

RIVER MANAGEMENT PLAN REVISION
for the
GULKANA RIVER

A Component of the National Wild and Scenic Rivers System

U.S. Department of the Interior
Bureau of Land Management
Glennallen Field Office
August, 2006

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PART I. INTRODUCTION

A. Purpose and Need

The 1983 Gulkana River Management Plan identifies management objectives and recognizes that the Wild and Scenic Rivers Act requires that a national wild and scenic river corridor be administered to protect and enhance the outstandingly remarkable values (ORVs) for which it was designated. However, the '83 Plan does not clearly define the ORVs. This plan revision identifies and describes the ORVs and management objectives for the Gulkana river corridor.

The 1983 Plan also identifies several management objectives which have not been met, including:

- Establish level and distribution of recreational river use.
- Establish limits on uses within the river management corridor.

There was a need to develop a management strategy for the Gulkana Wild River corridor to address increased visitor use and impacts associated with that increased use and protect resource values on the river. Impacts are not limited to physical impacts on the environment, but also include social impacts (such as crowding or camp encounters) that limit a users ability to have a positive recreational experience in the river corridor. That management strategy is presented in this Plan revision.

There was a need to update information in the 1983 Plan to reflect current conditions, increased user trends on the river, and changes in law or policy. Those changes are made in this revision.

B. Background

The Alaska National Interest Conservation Act of December 2, 1980 (ANILCA), Section 603(49), established the upper portion of the Gulkana River, including the Middle Fork and West Fork, as a component of the National Wild and Scenic Rivers System to be administered by the Secretary of the Interior through the BLM. Subject to valid existing rights, ANILCA classified and designated approximately 181 miles of the Gulkana River system as a “wild river area” pursuant to the Wild and Scenic Rivers Act. The Wild and Scenic Rivers Act states that wild river areas are “those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trails, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.”

ANILCA Section 606(a) also directed the Secretary of the Interior to establish detailed boundaries, prepare a management and development plan, and present this information to Congress by December 2, 1983. This section specifies that “such boundary shall not include any lands owned by the State or a political subdivision of the State nor shall such boundary extend around any private lands adjoining the river in such a manner as to surround or effectively surround such private lands...” In response to these

directives, the BLM developed the 1983 Gulkana River Management Plan, which established detailed boundaries and developed general management policies for the Gulkana National Wild River corridor. In November 1985, a Memorandum of Understanding (MOU) between the State of Alaska and the Department of the Interior was adopted for the Gulkana River and surrounding area to establish cooperative management provisions for the corridor. The MOU is included as Appendix B of the Final Environmental Assessment accompanying this plan.

C. Subsequent Management and Planning Process

In the years following, BLM has attempted to manage the river corridor consistent with the Wild and Scenic Rivers Act, ANILCA, the 1983 management plan, and the 1985 MOU. Management efforts have focused on monitoring use levels within the river corridor and mitigating impacts. Register stands at the boat launches, random user surveys, overflights, and fish tower visitor use data have documented river use levels and trends. The BLM river crew floats the river at least three times per year, picking up litter, burying or disposing of human waste, inventorying and monitoring campsite impacts, removing excessive fire rings, and occasionally making public contacts. In 1994 the Sourdough campground was reconstructed to accommodate increased use. A new boat launch, parking facilities, campsites and interpretive walkways and panels were constructed.

In 1998, the BLM initiated a cooperative effort with State of Alaska and Ahtna Native Corporation to conduct a study of the river corridor, which would culminate in the revision of the 1983 Gulkana River management plan. The main point of the study was to address Action Item 8 of the 1983 Plan, which states “Determine the amount and type of use that the Gulkana River Management Corridor can perpetually sustain without impairing its scenic and primitive character or causing unacceptable change to the experience of the user.” The BLM initiated the study in recognition that use levels on the river had increased dramatically and that some impacts from increased use were becoming unacceptable to the public. As part of the study, a 1999 survey was conducted on river users. Objectives of the survey were to characterize river users, identify impacts that they experienced in the river corridor, identify users tolerances for those impacts, and describe users acceptance of possible management strategies to address impacts. The survey provided useful information for planners to consider when developing indicators, standards, and management actions in the river corridor.

Using the survey analysis and information from public meetings identifying issues and concerns on the river corridor, managers developed four alternatives to address user impacts. These alternatives were presented to the public at meetings in Anchorage, Fairbanks, Glennallen, and Gulkana Village. After incorporating public comments, a preferred alternative was selected and developed as the proposed action that was analyzed in a Draft Environmental Assessment (EA). The Draft EA was made available to the public for review and comment. Eleven comments were received and used in writing the Final EA and Decision Record. Management actions adopted in the Decision Record provide the framework for this Management Plan revision.

D. Scope of this Management Plan Revision

The prescribed management direction within this Plan Revision covers the Gulkana National Wild River corridor. Under ANILCA, Wild and Scenic River corridors in Alaska include an average of not more than 640 acres per mile on both sides of the river and do not include any lands owned by the State, or private lands, including navigable waterways below ordinary high water mark.

On June 27, 1984, the United States disclaimed an ownership interest in the waters and lands below ordinary high water on all but the upper reaches of the Gulkana River. The disclaimed portions included: 1) the main stem of the Gulkana River from the Copper River to the north end of Paxson Lake; 2) the West Fork from the main stem to the confluence of the West Fork and "Victor Creek" (the unnamed creek entering the West Fork left bank in Section 20, T10N, R4W); and 3) the Middle Fork from the main stem to the confluence of the outlet from Swede Lake and the Middle Fork. The court confirmed the disclaimer on September 24, 1984. Therefore, within the Gulkana National Wild River corridor, the BLM acknowledges the State of Alaska's authority to manage between the ordinary high water marks, which includes the water column and most unvegetated beaches and gravel bars. With this in mind, BLM has worked closely with the State of Alaska in development of the management direction described in this Plan Revision.

The BLM and State currently manage the Gulkana National Wild River corridor consistent with a Memorandum of Understanding (MOU) that was signed in 1985. This MOU emphasizes management consistent with protection of river values but also allows access and uses consistent with provisions in ANILCA. As part of the recent planning effort described above, State of Alaska, Department of Natural Resource (DNR) agreed to do a Special Use Land Designation (SULD) to implement management actions consistent with BLM's proposals. DNR is in the process of developing their SULD and conducting public participation. Actions that are designed to occur within the ordinary high water marks are contingent on the State's concurrence in the SULD. If the State does not support BLM management actions in an SULD, those actions will be presented to the public as BLM recommendations for management of the Gulkana National Wild River corridor.

BLM is committed to working with the State of Alaska in implementation of this Plan Revision.

As part of the planning process leading to development of proposed standards and management actions, the BLM agreed to include the Lower River portion of the Gulkana River (1/2 mile below Sourdough campground to the confluence of the Gulkana and Copper Rivers). This area's uplands are owned and managed by Ahtna Native Corporation and the river within the ordinary high water marks is managed by the State of Alaska.

For the Lower River portion, BLM worked with Ahtna Native Corporation and the State of Alaska to develop indicators, standards, management actions, and monitoring.

These are attached as Appendix A of the Final Environmental Assessment. However, BLM has no authority within the Lower River portion other than to manage three 17(b) easements that provide access to public lands and waters across private (Ahtna) land within that segment. BLM will continue to cooperate with Ahtna Native Corporation, Gulkana Village, and the State of Alaska to the extent possible on implementation or monitoring of items in Appendix A and will continue to cooperate with Ahtna Native Corporation and Gulkana Village on management of the easements.

E. Legal Framework

The Southcentral Management Framework Plan (MFP) of March 1980 and the Federal Land Policy and Management Act (FLPMA) provide the overall long-term management direction for the Glennallen Field Office. The MFP is being replaced by the East Alaska Resource Management Plan, currently in Draft format and being finalized. Management actions identified in this Gulkana Plan Revision are consistent with goals and objectives identified in the East Alaska Resource Management Plan.

More specifically, BLM's management of the Gulkana National Wild River corridor must be consistent with the *National Wild and Scenic Rivers Act (NWSRA) and ANILCA*. Interpretation and management direction of the NWSRA for BLM is provided through *Wild and Scenic Rivers—Policy and Program Direction for Identification, Evaluation, and Management manual (1993)*. ANILCA established the Gulkana River as a component of the National Wild and Scenic Rivers System and amended the NWSRA to provide specific guidance for management issues specific to Alaska.

The BLM recognizes the State's management authority on the Gulkana River between the ordinary high water marks of the river, consistent with the protection of resource values identified for the river. This Plan Revision is consistent with the *Memorandum of Understanding (MOU) Between U.S. Department of the Interior, Bureau of Land Management, Alaska State Office, and State of Alaska on the Management of the Gulkana National Wild River and Surrounding Area (1985)*. The MOU is attached to the Final Environmental Assessment as Appendix B. As stated in the 1985 MOU, the State of Alaska (ADF&G) retains responsibility for the management of fish and game populations within or adjacent to the Gulkana.

PART II. RIVER DESCRIPTION AND OUTSTANDINGLY REMARKABLE VALUES

A. General Setting

The Gulkana National Wild River (including Middle Fork and West Fork) is the largest clear-water river system in the Copper River Basin. One of a handful of road-accessible rivers in the state and less than 5 hours drive from Fairbanks (population 75,000) and Anchorage (population 250,000), the river is among the most popular recreation resources in south-central Alaska.

The three forks of the Gulkana flow through the rolling valleys and low ridges of an upland spruce-dominated forest. Lakes are abundant in the surrounding hills. For several short stretches of river, most notably at Canyon Rapids, the river cuts sharply through ridges, providing short gorge-like settings. Soils are poorly drained and often tussocky. Vegetation includes spruce forests and thick willow, alder, and berry underbrush. Vegetation usually grows along the river's edge, although there are numerous gravel bars providing a more open river corridor.

For most of their length, the three forks of the Gulkana have little whitewater, although each has challenging reaches with good rapids. There is a 2 to 3 mile reach of Class II and III rapids on the Middle Fork, a 2 to 3 mile reach of Class II rapids on the West Fork, two reaches of Class II rapids on the Main Stem (3 miles and 8 miles), and a quarter-mile reach of Class III-IV rapids in the canyon on the Main Stem. At low water, almost all of these reaches become difficult to run because oars or paddles hit bottom or boats run aground. Canyon Rapids has a large hole that stops and sometimes flips rafts in normal to high flows, although there is an alternative route at these levels. Inexperienced canoeists can wrap their boats on sweepers or rocks at high flows or in the canyon at any flow.

The Gulkana is largely a wilderness river with few developments. Aside from the launch areas and attached campgrounds at Tangle Lakes, Paxson Lake, and Sourdough, the BLM maintains only four pit toilets on the system, all on the Main Stem. There are no maintained facilities on the Middle or West Fork. A number of old mining and trapping cabins are in the river corridor, and some are still used, particularly in winter. The BLM also maintains several hiking/all-terrain vehicle trails from State highways into the river corridor.

There are a number of excellent camping sites along the river. A BLM inventory in 2000 identified 96 different sites on the Main Stem. In addition there are 10-15 sites on the Middle Fork, most associated with hunting activities at the junction of the Swede Lake trail and the Middle Fork. Most sites receive moderate to light use. There are heavy use campsites where the Swede Lake trail crosses the Middle Fork, at the confluence of the Middle Fork and main stem, at Canyon Rapids, and at the confluence of the West Fork and main stem. Few documented campsites occur on the West Fork because of the light use that occurs there.

B. Recreation Activities and Use

Recreationists use the Gulkana in a variety of ways. The vast majority float or boat the river, with smaller numbers entering the river corridor by OHV or on foot. Trail access to the Gulkana is limited in the summer, with only three major trails available to hikers or OHVs. In winter, the river and several other trails are accessible by snowmachine.

There are essentially four different boating trips available on the BLM-managed reaches of the Gulkana River system. Powerboaters, who are encouraged not to travel on the Middle Fork or the Main Stem above the confluence with the West Fork before August 15, generally take trips from Sourdough to the area around the West Fork confluence. Floaters, in contrast, have the option of floating the Main Stem, the Middle Fork, or the West Fork. Upstream powerboat trips begin and end at Sourdough Campground. Boaters usually travel 8 or 10 miles upstream in search of fishing holes. The majority (73 percent) of those with powerboats have jet units; while about a quarter have propeller-driven engines. Only 2 percent use airboats.

Main stem floaters launch at Paxson Lake and float downstream to Sourdough Campground, both of which are road accessible via the Richardson Highway. This is a 47-mile trip that takes 3 to 5 days. The majority (68 percent) of Main Stem users float in rafts; 22 percent paddle canoes; and 9 percent use kayaks or catarafts.

Float trips on the Middle Fork can begin at the Delta National Wild and Scenic Wayside on the Denali Highway, although this route includes a difficult 1.25 mile portage. Middle Fork trips can also begin at Dickey Lake, accessed by float plane. The float from Dickey Lake to the confluence with the Main Stem is 25 miles. Due to the remote and difficult nature of this trip, very few users float the Middle Fork. Middle Fork users usually take out at Sourdough, and thus include most of the Main Stem as well.

Float trips on the West Fork can begin at Lake Louise (although this includes an arduous series of short portages between lakes and the Tyone River), or at the headwater lakes of either the North or South Branches of the West Fork, accessed by float plane. The trip from Lake Louise to the confluence with the Main Stem is over 100 miles. As with the Middle Fork, few users travel the West Fork. West Fork floaters generally paddle canoes or small rafts since some segments of the river are extremely shallow and narrow. Users usually terminate at Sourdough.

Based on physical characteristics, accessibility, motorized use, and use patterns, river planners have split the river into distinct segments as shown below. Table 1 displays characteristics of each segment and Map 1 shows the different segments.

146°30'W

146°0'W

145°30'W

Part II: River Description
and ORVs

62°50'N

7

62°40'N

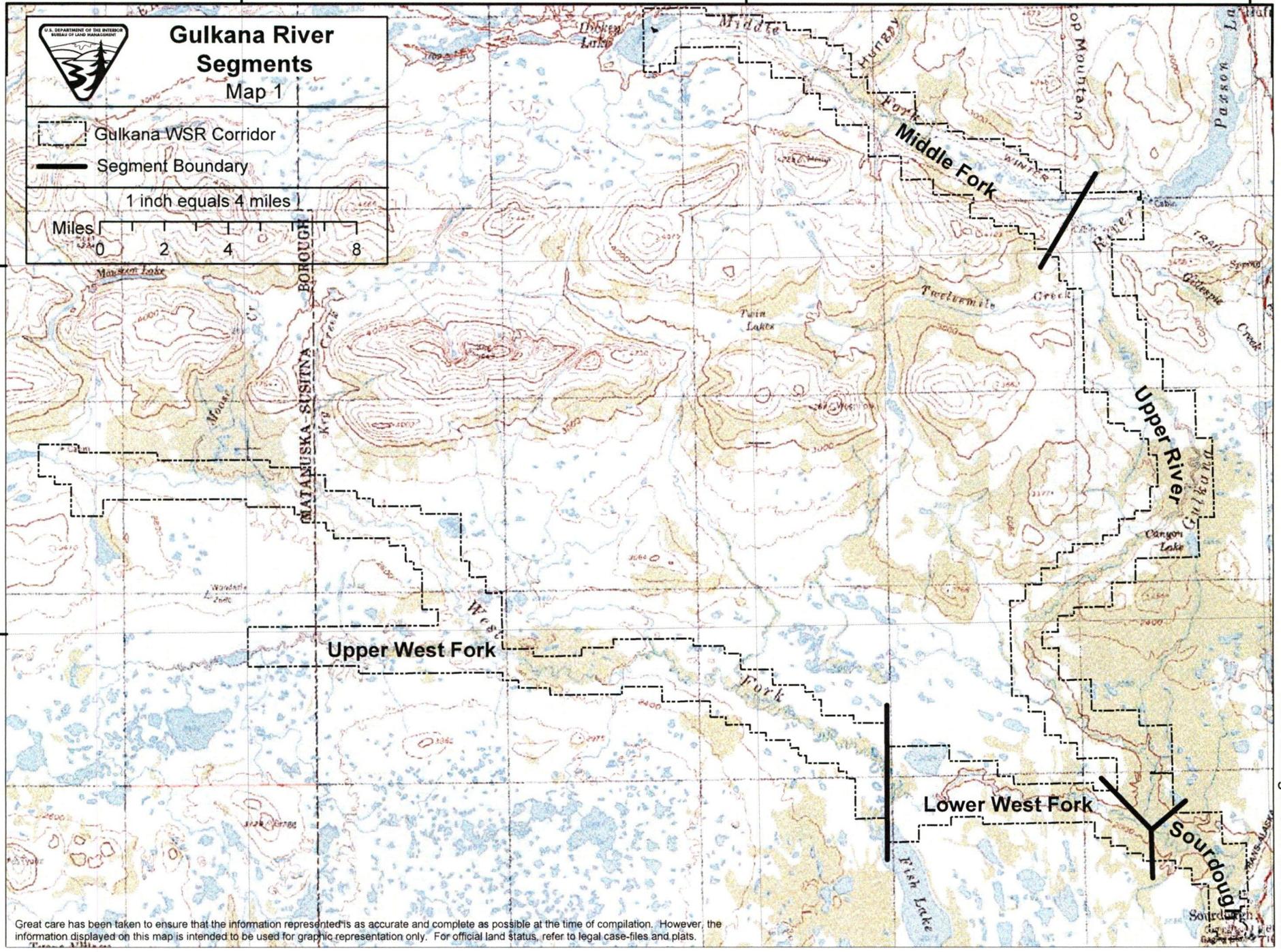
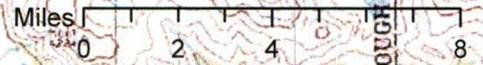
Gulkana NWSR



Gulkana River Segments Map 1

- Gulkana WSR Corridor
- Segment Boundary

1 inch equals 4 miles



Great care has been taken to ensure that the information represented is as accurate and complete as possible at the time of compilation. However, the information displayed on this map is intended to be used for graphic representation only. For official land status, refer to legal case-files and plats.

River Management Plan Revision

Table 1. Gulkana River Segments

Segment	Miles	Types/Levels of Users	Comments
Upper River	37	Considerable float use and occasional trail use.	Includes Paxson-West Fork reach.
Sourdough	10	Considerable float and powerboat use; probably the most heavily used boating segment.	Begins one mile upstream of West Fork and continues half-mile below Sourdough, traditional area for the majority of upstream powerboat use.
Middle Fork	25	Low numbers of floaters but highest trail use during hunting season.	Float access via Dickey Lake or from Upper Tangle lakes.
Upper West Fork	92	Rare use except by occasional floaters, some wintertime trails.	Includes both North and South branches.
Lower West Fork	17	Use by powerboaters (from the downstream end). Occasional float use.	Begins at Fish Creek (comes out of Fish Lake).

C. Outstandingly Remarkable Values

The Wild and Scenic Rivers Act states that “Each component of the national wild and scenic rivers system shall be administered in such a manner as to protect and enhance the values which caused it to be included in said system without, insofar as is consistent therewith, limiting other uses that do not substantially interfere with public use and enjoyment of these values.”

Outstandingly remarkable values represent those characteristics of a Wild and Scenic River that make that river unique. Most new additions to the Wild and Scenic River system have outstandingly remarkable values explicitly defined, but ANILCA rivers came into the system as a group without specific values identified by Congress. In these cases, managers typically develop outstandingly remarkable value lists from study reports and other documentation of management activities and intentions. For the Gulkana National Wild River, outstandingly remarkable values were selected based on review of the following:

- The Wild and Scenic Rivers Act.
- Alaska National Interest Conservation Act (ANILCA).
- “Gulkana River: A Wild and Scenic River Analysis”, Bureau of Outdoor Recreation, 1976.
- “Resource Values and Instream Flow Recommendations”, Shelby, etal, 1990.
- “Gulkana River 1999 On-River User Survey”, Whittaker, Vaske, and Williams, 2000

Following is a description of the outstandingly remarkable values for the Gulkana National Wild River corridor.

The Gulkana is the largest clearwater river in the region, with water quality and water clarity normally excellent.

In an area dominated by glacial streams, this attribute makes the Gulkana stand out in a regional context. Sitting in a canoe or raft and watching spawning sockeye and Chinook salmon as they torpedo their way upriver through the clear water is one of the memorable experiences on this river. Information acquired from the U.S. Geological Survey, the Environmental Protection Agency, the University of Alaska and the State of Alaska does not indicate that there are any system-wide concerns presently with water quality in the Gulkana River. The free-flowing nature of the river, adequate volume, and protected watershed provides generally superior water quality.

The Gulkana is located in a largely wild and undeveloped environment.

While accessible by Alaska standards, the Gulkana is largely a wilderness river with few developments. Aside from the launch areas and attached campgrounds at Tangle Lakes, Paxson Lake, and Sourdough, the BLM maintains only four pit toilets on the system, all on the Main Stem. There is also a maintained portage at Canyon Rapids. There are no maintained facilities on the Middle or West Fork. Except for the last mile of the float into Sourdough, the river is out of sight or sound of any road or highway. With the exception of a few heavy use campsites and the facilities mentioned above, vegetation exists in a natural state.

The Gulkana provides outstanding habitat for both resident and anadromous fish species.

It is the leading king (Chinook) and red (sockeye) salmon spawning stream in the Copper River basin. Grayling, rainbow trout, and steelhead are resident species and the Gulkana is one of the most popular sport fishing rivers in Alaska. According to the 1999 user survey conducted on the river, fishing was rated as the most important activity engaged in while on a Gulkana river trip.

Chinook salmon: The Chinook or king salmon is one of the predominant sport fish in the Gulkana River. It is utilized for commercial, personal use and sport fishing in the Copper River system. Chinook salmon enter the Gulkana River in early June and migrate up the mainstem to spawn in areas below the outlet of Paxson Lake. Other known spawning areas include creeks that drain into the Middle Fork and the West Fork and portions of the Middle Fork and mainstem of the Gulkana. Spawning occurs from mid-July through late August with fish higher in the drainage spawning first.

Sockeye salmon: There are at least four different populations of sockeye salmon that utilize the Gulkana River drainage (Sharr, et al, 1984). Each sub-population exhibits different migration times and location of spawning. Artificial enhancement of the sockeye fishery in Paxson and Summit Lakes may have modified the historical

migration and spawning times of sockeye salmon in the Gulkana River. The strength of the year class is dependent upon local flow and habitat conditions at the time of spawning, ocean conditions prior to the spawn and numbers of fish that make it to the spawning grounds. Water flow and spawning conditions during one year can influence sockeye returns five years later.

Grayling: Grayling are widespread throughout the mainstem and tributaries, focusing on free flowing reaches of runs and riffles, with the adults developing a substantial spring migration run in the Gulkana for spawning. Adults have been documented in the Sourdough and Poplar Grove tributaries and redistribute themselves throughout the river system immediately after spawning.

Steelhead trout: The steelhead trout is a migrating form of the rainbow trout. Unlike the anadromous salmon species, steelhead does not typically die after they spawn. They often return to the sea after the spawn and return in subsequent years. Steelhead and rainbow trout are located in the mainstem Gulkana River and in the Middle Fork. Critical spawning areas have been identified in the Middle Fork. The adult steelhead enter the Gulkana River in the early fall, overwinter in the mainstem and spawn in the early spring.

The Gulkana provides habitat for a diversity of wildlife species and provides outstanding opportunities for wildlife viewing.

The Gulkana provides excellent opportunities for viewing a variety of wildlife, including moose, bear, bald eagles, caribou, and waterfowl. There are large numbers of nesting sites for bald eagles, and opportunities for viewing or photographing bald eagles are numerous. A large concentration of trumpeter swans uses the wetlands of the upper West Fork of the Gulkana River for nesting.

The Gulkana River corridor supports over 30 species of mammal including black and brown bears, moose, caribou, wolves, martens, wolverines, otters, weasels, minks, foxes, coyotes, lynx, beavers, and muskrats. Over 60 species of birds include swans, ducks, geese, loons, hawks, owls, grouse, jays, thrushes, waxwings, warblers, sparrows, flycatchers, and others. Wildlife along the Gulkana River corridor enhances the recreational visitor experience, is essential to subsistence, hunting and trapping, and is significant for the diversity which it provides to the ecosystem. The Gulkana River watershed is considered representative of an Alaskan interior ecosystem and is typified by species of animals that require a seasonally distinct mosaic of habitats. Uncompromised nesting and brood-rearing habitats for birds and denning and calving habitat for mammals are present within the corridor.

The Gulkana provides a variety of water conditions for the floater and powerboater.

The Gulkana is one of a handful of road-accessible rivers in the State of Alaska but also provides opportunities for a remote and primitive experience, particularly on the West

and Middle Forks. The Upper River portion of the main stem provides an easily accessible semi-primitive experience outside of the salmon season, with more encounters expected during salmon season. The Sourdough segment is accessible to powerboats and as such sees high levels of use during the salmon season. Because of differences in accessibility, access to powerboat use, and location of facilities, the river lends itself to a diversity of recreation experiences. The corridor provides a remote setting for recreation and subsistence activities such as boating, fishing, hunting, trapping, camping, hiking, snowmachining, skiing, photography, wildlife viewing, and dogsledding.

For most of their length, the three forks of the Gulkana are not considered whitewater rivers, although each has stretches that would fit that description, including a quarter-mile stretch of Class III-IV rapids in the canyon on the Main Stem. This variety in water conditions adds to the diversity of experiences offered by the river.

The Gulkana is closely flanked by low rolling hills with the Wrangell Mountains and Alaska Range in the background, and features high quality scenic vistas.

Scenery along the Gulkana River system is subdued but wild. Spectacular mountains and glaciers are not close to the river, although they can occasionally be seen. Rather than presenting wide panoramas of scenic beauty from horizon to horizon, the Gulkana National Wild River corridor offers viewers and photographers opportunities to observe and photograph many aspects of nature; wild flowers, a variety of birds, and some animals are all present in abundance. The viewer has a chance to become almost a part of what he is viewing—a mirror calm oxbow bend in the river; a magenta stand of fireweed; a pothole lake with its families of waterfowl, beaver and muskrats; a cow moose and her spindly-legged calf poised on a sandbar; a stately spruce where a pair of eagles feed their young in a decades-old nest; and countless other close scenes that are vestiges of primitive America.

PART III. BOUNDARY DETERMINATION

Boundary determination, as directed by ANILCA, was conducted as part of the 1983 Gulkana River Management Plan. Since then, acquisitions of small parcels of private land have occurred as described in III-D below. These acquisitions are adjacent to the corridor, having been cherry-stemmed in 1983. As described below, the acquisitions have already taken place and BLM's recommendation is to change the boundary that was presented in the 1983 Gulkana River Management Plan to include these lands within the corridor. This would be an addition of approximately 245 acres to the acreage described in 1983. Section 3(b) of the Wild and Scenic Rivers Act (WSRA) states that "notice of...subsequent boundary amendments shall be published in the Federal Register and shall not become effective until ninety days after they have been forwarded to the President of the Senate and the Speaker of the House of Representatives." This section of the WSRA was amended by ANILCA (section 103(b)) to state that "Following reasonable notice in writing to the Congress of his intention to do so the Secretary...may make minor (less than 23,000 acres) adjustments in the boundaries of the areas added to or established by this Act as...Wild and Scenic Rivers." The BLM, through this plan, recommends the inclusion of these parcels into the corridor and will take appropriate action to follow-up, consistent with the WSRA, as amended by ANILCA. In the interim, these parcels will be managed consistent with the management direction provided in Part IV of this plan. The current map of the boundary, which includes these parcels, is shown in Part V of this plan.

Map boundaries presented in Part V are based on the Master Title Plats for the area and the legal descriptions provided in the 1983 Gulkana River Management Plan. A survey was done on the corridor boundaries in 2001. While the on-the-ground portion of the survey is complete, the survey data has not yet been approved and consequently could not be used in the presentation of the map boundaries. Utilization of this data, once approved, will result in a more accurate portrayal of the boundary and this plan will be amended at that time to include the new map. Total acreage within the corridor will not change significantly based on the new survey data.

The following text on legislative controls, BLM policy, and additional considerations is taken from the 1983 Plan but revised based on updated information.

A. Legislative Controls

ANILCA classified and designated that, subject to valid existing rights, the Gulkana River from the outlet at Paxson Lake in Township 12 North, Range 2 West, Section 4, Copper River Meridian to Sourdough Creek in Township 9 North, Range 2 West, Section 36, Copper River Meridian; the Middle Fork Gulkana River from the outlet at Dickey Lake in Township 13 North, Range 5 West, Section 12, Copper River Meridian, to its confluence with the Gulkana River in Township 12 North, Range 2 West, Section 6, Copper River Meridian; and the entire West Fork Gulkana River including the north branch from the outlets of unnamed lakes in Township 11 North, Range 8 West,

Sections 10 and 24, Copper River Meridian and the south branch from the outlet of an unnamed lake in Township 10 North, Range 7 West, Sections 10 and 15, Copper River Meridian to the confluence with the Gulkana River in Township 9 North, Range 2 West, Section 8, Copper River Meridian, is to be administered as a “wild” river pursuant to the Wild and Scenic Rivers Act (WSRA).

ANILCA further amended the WSRA to authorize the establishment of a river corridor boundary which may include up to an average of 640 acres per river mile for all designated National Wild and Scenic Rivers in Alaska. The boundary of this corridor may not include any lands owned by the State or a political subdivision of the State, nor may the boundary extend around any private lands adjoining the river in such a manner as to surround or effectively surround such private lands.

B. BLM Policy

For the purpose of preparing a detailed boundary for the Gulkana National Wild River corridor, the following policies were applied:

- The Gulkana River is navigable, as determined through court cases. Because the Gulkana River can be used for the transportation of people or goods, the Gulkana River was found navigable. *Alaska v. United States*, 662 F.Supp.455 (D. Alaska 1987). On appeal, the court of appeals affirmed the district court’s finding of navigability. *Alaska v. Ahtna, Inc.*, 892 F.2d1401 (9th Cir. 1989). The court of appeals found that the modern use of the Gulkana for guided hunting, fishing, and sightseeing trips is a commercial use and, since the physical characteristics of the river have not significantly changed since 1959, provides conclusive evidence that the river was susceptible of commercial use at statehood. In April 1990, the United States Supreme court denied a request by Ahtna, Inc. to reconsider and overturn the court of appeals decision.
- On June 27, 1984, the United States disclaimed an ownership interest in the waters and lands below ordinary high water on all but the upper reaches of the Gulkana River. The disclaimed portions included: 1) main stem of the Gulkana River from the Copper River to the north end of Paxson Lake; 2) West Fork from the main stem to the confluence of the West Fork and “Victor Creek” (the unnamed creek entering the West Fork left bank in Section 20, T10N, R4W); and 3) the Middle Fork from the main stem to the confluence of the outlet from Swede Lake and the Middle Fork. The court confirmed the disclaimer on September 24, 1984. Therefore, the BLM acknowledges the State’s ownership between the ordinary high water marks, and this area is excluded from acreage determination.
- The acreage for the river corridor has been measured outward from the ordinary high water mark along the shoreline and does not include either islands in the river or the riverbed.
- A review of State land selections and Federal mining claims has been made. None exist within the boundaries of the corridor. Private lands are excluded from the corridor boundary.

- Where private lands are adjoining, they will be excluded from the river corridor by a common external boundary, and access will be provided to the entire block of private land via the most commonly used route.

C. Additional Considerations

In addition to being affected by legislative controls and BLM policies, the boundary was located to protect important resource values such as crucial wildlife habitat and the historic trails that parallel the Middle Fork Gulkana River and the West Fork Gulkana River. Boundaries were drawn to include as much of the most frequently used land areas as possible. Significant lakes such as Canyon Lake were included if it was reasonable to do so. The corridor is widest around the confluence of the West Fork with the Gulkana River. This was done to prevent a long, narrow strip of undesignated land between these rivers where they run approximately parallel for about six miles. The boundaries were also drawn to exclude much of the utility corridor.

The boundary was then further adjusted in 1983 to follow protracted survey section lines (minimum 40-acres parcels) whenever possible in order to simplify the legal description of the boundary.

D. Boundary changes

Since 1983 there has been the acquisition of approximately 245 acres through the following actions:

- A June, 1977, decision by the Interior Board of Land Appeals (IBLA) (30 IBLA 359) granting David A. Burns 80 acres along the Gulkana River under the Trade and Manufacturing Site Act, was reversed by the Federal District Court in a quiet title action Exxon Pipeline Company, et al. v. David A. Burns, Civ. No. A82-454 (Consolidated) (D. Alaska., October 22, 1985). The Judge ruled that David A. Burns was not entitled to a patent to any portion of the lands within pending T&M site application F-033554, due to the fact it violated the 80 rod shore space limitation of the law which applies to navigable water bodies. In addition, the claim consisted of four non-contiguous tracts of land due to the determination that the Gulkana River is navigable. This rendered the claim invalid in the Court's opinion. On March 21, 1986, the BLM Alaska State Office officially canceled T & M Site application F-033554. This 80 acres was portrayed as private land in the 1983 Gulkana River Management Plan. It is now federal public land. BLM recommends inclusion of this 80 acres into the Gulkana National Wild River corridor and will pursue amendment of the boundary (consistent with the WSRA and ANILCA) to include it.
- The 1983 Gulkana River Management Plan showed a 160-acre Native allotment at the outlet of Paxson Lake. This parcel was shown as being cherry-stemmed and consequently was not counted as part of the total corridor acreage. In 1986, this application was rejected. The basis for the rejection was that a recreation withdrawal (PLO 225) from 1944 pre-dated the Native Allotment applicant's claim of occupancy. BLM recommends inclusion of this 160 acres into the Gulkana National

Wild River corridor and will pursue amendment of the boundary (consistent with the WSRA and ANILCA) to include it.

- In 2003, the BLM acquired 3.4 acres at the mouth of Paxson Lake that had been privately owned. The parcel was bought from a willing seller. This parcel, in the 1983 Gulkana River Management Plan, had been portrayed as adjacent to the corridor and consequently did not count in the total acreage. BLM recommends inclusion of this 3.4 acres into the Gulkana National Wild River corridor and will pursue amendment of the boundary (consistent with the WSRA and ANILCA) to include it.

Based on the designated beginning and ending points and on the legislative controls, policies, considerations, and acquisitions described in the preceding discussion, the acreage contained within the Gulkana Wild River corridor boundary is approximately 92,745 acres.

PART IV. MANAGEMENT CONSIDERATIONS

This section is divided into two parts. Part A describes management goals and objectives for the river corridor and Part B describes issues and concerns identified for the river and specific management actions, indicators, standards, and monitoring to address those concerns.

A. Management Goals and Objectives

The Wild and Scenic Rivers Act requires that a national wild and scenic river be administered to protect and enhance the values which caused it to be designated, without limiting other uses that do not substantially interfere with public use and enjoyment of these values. In conformance with this requirement, the following management goals and objectives have been established for the Gulkana National Wild River, based on maintenance and enhancement of the described outstandingly remarkable values.

ORV: The Gulkana is the largest clearwater river in the region, with water quality and water clarity normally excellent.

Goal Prevent degradation of the water quality.

Objectives Water quality will be maintained or improved to meet Federal criteria or federally approved State standards.

Manage to maintain water clarity, acknowledging the fact that there are natural sources of sedimentation along the Gulkana that increase turbidity during periods of high rainfall or spring break-up. Manage to minimize or eliminate human-caused sources of sediment such as stream crossings or erosion at campsites.

ORV: The Gulkana is located in a largely wild and undeveloped environment.

Goal Preserve the river and its immediate environment in its natural, primitive condition.

Objectives Manage to maintain a primitive or semi-primitive recreation experience on the Middle Fork, West Fork, and Upper River, where visitors have considerable opportunities to find solitude (e.g. few and short encounters with other groups).

Manage to maintain an undeveloped recreation experience in the Sourdough segment, where one expects to meet many other groups of users, and solitude is sometimes difficult to find. Powerboats are common.

Manage other activities within the corridor to maintain or enhance the undeveloped character of the river and surrounding environment.

Minor developments may be permitted if they are unobtrusive and do not have a significant direct and adverse effect on the natural character of the river area.

Manage activities within the corridor to preserve historic, archaeological and cultural values that contribute to its primitive character.

ORV: The Gulkana provides outstanding habitat for both resident and anadromous fish species.

Goal Maintain or enhance fish habitats.

Objectives Manage to maintain and protect excellent spawning habitat by limiting trail proliferation along the river and maintaining designated trails and crossings to eliminate any existing trail-produced sedimentation.

Ensure that future vegetation management activities in the corridor, such as prescribed burning, leave adequate vegetation buffer along the river.

Manage dispersed campsites along the river to eliminate erosion and minimize bare ground to reduce potential for sedimentation from these sites.

Cooperate with State ADF&G in existing and future fish monitoring, accurate monitoring of fish escapement, or research projects, consistent with management objectives.

Ensure adequate in-stream flows to provide optimum conditions for spawning.

ORV: The Gulkana provides habitat for a diversity of wildlife species and provides outstanding opportunities for wildlife viewing.

<i>Goal</i>	Maintain or enhance wildlife habitats.
<i>Objectives</i>	<p>Manage human activities within the corridor to minimize impacts to wildlife habitat.</p> <p>Manage human activities around bald eagle nest sites based on existing and current research to prevent disturbance of nesting bald eagles.</p> <p>Minimize human/bear encounters by encouraging visitors to use Leave No Trace camping techniques.</p> <p>Enhancement of wildlife habitat is the primary objective for any proposed vegetation management within the Gulkana National Wild River Corridor (e.g. such as prescribed burning).</p>

ORV: The Gulkana provides a variety of water conditions for multiple user groups such as floaters and powerboat users.

<i>Goal</i>	Maintain a diversity of recreation experiences within the river corridor.
<i>Objectives</i>	<p>Manage to maintain current recreation experiences by managing motorized access and by designating Off Highway Vehicle trails within the corridor.</p> <p>Allow for continued powerboat access on certain segments of the river.</p> <p>Maintain primitive or semi-primitive experiences by limiting launches, if necessary.</p> <p>Ensure adequate in-stream flows to accommodate floating use, powerboat use, and provide whitewater challenge in rapids (e.g. at Canyon Rapids).</p>

ORV: The Gulkana is closely flanked by rolling hills with the Wrangell Mountains in the background, and features high quality scenic vistas.

Goal Maintain scenic quality in the corridor.

Objectives Management activities will retain the existing character of the landscape within the river corridor.

Management activities may be seen but should not detract from the scenic quality within the corridor.

Through public input, river users have indicated they expect and actually experience different recreation experiences on different segments of the river. Based on user expectations and desired conditions, the following river segments will be managed to maintain the following recreation experiences:

Table 2. Recreation Experiences per River Segment

River segment	Experience to be Managed For	Definition of Experience
Upper River	Semi-primitive	Where one expects to meet a few other groups of users, but solitude is still possible, particularly at camps. There is little or no evidence of motorized use, including OHV trails. You may see traces of previous use at some sites. A ½ mile inclusion within this segment is Canyon Rapids, which will be managed to provide an undeveloped experience (see description below under Sourdough).
Middle Fork	Primitive	Where one can expect to find solitude and very few traces of previous use. There is little evidence of motorized use, including absence of OHV trails (except at designated crossings). There is little or no development.
Sourdough	Undeveloped	Where one expects to meet many other groups of users, and solitude is sometimes difficult to find. Motorized uses are common. Traces of previous use are visible at many sites.
Lower West Fork	Semi-primitive, motorized	Where one expects to meet a few other groups of users, but solitude is still possible, particularly at camps. There is some powerboat use, limited by physical barriers in the river. OHV trails are rare. You may see traces of previous use at some sites.
Upper West Fork	Primitive	Same as Middle Fork.

B. Major Issues and Concerns and Management Actions

The following discussion presents major issues and management concerns, based on public input, specialist review, and interagency coordination. These major issues and

concerns were discussed in the 1983 Gulkana River Management Plan and are presented again here with updated information.

For each issue, this section also describes management actions that will be implemented to address the issue. These management actions have been adopted from the proposed action analyzed in the Final Environmental Assessment for the Gulkana River Management Plan Revision as well as management actions common to all alternatives presented and analyzed in that document. These actions are the result of a careful evaluation of the objectives, issues and concerns, and constraints discussed in this document. They were also developed based on river users input through the 1999 River Survey as well as through public meetings during this planning process.

Management action items are presented in *italics*.

Some management actions will be implemented immediately upon adoption of this plan revision. Others will be phased in based on monitoring of standards described in the Action Items below. Actions described under some items under Phase I may be implemented over more than one year. For example, a campsite map and educational efforts may be implemented one year, followed by a voluntary reservation system the next year. All are Phase I actions.

ITEM 1: SURFACE TRANSPORTATION

Issue: Powerboats

Situation: The 1983 Gulkana River Management Plan states “Existing use of motorized boats is limited to the West Fork and to the lower Gulkana River downstream from a point 1 mile upstream from its confluence with the West Fork until August 15th of each year. After that date, the use of motorized boats is allowed on the entire Gulkana River system.” Because of the State’s management authority below ordinary high water marks on the river, this remains a BLM recommendation and is posted as such on the river. Because of physical limitations on the river, the river above the point is difficult to negotiate with powerboats at most times of the season (with the exception of high water). Powerboat use above this point does occur, especially during high water in king season and when fishing competition increases.

Powerboat use on the Middle Fork also rarely occurs because of rock gardens in the segment of the river between Paxson Lake and the confluence with the Middle Fork. Some powerboat use occurs on the Lower West Fork. Powerboats and airboats are rarely used to access private property on Fish Lake, and very rarely powerboats go into the Upper West Fork. There are currently no motorized restrictions on the West Fork or the Middle Fork.

Action 1.1: The following management actions are recommended for powerboat use. Powerboats include airboats, jetboats, boats with outboard motors, or boats with small horsepower “kickers”:

- *A powerboat closure one mile above the confluence of the West Fork with the main stem of the Gulkana. This will be a seasonal closure (5/15 – 8/15). This closure is recommended by BLM to be adopted by State DNR in their Special Use Land Designation for the Gulkana river. At this time, DNR has not adopted this measure in their SULD; it will remain in place as a BLM recommendation.*
- *A ban of jetskis on all segments of the river within the Wild and Scenic River corridor. This closure is recommended by BLM to be adopted by State DNR in their Special Use Land Designation for the Gulkana river. At this time, DNR has not adopted this measure in their SULD; it will remain in place as a BLM recommendation.*
- *A seasonal closure (5/15 – 8/15) on airboats on all segments of the river within the Wild and Scenic River corridor. This closure is recommended by BLM to be adopted by State DNR in their Special Use Land Designation for the Gulkana river. At this time, DNR has not adopted this measure in their SULD; it will remain in place as a BLM recommendation.*
- *Powerboat use (including airboats) will be allowed for access to private land, for administrative use, or for emergency purposes.*

Monitoring: The BLM will work with State of Alaska to monitor water quality (including petroleum hydrocarbons) below Sourdough boat launch. If measured petroleum hydrocarbon levels exceed State water quality standards, BLM will work with the State on developing a system to limit powerboat use during peak periods to correct the problem.

Discussion: The powerboat closure on the main stem one mile above the confluence with the West Fork is a decision that was made in the 1983 Gulkana River Management Plan and was never implemented as a formal regulation. It remains in place as a BLM recommendation. BLM has worked closely with the State of Alaska, Department of Natural Resources (DNR), during this planning process to encourage that their Special Use Land Designation (SULD) for the river be consistent with this management action. This decision is necessary to protect the outstandingly remarkable values, specifically a wild and undeveloped environment; to minimize floater/powerboat encounters; to maintain different recreation experiences on the river; and for safety reasons due to a more confined channel past this point. This recommended closure would be seasonal and still allow traditional access by powerboat to the river corridor for subsistence hunting.

The recommendation for a seasonal closure on airboats is based on the strength of public comments supporting such a measure, as well as the results of the 1999 River Users survey, which showed wide support for this measure. Airboats can be heard for miles on the river, and as they get closer to a floater or powerboater, noise levels become deafening. Use of these boats is clearly inconsistent with management for a wild classification and does not maintain the wild and undeveloped character of the river. The seasonal closure would still allow access by airboats to the river corridor for subsistence hunting, access to private land, and emergency purposes.

Aside from airboats and jetskis, no powerboat restrictions are recommended for the Sourdough segment. The BLM will continue to monitor powerboat and floating use on this segment. If it becomes apparent, through public input or monitoring, that powerboat or floater use is creating a public safety or resource concern within this segment, BLM will consider some limitation through number of daily launches out of Sourdough.

Issue: Off Highway Vehicles

Situation: Trail access to the Gulkana is available in the summer by several major trails available to hikers and OHVs. The Swede Lake trail begins at MP 16 of the Denali Highway and accesses the upper Middle Fork. The Swede Lake trail crosses the Middle Fork and joins with a network of trails that access the Alphabet Hills and Dickey Lake trails. There is also a spur off of the Swede Lake trail (the North West Middle Fork extension trail) that accesses the Middle Fork again at Hungry Hollow Creek. The Middle Fork trail starts from the Richardson Highway near Meiers Lake and accesses the confluence of the Middle Fork and the main stem of the Gulkana, a distance of seven miles. The Middle Fork trail then crosses the main stem of the Gulkana at two different points and becomes the North East Middle Fork Extension trail, paralleling the Middle Fork for five miles on the north side, and the Twelvemile Creek trail, eventually tying in with the Alphabet Hills trail. The Haggard Creek trail starts at the Richardson Highway and accesses the Canyon Rapids area, a distance of about 7 miles. The West Fork trail takes off from a pipeline access road at Sourdough and heads west to access Ewan Lake, Fish Lake, and Middle Lake. This is predominantly a winter use trail and does not access the West Fork during the summer.

The Gulkana National Wild River corridor is a federal subsistence hunting area, and the primary purpose for trips along the trails into the river corridor is for hunting (1999 Whittaker trails survey). For most subsistence and sport hunters, these trails serve as the only means of access into the area. Because of wetlands, steep slopes, or areas underlain by permafrost, portions of these trails have limited capacity to tolerate OHV use. In some areas this has led to rutted and muddy trail conditions, poor drainage, braided trails, and severe trail degradation.

The 1983 Gulkana River Management Plan states that “Off Highway vehicles may be operated on certain existing trails in accord with existing off-road vehicle designation for Tangle Lakes Archeological District (TLAD), and on all other OHV trails outside the District.” The trail designations with the TLAD are still in place, but this only entails a small portion of the Gulkana National Wild River corridor. Outside of the TLAD within the corridor, OHVs (with the exception of snowmachines) are to be on “existing” trails. The 1983 Plan also calls for OHVs to be parked out of sight of the river. There are currently no restrictions on trails, other than designated trails within the TLAD. Even on designated trails, any vehicle can use the trail.

Considerations:

- Subject to reasonable regulations that protect the natural and other values of the river corridor, ANILCA provides for: 1) the use of snow machines, motorboats, and

non-motorized surface transportation methods for traditional activities; and 2) assures adequate and feasible access for economic and other purposes to State or privately owned land or a valid mining claim which is located across a conservation system unit (ANILCA Section 1110).

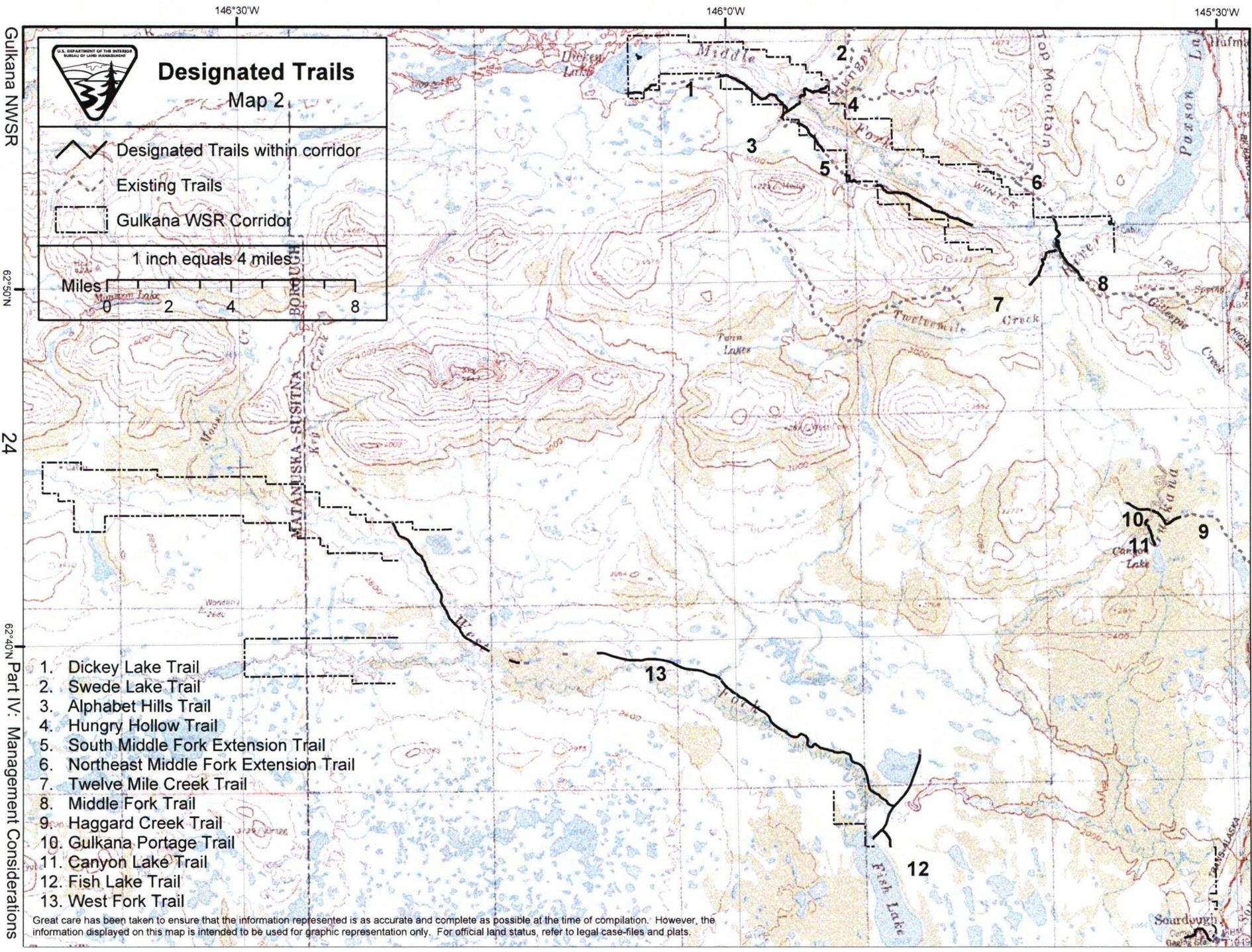
- BLM's implementing regulations, 43CFR 36.11, specifically address Off Highway Vehicles and prohibit their use in conservation system units in locations other than established roads or parking areas, except on routes or in areas designated by the appropriate Federal agency.
- The Wild and Scenic River Act states that wild rivers are generally inaccessible except by trail (Section 2).

Action 1.2: The use of Off Highway Vehicles within the wild river corridor will be limited to the following situations:

- *Off-Highway Vehicles may be operated on the following trails, which will be designated and marked as such on the ground: Haggard Creek trail, Middle Fork trail, Twelvemile trail, Swede Lake trail, Dickey Lake trail, Hungry Hollow trail, South Middle Fork extension trail, Northeast Middle Fork extension trail, Northwest Middle Fork extension trail, Fish Lake trail, and West Fork trail. See Map 2.*
- *Other existing trails within the corridor, including trails that have developed off of the trails listed above, will be permanently closed.*
- *Off Highway Vehicles will be encouraged to park out of sight of the river. On some trails, OHV parking areas will be provided out of sight of the river for those users wishing to fish or camp on the river.*
- *Trail designations do not apply to snowmachines 10/15 to 4/15.*

Monitoring: BLM crew will monitor trail development off designated routes. Developing trails will be closed through rehabilitation or physical closure. Once designated, education and enforcement will also need to be elements of implementation.

Discussion: Designated trails were chosen based on traditional use and on protection of the outstandingly remarkable values of the river. These trails provide access to a federal subsistence hunting area and to State subsistence hunting in the Alphabet Hills beyond the corridor. They were also chosen because they can be maintained to prevent impacts to fisheries, to minimize encounters with river floaters and boaters, and because they do not parallel the river in sight or sound of the river. This plan may be amended in the future to include vehicle weight limitations or seasonal closures on specific trails, consistent with protection of resource values and based on current and traditional use of trails. BLM will continue to work with local ADF&G and Alaska DNR on location of permitted crossings.



Gulkana NWSR

62°50'N

24

62°40'N

Part IV: Management Considerations

146°30'W 146°0'W 145°30'W

River Management Plan Revision

Issue: Roads

Situation: Currently a small portion of one Trans-Alaska pipeline access road exists in the corridor, just north of Sourdough campground. This road existed prior to the corridor being designated as part of the Wild and Scenic River system. No other roads exist within the corridor.

Considerations:

- ANILCA allows for the construction of new transportation systems in and across components of the National Wild and Scenic River system provided certain requirements are met (ANILCA sections 1104-1107).
- BLM's manual for management of Wild and Scenic Rivers (8351) states that for a wild classification, "a few inconspicuous roads...may be permitted" but "no construction of new roads...would be permitted within the river corridor."

Action 1.3: New roads, highways, railroads, and similar systems of overland transportation will generally not be permitted within or across the wild river corridor.

Discussion: Before such a system would be authorized, a determination must first be made that it would be compatible with the purposes for which the national wild river was established, and that there is no economically feasible and prudent alternative route or location (ANILCA 1105).

Any authorized transportation system will be located and constructed in an environmentally sound manner and in a manner that does not interfere with or impede stream flow or transportation on the river. Locations and construction techniques would be selected to minimize adverse effects on the outstandingly remarkable values of the river as well as subsistence.

Action 1.4: Other motorized uses: Use of chain saws for the cutting of firewood for campsites is prohibited on all segments of the river. Chain saws may be still be used for personal firewood or houselog gathering, under permit from BLM.

Discussion: Use of chain saws detracts from the wild and undeveloped character of the river corridor, adds to camp encounters (camping within sight or sound of another camp), and is unnecessary to build a fire, given the abundance of down and dead material along most of the river.

ITEM 2: AIRCRAFT USE**Issue: Should aircraft use be permitted within the wild river corridor?**

Situation: Current use of aircraft within the wild river corridor is limited as there are no existing airstrips. Occasionally, aircraft will land on Dickey Lake, Canyon Lake, and the lakes at the headwaters of the West Fork Gulkana River for the purpose of transporting

fishermen, float-boaters, and hunters. The Gulkana River is quite narrow and there are no sand and gravel bars suitable for safe aircraft operation.

BLM river managers currently use fixed wing aircraft to monitor visitor use along the wild river corridor. Approximately six flights occur each summer. In addition, an annual bald eagle productivity study is conducted using fixed wing aircraft.

In 1995 the Federal Aviation Administration and United States Air Force, after conducting an Environmental Impact Statement, issued a Record of Decision that, in part, modified the boundaries of the Fox Military Operations Area to exclude the Gulkana National Wild River corridor. The effect of this decision should be to minimize low-level military aircraft use in the corridor. This decision was based on public and agency input, including input from Glennallen Field Office staff.

Helicopter use within the corridor occurs periodically. Alyeska, the company responsible for maintenance of the Trans-Alaska pipeline, flies the pipeline daily. The pipeline parallels the main stem portion of the Gulkana, so Alyeska's daily flights can be heard and are often visible from the main stem. Helicopters are occasionally used by State agencies and BLM for logistical support in various resource projects; sometimes flight paths bisect the corridor.

Considerations:

- Subject to reasonable regulations that protect the natural and other values of the river corridor, ANILCA provides for the use of airplanes for traditional activities.
- BLM's Manual for Management of Wild and Scenic Rivers (8351) discourages motorized use in river corridors with a wild classification. Numerous overflights from helicopter or small fixed wing aircraft or low-level military flights would detract from the wild and undeveloped character of the river.

Action 2.1: Aircraft operations in the river corridor for traditional float plane use on lakes, for fire and rescue operations, and on traditional tundra landing areas is allowed except for use of the water surface on any part of the Gulkana River channel within the designated corridor. No commercial helicopter-supported activities will be permitted within the corridor.

Discussion: The Gulkana River is too narrow for safe aircraft operation. Use of the river for operating aircraft poses dangers for river users. Existing use is considered to be compatible with the values of the national wild river and provides needed access. No new airstrips will be constructed.

Action 2.2: Air Force and FAA planning decisions have excluded the Gulkana National Wild River corridor from the Fox Military Operations Area (MOA). BLM will continue to recommend exclusion of the corridor from this MOA in any future planning documents to minimize low-flying military flights in the corridor.

ITEM 3: SUBSISTENCE

Issue: How will management of the wild river corridor affect traditional subsistence activities?

Situation: In deliberations leading to the Alaska Native Claims Settlement Act of 1971, the U.S. Congress acknowledged the importance of subsistence hunting and fishing to Alaska Natives but provided no specific protection of these rights. By the late 1970s when oil and gas development on Alaska's North Slope was booming, more direct action was obviously needed to protect subsistence activities in the state.

The Alaska National Interest Lands Conservation Act of 1980 requires that rural subsistence users have a priority over other users to take fish and wildlife on Federal public lands where a recognized customary and traditional pattern of use exists. When it is necessary to restrict the taking of fish and wildlife on these lands, rural subsistence uses are given preference over other consumptive uses.

The State of Alaska managed statewide subsistence harvests until late 1989, when the Alaska Supreme Court ruled that the rural subsistence preference required by ANILCA violated the Alaska Constitution. Despite repeated efforts, the State has been unable to bring its regulatory framework back into compliance with ANILCA through a change in its constitution.

Consequently, the Federal government has managed subsistence hunting on Federal land, and has managed subsistence fishing on non-navigable waters on Federal public land in Alaska since July 1, 1990. As directed by the 9th Circuit Court in the Katie John case, and to meet the requirements of the rural subsistence priority in Title VIII of ANILCA, the Federal subsistence management program expanded on October 1, 1999, to include subsistence fisheries on the navigable waters of Alaskan rivers and lakes within and adjacent to Federal conservation units.

The Gulkana National Wild River corridor, being Federal land, is part of the subsistence hunting area and as such provides opportunity for caribou and moose harvest. It is also an important area for subsistence trapping, firewood gathering, and berry-picking activities. Because no customary and traditional subsistence fishing has been established for the Gulkana, it is not open to federal subsistence fishing.

Considerations:

- ANILCA allows for and protects local subsistence use on public lands in Alaska (ANILCA Section 801-811).
- Management to protect the wild and undeveloped character of the corridor must be balanced with the need to provide access to the area as part of the federal subsistence area.

Action 3.1: The Gulkana National Wild River corridor, as unencumbered federal land, is part of the federal subsistence hunting unit. As such, BLM will continue to provide access to the area subject to reasonable regulation to protect the outstandingly remarkable values of the river. Means of access that have been demonstrated to be traditional include powerboats, snowmachines, and Off Highway Vehicles including 4-wheelers and large tracked rigs.

Action 3.2: Trapping within the wild river corridor is permitted, subject to State and federal regulations. Establishment of new trapping cabins within the corridor will not be permitted.

Discussion: Trapping is a traditional winter subsistence use of the river corridor and with proper management can continue without affecting the integrity of the Gulkana National Wild River.

Action 3.3: Subsistence use of timber for fuelwood and house logs is allowed by permit.

Discussion: The Field Manager, by individual permit, may allow the removal of timber subject to reasonable stipulations to protect the natural and other values of the national wild river (ANILCA Title VIII). Stipulations will include considerations for protecting visual resources and maintaining the wild and undeveloped character of the corridor. Off-highway vehicle use off designated trails will not be permitted for fuelwood or house log harvest, so winter harvest with snowmachines is the preferred method.

ITEM 4: HUNTING AND FISHING

Issue: Will management under the national wild river designation alter hunting and fishing use?

Situation: Substantial growth of sport fishing for salmon has taken place on the main stem of the Gulkana River since the 1983 Gulkana River Management Plan was written. Surveys indicate that sport fishing is the primary reason for people to float, boat, or visit the river. Because of current low moose and caribou populations, no sport hunting for those species occurs within the corridor. Hunting is limited to subsistence hunting, either through the federal program or the State Tier II program.

Considerations:

- The Wild and Scenic River Act permits hunting and fishing in river systems in accordance with applicable State and Federal laws (WSRA Section 13).
- The Alaska Department of Fish and Game has responsibility for managing fish and wildlife populations in Alaska, and they will continue to regulate the taking of fish and wildlife resources.
- The 1985 MOU between the State and BLM on management of the Gulkana states "Hunting, fishing, and trapping are permitted uses to applicable state and federal laws and regulations. Nothing in the NWSR designations affects that jurisdiction or

responsibility of the state or the federal government with respect to the fish and wildlife.”

Action 4.1: Hunting and fishing is permitted, subject to applicable State and Federal regulations.

ITEM 5: WATER QUALITY

Issue: How should water quality of the river be maintained or enhanced?

Situation: The Gulkana River provides fish for sport, commercial, and subsistence use. Water quality and clarity is one of the outstandingly remarkable values. The free-flowing nature of the river, adequate volume, and relatively protected watershed provides generally superior water quality. Unauthorized OHV crossings, improper human waste disposal, run-off from heavy use campsites, and release of petroleum hydrocarbons from powerboats are all factors that can negatively impact water quality. BLM water quality data taken currently meets State water quality standards (18 AAC 70) for dissolved oxygen, pH, and temperature.

Considerations:

- The Wild and Scenic River Act provides that the agency managing a component river of the National Wild and Scenic Rivers system will cooperate with State agencies in maintaining or improving the water quality (WRSA, Section 12).

Action 5.1: All use authorizations will include measures to control water pollution. These include but are not limited to:

- *All Special Recreation Permits issued for commercial guiding on the river require the use of portable systems for packing out human waste.*
- *Any permitted use that includes the use of Off Highway Vehicles will be consistent with the conditions described above under Action Item 1.2. OHVs will use authorized stream crossings.*
- *Any permitted use will include stipulations for the proper storage and handling of hazardous materials. Fuel storage will not occur closer than 100 feet from any river, lake, stream, or wetland.*

Action 5.2: BLM will cooperate with the Alaska Department of Environmental Conservation, and where appropriate, the U.S. Environmental Protection Agency, for the purposes of preventing, eliminating, or diminishing the pollution of river water levels consistent with the Federal Clean Water Act and State Water Quality Standards.

Monitoring: Some water quality monitoring is currently being conducted. At least two water quality monitoring points will be established within the Gulkana river corridor, one at Sourdough and one in the Upper River segment. Dissolved oxygen, pH, temperature, turbidity, fecal coliform, and aqueous and aromatic hydrocarbons will be measured. This monitoring will provide baseline information to detect any significant

changes and will be shared/compared with water quality information obtained by Gulkana village in the proximity of the Richardson Highway bridge over the Gulkana.

The BLM will work with State of Alaska to monitor water quality (including petroleum hydrocarbons) at Sourdough boat launch.

ITEM 6: MINERAL DEVELOPMENT

Issue: How can mineral development be managed to minimize adverse effects on the resource values for which the river was designated?

Situation: When the 1983 Gulkana River Management Plan was written, there were several pre-designation mining claims along a tributary of the Middle Fork, some within the boundary of the river corridor. Since that time, BLM initiated an annual assessment fee on mining claims and all claims within the Gulkana National Wild River corridor have been dropped. Withdrawals associated with the ANILCA designation for a wild river prohibit locatable mineral entry or mineral leasing within the corridor.

Considerations:

- Lands within one-half mile of the bank of any river designated as a wild river have been withdrawn, subject to valid existing rights, from all forms of new appropriation under the mining laws and from mineral leasing by Section 606 of ANILCA.

Action 6.1: ANILCA, with designation of the Gulkana as a Wild and Scenic river, withdrew lands within ½ mile of the river from mineral entry or mineral leasing. No mining claims are left within the river corridor. Therefore, no mineral development or leasing will occur within the Gulkana National Wild River corridor.

ITEM 7: FACILITIES

Issue: How will recreation facilities be managed to provide a positive recreation experience while protecting outstandingly remarkable values on the river?

Situation: The Gulkana is largely a wilderness river with few developments. Aside from the launch areas and/or attached campgrounds at Tangle Lakes, Paxson Lake, and Sourdough, the BLM maintains only four pit toilets on the system, all on the main stem. There are no maintained facilities on the Middle or West Fork. Other facilities along the river include portage signs at Canyon Rapids and a maintained walkway at the Canyon Rapids portage. The portage warning signs provide the river users ample opportunity to pull over to shore to be able to portage around Canyon Rapids. The maintained walkway at the portage provides a safe and easy walkway for river users to portage their gear and eliminates soil erosion problems. All campsites along the river are dispersed, with no associated developments such as fire rings.

As primary access points to the river, Paxson and Sourdough facilities provide boat launches, parking, toilet facilities, education/interpretation panels, potable drinking water, and developed campsites with fire rings and picnic tables. A boater dump station was installed at Sourdough in 2002. These facilities occur outside the boundaries of the river corridor. The Delta Wayside provides a day use area with picnic tables, toilets and a boat launch on Upper Tangle Lakes.

Considerations:

- BLM's manual for management of Wild and Scenic rivers (8351), for a wild classification, allow simple comfort and convenience facilities, such as toilets, tables, fireplaces, and shelters if they are unobtrusive and do not have a significant direct and adverse effect on the natural character of the river area.
- The MOU between the State and BLM on management of the Gulkana says that the BLM or State may provide basic facilities to absorb user impacts on the resources. Wild river areas will contain only the basic minimum facilities in keeping with the "essentially primitive" nature of the area. If facilities such as toilets and refuse containers are necessary, they will be located in accord with the approved river management plans.

Action 7.1: Those facilities necessary to maintain the natural values of the river area and to provide for the health and safety of the visitors are provided and will be maintained on a scheduled basis.

Discussion: Warning and take-out signs are necessary at the Canyon Rapids portage to warn of the dangerous rapids downstream. Toilets need maintenance to preclude health hazards. Scheduled maintenance of the support facilities (which include the campgrounds, portage, parking areas, and boat ramps) is necessary to preserve natural values and provide for visitor enjoyment. Existing campground/boat launch facilities at Sourdough, Paxson Lake, and the Delta Wayside are adequate for the next 10-15 years with regular maintenance.

Action 7.2: There are currently four maintained outhouses on the river: Middle Fork, Canyon Rapids, and two at the West Fork confluence. These outhouses will receive regular maintenance by BLM, including re-location when they are full. However, Phase II and III actions on all segments of the river call for eventual removal of these facilities. Removal is contingent on implementation of all preceding Phase I or II actions (increased education, requiring users to pack out human waste) and meeting of human waste standards identified under Item 8.

Action 7.3: Dispersed campsites on the river will be managed and maintained as follows by river segment. The following section describes management indicators, standards, and Phase I and II actions that will be taken.

Dispersed campsite management: Upper River and Sourdough segments

Indicator	Amount of increase in bare ground, social trails, and “satellite” sites.
Standard	<p>Depends on the site. Dispersed sites will be inventoried and categorized as “heavy”, “moderate”, and “light” impact sites:</p> <p>Heavy impact sites. There are currently few of these (most are at Middle Fork confluence and Canyon Rapids). Rehabilitation at these core sites would be difficult without total rest for years; high use levels in these areas might also create new sites if these were closed. Accordingly, standards for these sites will be no increase in bare ground on the river bank and no increase in satellite sites or social trails from the existing condition;</p> <p>Moderate impact sites. These are sites where passive rehabilitation or rest could make a large difference. Current area of bare ground is small but has potential to spread. Standard for these sites will be no increase in bare ground and no creation of new satellite sites or social trails;</p> <p>Light impact sites. These are sites that are hard to find even with a map. Very little bare ground. These sites will be evaluated on whether or not to put them on a campsite map (see camp encounters issue). Regardless of whether or not they appear on the map, standard for these sites will be no increase in bare ground.</p>
Management Action Phase I	<p>Heavy impact sites: Close developing satellite sites and social trails through passive rehabilitation, utilizing natural materials (e.g. trees, rocks, root wads, brush) to discourage use. Increase in bare ground on banks will be minimized by passive rehabilitation funneling use into one area along the bank. This would concentrate bank use. Native materials may be used to harden sites, direct use or help discourage development of satellite sites.</p> <p>Moderate impact sites: Use passive rehabilitation to halt expansion of core area and block developing satellite camps and social trails. This would be used on all moderate impact sites within the segment not meeting standards.</p> <p>Light impact sites. If indicated on the campsite map, same as described for moderate impact sites. If not indicated on the campsite map or if it is newly developed site, consider closure of the site by passive rehabilitation and using natural materials to block site visibility from the river. Development of additional sites may be considered in high concentration areas to relieve pressure on heavy</p>

use sites and minimize camp encounters. All sites: Limit group size to 12.

Management Action Phase II Heavy impact sites: If satellite sites or social trails continue to develop, close them to allow rest and rehabilitation through physical barriers.

Moderate impact sites: Where passive rehabilitation described under Phase I is not effective, rest some campsites on an alternating basis.

Light impact sites: Same as described for moderate impact sites.

Dispersed campsite management: Middle Fork segment

Indicator Bare ground, social trails, and satellite sites.

Standard Same as described under Site Impact issue for Upper River.

Management Action Phase I Heavy impact sites: Close developing satellite sites and social trails through passive rehabilitation, utilizing natural materials (e.g. trees, rocks, root wads, brush) to discourage use.

Moderate impact sites: Use passive rehabilitation to halt expansion of core area and block developing satellite camps and social trails. This would be used on all moderate impact sites within the segment not meeting standards.

Light impact sites: These developing sites would be closed using natural materials to block access or visibility from the river. All sites: Limit group size to 12.

Management Action Phase II Heavy impact sites: If satellite sites or social trails continue to develop, close them to allow rest and rehabilitation through physical barriers or signing.

Moderate impact sites: Where passive rehabilitation described under Phase I is not effective, rest some campsites on an alternating basis.

Dispersed campsite management: Upper West Fork segment

Indicator	Bare ground.
Standard	No increase in bare ground. No heavy or moderate impact sites as described under Upper River, Sourdough, and Middle Fork segments exist on this segment.
Management Action Phase I	On trips down the West Fork, crew will dismantle all fire rings and remove any trace of the dispersed site. No campsite maps will be available for the public. Limit group size to 12.
Management Action Phase II	If site continues to grow (increase in bare ground), rest site using passive rehabilitation techniques until bare ground has re-vegetated.

Dispersed campsite management: Lower West Fork segment

Indicator	Bare ground, social trails, and satellite sites.
Standard	No increase in bare ground.
Management Action Phase I	Heavy impact sites: Currently there are none of these on the Lower West Fork segment; Moderate impact sites: Use passive rehabilitation to halt expansion of core area and block developing satellite sites and social trails. This would be used on all moderate impact sites within this segment not meeting standards; Light impact sites: If indicated on the campsite map, same as described for moderate impact sites. If not indicated on the campsite map or if it is a newly developed site, consider closure of the site by passive rehabilitation and using natural materials to block site visibility from the river. Limit group size to 12.
Management Action Phase II	Moderate impacts sites: Where passive rehabilitation described under Phase I is not effective, rest some campsites on an alternating basis; Light impact sites: Same as described for moderate impact sites.

Monitoring: A complete baseline inventory has been conducted on all campsites in 2003/04. Campsite sketch maps and photos are on file. These will be supplemented with GPS locations and estimates of bare ground at each campsite using various

methods that may include photopoint digital photography, condition class estimates of bare ground impacts, and radial transect measurements of impact parameters within each campsite. Re-measurement of campsites to determine trend in bare ground, satellite sites, and social trails will occur every three-five years. Management actions will be phased in based on non-compliance with standards for each campsite category.

Table 3. Action 7.3 Dispersed Camp Management – Summary

River Segment	Indicator	Standard	Management Action, Phase I	Management Action, Phase II
Upper River and Sourdough	Amount of increase in bare ground, social trails, and “satellite” sites	<p>Heavy Impact: no increase in bare ground on the river bank and no increase in satellite sites of social trails from the existing condition.</p> <p>Moderate Impact: No increase in bare ground and no creation of new satellite sites or social trails</p> <p>Light Impact: no increase in bare ground</p>	<p>Heavy Impact: close developing satellite sites and social trails through passive rehabilitation</p> <p>Moderate Impact: use passive rehabilitation to halt expansion of core area and block developing satellite sites and social trails</p> <p>Light Impact: If on campsite map - same as for moderate If not on campsite map – consider closure</p> <p>All sites: implement group size limit of 12.</p>	<p>Heavy Impact: close sites to allow rest and rehabilitation through physical barriers</p> <p>Moderate Impact: rest some campsites on an alternating basis</p> <p>Light Impact: same as for moderate</p>
Middle Fork	Bare ground, social trails, and satellite sites	Same as for Upper River and Sourdough segments	<p>Heavy Impact: close developing satellite sites and social trails through passive rehabilitation</p> <p>Moderate Impact: use passive rehabilitation to halt expansion of core area and block developing satellite sites and social trails</p> <p>Light Impact: developing sites would be closed</p> <p>All sites: implement group size limit of 12.</p>	<p>Heavy Impact: close sites to allow rest and rehabilitation through physical barriers and signage</p> <p>Moderate Impact: rest sites on an alternating basis</p>

River Segment	Indicator	Standard	Management Action, Phase I	Management Action, Phase II
Upper West Fork	Bare ground	No increase in bare ground	Light Impact: Remove any trace of a dispersed site All sites: implement group size limit of 12.	Light Impact: Rest site through passive rehabilitation until bare ground has revegetated
Lower West Fork	Bare ground, social trails, and satellite sites	No increase in bare ground	Moderate Impact: use passive rehabilitation to halt expansion of core area and block developing satellite sites and social trails Light Impact: developing sites would be closed All sites: implement group size limit of 12.	Moderate Impact: rest some campsites on an alternating basis Light Impact: same as for moderate impact sites

Action 7.4: Fire rings at dispersed campsites are not provided by BLM but develop with increased use of a dispersed site. The following describes management of fire rings by segment of the river:

Fire ring management: Upper River segment

- Indicator Number of fire rings per site.
- Standard Less than 10% of sites with more than one fire ring.
- Management Action Phase I More patrols and education. Crews and river ranger would dismantle all but one fire ring per site. Encourage use of portable fire pans if a fire is used. Require the use of dead and down wood.
- Management Action Phase II Require all campers to use fire pans.

Fire ring management: Sourdough segment

- Indicator Number of fire rings per site.
- Standard Less than 20% of sites with more than one fire ring.
- Management Action Phase I More patrols and education. Crews and river ranger would dismantle all but one fire ring per site. Encourage use of portable fire pans if a fire is used. Require the use of dead and down wood.

Management Action Phase II Require guides on this segment to use portable fire pans, continue to encourage others to do so through example and education.

Fire ring management: Middle Fork and Upper West Fork segments

Indicator Number of fire rings per site.

Standard Less than 20% of sites with one fire ring.

Management Action Phase I More education. Encourage use of a portable fire pan if a fire is used. Require the use of dead and down wood. Floating guides on this segment would be required to use portable fire pans. Crews and river ranger would dismantle all fire rings.

Management Action Phase II Require all campers to use fire pans.

Fire ring management: Lower West Fork segment

Indicator Number of fire rings per site.

Standard No camp sites with more than one fire ring.

Management Action Phase I More patrols and education, as described for this segment under Litter and Human Waste issues. Crews and river ranger would dismantle all but one fire ring per site. Encourage use of portable fire pans if a fire is used. Require the use of dead and down wood.

Management Action Phase II Require all campers to use fire pans.

Monitoring: Monitoring will be conducted by BLM clean-up crews, by tallying number of sites visited with greater than one fire ring. Management actions will be phased in if standard is exceeded for two consecutive years.

Table 4. Action 7.4 Fire Ring Management – Summary

River Segment	Indicator	Standard	Management Action, Phase I	Management Action, Phase II
Upper River	Number of fire rings per site	Less than 10% of sites with more than one fire ring.	More patrols and education	Require all campers to use fire pans
Sourdough	Number of fire rings per site	Less than 20% of sites with more than one fire ring.	More patrols and education	Require guides to use portable fire pans

River Segment	Indicator	Standard	Management Action, Phase I	Management Action, Phase II
Middle Fork and Upper West Fork	Number of fire rings per site.	Less than 20% of sites with more than one fire ring.	More education	Require all campers to use portable fire pans
Lower West Fork	Number of fire rings per site	No camp sites with more than one fire ring	More patrols and education	Require all campers to use fire pans

Issue: Will other facilities be permitted within the river corridor?

Situation: There are currently two existing leases for recreational cabins within the river corridor, both in the Sourdough segment. These are lifetime leases that will be terminated after the current lessees are gone. No authorized cabins or temporary structures are utilized for trapping or subsistence uses. The BLM cooperatively operates a fish-monitoring facility with ADF&G. This facility is located on private and State-owned lands approximately 1.5 miles up the main stem from the confluence with the West Fork. The facility consists of temporary scaffolding erected at two points in the river, white tarps on the bottom of the river, and a spotlight to conduct counting operations during the twilight hours. This facility provides important information for ADF&G to establish annual salmon escapement goals and is important for the enhancement of one of the outstandingly remarkable values on the river: fisheries.

Considerations:

- The State/BLM MOU of 1985 says “Construction of new cabins or temporary structures necessary for trapping, subsistence uses, or administrative purposes may be authorized subject to the provisions of Title XIII of ANILCA and a determination that the proposed use, construction and maintenance of such structures is compatible with NWSR values and approved river management plans.
- The 1985 MOU also states “In no case will authorization be granted for the construction of permanent structures for private or commercial use within NWSR corridors.”

Action 7.5: Permits or leases that require permanent facilities will not be granted. Permits or leases that require temporary facilities will be considered if it can be clearly demonstrated that the use of such facility enhances the outstandingly remarkable values of the river.

Action 7.6: Permits will not be issued for cabins used for recreational purposes. No new cabins will be permitted for subsistence trapping purposes. Existing cabins may be permitted if it can be clearly demonstrated that they are necessary for support of trapping operations.

ITEM 8: VISITOR MANAGEMENT

Issue: How will public recreational use of the wild river corridor be managed?

Situation: Although there have been annual fluctuations since 1983, the overall trend in visitor use on the river has been increasing use. Annual visitors per year jumped dramatically in the early 80s, then slowed to a steady increasing trend with annual fluctuations dependent on strength of the salmon run, weather and other factors.

The 1983 Gulkana River Management Plan called for determining the amount and type of use that the Gulkana River Management corridor could perpetually sustain without impairing its scenic and primitive character or causing unacceptable change to the experience of the user. Data now clearly shows that on some segments of the river, the current use levels are causing unacceptable change to the experience of the user and negatively impacting the natural and primitive character of the river. Impacts related to increased use levels include litter, human waste, heavy-use campsites, campsite encounters (camping within sight or sound of another group), on-river encounters between powerboats and floaters, and OHV use.

Considerations:

- Use of a national wild river must be managed to protect those values which caused the river to be designated a component of the National wild and Scenic Rivers system.
- BLM's manual for management of Wild and Scenic Rivers (8351), for a wild classification, says that recreation use including, but not limited to, hiking, fishing, and boating is encouraged in wild river areas to the extent consistent with the protection of the river environment. Public use and access may be regulated and distributed where necessary to protect and enhance wild river values.
- The 1985 MOU allows for carrying capacity determinations, saying that all studies will be developed in accord with approved river management plans and to the extent practical, all studies should be jointly undertaken.
- User surveys on the Gulkana indicated that users were most sensitive to camp encounters (camping within sight or sound of another camp) as an indicator of crowding. This is used as the key indicator for potentially limiting launches on the river.

Action 8.1: Implement the indicators, standards, management actions, and monitoring described below under this action item. If monitoring determines that standards are not being met, Phase I management actions will be implemented and monitoring will continue. Phase II management actions would include a permit system limiting launches per day out of Paxson, based on number of campsites available in the first days float. The following describes, by river segment, indicators, standards, management actions, and monitoring that would occur:

Camp encounters (during king season, 6/1 – 7/20): Upper River segment

Indicator Percent of nights on river within sight or sound of other campers.

Standard Less than 20% of nights.

Management
Action Phase I Develop a campsite map/river user's guide: a campsite map would be produced and would be made available for river users. This would enable users to determine where campsites are and avoid camp encounters or campsite sharing.

Voluntary camp reservation before launching: BLM would post a person at the launch site for the entire season to dispense educational information about the river. A campsite board would be available displaying campsites or areas corresponding with the sites on the map above. As parties launch, they would indicate their intended campsites on the board. This would give subsequent launchers an indication of available campsites. BLM would also obtain excellent information about use levels.

Campsite construction: BLM would assess the need for and possibly construct additional dispersed campsites at "bottleneck" areas such as the Middle Fork.

Information/education: A website would display expected use patterns, based on past historical use patterns. This would enable impact-sensitive visitors to avoid high-use days and may reduce campsite competition. The internet site would also include flow, no-trace camping, shuttle, and other useful information.

Management
Action Phase II Limit the number of trips launching per day: Implement a permit system for launches from Paxson. Based on current impact and campsite availability information, approximately 6 launches per day (including commercial operators) would meet the 20% camp encounter standard. Information from the Phase I system and monitoring would improve the precision of this estimate, and help adjust the number of launches per day if a permit system becomes necessary. A permit system would be developed through a public process consistent with existing laws, regulations, and policies and in cooperation with the State.

Camp encounters (after king season): Upper River segment

Indicator	Percent of nights on river within sight or sound of other campers.
Standard	Less than 10% of nights.
Management Action Phase I	Same as described above for king season.
Management Action Phase II	Same as described above for king season, but launches limited to 4 per day, with possible adjustment based on permit system information. Data shows that users are more solitude-seeking after king season and lower limits are accordingly expected.

Camp sharing: Sourdough segment

Indicator	Number of nights sharing campsite with another group.
Standard	Less than 5% of nights.
Management Action Phase I	Campsite map and information/education: These measures would be implemented as described above under Upper River camp encounters.
Management Action Phase II	Voluntary campsite reservation: Upriver users would have access to a campsite board at Sourdough where they could indicate which campsite they intend to use. This would assist other in trip planning. This board would be manned to maximize participation and minimize confusion. River users not staying out overnight would not need to use the board.
Management Action Phase III	Require permits from Sourdough based on number of campsites in segment. Implementation of this permit system similar to that described for Upper River, Phase II. Permits would be for overnights only launching out of Sourdough. Before moving from Phase II to Phase III, public involvement will occur.

Camp encounters: Middle Fork and Upper West Fork segments

Indicator	Percent of nights on river within sight or sound of other campers..
Standard	Less than 5% of nights.

Management Action Phase I Campsite map: A campsite map would be available to all overnight users to assist in trip planning and avoidance of camp encounters. Education/information: As described under Upper River camp encounters, a website would be available with use trends, average launches/day, flow levels, etc. to assist in trip planning.

Management Action Phase II Implement permit system for Middle Fork and Upper West Fork float trips. Estimate 1 launch per day based on campsites available in first day's float but this number could be adjusted based on information obtained from monitoring. Prior to implementing Phase II management actions, public involvement would occur.

Camp encounters (during king season, 6/1 – 7/20): Lower West Fork segment

Indicator Percent of nights on river within sight or sound of other campers.

Standard Less than 20% of nights.

Management Action Phase I Campsite map, voluntary campsite reservation, and information/education: These measures would be implemented as described above under Upper River camp encounters. Upriver users would have access to a campsite board at Sourdough where they could indicate which campsite they intend to use. This would assist others in trip planning. River users not staying out overnight would not need to use the board.

Camp encounters (after king season): Lower West Fork segment

Indicator Percent of nights on river within sight or sound of other campers.

Standard Less than 10% of nights.

Management Action Phase I Same as described above for king season.

Monitoring: Monitoring would be conducted through periodic on-river questionnaires available at launch sites and at Sourdough boat launch (take-out point for many float trips). Questionnaires would clearly define and tally camp encounters for users, which could then be expressed as a percentage. These values would be averaged per segment per season. Management actions will be phased in based on two consecutive years of non-compliance with standard.

**Table 5. Action 8.1 Visitor Management, Camp Encounters/Camp Sharing–
Summary**

River Segment	Indicator	Standard	Management Action, Phase I	Management Action, Phase II
Camp Encounters				
Upper River: King Season	Percent of nights on river within sight or sound of other campers	Less than 20% of nights	Develop a campsite map Voluntary camp reservation before launching Campsite construction at high-use areas Information and Education	Limit number of trips launching per day through a permit system for launches at Paxson Campground, 6 launches a day
Upper River: non-King Season		Less than 10% of nights	Same as described above for during King Season	Same as described above for during King Season, but with only 4 launches a day
Middle Fork and Upper West Fork		Less than 5% of nights	Develop a campsite map Information and Education	Permit system for Middle Fork and Upper West Fork floats, estimated 1 launch per day
Lower West Fork: King Season		Less than 20% of nights	Develop a campsite map Voluntary camp reservation before launch Information and Education	
Lower West Fork: non-King Season		Less than 10% of nights	Same as described above for King season	
Camp Sharing				
Sourdough	Number of nights sharing a campsite with another group	Less than 5% of the nights	Develop a campsite map Voluntary camp reservation before launching Information and Education	Require permits for those launching from Sourdough with plans for staying overnight based on campsites available.

Action 8.2: Litter was identified as a major impact on the river, an obvious sign of previous use, and detracts from the undeveloped and wild character of the river corridor. The following indicators, standards, and management actions were developed, by segment, for the river:

Litter: Upper River segment

Indicator Percentage of sites at which litter occurs. Sites are upland and gravel bar dispersed camp sites as identified by BLM mapping along the river. Currently there are 78 mapped sites on the Upper River segment.

Standard Less than 5% of sites have litter present.

Management Action Phase I Maintain existing crew patrols: Currently, BLM crews take an average of three trips a year, cleaning up litter and human waste, dispersing large or excess fire rings, and monitoring campsites.

Add river ranger Add river ranger and on-site education: In addition to the regularly scheduled crew trips, there would be a BLM river ranger based out of Paxson or Sourdough who would be responsible for public contacts on the river, encouraging Leave No Trace camping techniques. River ranger would spend most of the time on the river at launches, making contacts, doing clean-up, and getting information for possible enforcement if necessary.

Off-site Education: Currently there is a brochure with some Leave No Trace information available at the boat launches at Paxson and Sourdough and at the BLM office in Glennallen. There are informative kiosks at both boat launches. Phase I management actions include providing additional Leave No Trace information on a river website; the creation of a River User Guide, BLM contacts with large user group organizations such as military and Boy Scouts, and BLM cooperation or contracting Leave No Trace workshops with groups such as Copper River Watershed Project or Wrangell Institute for Science and Education.

Management Action Phase II Add one or more crew trips. One additional crew patrol would be added (4 per season) in addition to the river ranger position.

Litter: Sourdough segment

Indicator Percentage of sites at which litter occurs. Sites are upland and gravel bar dispersed camp sites as identified by BLM along the river. Currently there are 17 identifiable sites in this segment.

Standard Less than 10% of the sites have litter present.

Management Action Phase I Same as described under Phase I on the Upper River. River ranger as described under Phase I on the Upper River would take at least two upstream trips on the Sourdough segment during king season, camping within the segment and making contacts. Increase in education efforts would be as described under Phase I on the Upper River.

Management Action Phase II One additional crew trip would be added (4 per season) in addition to the river ranger activities. Education efforts would be maintained at Phase I levels.

Litter: Middle Fork segment

Indicator	Percentage of sites at which litter occurs. Dispersed campsites have been mapped on the Middle Fork. The majority of campsites occur at the mouth of Dickey Lake and where the Swede Lake trail accesses the Middle Fork. There are 10-15 sites on this segment.
Standard	Less than 5% of sites have litter present.
Management Action Phase I	Increase education, as discussed under Upper River and Sourdough segments.
Management Action Phase II	More patrols. BLM river crew or river ranger would make one trip down the Middle Fork per season for clean up. Education efforts as described in Phase I would be maintained.

Litter: Upper West Fork segment

Indicator	Percentage of sites at which litter occurs. At this time only two dispersed campsites are mapped on the North branch.
Standard	0% of sites have litter present.
Management Action Phase I	Increase education, as discussed under Upper River, Sourdough, and Middle Fork segments.
Management Action Phase II	More patrols. BLM recreation crew would make one trip down the West Fork per season for clean up, alternating years between the North branch and the South branch.

Litter: Lower West Fork segment

Indicator	Percentage of sites at which litter occurs. Sites are upland and gravel bar dispersed camp sites as identified by BLM mapping along this segment.
Standard	Less than 5% of sites have litter present.
Management Action Phase I	Increase education and patrols: BLM river ranger would take one upstream trip into this segment, cleaning up litter, human waste, monitoring campsites, and making contacts. Upstream trip would occur after 4th of July. In addition, crew float trips on the West Fork as described in Upper West Fork segment would occur for clean-up. Education efforts would take place as described in the Sourdough

and Upper River segments of the river.

Management Action Phase II Increase patrols: BLM river ranger would take one additional upstream trip into this segment for clean-up.

Monitoring: Monitoring will be conducted by river ranger or BLM clean up crews, by tallying number of sites visited and number of sites with litter present. Percentages for each trip will be averaged for the season. Management actions will be phased in if standard is exceeded for two consecutive years.

Table 6. Action 8.2 Visitor Management, Litter - Summary

River Segment	Indicator	Standard	Management Action, Phase I	Management Action, Phase II
Upper River	Percent of sites in which litter occurs	Less than 5% of sites have litter present	Maintain current crew patrols Add river ranger and on-site education Off-site education	Add one or more crew trips
Sourdough		Less than 10% of sites have litter present	Maintain current crew patrols Add river ranger and on-site education Off-site education	Add one or more crew trips
Middle Fork		Less than 5% of sites have litter present	Increased education	More crew patrols for clean up
Upper West Fork		0% of sites have litter present	Increased education	More crew patrols for clean up
Lower West Fork		Less than 5% of sites have litter present	Increased education and patrols by river ranger	Increased patrols by river ranger

Action 8.3: Human waste was identified as a major impact on the river, an obvious sign of previous use, and detracts from the undeveloped and wild character of the river corridor. The following indicators, standards, and management actions were developed, by segment, for the river:

Human Waste: Upper River segment

Indicator Percentage of sites that human waste (or associated tissue paper) is present. Number of sites are defined above.

Standard Human waste present at less than 5% of sites.

Management Action Phase I	<p>More patrols and education. See Phase I actions under Litter issue described above. An additional educational component would publicize the State statute that prohibits waste disposal along rivers; and proper disposal on the uplands. In addition, Upper River float guides are currently required to carry portable toilets or other human waste carry-out systems. This practice will continue. BLM crews and river ranger would also continue to carry human waste carry-out systems. A waste disposal and cleaning station has been constructed at Sourdough campground. Other users on the river will be encouraged to pack out human waste by example and by education.</p> <p>Outhouses: Maintain outhouses at Middle Fork site and at Canyon Rapids.</p>
Management Action Phase II	<p>Require all users to carry out human waste. Once monitoring shows standards are being met, remove outhouses at Middle Fork and Canyon Rapids.</p>

Human Waste: Sourdough segment

Indicator	<p>Percentage of sites that human waste (or associated tissue paper) is present.</p>
Standard	<p>Human waste present at less than 10% of sites.</p>
Management Action Phase I	<p>More patrols and education. See Phase I actions under Litter issue described above for this segment. Education component would emphasize State statute prohibiting disposal of human waste within the ordinary high water marks of the river (includes gravel bars). In addition, float and motorized guides on this segment would be required to carry portable toilets or other human waste carry-out systems. BLM crews and river ranger would also carry human waste carry-out systems. A waste disposal and cleaning station has been constructed at Sourdough campground. Other users on the river will be encouraged to pack out human waste by example and by education.</p> <p>Outhouses: Both outhouses at West Fork confluence will be maintained.</p>
Management Action Phase II	<p>Carry out human waste: All users would be required to pack out human waste.</p> <p>Outhouses: Maintain outhouses at West Fork.</p>

Management Action Phase III Outhouses: If monitoring shows standards being met, removal of outhouses on this segment would be considered.

Human Waste: Middle Fork and Upper West Fork segments

Indicator Percentage of sites at which human waste or associated tissue paper occurs.

Standard 0% of sites with human waste present.

Management Action Phase I Increase in education as described under Litter issue for Upper River and Sourdough segments. Middle Fork float guides would continue to carry portable toilets or other human waste carry-out systems. BLM crews and river ranger would also carry human waste carry-out systems. Other users on the river will be encouraged to pack out human waste by example and by education.

Management Action Phase II Require all users to carry portable toilets or other human waste carry-out systems. In addition, BLM recreation crew or river ranger would make one trip down the Middle Fork per season for clean-up and public contacts.

Human Waste: Lower West Fork segment

Indicator Percentage of sites that human waste (or associated tissue paper) is present.

Standard Human waste present at less than 5% of sites.

Management Action Phase I Increase education and patrols: See Phase I actions under Litter issue described above for this segment. In addition, float and motorized guides will continue to be required to pack out human waste. BLM crews and river ranger would also carry human waste carry-out systems.

Management Action Phase II All users will be required to pack out human waste.

Monitoring: Monitoring will be conducted by BLM clean-up crews, by tallying number of sites visited and those with visible human waste. Percentages for each trip will be averaged for the season. Management actions will be initiated if standard is exceeded for two consecutive years.

Table 7. Action 8.3 Visitor Management, Human Waste – Summary

River Segment	Indicator	Standard	Management Action, Phase I	Management Action, Phase II
Upper River	Percent of sites that human waste (or associated tissue paper) is present.	Less than 5% of sites have human waste present	Increased education and patrols Maintain outhouses at Middle Fork and Canyon Rapids	Requires all users to carry out human waste Remove outhouses once standards are being met.
Sourdough		Less than 10% of sites have human waste present	Increased education and patrols Maintain both outhouses at West Fork confluence	Requires all users to carry out human waste PHASE III: Remove outhouses if standards are being met
Middle Fork and Upper West Fork		0% of sites have human waste present	Increased education	Requires all users to carry out human waste, increased patrols for clean up and visitor contacts
Lower West Fork		Less than 5% of sites have human waste present	Increased education	Requires all users to carry out human waste

Action 8.4: Work cooperatively with the State of Alaska and stakeholders (both commercial and non-commercial) to develop indicators that measure quality of experience for commercial and non-commercial anglers and floaters and set standards for each. Subsequent management actions targeted at limiting guided activities on the river would be based on monitoring of these indicators and standards. Monitoring and data collection would begin once indicators and standards are developed.

Discussion: Present commercial river use is estimated to be less than 5 percent of existing use. However, commercial use on the river is increasing and survey data indicates that both commercial and non-commercial river users support some limit on commercial use.

Action 8.5: Competitive events in the wild river corridor generally will not be allowed, but may be considered by the Field Manager upon showing of no impact.

Discussion: Events of this nature are generally out of place in a primitive setting. Other rivers could be used for events of this nature.

ITEM 9: HISTORIC AND ARCHAEOLOGICAL RESOURCES

Issue: How will the historic and cultural resource values within the wild river corridor be identified and protected?

Situation: Cultural resources along the Gulkana River, which include historic cabins and archaeological sites, contribute to the natural, primitive character of the river that resulted in its designation as a Wild and Scenic River. The river's course is a paleo-

environmental cross section of the climate, geology and prehistory of the Copper River Basin.

Northwest of the Gulkana River's main stem and along the Middle Fork of the Gulkana, in the Tangle Lakes Archaeological District, there is ample evidence for early Holocene occupation of the area by hunter gatherers as early as 10,000 year Before Present (West et al 1996:381-386). Occupation in the Tangle Lakes spanned the entire Holocene, with a possible occupational hiatus between the Denali and Northern archaic aged occupations (West 1975). The Tangle Lakes Archaeological District (TLAD) alone contains over 500 archaeological sites clustered near the headwaters of both the Gulkana and Delta Rivers (Bowers 1989).

Beginning in summer of 2003 the BLM started a random sample and probabilistic archaeological survey of the entire river corridor. The first year's random sample surveys located two late prehistoric sites in the river's uplands. These random sample surveys suggest that there is a large amount of yet undiscovered prehistoric remains within the Gulkana River corridor that can shed light on several thousand years of missing prehistory in the Copper River Basin.

Considerations:

- Upland disturbances in the corridor are minimal. By far the biggest potential for cultural site disturbance is proliferation of OHV trails. Portions of the Gulkana National Wild River corridor within the TLAD have designated OHV trails, located to avoid cultural resources.
- Interpretation of the cultural resources of the wild river corridor will help to provide the public with an awareness of the importance of these resources and their susceptibility to damage. It will increase visitors' enjoyment of the river corridor.
- Protection and management of cultural resources will be consistent with the National Historic Preservation Act, the Antiquities Act, and the Archaeological Resource Protection Act.

Action 9.1: Surface disturbing projects within the wild river corridor will not be allowed without implementing the cultural resource protection actions as outlined in 36 CFR subpart 800.

Discussion: The National Historic Preservation Act of 1966 provides that cultural resources must be a "consideration". National Register status and Wild and Scenic River designation provide a cultural resource with protection. In this case consideration and protection can be accomplished by preventing disturbance of archeological sites at this planning level. Proposed surface disturbing activities will require cultural resource inventory throughout the corridor, and significant historic sites will be avoided or mitigated as appropriate.

Action 9.2: Provide cultural resource interpretation information at Paxson Lake Campground.

Discussion: Interpretation of cultural resources of the river corridor will help to provide the public with an awareness of the importance of these resources and of their susceptibility to damage. It will increase the enjoyment of visitors to this area.

ITEM 10: FIRE MANAGEMENT

Issue: How should fire be managed within the wild river corridor?

Situation: The Gulkana National Wild River corridor lies within the Copper Basin, an area dominated by boreal forest and wetlands. Because of the predominance of wetlands and active fire suppression, large-scale wildfires have not occurred in the area in the last 50 years.

In the Copper Basin (including the river corridor), fire management has been conducted by agreements executed on an interagency, landscape-scale basis since the early 1980s. This effort standardized policies and procedures among land managing agencies in Alaska. As a result, four wildland fire suppression management options (Critical, Full, Modified, and Limited) are utilized statewide by all Federal, State, and Native land managers.

Prescribed burning efforts in the area have focused on the Alphabet Hills (located between the Middle Fork and West Fork) with the objective to improve moose winter range. Early efforts through the 1980s and the 1990s failed to meet objectives, in part because of a very narrow burning window. In 2003, 5,000 acres were burned, and in 2004, 41,000 acres burned resulting in a mosaic pattern. Objectives were met in 2004, a year when wildfires burned more than 5 million acres in the state. The burn is visible from portions of the West Fork.

Considerations:

- The boreal forest is a fire-dependent ecosystem which has evolved in association with fire and will lose its character, vigor, and faunal and floral diversity if fire is totally excluded.
- Although fire has an essential ecological role, it also has potential for short-term water quality impacts, especially if fires are intense and burn close to the river edge.
- The long term effect of fire on scenery is primarily beneficial but its short term effect can be adverse in areas of high visual sensitivity.
- Prescribed burns play an important role in wildlife habitat management by providing browse on moose winter range.
- Many fires in Alaska are caused by people using open camp fires at times when fire danger is high, and by not extinguishing their camp fires when they leave.

Action 10.1: Fire suppression activities within the corridor are carried out under interagency agreement. The main stem of the Gulkana is currently classified as a modified suppression class, which provides flexibility in the selection of suppression strategies. When risks are high, the response is analogous to a Full suppression class;

when risks are low, the appropriate response is analogous to Limited. The goal of a modified suppression class is to balance acres burned with suppression costs and, when appropriate, to use wildland fire to accomplish land and resource objectives.

Discussion: The Middle and West Forks are classified as a limited suppression class, where wildland fire is used as a management tool to maintain, enhance, and improve ecological condition. Under this option, wildland fires will be allowed to burn under the influence of natural forces within predetermined areas, while human life and site-specific values continue to be protected. Suppression classes can be changed on an annual basis through interagency coordination and based on protection or enhancement of specific resource values.

Action 10.2: Prescribed burn plans within the Gulkana National Wild River corridor will address visual resource concerns consistent with management under a Visual Resource Management Class I. In order to protect visual resources and water quality, a vegetation buffer will be provided along the river. This will be accomplished by not lighting directly along the river and by burning within a prescription that allows for a mosaic of burned/unburned vegetation within the river corridor.

Action 10.3: Prohibit open fires within the river corridor during periods of extreme fire danger. Prohibitions will be coordinated with State Division of Forestry area-wide open-burning bans.

Discussion: Many fires in Alaska are caused by people using an open camp fire at times when fire danger is high. Prohibiting use of such fires during periods of extreme fire danger will reduce the possibility of wildfires.

ITEM 11: STATE AND PRIVATE LAND

Issue: How will State, Native, and other private lands adjacent to the wild river boundaries be affected by wild and scenic river management?

Situation: Private lands adjacent to or within the boundary of the river include:

- A five acre parcel on the river approximately 2 miles upriver from the confluence of the West Fork and the main stem. This acreage was and will continue to be cherry stemmed out of the corridor.
- A 0.6 acre parcel at the mouth of Paxson Lake. This acreage is what remains of a 4 acre parcel, 3.4 acres of which were acquired by BLM in 2003. This remaining 0.6 acres is adjacent to the corridor and will remain as such.
- A 4.85 acres parcel at the mouth of Paxson Lake. This acreage is adjacent to the corridor and will remain as such, unless a willing acquisition is made.
- A 4.9 acre parcel on a peninsula of Dickey Lake. This private land is situated on the shores of Dickey Lake, a navigable state waterway, so cherry-stemming was not necessary in 1983. It remains private land and will continue as such unless a willing acquisition is made. This acreage is not included in the total corridor acreage.

Acquisitions that resulted in conversion of private to federal public lands within or adjacent to the corridor are described in Part III, section D of this plan.

As described in Part III of this plan, the Gulkana is a navigable river; therefore, the BLM acknowledges the State's ownership between the ordinary high water marks, and this area is excluded from acreage determination.

The lower river portion of the Gulkana (below Sourdough) is not a part of the wild and scenic river system. Uplands are owned by Ahtna Corporation and the State owns and manages between the ordinary high water marks.

Considerations:

- If 50 percent or more of the entire acreage within the wild river corridor is publicly owned (it is in this case), the Federal government is not allowed to acquire fee title to any lands by condemnation (WSRA Section 6).
- ANILCA states that the Secretary may seek cooperative agreements with the owners of non-Federal land adjoining the river to assure that the purpose of designating the Gulkana River as a national wild river is served to the greatest extent feasible (ANILCA Section 605).
- The 1985 MOU with the State says "State lands, including the beds of navigable streams, are excluded from authorized boundaries of NWSR corridors. The management of these ownerships is, therefore, not directly subject to provisions of the WSRA. State land, however, shall be managed in accord with the provisions of this MOU."

Action 11.1: As described in Part III of this plan, the Gulkana is a navigable river; therefore, the BLM acknowledges the State's ownership between the ordinary high water marks. State-managed lands between the ordinary high water marks will be managed cooperatively by the State and BLM, consistent with the 1985 MOU between BLM and the State of Alaska on the management of the Gulkana National Wild River and surrounding area. BLM will continue to work with the State on implementation of specific action items described in this plan. Management actions that are designed to occur within the ordinary high water marks are BLM recommendations. If they are not adopted by the State in a Special Use Land Designation, they will remain as BLM recommendations.

Action 11.2: The Gulkana National Wild River corridor is an emphasis area for acquisition of adjacent private lands. BLM will be open to purchase of adjacent private lands by willing sellers, in order to prevent development and protect resource values. Acquisitions will be consistent with FLPMA and BLM's implementing regulations.

Action 11.3: For the parcels described in section III-D of this plan that have been acquired by BLM since 1983, BLM will pursue inclusion and the appropriate boundary adjustments necessary to include these in the Gulkana National Wild River corridor.

Action 11.4: Continue to lease two parcels for personal use. These two parcels are what remains as the resolution of the Burns T&M site described in section III-D of this plan. These are life-long leases and will terminate when the current lessees die.

Action 11.5: BLM will continue to coordinate with Ahtna Corporation and Gulkana Village on implementation of this plan and on management of ANCSA 17(b) easements in the Lower River portion, outside of the Gulkana National Wild River corridor.

ITEM 12: BIOTIC RESOURCES

Issue: How will the biotic resources within the wild river corridor be managed to ensure that these values are protected for the benefit and enjoyment of present and future generations?

Situation: The Gulkana River corridor supports over 30 species of mammals and approximately 60 species of birds, occupying different habitat types within the watershed. Wildlife along the Gulkana River corridor enhances the recreational visitor experience, is essential to subsistence, hunting and trapping efforts, and is significant for the diversity which it provides to the ecosystem. The Gulkana River watershed is considered representative of an Alaskan interior ecosystem and is typified by species of animals that require a seasonally distinct mosaic of habitats. Trumpeter swans nest and rear their young in many of the lakes within the river corridor. Many active bald eagle nests are located within the wild river boundaries. Bald eagle nesting surveys have been conducted along the Gulkana River for over twenty years now and have provided valuable information to biologists. Through these surveys, BLM has determined that nearly 100 nesting territories exist within the Gulkana River drainage; actual nest occupancy rates varying from year to year depending on various climatic conditions and biological situations.

The high quality of the fish habitat of the Gulkana River is a basic factor contributing to the productivity of the river's fisheries. The river drainage contains a good mixture of gravelly riffles for spawning, rocky-bottom runs for summer grayling habitat, deep water areas for overwintering, pools and backwaters for king salmon rearing, and lakes for red salmon rearing. The salmon run on the river provides important subsistence, sport fishing, and economic benefits. Increasing use in the corridor requires more intensive management to ensure that top quality fisheries habitat is maintained or enhanced.

Considerations:

- Research conducted on the Gulkana from 1989 to 1993 showed that human activity (particularly camping) near nests altered breeding behavior in bald eagles.
- The Bald Eagle Protection Act of 1940 protects eagles and their nests and eggs from disturbance.
- Human disturbances (powerboats, airboats, frequent passage by rafts or canoes, frequent landings by float planes) at or near the headwaters of the West Fork Gulkana River may disturb nesting trumpeter swans.

- Recently completed prescribed burning in the Alphabet Hills was conducted to improve moose winter range by increasing vigor and productivity of willows.
- Unmanaged proliferation of OHV trails, unauthorized OHV crossings, soil compaction and erosion at heavy-use campsites, improper disposal of human waste, and emissions from 2-stroke powerboat engines all have potential to negatively impact fish habitat or water quality.
- Perceived or potential impacts to fish populations through sport fishing, commercial or subsistence harvest are managed through regulation by ADF&G.

Action 12.1: Protect raptors (particularly bald eagles), raptor eggs, nest trees, and eyries from destruction or harassment. Dispersed campsites within ¼ mile of active bald eagle nests will be seasonally closed through posting of information at launch sites and at the specific campsite. Location of active nests will be determined by annual bald eagle productivity surveys.

Action 12.2: Protect existing waterfowl breeding, nesting, brooding and molting habitat.

Discussion: Lesser Canada geese, trumpeter swans, and other waterfowl nest along the Gulkana river system and on many of the lakes and potholes within the wild river boundaries. Withdrawals associated with the ANILCA designation of the river provide protection against mineral exploration or development. Habitat degradation from indiscriminate OHV use will be curtailed by designation of specific trails.

Action 12.4: In order to minimize vegetation disturbance, trampling, and soil compaction, existing dispersed campsites will be monitored, rested, or rehabilitated as described under Action Item 7.3.

Action 12.5: Fisheries habitat will be protected through measures described under Items 1 (Surface Transportation), Item 5 (Water Quality), Item 7 (Facilities), and Item 10 (Fire Management). These management actions minimize impacts to fisheries habitat from OHV use, dispersed campsites, prescribed fire, and permitted activities.

Action 12.6: Continue providing education on bear safety and Leave No Trace camping techniques in order to prevent negative bear/human encounters on the river. Consider interpretive panel at Paxson regarding bear safety.

Monitoring: The following monitoring will be conducted:

- Continue bald eagle productivity surveys. These are a continued measure of bald eagle nesting and fledgling success rates on the river system over time.
- Continue cooperation with USFWS on conducting trumpeter swan census flights.
- Continue cooperation with ADF&G on monitoring of fish populations, escapement, or habitat.
- Continue monitoring of campsites and impacts associated with these sites.

ITEM 13: SCENIC QUALITY

Issue: How will the scenic quality of the landscape within or adjacent to the wild river corridor be protected?

Situation: The Gulkana River flows through an area where the natural scenic character shows only isolated evidence of man's activity. It offers many aspects of nature; wildflowers, a variety of birds and animals, and occasionally views of spectacular mountains and glaciers in the distance.

Considerations:

- The Wild and Scenic Rivers Act states that the wild river corridor should be essentially undisturbed by man and accessible only by trail (WSRA Section 2).
- Management activities that could adversely affect visual resources in this remote setting include construction of recreational or other facilities, electrical transmission lines or pipelines, personal use harvest of timber for firewood or houselogs, OHV trails, and wildland or prescribed fire.

Action 13.1: The Gulkana National Wild River corridor will be managed under a Class I Visual Resource Management class, with an objective to preserve the existing character of the landscape. The level of change to the characteristic landscape should be very low and must not attract attention. The following management considerations will be applied:

- *Designated OHV routes will be maintained to minimize impacts to the viewshed from the river. OHVs will be encouraged to park out of sight of the river.*
- *Mineral exploration and development is prohibited based on withdrawals associated with the ANILCA designation of the river.*
- *Prescribed fires will be conducted under a prescription that results in a mosaic burn pattern and provides a buffer along the river's edge.*
- *Subsistence firewood and houselog gathering will not be conducted in a manner that leaves stumps or slash visible from the river.*
- *Dispersed campsites will be managed to minimize visual impacts (utilize vegetation screening, manage to minimize bare ground and soil compaction).*
- *Outhouses will be placed out of sight of the river and other recreation facilities along the river will be as visually unobtrusive as possible.*

ITEM 14: PIPELINE AND ELECTRICAL TRANSMISSION

Issue: Will pipelines or electrical transmission facilities be permitted within the wild river corridor?

Situation: The Trans-Alaska oil pipeline, which was completed in 1977, crosses the Gulkana River on an elevated bridge approximately one-half mile upriver from Sourdough Campground. The pipeline runs within the corridor for a distance of approximately 1 mile. Maintenance activities associated with the pipeline require

access via the road mentioned under Item 1, helicopter, and occasionally powerboat and airboat. Alyeska, the company responsible for pipeline maintenance, periodically conducts spill response drills, staging activity out of Sourdough campground and boat launch.

Considerations:

- In accordance with the provisions of the Wild and Scenic Rivers Act (WSRA) and Title XI of ANILCA, new utility systems may be permitted within NWSR corridors. This includes items such as electric transmission lines and other systems of general transportation and utility transmission. ANILCA sections 1104 and 1105 provide applicable standards for granting such authorizations
- New pipeline/utility corridors would detract from the primitive and scenic qualities of the river corridor.

Action 14.1: New pipelines and electrical transmission lines will not be permitted within or across the wild river corridor unless conditions of ANILCA Section 1105 and the WSRA are met.

Discussion: Before any such utility line will be authorized, a determination must first be made that it would be compatible with the purposes for which the national wild river was established, and that there is no economically feasible and prudent alternate route or location (ANILCA 1105, WSRA).

ITEM 15: NAVIGABILITY

Situation: Navigability has been determined on the Gulkana. Consequently, this issue has been addressed in Item 11, State and Private lands, under Action Item 11.1 which provides for cooperative management with the State.

ITEM 16: HEADWATERS OF THE SOUTH BRANCH OF THE WEST FORK

Issue: How should the 15 miles of floatable water upstream of the designated portion of the south branch of the West Fork Gulkana River be managed?

Situation: It has been established through field investigation that the start of the designated river corridor on the south branch of the West Fork Gulkana River is not the actual start of the floatable section of this river. The south branch of the West Fork can actually be floated from two separate lakes 15 miles upstream from the lake identified as the start of the river corridor. This 15-mile segment upstream of the start of the designated wild river corridor contains the wildest stretch of river on the entire Gulkana River system. There are no roads, trails, or privately owned lands along this stretch of the river. This segment shares the same outstandingly remarkable values as identified for the designated corridor.

Considerations:

- This area (approximately 9,000 acres along the 15-mile stretch) is currently selected by the State.
- The State Department of Natural Resources, in its 1985 Susitna Area Plan, states “Among the management objectives for this area is the protection of the popular wilderness canoe trip from the Lake Louise area into the Gulkana.”
- The draft East Alaska Resource Management Plan/Environmental Impact Statement, in the preferred alternative, identifies this area as eligible for inclusion in the Wild and Scenic River system.

Action 17.1: The 1983 Gulkana River Management Plan recommended inclusion of this segment of the river in the Wild and Scenic River system. Uplands surrounding this segment of river are State-selected. If State-selected lands in the area are conveyed to the State, this area will be managed consistent with DNR’s 1985 Copper Basin Area Plan, which recognizes the wild and undeveloped character of the area and protection of trumpeter swan habitat. If these lands remain in federal management, the BLM will pursue inclusion of this area as part of the National Wild and Scenic River system.

ITEM 18: WATER RIGHTS

Situation: The 1983 Gulkana River Management Plan state that “a reservation of minimum water flows sufficient for public recreation and to support the values for which the area was designated will be determined in cooperation with the Alaska Department of Natural Resources, Division of Land and Water Management.” These flow-dependent resource values were identified in the 1990 publication *Resource Values and Instream Flow Recommendations, Gulkana National Wild River, Alaska* (Van Haveren et al, 1990). Those values were identified as primarily fisheries habitat and recreation. Based on findings in this report, BLM filed for instream flow water rights with the State of Alaska to protect those resource values.

Recently, flow quantities filed for were updated (increased) based on up-dated data obtained from several flow-monitoring points on the river. The application has been re-filed with the State.

Considerations:

- The jurisdiction of the State over waters within the river corridor may be exercised only to the extent that such jurisdiction does not impair the purposes for which the national WSR was established (WSRA Section 13).
- Reservations on available surface water have the potential to reduce the quantity of water for recreation and other purposes.

Action 18.1: A reservation of minimum water flows sufficient for public recreation and to support the values for which the area was designated has been filed for with the Alaska Department of Natural Resource, Division of Land and Water Management. BLM will continue to track this filing.

PART V: LEGAL DESCRIPTION

The legal description are based on the unsurveyed 1 inch = 1 mile scale boundary maps displayed in Part VI of this river management plan revision. In case of discrepancy, these maps will control.

Lands included within wild river boundaries. No land within the Gulkana National Wild and Scenic River Corridor is classified as scenic or recreational.

Township 9 N., Range 2 W.	Unsurveyed
Section 4	All
Section 5	E $\frac{1}{2}$, SW $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$
Section 6	S $\frac{1}{2}$, S $\frac{1}{2}$ NW $\frac{1}{4}$
Section 7	N $\frac{1}{2}$, SE $\frac{1}{4}$
Section 8	All
Section 9	All
Section 10	S $\frac{1}{2}$, S $\frac{1}{2}$ N $\frac{1}{2}$
Section 11	SW $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$
Section 13	W $\frac{1}{2}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$
Section 14	S $\frac{1}{2}$, NW $\frac{1}{4}$, S $\frac{1}{2}$ NE $\frac{1}{4}$
Section 15	All
Section 16	N $\frac{1}{2}$, N $\frac{1}{2}$ S $\frac{1}{2}$
Section 17	NE $\frac{1}{4}$, N $\frac{1}{2}$ NW $\frac{1}{4}$
Section 22	NE $\frac{1}{4}$
Section 23	All
Section 24	W $\frac{1}{2}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$
Section 25	NW $\frac{1}{4}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$ excluding land to the east of the east bank meandering line on the Gulkana River
Section 26	All
Section 35	N $\frac{1}{2}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$ NW $\frac{1}{4}$
Section 36	NW $\frac{1}{4}$ NW $\frac{1}{4}$ excluding land to the east of the east bank meandering line on the Gulkana River
Township 9 N., Range 3 W.	Unsurveyed
Section 1	S $\frac{1}{2}$, S $\frac{1}{2}$ N $\frac{1}{2}$
Section 2	S $\frac{1}{2}$, S $\frac{1}{2}$ N $\frac{1}{2}$
Section 3	All
Section 4	All
Section 5	All
Section 6	All
Section 7	All
Section 8	N $\frac{1}{2}$

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Section 9	N $\frac{1}{2}$ N $\frac{1}{2}$
Section 10	N $\frac{1}{2}$
Section 11	N $\frac{1}{2}$
Section 12	N $\frac{1}{2}$
Township 9 N., Range 4 W.	Unsurveyed
Section 1	All
Section 12	N $\frac{1}{2}$ N $\frac{1}{2}$
Township 10 N., Range 2 W.	Unsurveyed
Section 5	W $\frac{1}{2}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$
Section 6	N $\frac{1}{2}$, N $\frac{1}{2}$ S $\frac{1}{2}$
Section 19	W $\frac{1}{2}$
Section 28	S $\frac{1}{2}$
Section 29	All
Section 30	All
Section 31	N $\frac{1}{2}$
Section 32	N $\frac{1}{2}$, SE $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$
Section 33	All, excluding 5 acres patented land
Township 10 N., Range 3 W.	Unsurveyed
Section 1	All
Section 2	E $\frac{1}{2}$, SE $\frac{1}{4}$
Section 11	All
Section 12	NW $\frac{1}{4}$
Section 13	W $\frac{1}{2}$
Section 14	All
Section 23	N $\frac{1}{2}$, SE $\frac{1}{4}$
Section 24	All
Section 25	N $\frac{1}{2}$, SE $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$
Section 31	All
Section 32	All
Section 33	S $\frac{1}{2}$
Section 34	SW $\frac{1}{4}$
Township 10 N., Range 4 W.	Unsurveyed
Section 7	S $\frac{1}{2}$ S $\frac{1}{2}$
Section 16	SW $\frac{1}{4}$
Section 17	S $\frac{1}{2}$, NW $\frac{1}{4}$
Section 18	All
Section 19	N $\frac{1}{2}$, SE $\frac{1}{4}$
Section 20	All
Section 21	All
Section 22	S $\frac{1}{2}$, NW $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$
Section 25	S $\frac{1}{2}$, S $\frac{1}{2}$ N $\frac{1}{2}$
Section 26	All

Section 27 All
 Section 28 N $\frac{1}{2}$, N $\frac{1}{2}$ SE $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$
 Section 29 N $\frac{1}{2}$ N $\frac{1}{2}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$
 Section 34 NE $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$
 Section 35 N $\frac{1}{2}$, N $\frac{1}{2}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$
 Section 36 All

Township 10 N., Range 5 W. Unsurveyed
 Section 7 S $\frac{1}{2}$, S $\frac{1}{2}$
 Section 9 S $\frac{1}{2}$ SE $\frac{1}{4}$
 Section 10 SE $\frac{1}{4}$, S $\frac{1}{2}$ SW $\frac{1}{4}$
 Section 11 S $\frac{1}{2}$
 Section 12 S $\frac{1}{2}$
 Section 13 All
 Section 14 All
 Section 15 All
 Section 16 All
 Section 17 All
 Section 18 N $\frac{1}{2}$, SE $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$
 Section 20 N $\frac{1}{2}$ NE $\frac{1}{4}$
 Section 21 N $\frac{1}{2}$ N $\frac{1}{2}$
 Section 22 N $\frac{1}{2}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ NE $\frac{1}{4}$
 Section 24 N $\frac{1}{2}$

Township 10 N., Range 6 W. Unsurveyed
 Section 1 All
 Section 2 All
 Section 3 NE $\frac{1}{4}$
 Section 7 All
 Section 8 All
 Section 9 All
 Section 10 All
 Section 11 All
 Section 12 All
 Section 13 N $\frac{1}{2}$
 Section 14 N $\frac{1}{2}$
 Section 15 N $\frac{1}{2}$
 Section 16 N $\frac{1}{2}$
 Section 17 NE $\frac{1}{4}$, N $\frac{1}{2}$ NW $\frac{1}{4}$
 Section 18 N $\frac{1}{2}$ N $\frac{1}{2}$

Township 10 N., Range 7 W. Unsurveyed
 Section 11 All
 Section 12 All
 Section 13 N $\frac{1}{2}$ N $\frac{1}{2}$
 Section 14 N $\frac{1}{2}$ N $\frac{1}{2}$

Township 11 N., Range 2 W. Unsurveyed
 Section 3 All
 Section 4 All
 Section 5 E $\frac{1}{2}$, E $\frac{1}{2}$ W $\frac{1}{2}$
 Section 8 NE $\frac{1}{4}$ NE $\frac{1}{4}$
 Section 9 E $\frac{1}{2}$, E $\frac{1}{2}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ NW $\frac{1}{4}$
 Section 10 All
 Section 11 SW $\frac{1}{4}$
 Section 14 W $\frac{1}{2}$
 Section 15 All
 Section 16 E $\frac{1}{2}$ E $\frac{1}{2}$
 Section 21 E $\frac{1}{2}$, S $\frac{1}{2}$ SW $\frac{1}{4}$
 Section 22 All
 Section 23 W $\frac{1}{2}$
 Section 27 All
 Section 28 All
 Section 29 E $\frac{1}{2}$, SW $\frac{1}{4}$
 Section 30 S $\frac{1}{2}$ S $\frac{1}{2}$
 Section 31 All
 Section 32 All
 Section 33 N $\frac{1}{2}$ N $\frac{1}{2}$
 Section 34 N $\frac{1}{2}$ N $\frac{1}{2}$

Township 11 N., Range 3 W. Unsurveyed
 Section 36 S $\frac{1}{2}$, NE $\frac{1}{4}$

Township 11 N., Range 6 W. Unsurveyed
 Section 17 S $\frac{1}{2}$ SW $\frac{1}{4}$
 Section 18 SW $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$
 Section 19 N $\frac{1}{2}$, SE $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$
 Section 20 All
 Section 21 S $\frac{1}{2}$, S $\frac{1}{2}$ N $\frac{1}{2}$
 Section 22 S $\frac{1}{2}$, S $\frac{1}{2}$ NW $\frac{1}{4}$
 Section 23 SW $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$
 Section 26 W $\frac{1}{2}$, W $\frac{1}{2}$ E $\frac{1}{2}$
 Section 27 All
 Section 28 NE $\frac{1}{4}$, N $\frac{1}{2}$ NW $\frac{1}{4}$
 Section 29 N $\frac{1}{2}$ N $\frac{1}{2}$
 Section 30 NE $\frac{1}{4}$ NE $\frac{1}{4}$
 Section 34 E $\frac{1}{2}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$
 Section 35 All
 Section 36 SW $\frac{1}{4}$

Township 11 N., Range 7 W.	Unsurveyed
Section 7	S $\frac{1}{2}$
Section 8	S $\frac{1}{2}$ S $\frac{1}{2}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$
Section 9	S $\frac{1}{2}$ S $\frac{1}{2}$
Section 10	S $\frac{1}{2}$ S $\frac{1}{2}$
Section 11	S $\frac{1}{2}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$
Section 13	All
Section 14	All
Section 15	All
Section 16	All
Section 17	All
Section 18	All
Section 23	N $\frac{1}{2}$ N $\frac{1}{2}$
Section 24	NE $\frac{1}{4}$, N $\frac{1}{2}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$
Township 11 N., Range 8 W.	Unsurveyed
Section 10	SE $\frac{1}{4}$, S $\frac{1}{2}$ NE $\frac{1}{4}$
Section 11	S $\frac{1}{2}$, S $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$
Section 12	S $\frac{1}{2}$
Section 13	All
Section 14	N $\frac{1}{2}$, SE $\frac{1}{4}$
Section 15	N $\frac{1}{2}$ NE $\frac{1}{4}$
Section 23	NE $\frac{1}{4}$
Section 24	NW $\frac{1}{4}$
Township 12 N., Range 2 W.	Unsurveyed
Section 4	E $\frac{1}{2}$
Section 5	All
Section 6	All
Section 7	All
Section 8	W $\frac{1}{2}$, N $\frac{1}{2}$ NE $\frac{1}{4}$
Section 9	N $\frac{1}{2}$ NW $\frac{1}{4}$
Section 17	W $\frac{1}{2}$
Section 18	N $\frac{1}{2}$, SE $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$
Section 19	E $\frac{1}{2}$
Section 20	All
Section 21	W $\frac{1}{2}$ W $\frac{1}{2}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$
Section 28	W $\frac{1}{2}$
Section 29	All
Section 30	E $\frac{1}{2}$
Section 31	E $\frac{1}{2}$
Section 32	All
Section 33	All

Township 12 N., Range 3 W.	Unsurveyed
Section 1	All
Section 2	E $\frac{1}{2}$, NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$
Section 3	N $\frac{1}{2}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$
Section 12	N $\frac{1}{2}$, N $\frac{1}{2}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$
Section 13	E $\frac{1}{2}$ NE $\frac{1}{4}$
Township 13 N., Range 2 W.	Unsurveyed
Section 31	S $\frac{1}{2}$ S $\frac{1}{2}$
Section 32	S $\frac{1}{2}$ S $\frac{1}{2}$
Section 33	S $\frac{1}{2}$ SW $\frac{1}{4}$ excluding 1.6 acres patented land
Township 13 N., Range 3 W.	Unsurveyed
Section 17	SW $\frac{1}{4}$
Section 18	S $\frac{1}{2}$
Section 19	All
Section 20	S $\frac{1}{2}$, NW $\frac{1}{4}$
Section 21	SW $\frac{1}{4}$, S $\frac{1}{2}$ NE $\frac{1}{4}$
Section 25	SW $\frac{1}{4}$ SW $\frac{1}{4}$
Section 26	S $\frac{1}{2}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ NW $\frac{1}{4}$
Section 27	All
Section 28	All
Section 29	All
Section 30	N $\frac{1}{2}$
Section 32	N $\frac{1}{2}$ N $\frac{1}{2}$
Section 33	N $\frac{1}{2}$, N $\frac{1}{2}$ S $\frac{1}{2}$
Section 34	N $\frac{1}{2}$, SE $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$
Section 35	All
Section 36	All
Township 13 N., Range 4 W.	Unsurveyed
Section 2	SW $\frac{1}{4}$ SE $\frac{1}{4}$, S $\frac{1}{2}$ SW $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$
Section 3	S $\frac{1}{2}$, S $\frac{1}{2}$ NW $\frac{1}{4}$
Section 4	S $\frac{1}{2}$, NW $\frac{1}{4}$, W $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$
Section 5	All
Section 6	All
Section 9	N $\frac{1}{2}$
Section 10	All
Section 11	All
Section 12	SW $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ NW $\frac{1}{4}$
Section 13	All
Section 14	N $\frac{1}{2}$, SE $\frac{1}{4}$
Section 24	N $\frac{1}{2}$

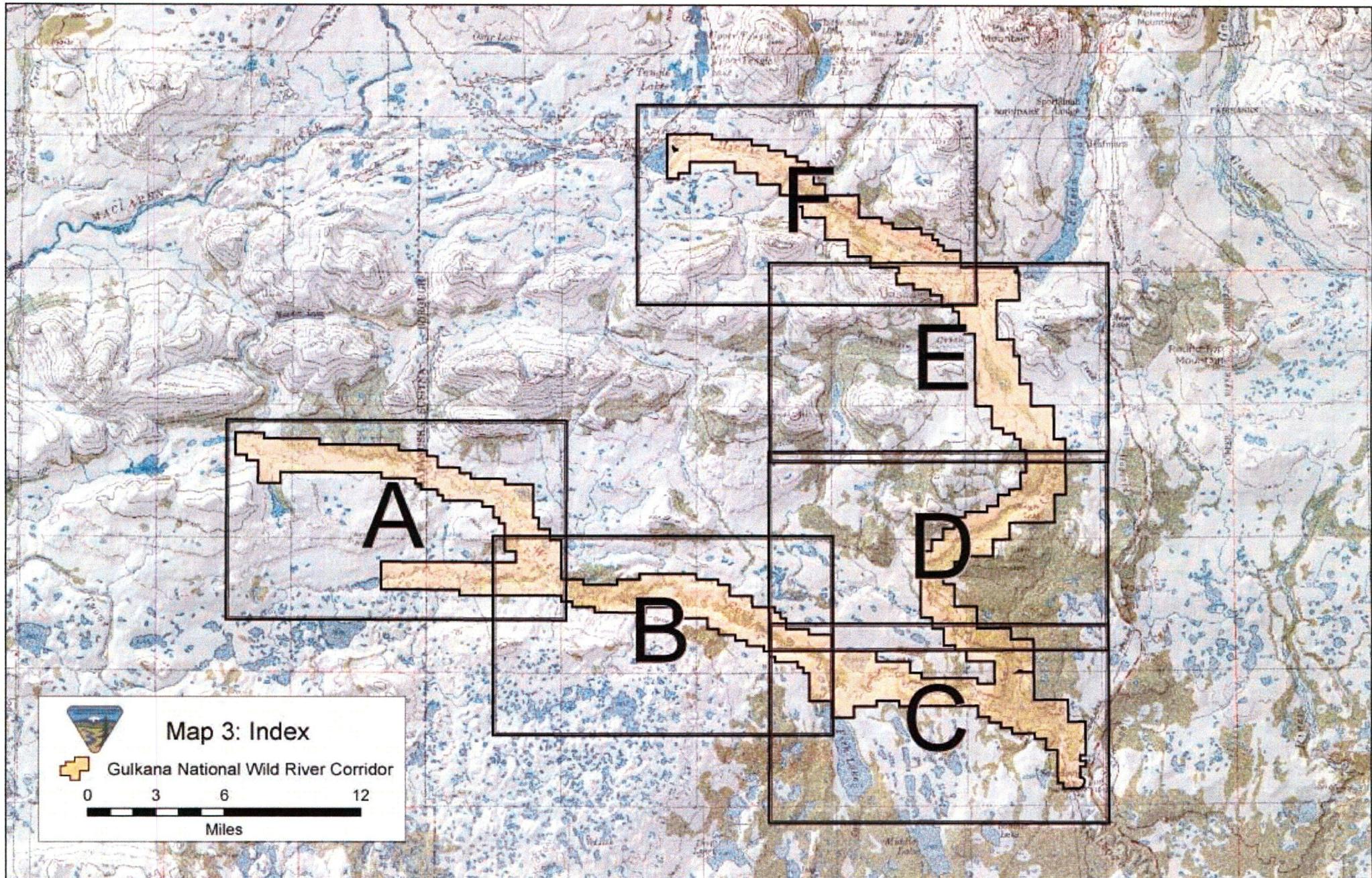
Township 13 N., Range 5 W. Section 1 Section 12	Unsurveyed All excluding 1 acre patented land N $\frac{1}{2}$, N $\frac{1}{2}$ SW $\frac{1}{4}$
Township 14 N., Range 4 W. Section 31	Unsurveyed S $\frac{1}{2}$ S $\frac{1}{2}$
Township 14 N., Range 5 W. Section 36	Unsurveyed S $\frac{1}{2}$ S $\frac{1}{2}$

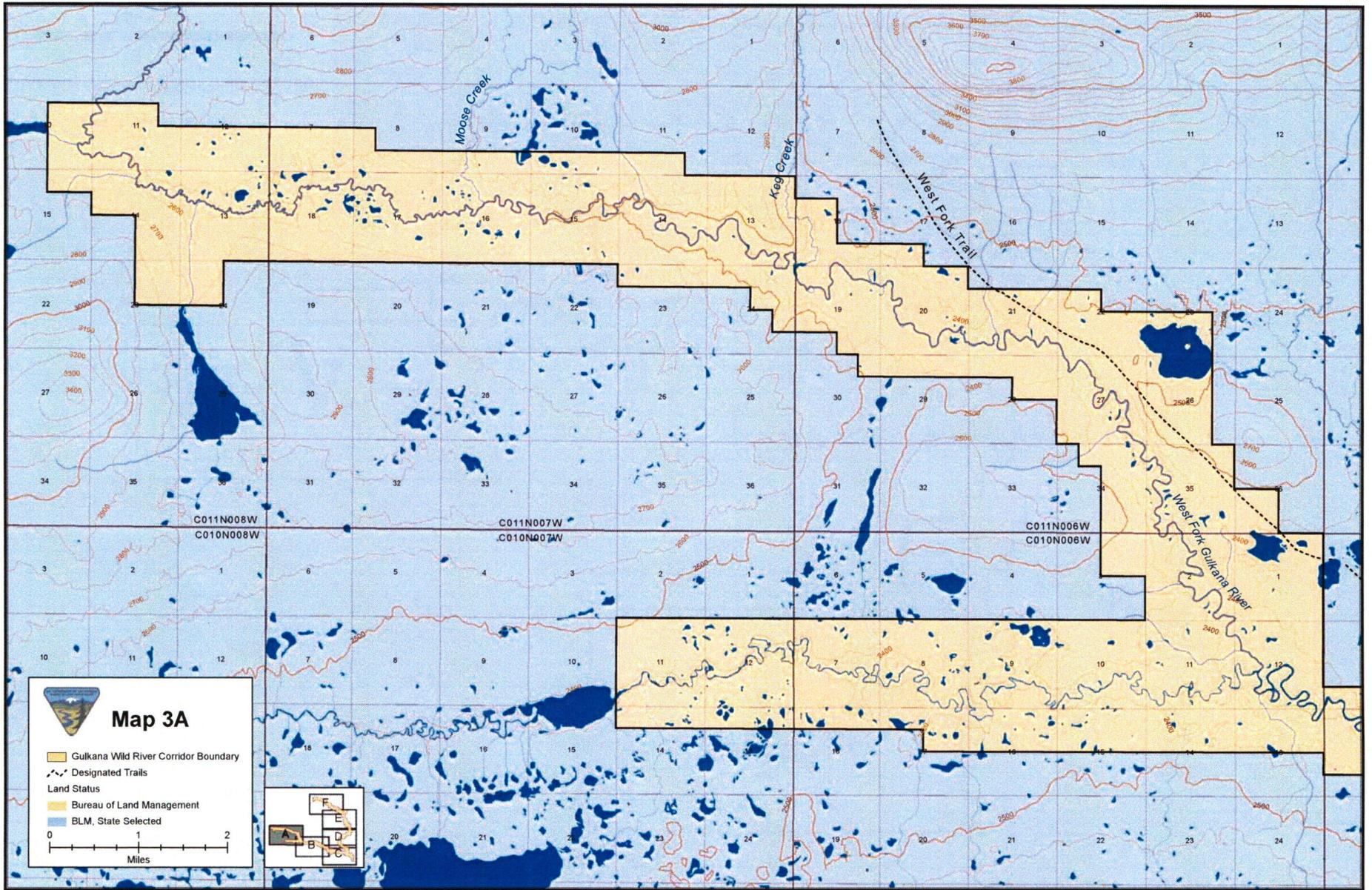
The area described, excluding areas between ordinary high water marks for designated streams, contains approximately 91,000 acres subject to adjustment to lines of public land surveys.

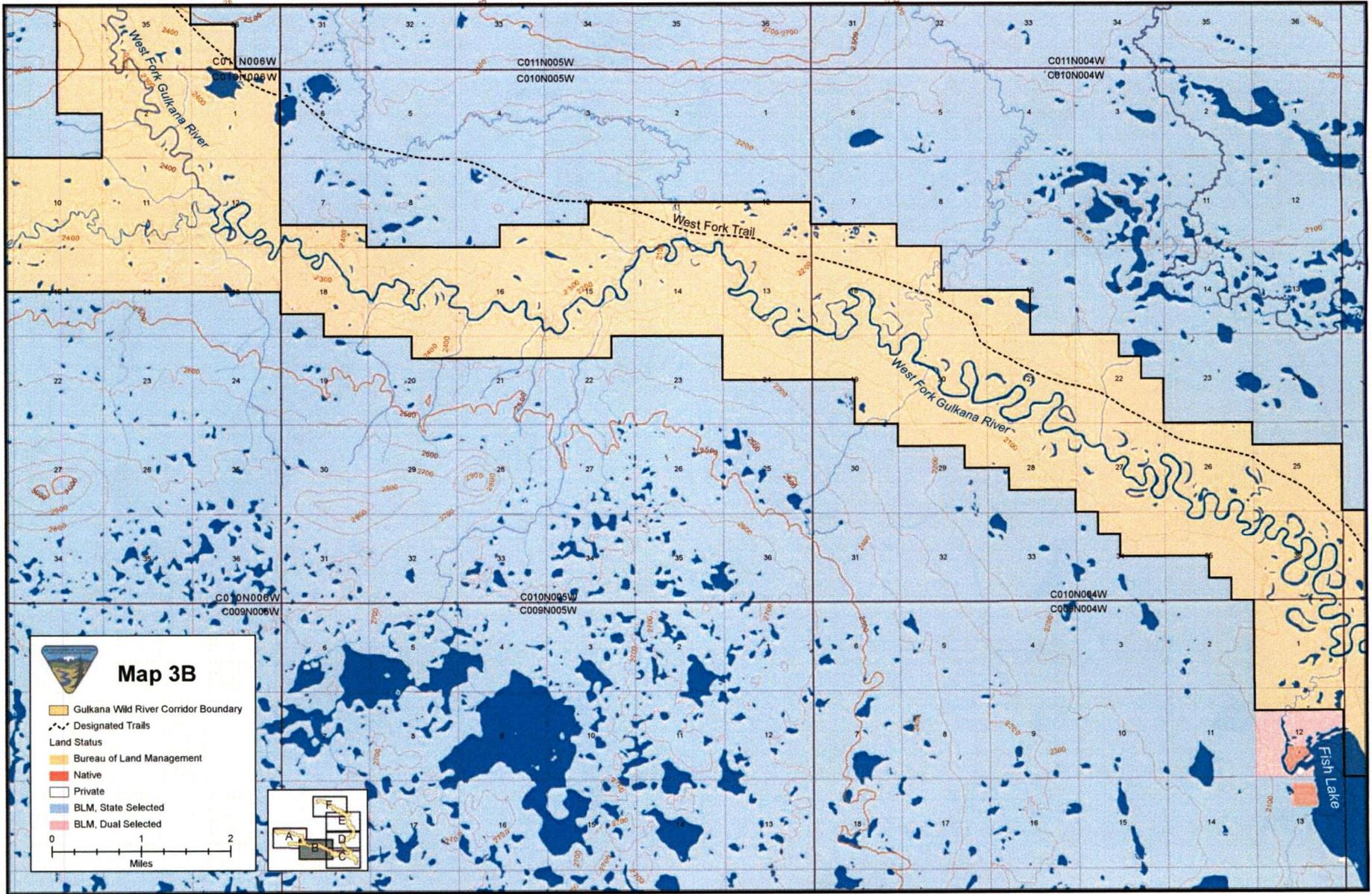
PART VI: RIVER MAPS

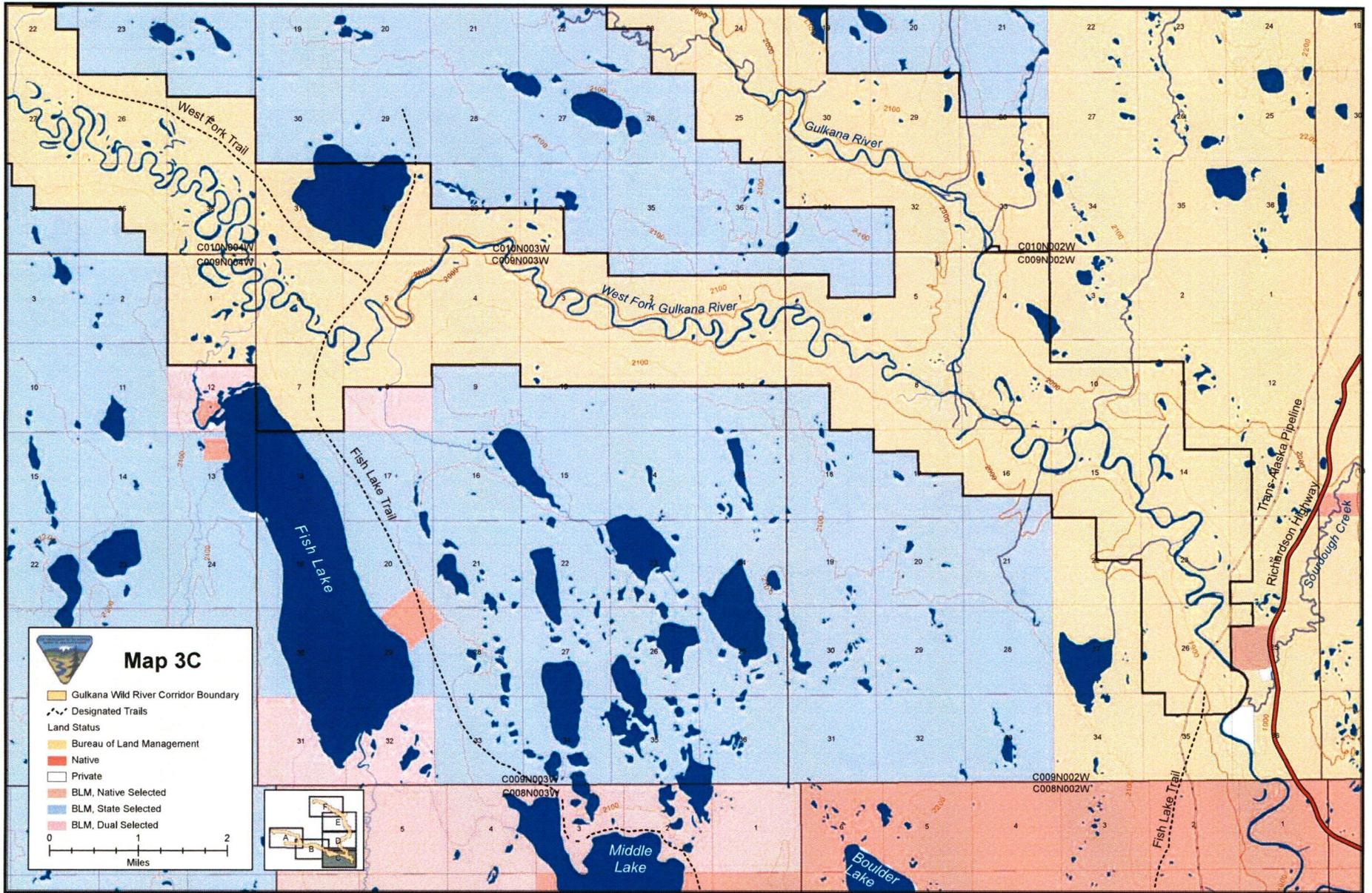
All land status and boundaries displayed on the following maps were produced using the most accurate information available as of July 2006. Great care has been taken to ensure that the information represented is as accurate and complete as possible at the time of compilation. However, the information displayed is intended for graphic representation only. For official land status, refer to legal case-files and plats.

Map 3 is the Index for which portion of the Gulkana National Wild and Scenic River Corridor is shown on subsequent Maps 3a through 3f.





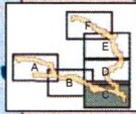


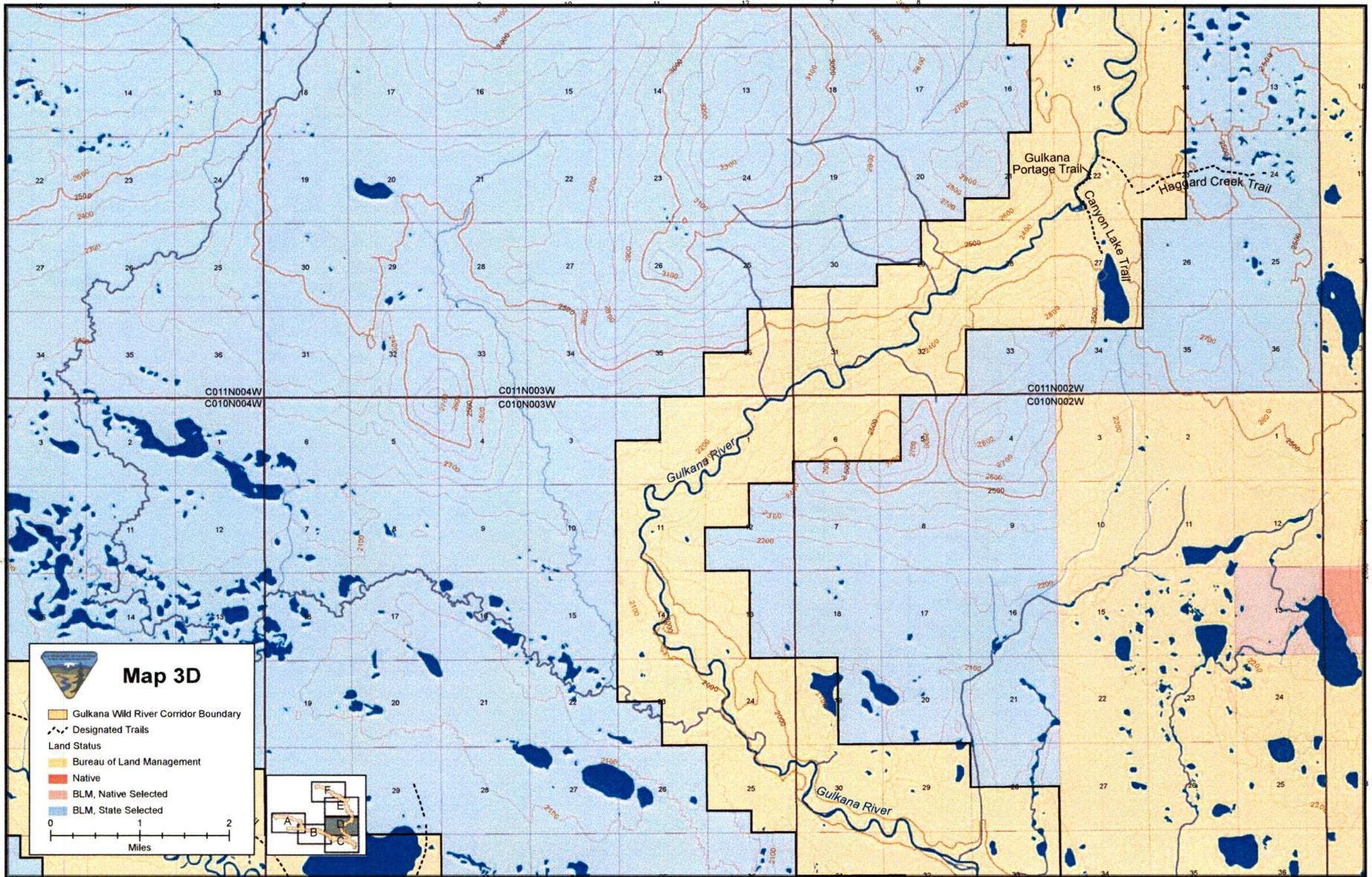


Map 3C

- Gulkana Wild River Corridor Boundary
- Designated Trails
- Land Status**
- Bureau of Land Management
- Native
- Private
- BLM, Native Selected
- BLM, State Selected
- BLM, Dual Selected

0 1 2
Miles





Map 3D

- Gulkana Wild River Corridor Boundary
- Designated Trails
- Land Status
- Bureau of Land Management
- Native
- BLM, Native Selected
- BLM, State Selected

0 1 2
Miles

