



United States
Department of
Agriculture

Forest Service

Pacific
Northwest
Region

**Ochoco
National Forest**



ENVIRONMENTAL ASSESSMENT

**Madras Fiber Optic Line Project
(Phase 2)**

**Crooked River National Grassland
Jefferson County, Oregon**

**US Department of Agriculture, Forest Service
Ochoco National Forest**

March 26, 2003

ENVIRONMENTAL ASSESSMENT

MADRAS FIBER OPTIC LINE PROJECT (PHASE 2)

Lead Agency:

**US Forest Service – Ochoco National Forest
Crooked River National Grassland**
3160 NE 3rd Street
Prineville, Oregon 97754-0490

Project Applicant:

Quantum Communications, LLC.
P.O. Box 1748
Redmond, OR 97756

Environmental Consultant:

David Evans and Associates, Inc.
2100 SW River Parkway
Portland, OR 97201

March 26, 2003

LIST OF ACRONYMS

ACHP	Advisory Council on Historic Preservation
BP	Before present
BPA	U.S. Department of Energy Bonneville Power Administration
CEC	Central Electrical Cooperative
CRNG	Crooked River National Grassland
DEA	David Evans and Associates, Inc.
E	East
EA	Environmental Assessment
F	Fahrenheit
FEMA	Federal Emergency Management Administration
FS	U.S. Department of Agriculture, Forest Service
LRMP	Land and Resource Management Plan
MIS	Management Indicator Species
NEPA	National Environmental Policy Act
NRCS	U.S. Department of Agriculture, Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
ODFW	Oregon Department of Fish and Wildlife
PETS	Proposed (for ESA listing), Endangered, Threatened, and Sensitive (species)
R	Range
RHCA	Riparian Habitat Conservation Areas
S	South
Sec.	Section
SHPO	State Historical Preservation Office
T	Township
USGS	U.S. Geological Survey

ENVIRONMENTAL ASSESSMENT

for the

Madras Fiber Optic Line Project (Phase 2)

Ochoco National Forest

Crooked River National Grassland

USDA Forest Service

The Responsible Official has identified Alternative 2 as the Proposed Action.

Responsible Official: Larry Timchak, Forest Supervisor
USDA Forest Service
Ochoco National Forest
3160 NE 3rd Street
Prineville, Oregon 97754-0490

**For more information,
contact:** Paul Cuddy, Environmental Assessment Project Manager
(541) 416-6617
or
David Kennedy, David Evans and Associates, Inc.
(503) 499-0547

Send comments to: **Paul Cuddy**
Ochoco National Forest Supervisory Office
3160 NE Third Street
PO Box 490
Prineville, Oregon 97754-0490

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1 PROJECT DESCRIPTION

1.1 LOCATION OF THE PROPOSED PROJECT

The project area is within the boundary of the Ochoco National Forest, Crooked River National Grassland (CRNG), south of the city of Madras, Oregon, in Jefferson County (see Figure 1: Vicinity Map). The project is an installation of a new fiber optic line, primarily on existing poles, within the existing right-of-way for the Central Electric Cooperative, Inc. (CEC) power transmission line. South of Madras, the fiber optic line runs due south, just east of the R. 13 E./R. 14 boundary. East of Haystack Reservoir, the fiber optic line turns southwesterly for approximately 4 miles to a point where it turns due south, for approximately 1 mile, where it leaves CRNG lands. From north to south, the project begins on the U.S. Department of the Interior Geological Survey (USGS) Buck Butte Quadrangle (1985), and continues on the Gray Butte and the Opal City quadrangles (1985). The fiber optic project begins in T. 11 S., R. 14 E., and ends at the T13S/T14S boundary.

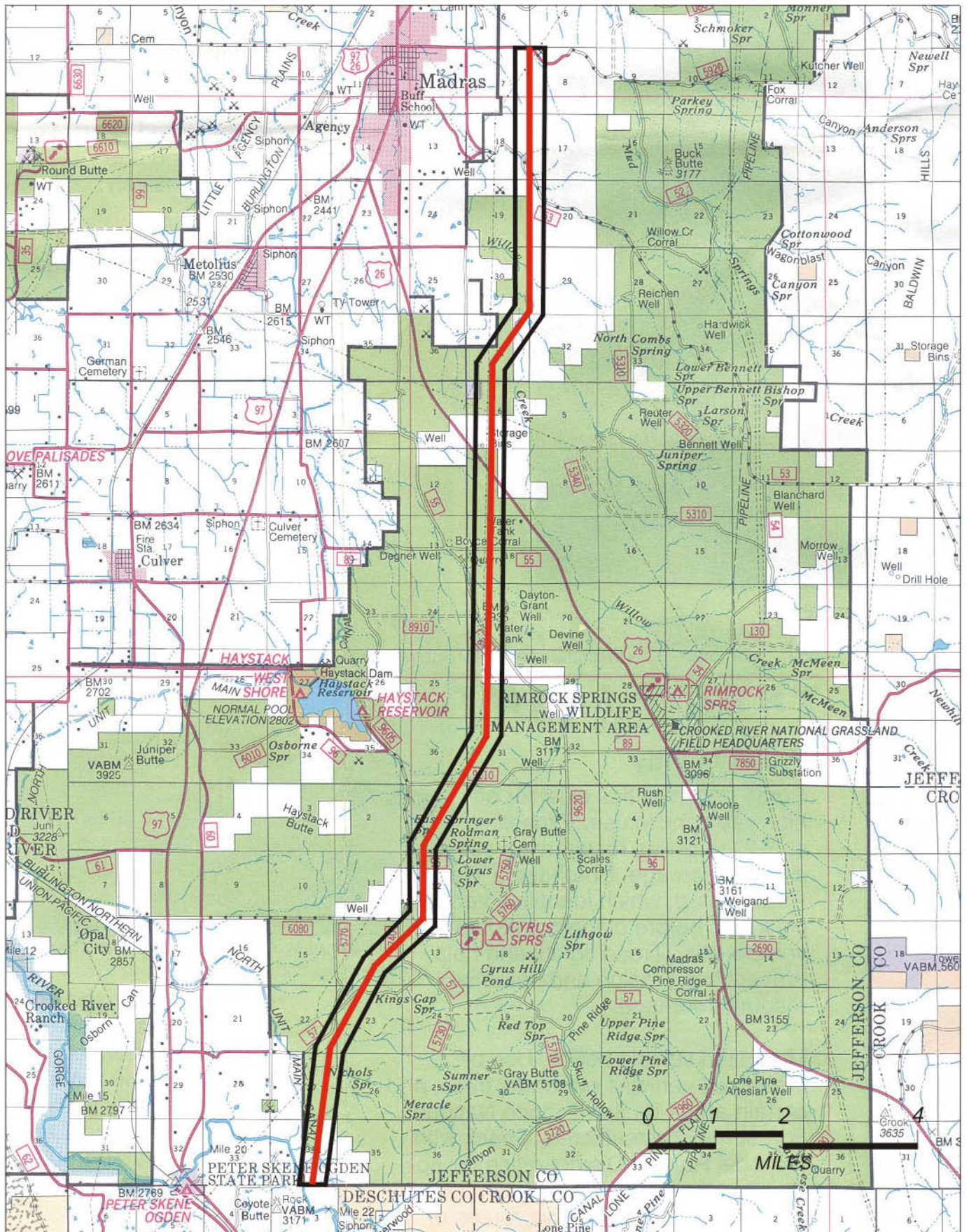
1.2 SCOPE AND NATURE OF THE PROPOSED ACTION

Quantum Communications, LLC (Quantum) has requested that the USDA Forest Service (FS) Ochoco National Forest grant a right-of-way across the CRNG in order to permanently install, operate, and maintain a fiber optic line connecting to BPA's fiber system. This EA will be the basis for deciding whether or not to authorize a long-term special use permit.

Quantum proposes to locate this fiber optic line from a BPA transmission tower access point located in T. 11 S., R. 14 E., Sec. 11, west to the Madras area and then south to the Redmond area. The proposed corridor would be 20 feet wide with existing towers or poles spaced 400 feet apart on average. Service access to each tower/pole along the line would be required for installation, operation, and maintenance. The project consists of the second phase of installation of a single fiber optic communications cable onto existing CEC pole lines.

A minor, short-term (less than one year) special use permit was issued to Quantum by Judith E. Levin, Acting Forest Supervisor, Ochoco National Forest. The permit authorized a 20-foot wide, 1.81-mile length easement across CRNG lands for installation, operation and maintenance of the fiber optic line. Phase 1 was approved for a Special Use Permit on June 19, 2002 and consisted of:

- Trenching 1,020 feet of underground line along the existing BPA access road to connect the fiber from an existing BPA splice box to an existing CEC overhead pole line.
- Manually hanging fiber cable on 8,546 feet of existing CEC overhead poles with brackets. In order to access existing CEC poles, crews drove on existing BPA roads to



USDA Forest Service Ochooco National Forest and Crooked River National Grassland, 1993

Figure 1
Project Vicinity

the extent that they are currently maintained or reasonably accessible. The fiber cable was hand-carried and strung along this overhead portion of Phase 1, resulting in little to no ground disturbance.

2 PURPOSE OF AND NEED FOR THE PROJECT

The purpose of this project is to provide broadband access to underserved rural areas by providing access to the BPA Public Benefit Fiber for the Central Oregon region (Jefferson, Deschutes and Crook counties). The project is needed because broadband access currently is unavailable to this region. Broadband technologies, which encompass high-speed digital technologies that provide consumers integrated access to voice, high-speed data, video-on-demand, and interactive delivery services. The public would be better served by increasing open access broadband service to the Central Oregon region. This project provides open access and non-discriminatory broadband access to these communities.

3 ALTERNATIVES CONSIDERED

3.1 ALTERNATIVE I – NO ACTION ALTERNATIVE

Under the No Action Alternative, Quantum would not provide broadband access via fiber cable hung on the existing CEC poles in the CRNG. None of the actions described under the Proposed Action would be authorized.

3.2 ALTERNATIVE II – PROPOSED ACTION

Phase 1 of the project was completed under a separate but related decision in 2002, as described above in Section 1.2. Phase 2 (the Proposed Action) would serve the need to provide long-term broadband access to the Central Oregon Region (Jefferson and Deschutes Counties). The Proposed Action is intended to provide broadband access to rural areas while causing the least ground disturbance, since it would use existing poles and access roads thereby minimizing ground disturbance reduces potential impacts to water and cultural resources, vegetation, and fish and wildlife. The Proposed Action consists of:

- Manually hanging fiber cable on 18 miles of existing CEC overhead poles with brackets. The fiber cable will be hand-carried and strung, resulting in little to no ground disturbance. As with Phase 1, Quantum will revegetate any disturbed areas with weed-free seed. If available, native seed will be used.
- Replacement of two existing, decaying CEC wooden poles.
- Long-term operation and maintenance of the proposed fiber line (including the Phase 1 portion) will be accomplished in same manner as the existing overhead line facility except the fiber optic line will not require any scheduled maintenance. Work crews will not be in the corridor unless there is reported vandalism of the line or an unexplained break in service.

- To prevent the introduction or spread of noxious weeds, ground-disturbing equipment will be washed of all soil and plant parts, both before and after operations. The population of teasel found within the bottom of the steep, dry tributary to Willow Creek located just south of Dover road (T. 11 S., R. 14 E., Sec. 30, 1/4 NE) would not be contacted during construction. In addition, the FS will provide weed free grass and herb seed with which to cover the replacement pole locations and any areas of disturbance caused by mobilizing vehicles and equipment to the replacement pole locations after construction is complete. The FS will provide this seed prior to project implementation so work crews can fill in areas of disturbance as they work.
- If any archaeological, cultural, or historic material is found during ground disturbance or construction, the construction contractor must cease operations and notify SHPO to ensure proper identification, evaluation, and disposition.

Under the Proposed Action the fiber optic line would be located on an existing CEC line just west of County Road #782A and north of Ashwood Road. The project consists of the installation of a single fiber optic communications cable consisting of 48 total fibers and measuring 0.575 inches in outer dimension. Four of the 48 fibers will be active or lit with the remaining 44 fibers for future Quantum system capacity needs. The existing CEC poles and lines are covered under CEC's consolidated Special Use Permit OCH412801. Service access to each tower along the line would be required for installation, operation and maintenance. However, public access to the CRNG would not change because no new roads would be constructed, nor is there a need to make any improvements to the existing access roads. This alignment was chosen as it the most direct route with only one major landowner (federal lands administered by the FS) to fit into the existing broadband and electrical overhead power system. Alternative routes would require negotiations with multiple landowners.

Two poles in poor condition would be replaced. Pole #124779 lies immediately south of a maintained gravel road between Imbler Lane to the west and Highway 26 to the east. No disturbance will result. Pole #115243 is the second pole north of Holly Lane. Crews would drive from Holly Lane to transport the replacement pole and drill the hole using a truck-mounted auger.

Public and internal FS issues raised during the scoping process are often used to formulate alternatives and mitigation measures, and are used to evaluate alternatives. Scoping was done in spring 2002. A flyer describing the proposed project and alternatives was mailed to the CRNG mailing list and a notice was published in the local newspaper. One comment was received from the local Native Plant Society, urging that any disturbed areas be re-seeded with native seed. Under the Proposed Action, all disturbed areas will be re-seeded.

4 AFFECTED ENVIRONMENT

4.1 NATURAL SETTING

4.1.1 Soils and Geology

The topography of the project corridor is nearly level to gently rolling except for the deeply incised Crooked River canyon. The project corridor consists of three main soil units, all of which are categorized as “warm soils on lava plains and hills” (see Figure 2: Soils). From the north end of the project corridor east of Madras, south T. 11 S., R. 14 E. and T. 12 S. R. 14 E., west of Culver, the soil unit is Caphealy-Reuter. Portions of the project corridor in Sections 19, 30, and 31 of T. 12 S., R. 14 E. are unmapped. The soil units in the T. 13 S., R. 13 E. portion of the project are mainly Lickskillet-Redcliff-Schrier and Madras-Agency-Cullius. There is a small portion of Deschutes-Stukel-Rock outcrop.

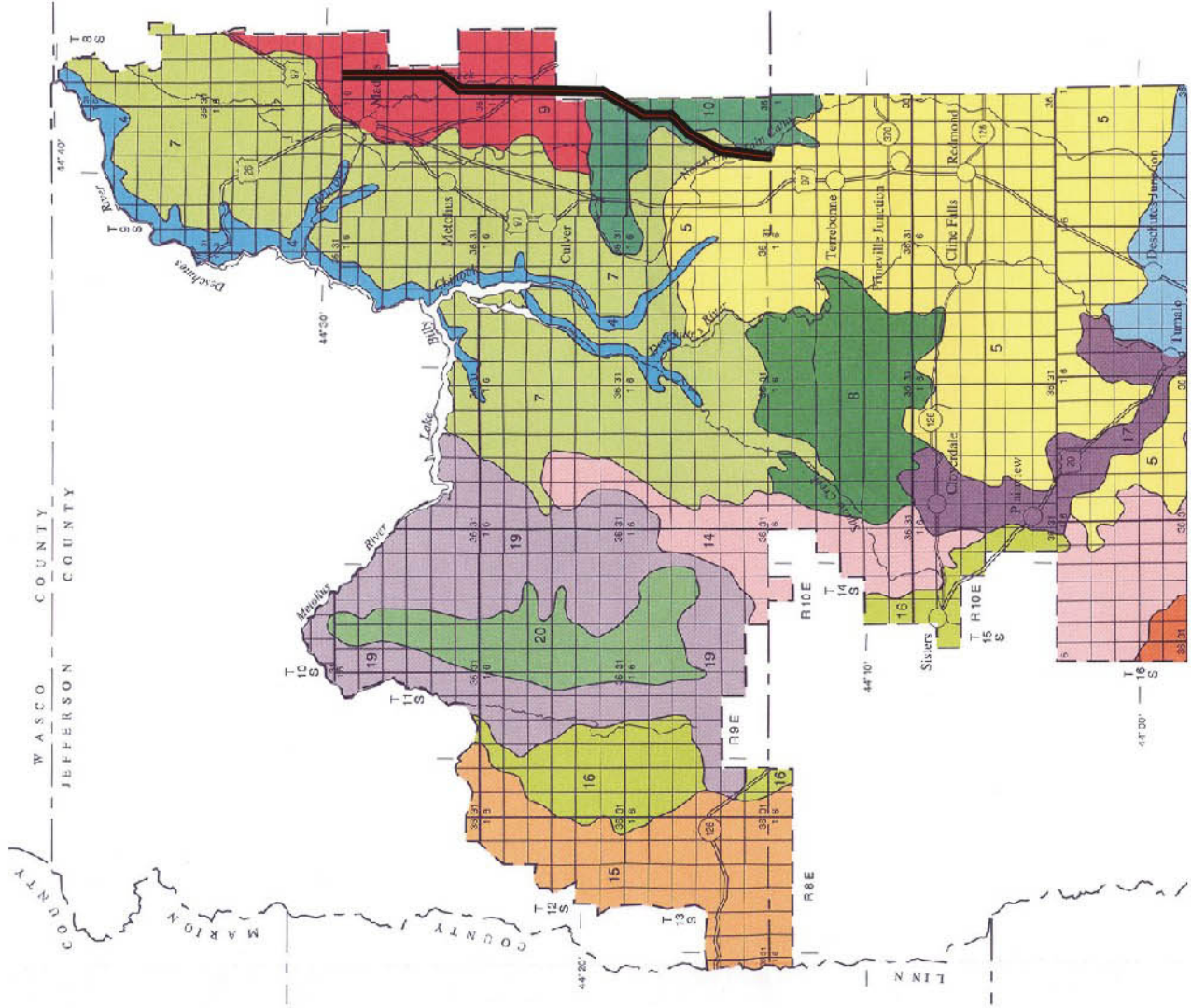
Caphealy-Reuter soils are moderately deep and shallow, well-drained soils that formed in colluvium over volcanoclastic material of the Deschutes formation. They have very low available water capacity and there is a hazard of wind erosion. Lickskillet-Redcliff-Schrier soils are shallow, moderately deep, and very deep, well-drained soils that formed on colluvium. Madras-Agency-Cullius soils are moderately deep and shallow, well-drained soils that formed in loess over volcanoclastic material of the Deschutes formation. In areas that have a sandy loam surface layer, wind erosion is a concern. Deschutes-Stukel-Rock outcrop soils are moderately deep and shallow, well-drained, sandy loam that formed in volcanic ash. Most of this unit is on young lava flows that are characterized by lava blisters, depressions, and rock outcroppings. The sandy loam surface layer is susceptible to wind erosion. It has low available water capacity and moderately rapid permeability (NRCS, 2002).

4.1.2 Hydrology/Water Quality

Water bodies within 200 feet of the project area consist of the Crooked River, Willow Creek, ephemeral tributaries to these water bodies, and the Main Canal. These bodies eventually drain into the Deschutes River above Pelton Dam. The portion of the corridor that lies closest to the Deschutes River crosses Willow Creek more than eight miles upstream from its confluence with the Deschutes River.

Willow Creek parallels the corridor before crossing to the east of the power line north of US 26. Shallow channels of ephemeral tributaries cross, and even parallel the corridor south of Jasper Road, although little if any riparian vegetation exists. All watercourses except Willow Creek, the Crooked River, and the Main Unit Canal were dry at the time of the David Evans and Associates, Inc. (DEA) personnel field survey conducted on August 6 and 7, 2002.

South of Springer Road the corridor runs adjacent to Springer Road before crossing private lands and steeper hillsides east of Sherwood Road. Relatively steep tributaries are cut into these hills of dense juniper. The corridor then crosses the North Unit Main Canal



SOIL LEGEND*

- 1 SOILS ON PUMICE-MANTLED STREAM TERRACES AND FLOOD PLAINS
Tutni-Sumner-Cryaquiols
- 2 SOILS ON PUMICE-MANTLED LAVA PLAINS AND HILLS
Shanahan-Steiger
- 3 Lapine
- 4 SOILS ON CANYONSIDES
Simas-Ruckles-Lickskillet
- 5 WARM SOILS ON LAVA PLAINS AND HILLS
Deschutes-Stukel-Rock outcrop
- 6 Gosney-Deskamp-Rock outcrop
- 7 Madras-Agency-Cullius
- 8 Holmie-Searies
- 9 Caphealy-Reuter
- 10 Lickskillet-Reddloff-Schrier
- 11 COOL SOILS ON LAVA PLAINS AND HILLS
Dester-Gardone-Borobey
- 12 Beden-Ninemile
- 13 Stookmoor-Membo
- 14 Wanaga-Fremle-Rock outcrop
- 15 SOILS ON GLACIAL MORAINES AND OUTWASH PLAINS
Linksterly-Beirick-Douthit
- 16 Lundgren-Allingham-Circle
- 17 Tuma'o-Plainview
- 18 SOILS ON MOUNTAINS
Sisters-Yapoah
- 19 Smiling-Windigo-Parrego
- 20 Gap-Prairie

*The units on this legend are described in the text under the heading "General Soil Map Units."

Compiled 1992

Figure 2
General Soils

and the Crooked River before terminating on the southern bank near a private road north of County Road #3226. The canal is approximately 40 feet wide and appears deep, but is culverted under the corridor. Gravel roads lead to it on both sides. The Crooked River is approximately 80 feet wide where it flows under the corridor. Steep banks lined with more juniper (*Juniperus occidentalis*), sage (*Artemesia* sp.), and cheatgrass (*Bromus* sp.) drop more than 200 feet to the river on either side.

Willow Creek is listed by the Oregon Department of Environmental Quality as Water Quality Limited for water temperature from the mouth to the McMean springs. The Crooked River is listed for temperature, pH, flow modification, and bacteria, while the Main Canal is listed for temperature, flow modification, and pH.

4.1.3 Wetlands

Two potential wetland or aquatic habitats lie within the project corridor. In the northern portion a series of human-created ponds on an ephemeral tributary to Willow Creek are shown on the USGS map. The landowner at Dover Road would not allow access, and these were not investigated. Another wetland area exists in the southern portion along the tributary leading from Rodman Spring near Springer Road. Ponderosa pine (*Pinus ponderosa*) and large sagebrush plants (*Artemesia tridentata*) dot the bank, and rush (*Juncus* sp.) carpets the shallow, dry bottom.

4.1.4 Floodplains

The project corridor is shown on several Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps . The northern portion of the project (T. 11 S., R. 14 E., Sections 7, 8, 17, 18, 19, 30) is in Zone X, Areas Determined to be Outside the 500-Year Floodplain, except where the corridor crosses Willow Creek (Sections 19 and 30). The area immediately surrounding the creek is designated Zone A, Special Flood Hazard Areas inundated by 100-year Flood, No Base Flood Elevation determined (Community Panel Number 410101 0217B). The portion of the project corridor in T. 11 S., R. 14 E., Sections 30 and 31 and T. 12 S., R. 14 E., Section 6 is in Zone A (Community Panel Number 410101 0375B). The portion of the project corridor in T. 12 S., R. 14 E., Sections 19, 30, and 31 is unmapped. The south end of the corridor (T. 13 S., R. 13 E.) also is in Zone X (Community Panel 410101 0475B).

4.1.5 Vegetation

According to the “Short Botany Report for Proposed, Endangered, Threatened And Sensitive Species: Crooked River National Grassland,” no potential occupied or unoccupied habitat for Proposed, Endangered, Threatened, or Sensitive (PETS) plant species or of Region 6 Sensitive Species, no occurrence of managed or protected areas according to Conservation Strategies, and no protected or managed habitat were found to occur in the proposed project area.

Vegetation within the corridor consists of relatively uniform vegetation throughout, and is generally indistinguishable from vegetation within surrounding, fenced areas. Existing vegetation in the Phase 2 project corridor consists mainly of sagebrush, western juniper, and other species including cheatgrass, broom snakeweed (*Gutierrezia sarothrae*), and rabbitbrush (*Chrysothamnus* sp.). Native bunchgrasses such as bluebunch wheatgrass (*Agropyron spicatum*) and needle and thread grass (*Stipa comata*) occasionally occupy areas where cattle are excluded. However, the majority of the landscape is heavily grazed and/or burned, with cheatgrass as the dominant understory. Weeds such as cheatgrass, Kocia (*Kocia scoparia*), and broom snakeweed (*Gutierrezia sarothrae*), which are present in areas of grazing and ground disturbance, are not listed as noxious for the area. No ground-disturbing work appears to have occurred within the power line right-of-way since its initial construction, except where it meets or parallels existing roads.

For descriptive purposes, the project area can be broken into north and south at Jasper Road, a well-used gravel road that runs parallel to and south of US 26. At the northern end of the project area juniper tends to exist only in riparian areas, with the ubiquitous cheatgrass and sagebrush dominating the open lands. Some small, widely-scattered ponderosa pine trees are also located along seasonal stream courses such as Willow Creek. The corridor crosses Willow Creek and its tributaries just north of US 26 before crossing more grazed range south to Jasper Road.

4.1.5.1 Noxious Weeds

Based on the Draft 2001 Noxious Weed List for the Ochoco National Forest and CRNG (dated December 17, 2001), no noxious weeds were found to be present within the existing dirt road prism that would be disturbed during construction of the Proposed Action. However, there are small populations of noxious weeds along existing roads outside the project corridor. These include teasel (*Dipsacus sylvestris*), medusahead (*Taeniatherum asperum*), and morning glory (*Convolvulus arvensis*). Teasel was found within the bottom of the steep, dry tributary to Willow Creek located just south of Dover road (T. 11 S., R. 14 E., Sec. 30, 1/4 NE). Medusahead and morning glory were both found in the same place, under a parallel power line where it crosses Jasper Road approximately 0.1 miles to the west of the CEC line (T. 12 S., R. 14 E., Sec. 19, 1/4 SW).

4.1.6 Fish and Wildlife Species

This section discusses the fish and wildlife species that occur or may occur in the project site and vicinity. There is no habitat or species presence for any federally endangered species. For more information, refer to the “Biological Assessment/Evaluation and Wildlife Report for Quantum Communications, LLC: Madras to Bend Fiber Optic Line Installation Project, Phase 2” (DEA, 2002a) and the “Fisheries Biological Evaluation for Quantum Communications, LLC: Madras to Bend Fiber Optic Line Installation Project, Phase 2” (DEA, 2002b). For the reports, a pre-field review of existing information and references for federally listed species was conducted for the project area. The CRNG

provided a list of the federally listed wildlife species that could potentially occur in the project area. A site visit was conducted on August 6 and 7, 2002.

4.1.6.1 Federally Listed Threatened and Endangered Species

No federally-listed threatened or endangered species are known to occur within one mile of the project area. However, bald eagles (*Haliaeetus leucocephalus*) are known to forage 1.5 miles to the west of the project area, and the nearest nest is approximately 10 miles east of the proposed line.

The Columbia River District Population Segment of bull trout is currently classified as threatened by the USFWS. Bull trout characteristically occupy high-quality aquatic habitat, often in less disturbed portions of a drainage. Necessary key habitat features include high channel stability, spawning substrate with a very low percentage of fine sediment, abundant and complex habitat, deep pools, cold water temperatures, and no barriers inhibiting connectivity. Water temperature in most spawning and rearing streams is below 50 degrees F during the spawning period and rarely exceeds 53.6 degrees during the peak of the summer.

Bull trout were historically found throughout most of the Ochoco basin. There has been no occurrence of bull trout in Willow Creek. Historic (pre-1990) occurrence has been documented in the Crooked River within the project area, but no recent occurrence has been documented. Bull trout were distributed in the Metolius drainage, Blue/Suttle Lake complex, Crescent Lake and Crescent Creek, Odell Lake and Odell Creek, Davis Lake, the upper Deschutes River (above Lake Billy Chinook), several lower Deschutes River tributaries.

This project is located in a Priority Watershed for bull trout. High levels of sediment exist within all the tributaries, Willow Creek, and the Main Canal. The sparse vegetation surrounding them generally consists of sagebrush and western juniper. Other than the Crooked River, no potential suitable spawning gravels were found. Cool, clear waters are unlikely to exist in the tributaries at any time of the year. Low flows and high temperatures, as evidenced by thick algal growth and listing by the Oregon Department of Environmental Quality, indicated unsuitable spawning or rearing habitat.

4.1.6.2 Forest Service Sensitive Species

There are ten fish and wildlife species on the Regional Foresters Sensitive Species List for the CRNG. The wildlife species, their habitat associations, and suitable habitat within the project area are discussed in Table 1.

Two species on the list, the pygmy rabbit (*Brachylagus idahoensis*) and the gray flycatcher (*Empidonax wrightii*), are of special interest for this analysis. While habitat for neither species exists within the 50-foot corridor of Phase 2, potential habitat may exist within a mile of the project area.

Table 1 - Forest Service Sensitive Wildlife Species

Species	Habitat Requirements	Suitable Habitat In Project Area?	Effect
California wolverine (<i>Gulo gulo</i>)	Remote high elevation mixed coniferous forest with shale or rock slide areas.	No Potential habitat in project area.	No impact
Pygmy rabbit (<i>Brachylagus idahoensis</i>)	Associated with Great Basin sagebrush and deep, friable soils.	Potential habitat within 1 mile of project area.	No impact
Peregrine falcon (<i>Falco peregrinus</i>)	Nest on cliffs near large concentrations of waterfowl or flocking birds.	No suitable nesting habitat in project area.	No impact
Western sage grouse (<i>Centrocercus urophasianus phaios</i>)	Associated most strongly with big sagebrush, low-dwarf sagebrush, salt desert scrub shrubland, and wet playa.	No suitable habitat in project area.	No impact
Gray flycatcher (<i>Empidonax wrightii</i>)	Breeds mainly in sagebrush and bitterbrush east of the Cascade crest. Most strongly associated with western juniper woodland and big sagebrush shrubland.	Potential habitat within 1 mile of project area.	No impact
Tricolored blackbird (<i>Agelaius tricolor</i>)	Associated with cattail and tule marshes	No suitable habitat in project area.	No impact
Upland sandpiper (<i>Bartramia longicauda</i>)	Associated with grassland and interspersed fir-Ponderosa, and wet montane meadow	No suitable habitat in project area.	No impact
Bufflehead (<i>Bucephala albeola</i>)	Inhabits and nests near mountain lakes surrounded by forests containing snags.	No suitable nesting habitat in project area.	No impact
Columbia spotted frog (<i>Rana luteiventris</i>)	Associated with waters with vegetated shorelines and slow-flowing streams with decaying vegetation on the bottom.	No suitable habitat in project area.	No impact
Interior redband trout (<i>Oncorhynchus mykiss</i>)	Prefer cool, clear, swift streams and rivers where riffles are the dominant habitat type.	No suitable habitat in project area.	No impact

Source: Adamus et al. 2001; FS, 2000; Houslet and Riehle, 1997.

The interior redband trout is the only fish species identified on the Regional Forester's Sensitive Species List for the CRNG. It is listed as Vulnerable by ODFW. In general, redband trout prefer cool, clear, swift streams and rivers where riffles are the dominant habitat type. Interior redband trout are known to occur in the lower Deschutes River and the Crooked River. However, existing habitat conditions make it unlikely that spawning would occur in these areas. They are not known to use Willow Creek or the Main Canal.

High levels of sediment exist within all the tributaries. The sparse vegetation surrounding them generally consists of sagebrush and western juniper. Other than the Crooked River, no suitable spawning gravels were found within them. Cool, clear waters are unlikely to exist in the tributaries at any point in the year. Due to these factors, no habitat for redband trout exists within the project area.

4.1.6.3 Crooked River National Grassland Management Indicator Species

The following species or groups of species are classified as management indicator species (MIS) for the CRNG: northern flicker (*Colaptes aurata*), golden eagle (*Aquila chrysaetos*), bald eagle (*Haliaeetus leucocephalus*), mule deer (*Odocoileus hemionus*), antelope (*Antilocapra americana*), prairie falcon (*Falco mexicanus*), hawks and owls, and species associated with logs and downed woody debris. The rainbow trout (*Oncorhynchus mykiss*) and the brook trout (*Salvelinus fontinalis*) are identified as MIS fish species in the Land and Resource Management Plan for the CRNG.

There are many nests of known raptors (golden eagle, prairie falcon, red-tailed [*Buteo jamaicensis*]) within one-half mile of the proposed project area. These nests are mainly in the Willow Creek and Crooked River Gorge Canyons. The proposed project would not change the existing habitat conditions for the raptor species and ungulates within the project area, however there is a potential for disturbance (noise and human presence) of nesting raptors.

High levels of sediment exist within all the tributaries. The sparse vegetation surrounding them generally consists of sagebrush and western juniper. Other than the Crooked River, no suitable spawning gravels were found within them. Cool, clear waters are unlikely to exist in the tributaries at any point in the year. Due to these factors, no habitat for rainbow trout or brook trout, other than Willow Creek and the Crooked River, exists within the project area.

4.1.6.4 Neotropical Migratory Songbirds

No suitable nesting or dispersal habitat was identified in the project corridor.

4.1.6.5 Other Species

Two individual loggerhead shrikes were observed within the project corridor during the field visit (T. 11 S., R. 14 E., Sec. 8, 1/4 NW, and T. 13 S., R. 13 E. Sec. 12, 1/4 NW). Loggerhead shrikes are listed as Sensitive/Vulnerable by ODFW (except for Columbia Basin and High Lava Plains ecoregions) and as the focal species for steppe-shrublands in the Landbird Conservation Strategy. They were observed perching on trees and fences within the corridor, but were not found near either of the two replacement poles.

4.2 CULTURAL SETTING

4.2.1 Archaeological and Historical Resources

Phase I Archaeological/Historic Survey Technical Memorandum prepared for the project provided the information for this section. The historic and archaeological resource assessment of the Quantum Communications, LLC Fiber Optic Cable Project included a literature search, State Historic Preservation Office (SHPO) consultation, and site reconnaissance of the project corridor.

The indigenous peoples in the Madras area spoke languages in the Penutian superfamily, Plateau Penutian family, Sahaptin language, Tenino (Wayampam) dialect (Loy, 2001). Women harvested biscuitroot and bitterroot in the early spring, and camas, yampa, and hyacinth bulbs in the late spring. Huckleberries were collected in September. Men hunted most intensively in the fall for antelope, sheep, and small game using bow and arrow. Permanent winter villages were established along rivers, such as the Deschutes (Aikens, 1993).

Three rock shelter sites near Round Butte (approximately 8 miles west of the project corridor) contained flaked stone artifacts and projectile points dated 7,990 years before present (BP); 2,675 BP; and 2,650 BP. Other artifacts such as bone tools, dart and arrow points, mortar and pestles, fresh water mussel shells, and fish bones were discovered in the area (Aikens, 1993).

4.2.1.1 National Historic Preservation Act/National Register of Historic Places

Per the National Historic Preservation Act of 1966 (“the Act”) (Public Law 89-665), the U.S. Secretary of the Interior, in partnership with state, federal, and tribal preservation programs, is authorized to expand and maintain a National Register of Historic Places (NRHP). The NRHP is composed of districts, sites, buildings, structures, and objects significant in American history, architecture, archeology, engineering, and culture. The NRHP lists properties that are included in the register or eligible for listing. The State Historic Preservation Officer in each state is the designated official who acts as a liaison for purposes of the Act. Section 101(d)(2) of the Act provides that “a Tribe may assume all or any part of the functions of a State Historic Preservation Officer... .” In 1996, the National Park Service approved 14 Indian Tribes, including the Confederated Tribes of the Warm Springs Indian Reservation, to assume national program responsibilities on Tribal lands (National Park Service, no date). The Confederated Tribes are discussed in Section 4.3, below.

The National Register Information System (the NRHP database) lists two sites in Jefferson County. One is in the City of Madras on 9th Street. The second, the Oregon Trunk Passenger and Freight Station, is on Metolius, at Washington and Sixth streets (National Park Service, 2001). The SHPO database lists only the station (SHPO, no date). In addition, pre-historic lithic scatters on the Ochoco National Forest and Crooked River National Grassland have been determined to be eligible for NRHP designation (FS, 1989a). Sites containing stone tools identified nearby are discussed in Section 4.5, below.

4.2.1.2 Forest Service

The Forest Service determined that there are at least 1,300 pre-historic sites and at least 700 historic (Euro-American) sites in the Ochoco National Forest and Crooked River National Grassland. Most of the pre-historic sites are lithic scatters. Historic resources mainly relate to grazing, mining, homesteading, and FS activities (FS, 1989a). The

management plan establishes an overall goal for managing cultural resources and establishes criteria for levels of inventorying the FS lands.

Goal(s)

Locate, evaluate, protect, and mitigate if necessary, significant historic and archaeological sites....

Objectives

Complete "broad area" cultural resource inventories and documentation prior to ground-disturbing activities on the Grassland (e.g. range improvement, water developments, pipeline or powerline installations, or road construction projects)... (FS, 1989b).

The Ochoco and Deschutes National Forests Heritage Program Manager determined that the entire 18-mile project corridor needed to be surveyed for historic and cultural material because of the high number of identified sites in the vicinity, even though ground disturbance will be limited to the two pole replacement sites.

4.2.1.3 Jefferson County

Jefferson County information was reviewed. Through Oregon Statewide Planning Goal 5, the State requires local governments to inventory and adopt programs that will conserve historic and cultural areas and resources for present and future generations. The Jefferson County Comprehensive Plan (1983) describes cultural and historic resources. The plan lists ten sites that the Jefferson County Historical Society determined warrant special protective treatment at the local level. None of the sites are near the project corridor. The plan mentions an additional 25 sites as warranting designation and explanation, but these are not listed in the comprehensive plan. A map is not included in the comprehensive plan, but the sites are supposed to be shown on a map in the Jefferson County Museum. The Warm Springs Indian Reservation is listed as an area of special cultural interest as well (Jefferson County, 1983).

4.2.1.4 Other Sources

The two Jefferson County bridges listed in the *Historic Highway Bridges of Oregon* (Smith, 1989) are both on the Crooked River. One is at Lake Billy Chinook, more than 6.5 miles west of the project corridor. The Crooked River (High) Bridge is more than 8 miles south, near the Deschutes County line.

4.2.1.5 SHPO Consultation

A site visit was made to the SHPO office on July 3, 2002 to determine whether there were any recorded archaeological sites located near or in the general vicinity of the project. Several reports have been done in the Phase 2 project vicinity (within the same USGS quadrangle maps), one for the construction of the Fox Hollow pipeline, one for the Crooked River Gorge Bridge project, six for prescribed burns/fuel burns, and one for data

collection purposes. Of the 18 total sites identified, 10 are homesteads, 2 are lithic scatters, and the others include a pre-historic gravesite, an isolated pre-historic flake, a pre-historic tool manufacturing site, a historic cemetery, a historic campsite, and a trash area.

A selective survey of was done in October 1983 for the 880-acre Alexander family homestead pasture prescribed burn (SHPO Report No. 5924). The survey identified debris from the homestead that contained a house, barn, shop, and granary (Site No. 675EA102). The homestead was established in 1910 and was inhabited until 1937.

A 1991 report produced by the Ochoco National Forest District Archaeologist (SHPO Report No. 12535) for the six-inch Fox Hollow pipeline through a mint field recorded one site in near a small pond (Site No. 35JE321). The 50-square-meter site is situated on a slight rise along the field. The predominate cultural material visible on the surface were obsidian and crypto-crystalline waste flakes. In addition, two tools were identified at the disturbed site: one broken biface and one broken projectile point. The archaeologist did a selective survey of 1,200 acres for North Healy Fuels prescribed burn (SHPO Report No. 13370). No sites on were identified in the 1992 survey. "A Stratigraphic Assessment of Three Small Rockshelters Site on the Crooked River National Grasslands," also performed by the District Archaeologist, was completed in 1993. The study found evidence of pot hunting disturbance throughout the pre- to proto-historic grave site (Site No. 35JE363). A third survey by the archaeologist of the East Cyrus Range and Natural Fuels Burn in 1993 identified the Lower Cyrus Spring site (SHPO Report No. 14330). The site of lithic debris is located west of the springs and includes an assortment of tools, cores, projectile points, choppers, scrapers, and pestle pieces (Site No. 35JE176).

In 1983, an archaeological technician from the Ochoco National Forest did a selective survey of 1,976 acres of the North Grant Rangeland Burn Project (SHPO Report No. 5163). The survey covered T. 12 S., R. 14 E., sections 7, 17, 18, and 19, and T. 12 S., R. 13 E., sections 12 and 13. Six resources were identified. The 60-meter-by-60-meter Floyd and Elizabeth Stanton homestead was established in 1915 (Site No. 675EA284). The site is heavily impacted by cattle grazing and no structures remain. At the Warren Brown homestead, also established in 1915, one structure foundation remained, as well as a concrete cistern, a 13-meter-by-6-meter pit, and a trash dump containing metal cans, barbed wire, glass jars, porcelain, and stoneware (Site No. 675EA327, 675EA175, and 675EA326). The Dayton Grant and J.P.R.&E. Weigard homestead has remains of a frame house, a shed, and a granary well (Site No. 675EA180). The J.F. Weigard homestead has the remains of the house, a shack, granary, and two springs (Site No. 675EA299). A small trash dump was examined as well. It contains old cans, sheet metal, and glass bottles (Site No. 675EA328). One isolated flake was observed in the survey area as well.

For the Windom prescribed burn in 1983, an Ochoco National Forest technician did a selective survey of the 1,386 acres (SHPO Report No. 5165). A small tool manufacturing site was identified, consisting of thin obsidian flakes (Site No. 35JE175). The site is

severely disturbed by plowing. The second site is the Jesse Wells and Gruyan and Nora Springer homestead (Site No. 675EA308). Little cultural material remains—seven large poplar tress mark the site. In 1985, an Ochoco National Forest Cultural Resources Technician surveyed the 1,640-acre South Healy prescribed burn (SHPO Report No. 7070). The selective survey identified three historic homestead sites as well as one cemetery. At the J. F. Pearl, Rolla and Esther Wiegard homestead, the well is still intact but no buildings remain (Site No. 675EA301). Limited debris remains at the Clay C. Butler homestead (Site No. 675EA154). The C. J. Smith homestead was the third one identified (Site No. 675EA103) and includes a limited debris scatter. The same technician did a selective survey of the 1,680-acre West Cyrus prescribed burn in 1986 (SHPO Report No. 7477). The survey identified the A. M. Burke homestead, which is directly under the existing CEC power line (Site No. EA119). There is limited debris but no remains of the house and barn.

A University of Oregon archaeologist conducted a survey for the Crooked River Gorge Bridge project in October 2002 (SHPO Report No. 13331). He identified a historic campsite in Peter Skene Ogden State Park (Site No. OR-05-7). The site includes tin cans, bottle fragments, and boot fragments.

4.2.1.6 Field Reconnaissance

Based on a review of SHPO files and reports, a survey methodology was formulated to cover a majority of project corridor. Field survey maps were prepared showing the location of all recorded prehistoric archaeological and historical sites features. The project corridor was added to these maps along with major environmental and built features, such as streams, ponds, and roads.

A Cultural Resources Specialist performed a cultural resources survey of the project corridor on August 21, 2002 and on September 1 and 2, 2002. A majority of the power line cut cross-country and was not easily assessed from public or private roads. In addition, most of the roads in Jefferson County were closed in August and September 2002 because of the extreme fire dangers. Therefore the survey consisted of walking along the existing CEC line within the corridor. For this survey, the Cultural Resources Specialist ran two transects, each approximately 30 to 50 feet wide, along the majority of the 18-mile-long power line corridor. The survey began at the north end of the project near Ashwood Road east of Madras, Oregon, and extended approximately 18 miles south/southwest to a terminus on the south side of the Crooked River at the southern end of Jefferson County. The only areas that were not surveyed were private properties that had locked gates and no trespassing signs posted, and public lands such as the Crooked River gorge, which were not accessible by walking. The survey did not include any subsurface excavation work.

The ground area under the power line route was mostly clear of ground vegetation. The north end of the corridor was mostly open rangeland with sparse vegetation of sagebrush

and a few juniper trees. The majority of the route, south of Holly Lane, was open rangeland with little tree cover. The ground was easily viewed along the majority of the route. There were only a few locations; adjacent to irrigated grass fields, where the ground was not visible. In these locations, the survey area was expanded in order to examine clearings and power line service roads. Particular attention was given near the areas where Native American or historic sites or features had been recorded in the past cultural resource surveys, and where power poles are to be replaced.

No prehistoric or historic cultural resources were identified during the three days of the survey work in 2002.

4.2.2 Public Services and Utilities

The Jefferson County Sheriff Department and the Oregon State Police patrol local and state routes along the project corridor. The Sheriff's Department, located in Madras, provides Search and Rescue and coordinates the County's Emergency Operations Plan. The Jefferson County Sheriff's Department, which provides enforcement of state and local laws on public lands in the Crooked River National Grasslands through a cooperative law enforcement agreement with FS, would be the first to respond within the project corridor (Jones, pers. comm. 2002).

The Jefferson County Rural Fire Protection District works in conjunction with the Prineville Fire District to provide fire and emergency medical services. The FS also provides forest fire protection for properties under their jurisdictions. A central dispatch issues ambulances provided by Jefferson County EMS, and then alerts the proper fire district for fire emergencies and medical support (McKonkey, pers. comm. 2002). In the event of a serious injury, Air Life, based in Bend, would be dispatched. The injured person likely would be treated at Mountain View Hospital in Madras. The hospital is a full service facility that provides surgery and emergency treatment as well as other services. In some cases patients can also be referred to St. Charles Hospital, a large regional hospital in Bend (Quinn, pers. comm 2002).

Solid waste is disposed of at the county landfill site at Box Canyon, which should serve the needs of the area through 2003 or later.

4.2.3 Socioeconomics

Information for this section is from the Oregon Employment Department's "2002 Regional Economic Profile." The profile uses U.S. Census Bureau 2000 Census data as well as other sources. Jefferson County population has grown 39 percent from 13,676 in 1990 to 19,009 in 2000. Regional (Crook, Deschutes, and Jefferson counties) growth during the same period was 49.5 percent, mostly due to increase in the City of Bend. By comparison, the population increase in the state as a whole was 20.4 percent. The Oregon Office of Economic Analysis projects that the county's population will expand 152 percent to 47,825 by 2040 (OEA, 1997). Jefferson County has more families with

children under 18 than the county and the state as a whole, and therefore a larger average household and family size and lower median age (36.6 years in 2000).

Non-farm payroll employment (by place of work) grew by 36 percent between 1990 and 2000. The greatest increases were in government (134 percent); fire, insurance, and real estate (70 percent); and transportation and public utilities (56 percent). All other industries had less than 50 percent growth. The smallest increases were in the manufacturing sector. Although the wood products industry continues to show employment growth, jobs are considerably lower-paying than in the past. The only decline was in services (-51 percent). In 2000, approximately one-quarter of jobs were in manufacturing and three-quarters in the non-manufacturing sector. The industry that had the greatest increase also accounted for the most jobs—39 percent of all jobs were with government in 2000, and 40 percent of those were with tribal government. As a result, Jefferson County had the second highest level of minority participation in the civilian labor force among all counties in the state (32 percent), three times higher the rate in the state as a whole (12.5 percent). Employment is projected to continue to grow, mostly in government and trade, although at a third of the rate during the 1990s.

Between 1988 and 1999, unemployment ranged between 6.0 percent and 7.0 percent, with upward spikes in 1992 (8.5 percent), 1993 (9.0 percent), and 1996 (7.7 percent). The 5.7 percent rate in 2000 was the lowest in thirty years. However, unemployment was consistently higher than for the state overall. Although the county's per capita income increased consistently during the 1990s (a 36 percent increase between 1990 and 1999), it is increasingly lower than the per capita income of the state as a whole and the nation. In the late 1980s/early 1990s, county income trailed the state by approximately \$3,800 and the U.S. by approximately \$5,200. By 1999, county per capita income was \$8,000 less than Oregon as a whole and \$9,700 less than the U.S. This can be attributed, in part, to the structural change in the wood products industry from higher paying jobs to lower paying ones.

4.2.4 Land Use

The project corridor is located in the Crooked River National Grassland. Although much of the land is publicly owned, there are numerous private parcels interspersed with publicly managed land. There are existing rural and FS roads within the project corridor, which are also used as service roads for the existing transmission lines.

The plans and guidelines that apply to land uses within the project corridor are overlapping and include the following:

FS:

- Land and Resource Management Plan Part 2 Crooked River National Grassland, 1989 (FS, 1989c)

The Land and Resource Management Plan (LRMP) guides all resource management activities within the Crooked River National Grassland (an administrative unit of the Ochoco National Forest).

Jefferson County:

- Comprehensive Plan, March 1981 (Jefferson County, 1983)
- Zoning Ordinance

4.2.4.1 Land and Resource Management Plan, Crooked River National Grassland, 1989

The Crooked River National Grassland LRMP establishes broad management direction and standards and guidelines for resources and activities within the National Grasslands. Where applicable, uses within the National Grasslands area must meet the National Grasslands LMRP. Applicable goals in the Crooked River National Grasslands LMRP include maintaining and enhancing ecosystem functions; locating and protecting cultural resources; and allowing only compatible land uses in the public interest. Another set of goals deals with providing a full range of quality outdoor recreation opportunities that can be modified for visitor use and provide forest visitors with visually appealing scenery along all major travel ways, and with managing and improving fish and wildlife habitats.

The main Standards and Guidelines that apply to the project are included in Lands (Special Uses and Utility and Transport Corridors), and Scenic Resources. The project corridor is located in MA-G1 (Antelope Winter Range), MA-G3 (General Forage), and MA-G16 (Utility Corridors) (see Figure 3: CRNG Land Management Designations). The MA-G16 Management Unit is a special use overlay, any impacts within the utility corridor would need to meet requirements in the underlying MA-G1 and MA-G3 Management Areas. These would include requirements for revegetation and timing work to not interrupt wildlife. See Sections 5.1.5 and 5.1.6 for more information on impacts to wildlife and work timing.

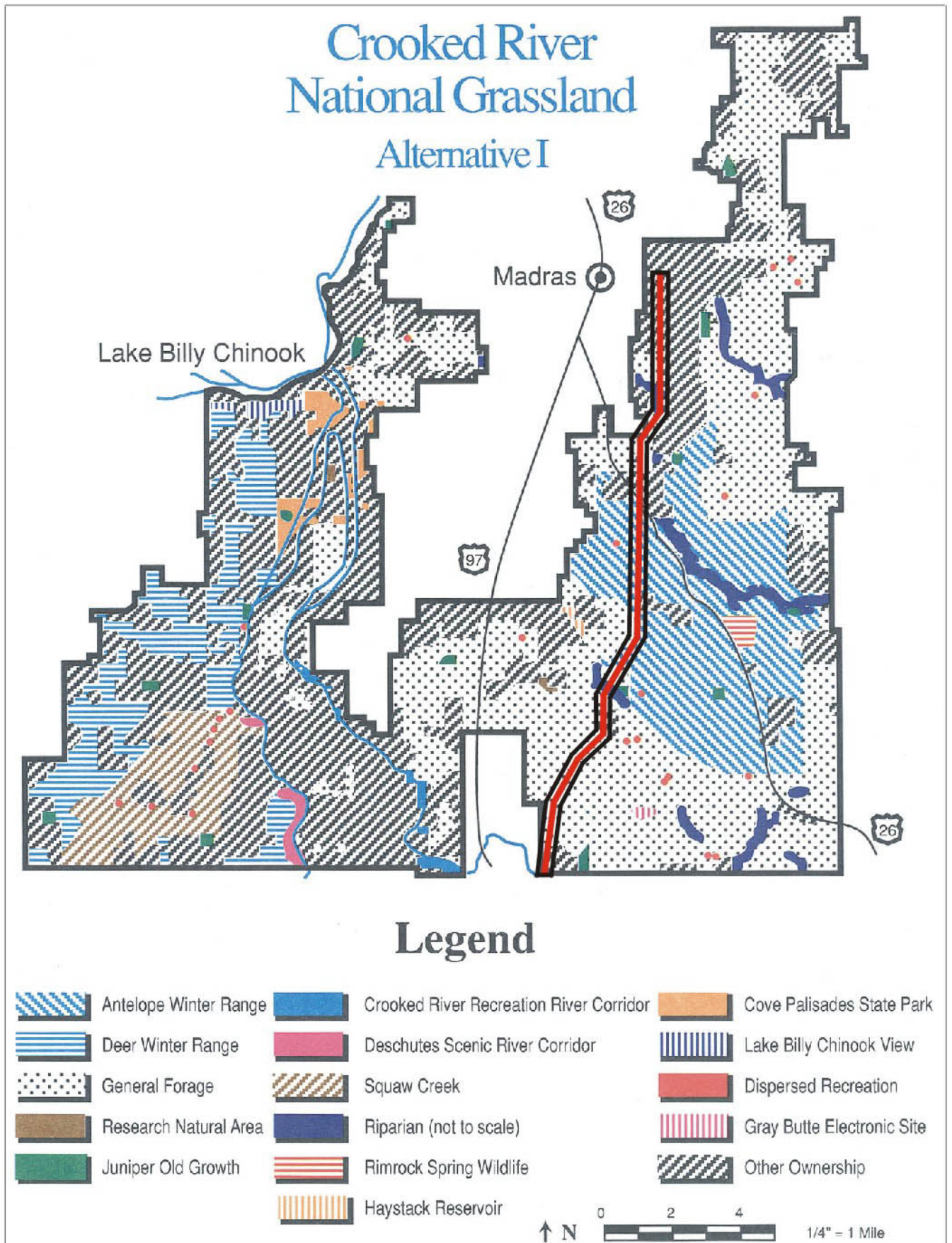
4.2.4.2 Jefferson County Zoning Ordinance

The project corridor is zoned Range Land (RL). Section 302 of the Jefferson County Zoning Ordinance states that uses permitted outright include farm and forest uses. Public facilities, such as the proposed project, are also allowed as a use permitted outright.

Section 420, Endangered Species, requires an application for a permit that may disrupt an endangered species to develop a program to protect the site and/or habitat.

4.2.4.3 Jefferson County Comprehensive Plan, 1981

The goals and policies of the comprehensive plan generally do not address adding fiber optic lines to an existing power line as in the Proposed Action. Indirectly, the following objectives or policies relate to the proposed project: protect agricultural land from non agricultural uses (3-D); protect dedicated natural areas (5-E); protect scenic resources



Land and Resource Management Plan, Crooked River National Grassland, USDA, 1989

Figure 3
CRNG Land Management Designations

(5-G), fish and wildlife (5-H), riparian areas with buffers (5-H-6), and listed historic sites (5-J).

4.2.5 Natural Resources and Energy

Natural resources and energy issues relate to the irretrievable commitment of resources to a project. The only commitment of natural resources or energy associated with the project are the two replacement poles, the fiber, and gasoline for the vehicle used to transport the workers along the line.

5 ENVIRONMENTAL IMPACTS

5.1 NATURAL SETTING

5.1.1 Soils and Geology

The Proposed Action would not result in any cuts or fills. Since the two poles proposed to be replaced would be replaced in the same locations, no earth movement would be required. The two types of hazards identified with the general soil types are low available water capacity and wind erosion. The Proposed Action would not require ground water nor include any activity that would impact or be impacted by wind erosion. In addition, the project corridor does not have unstable soils. Therefore, no impacts on soils or geology would be expected.

The No Action Alternative would not impact soils.

5.1.2 Hydrology/Water Quality

The Proposed Action would have no effect on hydrology or water quality within the project corridor. Since the fiber line would be strung on existing poles, and the two deteriorated poles would be replaced in the same locations, none of the waterways, including the Crooked River and the North Unit Main Canal, would be affected.

The No Action Alternative would not impact hydrology or water quality.

5.1.3 Wetlands

Under the Proposed Action, the two potential wetland areas in the project corridor would be avoided. Since the fiber line would be strung on the existing CEC poles, and the two deteriorated poles would be replaced in the same locations, the Proposed Action would not include any ground disturbing activity that may impact wetlands.

The No Action Alternative would not impact wetlands.

5.1.4 Floodplains

Since the fiber line would be strung on the existing CEC poles, and the two deteriorated poles would be replaced in the same locations, the Proposed Action would not include

any ground disturbing activity that could cause flooding in the project corridor. The Proposed Action does not include the construction of structures that could be impacted by flooding. In addition, no hazards to life or property are known to exist in the floodplain areas in the project corridor.

The No Action Alternative would not impact floodplains.

5.1.5 Vegetation

No Proposed, Endangered, Threatened, or Sensitive Species/taxa or essential habitat are known or suspected within the project area. Ground disturbance is to be limited to the replacement of two decaying CEC poles along an existing road bed. The remaining installation will be completed by walking between existing poles. Existing vegetation for this area is nearly exclusively sage, cheatgrass, and bare ground, with no listed noxious weeds or sensitive plants. Therefore, no direct or indirect effects are expected to occur under the implementation of the Proposed Action.

Both alternatives are expected to result in no impact to PETS plant species.

5.1.5.1 Noxious Weeds

No noxious weeds were found to be present within the existing dirt road prism that would be disturbed during construction. However, due to the presence of small populations of noxious weeds along existing roads outside the project corridor, there is a moderate probability for the introduction/spread of noxious weeds under implementation of the Proposed Action. Avoidance of these populations is described in following paragraphs.

The teasel found within the bottom of the steep, dry tributary to Willow Creek located just south of Dover road (T. 11 S., R. 14 E., Sec. 30, 1/4 NE) would not be contacted during construction. If this road is used to access the project corridor, extra care should be taken to avoid spreading seed of medusahead and morning glory. Equipment would be cleaned following project activities.

The special use permit would require equipment to be free of noxious weed seed. Pressure washing of all construction equipment at a commercial location would be required prior to and after mobilization onto forest lands. Receipts from the washing location should be kept on the vehicle.

In addition, FS would provide grass and herb seed with which to cover the replacement pole locations and any areas of disturbance caused by mobilizing vehicles and equipment to the replacement pole locations after construction is complete. The FS will provide this seed prior to project implementation so work crews can fill in areas of disturbance as they work. This would help discourage recruitment of wind-blown weed seed. Since no maintenance of the fiber optic line is required except in cases of vandalism, storm damage, etc., the threat of introducing or spreading noxious weeds should be negligible

The No Action Alternative would not increase the risk of noxious weed introduction or spread. Under both Alternatives, noxious weeds would continue to be introduced to the area from outside the area. Weeds would continue to spread within the area. Existing weed management would continue under the Ochoco National Forest and Crooked River National Grassland Integrated Weed Management Plan.

5.1.6 Fish and Wildlife Species

It is FS policy to protect the habitat of federally-listed and FS-listed sensitive species from adverse modification or destruction, as well as to protect individual organisms from harm or harassment as appropriate on FS lands (FSM 2670.3). The “Biological Assessment/Evaluation and Wildlife Report” (DEA, 2002) assesses possible impacts the proposed project may have on FS-sensitive and management indicator species of wildlife, and invertebrate species and their associated habitats, that may occur on the CRNG.

5.1.6.1 Federally Listed Threatened and Endangered Species

No bald eagles were observed during the field visit. Bald eagles (*Haliaeetus leucocephalus*) are not known to occur within one mile of the project area. The nearest foraging area is 1.5 miles to the west of the project area, while the nearest known nest is approximately 10 miles east of the proposed line. As the nesting and foraging areas are bisected by the existing BPA powerline, there is always the possibility for collisions. However, since this powerline has been in existence for more than 20 years, for the purpose of this analysis it was assumed that the eagles have become habituated to the powerline. Therefore, the “Biological Assessment/Evaluation and Wildlife Report” (DEA, 2002) determined that the implementation of the Proposed Action would have no effect on the bald eagle based on the distance and the minor nature of the construction.

The Inland Native Fish Strategy provides interim guidelines to protect bull trout habitat. Riparian Habitat Conservation Areas (RHCA) were established to protect streams from non-channelized sediment inputs and provide other riparian functions, including delivery of organic matter and woody debris, stream shading, and bank stability. RHCA standard widths were established based on four categories of stream or water bodies. The ephemeral tributaries in the project area fall within Category 4 – seasonally flowing or intermittent streams, wetlands less than one acre, landslides, and landslide-prone areas. Since the project area is within a Priority Watershed, the Category 4 RHCA width would be measured from the edge of the ephemeral tributary channel to a distance of 100 feet slope distance.

No spawning or rearing habitat for bull trout exists within the ephemeral tributaries or perennial streams within the project corridor. Based on the lack of habitat, the manual hanging of fiber, and the lack of ground-disturbance within the RHCA, the Proposed Action would have no effect on bull trout or its habitat within the Crooked River. No riparian vegetation would be disturbed. If necessary, erosion control measures, such as silt fencing, will be installed along the road prior to the beginning of construction to prevent

any sediment from entering the ephemeral stream. The manual construction techniques would not impact the ephemeral tributaries, Willow Creek, Crooked River, or the Main Canal. Construction will not impact water quality

The No Action Alternative would have no effect on federally listed Threatened and Endangered Species.

5.1.6.2 Forest Service Sensitive Species

While no habitat for either the pygmy rabbit (*Brachylagus idahoensis*) or the gray flycatcher (*Empidonax wrightii*), exists within the 50-foot corridor of Phase 2, potential habitat may exist within a mile of the project area. However, no impacts to these species would be caused by the minor noise disturbance related to the manual hanging of fiber optic cable on existing power lines, or from the replacement of two decaying CEC poles conducted outside of the nesting season for the species under the Proposed Action. The “Biological Assessment/Evaluation and Wildlife Report” (DEA, 2002) determined that the implementation of the Proposed Action would have no impact on FS Sensitive Species.

Construction associated with the Proposed Action would not result in the loss of interior redband trout spawning or rearing habitat in the foreseeable future; therefore, the project would have no impact on interior redband trout or its habitat. The fiber optic cable would be manually hung where the project corridor crosses the waterways. No impacts to riparian vegetation or water quality will take place. No pole replacements will take place within 50 feet of water bodies. Erosion control measures, such as silt fencing, will be installed along the road prior to the beginning of construction to prevent any sediment from entering the ephemeral stream.

The No Action Alternative would have no impact to Sensitive Species.

5.1.6.3 Crooked River National Grassland Management Indicator Species

Implementation of the Proposed Action would not change the existing habitat conditions within the project area; however, there is a potential for disturbance (noise and human presence) of nesting raptors. To minimize this potential for disturbance, the project will be seasonally restricted from occurring during the nesting season (March 1 to August 15). In addition, there is no proposed or foreseeable future development proposed in the project area. Therefore, the “Biological Assessment/Evaluation and Wildlife Report” (DEA, 2002) concluded that the implementation of the Proposed Action would not impact the management indicator species or their habitats that occur in the project area with the seasonal restriction in place.

Because construction associated with the Proposed Action would not result in the loss of rainbow trout or brook trout spawning or rearing habitat in the foreseeable future, the project is expected to have no impact on rainbow trout or brook trout or their habitats.

The fiber optic cable would be manually hung where the project corridor crosses waterways. No impacts to riparian vegetation or water quality would take place. Replacement poles are not located within 50 feet of water bodies. Erosion control measures, such as silt fencing, will be installed along the road prior to the beginning of construction to prevent any sediment from entering the ephemeral stream.

The No Action Alternative would have no impact on Management Indicator Species.

5.1.6.4 Neotropical Migratory Songbirds

No suitable nesting or dispersal habitat for neotropical migratory songbirds was noted within the project corridor, so none would be removed under the Proposed Action. Short-term impacts, should neotropical songbirds be present, would be limited to noise disturbance during replacement of two decaying CEC poles. The duration of construction is estimated to be less than one day for each pole and will be conducted outside of the nesting season. Therefore, construction is not likely to cause nesting displacement or failure within any potential adjacent nesting area.

The No Action Alternative would have no impact to neotropical migratory songbirds.

5.1.6.5 Other Species

The loggerhead shrikes observed during the field visit likely would not be disturbed by construction of the Proposed Action, as they were not found near either of the two replacement poles.

The No Action Alternative would have no impact on loggerhead shrikes or other species.

5.2 CULTURAL SETTING

5.2.1 Archaeological and Historical Resources

There is no nearby distinctive or unique development. No historic sites or features were identified during the field reconnaissance of the project corridor. One historic site was identified during the SHPO records search. The A. M. Burke homestead identified in a 1986 survey is directly under the existing CEC power line (SHPO Report No. 7477; Site No. EA119). As there are no remains of the house and barn and no ground disturbing activity will occur at the site, the Proposed Action would not impact the resource.

Several prehistoric or archaeological sites are identified in reports on file with the State Historic Preservation Office that are near the project corridor. No archaeological sites or features were identified within the project corridor during the field reconnaissance. The Proposed Action would involve minimal ground disturbance, so the likelihood of unearthing material of archaeological significance is low. The addition of the fiber optic cable to the existing poles and the replacement of the poles are not expected to have an adverse impact on cultural resources since there will be limited construction-related

excavation as part of this project. However, if any archaeological, cultural, or historic material is found during ground disturbance or construction, the construction contractor must cease operations and notify SHPO to ensure proper identification, evaluation, and disposition.

The No Action Alternative would not impact any archaeological, cultural, or historic resources.

A Finding Of No Effect, based on this approved inventory and cultural resource report, on February 10, 2003, as per the 1995 Programmatic Agreement among the ACHP, SHPO and FS Region 6 has been made for both alternatives. A copy of this finding and report was forwarded to Oregon SHPO for information. No additional cultural resource consultation is required

5.2.2 Public Services and Utilities

The Proposed Action would not change the demand for emergency, police, fire, medical, or solid waste services, as no development is likely to occur because of the alternative. However, use of the new fiber cable would permit long-term broadband access to new users in the Central Oregon region. The Proposed Action would not require alteration of any existing cables. The two deteriorating poles would be replaced with similar poles and would use the same holes as the existing poles. Service currently delivered along the transmission line is not expected to be interrupted. No impact to existing public services or utilities is anticipated.

Under the No Action Alternative, telephone and internet service would continue using the existing cable. As use of the existing line increases, service levels may be further reduced as the transmission capability of the existing line becomes more strained.

5.2.3 Socioeconomics

The Proposed Action is expected to have no adverse socioeconomic impacts. Many positive effects can be expected by bringing for long term broadband access to new business and residential customers in the Central Oregon region.

Recent research has shown telecom competition is increasing in rural areas as more businesses, especially e-commerce companies, locate their headquarters and warehouses there to take advantage of the low cost (versus major metropolitan center) of land and labor. Broadband access has become a fundamental component of this telecommunications revolution. In the near future, communities with fully-evolved broadband will have virtually eliminate geographic distance as an obstacle to acquiring information at a high speed, and dramatically reduced the time it takes to access information.

Quantum likely would use two workers from existing staff to hand-string the fiber optic line.

The No Action Alternative would have no socioeconomic impact.

5.2.4 Land Use

There would be no land use impacts under the Proposed Action. Jefferson County would consider installation of the new line and replacing two poles as a permitted use. Any revegetation or work timing would meet local, state, and federal requirements to protect the local flora and fauna.

To meet the Crooked River National Grasslands LRMP requirements, the Proposed Action would include revegetation with native plant species, and work timing would reduce impacts to wildlife. These are described in greater detail in Sections 5.1.6 and 5.1.5.

Aside from revegetation requirements and work timing, the Proposed Action would have no other land use impacts because it would stay within the Utility Corridor (MA-G16) as outlined in the Crooked River National Grasslands LRMP, and would be located on existing poles.

The No Action Alternative would not result in any change in land uses.

5.2.5 Natural Resources and Energy

Under the Proposed Action, the two replacement poles, the fiber, and the gasoline for the vehicle used to transport the workers along the line are negligible commitments of resources and energy.

With the No Action Alternative, there would be no commitment of natural resources or energy.

5.3 ENVIRONMENTAL JUSTICE

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* of February 11, 1994, requires agencies undertaking federal projects to identify low-income and minority populations, assess whether adverse human health or environmental impacts would result from each of the alternatives, and addresses the project's public outreach program in relation to environmental justice issues.

In accordance with this order, Alternative 2, the Proposed Action, has been reviewed to determine if it would result in "...disproportionately high and adverse human health and environmental effects on minorities and low-income populations." Due to the nature and location of the Proposed Action—a transmission line corridor that does not include any

existing permanent residences—no residents or businesses would be displaced. The project is expected to have positive benefits to the livability of the surrounding area, because broadband technologies, which encompass high-speed digital technologies that provide consumers integrated access to voice, high-speed data, video-on-demand, and interactive delivery services.

Under the No Action Alternative, there would be no impacts because no changes from existing land use patterns or economic activities would occur.

5.4 CUMULATIVE EFFECTS

Long-term, cumulative impacts are those that result from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes the other actions. An example of a cumulative effect of concern to FS is soil erosion and stream sedimentation from multiple timber permits and private logging operations in the same watershed. In this case, the cumulative effects could be the construction of multiple transmission lines across the CRNG and adjacent lands.

There are no other foreseeable state, federal, or private actions that would have cumulative effects in the project corridor.

5.5 PRIME FARMLANDS, RANGELANDS AND FOREST LANDS DETERMINATION

Neither farmland nor forest land are present in the project corridor. The resource emphasis for management designations in the project corridor are wildlife in MA-G1 (Antelope Winter Range) and rangeland in MA-G3 (General Forage). Neither the Proposed Action nor the No Action Alternative would have an adverse impact to the productivity of rangeland in the corridor.

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6.2 PERSONAL COMMUNICATIONS

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