters. It is not anticipated that the proposed project would impact jurisdictional waters of the U.S. No construction activities or project features are anticipated below the ordinary high water mark.

It is not anticipated that wetland habitats would be impacted due to the infrequency in which they occur in the Project area and commitments to implement the following avoidance measures: aerial installation, directional boring, and/or installation in previously disturbed areas (i.e., under pavement or existing conduit). If the avoidance measures are determined not to be practicable, and wetland impacts become unavoidable, a Section 404 Permit will be obtained from the U.S. Army Corps of Engineers (USACE) for those wetland impacts under the Nationwide Permit 12 – Utility Lines. This permit covers those activities required for the construction, maintenance, repair, and removal of utility lines and associated facilities in waters of the U.S., provided the activity does not result in the loss of greater than ½ acre of waters of the U.S. It also applies to the associated excavation, backfill, or bedding for the utility lines, provided there is no change in pre-construction contours.

No impacts would occur to floodplain habitats because the construction activities and Project features would not increase or decrease existing ground elevations within any floodplain areas. The Project also would not impact groundwater resources since Project features would not reach more than six feet in depth. Based on the avoidance and mitigation measures, UTOPIA will be able to construct the network with no significant adverse impacts on water resources.

Biological Resources

The Project could result in minor impacts on biological resources. Noise and human activity associated with fiber installation could disturb some wildlife species, but these effects will be minor, temporary, and confined to any non-urban areas. In accordance with Section 7 of the Endangered Species Act (ESA), UTOPIA consulted the United States Fish and Wildlife Service (USFWS) about the Project and its potential for impacts to threatened and endangered species protected under the ESA. In response to NTIA's letter of October 19, 2010, the USFWS concurred (by stamping and signing the original letter) that the Project would have no effect on ESA-protected species (concurrence dated October 29, 2010). Also, due to the nature and scope of the Project and its location within existing developed municipalities, it would also have no impact on any state-sensitive species. Consequently, the Project is not expected to result in significant impacts on biological resources.

Historic and Cultural Resources

On October 22, 2010, a consultation initiation letter, including a detailed project description, was sent by NTIA to the Utah State History Department, State Historic Preservation Officer (SHPO). Prior to the initiation letter being sent, and concurrent with consultation initiation, UTOPIA began a Class I cultural resources inventory and a selective reconnaissance level survey of specific historic resources for the UTOPIA Community Partnership Project in Centerville and Layton, Davis County; Midvale, Murray, and West Valley, Salt Lake County; Orem and Payson, Utah County; and Perry, Box Elder County, Utah. In a letter dated December 28, 2010, to the Utah SHPO, UTOPIA presented the results of the Class I cultural resources inventory and selective reconnaissance level survey. In that letter, UTOPIA reported that using the inventory methods previously discussed and approved by the Utah SHPO, 17 historic, architectural resources were identified. A subsequent reconnaissance level survey on the 17 buildings was conducted on October 8, 2010 and found that one of the 17 buildings had been demolished, reducing the number of buildings surveyed to 16. UTOPIA established the historic boundaries on the 16 properties using the legal tax boundaries for each structure. UTOPIA then determined that 12 of the 16 sites met the age criteria of at least 45 years of age and met one or more of the four criteria for potential eligibility on the National Register of Historic Places (NRHP). Based on these findings. UTOPIA concluded that the Project would include attachments of fiber-optic broadband cable to the 16 identified historic architectural resources. UTOPIA proposed that the attachments would be performed in such a manner as to not adversely impact the historic integrity of the 16 structures, in accordance with the BMP for attaching broadband cable to historic structures provided by NTIA. UTOPIA therefore presented a no adverse effect

determination for the 16 historic structures, with which the SHPO concurred on January 11, 2011 by signing UTOPIA's original letter dated December 28, 2010.

Also in the letter dated December 28, 2010, to the Utah SHPO, UTOPIA outlined the Class I cultural resources inventory to determine the presence of previously recorded archaeological resources and NRHP-eligible cultural resources with the Project area that might be affected by the Project. UTOPIA and Logan Simpson Design consulted previous site files and project reports using the SHPO's Historical Data Management System (HDMS). Additional searches were conducted in person at the SHPO's office to collect site and report information, as well as to check for additional backlog of data that might not have been included in the HDMS. The research identified three archaeological sites in Perry, Utah; eight sites in Layton, Utah; 17 sites in Centerville, Utah; 19 sites in West Valley City, Utah; 11 sites in Murray, Utah; nine sites in Midvale, Utah: 34 sites in Orem, Utah; and seven sites in Payson, Utah. Of all these identified archaeological sites, 13 were NRHP-eligible and had the potential to be impacted by the Project - specifically by underground installations of fiber-optic cables that would intersect the linear paths of several NRHP-eligible canals and railroad segments. However, UTOPIA concluded that since the fiber optic lines would cross the identified canal and railroad segments within existing developed roadways and along existing utility corridors, and since installation would be performed in such a manner as to not impact integrity of the railroad or canal segments, there would be no impacts to those resources. The SHPO concurred with UTOPIA's no adverse effect determination on January 11, 2011 by signing UTOPIA's original letter dated December 28, 2010.

On October 29, 2010, through the Tower Construction Notification System (TCNS), NTIA provided Project details to nine tribes interested in the Project's geographical location. Of the nine tribes notified, three tribes affirmatively responded that they had no interest in the site (Paiute Indian Tribe of Utah on November 2, 2010; Goshue Tribe on December 29, 2010; and the Fallon Paiute-Shoshone Tribe on January 5, 2011). The remaining six tribes, via automated responses contained in TCNS notification letter, stated that if the applicant did not receive a response within 30 days after notification through TCNS, the tribe had no interest in participating in the pre-construction review of the site. None of the remaining six tribes provided responses to the TCNS notification within the 30 day period. However, all nine 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 all activities 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 from the commenting agencies, the Project is not expected to have significant adverse impacts on historic and cultural resources.

Aesthetic and Visual Resources

The Project will have minimal and temporary impacts on aesthetic and/or visual resources in the project area during construction and installation of the fiber optic cable due to construction activities, the presence of construction equipment, and limited soil disturbance. Installation of the telecommunication huts would result in a long term impact on visual resources. However, as these huts would be small structures (measuring 10-feet by 10-feet) and would be built within municipal city boundaries, they would blend in with the existing urban landscape and would not significantly impact the aesthetic viewshed of the project area. Accordingly, the Project is not expected to have a significant adverse impact on aesthetic and visual resources.

Land Use

The Project would comply with the zoning and future land use plans of the municipalities involved and would utilize existing aerial and underground utility easements. The Project would require land acquisition and/or easements for the installation of the approximately 80 telecommunication huts. Installation of the telecommunication huts also would impact 13 Land and Water Conservation Fund (LWCF) resources by converting minor portions of the LWCF resources to a use other than a public outdoor recreation use due to the construction of the huts. This impact would amount to 100 square feet per hut, totaling 1,300 square feet for all thirteen LWCF resources. Under the LWCF Act, mitigation for such conversions consists of the acquisition of new lands as a replacement for lands converted from a public outdoor recreation use on a 1:1 ratio. If possible, the Proposed Action will avoid taking any land from the LWCF resources. If avoidance is not possible, coordination with the Utah State Parks and Recreation Office regarding these conversions will be undertaken by the appropriate city officials with jurisdiction over the LWCF resources to be impacted. Based on the route location, which is consistent with existing land use plans, and the potential LWCF mitigation measures, the Project is not expected to have significant impacts on land use.

Infrastructure

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 telecommunication huts will be placed along the Project route where they will be connected to existing power sources. The Project will improve communications infrastructure and is expected to result in improved transfer of information between CAIs, businesses, and individuals residing within the communities along the Project route. Overall, the Project will have a positive impact on infrastructure and will have no significant impacts on infrastructure.

Socioeconomic Resources

The Project will provide improved communications infrastructure to CAIs and residents who do not have access to broadband services or who do not have access to the services at the proposed speeds. The Project will have positive impacts on socioeconomic resources and will have no significant impacts on socioeconomic resources.

Human Health and Safety

Due to the nature and scope of the Project, it is unlikely that any hazardous waste sites will be disturbed during construction. If hazardous waste material is encountered during construction, the contractor will cease construction and notify the Utah Department of Environmental Quality, Division of Environmental Response and Remediation (DERR). Prior to construction, a health and safety plan will be developed. The plan will address topics such as worker and public safety; traffic control and safety for drivers; emergency procedures; and other topics. Additionally, construction activities will be limited to the existing utility easements or to the immediate vicinity of the huts to be constructed, and access to the construction sites will be limited. All workers installing the cable will adhere to approved construction safety procedures mandated by the Occupational Safety and Health Administration (OSHA). With implementation of the protection measures, the Project will not generate any significant adverse worker or traffic-related health or safety issues. Further, the Project will provide broadband service to rural health care facilities and public safety entities. The broadband will provide enhanced emergency and medical services and improve human health and safety throughout the Project area. The Project will have long-term positive impacts on the health and safety of the study area communities.

Cumulative Impacts

The Project covers approximately 254 linear miles within eight municipalities and coincides with existing roads and utility infrastructure. Routing maintenance and repair activities would be required for the continued operation of these existing roadways and utility lines. UDOT also has numerous small-scale surface treatment and road maintenance projects planned throughout the state, and UTOPIA would coordinate scheduling details with UDOT in order to avoid potential conflicts. The construction and implementation of the project would result in minimal negative impacts on the natural and human environment. The majority of the negative impacts would be temporary as a result of construction activities. Therefore, the cumulative effects of the project would not incrementally result in any significant negative environmental consequences, when combined with other unrelated activities.

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:		

The Utah Telecommunication Open Infrastructure Agency (UTOPIA)

Community Partnership Project

Issued:

Waxne Ritchie

Chief Administrative Officer

Office of Telecommunications and Information Applications National Telecommunications and Information Administration