

Proposed Installation of a Subterranean Fiber Optic Line

from

Alamo, Lincoln County, Nevada

to

Sunnyside, Nye County, Nevada

by

**Lincoln County Telephone System, Inc.,
Pioche, Nevada**

Analysis of Impacts

Prepared for:

Ely Field Office, U.S. Bureau of Land Management, Ely, Nevada

On Behalf of:

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and

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I. BACKGROUND INFORMATION

Need for Proposal

Lincoln County (Nevada) Telephone System, Inc. seeks to install an underground fiber optic telephone cable and associated, above-ground structures along US Highway 93 and State Route (SR) 318 in Lincoln and Nye counties (maps 1 - 8). The proposed cable would run from the company's facilities in Alamo, Lincoln County, to Sunnyside, in Nye County, a distance of approximately eighty **one** miles. Fiber optic service in the proposed project area is presently non-existent. Northward extension of the fiber optic line now connecting Alamo with points south would enable Lincoln County Telephone to connect with an established Nevada Bell fiber optic line at Sunnyside and open the proposed project area to fiber optic service.

Relationship to Planning

The proposed project is in conformance with the Ely Field Office, US Bureau of Land Management's **Caliente Management Framework Plan Amendment and Record of Decision for the Management of the Desert Tortoise**¹ (BLM 2000), stating:

“Grant power distribution lines 69kV or less, local telephone, water distribution pipelines and facilities, local fiber optic loops and cable lines outside of designated corridors on a case-by-case basis” (P. 27).

It is also in conformance with the **Schell Management Framework Plan** (BLM 1983), which stipulates:

“Establish transportation and utility corridors as set forth in Section 503 of the Federal Land Policy and Management Act” (Pp. L-4.0 – L-4.1a);

“Provide lands for rights-of-ways for roads, powerlines, telephone lines, and maintenance and storage sites for highway road maintenance” (P. L-5.0);

and

“In accordance with Title V of the Federal Land Policy and Management Act, provide lands for communication sites for use by Federal, State and local government agencies and the public as the need is presented” (P. L-6.0).

¹ Lands along the east side of US Highway 93 between Alamo and Ash Springs, a distance of about seven miles, are considered habitat for the federally listed, *Threatened* desert tortoise (*Gopherus agassizii*).

The proposed project is also consistent with Lincoln and Nye county management plans.

Lincoln County's **Public Land & Natural Resource Management Plan** (Anon. 1997) states:

“The specific goal of this plan is to secure multiple uses of publicly managed lands” (P. 5);

and stipulates the County's support for County-based private enterprise through such statements as:

“It is the policy of Lincoln County Government to increase any opportunity for local economic development by increasing the amount of available private land within the county” (P. 8).

Similarly, the **Nye County Policy Plan for Public Lands** (Anon. 1984) states:

“Corridors for communications and transportation need to be planned for in harmony with other multiple uses on public lands” (P. NY-7).

Issues

At a May 2001 project-scoping meeting during which the proposed action was completely described and in a follow-up conference call in January 2003 the following issues were raised:

- 1) Potential impacts on **special status species**, i.e., **desert tortoise** (*Gopherus agassizii*), a federally-listed (Threatened) species inhabiting project-area lands between Alamo and Ash Springs in Lincoln County; and **pygmy rabbit** (*Brachylagus idahoensis*), a BLM “sensitive” species known to occur in the vicinity of Sunnyside in Nye County.
- 2) Potential impacts on **migratory birds**, various species of which may occupy the project area during the officially designated 1 May to 15 July critical nesting period.
- 3) Potential impacts to **archaeological resources**, particularly those in the Hiko and White River narrows.
- 4) Potential of the project to introduce and/or proliferate spread of **noxious weeds**.
- 5) Potential impacts to local **visual resources**, which could be altered by presence of land scarring along the proposed cable route and presence of the proposed regeneration stations.

Following review of an August 2003 draft of this document, the US Fish and Wildlife Service' (FWS) Nevada Fish and Wildlife Office supplied comments (Williams 2003 – Appendix 1) raising additional questions about #s 1, 2 and 4 of the above-noted issues, along with new questions concerning potential project impacts on the:

- 1) **Bald eagle** (*Haliaeetus leucocephalus*), a federally-listed (*Threatened*) species and periodic user of Pahrnatag National Wildlife Refuge (located about four miles south of the proposed project's southern terminus at Alamo – Map 1);
- 2) **Yellow-billed cuckoo** (*Coccyzus americanus*), a candidate for federal listing reportedly observed along the Pahrnatag River (irrigation) ditch near the proposed route's crossings of US Highway 93 at Ash Springs (Map 1);
- 3) **Pahrnatag roundtail chub** (*Gila robusta jordani*) and **White River springfish** (*Crenichthys baileyi baileyi*), both federally-listed as *Endangered* and occurring in the Pahrnatag ditch and/or the ponds at Ash Springs (Map 1);
- 4) **Southwestern willow flycatcher** (*Empidonax traillii extimus*), a federally-listed (*Endangered*) bird recently observed nesting in the vicinity of Crystal Springs, near the junction of state highways 318 and 375 (Map 2);
- 5) **Hiko White River springfish** (*Crenichthys baileyi grandis*), a federally-listed (*Endangered*) species occurring at Crystal Springs (Map 2); and
- 6) **White River spinedace** (*Lepidomeda albivalis*), a federally-listed (*Endangered*) fish whose critical habitat exists about 0.25 miles from the proposed route's northern terminus near Sunnyside (Map 8).

II. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

Proposed Action

Lincoln County Telephone System, Inc. proposes to construct and install an approximately eighty **one** mile long fiber optic cable and two associated signal regeneration and cellular phone tower stations between Alamo, in Lincoln County, and Sunnyside, in Nye County. The proposed route would track US Highway 93 from within the town limits of Alamo north to the US 93/Nevada State Route 318 junction and, from there, trace SR 318 north to Sunnyside (Mid-State Consultants 2003). The cable would lie below ground, buried at a nominal depth of 48 inches. **At Sunnyside it would connect to an existing, above-ground, Nevada Bell communications cabinet.**

Typical cable installation methods would require use of large track- and wheeled-vehicles including tractors, cable plows or trenchers, backhoes, fiber reel trailers and water and equipment hauling trucks. Vehicle fueling, lubricating and other maintenance would occur in appropriate off-site areas or, if done on-site, in accordance with BLM and/or

NDOT guidelines. No vehicle maintenance would occur in or closely adjacent to any aquatic habitat.

The cable route's construction area footprint would not exceed twelve feet and, in most areas, would not exceed the width of a D-8 Caterpillar tractor (approximately eight feet). Cable would be installed via a tractor-drawn, static plow that would cut a nominally 48 inch deep trench, approximately six inches wide at ground surface and three inches wide at bottom. The trench would automatically close behind the plow following cable insertion (Anderson 2002) and the disturbed ground surface would be smoothed by a small, tractor-mounted blade following the plow.

To facilitate delivery of spools of cable during installation, access from the highway to the cable route would be required approximately every four miles. Existing roads would be used where possible but where no access currently exists it would be created. New access-ways would be temporary, single-lane tracks, sufficient only to allow ingress and egress from the cable route during construction of this project. All newly created access routes would be rehabilitated as directed by BLM.

Signs denoting buried cable presence would be installed at culvert and wash crossings, railroad and highway crossings and at points at which the cable's distance from the highway suddenly deviates (running line deviations). Elsewhere along the route signs would be placed at intervals readily visible by line of sight along the route, or at least every one thousand feet.

The proposed cable route would include six highway crossings. Four would be beneath US 93 and two would be beneath SR 318. Along US 93, one crossing would be in Alamo, two in Ash Springs, and the last at the US93/SR 318 junction. Along SR 318, one crossing would be at milepost LN (Lincoln County) 18.46, approximately four miles north of the White River Narrows, and the other at milepost NY (Nye County) 18.1, just south of Sunnyside. Highway crossings would be effected by boring at a depth of four to five feet below the roadway from the side ditch. Highway traffic flow would not be interrupted. The US 93 crossings would facilitate avoidance of private property in Pahranaagat Valley and allow the route to transition from US 93 to SR 318. The SR 318 crossings would permit cable connection to the first signal regeneration station and to the existing Nevada Bell facilities at Sunnyside.

The regeneration stations – one located on the west side of a small hill west of SR 318 at about milepost LN 18.5 (Map 3, photos 1-2) and the other east of the highway at milepost NY (Nye County) 16.0 (Map 8, Photo 3) – would be 100 foot-square, chain link-fenced, above-ground complexes. The chain link would be slatted with BLM-approved, non-reflective color slats. Each regeneration station would contain a concrete structure measuring approximately 22 by 10 by 10 feet that would house signal regeneration equipment and an emergency generator. The concrete structure would be painted a non-reflective earth-tone to minimize contrast with the surrounding landscape. Adjacent to the structure would be a 500 gallon propane tank to fuel the emergency generator. The tank would be approximately seven feet long and three feet in diameter.

An array of solar panels *may* also be installed as part of the regeneration station in Lincoln County if it is determined that bringing in power from the nearest available source – located near SR 318 milepost LN 10.75 – (Mid-State Consultants 2003) is not cost effective. If solar panels are included as part of this regeneration station they would be ground-mounted and occupy an area of roughly 10 by 20 feet inside the fenced compound. If the existing power source is used, an electric cable would be installed from it to the regeneration station site. The electric cable would be buried simultaneously with and alongside the fiber optic cable.

Power to the second regeneration station would be supplied from an existing source via subterranean cable installed simultaneously with the fiber optic line.

A single, 65 to 70 foot-high wooden pole cell phone tower would be erected as part of each complex. Pole supports would not include guy wires or cables potentially harmful to nocturnally migrating birds.

Access to the Lincoln County regeneration station from SR 318 would require a total right-of-way of about 4,600 feet by 50 feet. Both the access road and fiber optic cable would be placed within. From SR 318 this route would follow an existing dirt road west for approximately 300 feet to an existing highway frontage road, then north along the frontage road for approximately 500 feet. At that point the route would turn west for about 3,000 feet and then south and finally east for another combined 800 feet to the proposed regeneration station site. The latter 3,800 feet of access would constitute entirely new disturbance.

Access to the Nye County regeneration station would require approximately 250 by 50 feet of new right-of-way for road construction and cable placement.

Route Description

From Alamo the proposed route would follow US Highway 93 to its junction with SR 318, a distance of roughly 12.5 miles. In this section the route would lie entirely within the Nevada Department of Transportation's (NDOT) right-of-way² except when crossing private holdings in Alamo and Ash Springs. Other than at anticipated highway crossings the route would generally parallel US 93 at distances of from about 26 to 192 (eight feet inside the NDOT right-of-way fence) feet from highway centerline. Distance from the highway would vary to allow the route to avoid physical barriers (e.g., highway culvert crossings and associated rip-rapped drainages), topographic and environmentally or culturally sensitive features, and because distance of the right-of-way fence from the highway is not always constant. At its closest approaches to the highway the route would be ten feet from the pavement edge.

For most of its remaining, roughly 68 miles the proposed route would follow this same pattern along SR 318, and typically run about 192 feet from the highway centerline.

² The NDOT right-of-way typically extends two hundred feet from the highway centerline.

However, at thirteen points (marked with white arrows on maps 3, 4, 5 and 7) along this highway the route would briefly exit NDOT's right-of-way in order to avoid large rock outcrops, rip-rapped drainages and excessively steep slopes close to the highway. These deviations, typically no longer than a few hundred feet, would permit the barrier to be avoided, after which the route would immediately reenter the NDOT right-of-way. The combined lengths of these excursions beyond the right-of-way would amount to about two miles of the route's total length. At each fence crossing point the fence would be cut and subsequently repaired. No additional gates would be installed.

At milepost LN 18.46 the route would make a ninety degree left (west) turn, pass beneath SR 318 and intersect an existing, single-lane, dirt frontage road located approximately three hundred feet off the highway. The fiber optic line would then follow a shoulder of the frontage road north for about five hundred feet before again turning west to ascend a low hill on the back side of which the first regeneration station would be placed (Map 3). After exiting the frontage road the route would first extend west for about three thousand feet, then arc south and east for another combined eight hundred feet to the regeneration station site. Along this last 3800 feet a roughly twelve foot-wide road would be bladed to provide access to the regeneration station site. The road would not be paved. To continue the route north, fiber optic cable emanating from the station would reverse the above-described track to the original line east of SR 318, and proceed to its terminus near Sunnyside.

Route Segments of Particular Environmental Concern

Various sections of the proposed route would directly traverse or cross in close proximity to habitat occupied or used by various listed or otherwise sensitive species. Between Alamo and Ash Springs, a distance of about seven miles, the proposed project route would cross habitat of the *Threatened* desert tortoise (Map 1, Photo 4). During its passage through the settlement of Ash Springs (Map 1, photos 5-10) the route would pass over two culverts carrying outflow from the Ash Spring ponds. Pahrnagat roundtail chub and White River springfish, both *Endangered* fishes, occur in this outflow. Simultaneously, the route section through Ash Springs would lie adjacent to vegetation in which the *sensitive* yellow-billed cuckoo has reportedly been observed.

In its passage across the ancestral White River channel, which State Route 318 crosses just west of its junction with US Highway 95, the project route would lie on the opposite side of the road from Crystal Springs and habitat occupied by the *Endangered* Hiko White River springfish (Map 2, photos 11-13). The *Endangered* southwestern willow flycatcher has also been observed around Crystal Springs. The flycatcher has been similarly noted on the Key Pittman Wildlife Management Area adjacent to the proposed project route just south of Hiko (Map 2, photos 14-15). The *sensitive* pygmy rabbit occupies two stretches of habitat adjacent to the proposed route's northern-most reach in Nye County (SR 318 mileposts 13.8 – 14.6 and 17.1 – 18.1) (Map 8, Photo 16). Finally, the project's intended northern terminus at **about** SR 318 milepost 18.7 would lie about 0.25 miles east of habitat occupied by the *Endangered* White River spinedace (Map 8, photos 17-18).

Mitigation

Various actions would be taken to reduce potential impacts associated with this project.

In accordance with terms and conditions and standard operating procedures set forth in the Caliente Management Framework Plan Amendment and Record of Decision for the Management of Desert Tortoise Habitat (BLM 2000), appropriately timed desert tortoise surveys and associated actions would be conducted by qualified personnel prior to construction. Initial survey results would be submitted to the US Fish and Wildlife Service (agency charged with primary enforcement of the Endangered Species Act) for review and direction.

At the two points the fiber optic line would cross the culverts carrying Ash Springs outflow to the Pahrangat ditch, straw bales or other BLM-designated barriers would be placed between the construction route and the edge of nearby vegetation to prevent excavated material and other debris from entering the ditch.

Required removal, temporary storage and replanting of protected plant species (i.e., cactus and yuccas) would be done by appropriately skilled personnel.

The construction zone would be watered as needed to control dust. Water would not be obtained directly from sources (e.g., Ash or Crystal springs) harboring protected fish species.

All equipment destined for use in the project area would be washed prior to entering it to prevent inadvertent introduction of unwanted plant species. Because agricultural areas, particularly those near Sunnyside, are known or likely to contain infestations of spotted (*Centaurea maculosa*) and/or Russian knapweed (*Acroptilon repens*) (DeForest, pers. comm., Prentice, pers. comm.), all project equipment entering agricultural areas would be re-cleaned before reentering the project area. Both NDOT and the Tri-County Weed District conduct periodic monitoring and control of local noxious weed infestations in the vicinity of the proposed project corridor.

Monitoring

A BLM- or NDOT-appointed inspector would be present during construction to assure contract stipulations are met.

A desert tortoise monitor would be present while construction occurs between Alamo and Ash Springs.

One or more archaeological monitors would be on-site during construction activities through the Hiko and White River narrows and any other areas deemed appropriate by the BLM archaeologist.

Monitoring and control of noxious weed infestations along highway shoulders occurs as part of routine highway maintenance by NDOT. Tri-County Weed District personnel conduct similar monitoring and control activities of other local weed infestations.

Alternatives

No Action

Under the No Action Alternative the proposed action would not occur. The project area would remain without fiber optic service and the current level of cell phone service would remain unchanged. None of the anticipated environmental impacts would occur.

Alternatives Considered But Eliminated From Detailed Analysis

Above ground placement of the fiber optic line was considered. That option was eliminated because there is no existing, continuous aerial transmission line along the proposed route and the environmental impacts of installing one would exceed those of the project as currently proposed.

An initially proposed subterranean route included numerous passages in and out of the NDOT right-of-way and public (BLM) land and also placed the first signal regeneration facility in a position from which it would be highly visible from SR 318. This route would have been inside NDOT's right-of-way for about twenty eight miles and outside NDOT's right-of-way for about fifty two miles. The proposal was withdrawn and redesigned because:

- 1) It encroached on several archaeologically sensitive areas;
- 2) it produced increased visual resource management concerns associated with placement of the first signal generation station and;
- 3) because it would impact a wilderness study area.

III. DESCRIPTION OF THE AFFECTED ENVIRONMENT

Location

The proposed, roughly eighty **one** mile-long route parallels US Highway 93 and State Route 318 between Alamo and Sunnyside. The route's southern end lies within the town

limits of Alamo, in central Lincoln County's Pahranaagat Valley. From that point it extends north along the Valley, following the ancestral³ White River until the River crosses the Lincoln/Nye county line. From there the route traverses the eastern flank of the White River Valley, skirting the southern toe of the Schell Creek Range and passing between Gap Mountain and the southern terminus of the Egan Range en-route to Sunnyside, where it ends.

Topography and Soils

The proposed project area lies within the Basin and Range Physiographic Province – a section of western North America characterized by north/south trending valleys (basins) flanked by correspondingly oriented mountain blocks (ranges). This, geologically speaking, relatively recent⁴ landscape is a result of simultaneous uplifting of mountains and down-dropping of adjacent valleys in response to stresses applied to the continental land mass. Subsequent erosion of the mountain ranges has built large alluvial aprons that dip from the mountain margins toward the valley bottoms. These aprons' surfaces have themselves been eroded to produce a characteristic array of low, elongate hills, hummocks and benches separated by intervening drainages, all of which lie generally perpendicular to the mountains and valleys they lie between.

For most of the southern three quarters of its length, the project route would traverse lower margins of these alluvial landforms through the Pahranaagat and White River valleys. At the Hiko and White River narrows the route would enter the old riverbed where it cuts through uplifted volcanic deposits of Tertiary age (Tschanz and Pampeyan 1970). The route's northern quarter would traverse more upslope sections of alluvial aprons as it diverges from the River channel and valley bottoms and moves closer to the bases of the Schell Creek and Egan ranges.

Surface soils range from sandy and clayey loams on the alluvial fans to sands, silty sands and silts in the various drainages and the numerous, small, enclosed basins the project would cross. Patchy desert pavements of mostly pebbles and small clasts occur irregularly on the stable surfaces of some of the benches on the alluvial fans, particularly the fans along the very southern end of the route. Pebbles, cobbles and small boulders, most commonly derived from rhyolitic lavas, quartzites and cherts eroding from the local mountains, are frequently evident in the alluvium. Extensive lava and tuff flows are evident in the Hiko and White River narrows.

Elevation at the southern end of the proposed route is approximately 3,450 feet. From that origin it gradually ascends to its peak elevation of just over 5,600 feet at Gap Mountain before beginning a decline to around 5,300 feet at its northern end.

³ The White River is thought to have been an actively flowing stream between late Pliocene and late Pleistocene or early Holocene time – about 2 million to 10 thousand years ago (Tschanz and Pampeyan 1970).

⁴ North American Basin and Range topography probably began forming about middle Tertiary time, between 35 and 40 million years ago (Morrison 1965).

Visual Quality

The proposed project route crosses a region of generally undeveloped expanses of open, shrub-covered riverine valleys framed by low rolling hills, broad, low-angle alluvial fans and well defined, sometimes sharply rising and densely forested mountain blocks. Except within local human population centers – Alamo, Ash Springs, Hiko and Sunnyside – the terrain frequently seems almost devoid of human presence and activity. Only the occasional dirt roads and irregularly apparent traces of ranching and farming remind travelers that the area is, in fact, occupied and used. Travel, particularly along SR 318, can be a relatively unhurried undertaking marked by time for reflection and appreciation of the setting.

BLM visual resource management guidelines (BLM 1986) classify lands managed by that agency into four *Visual Resource Management (VRM) Classes*. Management objectives for VRM Class 1 lands are to *preserve* the existing character of the landscape in such a way that management activities should not attract attention. Objectives for VRM Class 2 lands are to *retain* the existing character. Management activities should be minimal and not distract the casual observer. Existing character of Class 3 lands should be at least *partially retained* and management-induced changes, though apparent, should not dominate the landscape. *Major modification* of existing landscape character is acceptable on Class 4 lands.

From Alamo to the US 95/SR 318 junction, lands that would be crossed by the project are designated Class 3. The project would cross a small area of Class 4 lands just prior to entering (south of) the White River Narrows. Elsewhere along the proposed route the lands are Class 2⁵.

Vegetation

At its southern end the proposed project route lies within northern margins of the Mojave Desert. The local plant community is reasonably typical, with creosote bush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*) and Joshua tree (*Yucca brevifolia*) dominating the assemblage and joint-fir (*Ephedra nevadensis*), little-leaf ratany (*Krameria parvifolia*), cheesebush (*Hymenoclea salsola*), spiny menodora (*Menodora spinescens*) and four-wing saltbrush (*Atriplex canescens*) occurring as common associates. Silver cholla (*Opuntia echinocarpa*) occurs irregularly, as do occasional pincushion cactus (*Coryphantha vivipara*) and blue yucca (*Yucca baccata*). Halogeton (*Halogeton glomeratus*) and/or Russian thistle or tumbleweed (*Salsola tragus*) are frequently evident in disturbed (i.e., bladed or heavily grazed) areas.

Moving beyond Alamo, the northern extent of the Mojave is quickly approached. Between Alamo and Ash Springs, creosote bush, a Mojave Desert hallmark, becomes increasingly spotty in occurrence while the saltbrush and spiny hopsage (*Grayia spinosa*)

⁵ In the White River Narrows, lands on the west side of SR 318 are designated Class 1. East of the highway, where the project corridor would lie, lands are designated Class 2.

rise in abundance. Occasional shadscale (*Atriplex confertifolia*) bushes also occur, indicating beginnings of the transition from Mojave Desert to Great Basin habitats.

At the US 93/SR 318 junction, where the proposed route would cross the old White River bed near Crystal Springs, it would enter a small, sharply defined zone of saltbrush, rabbitbrush (*Chrysothamnus* sp.) and desert saltgrass (*Distichlis spicata*). Scattered cottonwood trees (*Populus fremontii*) occur nearby. The presence of saltgrass and cottonwood indicates wetlands probably exist adjacent to the Highway in this vicinity.

Just north of Hiko the route would cross a series of blackbrush (*Coleogyne ramosissima*) dominated benches. Spiny menodora, green ephedra (*Ephedra viridis*), broom snakeweed (*Gutierrezia sarothrae*), cheesebush and four-wing saltbrush occur as common associates. Halogeton is sporadically evident. In the vicinity of the Hiko Narrows, at SR 318 milepost LN 12, big sagebrush (*Artemisia tridentata*) grows in well drained, upslope sites while four-wing saltbrush and rabbitbrush occupy areas where water accumulates during and after local storm events. Ephedra and snakeweed are, again, common associates in the upslope areas.

Scattered Utah juniper (*Juniperus utahensis*) trees grow around the proposed site of the first signal regeneration station (SR 318 milepost LN 18.5), which otherwise supports a community dominated by ephedra, snakeweed and sagebrush.

Around the White River Narrows (SR 318 milepost LN 25) and north along the remainder of the proposed route, black sagebrush (*Artemisia nova*) largely replaces the big sagebrush seen farther south. Winterfat (*Krascheninnikovia lanata*) is a reasonably common associate, sometimes growing in almost pure stands across small areas. Four-wing saltbrush remains a common occupant of storm-water impounding, enclosed basins. Occasional shrubs of antelope bush (*Purshia mexicana*) occur alongside the highway.

As the route approaches Gap Mountain (ca. SR 318 milepost NY 10) and attains its highest elevations Utah juniper is again in evidence, but this species quickly disappears as the project corridor descends the mountain slopes to continue north through White River Valley. In this same general vicinity, i.e., at about SR 318 milepost NY 8, big sagebrush begins to supplant black sage and eventually becomes the dominant plant along the remainder of the proposed project corridor.

Continuing regional drought conditions appear to have severely restricted any appearance of annual and smaller perennial plant species along much of the proposed route. Local grazing may have impacted some of these plants as well. Only desiccated remains of a few unidentifiable annuals were noted, while fluff grass (*Erioneuron pulchellum*), cheat grass (*Bromus tectorum*), little trumpet (*Eriogonum inflatum*), desert marigold (*Baileya multiradiata*) and naked stem sunray (*Enceliopsis nudicaulis*) comprised the extent of small perennial species observed.

Noxious Weeds

Comprehensive inventory of noxious weed occurrences along the affected highway segments have not been completed (DeForest, pers. comm.). Infestations of spotted and Russian knapweed have been identified near Crystal Springs (US 93/SR 318 junction). Russian knapweed is established around the Kirch Wildlife Management Area near Sunnyside (DeForest, pers. comm., Prentice, pers. comm.).

Wildlife

Mule deer (*Odocoileus hemionus*) inhabit much of the Pahranaagat Valley and are reasonably prevalent along the proposed route from Alamo to, at least, Hiko. Several major highway-crossing points for deer have been identified along US 93 as it skirts the Pahranaagat Lakes, south of the proposed project area. Deer also commonly cross SR 318 in the vicinity of the Key Pittman Wildlife Area, between Alamo and Hiko.

Coyotes (*Canis latrans*), desert cottontail rabbits (*Sylvilagus audubonii*) and black-tailed jackrabbits (*Lepus californicus*) were observed between Alamo and Ash Springs. A badger (*Taxidea taxus*) skull was also noted near Ash Springs. Rodent sign (burrows, tracks, skeletal material, etc.) is commonplace all along the route.

Pronghorn (*Antilocapra americana*) probably occupy or otherwise use lands that would be crossed by the project north of Hiko. Desert bighorn sheep (*Ovis canadensis*) are known to occupy the Hiko Range and southern portions of the Egan Range, both of which lie adjacent to the proposed fiber optic line route.

One covey of Gambel's quail (*Callipepla gambelii*) was observed near Ash Springs. Mourning doves (*Zenaidura macroura*) were a common sight throughout the Pahranaagat Valley. Numerous other bird species at least seasonally occupy or migrate through lands that would be crossed by the fiber optic line. Some migratory species may use the proposed project lands as nesting grounds.

Side-blotched lizards (*Uta stansburiana*), western whiptails (*Cnemidophorus tigris*) and leopard lizards (*Gambelia wislizenii*) were noted at various locations along the proposed route. Various other lizards and a number of snake species also occupy this part of Nevada.

Special Status Species

A search of the Nevada Natural Heritage Program database for records of sensitive species within the general⁶ project area reveals the possibility of encountering seven sensitive plant, eight invertebrate, seven fish, two reptile, two bird and two mammal species in the project vicinity (Appendix 2).

During the May, 2001 scoping meeting, two plants [White River catseye (*Cryptantha welshii*) and Sunnyside green gentian (*Frasera gypsicola*)] and one lizard, Gila monster

⁶ Searches reveal records of sensitive taxa within any part of each township and range (36 square miles) a project touches. As a result, some accounts include records from outside an actual project area.

(*Heloderma suspectum*), were cited as sensitive species potentially occurring along the route (DeForest, pers. comm.). These three species are included within the larger array supplied by the Natural Heritage Program.

The following sensitive species have been separately or collectively noted by Fish and Wildlife Service, Bureau of Land Management and Nevada Natural Heritage Program biologists as occurring or potentially occurring in or adjacent to the proposed project area:

Bald eagles (*Haliaeetus leucocephalus*), a *Threatened* species, periodically use the Pahrnagat National Wildlife Refuge, located approximately four miles south of Alamo (Map 1).

Between Alamo and Ash Springs the project would cross lands inhabited by the *Threatened* desert tortoise (Map 1). The tortoise reaches the extreme northern extent of its range in this part of the Pahrnagat Valley (Germano et al. 1994).

Yellow-billed cuckoos (*Coccyzus americanus*), a bird species under consideration for listing as *Threatened* or *Endangered*, have been observed in the Pahrnagat ditch approximately 0.75 miles downstream of the Ash Springs outflow point (Williams 2003 – Appendix 1) (Map 1).

Two *Endangered* fish – Pahrnagat roundtail chub (*Gila robusta jordani*) and White River springfish (*Crenichthys baileyi baileyi*) – and three *sensitive* invertebrates – Pahrnagat naucorid bug (*Pelocoris shoshone shoshone*), Pahrnagat pebblesnail (*Pyrgulopsis merriami*) and grated tryonia snail (*Tryonia clathrata*) – inhabit the ponds at Ash Springs (Map 1) and/or the Springs' outflow, which flows beneath US Highway 93 and into the Pahrnagat Ditch. The Ash Springs ponds lie east of US 93 and the Pahrnagat ditch lies west. Two culverts to be crossed by the project carry the outflow beneath the highway at about the southern boundary of the Ash Springs settlement.

The Hiko White River springfish (*Crenichthys baileyi grandis*), another federally-listed *Endangered* species, inhabits Crystal Springs, near the SR 318/SR 375 junction (Map 2).

Endangered Southwestern willow flycatchers (*Empidonax traillii extimus*) reportedly nest (Williams 2003 – Appendix 1) in the vicinities of Crystal Springs and the nearby Key Pittman Wildlife Management Area (Map 2).

The pygmy rabbit (*Brachylagus idahoensis*) has been added to BLM's list of sensitive species within the Ely District since analysis of the proposed project began. Surveys (Appendix 3) conducted in July, 2003 and August, 2004 have revealed the rabbit's presence in at least two small areas in the northernmost section of the proposed project corridor (i.e., north of SR 318 milepost NY 13.5 – Map 8).

Critical habitat for the *Endangered* White River spinedace (*Lepidomeda albivalis*) exists in the Kirch Wildlife Management Area, adjacent to the proposed northern terminus of this project (Map 8).

Except for those noted above, no evidence of any other special status species listed by the Nevada Natural Heritage Program as potentially occurring within or around the project area was found. Specific habitats required by some species listed in the Heritage Program report (i.e., high altitude areas or narrowly occurring soil types for most of the plants; aquatic, riparian and grassy meadow habitats for the snails, insects and butterflies; specific plant associations required by the birds; and wet meadows for the Pahrnagat Valley vole) do not occur in areas subject to project-related disturbance.

Ongoing drought may be limiting local occurrence of some sensitive plant species (e.g., bottlebrush suncup, *Camissonia boothii alyssoides*) that otherwise might be considered reasonable possibilities here.

Gila monster occurrence along the southernmost (Mojave Desert) part of the proposed route is a distinct but unlikely possibility. Just two records of Gila monster sightings in this vicinity exist and both are from areas well removed from the anticipated fiber optic route (see sighting locations in Appendix 2).

An array of cacti and yuccas, species protected under Nevada state law⁷, occur variously along the proposed route but particularly in its southernmost three or four miles.

Range

Evidence of grazing by domestic cattle (*Bos taurus*) is prevalent along much, if not all, of the public land outside of NDOT's right-of-way. Roadside livestock corralling and watering features are irregularly apparent on both public and private holdings along the entire route. A livestock loading/unloading chute, corral and watering complex is situated adjacent to the site of the proposed signal regeneration station at milepost LN 18.5 on SR 318.

Wild Horses and Burros

Between the White River Narrows and the southern terminus of the Egan Range (about eight miles south of Sunnyside), the route would enter the Dry Lake Wild Horse Herd Management Area each time it moves outside of NDOT's right-of-way.

The Dry Lake Wild Horse Herd currently numbers slightly more than 300 animals. Although the Herd's primary use area, Dry Lake Valley, lies well east of the proposed project route, the fiber optic line would intermittently

⁷ NRS 527.060-.120

enter the periphery of the Dry Lake Herd Management Area (Brown, pers. comm., Bybee, pers. comm.).

Cultural, Historic and Paleontological Values

The Pahranaagat and White River valleys have long been recognized as important cultural resource areas. In May 2002, archaeologists from the Harry Reid Center for Environmental Studies (HRC), University of Nevada, Las Vegas, conducted a BLM Class III Intensive Pedestrian Inventory along the proposed project route to its then anticipated northern terminus at SR 318 milepost NY 18.1. In August 2004, in response to a July 2004 proposal (Stephenson 2004) to extend the line 3230 feet north, HRC archaeologists surveyed the proposed extension⁸. Survey results are reported in White (2002) and Smith (2004).

Potential, project-related impacts to sites of cultural and historic value found along the route have been lessened by realigning the proposed fiber optic line's course to completely avoid them. If required by the BLM, an archaeological monitor would be present during construction to further reduce any likelihood of entry onto and damage to these locations.

No known paleontological sites or resources occur along the proposed route.

IV. ENVIRONMENTAL CONSEQUENCES

Proposed Action

The proposed action would not impact floodplains or riparian areas; wilderness values; Areas of Critical Environmental Concern; Wild and Scenic rivers; prime or unique farmlands; environmental justice; paleontological resources; drinking or ground water quality or Native American religious concerns.

Wetlands

Two wetland-indicating plant species – saltgrass and cottonwood trees – occur in the vicinity of the proposed White River crossing near the US 93/SR318 junction. There are no flowing or static surface water features in the crossing area. Because the proposed route across the White River lies just thirty five feet from SR 318's edge (Mid-State Consultants 2003), within the already disturbed highway corridor, any impacts to local wetlands accruing from the proposed action would likely be, at most, minor and

⁸ The extension was added to facilitate connecting the fiber optic line to an existing Nevada Bell communications cabinet at about milepost NY 18.7 on SR 318. The original plan called for a direct, line-to-line connection at milepost NY 18.1.

transitory. None of the local terrain would be filled or otherwise altered to cause a net loss of wetlands.

Wildlife

Project development would have the potential to disturb, injure or kill individuals of any wildlife species occupying or otherwise using the proposed course during construction and some aspects of project operation. However, prospective project impacts would be mitigated to the extent possible to avoid such occurrences.

Special Status Species

Listed and other sensitive species occupying the proposed project area could be subject to direct and indirect mortalities stemming from contact with project construction equipment and activities, maintenance equipment and activities and presence of project facilities (e.g. cell-phone towers). Potential mortality-causing factors include collisions with equipment and facilities; sedimentation or other pollution of aquatic habitats; project-associated alteration of local plant communities; encounters with project-generated toxic substances (e.g. petroleum spills) and project-related disturbance during critical (e.g., breeding and nesting) periods.

Various aspects of project extent or design have been incorporated to prevent or reduce severity of potential project-related impacts.

Surveys conducted by the author in February, 2002 revealed small evidence of tortoise along the proposed route. A single, *possible* desert tortoise burrow was noted in a drainage bank near the Richardville Cemetery, just north of Alamo. Between two and three miles north of Alamo, four well-bleached fragments of an old tortoise carcass were found approximately thirty feet upslope of the right-of-way fence, which the proposed route would closely track through this area. In the same general vicinity, a single fragment of a more recent tortoise carcass (partial scute still adhering) was noted in the ditch alongside US 93.

Tortoise habitat between Alamo and Ash Springs would be reexamined just prior to project initiation. Tortoises in the project area would be relocated, in accordance with current FWS tortoise relocation protocols, to adjacent habitat. To prevent foraging tortoise from entering the project corridor during construction a FWS- or BLM-approved tortoise monitor would be present, as required, during construction through tortoise habitat.

At the points the proposed route would cross the two culverts carrying outflow from Ash Springs to the Pahranaagat ditch, sufficient fill, i.e., 48 to 60 inches (1.1 – 1.5 m) over the first culvert and fifteen feet to twenty feet (4.6 – 6.1 m) over the second, exists to allow fiber optic line placement above the culverts without disturbing them. In this area the proposed route is along the graveled shoulder on the west side of US Highway 93, ten

feet (3 m) from the pavement edge and about ten feet from vegetation adjacent to the highway. Cable placement in this area would not enter local water courses or cause foreign material to be deposited therein, thus impacts to resident fish and aquatic invertebrates would be limited to vibration associated with equipment operation during fiber optic installation. However, because aquatic environments lie in close proximity here, straw bales or other BLM-designated barriers would be placed between the construction zone and adjacent habitat as a further safeguard against sedimentation.

Because the project route through the Ash Springs area would be in the unvegetated shoulder of US 93, no local yellow-billed cuckoo habitat would be entered or otherwise disturbed.

Where the project would pass Crystal Springs, cable placement would be on the east side of SR 318 and, therefore, on the opposite side of the road from the spring complex. Crystal Springs would not be used as a project water source. No project-generated impact would occur to the Hiko White River Springfish.

Near Crystal Springs, three large cottonwood trees along the east side of SR 318 may provide roosting habitat for bald eagles and other avians. The trees are situated about thirty feet (9.1 m) east of the highway in an otherwise denuded area commonly used by travelers as a parking and resting point. As the proposed project route would bypass these trees, their value as roosting habitat would not be compromised.

The project would not impact southwestern willow flycatcher habitat. As described above, in the Crystal Springs vicinity the proposed project route lies on the east (opposite) side of SR 318 and between fifty and hundred yards distant from habitat associated with the Spring. In the vicinity of the Key Pittman Wildlife Management Area the route would cross areas of low (< 1 m) brush closely adjacent to the highway or lie within the already bladed, largely denuded highway shoulder. None of the willow (*Salix* sp.) thickets or other habitats subject to use by the flycatcher would be entered.

Project construction would not impact the pygmy rabbit. Because this species is associated with dense stands of Big sagebrush (*Artemisia tridentata*) and digs a characteristic burrow (Hall 1946, Ulmschneider 2003), its presence or absence in an area can be readily established. Surveys conducted in July 2003 identified pygmy rabbit occupation areas within some northern project corridor sections (Appendix 3). The proposed route has been moved to the denuded highway shoulder in these areas to avoid pygmy rabbit habitat.

Because no project-related activities would occur closer than about 0.25 miles from the White River spinedace habitat in Kirsch Wildlife Management Area (adjacent to the project's northern terminus at Sunnyside), this species would not be affected.

Migratory Birds

Project construction would not impact nesting migratory birds or their nests. Per standard BLM stipulations, any project action anticipated during the 1 May – 15 July critical nesting season would precipitate:

- 1) preparation, by the project proponent, of appropriate maps showing areas subject to project-related disturbance and;
- 2) surveys, by BLM-approved wildlife team, to determine if migratory bird breeding or nesting is occurring in the project area.

Project actions would be permitted only in areas determined to be clear of migratory bird nesting activity.

Because the two cell phone towers would be placed within a regionally important bird migration corridor they would introduce new long-term collision hazards to nocturnally migrating birds. Locally wintering raptors might also be affected. The extent of these hazards would be reduced, however, because the towers would not require guy wires or support cables. Also, because of their relatively low (65 – 70 feet) height, aircraft avoidance lighting – a feature that attracts migrating birds – would be unnecessary.

Wild Horses and Burros

Impacts to the wild horses currently occupying the Dry Lake Herd Management Area (White River Narrows to southern terminus of the Egan Range) would be minimal because construction would be outside the horses' primary use area. In addition, any wild horses present would probably vacate the immediate vicinity during construction activity.

Some disturbance to animals grazing nearby could arise as a result of equipment-related noise and dust.

Cultural and Historic Resources

As currently proposed, the route completely avoids all twenty nine prehistoric and historic cultural resource sites identified by White (2002) and Smith (2004). Regardless, its passage through the White River Narrows Archaeological District, a locality currently listed on the National Register of Historic Places (NRHP), increases somewhat the potential of inadvertent damage to nearby sites. The proximity of some sites to the project route could increase the likelihood of artifacts being collected by project personnel during construction.

Visual Resources

No highway segment along the proposed alignment is a designated “scenic” route. US Highway 93 is designated a “scenic byway” north of its intersection with SR 318, the point at which the proposed route exits the US 93 corridor and begins paralleling SR 318 (NDOT 2002).

Anticipated fiber optic line installation methods would result in relatively minor ground disturbance and displacement. Disruption of currently established vegetation along the project’s eight to twelve foot-wide track and along the access points from the adjacent highway would impose some temporary scarring of the landscape. These types of disturbances are compatible with uses of VRM Class 2, 3 and 4 lands.

Presence of the ancillary regeneration stations and cell phone towers would impose upon existing viewsheds. To reduce this intrusion, the Lincoln County station would be situated behind a small knoll. The Nye County facility would be placed on public land, immediately adjacent to the NDOT right-of-way fence, but in an area where some development and structures (e.g., Sunnyside Ranch and Kirch Wildlife Management Area) are already apparent. The signal regeneration facilities would be colored to reduce their contrast with surrounding terrain but would still be intrusive. The 65 - 70 foot-high wood pole cell phone towers would be visible for long distances.

Invasive, Non-Native Species (Including Noxious Weeds)

This project has the potential to introduce and/or exacerbate spread of invasive, non-native species, including noxious weeds.

A BLM *Risk Assessment for Noxious Weeds*, an exercise assessing likelihood of a proposed activity to introduce or exacerbate spread of unwanted plants, has been completed as part of this process (Appendix 4). For this project the risk rating is judged to be low.

Mitigation to prevent spread of known noxious weed concentrations or introduction of presently absent species is set forth in the Mitigation subsection of the Description of the Proposed Action.

Air Quality

Depending upon extent of actual ground disturbance and post-construction revegetation rate, the project route could become a long-term source of dust. At minimum, transitory negative impacts to air quality would result from increased dust and vehicle/equipment exhaust fumes. Water spraying during project operations would reduce project-associated dust.

Wastes, Hazardous and Solid

No hazardous waste would be left on-site. Lincoln County Telephone System, Inc. recognizes that any spill of hazardous waste must be immediately cleaned and reported.

The project would generate small amounts of solid waste, e.g., empty cable spools. All project-generated solid waste would be disposed of properly.

Traffic Patterns and Flow

Proposed project activities would only occur *adjacent to* nearby highways over most of the project's length. Some minor, temporary disruptions of traffic flow might occur in areas where the fiber optic route would lie in close proximity to the highway (e.g., near Hiko, or through the White River Narrows) and at the five highway crossing points.

Socio-Economics

The project would meet the needs of the proposal and provide expanded communication facilities in the project area.

The project would provide temporary employment opportunities to various local contractors and increased, long-term employment opportunities with local communications companies.

No Action Alternative

Under the No Action Alternative the need for the proposed project would not be met. Communications facilities and service would remain static. The above-described project-associated impacts would not occur.

V. CUMULATIVE IMPACTS

Special Status Species

Past Actions

Construction and use of US Highway 93 and connecting routes has certainly caused an unknown number of vehicle collisions with desert tortoise between Alamo and Ash Springs. The lone tortoise shell fragment found alongside US 93 is probably a remnant of a recent road kill. Livestock grazing in the Pahrangat Valley has also probably contributed to tortoise mortalities through competition for local forage.

Construction of US 93 sections adjacent to the Pahrangat Lakes probably impacted, to an unknown degree, bald eagles' (and other species') use of the area. Similarly, US 93 construction through Ash Springs – and particularly across the Springs' outflow – probably caused some loss of fish there and may have simultaneously impacted use of the

willow and cottonwood thickets west of the highway by yellow-billed cuckoo and other bird species.

Construction and use of State Route 318 near Sunnyside probably caused loss of pygmy rabbit habitat and an unknown number of pygmy rabbit mortalities through collisions with vehicles.

Construction of US Highway 93 and SR 318 probably destroyed an unknown number of cacti and yuccas that previously occupied the highways' footprints. Construction of associated right-of-way fences may have caused injury to or death of tortoises, pygmy rabbits and local plants.

Present Actions

Project construction, while consistent with local land-use plans, has the potential to kill or injure protected fish, reptiles, birds and mammals, and damage or destroy plants in the construction corridor. Depending upon construction timing⁹, project-associated increased traffic could slightly increase the number of highway-related tortoise mortalities.

Reasonably Foreseeable Future Actions

Post-construction maintenance-associated equipment entry onto the fiber optic line corridor would increase probability that locally occurring sensitive species would be harmed.

Impacts

Various animal and plant species, now granted assorted degrees of state and/or federal protection, were undoubtedly impacted by original highway and adjacent right-of-way fence installation. The proposed project could contribute to cumulative losses via renewed local ground-disturbing activities. Given current BLM management policies, however, it is unlikely that these losses would be large or precipitate new *Threatened* or *Endangered* listings.

Project-related surveys have provided updated information regarding presence of some sensitive species (e.g., desert tortoise and pygmy rabbit) within and adjacent to the project corridor.

An aerial fiber optic line is already in place connecting the proposed project's northern terminus at Sunnyside and Ely. Constructing the proposed Alamo to Sunnyside line

⁹ Tortoises are normally winter-dormant and remain in their burrows from mid- or late October through about mid- or late February.

would not precipitate additional fiber optic installation to the north, crossing White River spinedace habitat and, thereby, contributing to potential harm to this species.

Cultural and Historic Resources

Past Actions

Highway construction and maintenance has physically disrupted some cultural resource sites along the US 93 and SR 318 corridors. Right-of-way fence installation may have disturbed sites in and adjacent to those corridors. Increased visibility of and access to the sites as a result of the highways' presence has precipitated more visits. Designating the White River Narrows as a National Register site has increased local awareness about the area's fragile nature and cultural significance.

Present Actions

As a result of this proposal the entire **eighty one** mile-long project corridor and immediately abutting lands have been thoroughly inventoried and recorded by professional archaeologists. Ely Field Office BLM staff now have a far more complete and detailed picture of cultural and historic resources in this area than at any previous time. This increased knowledge provides a solid base from which prudent management decisions affecting this area can be made.

To reduce likelihood of these sites being damaged, the proposed project has purposely incorporated avoidance of identified cultural and historic resources into its design.

Reasonably Foreseeable Future Actions

Careful placement of the proposed project route minimizes the likelihood that post-construction maintenance and other permitted additional uses would disturb the sites.

Impacts

Because avoidance of recognized sites has been a key project objective, no project-associated physical disruption of cultural materials should accrue unless previously unknown (buried) sites are discovered during construction. Such occurrence would cause a cessation of project operations at least until the new materials could be assessed.

Invasive, Non-Native Species (Including Noxious Weeds)

Past Actions

Various activities have resulted in establishment of spotted and Russian knapweed around Crystal Springs, near the US 93/SR 318 junction, and around the Kirch Wildlife Management Area, near Sunnyside.

Present Actions

Recognition of the project's potential to introduce or spread noxious weeds, together with mitigation measures designed to prevent such occurrence should minimize or prevent new infestations along the project corridor.

Reasonably Foreseeable Future Actions

Present and future proposals for projects along the proposed fiber optic corridor could hasten completion of BLM's comprehensive noxious weed inventory along the affected highway sections.

Maintenance and subsequent use of the project corridor would not increase weed-related concerns if appropriate mitigation measures continue to be applied.

Impacts

Following mitigation methods included as part of this proposed action would reduce the likelihood of spreading known noxious weed infestations or introducing new species into the project corridor.

VI. PROPOSED MITIGATION

Appropriate mitigation has been included as part of the Proposed Action. No additional mitigation is proposed.

VII. SUGGESTED MONITORING

Appropriate monitoring has been included as part of the Proposed Action. No additional monitoring is proposed.

VIII. CONSULTATION AND COORDINATION

Lincoln County Telephone System, Inc. and its consultants met with Ely Field Office BLM staff for a project-scoping meeting in May 2001. Initial internal District review was provided by:

Bob Brown	Wild Horses
Gretchen Burris	Outdoor Recreation/Wilderness
Shane DeForest	Wildlife/Sensitive Species/Invasive Species (Noxious Weeds)
Mark Henderson	Archaeology
Doris Metcalf	Land Law Examiner
Paul Podborny	Wildlife/Sensitive Species
Karen Prentice	Noxious Weeds
Jake Rajala	NEPA Coordination

Mr. Bill Smith, biologist at Ely District BLM's Caliente Field Station, provided additional coordination during preparation of this document. This project has also been coordinated with appropriate US Fish and Wildlife Service and NDOT staff and the public.

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**Pygmy Rabbit (*Brachylagus idahoensis*) Presence on Lands
Subject to Crossing by a Subterranean Fiber Optic Line
Along State Route 318 Between Mileposts LN 41 and NY 18
in
Lincoln and Nye Counties, Nevada**

Prepared for:

Lincoln County Telephone Company, Pioche, Nevada

and

U.S. Bureau of Land Management, Ely District Office, Ely Nevada

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August 2003

Pygmy Rabbit (*Brachylagus idahoensis*) Presence on Lands Subject to Crossing by a Proposed Subterranean Fiber Optic Line Along State Highway 318 Between Mileposts LN 41 and NY 18 in Lincoln and Nye Counties, Nevada

Introduction

This report details results of surveys conducted 11 and 24 July 2003 for purposes of establishing presence or absence of pygmy rabbits (*Brachylagus idahoensis*) along northern portions of a proposed, eighty mile-long by twelve foot-wide fiber optic line corridor. Lincoln County Telephone Company seeks to install a buried fiber optic communication line from Alamo in Lincoln County to Sunnyside in Nye County. The proposed route would parallel U.S. Highway 93 and Nevada State Route 318 along these highways' east sides. The Company's proposal has prompted preparation of a NEPA¹⁰-based Environmental Assessment. One issue addressed in the EA is the proposed project's potential to impact pygmy rabbits residing in or otherwise using the project corridor. Pygmy rabbits are managed as a "sensitive" species in Nevada.

On 11 July 2003 I met with Nevada Division of Wildlife (NDOW) Game Biologist Supervisor John Himes at Kirch Wildlife Management Area near Sunnyside to receive field instruction in identification of pygmy rabbit sign and species-specific survey techniques. Dr. Himes had previously supplied me with related written information, references and photos. Our meeting occurred in response to my previously having been notified by Ely District Bureau of Land Management staff that a survey of potential pygmy rabbit habitat would be required as part of the above-described Environmental Assessment, which I am preparing on behalf of Lincoln County Telephone.

Background

Pygmy rabbits, small leporids most commonly associated with mature stands of Big sagebrush, *Artemisia tridentata*, reach the southern extent of their Nevada range in extreme northwestern Lincoln and northeastern Nye counties (Hall 1946). Key habitat requirements appear to be dense stands of *A. tridentata* a meter or more in height growing in conjunction with deep soils in which the rabbit can construct its burrows (Ulmschneider 2003).

A disjunct population of pygmy rabbits in Washington state was listed as Endangered in 2001 and, in recent months, a petition has been filed by a consortium of groups and individuals to place all remaining pygmy rabbit populations under federal protection. Because the rabbit is locally considered a "sensitive" species by Bureau of Land Management personnel, any action on BLM lands in Nevada that may impact the species triggers a survey to determine rabbit presence or absence in the proposed project area. Survey results dictate subsequent management decisions and actions. Actions potentially

¹⁰ National Environmental Policy Act of 1969. 42 U.S.C.~ 4321-4347, January 1, 1970 as amended 1975 and 1994 (Musgrave et al. 1998).

impacting pygmy rabbits are now being even more closely scrutinized pending outcome of the petition to list the species under the Endangered Species Act.

The Nevada Natural Heritage Program data base of local sensitive species occurrence contains records of *Brachylagus idahoensis* in the general vicinity of the proposed project corridor (Miskow, pers. comm.).

Ely District BLM wildlife biologists have identified several areas of potential *Brachylagus* habitat that would be crossed if the fiber optic line is constructed as proposed. These habitats, identified by presence of Big sagebrush, lie variously in the twenty seven miles between SR 318 milepost 41 in Lincoln County and the route's northern terminus at about milepost 18 in Nye County.

Methods

After meeting with Dr. Himes on 11 July I drove the relevant stretch of SR 318 and noted approximate beginning and ending points of each section containing likely looking Big sagebrush stands. I found no suitable habitat in the Lincoln County portion. Locations, by milepost, of the potentially suitable stands initially identified and visited on 11 July are:

NY 3.9 – 4.1
NY 6.2
NY 7.5
NY 7.6 – 7.9
NY 8.0 – 9.1
NY 11.1 – 11.5
NY 13.3 – 14.6
NY 17.1 – 18.1.

After identifying each location from the highway I stopped to more closely examine the local sagebrush community and do spot checks for pygmy rabbit sign (pellets, burrows and rabbits). I eliminated several of the above localities from further consideration when 1) preliminary inspection revealed the sagebrush to be insufficiently tall and/or dense to provide the rabbit's requisite cover and 2) no pygmy rabbit sign was apparent. After the preliminary examination just four sites remained to be more fully surveyed. These are:

NY 8.0 – 9.1
NY 11.1 – 11.5
NY 13.3 – 14.6
NY 17.1 – 18.1.

On 24 July I examined the remaining four sites for indications of occupation and/or use by pygmy rabbits. I surveyed each site by walking its length up and back in a roughly zigzag pattern that allowed me to closely inspect an approximately twenty foot-wide corridor along its entire length. Because in this part of the project area the proposed fiber

optic line would be placed roughly eight feet inside (toward the highway) the fence denoting Nevada Department of Transportation's right-of-way boundary (Mid-State Consultants 2003), I used the fence as a continuous reference of project corridor location.

I assumed presence of pygmy rabbit pellets, burrows or the rabbits themselves to indicate an area is, or has been, used and/or occupied by *Brachylagus*. Conversely, I assumed absence of sign to mean probable rabbit absence.

Results

I found no apparent *Brachylagus* habitat within the few, scattered *Artemesia tridentata* stands in the Lincoln County portion of the survey area (i.e., milepost LN 41 to LN 49). Where Big sage does grow in this section it is too small and too widely spaced to be of use to the rabbit. Similarly, between mileposts 0.0 and 8.0 in Nye County none of the sites supporting Big sagebrush appear to provide suitable *Brachylagus* habitat or contain any pygmy rabbit sign.

Descriptions and survey results for the four remaining locations follow:

Site 1: Milepost NY 8.0 – 9.1

Potential *Brachylagus* habitat along this highway section is very discontinuous. Scattered patches of what I would judge to be marginally suitable pygmy rabbit habitat occur, but are typically just a few meters in extent. Individual *Artemesia tridentata* within these patches only occasionally reach or exceed a meter in height and there are no truly large plants. These *Artemesia* stands are also insufficiently dense to provide an interlocking canopy and thus, in my view, fail to provide the cover *Brachylagus* prefers. I found no pygmy rabbit sign along this stretch. Black-tailed jackrabbit (*Lepus californicus*) sign is fairly common.

Site 2: NY 11.1 – 11.5

This site contains some *Artemesia tridentata* reaching heights of about 1.5 meters but I found no evidence of *Brachylagus* here. Local habitat character has probably been changed and its value to pygmy rabbits reduced by presence of the large dike that directs runoff beneath the culvert at SR 318 milepost 11.5. The small stand of moderately large Big sagebrush adjacent to the proposed project corridor here exists as an isolated island of habitat in the cul-de-sac created between the dike and the highway. As such, it probably provides little habitat useful to *Brachylagus*. I did note black-tailed jackrabbit burrows and sign and one possible badger (*Taxidea taxus*) burrow in this area.

Site 3: NY 13.3 – 14.6

Between milepost 13.3 and about 13.5 the *Artemesia tridentata* is mostly less than one meter in height and too widely spaced to provide adequate *Brachylagus* cover. From mileposts 13.5 to between 13.7 and 13.8 an eight to ten meter-wide swath has been recently bladed along the highway-side of the right-of-way fence. As this bladed area is just now beginning to revegetate it is unlikely to provide any habitat values for *Brachylagus*. One roughly thirty meter-wide patch of mature Big sage remains in a drainage crossing the bladed area but I found no pygmy rabbit sign within it. Cottontail (*Sylvilagus nuttallii*) and black-tailed jackrabbit sign is apparent throughout both the vegetated and cleared areas.

Excellent *Brachylagus* habitat begins at about milepost 13.8 and extends virtually unbroken to the end of this section. The *Artemesia tridentata* is mature and frequently reaches two meters in height. Growth is frequently sufficiently dense to even make surveying difficult because the plant bases cannot be easily seen. This area is crisscrossed with rabbit trails. Scat, both old and fresh, of *Brachylagus*, *Sylvilagus* and *Lepus* sometimes literally carpets the ground. Forms (above-ground resting areas) are abundant around the bases of the *Artemesia*. Coyote (*Canis latrans*) sign is also plentiful here, indicating the area is frequented by these rabbit predators. I found numerous fragmented skeletal remains of both rabbits and hares – material probably left over from disintegrated coyote scat.

I noted and flagged several “suspect” burrows within the mature *Artemesia* stand. The larger holes, situated in more open spaces, are probably not the work of *Brachylagus* but the smaller burrows around the bases of sagebrush plants almost certainly are. I saw one pygmy rabbit toward the north end of this reach.

Site 4: NY 17.1 – NY 18.1

The southernmost part of this section hosts a patchy community of well spaced Big sagebrush. Although some plants approach heights of one and a half meters they are generally too far apart to provide adequate cover for *Brachylagus*. By about milepost 17.3 the density and height of the Big sage is beginning to increase and, beneath it, old pygmy rabbit scat is becoming more or less regularly apparent. One to two hundred meters farther north I found a cluster of fresh *Brachylagus* scat. Big sage in this vicinity is considerably thicker and taller still, with some plants growing to about two meters.

I noticed some possible forms in this reach but, based on their relatively open placement, am not convinced they were made by *Brachylagus*. Both cottontails and jackrabbits also use this area. I noted and flagged two seemingly abandoned (one very shallow, the other filled with debris and spider web) *Brachylagus* burrows along this reach. Although both are actually slightly outside the anticipated project corridor, their presence certainly evidences use of the general area by pygmy rabbits.

Discussion and Recommendations

Because *Brachylagus* sign appears to be absent from all but the northern two reaches examined during these surveys, I think it unlikely that any pygmy rabbits would be harmed if the proposed project is constructed through those apparently unoccupied and unused areas, as presently planned.

Brachylagus occupies and routinely uses the mature *Artemesia tridentata* stand located between about mileposts NY 13.8 and 14.6 in Site 3 and the fiber optic line route should be moved to the highway shoulder through this area. Because large Big sage plants grow right to the edge of the highway shoulder along much of this reach, some loss of habitat would still occur. But loss of “edge” habitat is likely to cause less impact to local rabbits than would occur if this *Artemesia* stand is fragmented by placing the fiber optic line adjacent to the fence as presently proposed.

Similarly, although habitat values in Site 4 appear to be somewhat less than those in Site 3, presence of reasonably abundant *Brachylagus* sign in this vicinity indicates that Site 4 is used and probably occupied by pygmy rabbits. Dr. Himes and I observed a pygmy rabbit, a burrow and associated form just outside the proposed project corridor here on 11 July. Fragmentation of the Big sage stand in this reach will only reduce its value as *Brachylagus* habitat. I recommend moving the fiber optic line to the highway shoulder through this area, as well.

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September, 2004 addendum to August 2003 report on pygmy rabbit, *Brachylagus idahoensis*, presence along the proposed route of Lincoln County Telephone System, Inc.'s Alamo to Sunnyside fiber optic line.

Introduction

In July 2004, Lincoln County Telephone System Inc. extended its proposed Alamo to Sunnyside fiber optic line route 3230 feet north along the west side of State Route 318 from the originally planned termination point. This extension would move the project's northern terminus from near milepost NY 18.1 to about milepost NY 18.7, and enable direct connection with a Nevada Bell communications cabinet at the latter site.

After crossing beneath SR 318 at milepost 18.1 as originally planned, Lincoln County Telephone's proposed extension would then veer north to milepost 18.7. The proposed extension's path would parallel the highway at a distance of thirty feet from centerline, i.e., about fourteen feet from the highway edge.

Because some habitat adjacent to the area through which the extension would run has previously been found to contain the pygmy rabbit (*Brachylagus idahoensis*), a BLM-designated *sensitive* species, on 27 August 2004 I examined the proposed extension area for evidence of this animal.

Methods

As in the original (August 2003) survey, I visually examined the vicinity of the proposed extension route for pygmy rabbits and their sign (i.e., burrows, forms and defecated pellets) by walking transects across areas supporting mature big sagebrush, *Artemesia tridentata*, stands – a key habitat component for this rabbit species. Transects were walked in a roughly zigzag pattern, one from south to north and then one north to south. The area surveyed extended from the edge of the highway shoulder to about fifty feet west.

Results

From milepost 18.1 to about milepost 18.4, a mixed community of mature and immature big sagebrush provide a discontinuous mosaic of potentially suitable *Brachylagus* habitat, along the highway shoulder. From milepost 18.4 to the project's terminus near 18.7, the sagebrush has long been removed by grading and no *Brachylagus* habitat exists.

Within the *Artemesia*-covered area I noted numerous rabbit pellets which, based upon their size, I judge to be the product of either cottontail (*Sylvilagus nuttallii*) or black-tailed jackrabbit (*Lepus californicus*). None of these sign appeared to be freshly deposited. Most was either gray and very crumbly (old) or light brown and dry

(moderately old). Only occasionally did I note diminutive fecal pellets that might have been left by pygmy rabbits, and these occurred only as scattered leavings noted in conjunction with the highly abundant larger pellets of the cottontail and hare. I found no suspect burrows or forms (above-ground resting sites) implying routine use of the area by *Brachylagus*.

Conclusions

Approximately 0.3 miles (milepost 18.1 – 18.4) of the habitat that would be crossed by Lincoln County Telephone System, Inc.'s proposed fiber optic line extension may be of some marginal use to the pygmy rabbit, but it does not appear to be regularly used by the species. The remaining, essentially denuded 0.3 miles (milepost 18.4 – 18.7) of the proposed extension corridor contains no sagebrush and is, therefore, of no value to the rabbit.

Incorporating the proposed extension into the project is unlikely to either materially disrupt local pygmy rabbit habitat or cause loss of any locally occurring pygmy rabbits.