National Telecommunications and Information Administration
Broadband Technology Opportunities Program
Finding of No Significant Impact
Nevada Hospital Association
Nevada Broadband Telemedicine Initiative Project

Summary

Nevada Hospital Association (NHA) applied to the Broadband Technology Opportunities Program (BTOP) for a grant to establish a private, health care broadband network throughout the State of Nevada. The backbone of the network will consist of three backhaul routes that interconnect with existing broadband network rings. Approximately 650 miles of the network will be a hybrid of new buried and aerial fiber. Fiber buried underground will be within existing utility rights-of-way (ROWs); aerial fiber will be installed on existing utility poles. The remaining portion of the network will utilize existing buried conduit or leased fiber. In addition to new fiber installation, NHA will establish two data centers in existing facilities, one in northern Nevada and one in southern Nevada. NHA will also install lateral fiber runs to allow 36 CAIs, including hospitals and medical facilities, and the 2 new data centers to connect to the new network. The proposed action will provide broadband connectivity across Nevada and is referred to as the Nevada Broadband Telemedicine Initiative (NBTI) Project (Project).

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

NHA completed an EA for this Project in January 2012. NTIA reviewed the EA, determined it is sufficient, and adopted it as part of the development of this FONSI.

The Project includes:

- Establishing a private, health care broadband network across Nevada through land owned by private entities and Tribes, and land managed by the U.S. Department of Agriculture – Forest Service (USDA-FS); U.S. Department of Defense (DoD), Bureau of Reclamation (BOR), Bureau of Land Management (BLM), and Bureau of Indian Affairs (BIA);
- Installing approximately 654 miles of new buried and aerial fiber, and associated handholes, in existing, previously disturbed ROWs, and leasing approximately 676 miles of existing buried fiber-optic cable;
    - Establishing three backhaul routes, including:
        - Two East-West Connections along Interstate 80 and US Highway 50
            - Leasing approximately 548 miles of existing buried fiber optic cable and/or conduit
        - North-South Connection from Reno to Las Vegas, NV
            - Installing approximately 93 miles of buried fiber within existing conduit;
            - Installing approximately 417 miles of aerial fiber on existing poles; and
            - Installing approximately 16 miles of buried fiber in conduit in existing ROWs by plowing, trenching, or directional boring.
        - Carson City Connection to Gardnerville
            - Installing approximately 32 miles of aerial fiber on existing poles
    - Installing approximately 5 miles of new buried fiber in Las Vegas, NV to connect NBTI to the existing Zayo ring network;
    - Leasing approximately 126 miles of existing city rings within the urban areas of Las Vegas, NV;
    - Installing approximately 0.3 miles of buried fiber within existing conduit and approximately 26 miles of aerial fiber on existing poles within the urban areas of Reno, NV;
    - Installing approximately 17 miles of aerial fiber on existing poles within the urban areas of Carson City, NV;
    - Installing approximately 49 miles of last mile lateral connections to 36 CAIs and 2 data centers along the Project route, including:
        - Leasing approximately 2 miles of existing buried fiber-optic cable and/or conduit;
        - Installing approximately 32 miles of buried fiber in conduit in existing ROWs by plowing, trenching or directional boring; and
        - Installing approximately 16 miles of aerial fiber on existing poles.
- Establishing 2 data centers within existing facilities located in Reno and Las Vegas, NV; and
- Establishing 11 signal regeneration stations measuring 20 by 20 feet to 40 by 60 collocated at existing power substation locations along the Project route.

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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 establish a broadband network that will connect medical facilities throughout Nevada, delivering secure and reliable high-speed transmission of telemedicine applications, as well as the exchange of electronic medical records. Nevada currently lacks the statewide broadband infrastructure necessary for telemedicine applications or to exchange medical information among healthcare providers. In addition, many rural health providers in Nevada have limited broadband access that is not capable of transmitting critical patient information. A statewide medical network would improve health information exchange by providing secure medical communications between medical providers. Additionally, the new network would bring videoconferencing, telemedicine applications, and other critical tools to healthcare providers throughout Nevada. The planned Project will directly serve 36 CAIs, including hospitals and medical facilities, with additional capacity available for future service to public safety entities, educational institutions, and Native American governments. Local internet providers will also be allowed to connect to the new network, thereby extending affordable broadband service to community residents and businesses. Furthermore, the Project will create a statewide telemedicine network to support the meaningful use of electric medical records, as required by the Health Information Technology for Economic and Clinical Health (HITECH) Act.

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Project Description

Under this Project, NHA will build a private, health care broadband network throughout the State of Nevada. The backbone of the network will consist of three backhaul fiber routes that interconnect with existing broadband network rings located in Reno, Carson City, and Las Vegas, NV. For the new network, NHA will install approximately 650 miles of new fiber; lease 676 miles of existing fiber; construct two data centers; and install 11 signal regeneration stations along the Project route. New fiber optic cable will be buried within existing, previously disturbed ROWs or attached to existing poles. Approximately 49 miles of lateral fiber runs will allow 36 CAIs, including hospitals and medical facilities, and the 2 new data centers to connect to the new network. Direct connections to existing structures will be provided by NHA using new buried or aerial fiber, or existing fiber through lease agreements, as appropriate for each CAI.

NHA will install 508 miles of fiber aerially on existing utility poles. Depending on the road conditions, NHA will use either the drive-out method or the stationary reel method to access the poles. The drive-out method is the preferred technique and will be used where adequate vehicular access (no less than an eight-foot wide corridor) is available along the fiber route. In the drive-out method, one vehicle carrying the reel of fiber optic cable proceeds from pole to pole, releasing fiber optic cable as it moves forward. A bucket truck is then used to secure the fiber optic cable to the pole attachments. The stationary reel method will be used where vehicular access to the construction corridor is restricted due to rough terrain or environmentally sensitive areas. Using this method, the fiber route is accessed by ATV, or on foot, and workers will climb the utility poles to attach the cable through use of a pulley system. The staging area for the stationary reel method will be restricted to existing roads and disturbed areas. A limited number of angle poles may require additional ground anchors with guy wire to support the weight of the new fiber optic cable. In these areas, a 6-foot long screw anchor will be placed in the ground near the base of the pole, and a support cable would be strung between the anchor and the pole.

In addition to installing aerial fiber, NHA will bury 53 miles of cable in existing ROWs by plowing, trenching, or directional boring. For the plow method, the vibrating plow pulls a metal blade through the subsurface approximately 3 feet deep creating a 6-inch wide slit trench. NHA will then install the fiber and backfill the trench with excavated soil. This installation method will be used between Goldfield and Lida Junction (approximately 14 miles) along the Nevada Department of Transportation (NDOT) Highway 95 ROW. NHA will place the fiber within six feet of the western edge of the ROW. The temporary construction corridor along this segment will be no more than 10 feet wide.

Trenching will be used in areas with large rocks, boulders, or solid rock, as well as in urban settings. The narrow backhoe trench will range from 1 to 2-feet wide, primarily in urban areas, but may be as wide as 5 feet in rocky areas. The original excavation material will be used to backfill the trench, where possible, otherwise sand or other acceptable material may be used.

Directional boring will be used to avoid construction-limited areas and sensitive ecological resources, such as, wetlands, streams, and rivers. The directional boring method involves excavating pits at the cable entry and exit points, drilling a horizontal cable pathway between the points, installing conduit, and pulling the cable back through the conduit. Dry washes would be plowed or bored as conditions allow and as required by the Army Corps of Engineers (ACOE) Nationwide Permit conditions. In addition, NHA will use boring under culverts. Cable in conduit will not be placed over culverts unless written permission from the property owner is obtained. Approximately 93 miles of fiber will be air-jetted or blown into existing conduit at existing access locations. This installation method will not require any new ground disturbance.

NHA will install handholes along the network fiber route for splice locations and at access points for current lateral and future connections. In addition, handholes will be installed in-line on existing conduit along the Project route to facilitate cable pulling or where required by a physical obstruction or transition. Ground disturbance will consist of excavation for the placement of these handholes, which would be approximately 4 feet wide by 5 feet long by 4 feet deep. The physical permanent handhole will be 30 inches wide by 48 inches long by 30 inches high. In addition, fiber optic cable markers will be placed along the buried portions of the Project at all handhole locations, changes in route direction, and all road/highway intersections, or at a minimum spacing of 1,500 feet.

South of Tonopah, the width of the temporary construction corridor will be 10 feet wide. However, North of Tonopah, the temporary construction corridor width may be up to 30 feet wide (not including desert tortoise [*Gopherus agassizii*] habitat or federally managed lands). This construction zone will be located within the existing roadways along the power lines and the existing access roads from the highway. Where roads allow, vehicles will be allowed to pass each other. No new roadways will be constructed for this Project.

The permanent ROW width for installation using existing overhead pole lines and permanent buried fiber optic cable will be 10 feet wide. The buried fiber will occupy less than six inches of horizontal space once construction is complete with the exception of handhole boxes placed for splicing and/or cable slack for future use.

Under this Project, NHA will also establish two data centers, one in northern Nevada and one in southern Nevada, in existing facilities. The northern data center will be housed in an existing structure on private land in Carson City. The southern data center will be housed in the SuperNAP facility near the intersection of South Decatur Boulevard and West Badura Avenue in Las Vegas. The data centers will not require any new ground disturbance.

NHA will install 11 regeneration stations (regens) along the NHA network, collocated at existing electric utility substations owned by either Valley Electric Association (VEA) or Nevada Energy. Regeneration sites vary in size from 20 by 20 feet to 40 by 60 feet, depending on the available space and will require minor ground disturbance for construction.

NHA is also establishing two fiber optic colocations, one in Carson City, and another in Pahrump at the Valley Electric Association (VEA) Office. These sites will enable multiple fiber optic cable providers to share infrastructure.

Construction of the new network will occur within previously disturbed areas located on land owned by State, private, and tribal lands, and Federal land managed by the BLM, USDA-FS, BOR, BIA, and DoD. BLM and BOR are Cooperating Agencies for this Project and have provided information, comments, and technical expertise to NTIA. The Carson City District Office, Sierra Front Office is the BLM lead for granting ROW access to NHA. NHA is requesting ROW access from by the USDA-FS for the estimated 5 miles of new aerial fiber that will cross through the Humboldt-Toiyabe National Forest in the Spring Mountains west of Las Vegas. NHA is also requesting ROW access from BOR and DoD along portions of the Project route. In addition, the Project will cross approximately 8 miles of land owned by the Walker River Paiute Tribe, and approximately 1.5 miles of land owned by the Timbisha Tribe via existing poles. NHA is requesting ROW access for fiber installation from the BIA and Tribes. As currently proposed, the Project will not require any new ground disturbance with the exception of approximately 2 acres of temporary ground disturbance on BLM land for the installation of new buried fiber and associated structures. Table 1-1 summarizes the construction to occur under this Project based on land management ownership.

Table 1-1

Route Type	Miles by Land Management *(approximate values)*							Total Miles
	Private/ Municipal	NV State	USDA FS	BIA	DoD	BOR	BLM	
Aerial Fiber	167	0.9	5	10	14	2	309	508
Buried Fiber	38	–	–	–	–	–	15	53
Existing Conduit	76	3	0.2	–	–	8	7	93
Leased Fiber	346	2	7	3	8	23	286	676
Total Miles	628	6	12	13	22	33	617	1,330

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.

Aerial, Underground, and Leased Fiber Network (Preferred Alternative). This alternative involves installing 654 miles of new fiber; leasing 676 miles of existing fiber; constructing two

data centers; and installing 11 signal regeneration stations along the Project route. Approximately 650 miles of the network will be a hybrid of new buried and aerial fiber. The fiber will be buried underground within existing rights-of-way (ROWs), while aerial fiber will be installed on existing utility poles. The remaining portion of the network will utilize existing telecommunications infrastructure. Network access will be provided for CAIs and two data centers through installation of 49 miles of lateral fiber runs. Direct connections to existing structures will be installed by NHA. However, the exact installation method and location are still being determined for each CAI.

Alternative North-South Connections:

- *Yerington to Hawthorne* – This route would include an additional 21 miles of aerial fiber, including a portion located on USDA-FS managed land. However, this route would avoid crossing land owned by the Walker River Paiute Tribe at the north end of Walker Lake.
- *Hawthorne to Mina* – This aerial route is approximately 8 miles longer than the Preferred Alternative from Thorne SS to Mina.
- *Lida Junction to Goldfield* – This route would follow the east side of Highway 95 and include approximately 2 miles of additional buried and aerial fiber.
- *Las Vegas to Boulder City* – This buried route would be approximately 9 miles longer than the Preferred Alternative and would be selected if the preferred aerial poles cannot be used. This route would decrease the total aerial fiber for the Preferred Alternative by 10 miles. The proposed alternative route will also temporarily disturb approximately 0.14 acres on BOR land.

Alternative Carson to Gardnerville Connections:

- *Carson City to Gardnerville* – This route would be one mile shorter than the Preferred Alternative and would cross land owned by the Washoe Tribe.
- *Carson City to Gardnerville (joint build with CBC)* – The route would be one mile shorter than the Preferred Alternative and crosses land owned by the Washoe Tribe.

Alternative City Ring Connections:

- *Reno and Carson Rings* – Rather than using the existing network rings in Reno and Carson City, this alternative would lease fiber within the Zayo Rings.

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 would be constructed and the data centers would not be established. This alternative would not address the lack of broadband service to hospitals and medical facilities, which may impact the ability of these facilities to provide appropriate medical services and comply with the requirements of the HITECH Act. Under this alternative, the Project's stated purposes would not be met. 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, NHA considered an alternative route from Gardnerville to Yerington using the same aerial installation methods described above. This alternative was eliminated due to rough terrain and associated construction challenges. This alternative was replaced by the Silver Springs to Yerington alignment on existing poles. An alternative route from Carson City to Carson Valley Medical Center was also considered. However, this alternative was eliminated because the conduit required for this route would not be installed within the Project timeline. NHA also determined that it would be infeasible to bury a more significant portion of the fiber. Hanging the new fiber on existing poles is more cost effective due to the terrain and rock formations along the Project route and would minimize environmental impacts. At the request of the U.S. Fish and Wildlife Service (USFWS), NHA evaluated using helicopters for fiber installation to avoid ground disturbance and potential impacts to the desert tortoise. NHA determined that using a helicopter was impractical because installation would be physically restricted by the existing wires. NHA also considered using a wireless, or partially wireless network to meet Project needs. However, limiting the network to wireless technology would not meet the goals of the Project, because wireless technology is unable to provide the bandwidths and internet speeds available with fiber optic cable and obtaining site access may result in potential delays.

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. 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., hospitals). However, construction will generally occur in the administrative portion of the hospitals away from patient rooms. Construction activities near residences will be performed during daytime hours, Monday through Friday. NHA will comply with local, State, and Federal noise ordinances, where applicable, to keep noise impacts to a minimum. Operation of the network will not increase long-term ambient noise levels. 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, bucket trucks, and directional drilling equipment. Emissions from this construction equipment will be temporary, minor, and transitory as construction activities move along the installation route. Negligible fugitive dust emissions will

also be generated during construction operations. NHA will obtain the necessary permits required by the Nevada Division of Environmental Protection (NDEP), which may include the Bureau of Air Pollution Control surface disturbance permit for the disturbance of five or more acres. Anticipated project construction permits will contain measures to control fugitive dust during both project construction and under post-construction conditions. Project specific BMPs, compliance with NDEP fugitive dust permit requirements, and county Dust Control Plans will meet the requirements for dust control measures.

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, NHA estimates that the Project will result in the release of less than 200 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. Based on implementation of BMPs and compliance with State and local requirements, construction of the planned network is not expected to have significant adverse impacts on air quality.

Geology and Soils

Under this Project, fiber optic lines will be installed in previously disturbed ROWs. Installing fiber on existing utility poles should have negligible impacts on geology or soils. Portions of the aerial fiber route in the vicinity of Goldfield and Tonopath cross known mineral resources with proposed mineral extraction projects. No formal Plans of Operation are available at this time. However, the potential mineral extraction projects may result in the realignment of Highway 95 and adjacent powerline. NHA has accounted for this future relocation in the design, including the installation of extra handholes to accommodate the relocation of power poles.

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. Immediately upon completion of construction activities, loose soil will be backfilled, compacted, and graded into trenches or appropriate areas at the construction site. NHA will also reestablish ground cover of disturbed areas. BMPs will be implemented during project construction to minimize the off-site transport of fugitive dust and soil sedimentation. NHA will secure State or county surface disturbance and water pollution control permits before construction begins. In addition, prime farmland is present along the fiber route. However, impacts to these areas are not expected to be significant because construction activities will be limited to existing ROWs. Based on the implementation of BMPs and compliance with State and local permits, the Project is not expected to result in significant adverse impacts on the geology or soils in the area.

Water Resources

Project construction activities are not expected to impact water resources. Although the fiber route intersects multiple streams and rivers, as well as adjacent wetlands, impacts to water resources will be avoided by installing the cable aerially on existing poles. The ephemeral drainages and dry washes crossed by the approximate 16-mile buried in-conduit portion of the

Project will be restored to pre-construction bed and bank configuration. NHA will also develop and adhere to the conditions of a Storm Water Pollution Prevention Plan (SWPPP) before construction commences to avoid impacts to water resources during construction.

Construction activities will not create new aboveground encroachments into floodplains. The construction of the buried fiber will temporarily disturb the channels and floodplains of dry washes. However, NHA will restore floodplain areas to approximate pre-construction conditions and thereby provide additional soil protection.

In addition, fiber will be placed within existing roadway ROWs and 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. Regional ground water resources in the Project area will be avoided by using aerial construction. Therefore, no significant direct or indirect impacts to groundwater resources are anticipated.

NHA notified the U.S. Army Corps of Engineers (USACE) of possible water crossings along the buried section from Goldfield to Lida Junction, as this portion of the route crosses numerous dry washes. NHA determined that these dry washes are not jurisdictional under the Federal Clean Water Act and therefore, USACE Nationwide Permit (NWP) 12 for Utility Line Activities is not required. Any impacts to dry washes will be temporary and will not significantly alter hydrology, soil, or vegetation. The areas disturbed for the buried portions of the Project will be returned to approximate pre-construction bed and bank configuration. Several of the Project segments will cross wetland areas. If soil conditions are wet at the time of construction, the poles will be walked and climbed to avoid soil compaction by heavy machinery. There will be no fill or other permanent or temporary impacts to wetlands or other waters of the United States.

By avoiding construction through waterways and implementing erosion and sediment control BMPs, NHA will be able to construct the network with no significant adverse impacts on water resources.

Biological Resources

On behalf of NHA, Resource Concepts, Inc. collected preliminary background information on threatened and endangered species within the Project area. Through correspondence with the USFWS, BLM, USDA-FS, and Nevada Department of Wildlife (NDOW), and a review of the Nevada Natural Heritage Database, Resource Concepts identified State and federally listed threatened and endangered species and BLM and USDA-FS sensitive species. Based on these data, several Federal threatened or endangered species and State threatened, endangered, or sensitive species were identified in the Project area. After further evaluation, Resource Concepts, Inc. determined that suitable habitat for the following species is present near the Project route and subject to potential disturbance: Mojave desert tortoise, Gila monster (*Heloderma suspect cinctum*), southwestern willow flycatcher (*Empidonax traillii extimus*), yellow-billed cuckoo (*Coccyzus americanus*), Yuma clapper rail (*Rallus longirostris*

yumanensis), western burrowing owl (*Alasmidonta heterodon*), greater sage-grouse (*Centrocercus urophasianus*), Las Vegas buckwheat (*Eriogonum corymbosum* var . *nilesii*), and several State species of bats, fish, and birds.

On August 1, 2011, NTIA entered into formal consultation with the USFWS regarding potential significant adverse impacts from Project activities on the Mojave desert tortoise, southwestern willow flycatcher, yellow-billed cuckoo, Yuma clapper rail, and Las Vegas buckwheat. During the consultation process with USFWS, NHA was able to adjust the route alignment through Beatty, NV resulting in a no effect determination for the southwestern willow flycatcher and the Yuma clapper rail.

Within desert tortoise habitat, 226 miles of fiber will result in the direct loss of 3.6 acres of vegetation. The USFWS suggested the use of a helicopter to install the fiber to avoid ground disturbance and potential impacts to the desert tortoise. However, Resource Concepts, Inc. determined that the use of a helicopter was impractical because the new cable would be hung below the existing power lines and installation would be physically restricted by the existing wires. The preferred installation methods will require the use of ATVs and hiking to the poles that will result in vegetation crushing. Therefore, in desert tortoise habitat, the areas to be crushed will be cleared of desert tortoises by authorized biologists and desert tortoise monitors who will walk ahead of the equipment. Existing roadways will not be improved in desert tortoise habitat and no new roadways would be constructed. In a Biological Opinion dated December 15, 2011, the USFWS concluded that, based on the information provided by NTIA and Resource Concepts, Inc., the Project is not likely to adversely affect desert tortoise. This determination was based on the following stipulations that NHA: (1) provide an environmental awareness program to construction personnel; (2) implement a 25 mile-per-hour (mph) speed limit; (3) require an authorized desert tortoise biologist onsite; (4) conduct pre-activity desert tortoise clearance surveys and relocating all desert tortoises out of development areas; (5) implement a litter-control program; and (6) keep all vehicles within delimitated temporary work areas. Potential project impacts to the desert tortoise, Gila monster, southwestern willow flycatcher, the yellow-billed cuckoo, and the Yuma clapper rail will be minimized by implementation of the conservation measures listed above and those measures contained in the Biological Assessment prepared by Resource Concepts, Inc. (August 2011) and proposed by NTIA to further minimize any effects to the desert tortoise and its habitat.

To avoid direct and indirect impacts to the southwestern willow flycatcher and yellow-billed cuckoo, NHA will remove nesting vegetation outside the bird-breeding season. If this cannot be avoided, vegetated areas will be surveyed for nesting birds prior to impact. If nesting birds are found, these areas will be avoided by a buffer as determined by BLM and USFWS. In addition, the Project will not be constructed within 300 feet of habitat occupied by the southwestern willow flycatcher or the yellow-billed cuckoo during the nesting season to reduce indirect effect of construction noise. Construction will also not occur between June 1 and August 15 where habitat is within 300 feet of the power line unless approved biologists with the required permits

conduct surveys during the appropriate time, and the surveys determine there are no breeding or nesting pairs in the vicinity.

NHA will minimize potential Project impacts to the Gila monster by implementation of the conservation measures outlined in NDOW's guidance document, *Gila Monster Status, Identification, and Reporting Protocol for Observations*. The buried section between Goldfield and Lida Junction is located within potential habitat for several bird species, including the burrowing owl. If construction takes place between mid-March and August, qualified biologists shall conduct pre-construction surveys in areas with a high potential for burrowing owl presence.

Las Vegas buckwheat habitat is limited to gypsum-rich soils in central and eastern Clark County. Gypsum rich soils are not present within the Project area; therefore, no potential impacts on the Las Vegas buckwheat are anticipated. BMPs will also be implemented to avoid direct and indirect impacts to sensitive plants, amphibians, and fish. Direct effects of the proposed project on sensitive plant species will be avoided through preconstruction surveys, flagging of identified populations, and avoidance.

In addition to considering potential impacts on listed species, NHA evaluated potential impacts on migratory birds and other wildlife. The Project may temporarily affect wildlife, including migratory birds. There are no records of bald eagles within the 10-mile area encompassing the Project area. However, golden eagle nests are located within 3 miles of the Project area. Potential project impacts to the golden eagle will be minimized by implementation of conservation measures. To avoid direct and indirect impacts to migratory birds, removal of nesting vegetation will occur outside the bird-breeding season (October through July). If vegetation removal will occur during the nesting season, NHA will have a qualified biologist survey active construction sites to confirm the absence of nest and nesting activity. If an active nest is located, a buffer will be established around the nest and the area avoided until the nest is no longer active. The size of the buffer will depend on the identified nesting species and will be determined by the qualified biologist. Potential impacts to migratory birds from construction of new regen stations and other structures will be minimized by preventing any holes, gaps, or hallow spaces in the proposed facilities and by not using open-ended posts.

Construction noise and human presence will cause temporary direct and indirect impacts to sensitive bats, greater sage grouse, bighorn sheep, mule deer, pronghorn antelope, Rocky Mountain elk, and other ground dwelling mammals and reptiles. Direct and indirect impacts to these species will be minimized through the implementation of BMPs. NHA will provide an environmental education program to make sure construction crews are aware of sensitive biological and environmental areas and avoidance areas. The Amargosa toad (*Bufo nelsoni*), the northern leopard frog (*Rana pipiens*), and the Pahrump poolfish (*Empetrichthys latos*) may potentially occur near the Project area. However, there are no earth disturbing activities proposed within or immediately adjacent to their habitat. Direct impacts to the Lahontan cutthroat trout (*Oncorhynchus clarki henshawi*) will be avoided by prohibiting the presence and

operation of machinery within their aquatic habitat. Instead, the Carson and Walker Rivers will be crossed on foot or via existing bridges.

The project area crosses approximately 1.6 miles of the Amargosa Mesquite Area of Critical Environmental Concern (ACEC) located in Nye County south of Amargosa Springs, managed by the BLM Pahrump Field Office. Along this segment, fiber will be installed on existing poles that would be accessed via an existing jeep trail adjacent to the power poles. The mesquite vegetation in the ACEC will not be impacted by hanging the fiber cable from the poles.

Construction activities will disturb some local vegetation. However, project-related improvements shall be installed in existing ROWs and disturbance corridors to minimize disturbance to vegetation. There are no currently known or identified noxious weeds along the proposed alignments. Ground disturbance increases the likelihood of weed invasion. The project areas most vulnerable to weed invasion are the wetter areas associated with the floodplains surrounding Carson River, Walker River, Amargosa River, and Walker Lake. The buried section between Goldfield and Lida Junction is also relatively vulnerable due to the disturbance associated with burying the fiber optic cable. However, the buried portion of the project between Goldfield and Lida Junction will be re-seeded using a BLM approved seed mix. Furthermore, NHA will avoid the spread of noxious or invasive weeds during construction, operation, or maintenance activities. Equipment previously used during project excavation will be thoroughly washed prior to accessing construction sites to eliminate the transport of new noxious or invasive weed species into the Project area. All areas disturbed using project construction will be revegetated for long-term site stabilization. Cacti and yucca may be present in the project impact area. To the extent practical, cacti and yucca within the project area would be avoided by this action. If cactus and yucca are unable to be avoided, due to the small amount of disturbance associated with this project, impacts would be considered negligible.

In comparison to the Preferred Alternative, the Alternative Yerington to Hawthorne route has approximately 23 miles of additional construction that may increase temporary direct and indirect impacts on sensitive species, if present. Each of the Alternative Carson City to Gardnerville routes are approximately one mile shorter than the Preferred Alternative. Similarly, to the Preferred Alternative, these routes cross potential habitat for the Carson wandering skipper. However, these Alternatives do not include ground-disturbing actions, and therefore, would not adversely impact this species. The Alternative Goldfield to Lida Junction route would decrease the underground portion by 1.7 miles in desert tortoise habitat. Conversely, the alternative Las Vegas to Boulder City would increase the total underground disturbances by 9.2 miles in desert tortoise habitat and therefore is not preferred. Direct impacts to sensitive wildlife would be avoided through preconstruction survey, flagging, and avoidance as described in the environmental commitments above.

Based on this analysis and implementation of the recommended protective measures and BMPs, NHA will be able to construct the fiber network with no significant adverse impacts on biological resources.

Historic and Cultural Resources

In October 2010, NTIA initiated consultation with the Nevada Department of Conservation and Natural Resources (State Historic Preservation Office [SHPO]). In this correspondence, NTIA provided the SHPO with a project description and an associated map of the Project area. Following this initiation letter, NHA subsequently finalized project engineering and made changes to the original Project description. In a letter dated July 22, 2011, NTIA provided the SHPO with the revised Project description and maps. In this letter, NTIA confirmed that NHA would proceed with a Class I Literature Search for all buried portions of the Project, including all lateral routes, and would consult with NTIA, the SHPO, land management agencies, and other consulting parties to determine Class III requirements, if any. The majority new fiber will be installed aerially on existing utility poles. Placement of lines on existing overhead poles is exempt from Section 106 review, per the *Programmatic Agreement Among the U.S. Department of Agriculture Rural Utilities Service, the National Telecommunications and Information Administration, the National Conference of State Historic Preservation Officers and the Advisory Council on Historic Preservation for the Broadband Technology Opportunities Program and the Broadband Initiatives Program* (BTOP NPA, November 2009).

NHA engaged an archaeologist with Gnomon, Inc., to analyze the archaeological and architectural resources within the Project's area of potential effect (APE). As outlined in the July 2011 addressed to the SHPO, Gnomon, Inc. conducted a Class I Cultural Resource Inventory within a ¼-mile corridor along the proposed buried fiber alignments. The proposed buried segment between Goldfield and Lida Junction and lateral connections to three hospitals in Las Vegas are located on BLM managed lands. The remainder of the buried fiber is located on private land in towns in northern and southern Nevada.

Four National Register eligible or unevaluated archaeological sites are located within the APE. In these locations, construction will be confined within the prisms of existing roads or follow previously disturbed utility corridors. Several measures or combination of measures, including pre-construction routing of the alignment around significant properties, avoidance fencing, or construction monitoring may be appropriate to ensure avoidance.

The Alternative Goldfield to Lida Junction segment is located on the east side of Highway 95. This alignment is near several old railroad grades and the Class I inventory indicated there are historic resources located in the area. Construction of the Goldfield to Lida Junction on the east side of Highway 95 would likely impact known historic resources. None of the other alternative buried routes will impact known historic or cultural resources.

The results of the study were coordinated with BLM and submitted in a report by NTIA to the SHPO on August 31, 2011 with a request for concurrence that the Project will have No Adverse Effect on Historic Properties. The revised report identified 77 archaeological sites, 355 architectural resources, and 13 National Register listed properties within the APE, and provided recommendations ensuring that the Project will have No Adverse Effect on Historic Properties.

In a September 28, 2011 letter, the SHPO accepted the report and concurred that the Project should have No Adverse Effect on historic properties provided that the following conditions are implemented:

- The recommendations proposed in Table 4 on page 9 of the *Cultural Resources Records Search for Nevada Hospital Association Statewide Fiber Optic Network* (Gnomon, August 29, 2011) to ensure the protection of historic properties are to be incorporated into any plans or designs provided to construction crews;
- The need for an archaeologist monitor along the Carson City route must be submitted to the entities responsible for implementing that portion of the Project; and
- A monitoring report will be provided to the SHPO within one month of Project completion within the vicinity of the historic property 26Orl, located in the Arrowhead/Goni segment in Carson City.

The 14-mile long proposed buried alignment along Highway 95 between Goldfield and Lida Junction traverses minimally disturbed areas. The northern portion of highway ROW was previously inventoried and Gnomon, Inc. conducted a Class III inventory for the southern part of the route. No significant resources were discovered between Goldfield and Lida Junction (Gnomon, 2011b, *A Class III Cultural Resource Inventory of the West Side of Highway 95 from Milepost 12 to Lida Junction, Esmeralda County, Nevada*). The BLM reviewed the Class III report and in correspondence dated January 5, 2012, determined that there would be no Project effect in this area.

In a letter dated October 20, 2011 addressed to NTIA, NHA confirmed their commitment to avoid archaeological impacts through implementation of the recommendations included in the Class I report approved by the SHPO. NHA will incorporate the requirements specified in the report into any plans or designs provided to construction crews.

The Project route will cross land owned by the Walker River Paiute Tribe and the Timbisha Tribe. In September 2011, NTIA met with both tribal chairs to explain the Project. Specifically, the Project will cross approximately 8 miles of land on existing poles along the north end of Walker Lake owned by the Walker River Paiute Tribe. On October 25, 2011, NTIA provided the Walker River Paiute Tribe Chairperson with a Statement of Cooperation to serve as a set of guiding principles between NTIA and the tribe for completing the NEPA environmental review. In a letter dated November 16, 2011, the Walker River Paiute Tribe expressed concerns and requested copies of Material Safety Data Sheets for hazardous waste that may be stored in vehicles and/or in the construction area on tribal land, to be notified in the event of a spill, and requested copies of all permits obtained from the NDEP. In addition, the Tribe conducted a walking survey of the route segment and identified one fire ring within the ROW. This cultural resource will be flagged and avoided, and therefore will not be impacted. In a consent statement dated December 8, 2011, the Walker River Paiute Tribe granted access for a metes and bound

survey to be conducted and requested a formal ROW application be completed before the start of construction. Consultation with the Walker River Paiute Tribe is still ongoing and construction will not occur in these areas until the consultation is complete. NHA will also install approximately 1.5 miles of aerial fiber on existing poles located on Timbisha Tribe land near Lida Junction. In a signed resolution dated December 17, 2011, the Timbisha Tribe granted NHA ROW access to install the fiber as proposed across the tribal lands.

In addition to consultation with the previously mentioned Tribes, on July 29, 2011, NTIA notified 26 Native American Tribes of the Project through the Federal Communication Commission's Tower Construction Notification System (TCNS). Additional correspondence was sent to the Shoshone-Pauite Tribe, Duckwater Shoshone Tribe, Fallon Paiute-Shoshone Tribe, and Hualapai Tribe by Resource Concepts, Inc. Eighteen Tribes did not respond within 30 days after the TCNS notification, thereby indicating no interest in the Project. Four Tribes responded (via letter and email) that they have no interest in the Project, but requested notification in the event of unanticipated discoveries. The Hualapai Tribe concluded in a letter dated May 9, 2011 that they have no concern with the Project. However, they requested notification in the event that archaeological remains or resources are discovered. As of February 1, 2012, no comments have been received from the Shoshone-Pauite Tribe, Duckwater Shoshone Tribe, or Fallon Paiute-Shoshone Tribe.

If Project construction activities uncover cultural materials (e.g., structural remains, historic artifacts, or prehistoric artifacts), NHA will stop all construction work and immediately notify interested Tribal Nations, the SHPO, and NTIA. If earth-disturbing activities uncover human remains, all work will cease immediately, in accordance with the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) and relevant State statutes. The area around the discovery will be secured and appropriate law enforcement personnel and NTIA will be notified immediately.

In addition, reasonable efforts to avoid, minimize, or mitigate adverse effects to the property will be taken and the SHPO and Indian Tribes with concerns about the property, and the Advisory Council on Historic Preservation (ACHP) will be notified within 48 hours in compliance with 36 CFR 800.13 (b) (3).

The Project is not expected to have adverse impacts on historic and cultural resources.

Aesthetic and Visual Resources

Fiber will be installed either underground in existing ROWs or added to existing poles. No new transmission corridors will be created as a result of this Project. Aesthetic disruption in most areas will be limited to the short-term presence of construction equipment. For aerial fiber installation, NHA will use existing utility poles to avoid creating new visual impacts. The Project will also be consistent with the objectives of the Class II, III, and Class IV designations on BLM managed lands. Likewise, the new buried fiber will be consistent within the context of the current viewshed within the highway corridor and other roadways. Vegetation will be

reestablished with indigenous species in areas disturbed along the fiber route. Based on the analysis and consultation, the Project is not expected to have a significant adverse impact on aesthetic and visual resources in the Project area.

Land Use

Fiber will be installed in previously disturbed ROWs located on State, tribal, and private owned lands, and Federal land managed by the BLM, USDA-FS, BOR, BIA, and DoD. There will be no change in the existing land use due to the underground fiber installation or the addition of new fiber on existing poles. The planned fiber improvements are consistent with the applicable BLM, USDA-FS, BOR, BIA, DoD, tribal, State agency, county, and city land management or resource plans. NHA has contacted the BLM, USDA-FS, BOR, BIA, DoD, and NDOT to determine the appropriate permits and approvals required to construct and operate the proposed Project within their jurisdictions. Through the respective agency permitting processes, the BLM, USDA-FS, BOR, and DoD will analyze potential land use impacts and determine whether the Project is consistent with their respective land and resource management plans. NHA has agreed to comply with all permit conditions issued by the respective Federal, State, and local agencies.

A portion of the Project will cross through the Spring Mountain National Recreation Area (SMNRA), which is part of the Humboldt-Toiyabe National Forest, along Highway 160. In this area, the fiber will be installed aerially on existing poles. Therefore, no ground disturbance will occur. The SMNRA will remain open during construction activities.

During construction, areas immediately adjacent to the affected ROWs may experience temporary and minor impacts due to the presence of construction equipment and work crews. Project activities may also temporarily disturb livestock and prevent livestock movement within permitted allotments. Approximately 14 miles of buried fiber will be installed on the Montezuma and Magruder Mountain Allotments administered by the BLM Battle Mountain District. However, construction activities will occur within the fenced NDOT ROW along Highway 95 and will not affect these grazing permits. NHA will repair, replace, or relocate existing range improvements that may be damaged during project construction. Approximately 96 miles of the Project will encroach on established Herd Management Areas (HMAs), 70 percent of which represents a crossing or transecting impact. However, because construction will be limited to pre-existing utility corridors and structures, these HMA crossings are expected to have a minimal effect on wild horses and burro populations, and HMA capacities. Based on these consultations and implementation of BMPs, the Project will have no significant adverse impact on land use.

Infrastructure

Under this Project, NHA will install 654 miles of new fiber; lease 676 miles of existing fiber; construct two data centers; and install 11 signal regeneration stations along the Project route. No new utilities, roadways, or waste disposal facilities will be needed for this Project. NHA and NVE will be signing pole attachment and conduit agreements for use of road ROWs and existing poles and conduit infrastructure. NHA will also adhere to the conditions contained with the

ROW permit to be issued by BLM. These agreements will ensure that there will be no adverse effect to infrastructure. The new network will provide long-term benefits to health care and local communities within the Project area. Overall, this Project is expected to have a positive impact on infrastructure, and is not anticipated to result in significant adverse impacts on infrastructure.

Socioeconomic Resources

The Project will provide reliable broadband access across the State of Nevada. Implementation of the Project will connect medical facilities throughout Nevada, allowing high-speed transmission of telemedicine applications and the exchange of electronic medical records. The network will provide secure medical communications and bring videoconferencing, telemedicine applications, and other critical tools to healthcare providers throughout Nevada. Local internet providers will also be allowed to connect to the new network, thereby extending affordable broadband service to community residents and businesses. The network will create additional jobs within the community and provide long-term benefits with improved internet access. The Project will not disproportionately affect minority and low-income populations. Overall, the Project is expected to have a positive impact on socioeconomics in the planned service area, and is not anticipated to result in significant adverse impacts on socioeconomic resources.

Human Health and Safety

Several hazardous waste sites have been identified within or near the Project area. Ten sites either have been closed in accordance with Environmental Protection Agency requirements or did not have any associated releases or spills. The Project will also cross the Carson River Mercury Site on existing poles, so no ground disturbance will occur. Nevertheless, if contaminated soils are unexpectedly encountered during construction, work will cease in the area of concern and the appropriate State and local authorities will be contacted. BMPs, including the implementation of standard refueling procedures for heavy equipment, requirement of dust controls, spill prevention, waste collection, and environmental education on the prevention of fire starts, will be implemented at the construction sites. In addition, an onsite inspector will be present during construction to make sure all materials are used and stored properly. Therefore, no impacts are anticipated along the fiber route.

The Project is not expected to have direct impacts on human health and safety during normal operation. BMPs for workplace safety will be implemented to protect workers and the public along the Project route. NHA will adhere to all Federal, State, and county laws, ordinances, rules, and regulations that pertain to prevention, pre-suppression, and suppression of fires. With implementation of these protection measures, the Project is not expected to have direct impacts on human health and safety during normal operation.

Cumulative Impacts

Based on the analyses documented in the NHA EA, as well as the correspondence record with Federal and Tribal resource agencies, no significant cumulative impacts should result from implementation of the Project. Although construction along existing ROWs presents some

potential for overlap and impact with current built infrastructure and future development, the cumulative impacts from the Project were found negligible and are not expected to exceed the threshold of significance.

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.

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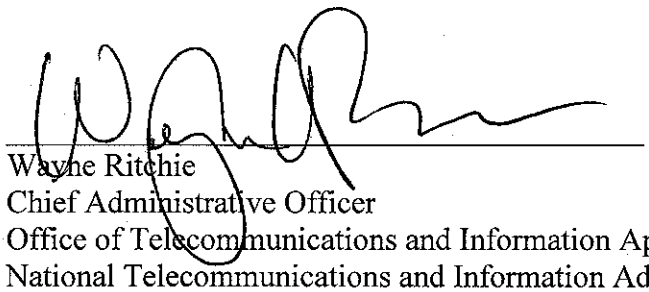

Wayne Ritchie
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2/13/2012
Date