

3.8 Park and Recreation Resources

A *Recreation Analysis* (HDR and USKH 2013) completed for this project details the recreation background of the project area. The following two subsections are largely a summary of that study. Section 3.8.1 summarizes the affected environment for recreation resources. Section 3.8.2 addresses impacts to parks and recreation resources. Many of the park and recreation properties in the project area are protected under Section 4(f) of the Federal Department of Transportation (DOT) Act, which prohibits the use of certain parks, recreation areas, wildlife refuges, or historic properties for transportation projects. For a comprehensive analysis of properties protected under that Federal law, see Chapter 4, Section 4(f) Evaluation.

3.8.1 Affected Environment

3.8.1.1 Overall Recreational Character

The Kenai and Russian rivers, associated area campgrounds, and area trails—along with private commercial businesses that cater to recreationalists—combine with natural scenery to define the Cooper Landing area and to draw recreation users from around the state and tourists from around the world for sport fishing, camping, mountain biking, hiking, hunting, and other recreational pursuits. Multiple designated park and recreation sites owned and managed by several State and Federal agencies populate the project area, particularly in a 4-mile stretch of the Kenai River valley between the mouth of Cooper Creek and the mouth of the Russian River (approximately existing highway milepost [MP] 51 to MP 55). A map showing trails and some of the park and recreation features appears at the end of this chapter (Map 3.8-1). Other recreation-oriented maps appear at the end of Chapter 4, Section 4(f) Evaluation.

Recreation in the area is managed under several land management plans, including the multi-agency *Kenai River Comprehensive Management Plan*, the *Chugach National Forest Revised Land and Resource Management Plan*, the *Kenai National Wildlife Refuge Comprehensive Conservation Plan*, and the *Kenai Peninsula Borough Comprehensive Plan*. Details on these plans appear in Section 3.2, Land Use Plans and Policies.

The recreational character of the upper Kenai River area/project area includes a combination of a spectacular natural landscape; public lands managed in large part for recreation, including developed public recreation facilities; private commercial properties (e.g., lodges) and businesses operating on public lands under permit; and relative ease of access via the Sterling Highway for the majority of the state’s population and visitors (compared to much of Alaska, which is without roads). The community of Cooper Landing is an integral part of the recreational landscape, with its many lodging options and fishing/floating outfitters and guides. Primary areas along the highway where recreation is concentrated include the support services, guides, and lodges in the community and on private lands along the river, and a concentration of mostly public recreation sites in the MP 51–55 area (mouth of Cooper Creek to mouth of the Russian River). The private and public sites accessed directly from the highway throughout the project area from east to west (Map 3.8-1), include:

- Commercial services located at Quartz Creek, and access via Quartz Creek Road to campgrounds outside the project area

- Commercial services, lodges, and guide services located in MP 47–48 portion of Cooper Landing (northeast of the Cooper Landing Bridge)
- Cooper Landing Boat Launch and Day Use Area
- Commercial services, lodges, and guide services located in the MP 48–50.5 portion of the Cooper Landing (southwest of the Cooper Landing Bridge)
- Cooper Creek Public Camp and Picnic Ground (recreation withdrawal, Tracts A and B; Tract B south of the highway provides access to Stetson Creek Trail, as well)
- Stetson Creek Trail alternative access
- Gwin’s Lodge
- Russian River Campground/trailhead for Russian Lakes Trail and Russian River Angler’s Trail
- K’Beq Footprints Heritage Site
- Trailhead for Resurrection Pass Trail
- Sportsman’s Landing-Russian River Ferry area
- Trailhead for Fuller Lakes Trail
- Kenai National Wildlife Refuge (KNWR) visitor contact station
- Jim’s Landing off Skilak Lake Road, which also provides access to KNWR recreation sites outside the project area.

The highway and all Kenai Peninsula traffic (local and through traffic) pass through this rich recreation setting. The access provided by the highway to Kenai Lake, the Kenai River, and the Russian River is in part responsible for the area’s recreational popularity. The area is heavily used by recreational traffic during the busy summer period for access to campgrounds, trailheads, interpretive sites, and fishing, as well as for traffic traveling through. There are safety issues inherent in the mix of through-traffic with parked and slow-moving recreational traffic and pedestrians, particularly on the stretch of highway near MP 54–55 (Sportsman’s Landing-Russian River Ferry area), that have been a management problem for the Alaska Department of Transportation and Public Facilities (DOT&PF), Alaska State Troopers, and the managers of the recreation resources. ADF&G, in its role as a cooperating agency and manager of fish populations and the sport fishery resource, indicated during consultation that the interrelated issues of existing heavy recreational traffic (by extension, both vehicle traffic and foot traffic), existing highway congestion in the primary area where people seek access to the river, existing impacts of bridges and road proximity to riparian habitat, and existing risks of river/habitat contamination related to vehicle operation and crashes were among the project area’s most important issues.

3.8.1.2 Section 6(f) and Section 4(f)

Some parks and recreation facilities have special protection under Federal law. Outdoor recreation facilities and parks funded by the Federal Land and Water Conservation Fund Act are subject to protections under Section 6(f) of that act. However, the State administrator for the Land and Water Conservation Fund Act reports there are no park or recreation features subject to

6(f) protections in the project area (Gray, personal communication 2008). Some park and recreation areas are subject to special protection under Section 4(f) of the U.S. Department of Transportation (USDOT) Act, a law that applies only to USDOT agencies.

Because the Federal Highway Administration (FHWA) is a USDOT agency and FHWA funds are being used for this project, and because proposed alternatives use land from properties protected under the Act, a Section 4(f) Evaluation was prepared. Chapter 4, Section 4(f) Evaluation, is the complete evaluation of those properties to which Section 4(f) protections apply.

Section 4(f) applies to “publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site or national, State, or local significance” (23 CFR 774.17). FHWA has identified parks, recreation areas, refuges, and historic properties that are protected by Section 4(f). This section references refuges along with recreation features and indicates those to which FHWA has determined that Section 4(f) applies. See Table 3.8-1. For historic properties protected by Section 4(f), see Section 3.9, Historic and Archaeological Preservation. Further detail on the Section 4(f) properties appears in Chapter 4.

Table 3.8-1. Park, recreation, and refuge properties and associated Section 4(f) applicability

Property Name	Size (acres) if Known, or Other Notes	Managing Agency or Landowner	4(f) Applies
Park			
Helen Rhode Community Wildflower Park		DOT&PF ROW	N ^a
Kenai Peninsula Borough “Preservation” Lands		Borough	N
KRSMA (legislatively designated as a park unit)	44,000 total 720 in project area	DNR-DPOR	Y
KRSMA, proposed additions (designated in land use plan; managed “as-if” a park)		DNR-DPOR	N
Wildlife Refuge			
Kenai National Wildlife Refuge		USFWS	Y
KNWR Fuller Lakes Trail access in highway ROW		USFWS, DOT&PF	Y
KNWR visitor contact station facilities in highway ROW		USFWS, DOT&PF	Y
KNWR Russian River Ferry ^b		USFWS	Y
Recreation Area			
Art Anderson Slaughter Gulch Trail		DNR, Forest Service, Borough	N
Bean Creek Trail (see also entry under Historic Sites)		Forest Service, DNR, Borough	Y
Birch Ridge trails		Forest Service, Borough	N ^a

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Property Name	Size (acres) if Known, or Other Notes	Managing Agency or Landowner	4(f) Applies
Cooper Creek Public Camp and Picnic Ground (recreation withdrawal, Tracts A and B)	19.0	Forest Service	Y
Cooper Creek Public Service Site, Tract C (recreation withdrawal)	40.0	Forest Service	N
Cooper Lake Dam Road		Forest Service, Borough, private	N
Cooper Landing Boat Launch and Day Use Area (Kenai Area Plan Unit #391F)	5.4	DNR, ADF&G, DPOR, DOT&PF ROW	Y
Coyote Notch Loops Trail		Forest Service, Borough	N ^a
Juneau Falls Recreation Area (recreation withdrawal)	320.0	Forest Service	Y
Forest Service Kenai River Recreation Area (recreation withdrawal)	350.0	Forest Service	Y
Lower Russian Lake Recreation Area (recreation withdrawal)	1,855.0	Forest Service	Y ^a
Quartz Creek Campground (recreation withdrawal)	91.0 Not affected	Forest Service	Y ^a
Resurrection Pass National Recreation Trail	+/-4,600.0	Forest Service	Y
Russian Lakes Trail and Russian River Angler's Trail	Not affected	Forest Service	Y ^a
Russian River Campground Area (recreation withdrawal)	340.0	Forest Service	Y
Shackleford Creek/Powerline Trail		DNR, Chugach Electric Assoc.	N ^a
Sportsman's Landing Boat Launch ^b	4.3	ADF&G, USFWS, Forest Service	Y
Sterling Highway State Scenic Byway		DOT&PF	N ^a
Stetson Creek Trail (see also entry below under Historic Sites)		Forest Service	Y
Forest Service Access Roads/Juneau Creek Road		Forest Service	N

^a Decisions on some properties did not include specific consultation regarding site significance with the land managing agency, usually because the site was not expected to be affected by any of the alternatives, and/or because significance was presumed.

^b Although accessed from the same driveway and fee station as Sportsman's Landing, the Russian River Ferry is owned by the USFWS, while Sportsman's Landing is owned by ADF&G. Both sites are managed by USFWS (Sportsman's under an interagency agreement). Section 4(f) impacts to Russian River Ferry are evaluated as part of the overall Kenai National Wildlife Refuge property. Section 4(f) requires consideration of the KNWR as a single protected property. The Forest Service also owns property that contains part of the entrance road to this complex; the property is part of the Kenai River Recreation Area listed above.

Note: ADF&G = Alaska Department of Fish and Game; Borough = Kenai Peninsula Borough; DNR = Alaska Department of Natural Resources; DPOR = Alaska Division of Parks and Outdoor Recreation; KRSMA = Kenai River Special Management Area; ROW = right-of-way; Forest Service = Forest Service, U.S. Department of Agriculture; USFWS = U.S. Fish and Wildlife Service

Analysis for this project of the properties listed in Table 3.8-1 appears in *Background for Section 4(f) Determination of Applicability* (HDR 2008c). The document is on file with DOT&PF and FHWA but is not published for ready access by the public because it contains sensitive information about historic and cultural sites. Effects to the listed properties that are subject to Section 4(f) are addressed in Chapter 4; those park and recreation properties that are not subject to Section 4(f) are discussed below in the remainder of Section 3.8. Cultural resources are addressed in Section 3.9, Historic and Archaeological Preservation. Kenai Peninsula Borough (Borough) and State of Alaska planning areas listed in Table 3.8-1 are addressed under discussion of management plans in Sections 3.1 (Land Ownership) and 3.2 (Land Use Plans and Policies).

3.8.1.3 Water-Based Recreation Resources

The lakes, rivers, creeks, and drainages in the Kenai River valley are scenic, extremely productive fisheries, and therefore attractive to a range of recreation users, from fishing and boating enthusiasts to hikers and sightseers enjoying scenic views. Water-based recreation is a key component of the overall recreational character addressed in the impacts discussion in Section 3.8.2. Water bodies that serve as important recreation resources in the project area include Kenai Lake, the Kenai River, and the Russian River. The outlet of Kenai Lake and immediate downstream area include many private lots with river frontage, and these have attracted recreational second homes, lodges, river guides, and other commercial interests centered mostly on water-based recreation. See also the discussion in 3.8.1.1, above, on overall recreational character of the project area. Section 3.8.1.4, below, discusses recreation developments on land in the project area, many of which support water-based recreation.

Kenai Lake. Kenai Lake is a distinctive landmark providing a unique scenic vista along the Sterling Highway. The submerged lands are part of the Kenai River Special Management Area (KRSMA), a unit of the State park system that is addressed in detail in Chapter 4, Section 4(f) Evaluation. The lake enhances the recreational experience of travelers and sightseers, hikers in the area, residents, recreational cabin users, and lake users engaged in recreational activities. The lake supports recreational use, with multiple access points and a number of well-developed facilities oriented primarily to summer use. The lake is also used for recreation in the winter for snowmobiling, ice skating, and other winter sports.

The Sterling Highway, Quartz Creek Road (along the lake at the eastern end of the project area), and Snug Harbor Road (along the west side of the lake) have a number of pull-offs and access points along Kenai Lake. Kenai Lake facilities support recreational boating with three launch sites and boat-accessible picnic areas and camping facilities inside and outside the project area. Floatplanes land on Kenai Lake. Additionally, on State-owned land, Camp Fire USA's Alaska Council provides Camp K on Kenai Lake (an overnight camp), and "Waikiki Beach" is a popular beach for local recreation along Snug Harbor Road.

Kenai River. The Kenai River is a large, glacier-fed stream that flows out of Kenai Lake and travels westward 82 miles into Cook Inlet. The 17 miles of river between Kenai Lake and Skilak Lake is known as the "upper Kenai," where the river is largely confined in a narrow glacial valley, about 1 to 2 miles wide. The upper Kenai River area largely coincides with the project area. Within the valley, the Sterling Highway is located alongside the Kenai River, within a few hundred feet or less of the water (and often immediately adjacent to the water). Cooper Landing Bridge and Schooner Bend Bridge cross the Kenai River at MP 47.8 and 53, respectively. The

Kenai River is part of the KRSMA, discussed further in Chapter 4. Various State-owned uplands along the river and its tributaries are proposed additions to the KRSMA and are managed by the Alaska Division of Parks and Outdoor Recreation (DPOR) as if they were part of the State park.

The upper Kenai River is typically more than 100 feet wide with turquoise glacier water, giving it a distinctive scenic quality that enhances the recreational experience for anglers, boaters, and sightseers, as well as affording scenic views for hikers and recreational motorists. Because of the easy access to the river along the Sterling Highway and high recreational demand, stream banks along the river at some locations show signs of heavy recreational use, including erosion, although erosion is typically from natural causes (HDR and USKH 2013). Land management agencies have been addressing erosion with multiple projects since the *Kenai River Comprehensive Plan* was instituted in the late 1990s when State agencies, the U.S. Fish and Wildlife Service (USFWS), and the Forest Service, U.S. Department of Agriculture (Forest Service) all signed a memorandum of understanding to accept and implement the plan.

The *Recreation Analysis* (HDR and USKH 2013) completed for this project indicates that the Kenai River is a major recreational attraction in the project area, and is heavily used because of its scenic, fishing, and recreational boating values within easy road access of Alaska’s highway system. The Alaska Department of Fish and Game (ADF&G), in its role as a cooperating agency, notes that the Northern Kenai Peninsula Management Area accounts for nearly one-fourth of all sport-fishing user days statewide, and that the Kenai River typically accounts for approximately 80 percent of the management area total.¹ The Forest Service in its role as a cooperating agency notes that anglers use the Schooner Bend Bridge to access fishing spots on either side of the Kenai River from existing informal pullout parking areas along the highway on the west side of the bridge or from the Resurrection Pass Trailhead. The Kenai River is considered a sport fishing “paradise” and is one of the last river systems in the world to contain world-class Chinook (king) salmon that can weigh nearly 100 pounds. Altogether, the upper Kenai River and its tributaries (including the Russian River) support 39 species of fish, and according to the recreation analysis the Kenai River as a whole is the most heavily used river in Alaska for freshwater sport fishing.

The *Kenai River Comprehensive Management Plan* acknowledges that the river is “overwhelmed by users during the peak fishery periods,” damaging habitat near popular facilities and along fragile stream banks, where the “number of users far exceed site capacities,” especially on undeveloped public land and at public facilities. The recreation analysis indicates that it is difficult to count the actual use of the river because the number of anglers who park on the road and hike in adds to the number of formally “countable” users of the area. According to the Forest Service, there are a lot of people who do park along the highway, but the Forest Service estimates it is less than those who use developed recreation locations for access.

Overall, the Kenai River recreational fishing effort is about 15 percent of the statewide total (DNR, ADF&G, KPB 1997). The upper Kenai River is an important component of this total. Table 3.8-2 provides recent statistics.

¹ From 2011 to 2015, the annual range of sport fishing effort for the Kenai River, measured in angler-days, was 365,863–455,578, according to ADF&G.

Table 3.8-2. Kenai River angler days (effort expended by recreational anglers), 2005–2009, for early run and late run sockeye salmon

Year	2005	2006	2007	2008	2009
Angler days	388,677	329,122	410,381	360,344	337,217

Source: Begich and Pawluk (2011).

Note: These data are for the entire length of the Kenai River; the upper Kenai River angling effort is a portion of this larger total.

Along with fishing, floating the upper Kenai River is a major draw. Much of the upper Kenai River in the project area has been designated “non-motorized,” with limitations on vessel types and size to limit the wake impact on stream bank habitat, reduce motorized/non-motorized user conflicts, and create a quality recreational experience for rafting, canoeing, kayaking, bank fishing, and other non-motorized uses.

The DPOR requires park use permits for commercial fishing and float guides operating on the Kenai River. The number of guides on the Kenai River has remained steady at about 340, with approximately 350 registered vessels and 130 drift boats. The estimated number of visitors boating the upper stretch of the river during a typical summer is around 25,000, according to a KNWR study (Table 3.8-3). Because much of the upper Kenai River is restricted to non-motorized use and has limited points of entry with one direction of travel, the study included 24-hour-a-day video, and thus obtained accurate numbers for the 2004 boating season from mid-June to late September of people pulling out or passing by Jim’s Landing in KNWR. There are some boaters who put in at the Cooper Landing Boat Launch and take out at Sportsman’s Landing, and never reach Jim’s Landing. These boaters are both guided and non-guided. The Forest Service does not have any estimate of users on this section of river (Cooper Landing to Sportsman’s Landing); however, it is likely that there are more boaters than reported in Table 3.8-3.

Table 3.8-3. Upper Kenai River total boat use, 2004 season

Survey method	Visitors	Boats	Anglers (%)	Scenic (%)	Guided (%)	Unguided (%)	Unknown (%)
Video surveillance	24,941	6,963	62	32	45	40	15
Interviews	6,500	1,700	66	34	51	49	—

Source: West, personal communication (2006).

Note: Interview and video surveillance occurred at Jim’s Landing between June 17 and September 30, 2004; drift boats were most widely used, with rafts, then cata-rafts, kayaks, and canoes.

The popularity of the fishing and floating on the Kenai River causes problems in the project area. These include:

- Traffic congestion and safety issues on the highway and at informal wide spots and pullouts where recreational users park for access and sometimes informal camping.
- Bank trampling, vegetation loss, and erosion, as noted above.

- A combination of developed areas, including the highway and its bridges (with effects such as vegetation loss, likely contaminated runoff, and some erosion), and overused “natural” areas that together degrade riparian habitat.
- Minor water quality contamination and risk of major contamination from spills of hazardous materials, most likely to occur because of crashes on the highway related to congestion.
- Noise, visual effects, smells of exhaust, and vibration associated with what can be heavy streams of traffic adjacent to areas used for recreation. The highest traffic periods and highest recreational periods coincide.

ADF&G, in its role as a cooperating agency and manager of fish populations and the sport fishery resource, indicated during consultation that these existing interrelated issues are among the project area’s most important issues. Some of these issues also pertain to the Russian River upstream of its confluence with the Kenai River.

Russian River. The Russian River is a clear tributary stream flowing from the mountains south of the highway some 12 miles to its confluence with the Kenai River at MP 55 of the existing Sterling Highway. From the confluence upstream about 2.5 miles (to a regulated point 1,800 feet below a low series of falls), the lower Russian River, like the adjoining Kenai River, is recognized as one of the busiest fishing rivers in Alaska.

Besides the fishery on the lower river, Russian River recreational resources are spread from the confluence of the Kenai and Russian rivers upstream along a 23-mile trail system that features a gorge, a waterfall, two lakes, and three Forest Service public recreation cabins (HDR and USKH 2013). As a result of these amenities, the Russian River experiences overuse pressures in some areas. New facilities, controlled access, fees, and stream bank restoration are methods used to maintain the condition of this recreational resource (HDR and USKH 2013).

The Russian River is the most popular clear-water sockeye salmon fishery in Alaska, with a 10-year average of 60,965 angler-days per year for sockeye salmon alone (Table 3.8-4). More than 1,000 anglers per day can be found fishing the Russian River/Kenai River confluence, and demands made on the Russian River fish population are sometimes greater than the resource can provide (HDR and USKH 2013).

Table 3.8-4. Russian River angler days (effort expended by recreational anglers), 2005–2009, for early run and late run sockeye salmon

Year	2005	2006	2007	2008	2009	2000–2009 Average
Angler days	55,801	70,804	57,755	55,444	64,518	60,965

Source: Begich and Pawluk (2011).

The Chugach National Forest (CNF) manages most of the Russian River (not including the lowest segment near the Kenai River) as a Wild and Scenic River (although it is not so designated by Congress at this time) in recognition of its outstanding “wild, recreational, fisheries and prehistoric heritage values” (Forest Service 2002a). South of the Sterling Highway,

the river forms the boundary between the CNF and the KNWR; most KNWR lands in the area are designated as Federal Wilderness. The heavy seasonal use pressures created by these outstanding qualities create substantive management and facility capacity issues (HDR and USKH 2013).

The Russian River Land Act (Pub. L. 107-362) spells out a settlement for Alaska Native land claims in the Russian River confluence area and protects public recreation lands in the area (the Forest Service campground, USFWS Russian River Ferry site, and most of the land remain in public ownership), while conveying certain specified parcels and archaeological rights to Cook Inlet Region, Incorporated, the regional Native corporation formed under the Alaska Native Claims Settlement Act (43 USC 1601-1624).

The Russian River, and sockeye salmon in the Kenai bound for the Russian River, is the main attraction for recreational sport fishing in the project area. The Russian River has scenic, wildlife, and cultural attributes that create a unique recreational experience.

3.8.1.4 Land-Based Recreation Resources

Overall Recreational Character. The forests and mountain slopes of the CNF, KNWR, and State and Borough lands provide a popular recreational setting and contribute strongly to the overall recreational character of the project area. See also the discussion of overall recreational character in Section 3.8.1.1, above. Upland recreational activities throughout the project area include the following:

- Driving for pleasure
- Viewing scenery, wildlife, and natural features
- Trail use (hiking, mountain biking, snowmobiling, skiing, some horseback riding) and camping
- Cabin use (public recreation cabins)
- Hunting
- Winter use
- Dispersed and remote backcountry activities (hiking, hunting, backcountry skiing) both on and off trails

The study conducted for this project identified that viewing wildlife, viewing natural features/scenery, and driving for pleasure are among the top five recreational activities throughout the CNF. “Viewing of scenery” is a major recreation activity in and of itself in the CNF, and as a major component in the overall satisfaction of other activities (HDR and USKH 2013).

CNF is a major recreational resource providing numerous opportunities for upland recreation. Most upland recreational activities in the project area are accessed from the Sterling Highway. Although major use of Forest Service campgrounds and other Forest Service facilities in the project area is related to sport fishing and boating, there are also many other activities that draw thousands of visitors through the area, including scenic driving (as high as 200,000 visitors annually on both the Sterling and Seward highways), hiking and trail use (9,000 to 13,000 annual

average of users who signed registers at four area trails²), and use of public recreational cabins (around 1,500 annually). Some activities that occur in the CNF are harder to quantify, including snowmobiling, hunting, horseback riding, mountain biking, and remote dispersed off-trail activities in general (HDR and USKH 2013).

On KNWR lands adjacent to the Sterling Highway between MP 55 and 60, USFWS facilities primarily are focused around fishing at the mouth of the Russian River and providing a visitor contact station for other facilities farther west, outside the project area and not subject to impacts by the Sterling Highway project alternatives. Recreation in the KNWR that is not sport fish- or boating-related consists primarily of wildlife viewing from the road, hiking/backpacking on Fuller Lakes Trail, or more remote dispersed backcountry activities such as hunting. The KNWR Wilderness is the closest Federally designated Wilderness to the majority of the Alaska population. Similar recreation experiences exist on other lands nearby, although these areas are not protected under the Wilderness Act and could be altered more easily in the future. The USFWS recognizes that there are large areas of National Forest in Inventoried Roadless Areas that abut KNWR Wilderness but notes that the National Forest lands do not fulfill the unique and specific functions and purposes of Congressionally designated Wilderness (see also Section 3.2.1.1).

State and Borough lands in the Cooper Landing area also provide for dispersed and remote recreation activity. Many of the State land units are proposed as additions to the KRSMA and are managed as if they were State park lands. Community use of local trails discussed below often begins on State or Borough lands and leads into CNF lands.

A triangular plot of land located between forks of Bean Creek Road at its intersection with the Sterling Highway (MP 47.7) has been called Helen Rhode Community Wildflower Park. It contains a small pathway and a broken-down picnic table. It is located on DOT&PF Sterling Highway right-of-way and is not a formally permitted use. It is not clear whether it is regularly maintained by any organization or individual, but it is a pleasant patch of open green space in the community.

Sterling Highway as a Recreation Resource. The Sterling Highway, which is essential for access to recreation resource areas, is also used for recreation itself. The Kenai River area owes much of its popularity to its easy access via the Sterling Highway's link to Alaska's population centers and major transportation facilities (i.e., airports, rail, and ports). As noted above, CNF has documented scenic driving as an activity that draws as many as 200,000 visitors annually on both the Sterling and Seward highways. Enjoying the scenery from the car is an experience that extends throughout the project area, including KNWR and State lands. Data from CNF forest-wide (Forest Service 2004a) indicate high participation rates in activities that relate to the experience of driving, and viewing scenery and wildlife, including:

- 60.69 percent of visitors to the CNF participate in viewing wildlife
- 53.54 percent of visitors to the CNF participate in viewing natural features/scenery
- 28.05 percent of visitors to the CNF participate in driving for pleasure

² The Forest Service, in its capacity as a cooperating agency for this EIS, estimated 26,500 users annually on the Lower Russian Lakes Trail and 10,000 users annually on the Resurrection Pass Trail system (north end, south end, Devil's Pass Trail, and Summit Creek Trail). Forest Service studies indicate that only a fraction of users sign trailhead registers.

Many of these visitors likely also visited the KNWR and had similar experiences. The Sterling Highway's easy access and proximity to the Kenai River also present drawbacks for recreation. The Sterling Highway is the only road serving communities on the western Kenai Peninsula, and the majority of its traffic is not bound for recreational sites in the Cooper Landing area. These conflicts create safety issues and a sometimes stressful experience that detracts from recreationists' experiences and make some recreational activities difficult—such as leisurely scenic sightseeing for recreational motorists, or travel alongside the river and roadway on foot or by bicycle. An additional concern is that motorists' easy access along the river can contribute to overuse and stream bank erosion at vulnerable locations, or, even more seriously, that traffic carrying toxic materials could create a spill into the Kenai River that impacts the recreational resource; see Section 3.17, Hazardous Waste Sites and Spills.

Trails. Trails within the project area consist of four improved trails in the CNF and one in the KNWR, all accessible from the Sterling Highway, and several informal trails and old roads used as trails. Resurrection Pass National Recreation Trail is the most prominent trail in the project area and connects Cooper Landing to a trailhead near Hope. Bean Creek Trail connects to it and is the historic route of the trail. Fuller Lakes Trail is a KNWR trail that, like the Resurrection and Bean Creek trails, lies north of the Sterling Highway. South of the highway are the Russian Lakes Trail, which is another long-distance trail, and the less-known but historic Stetson Creek Trail. A number of backpackers and bikers travel between Resurrection Pass Trail and Russian Lakes Trail using the Schooner Bend Bridge and a short section of the Sterling Highway to the Russian River Campground road as the connecting link. The Resurrection Pass Trail has a formal CNF trailhead that operates in summer but is not plowed in winter. Snowmobile access to the trail or to an alternate route via the CNF Juneau Creek Road (low-maintenance administrative road, also sometimes called West Juneau Road or West Juneau Creek Road) often begins with parking in the Sterling Highway right-of-way, where there is a large, informal gravel pullout at the driveway. The Resurrection, Bean Creek, Stetson Creek, and Fuller Lakes trails are detailed further in Chapter 4, Section 4(f) Evaluation. Trails and parking areas that do not have Section 4(f) protection are discussed further in this section. Map 3.8-1 shows the locations of these trails.

The Shackelford Creek/Powerline Trail (originally an access track for a power transmission line) extends from Snug Harbor Road across the lower slopes and benches north of Cecil Rhode Mountain and connects with the Cooper Lake Dam Road.

Several of the trails are interconnected. The Borough and local residents have identified the Art Anderson Slaughter Gulch Trail, in particular, as popular locally, and the 1996 *Land Use Classification Plan* identifies potential trailheads for this trail in the area. The trail appears to cross private land, Borough land, and Federal (CNF) land, but does not have a formally mapped route. It is about 1.25 miles long measured from the Cooper Landing School up the edge of Slaughter Gulch, sometimes steeply, to the last mountain hemlock trees and alpine areas, where the grade eases.

The Cooper Creek Trail is known by the Forest Service as the Cooper Lake Dam Road and is classified as a road for maintenance access. The road leaves the Sterling Highway near MP 49.5 and crosses Borough land without restrictions. At the CNF boundary, it is gated and available for permitted vehicle use by Chugach Electric Association only to access the Cooper Lake hydroelectric dam. The general public uses it on foot for recreation. Similarly, the Powerline Trail is an access track associated with the Homer Electric Association transmission line right-of-way. Although typically not maintained as a trail by any agency and typically crossing two or

more jurisdictions including private property, these trails are used for recreation, principally by local residents. Juneau Creek Road and connected Forest Service roads are used more widely for recreation as alternative snowmobile access and horseback access to the Resurrection Pass Trail.

A Forest Service permittee leads horseback rides from the south side of the highway to the north side of the highway near MP 44, outside the project area. Informal trails exist north of the highway. A horse crossing is marked with signs on the existing highway east of the Sterling Highway MP 45–60 project limits.

Campgrounds and Recreation Sites. Several campgrounds and recreation sites are within or adjacent to the project area. These include four Forest Service campgrounds. The Cooper Creek Campground (North and South) and Russian River Campground are centrally located in the project area; the pullouts on the west side of the Schooner Bend Bridge serve as overflow parking for the Russian River Campground, and people park there and then hitch a ride, walk, or bike into the campground using the bridge and a short section of highway. Access for the Crescent Creek and Quartz Creek campgrounds is at the eastern edge of the project area at Quartz Creek Road (the two campgrounds are outside the project area). Also included among area recreation sites are Sportsman’s Landing boat launch; the Russian River Ferry and associated KNWR parking and small campground; and the Cooper Landing Boat Launch and Day Use Area. These are heavily used facilities; visitor counts for the Forest Service campgrounds and Forest Service Russian River day use parking are shown in Table 3.8-5. The Forest Service campgrounds are located on parcels of land withdrawn by public land order from mineral entry and other uses, specifically for recreational purposes. In addition to the campgrounds, the CNF includes two similar recreation areas that are not highly developed:

- Juneau Falls Recreation Area (see Map 3.8-1) near mile 4 of the Resurrection Pass Trail, which incorporates the junction of the Bean Creek Trail and Resurrection Pass Trail and provides a backcountry campsite near a scenic waterfall and canyon.
- Forest Service Kenai River Recreation Area, which lies along both sides of the Sterling Highway between Cooper Creek Campground and Sportsman’s Landing and provides a public use buffer along the river and highway.

Table 3.8-5. Annual number of visitors at area facilities, 2008–2012

	2008	2009	2010	2011	2012
Cooper Creek Campground	5,594	5,992	5,900	5,628	5,016
Crescent Creek Campground	1,447	2,538	2,392	2,385	1,790
Quartz Creek Campground	15,197	16,588	16,326	15,645	14,048
Russian River Campground	31,598	24,412	23,218	20,667	20,964
Russian River day use parking area	28,385	32,342	21,594	23,223	22,844

Source: Forest Service (2012a) reported in HDR and USKH (2013).

The Section 4(f) Evaluation in Chapter 4 provides much greater detail about these park and recreation areas, because all qualify for Section 4(f) protection.

While specific recreation sites are discussed primarily in Chapter 4, a few, such as Sportsman’s Landing, are recreational properties protected under Section 4(f) for which discussion is provided here, because no Section 4(f) “use” is expected by any alternative. The existing highway lies immediately adjacent to the northern edge of the Sportsman’s Landing parcel. A single driveway across the parcel provides access to Sportsman’s Landing (State land) and the adjoining Russian River Ferry (KNWR land). By agreement, KNWR manages both sites: the State boat launch ramp and parking area, and the KNWR’s small passenger ferry that moves sport fishing enthusiasts across the Kenai River to the mouth of the Russian River. This area is popular during salmon runs in the summer and is a source of traffic conflict, with vehicles turning in and out of the parking area and parking on the edges of the highway. USFWS, in its role as a cooperating agency, indicated that the current limitations of the parking lot and the absence of shoulders or other nearby parking help control the amount of use of the Kenai River at Sportsman’s Landing and the Russian River Ferry.

3.8.2 Environmental Consequences

A *Recreation Analysis* technical report prepared for this project (HDR and USKH 2013) describes park and recreation resources and impacts to them in detail. This section of the **Final EIS** summarizes the impact analysis using a modified format so that this section remains structured like other resource discussions in this section of the SEIS. The analysis that follows focuses on those properties to which FHWA determined that Section 4(f) does not apply. Section 4(f) of the USDOT Act applies to many parks and recreation areas but may not apply if the facility is not publicly owned, not fully open to the general public, or not significant on a local, regional, or national scale, although such facilities may be important in the community. Chapter 4, Section 4(f) Evaluation, more fully explains the legal background for Section 4(f) and addresses in detail the impacts to the many park and recreation properties protected by Section 4(f). Sportsman’s Landing is an important recreational property and is protected under Section 4(f). Most of the alternatives would be located very close to Sportsman’s Landing, but none would have a Section 4(f) use of the land. It is therefore discussed in the sections below and mentioned only briefly in Chapter 4.

3.8.2.1 No Build Alternative

Direct and Indirect Impacts

Overall Recreational Character. The recreational character of the Cooper Landing and upper Kenai River area would not be substantially altered. The No Build Alternative would not impact recreational lands or lands proposed as additions to the KRSMA. These lands would continue to function much as they do today, likely with gradually increasing use. Businesses and public recreation sites accessed from the highway today would continue to be accessed directly from the existing highway. To some businesses, this would be an advantage, as they would benefit by spontaneous stops (e.g., for gas or dining). For most recreation sites that are planned destinations, both private (commercial) and public, the continuation of all traffic and projected increased traffic past the entrance would continue a trend that has degraded the overall recreational character of the area: increasing traffic would contribute to an increasingly congested recreational environment, with difficulties during the busy summer season in getting back into the stream of traffic from destinations. Similarly, pulling over to admire the view,

parking, driving for pleasure, and walking or bicycling along the highway would be difficult, unpleasant, or virtually impossible.

Water-Based Recreation. All Sterling Highway traffic would remain close to the Kenai River throughout the project area. Kenai Lake effects would not change. The No Build Alternative would conform to the *Kenai River Comprehensive Management Plan* (DNR, ADF&G, KPB 1997) recommendation to keep river crossings to a minimum, as no new bridges would cross the Kenai River. Existing bridges are anticipated to be replaced by 2043, which would create construction-related river use restrictions and temporary closure impacts to recreational fishers and boaters, but would not result in any permanent change to water-based recreation. The increased traffic over time would increase the risk of crashes and hazardous material spills that could easily pollute the Kenai River, both as a recreation resource for participants and a business resource for recreation-oriented businesses, and as habitat for salmon and trout species pursued by sport fishing enthusiasts (see Section 3.21, Fish and Essential Fish Habitat). Little change would occur to recreation on the Russian River; turning into and out of the main access points—the Russian River Ferry and the Forest Service Russian River Campground and trailhead—would likely become more challenging as traffic increased. Similar access issues would occur at other access points, including the Cooper Landing Boat Launch and Day Use Area, and the Skilak Lake Road access to Jim’s Landing.

Sterling Highway as a Recreation Resource. Traffic would continue to increase during the busy summer recreation period, and congestion, traffic noise, exhaust, and dust would continue to detract from the recreational experience.

Safety issues associated with the mix of through-traffic with parked and slow-moving recreational traffic and pedestrians, particularly on the stretch of highway near MP 54–55 (Sportsman’s Landing-Russian River Ferry area), would continue to be a management problem for the DOT&PF, Alaska State Troopers, and the managers of the recreation resources. All recreation facilities—including guiding, lodging, and other businesses centered mostly in the Cooper Landing community (MP 47–50.5) and recreation sites centered mostly in the area between Cooper Creek and the Russian River (MP 51–55)—would remain accessed directly from the existing highway. Conflicts between the needs of local/recreational traffic and through-traffic would continue. The roadway would remain winding and picturesque, but during busy periods would remain difficult to enjoy by car (“driving for pleasure”), on foot, or by bicycle because of other traffic and the need for heightened alertness.

Trails. The No Build Alternative would have no impact to trails. The trails would continue to function much as they do today, likely with increasing use and increasing formality of the trails over time. Access to and from trailheads would have the same issues noted in the paragraphs above.

Campgrounds and Recreation Sites. Recreation sites are discussed primarily in Chapter 4. Sportsman’s Landing is a recreational property protected under Section 4(f) for which discussion is provided here, because no Section 4(f) “use” is expected by any alternative. The No Build Alternative would have no effect to Sportsman’s Landing. This area is expected to remain popular during salmon runs and to continue to be a source of traffic conflict, with vehicles turning in and out of the parking area and parking on the edges of the highway. These conditions would continue to cause problems both for through-traffic and for stopping recreationists.

3.8.2.2 Issues Applicable to the Build Alternatives

Recreation-related issues are similar across all build alternatives, but notable differences are discussed in the sections below. In general, all build alternatives would alter the existing recreational character of the project area. Each of the build alternatives would include a segment built on a new alignment. The new segment of each alternative would cross existing recreational trails and would cross public lands that people currently use for dispersed and remote recreation. Higher average traffic speeds on new or rebuilt sections would make established roadside recreational activities less pleasant, and long-established roadside parking patterns would be altered. Use of the trails and public lands would be altered, as further described for each alternative below, with complementary detail in Chapter 4, Section 4(f) Evaluation, for those properties that are protected by Section 4(f).

The segment of each alternative built on a new alignment would leave a portion of the “old” highway that would not be rebuilt. In all cases, it is anticipated that approximately 70 percent of traffic would use the segment built on a new alignment and 30 percent would use the unimproved “old” segment, primarily to access local destinations, many of which are public or private (commercial) recreational facilities or recreational support services (gas stations, gift shops, and convenience stores). Although the length of the “old” highway under each alternative would differ, the character of the “old” highway is expected to change in similar ways. The road would function as a local road—a winding, two-lane road with relatively low speed limits suitable for providing access to local destinations. With less traffic on the “old” highway the overall experience of recreational drivers, pedestrians, and bicyclists traveling through the area would be improved. However, 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 to connect points within the community.

All build alternatives would include a wider area cleared of vegetation, leave a wider paved road surface, and light the major intersections at each end of the new highway segment at night. All alternatives, including the No Build Alternative, would experience increased traffic over time and with it slightly greater traffic noise. While the highway in all build alternatives would improve access for recreation in this valley, popular for fishing, camping, and trail use, it also would incrementally add to visual and noise effects that would diminish the sense of naturalness, wildness, and solitude. These visual and audible effects to recreationists are particularly important in designated Wilderness on either side of the Kenai River in the KNWR, which is specifically managed to preserve these and other wilderness values (see Section 3.2.1.1 for more on Wilderness management intent).

All build alternatives could restrict or temporarily close driveway and access roads to recreational facilities during construction. Coupled with temporary closures of the Kenai River to boating, under those alternatives that would involve building bridges across the Kenai River, these temporary changes could impact commercial river guides and require greater effort during permitting of these guides by the permitting agencies (principally USFWS and DPOR). Mitigation measures listed under each alternative, below, in 3.7 (River Navigation), and in Chapter 4 (Section 4(f) Evaluation), would minimize these impacts.

These issues are further explained below for each alternative.

3.8.2.3 Cooper Creek Alternative

Direct and Indirect Impacts

Overall Recreational Character. The recreational character of the Cooper Landing and upper Kenai River area would change under the Cooper Creek Alternative scenario. Through-traffic would follow the new highway south of Cooper Landing, and users of the existing highway through the MP 48–50 portion of Cooper Landing (southwest of the Cooper Landing Bridge) would benefit from lower congestion, traffic noise, dust, and exhaust, and increased safety and ease for pedestrians, bicyclists, and drivers. Farther west, between MP 52 and 55, through-traffic and recreational traffic would remain combined. The highway in this popular recreation area would function better than it does today, as a result of planned roadway improvements, but issues of mixing local and through-traffic would remain, as further detailed below.

Access to recreation-oriented sites located on the “old” highway would be easier because the 70 percent of traffic that is through-traffic would be on the new highway. The sites benefitting from easier access/lower congestion would be:

- Cooper Landing Boat Launch and Day Use Area
- Commercial services, lodges, and guide services located in the MP 48–50 portion of Cooper Landing (southwest of the Cooper Landing bridge)
- Cooper Creek Campground³

Recreation-oriented sites located along the rebuilt sections of the existing alignment for this alternative would have a wider, straighter road with shoulders and turning lanes, but still would be subject to conflicts between through-traffic (70 percent of the traffic) and recreation/local traffic (30 percent of the traffic). The recreation-oriented sites accessed from the rebuilt sections of the Cooper Creek Alternative would be:

- Commercial services located at Quartz Creek
- Commercial services, lodges, and guide services located in MP 46–48 portion of Cooper Landing (northeast of the Cooper Landing Bridge)
- Stetson Creek Trail alternative access
- Gwin’s Lodge
- Russian River Campground
- K’Beq Footprints Heritage Site
- Trailhead for Resurrection Pass Trail
- Sportsman’s Landing-Russian River Ferry
- Trailhead for Fuller Lakes Trail
- KNWR visitor contact station

³ The existing Stetson Creek Trail alternative access point would be included in this list geographically, but no longer would be available as a trail access point; the project would include a new Stetson Creek Trail access point (pullout parking area) just uphill along a section built on a new alignment.

In addition, the main highway and 100 percent of traffic in the MP 51–55 core area for recreation would remain adjacent to the Kenai River, retaining visual and noise impacts to recreational users of campgrounds and river access points. The improved highway curves and width would reduce congestion issues, but would result in higher average speeds in an area heavily used by recreational traffic during the busy summer recreation period for access to campgrounds, trailheads, interpretive sites, and fishing. Safety issues, monitoring, and enforcement associated with the mix of through-traffic with parked and slow-moving recreational traffic and pedestrians, particularly on the stretch of highway near MP 54–55 (Sportsman’s Landing-Russian River Ferry area), would continue to be a management problem for DOT&PF, Alaska State Troopers, and the managers of the recreation resources. Informal pullouts within the existing right-of-way would be eliminated to expand the shoulder; most informal parking and pullouts would no longer be available. However, pullouts would be retained/re-created near MP 53.1 (CNF), MP 55.6 (KNWR), and MP 57.2 (KNWR) for recreational access. Wider shoulders would make it safer for people to park and walk along the road but also would encourage such use. Shoulders in the Sportsman’s Landing area would be posted “No Parking.”

Public Lands Used for Recreation. The Cooper Creek Alternative would cross Borough lands classified as recreation and preservation lands south of the community. These lands are not likely to be otherwise developed. An area known as Helen Rhode Community Wildflower Park is a non-permitted green area located in the DOT&PF right-of-way between two branches of Bean Creek Road at its intersection with the Sterling Highway. It includes a broken-down picnic table and small path. The area would be removed under this alternative to realign the highway and reconfigure the intersection. A large area of DOT&PF right-of-way land likely would remain at the intersection of Bean Creek Road with the Sterling Highway; it is likely the area would revegetate and appear similar to the existing wildflower park.

The Cooper Creek Alternative would provide access from the segment built on a new alignment to areas that may be used for hunting, hiking, or other recreational activity that were previously difficult to reach. This would include undeveloped lands on the slopes south of Cooper Landing. While a few hunters and hikers may park on the roadside to access the trails and nearby public lands, most would likely use existing trailheads or parking. While most recreationists would use the proposed pullout trailhead for Stetson Creek Trail provided as part of this project (see Mitigation below and maps in Chapter 4) or the existing access off the “old” highway to Cooper Lake Dam Road to access the undeveloped lands, some may choose to park on the new highway shoulder. The new highway and new trailhead and parking area may attract additional people to this area, thereby increasing the possibility for human-bear conflicts. Use of the shoulders for parking and recreational activity could create safety risks for recreationists and drivers. However, similar risks in the western portion of Cooper Landing along the existing “old” highway would be reduced because the traffic volume in that area would be 30 percent of the total projected volume for the corridor.

KRSMA Additions. The Cooper Creek Alternative would have minimal impact on proposed additions to the KRSMA. The alternative would cross a narrow strip of land along Cooper Creek that is a proposed addition to the KRSMA. This would slightly reshape the land ownership pattern and could diminish prospects for actual addition of this parcel to the KRSMA State park unit through State legislation. However, this land is managed as a natural buffer for the creek, and this seems unlikely to change.

Water-Based Recreation. The Cooper Creek Alternative would have little permanent impact to recreation on Kenai Lake, the Kenai River, or the Russian River or along their shorelines. This alternative would conform to the *Kenai River Comprehensive Management Plan* (DNR, ADF&G, KPB 1997) recommendation to keep river crossings to a minimum, as no new bridges would cross the Kenai River. The highway would be widened adjacent to the river in a few locations, and riprap rock armoring of slopes subject to river erosion would be visible to Kenai River floaters and bank fishers in these locations.

The Cooper Creek Alternative would impact the KRSMA by replacing (and widening) two bridges over the Kenai River and by placing fill material or riprap (rock) in the river at several small areas, as described in Chapter 4. Fill areas at the edge of the Kenai River west of MP 55 would be common to all alternatives. The fill/riprap areas would have minimal impact on normal Kenai River processes compared to today, but would impact recreationists who would see the engineered slope and riprap from the river rather than the more vegetated slopes that exist today (note that the highway and its engineered embankment are visible in these areas today but would be expanded).

Indirect effects to KRSMA users could result from the portion of the Cooper Creek Alternative just east of the Russian River Campground entrance where a cut 55 feet high and 350 feet long would be located on the uphill side of the new highway. Although this cut would be located well outside the KRSMA boundary (across the new highway from the Kenai River), it likely would be visible to boaters from some points on the Kenai River over an area of up to 1 mile. Over time, it would grow in with vegetation and look more natural. The new highway in this area would be located up to about 80 feet farther from the Kenai River and at slightly higher elevation than the existing highway alignment. This would be one location along the Kenai River with a distinct change in the visual environment (see Section 3.16), but no substantial impairment to the functions of the KRSMA—including fish habitat and fish movement, river boating, fishing, and viewing—is expected.

Sterling Highway as a Recreation Resource. Traffic would continue to increase during the busy summer recreation period, and traffic noise, exhaust, and dust would continue to detract from the recreational experience in many areas. However, the highway would be improved, with turning lanes at key intersections and public recreation destinations. These improvements would allow for better access to and from recreational sites. The Cooper Creek Alternative would be routed around a portion of Cooper Landing and around Cooper Creek Campground. Traffic at the access to these areas from the “old” highway would be substantially reduced, with 70 percent of traffic expected to use the new highway. The “old” highway would be retained as a narrow, winding, lower-speed, segment well suited for local access to commercial recreation destinations and to Cooper Creek Campground.

Safety issues associated with the mix of through-traffic and parked or slow-moving recreational traffic and pedestrians, would be reduced because of wider lanes and shoulders and the addition of turning lanes. This would be particularly important on the stretch of highway near MP 54–55 (Sportsman’s Landing-Russian River Ferry area) closest to the popular confluence of the Kenai and Russian rivers. However, all traffic would continue to pass through this area. Conflicts between the needs of local traffic, recreational traffic, and through-traffic would continue, with some drivers likely attempting to use the new (wide) shoulders for parking. The shoulders would improve access for pedestrians and bicyclists, and reduced traffic on the “old” highway segment also would make that segment somewhat better for pedestrians and bicyclists, although

conditions that combined large recreational vehicles, narrow lanes, and no shoulders, still would exist. During busy periods, the “old” highway would remain difficult to enjoy by car (“driving for pleasure”) because of other traffic and the need for heightened alertness.

Trails. Of the primary maintained trails in the project area, the Cooper Creek Alternative would cross Stetson Creek Trail, addressed in detail in Chapter 4, and would reconfigure the driveway connection to the Resurrection Pass Trail and Fuller Lakes Trail. Although the driveway connections would be more clearly defined, in both cases the parking area within the pullout would be retained. At the Resurrection Pass Trail, this would continue to function as primary parking for winter access to the Resurrection Pass Trail system.

Of the more informal trails named in Section 3.8.1, this alternative would cross the Cooper Lake Dam Road and the Shackleford Creek/Powerline Trail. The new highway would cross over the Cooper Lake Dam Road via an overpass (bridge or large culvert). There would be no access ramps from the highway to the Cooper Lake Dam Road, but the overpass would allow continued use of the Dam Road and would not preclude continued informal recreational use. The Cooper Creek Alternative would cross the Powerline Trail twice over about 0.5 mile and would parallel it between the two crossings. Trail use at this location appears to have developed informally (recreational use of the powerline construction/maintenance access track), and it is likely that connection between the two crossing areas would develop informally in the ditch area along the highway, as occurs in many other places along highways near rural Alaska communities. Some users on ATVs or snowmobiles or on foot may cross the highway at grade at these locations. Others may park on the highway to access either the Powerline Trail or Cooper Lake Dam Road. Such uses could pose a risk of collision both for recreationists and for other drivers. A marked horse crossing outside the project area near MP 44 would remain, and existing conditions would be largely unchanged.

Other trails listed in Section 3.8.1 are not expected to be affected.

Campgrounds and Recreation Sites. The Cooper Creek Alternative would use land from the following park and recreation areas protected by Section 4(f), as described fully in Chapter 4:

- Cooper Landing Boat Launch and Day Use Area (temporary occupancy during construction only)
- Forest Service Kenai River Recreation Area

This alternative also would pass close to or use land from several other recreation sites, as described in the following paragraphs.

Cooper Creek Campground. The Cooper Creek Alternative would pass uphill of the Cooper Creek Campground, which could somewhat diminish the campground experience (the “old” highway would lie to the north and the new highway to the south and west). The new highway would cross the creek canyon at an elevation of approximately 100 feet above the creek and about 2,000 feet upstream from the campground. The new highway would follow the hillside west of the creek toward the existing Sterling Highway, coming within about 1,300 feet of the campground. While forest would screen the highway from being seen during the May–September period that the campground is open, campground users would be aware of its presence, including noise from engines laboring uphill and from trucks downshifting or using compression brakes going downhill, and likely the sounds of tires on the bridge abutments, leaving the impression that the campground was backed by a highway and bridge rather than

quiet woodland. Traffic and associated noise on the existing Sterling Highway would decrease, improving the ability to access and depart the Cooper Creek Campground and making the area safer for pedestrians and bicycles. Noise modeling indicated that despite multiple sources and directions of traffic noise, there would be no overall increase within the campground based on average traffic sounds (sounds mostly generated by engines and tires over a specified period; see Appendix D of this EIS for a detailed technical study of noise effects). The noise model does not account for instantaneous sounds such as compression brakes or rumble strips, and the Forest Service has indicated concern about such effects at the campground. While these sounds would be audible and may be disturbing to some in the campground, they would be more distant than sounds are today from the existing highway. The activities, features, and attributes of the campground would remain as they are today and would not be substantially impaired.

KNWR Facilities. The effects of the Cooper Creek Alternative on the KNWR visitor contact station and the KNWR Fuller Lakes Trailhead would be identical to those of the other build alternatives (Map 4-3 at the end of Chapter 4 illustrates this area). The widened roadway fill under all four build alternatives would come to the edge of the western cul-de-sac at the visitor contact station, which was built within the highway right-of-way, but there would be no use of the contact station and its grounds. Vehicles on the cul-de-sac would not be within the new highway's clear zone and would therefore not be a safety hazard. The trailhead for the KNWR Fuller Lakes Trail also lies within the Sterling Highway right-of-way and adjacent to the existing highway. There would be no use of the Fuller Lakes Trailhead by any of the alternatives. In both cases, highway traffic noise would be an evident and continued part of the experience at these locations (*Highway Traffic Noise Assessment*, Appendix D of this SEIS), and the highway and its traffic would be readily visible. However, these noise and visual effects would be similar to those experienced at these locations today and under the No Build Alternative. Access to and from the contact station may be improved with an eastbound passing lane, which would allow through traffic to safely go around vehicles slowing to turn into the parking area. Because this alternative would not use any KNWR land outside the existing right-of-way and would not alter the human use pattern in the area, no other effects to KNWR recreation are anticipated. The activities, features, and attributes of the contact station, the trailhead, and KNWR as a whole would not be substantially impaired.

Sportsman's Landing. The widened Cooper Creek Alternative, where it would pass the Sportsman's Landing boat launch, would follow the existing highway alignment and would remain immediately parallel to the north side of the Sportsman's Landing parcel. Permanent access to the property would be improved with the addition of a turning lane on the highway. Near Sportsman's Landing and Russian River Ferry—prime river access points—the new highway's 8-foot shoulders could tempt the public to park outside these access point parking lots, which charge a fee and often can be full during prime fishing season. Left unmanaged, this additional informal parking could lead to a public safety hazard and to more people in already crowded areas near the confluence of the Russian River and Kenai River, and could increase the need for management by USFWS (manager of Sportsman's Landing and Russian River Ferry), DPOR, ADF&G, and the Forest Service. Enforceable no parking signs would be posted to reduce this problem.

Design year 2043 average traffic noise levels were modeled at a level equal to existing 2012 noise levels (see Section 3.15, Noise). The activities, features, and attributes of Sportsman's Landing would not be substantially impaired.

Construction Impacts

Overall Recreational Character. The noise, dust, and detours or pilot cars associated with the construction process would temporarily disrupt the rural recreational atmosphere for many people in the project area. While the construction contractor would be required to maintain access to public recreation sites and recreation-oriented businesses, access could be difficult at times. Under the Cooper Creek Alternative, construction would occur directly at the access points for multiple recreation sites and commercial properties that support recreation.

Water-Based Recreation. Bridge construction would result in restrictions on Kenai River use and temporary closures of the river in the vicinity of the bridges being replaced (Cooper Landing and Schooner Bend bridges), for safety. Access restrictions would be short term and temporary, and limited to the period of time when equipment, workers, and temporary structures would be located in the river. Other temporary impacts to recreation would include construction noise, dust, temporary visible water quality impacts, and, in a few locations, construction equipment working in the edge of the Kenai River. During construction, individual planned trips down the Kenai River could be cancelled if the river was closed to navigation at the time a group wished to float the river. Closures could occur over two to four summer recreation seasons. See Section 3.7, River Navigation, for a complete discussion of these impacts and proposed mitigation.

Sterling Highway as a Recreation Resource. During reconstruction of highway segments built on the existing alignment, driving for pleasure and access to recreation destinations could be more difficult. The Cooper Creek Alternative has about 10.5 miles that would be reconstructed.

Trails. Stetson Creek Trail would be closed temporarily during construction. Access to the upper trail would be maintained, but would cross the construction zone. Trail detours would be likely. The experience of trail users would be degraded for short segments during this time, and any closure would impact trail users intending to use the trail at that time.

Construction activity would require temporary closure of the Cooper Lake Dam Road and Powerline Trail, which would temporarily limit access for recreational activity in the area. Because these routes are informally used for recreation but not managed for recreation, no detours or accommodation are anticipated to be provided during the construction process, and users would have to go to other area trails.

Campgrounds and Recreation Sites. The Cooper Creek Alternative would involve temporary closures and recreation use restrictions to the Cooper Landing Boat Launch. Construction would occur within the Forest Service Kenai River Recreation Area, creating noise and dust impacts and potentially affecting access by recreationists on foot in some areas. See a complete discussion of these two recreation areas in Chapter 4.

Sportsman's Landing. The construction contractor would likely need to use the northern edge of the parcel temporarily during construction. Public access to the parcel and along the access road at the northern edge of the parcel would be maintained throughout construction during the summer use season (particularly from the opening of the red salmon fishing season in mid-June through Labor Day weekend). The relationship of the boat ramp parking facilities to the highway would be unchanged following construction. During construction, those using the parking area, especially those nearest the highway, would experience the noise of heavy equipment and likely some dust. They may experience traffic delays getting to and from the site. These impacts during construction, including use of the northern edge of the parcel by workers and equipment, would

be temporary—much less than the duration of construction of the entire project. No permanent changes to the parcel are anticipated, and no interference with the activities, features, or attributes on even a temporary basis is anticipated. Any disturbance of earth at the northern edge of the property would be revegetated to leave the area in the same condition it is in today. There is no substantial tree buffer now between the highway and parking area, so visual and vegetation changes would be minimal. These impacts have been discussed with ADF&G (land owner) and USFWS (land manager), and all agree that these temporary uses would not cause any important impact (HDR 2009b, ADF&G 2016, USFWS 2016). If this alternative were advanced, FHWA would seek formal concurrence from both land managing agencies prior to making a final determination to this effect.

Mitigation

Section 4.6 in Chapter 4, Section 4(f) Evaluation, provides extensive mitigation discussion for impacts of the Cooper Creek Alternative to the following properties:

- Kenai River-KRSMA
- Stetson Creek Trail
- Forest Service Kenai River Recreation Area
- Cooper Landing Boat Launch and Day Use Area

Mitigation measures follow for properties not addressed in the Section 4(f) Evaluation.

Pullouts and Parking. Pullouts would be retained/re-created near MP 53.1 (CNF), MP 55.6 or 56.7 (KNWR), and MP 57.2 (KNWR) for recreational parking/access. In general, to help control recreational parking on the new shoulders of the reconstructed highway in popular areas, DOT&PF would post enforceable no parking signs wherever reasonably requested by adjacent land management agencies.

Sportsman’s Landing/Kenai River. Construction contractors would not park vehicles or stage construction materials at Sportsman’s Landing during the busy summer visitor season (from the opening of red salmon fishing season in mid-June through Labor Day weekend), and would not do so at other times of the year without an agreement with ADF&G and KNWR. Enforceable no parking signs would be posted near Sportsman’s Landing to keep the new highway shoulders from becoming additional parking and thereby keep numbers of people accessing the Kenai River through the Sportsman’s Landing entrance to manageable levels.

KNWR Facilities. As with all build alternatives, DOT&PF would work with the KNWR regarding design and construction in the vicinity of the Fuller Lakes Trailhead and visitor contact station to ensure minimal impact. Construction contractors would not park vehicles or stage construction materials at the trailhead or the visitor contact station during the busy summer visitor season, and would not do so at other times of the year without an agreement with KNWR. Enforceable no parking signs would be posted near Sportsman’s Landing. To retain as much visual buffer as possible, the trees that exist between the visitor contact station parking area and the highway would be retained to the extent possible, and replanting of trees or shrubs would occur where possible.

Powerline Trail and Cooper Lake Dam Road. Notice of construction and trail interruption would be posted near the beginning of the Powerline Trail (off Snug Harbor Road) and near the

beginning of Cooper Lake Dam Road (off the existing Sterling Highway near MP 49.6), as well as at the approach to the construction zone (e.g., posted on a tree). DOT&PF would monitor use of the highway shoulder for parking by recreationists as access to these trails. If safety hazards developed, DOT&PF would post no parking signs near the intersections of these trails with the highway.

3.8.2.4 G South Alternative

Direct and Indirect Impacts

Overall Recreational Character. The recreational character of the Cooper Landing and upper Kenai River area would change under the G South Alternative. Most through-traffic would follow the new highway north of Cooper Landing. The “old” highway through the community both southwest and northeast of the Kenai Lake outlet would benefit from lower congestion; traffic noise, dust, and exhaust; and increased safety and ease for pedestrians, bicyclists, and drivers. Farther west, from MP 52 to 55, through-traffic and recreational traffic would remain combined, and the highway would function almost identically to the Cooper Creek Alternative.

Access to recreation-oriented sites located on the “old” highway would be easier because the 70 percent of traffic that is through-traffic would be on the new highway and separated from many of the recreational businesses. The sites benefitting from easier access/lower congestion would be:

- Commercial services, lodges, and guiding businesses located in both the MP 46–48 and MP 48–50 portions of Cooper Landing (both northeast and southwest of the Cooper Landing bridge)
- Cooper Landing Boat Launch and Day Use Area
- Cooper Creek Campground
- Stetson Creek Trail alternative access

Recreation-oriented sites located along the rebuilt sections of the existing alignment for this alternative would benefit from a wider, straighter road with shoulders and turning lanes, but still would be subject to conflicts between through-traffic (70 percent of the traffic) and recreational/local traffic (30 percent of the traffic). The recreation-oriented sites accessed from the rebuilt sections of the G South Alternative would be:

- Commercial services located at Quartz Creek
- Gwin’s Lodge
- Russian River Campground
- K’Beq Footprints Heritage Site
- Trailhead for Resurrection Pass Trail
- Sportsman’s Landing-Russian River Ferry
- Trailhead for Fuller Lakes Trail
- KNWR visitor contact station

In addition, the main highway and 100 percent of traffic in the MP 51–55 core area for recreation would remain adjacent to the Kenai River, retaining visual and noise impacts to recreational users of campgrounds and river access points. The improved highway curves and width would reduce congestion issues, but would result in higher average speeds in an area heavily used by recreational traffic during the busy summer recreation period for access to campgrounds, trailheads, interpretive sites, and fishing. Safety issues, monitoring, and enforcement associated with the mix of through-traffic with parked and slow-moving recreational traffic and pedestrians, particularly on the stretch of highway near MP 54–55 (Sportsman’s Landing-Russian River Ferry area), would continue to be a management problem for DOT&PF, Alaska State Troopers, and the managers of the recreation resources. Existing informal pullouts within the existing right-of-way would be eliminated to expand the shoulder, so most informal parking and pullouts would no longer be available. However, pullouts would be retained/re-created near MP 53.1 within the CNF and near MP 55.6 and MP 57.2, both in KNWR, for recreational access.

Wider shoulders would make it safer for people to park and walk along the road, but also would encourage such use. Shoulders in the Sportsman’s Landing area would be posted no parking.

The G South Alternative would cross Borough lands classified for recreation and preservation north of the community. These lands are not likely to be otherwise developed, and in the *Cooper Landing Land Use Classification Plan* are specifically classified to create a buffer around a presumed highway alignment for this project (CLAPC 1996). The buffer likely would serve to restrain development along the highway and contain development mostly to areas within the existing community. The presumed G South alignment in the land classification plan and the proposed G South alignment discussed in this SEIS are not identical, and the Borough may need to amend its plan to reflect the final alignment.

While most recreationists would use the proposed new summer trailhead and proposed winter pullout for Bean Creek Trail (see mitigation in Section 4.6.5 of Chapter 4) to access undeveloped lands on the slopes north of Cooper Landing, some may choose to park on the highway shoulder. This could cause a hazard to recreationists and to other drivers. However, shoulder use is expected to be low, similar to other undeveloped stretches of highway in Alaska, and much safer with a shoulder than without. A short distance west of Juneau Creek, staging areas and an access road necessary for constructing the large bridge have the potential to create permanent, new, and easier public access to the creek area after the work is complete. The construction access areas would be closed following construction (see mitigation for bears in Section 3.22, Wildlife). Regardless of this closure, access on foot in this area likely would be easier than it is today, potentially leading to a new fishing access point, and some recreationists may benefit. Some may also unwittingly place themselves in danger of conflict with brown bears in this area. This could become a recreation management issue for DPOR and the Forest Service.

KRSMA Additions. The G South Alternative would cross lands in the area near Bean Creek and Juneau Creek that are proposed additions to KRSMA, inserting the highway and a large bridge on tall piers across the lower portions of Juneau Creek Canyon, with associated traffic noise and visual impacts, in what is currently a mostly undeveloped area. The highway, and construction access roads into the bottom of the valley for bridge construction, would result in tree cutting and would change the appearance of these lands. The DOT&PF would own the transportation corridor (or control an easement) through these proposed KRSMA additions. This would reshape the land ownership pattern and could make the KRSMA additions area more difficult for DPOR to manage because of increased public access from the highway. CNF lands in this area would be

affected similarly. It is possible that placing a highway through the area would diminish the value of the lands as a park in the eyes of State legislators and reduce the prospects for actual addition of these lands to the KRSMA State park unit through legislation.

Water-Based Recreation. The G South Alternative would have some permanent impacts to recreation on Kenai Lake, Kenai River, and Russian River or along their shorelines. This alternative would include a new bridge across the Kenai River. This is not in keeping with recommendations in the *Kenai River Comprehensive Management Plan* (DNR, ADF&G, KPB 1997), which seeks to avoid creating new crossings. Most boaters on the river would then pass under two bridges on a day trip instead of one—an increased visual and aesthetic impact and a similar but new obstacle to navigation. The bridge would cross a gravel bar where boaters sometimes stop to fish or picnic, and the experience at that location would change incrementally. The bridge location is just downstream from an area where the existing highway is within sight of the river and boaters. At the bridge site, the existing highway is still within the hearing of boaters who use the river or gravel bar at this location (the existing highway is across the river, which is about 200 feet wide, and beyond a buffer of trees, which adds about 240 additional feet). With the G South Alternative, this location would change to an evident roadside setting.

Otherwise, as is true of other alternatives, the highway would be widened adjacent to the river in a few locations, and riprap rock armoring of slopes subject to river erosion would be visible to Kenai River floaters and bank fishers in these locations. These are locations in which the highway is visible today, but it is likely that more fill and riprap would be visible. These fill areas would have almost no impact on normal Kenai River processes but would impact recreationists who would see the riprap from the river rather than vegetated slopes.

Indirect effects on the KRSMA also could result from the portion of the G South Alternative just east of the Russian River Campground entrance where a cut 55 feet high and 350 feet long uphill of the new highway would be required to straighten a curve that does not meet current standards. Although this cut would be located well outside the KRSMA (across the highway from the Kenai River), it likely would be easily visible to boaters from some points on the Kenai River over an area of up to 1 mile. The highway in this area would be located up to about 80 feet farther from the Kenai River and at slightly higher elevation than the existing highway alignment. This would be one location along the Kenai River with a distinct change in the visual environment (see Key View 15, discussed in Section 3.16, Visual Environment). Overall, impacts of the new bridge to fish habitat and fish movement are expected to be minor, and impacts to river boating and fishing are expected to be changes primarily to the aesthetics of the activity. The visual environment would be somewhat degraded in a few locations, but float trips and fishing on the river would be expected to remain popular.

Sterling Highway as a Recreation Resource. Traffic would continue to increase during the busy summer recreation period, and traffic noise, exhaust, and dust would continue to detract from the recreational experience in many areas. However, the highway would be improved with turning lanes at key intersections and public recreation destinations, allowing for better recreational access to and from these sites. The G South Alternative would be routed around the Cooper Landing community in its entirety and around Cooper Creek Campground. Traffic at the access to these areas from the “old” highway would be substantially reduced, with 70 percent of traffic expected to use the new highway. The “old” highway would be a narrow, winding, lower-speed, and aesthetically-pleasing segment well suited for local recreational access and driving for pleasure.

Safety issues associated with the mix of through-traffic with parked or slow-moving recreational traffic and pedestrians would be reduced because of wider lanes and shoulders and turning lanes. This is an issue particularly on the stretch of highway near MP 54–55 (Sportsman’s Landing and Russian River Ferry area) near the popular confluence of the Kenai and Russian rivers. However, all traffic would continue to pass through this area. Conflicts between the needs of local traffic/recreational traffic, and through-traffic would continue, with some drivers likely attempting to use the new (wide) shoulders for parking. The shoulders would improve access for pedestrians and bicyclists, and reduced traffic on the “old” highway segment also would make that segment somewhat better for pedestrians and bicyclists, although conditions that combined narrow lanes, no shoulders, and large recreational vehicles still would exist. During busy periods, the “old” highway would remain difficult to enjoy by car (“driving for pleasure”) because of other traffic and the need for heightened alertness.

Trails. Of the primary trails in the project area, the G South Alternative would cross the Bean Creek Trail, which is addressed in Chapter 4. It would pass by the trailheads for the Resurrection Pass Trail and Fuller Lakes Trail, both adjacent to the highway, and would slightly reconfigure the driveway connection for each. Reconfiguring the trailhead driveway for the Resurrection Pass Trail would include formalizing a large pullout used in part for winter parking for the trail. A new pullout would be added near the Bean Creek trailhead, and it would provide for winter parking and access via the Bean Creek Trail to the Resurrection Pass Trail system. A new summer trailhead parking area would also be provided for the Bean Creek Trail, and these parking facilities would make the Bean Creek Trail more visible and accessible. It is likely that some use would shift from the current Resurrection Pass Trail access point to the new Bean Creek Trail access point, because of shorter distance to destinations along the Resurrection Pass Trail or better snow conditions. This shift in use likely would require some change in management measures on the part of the Forest Service.

The G South Alternative would cross lower Juneau Creek valley and follow the west side of the valley southward to the Kenai River. In this area, the highway would lie below Resurrection Pass Trail (which is on a bluff top above and to the northwest) and likely would be intermittently visible and audible from the trail. However, the highway at its closest would be approximately 1,900 feet away horizontally and approximately 300 feet lower than the Resurrection Pass Trail. Noise studies included modeled noise receptors located on Resurrection Pass Trail and Bean Creek Trail within the southern portion of the Juneau Falls Recreation Area (i.e., north of the G South alignment). These locations both showed 35 dBA sounds levels from the G South Alternative in 2043—among the quietest sound levels modeled and indicative of natural background noise levels. The location where the trail is closest to the G South Alternative also was modeled as quiet—42 dB(A) in 2043, approximately 2 dB(A) greater than the assumed level today. While traffic noise may be audible, the distance would mean it would not be considered loud. Occasional views of the Juneau Creek Bridge and highway east of the bridge likely would occur over about 1 mile of the trail. The sound and the line of pavement and cut through the forest would not be natural, and would be a change from current conditions and likely considered an impact to some trail users. FHWA has determined that these proximity impacts likely would occur but would not be so severe that the activities, features, or attributes of the trail, which is qualified for protection under Section 4(f) of the Federal DOT Act, would be substantially diminished. The trail would be expected to remain popular over its 38-mile length. The views and sounds would be additions to occasional views and sounds of the existing highway already experienced by trail users on the lower stretches of the trail.

Of the more informal trails in the project area, the G South Alternative would cross the Art Anderson Slaughter Gulch Trail (and the connected Birch Ridge Trails). The highway would run between the community of Cooper Landing and the upper trail, about 0.4 mile into the 1.25-mile trail (measured from a de facto trailhead at the school). Without mitigation, this would create a barrier for some local users who would not want to cross the highway. Others likely would cross the highway on foot and could pose a risk of pedestrian-vehicle accidents. Others may park on the shoulder to gain access to these trails, another potential safety issue. In any of these cases, the highway would create a change in the trail experience, introducing an engineered highway embankment and traffic where the trail previously traversed primarily natural surroundings. However, this is not a formal trail managed by any agency. While there are no counts of users, and the trail is known to be locally popular, the number of users is thought to be low.

A marked horse crossing outside the project area near MP 44 would remain, and existing conditions would be largely unchanged.

Other trails listed in Section 3.8.1 are not expected to be affected.

Campgrounds and Recreation Sites. In addition to trails, the G South Alternative would use land from the Forest Service Kenai River Recreation Area, which is protected by Section 4(f). Impacts are described fully in Chapter 4. This alternative also would pass close to or use land from several other recreation sites, as described in the following paragraphs.

Sportsman’s Landing. The G South Alternative, where it passes the Sportsman’s Landing boat launch, would follow the existing highway alignment and remain immediately parallel to the north side of the Sportsman’s Landing parcel. The alignment and relationship to Sportsman’s Landing would be identical to those of the Cooper Creek Alternative. No permanent impact is anticipated. See also the discussion below under Construction Impacts. Near Sportsman’s Landing and the Russian River Ferry—prime river access points—the highway’s new 8-foot shoulders could tempt the public to park outside these access point parking lots, which charge a fee and often can be full during prime fishing season. Left unmanaged, this additional informal parking could lead to a public safety hazard and to more people in already crowded areas near the confluence of the Russian River and Kenai River. It could also increase the need for management by USFWS (manager of Sportsman’s Landing and Russian River Ferry), DPOR, ADF&G, and the Forest Service. Enforceable no parking signs would be posted to reduce this potential problem.

KNWR Facilities. The effects of the G South Alternative adjacent to the KNWR visitor contact station and the KNWR Fuller Lakes Trailhead would be identical to those of the other build alternatives (Map 4-3 at the end of Chapter 4 illustrates this area). The widened roadway fill under all four build alternatives would come to the edge of the cul-de-sac at the visitor contact station, which was built within the existing highway right-of-way, but there would be no use of the contact station and its grounds. Vehicles on the cul-de-sac would not be within the new highway’s clear zone and would therefore not be a safety hazard. The trailhead for the KNWR Fuller Lakes Trail also lies within the existing Sterling Highway right-of-way and adjacent to the existing highway. There would be no use of the Fuller Lakes Trailhead by any of the alternatives. In both cases, highway noise would be an evident and continual part of the experience at these locations, and the highway and its traffic would be readily visible. However, these noise and visual effects would be similar to those experienced at these locations today. Access to and from these facilities may be improved with the wider, safer road and, in this area, an additional lane.

No other indirect effects to the contact station site are anticipated. Because this alternative would not use any KNWR land outside the existing right-of-way and would not alter the human use pattern in the area, no other effects to KNWR recreation are anticipated. The activities, features, and attributes of the contact station, the trailhead, and KNWR as a whole would not be substantially impaired.

Construction Impacts

Overall Recreational Character. The noise, dust, and detours or pilot cars associated with the construction process would temporarily disrupt the rural recreational atmosphere of the highway in the project area. While the construction contractor would be required to maintain access to public recreation sites and recreation-oriented businesses, access could be difficult at times. Construction would occur directly at the access points for multiple recreation sites and commercial properties that support recreation.

To construct the Juneau Creek Bridge, a new access road and a bridge construction staging area would be created, and this area would also be used for disposal of unusable overburden and earth materials. Construction would alter the appearance of the area. Although they would be made impassable to motor vehicles, the access road and this area in general could provide greater permanent foot access for recreationists wishing to access lower Juneau Creek for fishing, hiking, and sightseeing. See the discussion above under Direct and Indirect Impacts.

Water-Based Recreation. Bridge construction would result in restrictions on Kenai River use and temporary closures of the river to boating in the vicinity of the bridges being replaced, for safety (i.e., Schooner Bend Bridge and new Kenai River bridge crossing). Access restrictions would be short term and temporary, and limited to the period of time when equipment, workers, and temporary structures would be located in the river. However, impacts to individual planned trips down the Kenai River could occur if the river was closed to navigation at the time a group wished to float the river. The construction process also likely would include a temporary construction bridge built on multiple pilings at close spacing as a platform for construction of the new bridge; see Section 3.7.2 in River Navigation for more information.

Other temporary impacts to recreation would include construction noise, dust, and, in a few locations, construction equipment working in the edge of the Kenai River.

Sterling Highway as a Recreation Resource. During reconstruction of highway segments built on the existing alignment, driving for pleasure and access to recreation destinations could be more difficult. The G South Alternative has about 9 miles of existing highway that would be reconstructed.

Trails. The G South Alternative would cross the Art Anderson Slaughter Gulch Trail and Birch Ridge trails. **Temporary trail closures likely would occur for safety purposes.** See also the discussion of the Bean Creek Trail in Chapter 4.

Campgrounds and Recreation Sites. Because the segment of this alternative built on a new alignment would be located off the existing highway to the north, access to Kenai River-oriented recreation businesses in Cooper Landing would not be adversely affected. Other sites would be affected by construction as discussed in the following paragraphs.

Sportsman's Landing. Temporary work would occur along the northern edge of Sportsman's Landing during construction. The highway cut and fill line would be immediately adjacent to the Sportsman's Landing parcel, and the contractor likely would need to use the northern edge of the

parcel temporarily during construction. Access to the parcel and along the access road at the northern edge of the parcel would be maintained throughout construction. Permanent access to the property would be improved with the addition of a turning lane on the highway. The relationship of the boat ramp parking facilities to the highway would be unchanged following construction. The facilities would be located immediately adjacent to the highway, as they are today, and 2043 average traffic noise levels are anticipated to be the same as those under the No Build Alternative, a 1-dBA decrease, indistinguishable from today's noise levels (see Appendix D). When noise levels change 3 dBA or less, the change is considered barely perceptible to an adult with normal hearing in an outdoor setting (see Section 3.15, Noise).

During construction, those using the parking area, especially those nearest the highway, would experience the noise of heavy equipment and likely some dust. They likely would experience some delay getting into the site. These impacts during construction, including use of the northern edge of the parcel by workers and equipment, would be temporary—much less than the duration of construction of the entire project. No permanent changes to the parcel are anticipated, and no interference with the activities, features, or attributes on even a temporary basis is anticipated. Any disturbance of earth at the northern edge of the property would be revegetated to leave the area in the same condition as it is today. There is no substantial tree buffer now between the highway and parking area, so visual and vegetation changes would be minimal. These impacts have been discussed with ADF&G (land owner) and USFWS (land manager), and all agree that these temporary uses would not cause any important impact (HDR 2009b, ADF&G 2016, USFWS 2016). If this alternative were advanced, FHWA would seek formal concurrence from both land-managing agencies prior to making a final determination on this effect.

Mitigation

The Section 4(f) Evaluation (Chapter 4, see Section 4.6) provides extensive mitigation discussion for impacts of the G South Alternative to the following:

- Kenai River-KRSMA
- Bean Creek Trail
- Forest Service Kenai River Recreation Area

Other mitigation measures would include the following:

Pullouts and Parking. Pullouts would be retained/re-created near MP 53.1 (CNF), near MP 55.6 or 56.7 (KNWR), and MP 57.2 (KNWR) for recreational access. In general, to help control recreational parking on the new shoulders of the reconstructed highway in popular areas, DOT&PF would post enforceable no parking signs wherever reasonably requested by adjacent land management agencies.

Sportsman's Landing/Kenai River. Construction contractors would not park vehicles or stage construction materials at Sportsman's Landing during the busy summer visitor season (from the opening of the red salmon fishing season in mid-June through Labor Day weekend) and would not do so at other times of the year without an agreement with the management of the ADF&G and KNWR. Enforceable no parking signs would be posted near Sportsman's Landing to keep the new highway shoulders from becoming additional parking and thereby keep numbers of people accessing the Kenai River through the Sportsman's Landing entrance to manageable levels.

KNWR Facilities. As with all build alternatives, DOT&PF would work with the KNWR regarding design and construction in the vicinity of the Fuller Lakes Trailhead, visitor contact station, Jim’s Landing, and Sportsman’s Landing/Russian River Ferry to ensure minimal impact. Construction contractors would not park vehicles or stage construction materials off the highway at these locations during the busy summer visitor season and would not do so at other times of the year without an agreement with the management of the KNWR. Enforceable no parking signs would be posted near Sportsman’s Landing. To retain as much visual buffer as possible, the trees that exist between the visitor contact station parking area and the highway would be retained to the extent possible, and replanting of trees or shrubs would occur where possible.

Art Anderson Slaughter Gulch Trail. For this alternative, a crossing underneath the highway embankment would be provided. Except to create a transition from the existing trail to the undercrossing, no further trail work would be part of this project. Notice of construction and trail interruption would be posted near the trailhead for Slaughter Gulch and Birch Ridge trails (e.g., on a tree and at the school), and along the trail near the construction zone on both the uphill and downhill sides of the highway corridor. Once the project was complete, DOT&PF would monitor use of the highway shoulder for parking by recreationists as access to the Slaughter Gulch Trail. If safety hazards developed, DOT&PF would post no parking signs near the intersection of this trail with the highway.

3.8.2.5 Juneau Creek and Juneau Creek Variant Alternatives

Direct and Indirect Impacts

Overall Recreational Character. The recreational character of the Cooper Landing and upper Kenai River area would change under the Juneau Creek (preferred alternative) and Juneau Creek Variant alternatives. Most through-traffic would follow the new highway north of Cooper Landing and north of the primary recreational portion of the upper Kenai River (MP 51–55).

The Juneau Creek and Juneau Creek Variant alternatives would avoid most recreation resources along the existing highway in the greater Cooper Landing area. Access to recreation-oriented sites located on the “old” highway would be easier because the 70 percent of traffic that is through-traffic would be separated on the new highway. The sites benefitting from easier access/lower congestion would be:

- Commercial services, lodges, and guides located both in the MP 46–48 and MP 48–50 portions of Cooper Landing (both northeast and southwest of the Cooper Landing bridge)
- Cooper Landing Boat Launch and Day Use Area
- Cooper Creek Campground/Stetson Creek Trail
- Stetson Creek Trail alternative access
- Gwin’s Lodge
- Russian River Campground
- K’Beq Footprints Heritage Site
- Trailhead for Resurrection Pass Trail
- Sportsman’s Landing-Russian River Ferry

Recreation-oriented sites located along the rebuilt sections of the existing alignment for these alternatives would benefit from a wider, straighter road with shoulders and turning lanes but still would be subject to conflicts between through-traffic (70 percent of the traffic) and recreation/local traffic (30 percent of the traffic). The recreation-oriented sites located directly on these alternatives would be:

- Commercial services located at Quartz Creek
- Trailhead for Fuller Lakes Trail
- KNWR visitor contact station

In addition, removing the main highway and 70 percent of traffic from the MP 51–55 core area for recreation would reduce visual and noise impacts to recreational users of campgrounds and river access points. Travelers on the “old” highway in this core area would benefit from lower congestion, traffic noise, dust, and exhaust, and increased safety and ease for pedestrians, bicyclists, and drivers. Through-traffic and recreational traffic would remain combined west of MP 55 and east of MP 46, but these are areas with fewer recreational facilities or attractions and much less intensive recreational use. Most recreational sites, including campgrounds, trailheads, interpretive sites, and fishing, would be accessed from the “old” (existing) highway. Safety issues associated with the mix of through-traffic with parked and slow-moving recreational traffic and pedestrians would remain but would be less critical, because the traffic volumes would be reduced by the elimination of most of the through-traffic. Informal roadside pullouts in the core recreational area (MP 51–55) would remain; this would retain options for recreational parking. Lower traffic volumes would make entering and exiting safer and easier. Pullouts would be retained/re-created near MP 55.6 and MP 57.2, both in KNWR, for recreational access. Under the Juneau Creek Alternative, which intersects the “old” highway near MP 55.6, the location of the pullout may need to shift during final design to accommodate the intersection and could require additional fill in wetlands. Safety issues, monitoring, and enforcement associated with informal parking along the highway shoulders would likely continue to be an issue for State Troopers, DOT&PF, and land management agencies.

Because these alternatives would cross the Resurrection Pass Trail and include a new trailhead 3.4 miles up the trail from the existing trailhead, the use pattern of the trail would change (see complete discussion of the trail at Section 4.5.4.2). These changes, including greater accessibility to areas now considered remote, could mean changes to backcountry dispersed primitive recreation experiences off the trail. Off-trail areas now considered hard to get to would be easier to access, and it is likely more people would use them. This could increase encounters with other parties, resulting in reduced feelings of solitude and remoteness, and could result in greater wildlife disturbance or hunting pressure in some areas. However, most use today is along the trail system, and this pattern likely would continue.

There would be one difference between these alternatives. The Juneau Creek Variant Alternative would be located immediately north of Sportsman’s Landing. With new wide shoulders, it is possible that some recreationists would park along the new highway overlooking Sportsman’s Landing rather than along the old highway in the same area, potentially creating a new version of the safety hazard that exists today. The shoulders on the new highway in this area would be signed no parking. The Juneau Creek Alternative would be located farther north so that this use would not be a temptation. The Juneau Creek Variant Alternative in this area also would be plainly visible as a large, new engineered structure (roadway embankment and overpass) from

the Russian River confluence area of the Kenai River, the most popular recreation site in the project area. The existing highway is visible from this area today, but the new highway would be more evident. See the visual impact analysis in Section 3.16, Visual Environment.

The Juneau Creek and Juneau Creek Variant alternatives would cross Borough lands classified as recreation and preservation lands north of the community. Because DOT&PF would reserve access rights to the segment of the highway built on a new alignment, new driveways, trailheads, or parking on these lands would not occur, and these lands likely would remain undeveloped except for the highway. The presumed alignment in the land classification plan and the current alignment for these alternatives are not identical, and the Borough may choose to amend its plan to reflect the final alignment.

The Juneau Creek Variant Alternative would remain within the existing highway easement through the KNWR, with no change in land ownership or management. A difference between the Juneau Creek and the Juneau Creek Variant alternatives (and other alternatives) is that, under the Juneau Creek Alternative, DOT&PF would acquire a new transportation easement across a corner of the KNWR Mystery Creek Wilderness unit. This change in land ownership interest would be a change in land management intent and would require an amendment to the Wilderness boundary set by Congress and managed through the KNWR *Comprehensive Conservation Plan* (USFWS 2010a) or amendment of the management intent expressed in the plan. This would change dispersed recreation opportunities in Wilderness, but the affected area is without trails and without particular recreational attractions at the edge of the Wilderness unit and is not thought to receive a great deal of recreation. For recreationists who use this area, recreational aspects of designated Wilderness (see Section 3.2.1.1) would be affected in the immediate southeast corner of the Mystery Creek Wilderness, where the new alignment would be located. Placement of the highway across the Wilderness unit up to 800 feet from the existing alignment would push back the area where recreationists might perceive a “truly wilderness experience” by a like distance. Visual impacts of a new cleared area would include two highways on the landscape and a lighted intersection, and traffic noise would carry over greater distance and diminish the sense of solitude, nature, and wildness in incremental ways at elevations above treeline where Wilderness recreationists would be most aware of them.

The Juneau Creek Alternative and KNWR Lands. This section addresses land status as it exists at the time of publication. However, as explained in Section 3.1.2.2 and 3.27.4.3, it is reasonably foreseeable that a previously authorized land exchange between KNWR and Cook Inlet Region, Inc. (CIRI) will take place if the Juneau Creek Alternative is selected. The exchange would remove land from the National Wildlife Refuge System and National Wilderness Preservation System. See Section 3.27. See also Chapter 4 regarding KNWR.

These alternatives would impact proposed additions to the KRSMA east of Bean Creek, inserting the highway, with associated noise and visual impacts, in what is currently a mostly undeveloped area and placing Bean Creek in a culvert. Community concepts for formalizing loop trails in this area for skiing and for summer hiking are still developing; the highway in this area could require alteration of these plans.

At the request of managing agencies for mitigation, these alternatives would provide a new trailhead for the Resurrection Pass Trail and a pullout east of Juneau Creek near the Bean Creek Trail (see mitigation in Section 4.6). These would provide access not only to the trails but to off-trail areas that were previously difficult to reach. Access to the Resurrection Pass Trail and upper

Juneau Creek valley would change by placing a trailhead 3.4 miles from the existing trailhead. See Chapter 4 for further detail.

While most recreationists would use the proposed new Resurrection Pass Trailhead (see mitigation in Section 4.6) to access undeveloped lands near Juneau Creek, some may choose to park on the highway shoulder, and this could pose safety risks for recreationists and other drivers on the highway.

Water-Based Recreation. The Juneau Creek and Juneau Creek Variant alternatives would not replace bridges over the Kenai River or result in any new bridge over the Kenai River. These alternatives would conform to the *Kenai River Comprehensive Management Plan* (DNR, ADF&G, KPB 1997) recommendation to keep river crossing structures to a minimum.

Mostly, these alternatives would remove 70 percent of the highway traffic from areas used heavily for recreation oriented to the Kenai River. The modernized and much wider highway would be located away from the river, and there would be no change to bridges over the Kenai River. These features of the alternatives would tend to protect riparian areas that provide fish habitat—the basis for the sport fishing and much of the other recreation that occurs at and near the river. Similarly, the risk of spills entering the river from highway crashes would be reduced, protecting fish, habitat, and the recreation resource. Noise, visual, and other impacts of passing traffic would be reduced, and accessing and using the river corridor likely would become easier, safer, and more aesthetically pleasing for users and somewhat easier to manage for agencies. ADF&G, as a manager of the fish habitat and of sport fishing, indicated that these interrelated issues (collectively, the fisheries importance of the Kenai River) were among the most important issues of the project.

At and west of MP 55.5, the highway would be widened adjacent to the river in a few locations, and riprap rock armoring of slopes subject to river erosion would be visible to Kenai River floaters and bank fishers. The Juneau Creek and Juneau Creek Variant alternatives therefore would have some impact to KRSMA and its activities (but no Section 4(f) use of the KRSMA property). Fill areas at the edge of the Kenai River west of MP 55 would be common to all alternatives. These areas would have almost no impact on normal river processes but would impact recreationists who would see the riprap from the river rather than the vegetated slopes.

Sterling Highway as a Recreation Resource. While traffic would continue to increase during the busy summer recreation period, the route of the highway under these alternatives would remove about 70 percent of the traffic and accompanying noise, exhaust, and dust from the Cooper Landing community and from most of the project area’s recreation sites. The reduction in traffic on the “old” highway (9–10 miles long under these alternatives) would allow for better access to and from these sites. These alternatives would be routed around the Cooper Landing community in its entirety and around Cooper Creek Campground, Russian River Campground, K’Beq Heritage Site, trailheads, and the Sportsman’s Landing-Russian River Ferry area. With reduced traffic at the driveways to these areas, recreational access would be improved. The “old” highway would be a narrow, winding, lower-speed, roadway better-suited for local access and driving for pleasure.

The new highway would minimize driver distractions. While it would be a higher-speed route compare to the “old” highway, it would be suited to driving for pleasure because of reduced side road conflicts, wider lanes and shoulders, and areas with broad mountain views from higher elevation. The shoulders would improve access for pedestrians and bicyclists, and reduced traffic

on the “old” highway segment also would make that segment somewhat better for pedestrians and bicyclists, although conditions that combined narrow lanes, no shoulders, and large recreational vehicles still would exist. During busy periods, the “old” highway would remain difficult to enjoy by car (“driving for pleasure”) because of other traffic and the need for heightened alertness.

Safety issues associated with the mix of through-traffic with parked or slow-moving recreational traffic and pedestrians would be substantially reduced because of the reduced traffic volume. This is particularly an issue on the stretch of highway near MP 54–55 (Sportsman’s Landing-Russian River Ferry area), at the confluence of the Kenai and Russian rivers. Conflicts between the needs of local traffic/recreational traffic and through-traffic would be effectively eliminated in this area.

Trails. Of the primary trails in the project area, the Juneau Creek and Juneau Creek Variant alternatives would cross the Bean Creek Trail and Resurrection Pass Trail and would pass by the trailhead for Fuller Lakes Trail (located in the highway right-of-way). Chapter 4 (particularly Sections 4.5.4.3 and 4.6.4.1) addresses these changes in detail. These two alternatives also would cross and shorten the interconnected Birch Ridge and Art Anderson Slaughter Gulch trails (Map 3.8-1).

These alternatives also would cross the Juneau Creek Road (former Forest Service logging roads) via bridges or tunnels (street vehicles on the new highway would not have direct access to the roads). The crossings would be large culverts or bridges that would allow passage by horseback riders who use the Juneau Creek Road and connected Forest Service roads as alternate access to the Resurrection Pass Trail. This would allow for continued use of West Juneau Road for recreational access, but the experience would change with the introduction of the undercrossing, the highway embankment, and the activity of traffic.

Snowmobilers and other winter recreationists also use the Forest Service roads and would be able to continue their use without crossing the highway at grade. However, any passage beneath a bridge or through a large culvert would accumulate little or no snow (snowless length likely would be 60–70 feet). Snowmobiles can operate on “dry” ground, but a snowless stretch would change the experience. Skiers on this route would need to take off their skis and walk under the highway. Because the new highway would cross these roads at two locations at an area a few hundred feet higher than the existing intersection of Juneau Creek Road with the existing (“old”) Sterling Highway, where access occurs today, some recreationists may park along the highway shoulder for access, particularly in winter when the new Resurrection Pass trailhead would be closed and when the lower-elevation trailhead may have poorer snow conditions. Recreational use of the shoulder could pose a safety hazard both for recreationists and for other drivers on the highway. The two alternatives would take slightly different alignments through the topographic bench area west of Juneau Creek (area of Forest Service roads), but impacts would be of the same type.

For the Art Anderson Slaughter Gulch Trail (and the connected Birch Ridge Trails), the highway would run between the community of Cooper Landing and the upper trail, about 0.4 mile into the 1.25-mile trail (measured from a de facto trailhead at the school). Without mitigation, this would create a barrier for some local users who would not want to cross the highway. Others likely would cross the highway on foot and could pose a risk of pedestrian-vehicle accidents. Others may park on the shoulder to gain access to these trails, creating another potential safety issue. In

any of these cases, the highway would create a change in the trail experience, introducing an engineered highway embankment and traffic where the trail previously traversed primarily natural surroundings. However, this is not a formal trail managed by any agency. While there are no counts of users, and the trail is known to be locally popular, the number of users is thought to be low.

A marked horse crossing outside the project area near MP 44 would remain, and existing conditions would be largely unchanged.

Other trails listed in Section 3.8.1 are not expected to be affected.

Campgrounds and Recreational Sites. In addition to trails, the two Juneau Creek alternatives would use land from the following park and recreation areas protected by Section 4(f), as described fully in Chapter 4:

Juneau Creek Alternative

- Juneau Falls Recreation Area
- Kenai National Wildlife Refuge and Wilderness

Juneau Creek Variant Alternative

- Juneau Falls Recreation Area
- Forest Service Kenai River Recreation Area

These alternatives would also affect other recreation sites, as described in the following paragraphs.

Sportsman’s Landing—Impact Specific to the Juneau Creek Variant Alternative. Under the Juneau Creek Variant Alternative only, the connection between the new highway and the existing highway would be constructed immediately north of the Sportsman’s Landing property (see photo simulation in Figure 3.8-1). See also Map 2.5-6 and Map 4-4 in Chapters 2 and 4, respectively. The result would alter the background appearance of Sportsman’s Landing, but not the use and function of the site. Traffic noise would be expected at the site, as occurs today. Noise modeling indicated no change in noise level at this site in 2043, which would be 1 dBA lower than the predicted noise level for the No Build Alternative.

Near Sportsman’s Landing and Russian River Ferry—prime river access points—the new highway’s 8-foot shoulders could tempt the public to park outside these access point parking lots, which charge a fee and often can be full during prime fishing season. Left unmanaged, this additional informal parking could lead to more people in already crowded areas near the confluence of the Russian River and Kenai River and lead to a public safety hazard, and could increase the need for management by USFWS (manager of Sportsman’s Landing and Russian River Ferry), DPOR, ADF&G, and the Forest Service. Enforceable no parking signs would be posted to reduce this problem.

Differences between the Juneau Creek Alternative and Juneau Creek Variant Alternative: Under the Juneau Creek Variant Alternative, there would be temporary occupancy of the Sportsman’s Landing property and a permanent change to how the driveway connects to the (existing) Sterling Highway. Under the Juneau Creek Alternative, there would be no temporary or permanent impact to the Sportsman’s Landing site.



Figure 3.8-1. Existing conditions (top) and simulated conditions at Sportsman's Landing.

The proposed Juneau Creek Variant Alternative would climb to the east and cross over the existing highway. An intersection of the two roads would occur just out of sight on the north side of the new highway.

No permanent adverse impacts to the site are anticipated, and all activities, features, and attributes would be maintained both during construction and permanently. See further discussion below under Construction Impacts.

KNWR Facilities. The effects of the Juneau Creek and Juneau Creek Variant alternatives adjacent to the KNWR visitor contact station and the KNWR Fuller Lakes Trailhead would be identical to those of the Cooper Creek and G South alternatives (Map 4-3 at the end of Chapter 4 illustrates this area). The widened roadway fill under all four build alternatives would come to the edge of the cul-de-sac at the visitor contact station, which was built within the existing highway right-of-way, but there would be no use of the contact station and its grounds. Vehicles on the cul-de-sac would not be within the new highway's clear zone and would therefore not be a safety hazard. The trailhead for the KNWR Fuller Lakes Trail also lies within the existing Sterling Highway right-of-way and adjacent to the existing highway. There would be no use of the trailhead for Fuller Lakes Trail by any of the alternatives. In both cases, highway noise would be an evident and continual part of the experience at these locations, and the highway and its traffic would be readily visible.

However, these noise and visual effects would be similar to those experienced at these locations today. Access to and from these facilities may be improved with the wider, safer road.

The Juneau Creek Alternative would use KNWR land outside the existing right-of-way, as described in brief above under Overall Recreational Character. Although proximity to the trailhead and visitor contact station would be identical to that under the other build alternatives and impacts to recreational activity would be similarly low, the use of KNWR land constitutes a use of Section 4(f) property that would not occur under the other alternatives. For this reason, a detailed discussion of the Juneau Creek Alternative impacts to KNWR appears in Chapter 4.

The Juneau Creek Variant Alternative would not use any KNWR land outside the existing right-of-way and would not alter the human use pattern in the area. For these reasons, no other effects to KNWR recreation are anticipated under this alternative; the activities, features, and attributes of the contact station, the trailhead, and KNWR as a whole would not be substantially impaired.

Construction Impacts

Overall Recreational Character. The noise, dust, and detours or pilot cars associated with the construction process would temporarily disrupt the rural recreational atmosphere of the highway in limited portions of the project area. Most of the length of the two Juneau Creek alternatives would be built on a new alignment, located away from the existing highway where it passes through the Cooper Landing community and where it passes by the main recreation sites. These alternatives would preserve the existing recreation character between MP 47 and MP 55 during construction, because no construction would occur in these locations, although higher than normal construction traffic likely would occur in this area. Construction would occur directly at the access points for Quartz Creek Road, Fuller Lakes Trail, and the KNWR visitor contact station, and no construction would occur at other recreation-oriented sites. The Juneau Creek Variant Alternative would involve construction directly at the Sportsman’s Landing driveway, an impact that would not occur under the Juneau Creek Alternative.

Water-Based Recreation. Very little construction impact would occur to water-based recreation. Boaters on Kenai Lake near MP 45 of the Sterling Highway and on the Kenai River between approximately MP 55.5 and MP 58 would see adjacent construction activity, but these alternatives would not involve any river closures or navigation impacts.

Sterling Highway as a Recreation Resource. During reconstruction of highway segments built on the existing alignment, driving for pleasure would be more difficult. The Juneau Creek Alternative has about 5 miles that would be reconstructed, and the Juneau Creek Variant Alternative has 5.5 miles that would be reconstructed.

Trails. Construction activity associated with the Juneau Creek and Juneau Creek Variant alternatives would interrupt the Art Anderson Slaughter Gulch and Birch Ridge trails and temporarily would interrupt access to these trails. **Temporary trail closures likely would occur for safety purposes.**

Use of areas proposed for disposal of cleared vegetation and excess soil, and for construction equipment staging, may affect recreation resources on a temporary basis; such a disposal area is located near the crossing of Juneau Creek Road by these alternatives. **Also, the construction contractor may desire access to the alignment via Juneau Creek Road. If the Forest Service granted access, the road could be temporarily closed to recreational horseback riding used to access the Resurrection Pass Trail. If there were substantial construction use in winter (considered unlikely), such construction use could temporarily close the road to snowmobile access to the Resurrection Pass Trail. Use of the road for construction access would require a Forest Service special use permit subject to Forest Service stipulations.**

In general, during construction, noise and dust from operation of heavy equipment, chainsaws, pile drivers or rock drilling equipment, and rock blasting equipment are likely near trails and would negatively affect the usually quiet trails.

Campgrounds and Recreation Sites. Because the segment of these alternatives built on a new alignment would be away from the existing highway to the north, access to most Kenai River-oriented recreation businesses, campgrounds, and the prime fishing holes would not be adversely affected. There would be no bridge construction over the Kenai River and therefore no river restrictions or closures. There would be some temporary changes, as outlined in the following paragraphs.

Sportsman’s Landing. For the Juneau Creek Variant Alternative only, temporary construction activity would occur on the northern edge of the Sportsman’s Landing parcel. The contractor would use a portion of the parcel temporarily to construct a realigned driveway through the northern edge of Sportsman’s Landing and connect it to a realigned existing Sterling Highway. (The existing highway would be realigned slightly at this location to pass under the new highway and connect to the new highway on its north side.) There would be no change to the parking layout, entrance fee station, or boat launch itself. Access would be maintained to the facility during construction. Ultimately, realigning the driveway and adjacent existing Sterling Highway would improve access to the Sportsman’s Landing parcel with separate right- and left-turn lanes for exiting and a straighter driveway more easily managed by trucks towing boat trailers. The work done on the driveway would be scheduled to avoid the main fishing season (from the opening of the red salmon fishing season in mid-June through Labor Day weekend). Green space would be reconfigured and replanted but not reduced in area. The affected portion of the site would be fully restored following driveway realignment, and the function of the site is expected to be as good as or better than it is currently. None of the land from this parcel would be incorporated into the transportation right-of-way. These impacts have been discussed with ADF&G (land owner) and USFWS (land manager), and all agree that these temporary uses would not cause any notable impact (HDR 2009b, ADF&G 2016, USFWS 2016). If this alternative were advanced, FHWA would seek formal concurrence from both land-managing agencies prior to making a final determination on this effect.

Mitigation

The Section 4(f) Evaluation provides mitigation discussion (Chapter 4, Section 4.6) for the following:

<u>Juneau Creek Alternative</u>	<u>Juneau Creek Variant Alternative</u>
<ul style="list-style-type: none">• Bean Creek Trail• Resurrection Pass Trail• Juneau Falls Recreation Area• Kenai National Wildlife Refuge	<ul style="list-style-type: none">• Bean Creek Trail• Resurrection Pass Trail• Juneau Falls Recreation Area• Forest Service Kenai River Recreation Area

Other mitigation measures follow.

Pullouts and Parking. Pullouts would be retained/re-created near MP 55.6 or 56.7, and near MP 57.2 (both in KNWR) for recreational access. In general, to help control recreational parking on the new shoulders of the reconstructed highway in popular areas, DOT&PF would post enforceable no parking signs wherever reasonably requested by adjacent land management agencies.

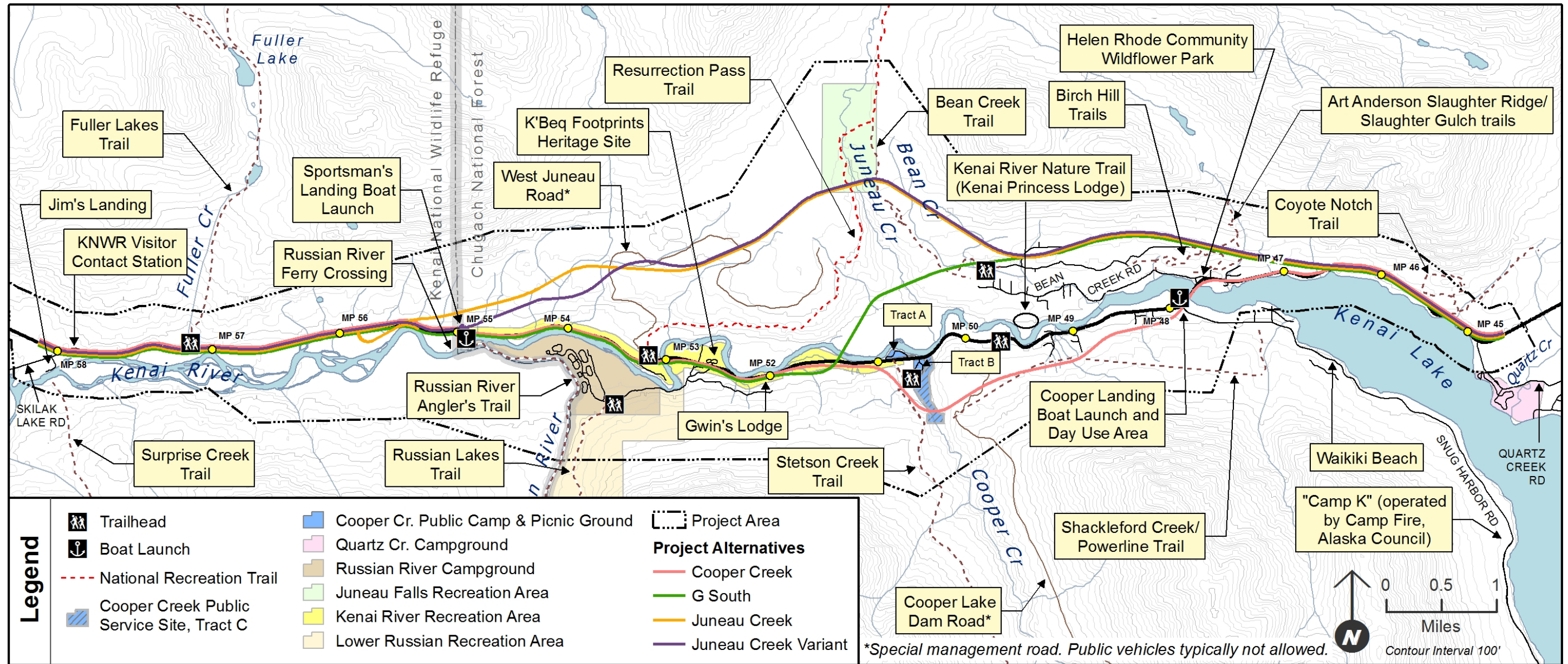
Sportsman’s Landing/Kenai River. For the Juneau Creek Variant Alternative only, design and construction work at Sportsman’s Landing would be undertaken with the proximity of many recreational fishers and boaters in mind. Major construction activity adjacent to the site and driveway work within the site would be timed to avoid the prime mid-summer fishing season (from the opening of the red salmon fishing season in mid-June through Labor Day weekend). The opening beneath the bridge/overpass, overpass materials, and highway embankment slope

facing the river would be designed for aesthetics, including revegetation choices and visible surface treatments. Construction contractors would not park vehicles or stage construction materials at Sportsman’s Landing during the busy summer visitor season and would not do so at other times of the year without an agreement with ADF&G and KNWR. Enforceable no parking signs would be posted near Sportsman’s Landing to keep the new highway shoulders from becoming additional parking and thereby keep numbers of people accessing the Kenai River through the Sportsman’s Landing entrance to manageable levels.

KNWR Facilities. For these two alternatives, as with all build alternatives, DOT&PF would work with the KNWR regarding design and construction in the vicinity of the Fuller Lakes Trailhead and visitor contact station to ensure minimal impact to recreational access. Construction contractors would not park vehicles or stage construction materials at the trailhead or visitor contact station during the busy summer visitor season and would not do so at other times of the year without an agreement with KNWR. To retain as much visual buffer as possible, the trees that exist between the visitor contact station parking area and the highway would be retained to the extent possible, and replanting of trees or shrubs would occur where possible.

Art Anderson Slaughter Gulch Trail. For either alternative, a crossing underneath the highway embankment would be provided. Except to create a transition from the existing trail to the undercrossing, no further trail work would be part of this project. Notice of construction and trail interruption would be posted near the trailhead for Slaughter Gulch and Birch Ridge trails (e.g., on a tree and at the school), and along the trail near the construction zone on both the uphill and downhill sides of the highway corridor. DOT&PF would monitor use of the completed highway shoulder for parking by recreationists as access to this trail. If safety hazards developed, DOT&PF would post no parking signs near the intersection of the trail with the highway.

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Map 3.8-1. Recreation sites in the project area [Updated]

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