3.11 Utilities

3.11.1 Affected Environment

Cooper Landing and the surrounding area are rural and do not have a highly developed utility infrastructure.

No natural gas lines are located in Cooper Landing or the surrounding area.

Two-thirds of homes in the Cooper Landing area, as well as the school, use individual water wells and septic tank systems, and are completely plumbed. Public comment on the Draft Supplemental Environmental Impact Statement (EIS) indicated that a few property owners in the Cooper Landing area use surface water sources for their drinking water. Surface water rights have been reserved in several locations, including sources used for drinking water (spring or stream); see Map 3.13-2. Residents of the remaining homes haul water or have it delivered and use privies (outhouses). The Kenai Peninsula Borough provides a transfer site for garbage and trash along the Sterling Highway at Milepost (MP) 44.

Chugach Electric Association is the local power service provider in the project area, and Homer Electric Association owns and maintains the power transmission line that traverses through the project area (see Map 3.11-1). The transmission line is a major line consisting of two sets of towers paralleling each other. These lines cross the existing highway right-of-way and the Kenai River near MP 55.6. West of this point, the line is located well to the north of the existing highway. East of this point, the line is located well to the south of the existing highway and passes south of Cooper Landing on a topographic bench before descending to Kenai Lake and crossing the lake to the Quartz Creek area.

TelAlaska maintains the telephone lines within the project area, which are strung on the power distribution poles, and both copper and fiber optic communication lines exist within the corridor. During the summer of 2005, TelAlaska replaced the telephone lines (copper and fiber) between the Cooper Landing Bridge and the community of Sunrise and placed these lines underground within the same corridor as the power poles. It is assumed for purposes of this EIS that all utilities are in proper easements. See Section 3.17.1, Hazardous Waste Sites and Spills, regarding the potential for soil contamination in the project area related to chemically treated power poles.

3.11.2 Environmental Consequences

3.11.2.1 No Build Alternative

Direct and Indirect Impacts

Under the No Build Alternative, there would be no direct or indirect impacts on utilities located within the project area. There are no plans to relocate, raise, upgrade, or add utilities unless further residential or commercial development occurs.

3.11.2.2 Issues Applicable to the Build Alternatives

Construction Impacts

Under the build alternatives, relocation and/or installation of local power distribution and telephone poles and lines and of larger transmission lines would occur within each proposed alternative's right-of-way. The construction activities for these actions have very small and localized ground disturbance but could involve contaminated soils (see discussion in Section 3.17.2). Overhead power line crossings would require relocation and/or raising of power poles. The relocation of underground copper and fiber optic communication lines would require linear trenching along the right-of-ways. Changes or temporary disruptions to utility services such as power and communication lines during construction would be planned to avoid or minimize interruption of service to customers. These disruptions are typically a few hours at a time, not days or weeks. Transmission line interruptions have the potential to disrupt service on a regional scale. Construction activities to move transmission towers and raise the power lines would be coordinated with Homer Electric Association to avoid or minimize interruption of service to customers.

The utility companies would have to apply for necessary permits from the appropriate land management agency or private property owners, depending on the location, and obtain authorization for utility relocation and installation activities, including realignment of utility easements in some cases. This EIS is meant to provide basic information about impacts, which Federal land management agencies may need to make NEPA decisions without substantial further analysis. However, it may not provide sufficient information for permitting utility work based on final design-level information.

One utility location common to all alternatives is near MP 44.8, where the project footprint would overlap with a single wooden pole for an electric distribution line where the line crosses the highway near the Sunrise Inn. The pole would be relocated outside the clear zone of the highway and within the existing power line easement. No substantial new clearing or access track would be expected.

Another location common to all alternatives is where the Homer Electric Association transmission line crosses the existing highway, near MP 55.6. At this location within the Kenai National Wildlife Refuge, each of the alternatives likely would require raising six transmission lines hung on towers, two on each side of the highway (four total). Line splicing may be necessary, meaning power would be cut off for short durations but possibly over a broad area. Access to these towers may require approximately 1.25 acres of clearing outside the highway project footprint north of the highway and about 0.9 acre south of the highway. These areas have been partially affected in the past for constructing and maintaining the transmission line, and it is assumed impacting areas outside the transmission line easement would not be necessary.

Specific discussion about the temporary impacts to utilities for each of the build alternatives appears in the sections below. The *Preliminary Engineering Report* (HDR 2014a) provides additional information about utility requirements and specific pole and line needs by alternative.

Mitigation

Utilities would be relocated, raised, or realigned as stated above and described further for each alternative below. Notification would be given to users of the services that would experience temporary, short-term interruption in service. Construction activities would be coordinated with

Chugach Electric Association and Homer Electric Association to minimize service disruptions. See Section 3.17.2 regarding mitigation for potential soil contamination discovered in association with utility relocations. The project would pay for the necessary utility relocations.

3.11.2.3 Cooper Creek Alternative

Construction Impacts

New power poles and service connections would be required to light the intersections at each end of the new highway segment, as proposed under the Cooper Creek Alternative (see Section 3.16.2.3 for visual impacts of lighting). Power is already available at both intersection locations. No power lines or other utilities are anticipated to be extended along the Cooper Creek Alternative segment built on new alignment.

In addition to the tower and line raising at MP 44.7 and MP 55.6, common to all alternatives (see above), the Cooper Creek Alternative would involve several other utility relocations. From approximately MP 46 to 46.5 of the existing highway, eight wooden Chugach Electric Association power distribution line poles and associated telephone service line would need to be relocated. It appears the lines could be relocated at the edge of the new highway construction area. This likely would require adjustment to the location of the utility easements in this area. Minor additional clearing beyond the highway construction footprint may be required. It is estimated that the cleared area would be approximately 0.6 acre. It is assumed that pole locations could be accessed from the highway construction area without need to build new road or cat tracks.

Underground copper and fiber optic communication lines would need to be relocated from approximately MP 46.0 of the existing highway to Snug Harbor Road. A powerline easement would also likely need to be relocated but within the highway right-of-way.

At Snug Harbor Road (approximately MP 47.9 of the existing highway), one wooden Chugach Electric Association power pole and associated telephone service line would need to be raised.

The Cooper Creek Alternative would cross the Homer Electric Association transmission lines twice south of MP 49.0 of the existing highway (see Map 3.11-1). These crossings (two sets of wires) would require the high voltage power lines to be raised and one of the transmission towers to be relocated. Access to the tower for relocation and for tower raisings on up to seven towers could come from the new Cooper Creek Alternative alignment and would not require substantial clearing or the construction of a new access track (an access track exists within the transmission line corridor). Relocation would occur within the existing transmission line easement. To raise the lines, line splicing may be necessary, likely meaning that power would be cut off for a short time, but possibly over a broad area.

Near MP 51.0 of the existing highway, the new alignment of the Cooper Creek Alternative would overlap approximately 1,330 feet of a Chugach Electric Association distribution line. Five Chugach Electric Association wooden power poles and associated telephone service line would need to be relocated. Because the new highway and power line are essentially parallel in this area, the power line easement likely would be relocated to the north of the new highway (between the old and new highways) and would cross the new highway at the western end of his 1,330-foot stretch. The fill embankment is large in most of this area, and it appears the power line could be placed near the toe of the fill and would not require additional clearing.

One Chugach Electric Association wooden distribution power pole would need to be replaced near MP 53.7, where the power lines cross the Kenai River. Replacement would occur within the existing powerline easement and would be accessible from the highway with negligible additional vegetation removal.

Because of the relocation of a transmission line tower, and more overall utility relocations than other alternatives, the cost of utilities work for the Cooper Creek Alternative likely would be substantially greater than for other alternatives.

Road construction activities would require temporary closures of the Cooper Lake Dam Road. The construction contractor would be required to coordinate temporary closures with the Forest Service, U.S. Department of Agriculture, and Chugach Electric Association. Temporary closures would be timed to avoid conflicts with maintenance of the Cooper Lake Hydroelectric Facility.

Mitigation would be as listed above for all alternatives in Section 3.11.2.2.

3.11.2.4 G South Alternative

Construction Impacts

New power poles and service connections would be required to light the intersections at each end of the new highway segment, as proposed under the G South Alternative (see Section 3.16.2.4 for visual impacts of new lighting). Power is already available at both intersection locations. No power lines or other utilities are anticipated to be extended along the G South Alternative segment built on new alignment.

In addition to the tower and line raising at MP 44.7 and MP 55.6, common to all alternatives (see above), the G South Alternative would involve several other utility relocations. From approximately MP 46.0 to 46.75 of the existing highway, 11 Chugach Electric Association power poles and associated telephone service lines would need to be relocated. Underground copper and fiber optic communication lines would need to be relocated from approximately MP 46.0 to MP 47.0 of the existing highway. It appears the lines could be relocated at the edge of the new highway construction area. This likely would require adjustment to the location of the utility easements in this area. Minor additional clearing beyond the highway construction footprint may be required. The cleared area is anticipated to be less than an acre. It is assumed that pole locations could be accessed from the highway construction area without need to build new road or cat tracks.

Near MP 51.5 of the existing highway, the new alignment of the G South Alternative would overlap approximately 1,000 feet of a Chugach Electric Association distribution line. Approximately four Chugach Electric Association wooden power poles and associated telephone service line would need to be relocated. The new highway alignment and power line are essentially parallel in this area, and it is likely the powerline easement would shift slightly to the south, within the highway right-of-way. It appears the power line could be placed near the toe of the fill and would require minimal additional clearing. The additional cleared area would amount to approximately 5,000 square feet.

One Chugach Electric Association wooden distribution power pole would need to be replaced near MP 53.7, where the power lines cross the Kenai River. Replacement would occur within the existing powerline easement and would be accessible from the highway with negligible additional vegetation removal.

Mitigation would be as listed above for all alternatives in Section 3.11.2.2.

3.11.2.5 Juneau Creek and Juneau Creek Variant Alternatives

Construction Impacts

New power poles and service connections would be required to light the intersections at each end of the new highway segment, as proposed under the Juneau Creek or Juneau Creek Variant alternatives (see Section 3.16.2.5 for visual effects of new lights). For the Juneau Creek Alternative (preferred alternative), it is assumed a direct power drop would extend from the Homer Electric Association transmission line near MP 56.6 to the intersection at that location (with a transformer), without need for further poles. For the Juneau Creek Variant Alternative, power is available at the intersection location at the end of the distribution line (Sportsman's Landing). Power lines would be buried in the highway embankment and run along the new alignment to provide highway lighting as necessary for a wildlife overpass (see Section 3.22.3.2 for details). No other power lines or other utilities are anticipated to be extended along the segment built on new alignment for either alternative.

In addition to the tower and line raising at MP 44.7 and MP 55.6, common to all alternatives (see above), the Juneau Creek alternatives would involve one additional area of utility relocations. From approximately MP 46.0 to MP 46.75 of the existing highway, 11 Chugach Electric Association wooden power poles and associated telephone service line would need to be relocated. Underground copper and fiber optic communication lines would need to be relocated from approximately MP 46.0 to 47.0 of the existing highway. It appears that the lines could be relocated at the edge of the new highway construction area. This likely would require adjustment to the location of the utility easements in this area. Minor additional clearing beyond the highway construction footprint may be required. The additional cleared area would amount to less than an acre. It is assumed that pole locations could be accessed from the highway construction area without need to build new road or cat tracks.

Mitigation would be as listed above for all alternatives in Section 3.11.2.2.

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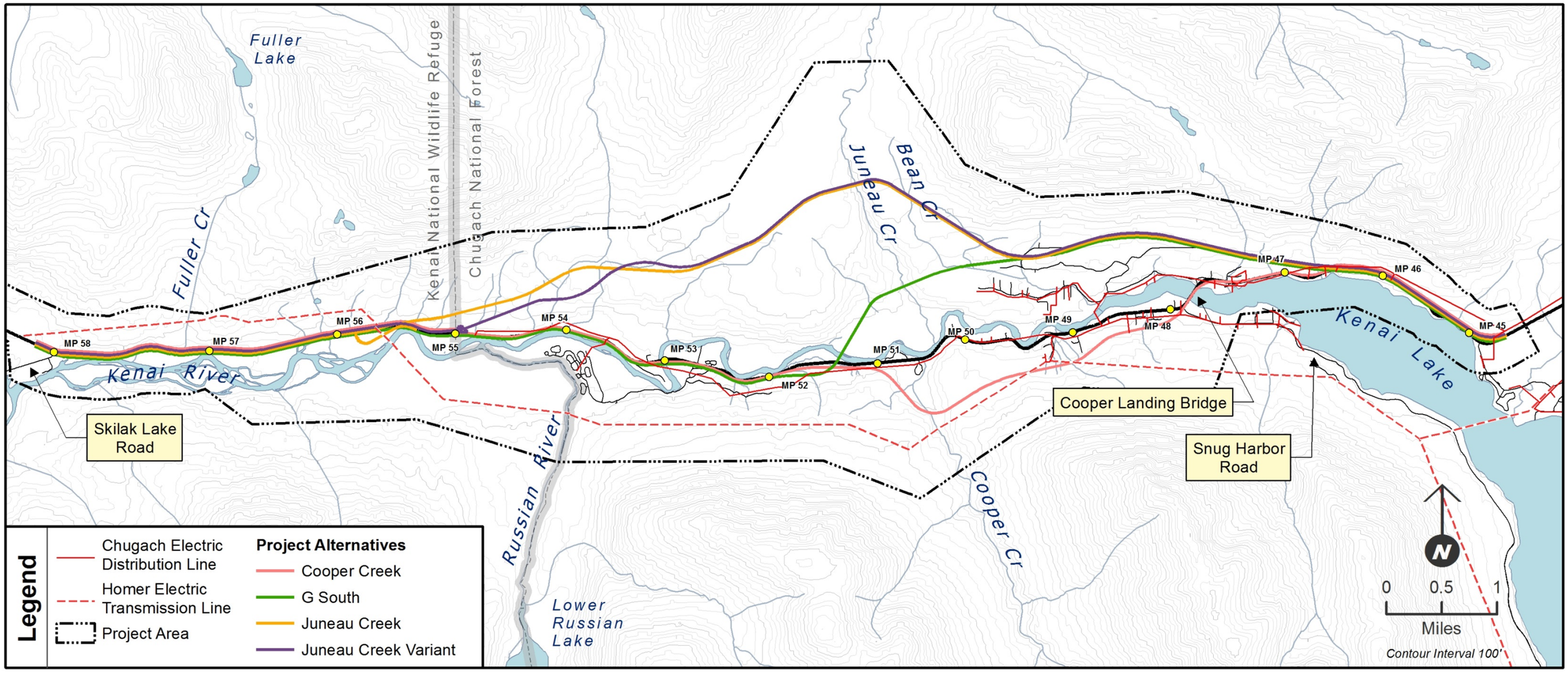

Map 3.11-1. Utilities in the project area [Updated]

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