

**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:

**Lincoln County Telephone System, Inc.**

and

**Mid-State Consultants  
Nephi, Utah**

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July 2004

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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 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**<sup>1</sup> (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);

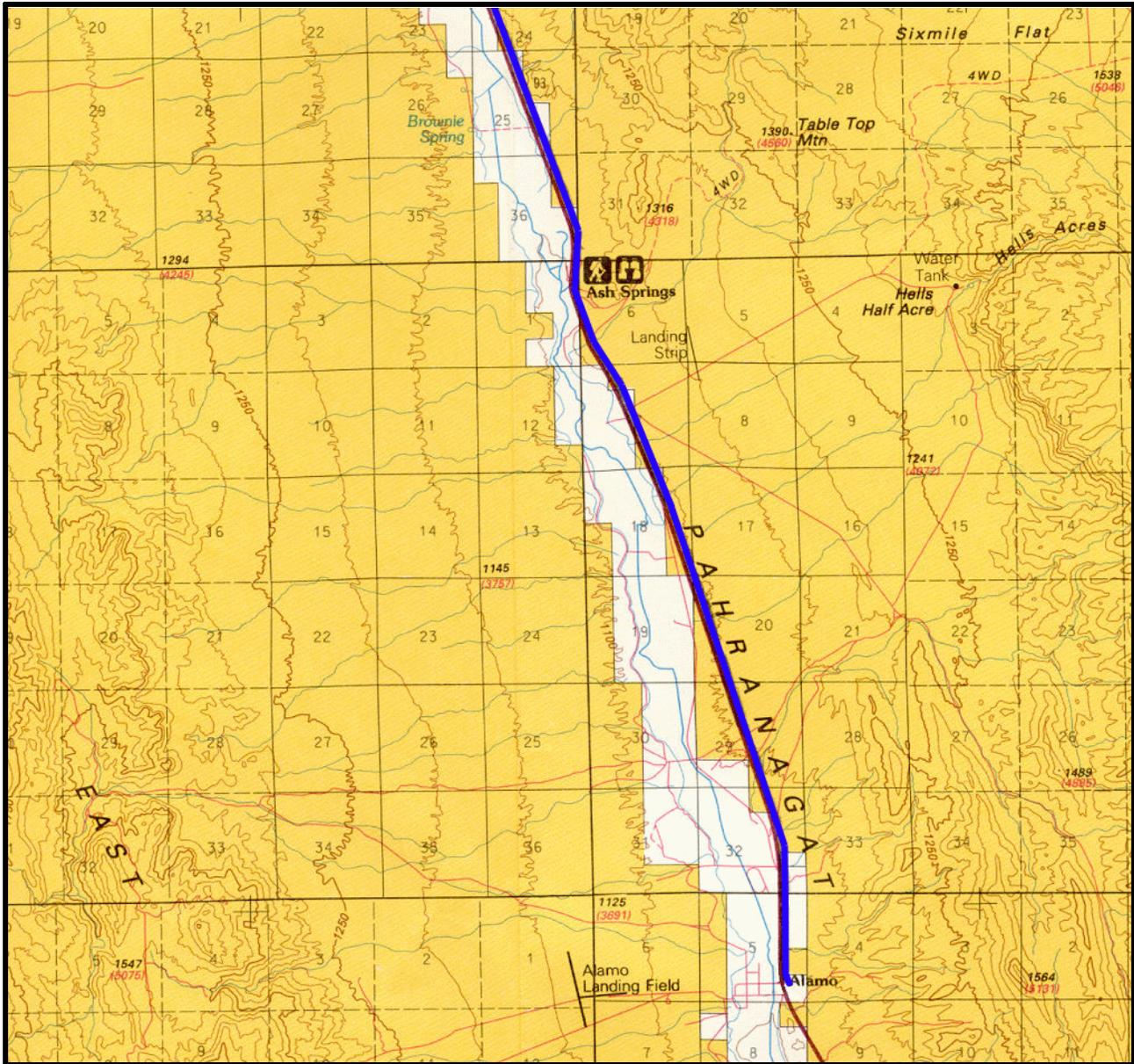
“Provide lands for rights-of-ways for roads, powerlines, telephone lines, and maintenance and storage sites for highway road maintenance” (P. L-5.0);

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).

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<sup>1</sup> 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*).



HARRY REID CENTER  
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 UNIVERSITY OF NEVADA-LAS VEGAS

Project: Lincoln County Fiber Optic Line  
 County: Lincoln  
 Map Reference: Pahrana GAT, Nevada  
 (BLM Edition Surface Management Status Map, 1999)

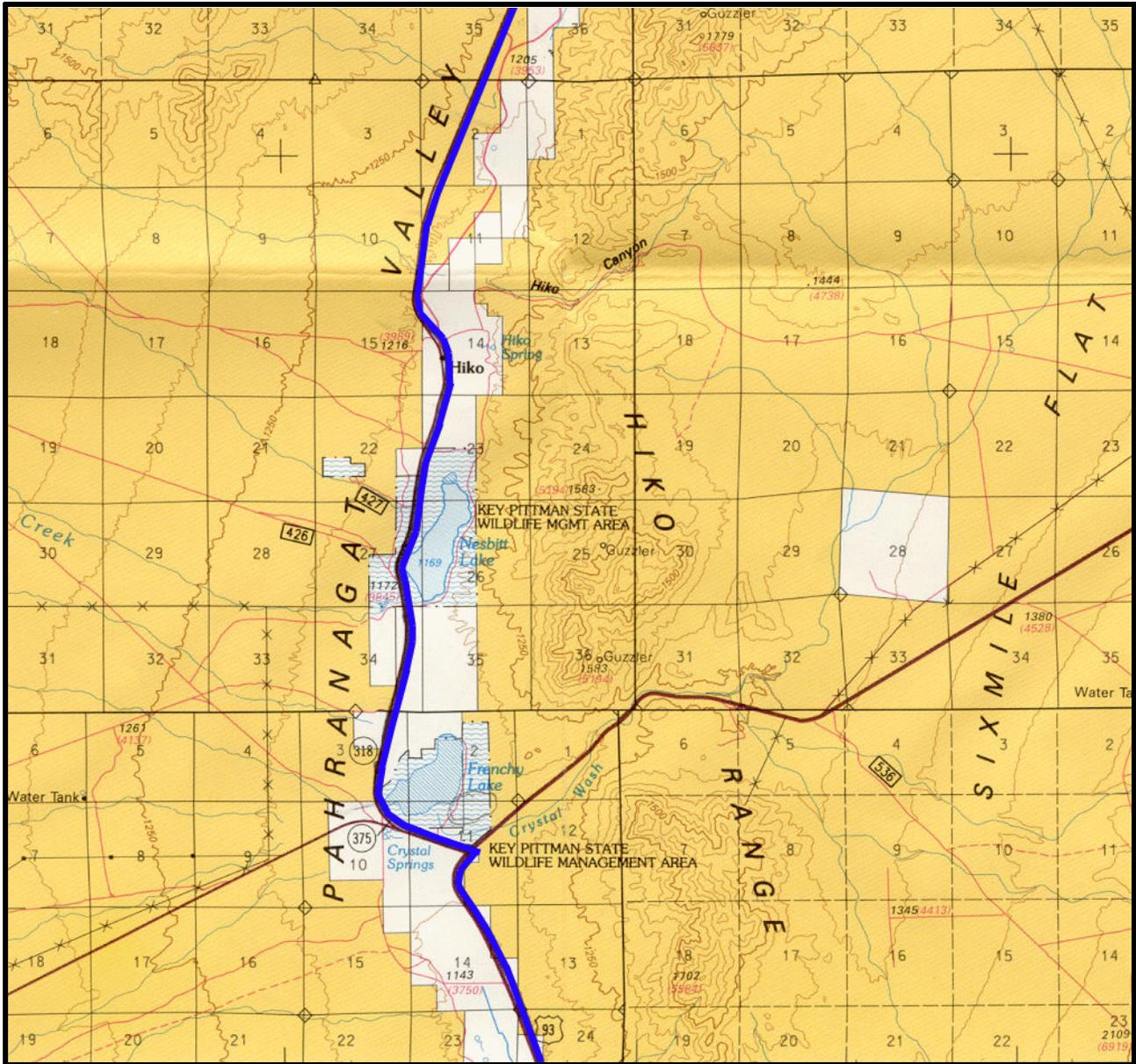
Map #1 (of 8). Proposed Route of Lincoln County Telephone System, Inc. Fiber Optic Line Between Alamo and Sunnyside in Lincoln and Nye Counties, Nevada.

Legend:

Scale: 1:100,000



Project Alignment



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Project: Lincoln County Fiber Optic Line  
 County: Lincoln  
 Map Reference: Timpahute Range, Nevada  
 (BLM Edition Surface Management Status Map, 1996)

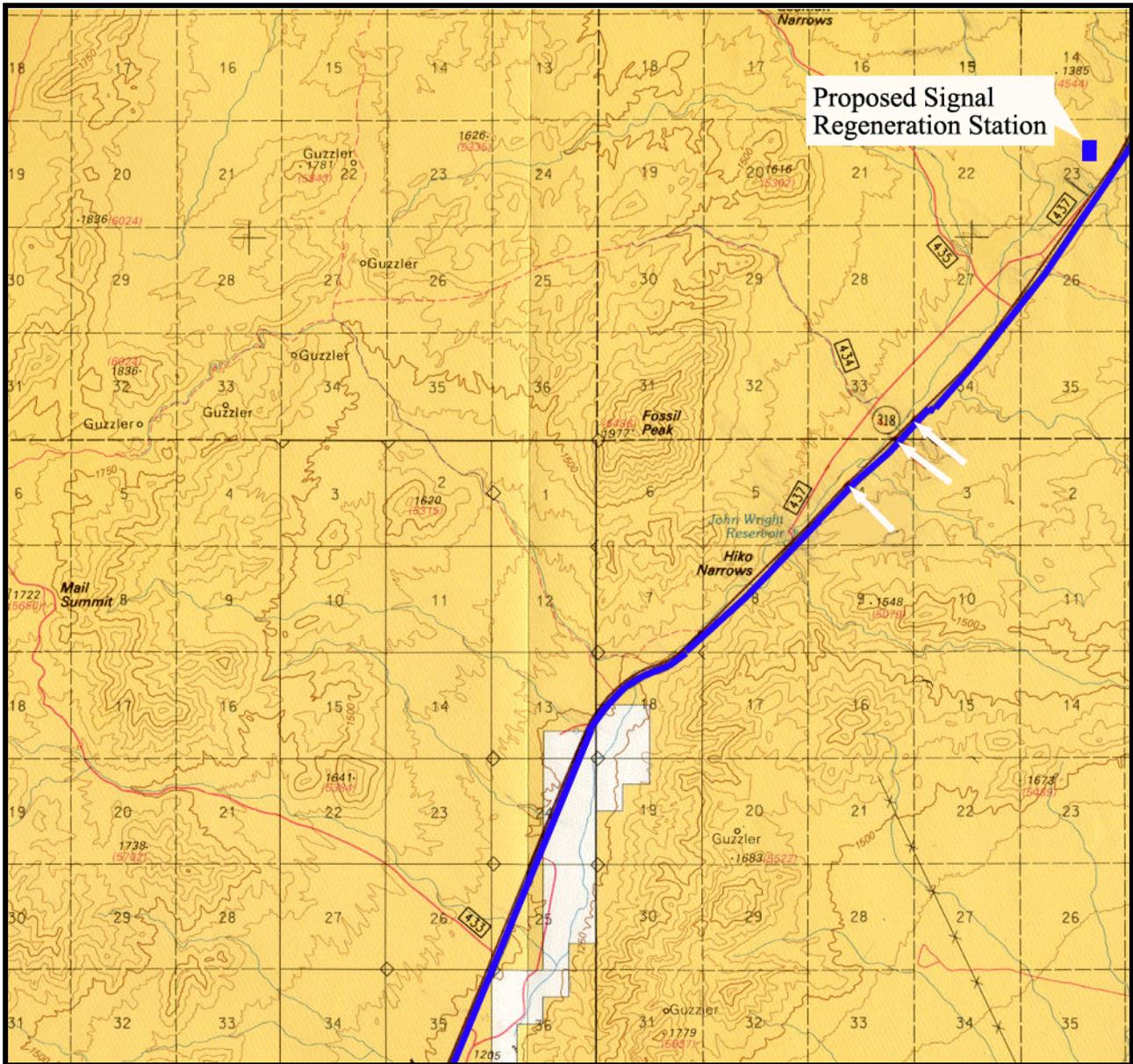
Map #2 (of 8). Proposed Route of Lincoln County Telephone System, Inc. Fiber Optic Line Between Alamo and Sunnyside in Lincoln and Nye Counties, Nevada.

Legend:

Scale: 1:100,000



Project Alignment



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 UNIVERSITY OF NEVADA-LAS VEGAS

Project: Lincoln County Fiber Optic Line  
 County: Lincoln  
 Map Reference: Timpahute Range, Nevada  
 (BLM Edition Surface Management Status Map, 1996)

Map #3 (of 8). Proposed Route of Lincoln County Telephone System, Inc. Fiber Optic Line Between Alamo and Sunnyside in Lincoln and Nye Counties, Nevada.

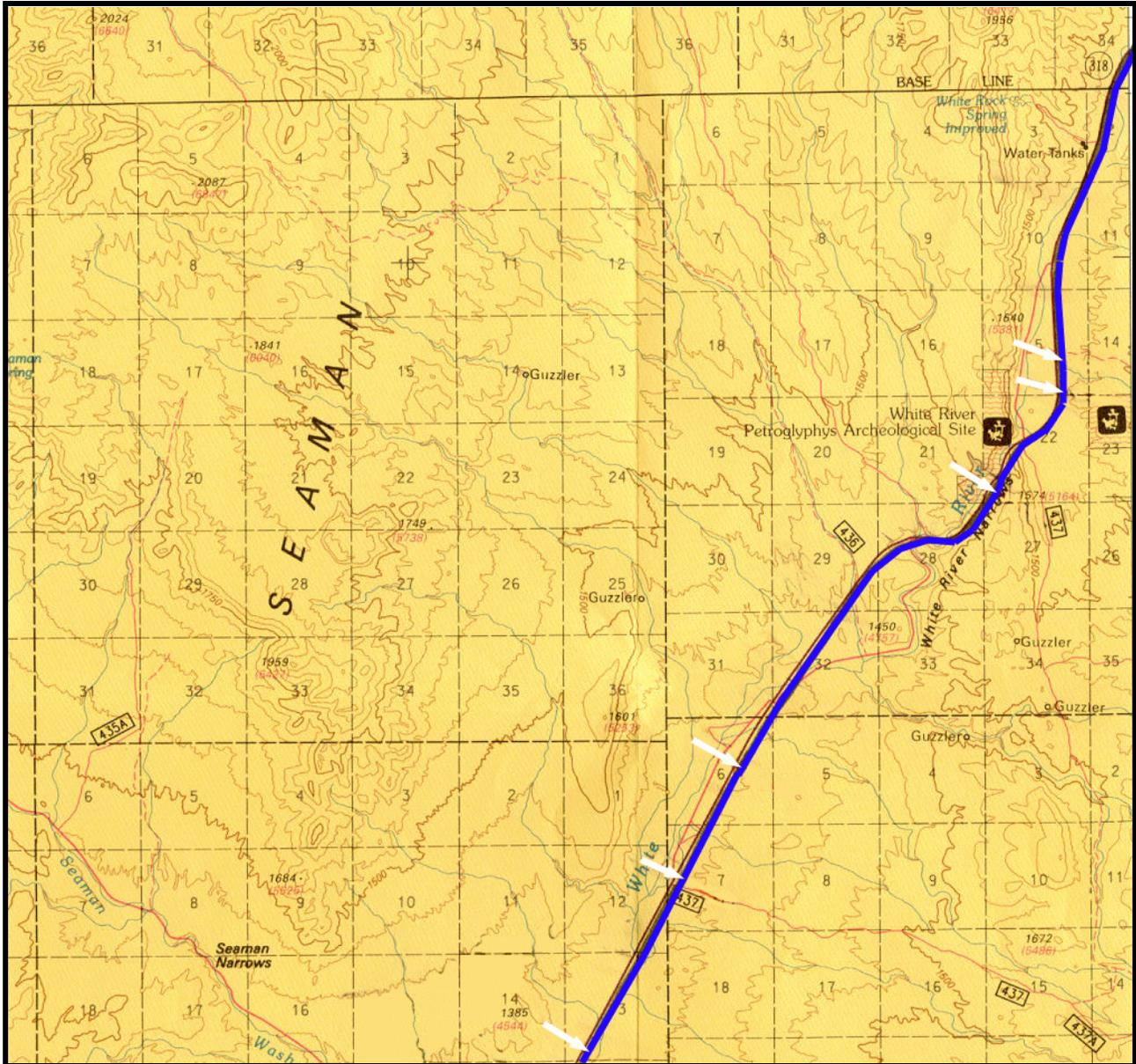
Legend:

Scale: 1:100,000

 Project Alignment

 Proposed Signal Regeneration Station

 Point Where Route Briefly Departs NDOT ROW to Avoid Obstacle



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Project: Lincoln County Fiber Optic Line  
 County: Lincoln  
 Map Reference: Timpahute Range, Nevada  
 (BLM Edition Surface Management Status Map, 1996)

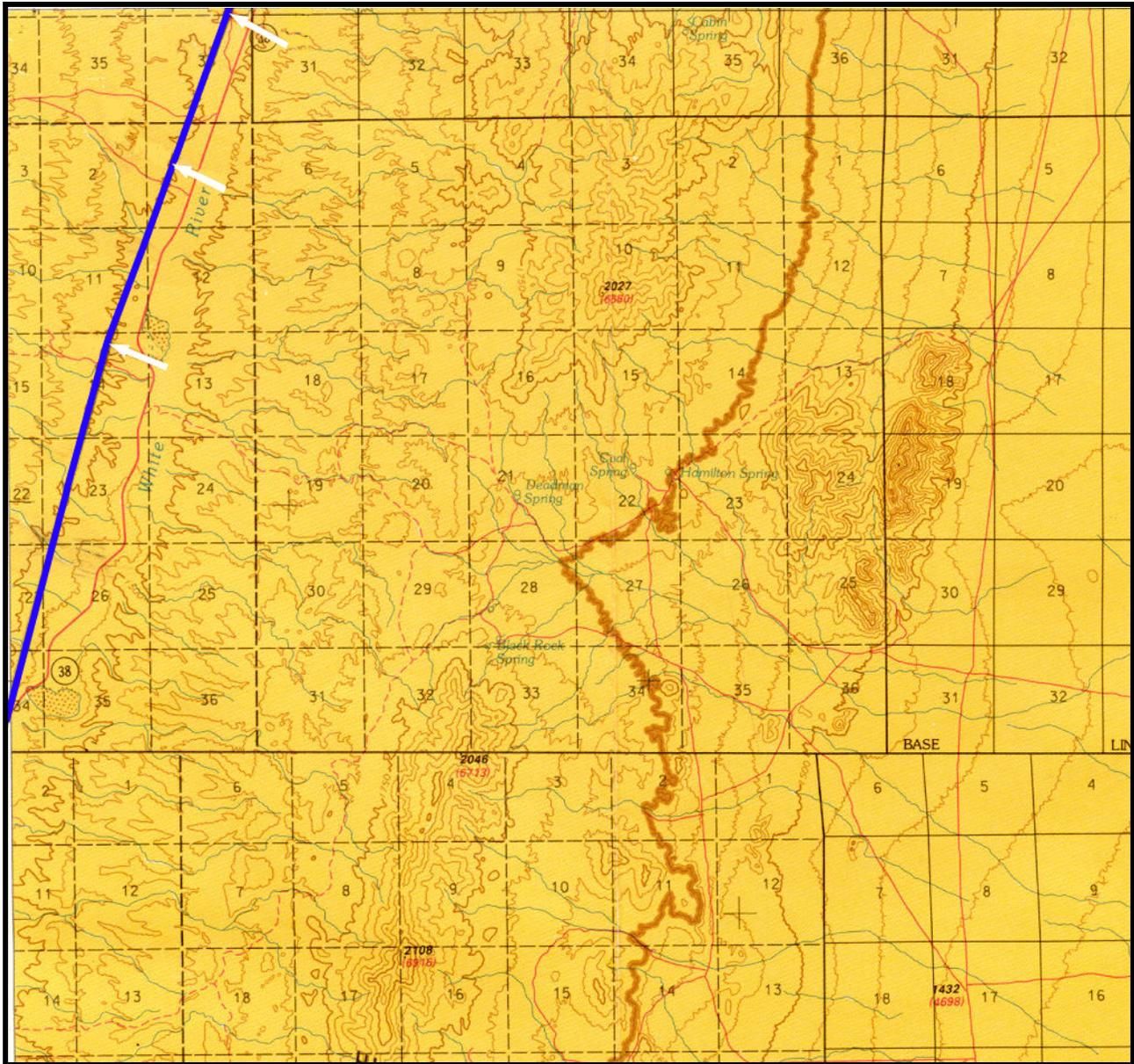
Map #4 (of 8). Proposed Route of Lincoln County Telephone System, Inc. Fiber Optic Line Between Alamo and Sunnyside in Lincoln and Nye Counties, Nevada.

Legend:

Scale: 1:100,000

 Project Alignment

 Point Where Route Briefly Departs NDOT ROW to Avoid Obstacle



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 FOR ENVIRONMENTAL STUDIES  
 UNIVERSITY OF NEVADA-LAS VEGAS

Project: Lincoln County Fiber Optic Line  
 County: Lincoln  
 Map Reference: Caliente, Nevada  
 (BLM Edition Surface Management Status Map, 1999)

Map #5 (of 8). Proposed Route of Lincoln County Telephone System, Inc. Fiber Optic Line Between Alamo and Sunnyside in Lincoln and Nye Counties, Nevada.

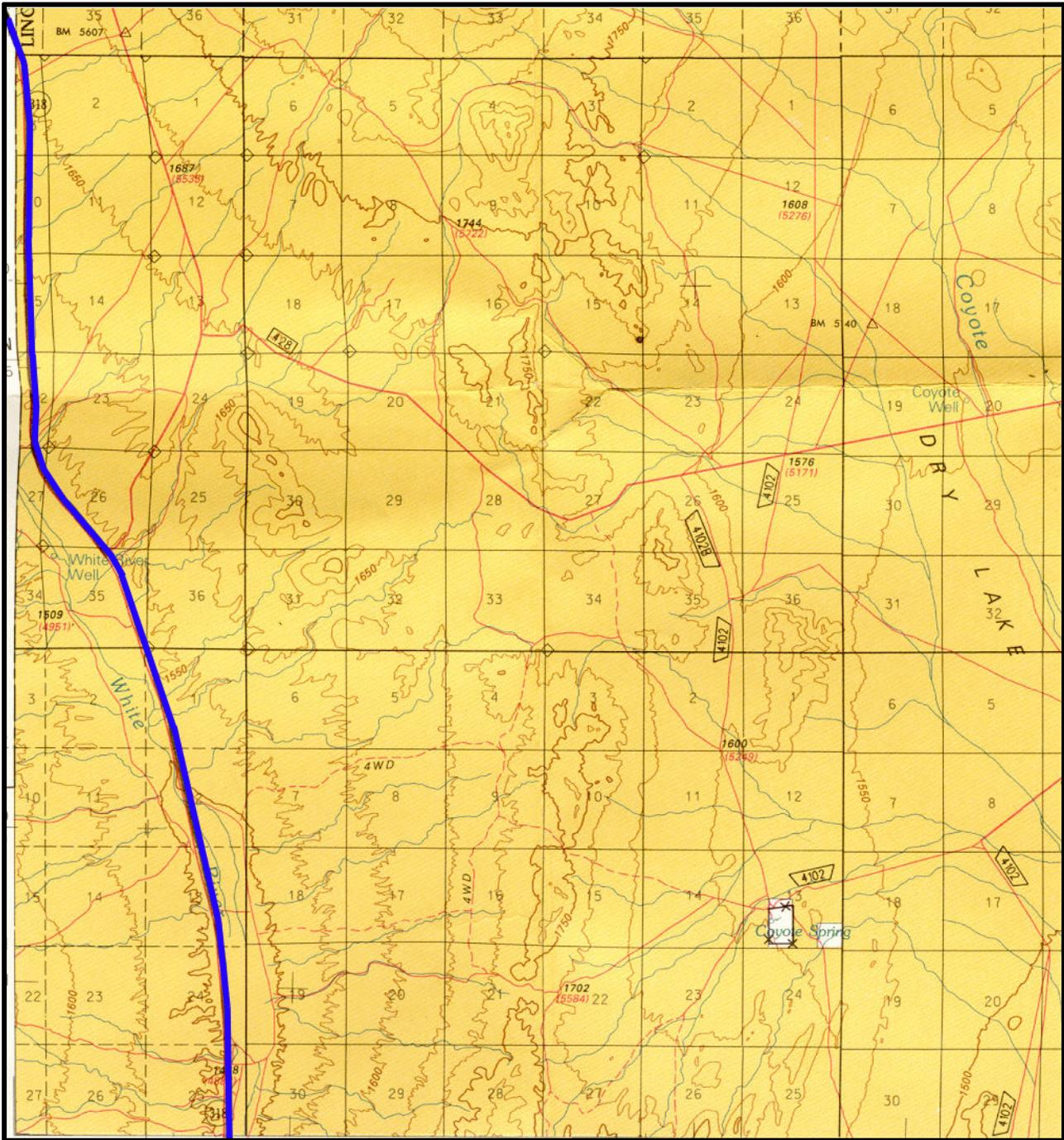
Legend:

Scale: 1:100,000

 Project Alignment



Point Where Route Briefly  
 Departs NDOT ROW to  
 Avoid Obstacle



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 UNIVERSITY OF NEVADA-LAS VEGAS

Project: Lincoln County Fiber Optic Line  
 County: Lincoln  
 Map Reference: Wilson Creek Range, Nevada  
 (BLM Edition Surface Management Status Map, 1998)

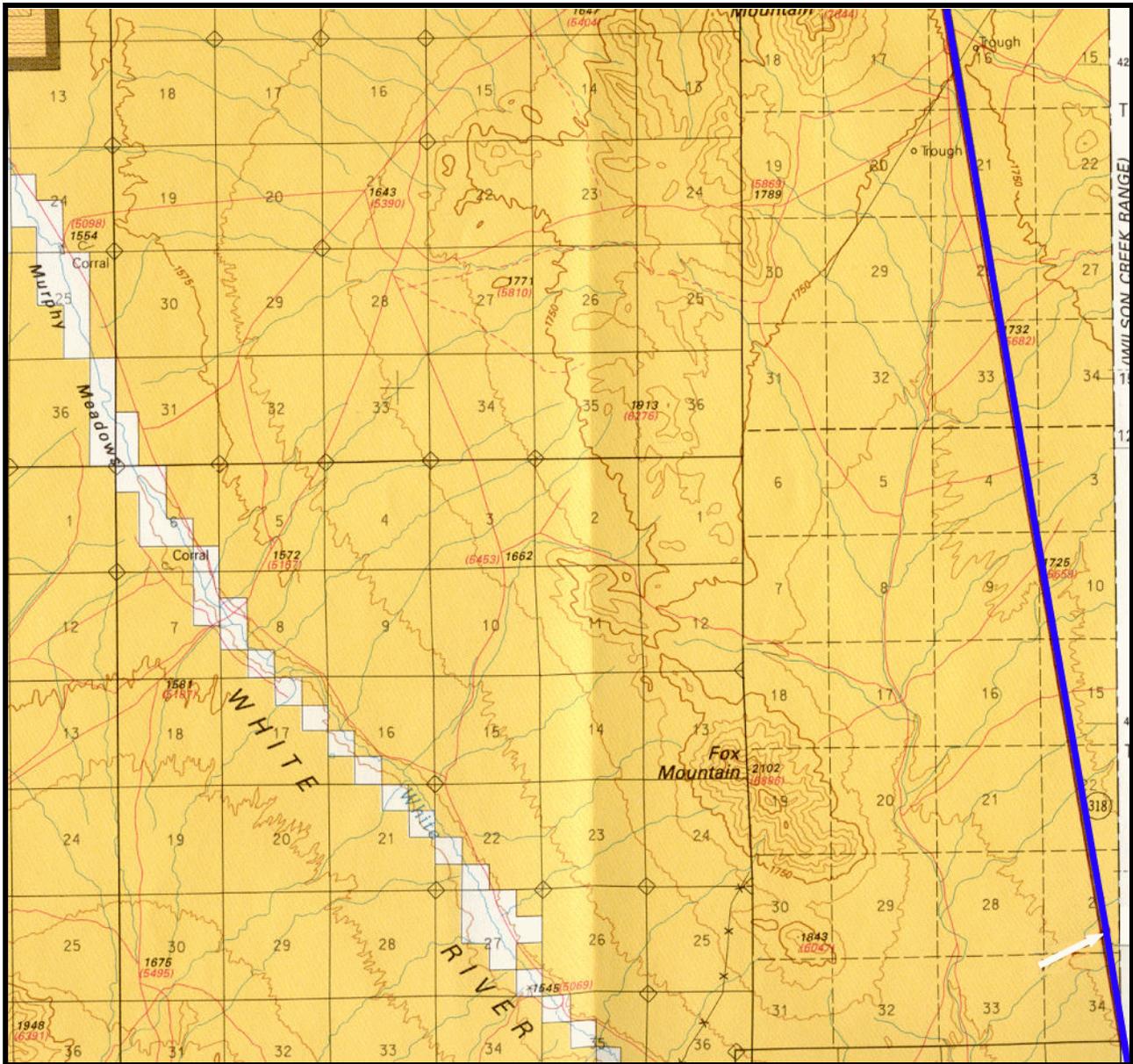
Map #6 (of 8). Proposed Route of Lincoln County Telephone System, Inc. Fiber Optic Line Between Alamo and Sunnyside in Lincoln and Nye Counties, Nevada.

Legend:

Scale: 1:100,000



Project Alignment



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 FOR ENVIRONMENTAL STUDIES  
 UNIVERSITY OF NEVADA-LAS VEGAS

Project: Lincoln County Fiber Optic Line  
 County: Nye  
 Map Reference: Wilson Creek Range, Nevada  
 (BLM Edition Surface Management Status Map, 1996)

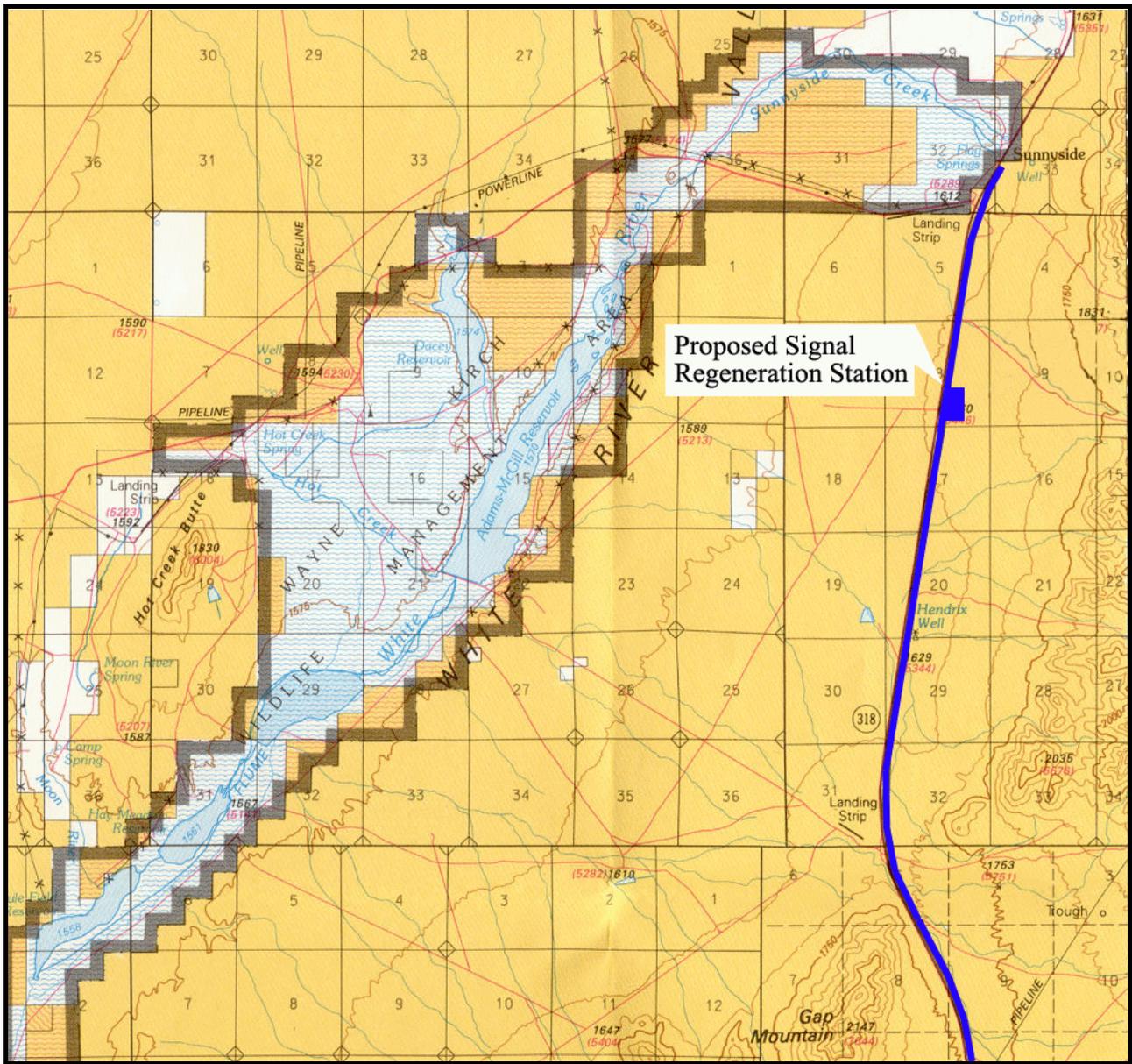
Map #7 (of 8). Proposed Route of Lincoln County Telephone System, Inc. Fiber Optic Line Between Alamo and Sunnyside in Lincoln and Nye Counties, Nevada.

Legend:

Scale: 1:100,000

 Project Alignment

 Point Where Route Briefly  
 Departs NDOT ROW to  
 Avoid Obstacle



HARRY REID CENTER  
 FOR ENVIRONMENTAL STUDIES  
 UNIVERSITY OF NEVADA-LAS VEGAS

Project: Lincoln County Fiber Optic Line  
 County: Nye  
 Map Reference: Quinn Canyon Range, Nevada  
 (BLM Edition Surface Management Status Map, 1994)

Map #8 (of 8). Proposed Route of Lincoln County Telephone System, Inc. Fiber Optic Line Between Alamo and Sunnyside in Lincoln and Nye Counties, Nevada.

Legend:

Scale: 1:100,000

 Project Alignment

 Proposed Signal Regeneration Station

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 Pahrnagat 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 Pahrnagat River (irrigation) ditch near the proposed route's crossings of US Highway 93 at Ash Springs (Map 1);
- 3) **Pahrnagat roundtail chub** (*Gila robusta jordani*) and **White River springfish** (*Crenichthys baileyi baileyi*), both federally-listed as *Endangered* and occurring in the Pahrnagat 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 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.

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.



**Photo 1:** Site of proposed Lincoln County Telephone System, Inc., Alamo to Sunnyside fiber optic line signal regeneration and cell phone tower station #1 near Nevada State Route 318 milepost LN 18.5. Station would be placed on back side of hill and accessed by single-track dirt road. The road, included as part of the project, would diverge from an existing frontage road (not visible in photo) at point of arrow and proceed around hill to site. View to west.



**Photo 2:** Site of proposed Lincoln County Telephone System, Inc., Alamo to Sunnyside fiber optic line signal regeneration and cell phone tower station #1 near Nevada State Route 318 milepost LN 18.5. Station location to right of large juniper tree (arrow). View to south.



**Photo 3:** Site of proposed Lincoln County Telephone System, Inc., Alamo to Sunnyside fiber optic line signal regeneration and cell phone tower station #2, adjacent to Nevada State Route 318 milepost NY 16. Station would be placed behind and adjacent to fence, approximately 250 feet from highway centerline. View to east.

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-way<sup>2</sup> 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 67.5 miles the proposed route would follow this same pattern along SR 318, and typically run about 192 feet from the highway centerline.

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<sup>2</sup> 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 5-9) 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 10-12). 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 13-14). 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 15). Finally, the project's intended northern terminus at SR 318 milepost 18.1 would lie about 0.25 miles east of habitat occupied by the *Endangered* White River spinedace (Map 8, photo 16).



**Photo 4:** Desert tortoise (*Gopherus agassizii*) habitat along US Highway 93 near southern terminus of proposed Lincoln County Telephone System, Inc., Alamo to Sunnyside fiber optic line. The line would here lie eight feet inside (left of) the fence, 192 feet from the highway centerline. Tortoise habitat extends from this location, at approximately US 93 milepost LN 39.75, to milepost LN 45 at Ash Springs. View to north.



**Photo 5:** Proposed Lincoln County Telephone System, Inc., Alamo to Sunnyside fiber optic line US Highway 93 crossing point at south end of Ash Springs, Lincoln County, Nevada (US 93 milepost LN 45.48). Line would cross beneath highway from east to west (photo foreground to photo background) to connect with Lincoln County Telephone facilities contained in light-colored box seen at photo center. From that point the line would continue north beneath the west-side highway shoulder to the second highway crossing point in Ash Springs at milepost LN 45.60.



**Photo 6:** West shoulder of US Highway 93 at south end of Ash Springs, Lincoln County, Nevada. Proposed Lincoln County Telephone System, Inc. Alamo to Sunnyside fiber optic line would be placed ten feet left of the pavement edge and three to four feet below ground in its transit through Ash Springs. The Ash Springs ponds (beneath the trees on highway right) drain via two culverts into ditches shaded by the trees on highway left. The culverts cross beneath US 93 at about the near edge of the trees on highway right.



**Photo 7:** Upper part of gauging station at west end of primary outflow from Ash Springs ponds, Ash Springs, Lincoln County, Nevada. Outflow is carried via culvert buried fifteen to twenty feet below US Highway 93. View from edge of highway shoulder.



**Photo 8:** US Highway 93 west edge and shoulder at point proposed Lincoln County Telephone System, Inc. Alamo to Sunnyside fiber optic line would cross primary Ash Springs ponds drain, Ash Springs, Lincoln County, Nevada. The fiber optic line would lie ten feet left of the pavement and between three and four feet below ground surface. The pond drain line lies fifteen to twenty feet below ground surface.



**Photo 9:** East edge and shoulder of US Highway 93 at milepost LN 45.60, Ash Springs, Lincoln County, Nevada. Here the proposed Lincoln County Telephone System, Inc. Alamo to Sunnyside fiber optic line would cross the highway from west to east (photo left to photo right) and proceed north. Cable alignment would be four feet left of the fence. The Ash Springs ponds lie well right of the fence.



**Photo 10:** US Highway 93 (foreground)/Nevada State Route 318 (background) junction at US 93 milepost LN 51, Lincoln County, Nevada. Proposed Lincoln County Telephone System, Inc. Alamo to Sunnyside fiber optic line would cross beneath US 93 at this point to begin run along right shoulder of SR 318. Along this stretch of SR 318 cable placement would be thirty-five feet to right of highway edge. Distant tree cluster on left of highway is Crystal Springs.



**Photo 11:** Route of proposed Lincoln County Telephone System, Inc. Alamo to Sunnyside fiber optic line adjacent to Crystal Springs, Lincoln County, Nevada. Cable route would lie between cottonwood trees at left and brush field on right. Crystal Springs lies left of photo, across Nevada State Route 318.



**Photo 12:** Crystal Springs, Lincoln County, Nevada as seen from proposed alignment of Lincoln County Telephone System, Inc. Alamo to Sunnyside fiber optic line adjacent to Nevada State Route 318. View to south.



**Photo 13:** Frenchy Lake, Key Pittman Wildlife Management Area viewed from proposed Lincoln County Telephone System, Inc. Alamo to Sunnyside fiber optic line alignment at Nevada State Route 318 milepost LN 1, south of Hiko, Lincoln County, Nevada. In this vicinity the proposed alignment would be fifty feet from the highway edge. View to east.



**Photo 14:** View east from proposed Lincoln County Telephone System, Inc. Alamo to Sunnyside fiber optic line alignment at Nevada State Route 318 milepost LN 3. Nesbitt Lake, Key Pittman Wildlife Management Area, near Hiko, Lincoln County, Nevada in background.



**Photo 15:** Nevada State Route 318, milepost NY 14, approximately four and a half miles south of Sunnyside, Nye County, Nevada and the northern terminus of proposed Lincoln County Telephone System, Inc. Alamo to Sunnyside fiber optic line. Along this stretch of highway (milepost 13.8 – 14.6) the line would deviate from its locally typical alignment (242 feet from highway center line) to run along the highway shoulder. This transition would allow avoidance of pygmy rabbit, *Brachylagus idahoensis*, habitat. A similar transition would occur from milepost 17.3 to Sunnyside.



**Photo 16:** Vicinity of northern terminus of proposed Lincoln County Telephone System, Inc. Alamo to Sunnyside fiber optic line. At approximate location of vehicle the line would cross beneath the highway and from there proceed along its west side shoulder to Sunnyside, marked by trees in the distance. At Sunnyside the line would connect with existing Nevada Bell facilities extending south from Ely in White Pine County.

## 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 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 ancestral<sup>3</sup> White River until the River crosses the

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<sup>3</sup> 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).

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 recent<sup>4</sup> 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 Pahrnagat 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.

### *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

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

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 2<sup>5</sup>.

### *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*) 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,

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<sup>5</sup> 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.

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 heavily dominated by ephedra and snakeweed.

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 and attains its highest elevations, Utah juniper is again in evidence, but the species quickly disappears from the project area once elevation is again lost and the route nears Sunnyside.

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 (*Zenaida 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 general<sup>6</sup> 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 (*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**

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<sup>6</sup> 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.

biologists as occurring or potentially occurring in or adjacent to the proposed project area:

Bald eagles (*Haliaeetus leucocephalus*), a *Threatened* species, periodically use the Pahranaagat 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 Pahranaagat 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 Pahranaagat ditch approximately 0.75 miles downstream of the Ash Springs outflow point (Williams 2003 – Appendix 1) (Map 1).

Two *Endangered* fish – Pahranaagat roundtail chub (*Gila robusta jordani*) and White River springfish (*Crenichthys baileyi baileyi*) – and three *sensitive* invertebrates – Pahranaagat naucorid bug (*Pelocoris shoshone shoshone*), Pahranaagat 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 Pahranaagat Ditch. The Ash Springs ponds lie east of US 93 and the Pahranaagat 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 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 Pahranaagat 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 law<sup>7</sup>, 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 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, University of Nevada, Las Vegas, conducted a BLM Class III Intensive Pedestrian Inventory along the proposed project route and surrounding areas. A record of all prehistoric and historic cultural sites encountered during their survey is reported in White (2002).

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<sup>7</sup> NRS 527.060-.120

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 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 Pahrangat 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 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). 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 Pahranaagat Valley has also probably contributed to tortoise mortalities through competition for local forage.

Construction of US 93 sections adjacent to the Pahranaagat 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 timing<sup>8</sup>, project-associated increased traffic could slightly increase the number of highway-related tortoise mortalities.

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<sup>8</sup> Tortoises are normally winter-dormant and remain in their burrows from mid- or late October through about mid- or late February.

### *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 – Sunnyside line would not precipitate additional fiber optic installation to the north, crossing White River spinedace habitat and 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 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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