

3.3 Social Environment

3.3.1 *Affected Environment*

This section describes conditions and trends related to the populations of the Kenai Peninsula Borough (Borough) and Cooper Landing, including changes in the amount and location of population, racial composition, age distribution, household characteristics, and income. This section also describes community character and community and public facilities. Information on travel patterns, accessibility, and traffic safety can be found in Section 3.6, Transportation. Information on housing is described in Section 3.4, Housing and Relocation.

3.3.1.1 Population and Social Groups

Population

The Borough covers 25,600 square miles, of which 15,700 square miles are land, and averages 2.2 persons per square mile (KPB 2010). The population of the Borough grew 36 percent, increasing from 40,802 to 55,400 people, between 1990 and 2010, an average annual rate of 1.8 percent. Population has generally increased since 1990 to its current peak (ADOLWD 2010). A large portion of the population is located in and around the towns of Homer and Seward and the communities of Soldotna, Cooper Landing, and Sterling.

The population of the unincorporated community of Cooper Landing in 2010 was 289 and peaked in 2001 at 391. The population declined slightly in 2002 and 2003 but was relatively constant between 2003 and 2009 (ADOLWD 2010).

Minority and Low-Income Populations

According to 2010 U.S. Census data, 4.5 percent of the residents of Cooper Landing are considered part of a minority group, fewer than the average for the Borough and the State of Alaska at 17.2 and 35.9 percent, respectively (Table 3.3-1). Based on the 2010 Census information presented in the 2010 Census Interaction Population Map, there are no clusters of minority residents within the project area or adjacent to any particular alternative. The number of minority residents, by census block, ranges from zero to three. The Census Bureau indicates that the race category identified as American Indian and Alaska Native (alone) comprises most of the Borough and the Cooper Landing minority population (7.4 and 1.4 percent, respectively, compared to the statewide average of 14.8 percent).

Table 3.3-1. Population in Alaska, the Kenai Peninsula Borough, and Cooper Landing

| Area | Total population | White | Minority ^a | Percent (%) non-white |
|----------------|------------------|---------|-----------------------|-----------------------|
| Alaska | 710,231 | 455,320 | 254,911 | 35.9 |
| Borough | 55,400 | 45,879 | 9,521 | 17.2 |
| Cooper Landing | 289 | 276 | 13 | 4.5 |

^a Total minority is the sum total of the following populations: Black or African American, American Indian or Alaska Native, Asian, Native Hawaiian or Pacific Islander, Two or More Races, and White Hispanic.

Source: USCB (2010a)

Median household income data are based on 2008 through 2012 American Community Survey¹ (ACS) data (USCB 2011). Household income is generally used as the basis for determining poverty. According to the U.S. Department of Health and Human Services (DHHS), poverty is defined by comparing the total family income with the poverty threshold. The poverty threshold for Alaska is \$19,380 for a household of two (Table 3.3-2).

Table 3.3-2. U.S. Department of Health and Human Services 2013 poverty guidelines

| Size of family/ household unit | 48 contiguous states and D.C. (\$) | Alaska (\$) | Hawaii (\$) |
|--|---|--------------------|--------------------|
| 1 | 11,490 | 14,350 | 13,230 |
| 2 | 15,510 | 19,380 | 17,850 |
| 3 | 19,530 | 24,410 | 22,470 |
| 4 | 23,550 | 29,440 | 27,090 |
| 5 | 27,570 | 34,470 | 31,710 |
| 6 | 31,590 | 39,500 | 36,330 |
| 7 | 35,610 | 44,530 | 40,950 |
| 8 | 39,630 | 49,560 | 45,570 |
| <i>For each additional person, add</i> | <i>4,020</i> | <i>5,030</i> | <i>4,620</i> |

Source: DHHS (2013).

2010 Census data indicated there were 161 occupied households in Cooper Landing (see Section 3.4, Housing and Relocation). The median household income in 2012 for Cooper Landing was \$119,306, approximately \$100,000 above the 2013 poverty threshold for the state of Alaska for a household of two. This income level indicates that the project area most likely does not have a large low-income population, based on the DHHS poverty guidelines.

ACS 2008 through 2012 data reveal that approximately 10 people, or 3.3 percent of the population, live below the poverty level in the community of Cooper Landing, as shown in Table 3.3-3. Percentages of population below the poverty level for the Borough and the state of Alaska are higher, at 9.1 and 9.6 percent, respectively. FHWA and DOT&PF are unaware of any concentrations of low-income residents within the project area or adjacent to any particular alternative. The available data set is too small to analyze.

¹ The ACS is an ongoing survey sent to approximately 3 million addresses each year. The data collected by the ACS replace the long form of the census to obtain demographic, housing, social, and economic information. Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see the American Community Survey Data & Documentation Web site (USCB 2011)). The effect of nonsampling error is not represented in these tables.

Table 3.3-3. Poverty rates in Alaska, Kenai Peninsula Borough, and Cooper Landing

| Area | Population for whom poverty status is determined ^a | Median household income for total population in 2012 (\$) ^a | Total population with income in the past 12 months below poverty level ^a | Population with income in the past 12 months below poverty level (%) |
|----------------|---|--|---|--|
| Alaska | 694,795 | 69,917 | 66,631 | 9.6 |
| Borough | 54,055 | 59,421 | 4,930 | 9.1 |
| Cooper Landing | 302 | 119,306 | 10 | 3.3 |

^a USCB (2013).

2010 U.S. Census data confirm the population of Cooper Landing is older than the state average. In Cooper Landing, the median age is 55.6 years old, 29.4 percent of the population is 65 years and older, and 8.7 percent is less than 20 years old. For the state of Alaska, the median age is 33.8 years old, 7.8 percent of the statewide population is 65 years and older, and 29.3 percent is less than 20 years old (Table 3.3-4).

Table 3.3-4. Population breakdown by age for Alaska, Kenai Peninsula Borough, and Cooper Landing

| | Alaska | Percent (%) of total state population | Kenai Peninsula Borough | Percent (%) of total Borough population | Cooper Landing | Percent (%) of total Cooper Landing population |
|-------------------------|---------|---------------------------------------|-------------------------|---|----------------|--|
| Total population | 710,231 | — | 55,400 | — | 289 | — |
| Under 5 years | 53,996 | 7.6 | 3,464 | 6.3 | 10 | 3.5 |
| 5 to 9 years | 50,887 | 7.2 | 3,434 | 6.2 | 7 | 2.4 |
| 10 to 14 years | 50,816 | 7.2 | 3,762 | 6.8 | 6 | 2.1 |
| 15 to 19 years | 52,141 | 7.3 | 3,959 | 7.1 | 2 | 0.7 |
| 20 to 24 years | 54,419 | 7.7 | 3,066 | 5.5 | 6 | 2.1 |
| 25 to 34 years | 103,125 | 14.5 | 6,290 | 11.4 | 28 | 9.7 |
| 35 to 44 years | 92,974 | 13.1 | 6,855 | 12.4 | 24 | 8.3 |
| 45 to 54 years | 111,026 | 15.6 | 9,527 | 17.2 | 59 | 20.4 |
| 55 to 65 years | 85,909 | 12.1 | 8,767 | 15.8 | 62 | 21.5 |
| 65 to 74 years | 35,350 | 5.0 | 4,064 | 7.3 | 50 | 17.3 |
| 75 to 84 years | 14,877 | 2.1 | 1,679 | 3.0 | 27 | 9.3 |
| 85 years and over | 4,711 | 0.7 | 533 | 1.0 | 8 | 2.8 |
| Median age (years) | 33.8 | — | 40.8 | — | 55.6 | — |

Source: USCB (2010a).

3.3.1.2 Community Character

Cooper Landing is an unincorporated community located on the Sterling Highway about 100 miles south of Anchorage and about 50 miles northwest of Seward and east of Soldotna at the west end of Kenai Lake in the Chugach Mountains. The highway and settlement area lie in the narrow east-west corridor of the Kenai River Valley, where sport fishing is a popular recreational activity and major source of area employment and income. The Cooper Landing Community Club, formed in 1949, is extensively involved in local development issues and is an advocate for residents' concerns. Commercial activity consists of small businesses located along the existing Sterling Highway corridor. Residential subdivisions in the area have a total of 395 housing units (USCB 2010a). A non-profit corporation, Cooper Landing Senior Citizens Corporation, Inc., has developed Eagles View and Ravens View, two clusters of senior housing located 2.8 miles down Snug Harbor Road (see Map 3.3-1). According to the organization's web site, there are a total of 12 apartments at the site.

Overall, Cooper Landing is an aging community. The median age increased from 45.7 in 2000 to 55.6 in 2010. The number of children under 19 has dropped in the same time frame, from 76 to 25 children. School enrollment has also decreased dramatically. In fall 2010, the Cooper Landing School had 10 students, compared to 34 in 2000 (ADEED 2011). Enrollment for the 2013–2014 school year was 17 (KPB School District 2013). Should the enrollment drop below 10 students, the school would not receive full funding from the State (ADEED 2012). If the school did not receive full funding from the State, its future would be uncertain, and this could lead to the closure of the school.

Between 2000 and 2010, home ownership rates continued to be high, with almost three times as many home owners as renters. In 2010, more households lived in Cooper Landing on a year-round basis than in 2000. However, the rate of seasonally occupied housing remains similar with approximately half the housing units being seasonally occupied. This is to be expected, as many of the local businesses are associated with tourism, which is substantially higher during the summer than the winter, and many of the homes are recreational dwellings (second homes).

The Sterling Highway is one of the community's defining features and shapes its character. The community formed around the highway, with residential housing, commercial development, and community and public services located on the north and south of the highway. While it is likely the road initially was a unifying feature for the community, increasing traffic, particularly in the summer, makes it difficult for local residents to turn onto and off of the highway, and increases travel times between local destinations. Most commercial development and community facilities are oriented along the highway and are not easily accessed without a vehicle, requiring residents to drive on the highway (LDN 2010a). The *Cooper Landing Walkable Community Project* plan notes that "as most travel is by vehicle, the ability for casual contact among residents is limited" (LDN 2010a). Through such plans, the community has advocated for increased pedestrian amenities and traffic calming.

3.3.1.3 Community and Public Facilities

Cooper Landing, an unincorporated community with a population of 289, does not provide many of its own local services because of its limited population base. Residents of Cooper Landing go to the neighboring community of Soldotna or other nearby communities for many of their supplies and necessary services. Table 3.3-5 lists service types and locations available in the vicinity of Cooper Landing. Map 3.3-1 identifies these locations. Residents in Cooper Landing

usually drive rather than walk or bike because of heavy traffic on the highway and inadequate pedestrian facilities (LDN 2010a).

Table 3.3-5. Community facilities and services available in Cooper Landing vicinity

| Facility | Services available |
|------------------------|---|
| Health Care Facilities | <ul style="list-style-type: none"> • Cooper Landing Medical Clinic provides services on Tuesdays from 9am to 3:30pm (operated by Peninsula Community Health Services) • Alternative care options (each approximately 47 miles from Cooper Landing): <ul style="list-style-type: none"> - Central Peninsula General Hospital in Soldotna - Providence Seward Medical Center |
| Police | <ul style="list-style-type: none"> • No local police services • Alaska State Troopers patrol the area and have a post on Quartz Creek Road |
| Fire/Rescue | <ul style="list-style-type: none"> • Cooper Landing Volunteer Fire Department (located on Snug Harbor Road) <ul style="list-style-type: none"> - 11 volunteer firefighters and no salaried staff • 911 telephone service • Cooper Landing Volunteer Ambulance – an independent, locally based organization located at the Cooper Landing Volunteer Fire Department on Snug Harbor Road |
| Libraries | <ul style="list-style-type: none"> • Cooper Landing public library located on Bean Creek Road • Cooper Landing School library located on Bean Creek Road |
| Schools | <ul style="list-style-type: none"> • Borough School District serves kindergarten through 12th grade at Cooper Landing School located on Bean Creek Road <ul style="list-style-type: none"> - 17 students enrolled for the 2013–2014 school year |
| Community | <ul style="list-style-type: none"> • Cooper Landing Community Center on Bean Creek Road • Historical Society and Museum located at Milepost (MP) 48.7 • Cooper Landing Visitor’s Center Log Cabin located at MP 47.5 • KNWR Visitor Contact Station located at MP 60 (open summer months only) • Senior Housing located on Snug Harbor Road • Post Office located on Snug Harbor Road |

Source: Stewart, personal communication (2005), ADCCED (2011), KPB School District (2013).

3.3.1.4 Environmental Justice

Executive Order 12898 (29 FR 7629) and the Federal Highway Administration (FHWA) order titled *FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (1998) require FHWA to incorporate consideration of environmental justice into the National Environmental Policy Act evaluation process. Demographic analysis indicates there are no low-income populations in the project area, but there are minority populations in the project area, including Alaska Natives (see Table 3.3-1).

3.3.2 Environmental Consequences

This section discusses the effects of the Sterling Highway Milepost (MP) 45–60 Project alternatives on the social environment, including changes to populations and social groups, community character, and community and public facilities. It also discusses populations that could be disproportionately affected by the project because of their minority or low-income status (environmental justice). Information on impacts to travel patterns and accessibility and highway and traffic safety can be found in Section 3.6. Park and recreation impacts are discussed in Section 3.8. Economic impacts are discussed in Section 3.5.

3.3.2.1 No Build Alternative

Direct and Indirect Impacts

Effects on Population and Social Groups. The No Build Alternative would not directly affect population and social groups (elderly, handicapped, non-drivers, minority, and/or ethnic groups) located within the project area. The local population and demographics would remain generally unchanged from current conditions, and current trends would continue and be unaffected by the No Build Alternative. Similarly, social groups would continue to function as under current conditions, with no change in general characteristics anticipated to result from the alternative. The No Build Alternative would not directly affect any known minority and low-income populations located within the project area. Therefore, there would be no effect on environmental justice populations.

Effects on Community Character. The No Build Alternative would continue to affect the opportunity for casual contact among residents. As traffic continued to grow, roadway congestion would increase, particularly in summer. Increased roadway congestion would create more of a barrier for pedestrian and bicyclist traffic, thus limiting social interaction.

It would be increasingly difficult for residents and tourists to turn onto and off the highway. This would decrease their ability to access locations of businesses and services. See Section 3.5 for discussion related to the local economy.

Community and Public Facilities. Under the No Build Alternative, there would be no change to community and public facilities relative to existing conditions during the winter. During the summer, traffic on the Sterling Highway is expected to increase, making congestion worse. Congested traffic would increase the response times of emergency service providers. Also in the summer, increased congestion would make it incrementally more difficult for people to travel to and between community and public facilities in the area. It would take longer, be incrementally less safe, and be less convenient for people to access community and public facilities.

Environmental Justice. Based on demographic analysis and outreach, the No Build Alternative would cause no disproportionately high or adverse environmental effects on human health or the environment for the minority populations identified in the project area. That is, any adverse effects suffered by minority and low-income populations would be no more severe or greater in magnitude than those suffered by the non-minority population or non-low-income population. Therefore, the No Build Alternative would not have an adverse environmental justice impact.

3.3.2.2 Issues Applicable to the Build Alternatives

Direct and Indirect Impacts

Effect on Population and Social Groups. Little permanent effect to the Cooper Landing community population is expected under any of the build alternatives. Some discussion appears under each alternative in the sections below.

Effects on Community Character. All of the build alternatives have the potential to change local traffic patterns by moving the faster through-traffic away from the central business area (approximately MP 48 to 50). Because the main highway would bypass most or all of the community of Cooper Landing, about 70 percent of traffic would be diverted away from the center of the community. Dust, noise, and visual effects of steady traffic in summer would be decreased. There would be a decrease in congestion, which may improve the travel experience for visitors, pedestrians, and residents, as well as local businesses that use the existing road in their daily business. Removing the through-traffic could make it easier for local residents to travel to and from community facilities and between neighborhoods and developed areas, which could improve community function and character within Cooper Landing and increase positive social interactions and enhance the small town atmosphere. Improving the small town atmosphere could generally enhance Cooper Landing’s reputation as a good place to visit. The “old” highway segments would not, however, be improved to include wider shoulders or a pedestrian path. The traffic, while considerably less in volume, would still include large RVs and vehicles with boat trailers, allowing no additional room for pedestrians or bikers using the highway.

All build alternatives would directly affect the businesses of Cooper Landing because each alternative includes a segment built on a new alignment that would be routed around most (i.e., Cooper Creek Alternative) or all (i.e., G South, Juneau Creek, and Juneau Creek Variant alternatives) of the business district. Discussion of the local economy appears in Section 3.5 and indicates that as a result of the build alternatives, some businesses may need to change to remain profitable, and it is possible some would go out of business. Such changes could cause a shift in the mix of businesses that contribute to Cooper Landing’s existing character. However, Cooper Landing would remain a destination for fishing and other recreation, so support businesses related to those activities would likely not change. Therefore, the mix of business types that gives Cooper Landing its current character would not be dramatically affected by the build alternatives, although some change is likely.

Community and Public Facilities. None of the build alternatives would have adverse impacts on community and public facilities, including schools, libraries, health care facilities, fire stations, and the provision of public safety services in the Borough. With no anticipated changes in population trends in the project area, there would be minimal additional demand for community and public facilities or services compared with the No Build Alternative.

All build alternatives would alleviate emergency response vehicle delays by reducing traffic congestion and by providing an alternate route in a portion of the project area if an accident were to close one of the roads. By improving safety features (e.g., shoulders and clear zones) along the build alternatives, the accident rate is expected to decrease. Therefore, the demand for emergency services for vehicle-related crashes would not increase in proportion to the projected increase in traffic. With a highway designed for highway speeds and with less congestion than presently occurs, traffic would move at faster average speeds, which may result in an increase in

crash severity. All build alternatives would expand the area for emergency service providers because they would have to provide services on the build alternative as well as the “old” highway, but the total amount of traffic is expected to be the same as under the No Build Alternative.

Traffic noise levels would be slightly reduced in the school vicinity, resulting in a slightly quieter school environment than under the No Build Alternative. For more information on noise-related issues, see Section 3.15.

Environmental Justice

Based on demographic analysis and outreach, no disproportionately high or adverse environmental effects on human health or the environment would occur to the minority populations identified in the project area as a result of construction or operation of any of the build alternatives. That is, any adverse effects suffered by minority and low-income populations will be no more severe or greater in magnitude than those suffered by the non-minority population and/or non-low-income population. Therefore, none of the build alternatives would have an adverse environmental justice impact.

Construction Impacts

Construction of any of the build alternatives would temporarily affect the population, community character, and access to community facilities in the project area. Traffic, air quality, and noise impacts (as discussed in Sections 3.6, 3.14, and 3.15, respectively) would temporarily combine to slightly reduce quality of life to varying degrees under the different alternatives. See further discussion in the sections for each alternative below. In addition, an increase in construction employment would temporarily increase the population in the Cooper Landing area, mostly in the snow-free months, over 3 to 4 years as discussed in Section 3.5, Economic Environment.

Regarding environmental justice, construction of any of the build alternatives would result in no disproportionately high or adverse environmental effects on human health or the environment for the minority populations identified in the project area.

Mitigation

To direct and inform visitors of businesses and services in Cooper Landing, signs would be constructed at the intersections of the alternative with the “old” highway that would direct people to the community via the old highway.

3.3.2.3 Cooper Creek Alternative

Direct and Indirect Impacts

See the general discussion of the effects of all build alternatives above in Section 3.3.2.2. In addition to those effects, the Cooper Creek Alternative right-of-way would require relocation of some residents. The alternative would require acquisition of seven occupied residences, plus one nonprofit church residence (according to Borough property records). This represents a population of approximately 11 out of a current population of 289². Relocated residents could choose to stay in Cooper Landing or move to another community. The number of directly affected people represents about 4 percent of the total population. Comparable housing does exist in Cooper

² According to 2010 U.S. Census data, the average household size in Cooper Landing is 1.8 people; 6 households multiplied by the average household size would be approximately 11 people.

Landing (4 comparable residences in 2011; see Appendix B, the *Conceptual Relocation Study*). However, even if none of the dislocated people relocate back in Cooper Landing, the small number affected would not affect population trends or social groups.

The Cooper Creek Alternative would have different effects on the community than the other build alternatives because it would continue to bring all traffic through the portion of Cooper Landing northeast of the Kenai Lake outlet, diverting through-traffic away from town only southwest of the Kenai Lake outlet. The other build alternatives are routed around the entire community. This alternative would somewhat improve the social environment and enhance the community character of Cooper Landing by diverting through-traffic away from the western portion of town. With roadway congestion eased in that area, travel there would be safer and more enjoyable, somewhat improving positive social interaction. Because that area is generally the town center, it would have a positive effect on the community as a whole.

However, the main highway and all its traffic would continue to separate this area from areas along Snug Harbor Road and areas along the highway on the north side of the Cooper Landing Bridge. In this northeast part of the community, the existing highway would be wider, with turning lanes and improved intersections, but all through-traffic and local traffic still would pass through this portion of the community. Its atmosphere would contrast markedly with the area to the southwest, where the highway would experience no widening but where only 30 percent of traffic would remain, resulting in a calmer atmosphere.

Construction Impacts

Construction of the Cooper Creek Alternative could temporarily affect access to Cooper Landing Public Library and Cooper Landing School and Library on Bean Creek Road, as well as to Cooper Landing Volunteer Fire and Ambulance and the U.S. Post Office on Snug Harbor Road. Although vehicle access to all community and public safety facilities would be maintained throughout construction, short detours and some delays may be necessary. Nighttime closures, localized congestion, traffic delay, and queuing during construction may also be experienced. Permanent traffic impacts are further discussed in Section 3.6.

Mitigation

Early notification, signage, and other necessary traffic control measures would be taken during construction to minimize disruption to traffic patterns and access to community facilities.

3.3.2.4 G South Alternative

Direct and Indirect Impacts

Acquisition of right-of-way for the G South Alternative would not require relocation of any residences or businesses (see Section 3.4). This alternative therefore would not affect population trends or social groups in Cooper Landing and the surrounding area. The G South Alternative would route the highway around the entire Cooper Landing community. Effects of the G South Alternative are discussed in Section 3.3.2.2 above.

Construction Impacts

Construction of the G South Alternative would not affect operations and provision of services at community and public facilities within the community of Cooper Landing, nor would construction affect direct access to these facilities from the highway. Realigning and widening

the existing highway outside of the core community of Cooper Landing could result in traffic delays and temporarily affect general circulation of traffic, including emergency response, in the broader project area.

Mitigation

Early notification, signage, and other necessary traffic control measures would be taken during construction to minimize disruption to traffic patterns and access to the community as a whole.

3.3.2.5 Juneau Creek and Juneau Creek Variant Alternatives

Direct and Indirect Impacts

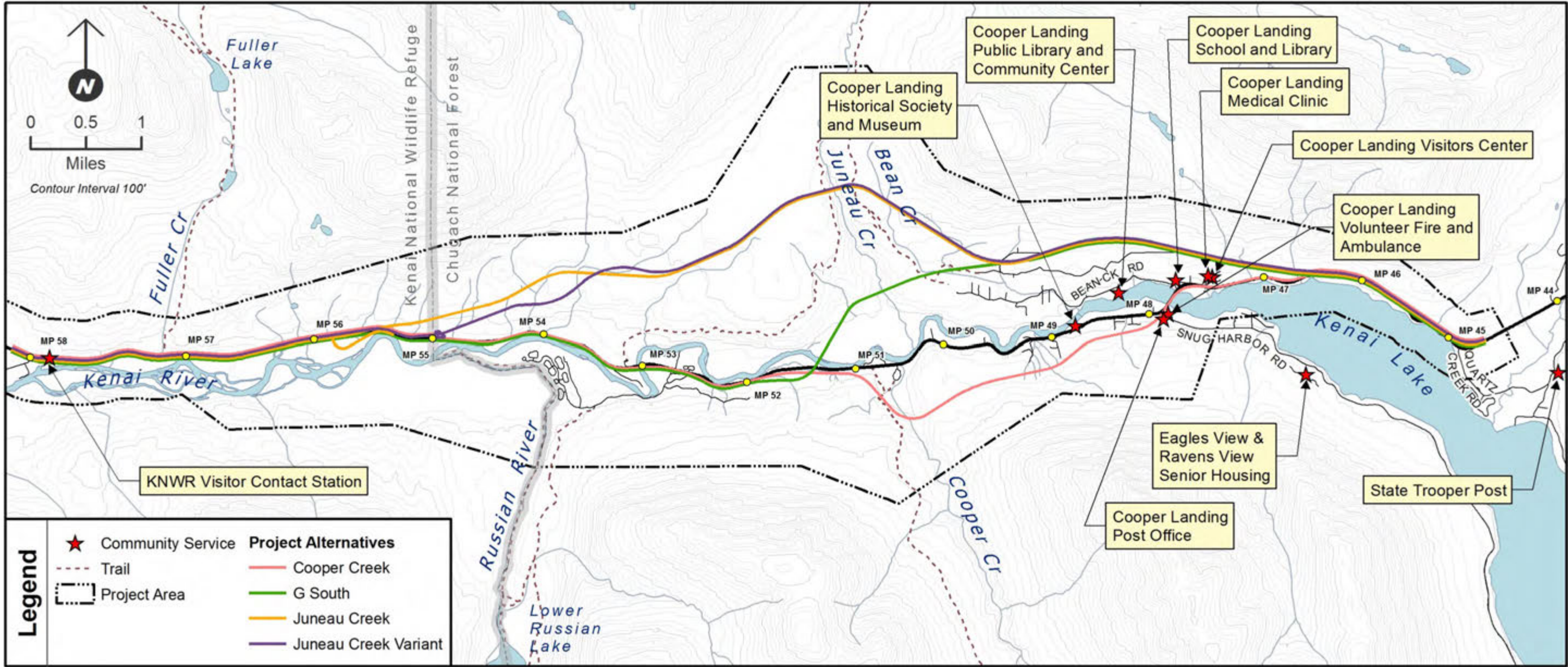
Acquisition of right-of-way for the Juneau Creek and Juneau Creek Variant alternatives would not require relocation of any residences or businesses. These alternatives therefore would not affect population trends or social groups in Cooper Landing and the surrounding area. These alternatives would route the highway around the Cooper Landing community. Effects of these alternatives are discussed above in Section 3.3.2.2 above.

Construction Impacts

Construction of the Juneau Creek or Juneau Creek Variant alternatives would not affect operations and provision of services at community and public facilities within the community of Cooper Landing, nor would construction affect direct access to these facilities from the highway. Realignment and widening the existing highway outside of the core community of Cooper Landing could result in traffic delays and temporarily affect general circulation of traffic, including emergency response, in the broader project area.

Mitigation

Early notification, signage, and other necessary traffic control measures would be taken during construction to minimize disruption to traffic patterns and to access to the community as a whole.



Map 3.3-1. Community features and facilities

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