# Chapter 3: Management Guidelines, Recommendations, and Public Use Sites for Each Management Unit

| Introduction                             | 1  |
|--|----|
| Map 3-1: Management Units                | 3  |
| Unit A – Lower Knik Flats                |    |
| Map 3-2: Proposed Waterbody Restrictions | 11 |
| Unit B – Lakes and Wetlands              |    |
| Unit C – Upper Knik Flats                | 19 |
| Unit D – Upper Jim Alpine                |    |
| Unit E – Upper Friday Alpine             |    |
| Unit F – Grasshopper Valley              |    |
| Unit G – Glacier                         |    |
| Unit H – Metal Creek                     | 35 |

## Chapter 3: Management Guidelines, Recommendations, and Public Use Sites for each Management Unit

## Introduction

The PUA consists of approximately 208,261 acres of state land. The state land has been subdivided into eight management units. Map 3-1 depicts the management units for the PUA. Management units were delineated based on recreational use patterns and topographic similarities.

This chapter provides a detailed description of the management units including the uses occurring within them as well as their resources (recreation, wildlife, habitat, minerals, cultural/historical). The chapter also includes management guidelines and recommendations for management and facilities. The information for each unit follows the format provided below.

This chapter also provides recommendations for the management of adjacent general state land and adjacent borough land. These recommendations are discretionary for lands that are not state owned. They are provided as a framework for consistent management approaches between two public entities.

#### **Unit Description**

Unit descriptions include background information on land status, access, use, fish and wildlife habitat, facilities, trails and easements, and cultural and historical resources. The Unit Description also discusses issues that are affecting management.

## **Management Intent**

The management intent provides a desired future condition for each of the units consistent with the purposes of the PUA. Specific management guidelines and recommendations follow the management intent.

#### **Management Guidelines**

Consistent with the intent for the unit, management guidelines direct the current and future management decisions by DNR. Management guidelines involve specific courses of action that are consistent with and are necessary to the implementation of the management intent of the unit. Together with management intent, they represent DNR's management policy. Certain guidelines necessary to implement the plan will be adopted as regulation (see Appendix C for regulations that have been adopted for the PUA and for regulations that will be necessary to implement the plan).

## **Management Recommendations**

Management recommendations identify additional actions DNR *may* take to implement the plan. These include recommendations pertaining to development of roads and trails or stream crossings and land acquisition.

## **Facilities Recommendations**

Facilities recommendations are described in certain areas of the management units. DNR may develop them as funding allows or facilitate third party requests to develop them on a case-by-case basis. Facilities are recommended in areas where they will maintain and enhance uses. Facilities are also recommended to minimize the impacts of users on fish and wildlife and their habitats.

## **Public Use Sites**

Recommendations for public use sites, or areas for which a specific management direction or use is provided, are included. These areas will receive a high level of management direction by DNR since they are associated with higher levels of public use.

## **Map 3-1: Management Units**

## **Unit A – Lower Knik Flats**

## **Unit Description**

This unit encompasses both state and private lands in the vicinity of the Old Glenn Highway Bridge. It extends from approximately two miles west of the Old Glenn Bridge to the eastern boundary of Township 16N, Range 3E. It is bounded by the OHWM of the Knik River on the south, and the north side of the Knik Glacier Trail (RST 17) on the north. The dominant feature of this unit is the extensive "flats" that are composed of the exposed bed of the Knik River. The confluence of Jim Creek and the Knik River is within this unit. See Map 3-1, *Knik River Management Plan Units* page 3 - 3.

## **Land Ownership**

There are approximately 7,686 acres of state land and 5 acres of private land within this unit. See Map 1-2 on page 1 - 5 for generalized land status of the planning area and surrounding lands.

#### Access

The Sexton and Envy trails and the Knik Glacier Trail (RST 17) provide the primary access from adjacent MSB, private, federal and state land. Many users access the PUA from the north end of the Old Glenn Bridge. Access on the south side of the Knik River is provided by state shoreland, federal land within PLO 3324 and one 17(b) easement. There are numerous other user-created trails that provide access into and through this unit. The Knik River provides boat access to this and other units. Airplanes may access this on the unvegetated gravel bars of the river.

## **Recreational Use**

This unit receives the highest levels of use in the planning area. Moderate to high levels of use occurs in this unit year-round, but primarily on weekends. Both non-motorized and motorized use occurs; however, the majority of recreational use is motorized.

Non-motorized uses in the unit include hiking, fishing, boating, camping, wildlife viewing, horseback riding, biking, swimming and hunting. This unit is the gateway for many users to access units to the east. When ice and snow conditions permit, the area receives a variety of uses including snowshoeing, winter biking, and skiing. Non-motorized boating occurs during the ice-free periods on the Knik River and Jim Creek. Floating the Knik River from the glacier is uncommon because of difficult access to the headwaters. Canoes and rafts routinely put in at access points along Knik River Road and float down to takeouts at the New and Old Glenn bridges. Non-motorized watercraft includes canoes, kayaks and rafts.

Motorized uses include highway and OHV operation as a means of access for fishing, hunting, trapping, camping, wildlife viewing, photography, and for recreation. Motorized boat use is common on the Knik River. OHV use occurs primarily on the numerous trails

near the Pavilion Parking, the unvegetated gravel bars of the Knik River, and the Knik Glacier Trail (RST 17). During winter months frozen ground conditions allow for increased motorized recreational opportunities and access. Motorized boating primarily occurs on the Knik River and Jim Creek during ice-free periods. Typical vessels include motorboats, jetboats and airboats. Limited airboat use occurs throughout the year. Motorized boating use increases during the fishing and hunting seasons.

## Fisheries Habitat

The Knik River is the primary waterbody in this unit; however, Jim Creek is important as the gateway into the Lakes and Wetlands Unit and is a popular fishing destination. The Knik River provides habitat for resident fish species and is catalogued by ADF&G as an anadromous stream. Coho, sockeye and chum salmon are present and coho salmon spawn in portions of the Knik River. See Appendix B, Map B-1, *Anadromous Streams and Waterbodies* for a depiction of those streams included in ADF&G's catalogue of waters important for the spawning, rearing, or migration of anadromous fish.

#### Wildlife Habitat

Habitat consists of forested areas of uplands, dunes, and forested wetlands in the northern portion of the unit adjacent to the flats. Habitat in the flats includes both vegetated and unvegetated areas of state shorelands adjacent to the numerous braids, sloughs and abandoned channels of the Knik River. Habitat in the unit is used for cover and forage for many wildlife species.

Migratory waterfowl utilize the water of the Knik River and adjacent shorelands as a stopover during their spring and fall migrations. Habitat for nesting and brooding is limited. Many types of both game and non-game species of waterfowl can be found. See Appendix B, Map B-2 for waterfowl habitat and nesting habitat.

Large and small game species utilize available habitat. Moose utilize habitat primarily for over-wintering, however, use outside of winter also occurs. Bear habitat encompasses the entire unit. Small game species such as snowshoe hare and spruce grouse can be found in the vegetated areas. See Appendix B, Map B-3, *Moose Habitat*.

#### **Commercial Use**

This unit receives moderate amounts of commercial use, primarily as access to other units in the Public Use Area. Currently, no land use authorizations for temporary or permanent commercial facilities have been issued by DNR in this unit. Commercial uses include OHV, jetboat, flightseeing, and airboat tours. Hunting and fishing guides may operate in this unit.

## **Facilities**

The only developed facility is the Old Glenn Highway Bridge.

#### **Trails and Easements**

Numerous trails exist in the Lower Knik Flats Unit. The primary trails in this unit are the Knik Glacier Trail (ADL 223176) and the Sexton and Envy trails. The Knik Glacier Trail is a state recognized RS 2477 and is identified as RST 17. This trail provides access through and within the northern portion of the unit. The portion of the Knik Glacier Trail that crosses Eklutna Inc. lands has a 17(b) easement (EIN no. 45) to provide for public access. The Sexton and Envy trails provide access from the Pavilion Parking area on Sullivan Road to the Knik River. A large number of user-created trails exist within this unit.

#### **Cultural and Historical**

Resources related to Native cultures and early non-native settlement may be present. Early accounts of Native cultures have indicated that a village site was located in the western portion of the unit. This site was abandoned after glacial outburst flooding from the Knik Glacier. Remains of another structure related to early non-native settlement exists just outside of the eastern boundary. Artifacts related to occupancy and use of the structure may be located in the area.

#### **Issues**

The primary issues are the unlawful activities, high levels of use, and trespass on private land that is occurring.

This unit receives a high level of use that is unlawful or that constitutes a threat to public safety. This type of use is facilitated by the relative ease of access to this unit from the Old Glenn Highway Bridge and the Sexton and Envy trails. Difficulty in accessing the PUA by two wheel drive patrol cars has hampered efforts to increase law enforcement patrols. Dangerous and/or reckless discharge of firearms, destruction of private and public property, and the wrecking and burning of automobiles are a few of the major problems identified by the public. Many users have indicated that they do not feel safe recreating while individuals are shooting in the area of trails. Several individuals indicated they had people unknowingly shooting at them while they were recreating. Several others indicated that they have had bullets fired into residences or private property adjacent to the PUA. Many members of the public cited a lack of law enforcement in the area as a major issue.

The second issue affecting management in this unit is the high levels of use, primarily west of Jim Creek. Because of the ease of access to this unit and its close proximity to the major population centers of Alaska and the community of Butte; this unit receives the highest levels of use. The majority of users access this unit by means of motorized highway and off-highway vehicles. Many users of this area recreate with OHV's on the numerous user-created trails developed in forest and dune areas as well as on the shorelands of the Knik River. Land in this unit is highly valued by motorized users for recreation and access to adjacent units for hunting and fishing. The high level of use is

causing impacts to the existing trails in addition to displacing some users from those same trails. Some users suggested they are displaced from the area because of conflict with other user groups on trails. Others suggested that trail rutting and debris on the trails made them unusable for some methods of non-motorized travel.

There are other issues concerning this unit that apply to the entire public use area. These areawide issues are summarized in Chapter 2 rather than in every unit.

## **Management Intent**

The management intent for the Lower Knik Flats Unit is to manage for high levels of public use, particularly at proposed parking and camping areas. Recreational opportunities will be enhanced by applying management guidelines directed specifically to this unit and to the entire public use area. The unit will be managed to provide the full spectrum of public uses and increased use in the future, while minimizing impacts of use on fish and wildlife habitat and protecting public safety. Facilities are proposed to be constructed at key locations that will enhance the public's enjoyment of the area, protect public safety and minimize impacts on fish and wildlife habitat. DNR will address trail use impacts to identified sensitive fish and wildlife habitats through the TMP described in Appendix D.

It is intended that OHV and highway vehicle uses continue on the forested uplands adjacent to the Pavilion Parking area and on the unvegetated shorelands of the Knik River. See Map 2-3, page 2 - 35 for a depiction of this area. Increasing levels of such use are also considered appropriate. DNR has concluded that the continuation of these uses is appropriate in these areas and that rutting and ground disturbing impact from these uses have minimal and an acceptable level of impact on the identified area. The TMP will address potential impacts associated with use of trails in all other areas of the unit. Except for impacts related to rutting and ground disturbance, uses in the area described above remain subject to all local, state, and federal authorities for other impacts associated with their use.

DNR is committed to improve access from Sullivan Avenue to the lower flats. DNR will improve access into the PUA from Sullivan Ave. through road/trail upgrades, and/or new road construction. These access improvements will be a top priority of DNR because they will aid our enforcement strategy. These improvements will be reserved through easements, and they will provide needed access to law enforcement personnel and DNR staff.

## **Management Guidelines**

- The portions of the Sexton (ADL 230254) and Envy (ADL 230256) trails on state land will be surveyed and reserved as a public easement to DNR as multiple use trails.
- Motorized use on the waters of Manmade Lake will be prohibited during ice-free periods. Additionally, motorized use of the land within 100 feet of the shoreline of Manmade Lake will be seasonally restricted to no more than 10 miles per hour during ice free periods. See *Proposed Waterbody Restrictions*, Map 3-2, page 3 11.

 Develop a non-motorized trail from the area of the Pavilion Parking lot to the Knik River flats. DNR will explore available funding sources and will, in cooperation with local groups, work to secure this funding to identify a route and build this new trail for non-motorized users. The new trail will be reserved as a non-motorized easement to DNR.

## Management Recommendations<sup>1</sup>

- The portion of the Knik Glacier Trail (RST 17) between the Pavilion Parking area and the mouth of Jim Creek may be developed as a maintained road. If this occurs the upgraded portion of the road will be reserved as a public road easement. In addition, a parking area and sanitary facilities may be developed in the area of the mouth of Jim Creek.
- A maintained road may be developed from adjacent state land near the Pavilion Parking Area to the Knik River flats. The purpose of this road would be to provide access for public safety, enforcement and maintenance. This new road would not be open to the public for use.
- DNR should work with ADF&G to identify stream crossing locations that will minimize impacts to resources including fish and wildlife and to the recreating public.

## Facilities Recommendations<sup>2</sup>

- A camping facility may be developed near the proposed Jim Creek parking facility. This camping area would provide primitive camping sites, and should be located away from the confluence of Jim Creek and the Knik River.
- Sanitation facilities may be constructed in the area of the parking and/or camping facilities at Jim Creek. These facilities should consist of toilets, picnic tables, fire grates, and bear-resistant trash receptacle(s).
- Sanitation facilities should be constructed at Manmade Lake. Development of these
  facilities is dependant upon adequate staffing and funding for site planning and
  development.
- Time and use restrictions for facilities will be developed at the time they are constructed.
- A boat launch facility should be developed at either the Old Glenn Highway Bridge or in the location of Manmade Lake. Development of this facility is dependant upon adequate staffing and funding for site planning and development.

## **Public Use Sites**

No public use sites are established.

Knik River Public Use Area Management Plan

<sup>&</sup>lt;sup>1</sup> In the Recommendations that follow, the words "may," "will," and "should" are used. "Will" requires a management action by DNR; "should" indicates the intent to pursue a specific course of action given the availability of funds and the resolution of permitting issues. "May" means the same as "should." See *Glossary* in Appendix A for a definition of terms.

<sup>&</sup>lt;sup>2</sup> "Should" indicates the intent to pursue development of a facility subject to availability of funds and the resolution of permitting agencies.

## **Land Use Designation**

All state land is co-designated Public Recreation and Wildlife Habitat. All state land will be retained in public ownership.

## **Allowed/Prohibited Uses**

## **Map 3-2: Proposed Waterbody Restrictions**

## Unit B – Lakes and Wetlands

## **Unit Description**

This unit encompasses both state and private lands located primarily south and east of Maud Road extension (ADL 206989) and the Rippy Trail. The northern boundary runs east and west along the 1000 foot elevation line at the base of the Chugach Mountains, while the southern boundary runs east and west along the north side of Knik Glacier Trail (RST-17). The dominant features of this unit consist of the extensive system of lakes, creeks, and wetlands including Mud, Jim, Gull, Leaf, and Swan lakes; and McRoberts and Jim creeks. See Map 3-1, *Knik River Management Plan Units* page 3 - 3.

## **Land Ownership**

There are approximately 7,725 acres of state land and 400 acres of private land in this unit. See Map 1-2 on page 1 - 5 for generalized land status of the planning area and surrounding lands.

#### Access

Two major routes provide overland access from adjacent borough, private, federal and state land. The Maud Road extension (a 66-foot-wide easement, ADL 206989) and the Rippy Trail provide access in the northern portion. Access into the southern portion is provided by the Knik Glacier Trail. Jim Creek provides water access from the south.

#### **Recreational Use**

This unit receives moderate levels of recreational use, although use levels vary. Use levels increase on weekends and during the fall fishing and hunting seasons. In these instances a high level of use is characteristic and it is likely that use levels will increase in the future. In winter, use increases when snow and ice conditions allow greater access. Because of the varied terrain, opportunities to view wildlife, and exceptional viewshed opportunities; Rippy Trail is a popular destination for both motorized and non-motorized users.

Non-motorized use occurs primarily along the Maud Road Extension, Rippy Trail and other user-created trails. Non-motorized users access the area for a wide variety of recreational opportunities including, hiking, biking, canoeing, wildlife viewing, horseback riding, hunting, and fishing. When ice and snow conditions permit, the numerous waterbodies and wetland areas receive a variety of uses including snowshoeing, biking, skating, and skiing. Non-motorized boating occurs on the expansive network of lakes and creeks. Jim and Mud lakes and Jim and McRoberts creeks are primary destinations for many of these users. Non-motorized watercraft include canoes, kayaks and rafts.

Motorized uses occur throughout this unit primarily to access the area for hunting, fishing, trapping, camping, wildlife viewing, photography, and other forms of recreation. Uses include OHV operation and boating. OHV use occurs primarily on the Maud Road Extension and Rippy Trail. Some OHV use also occurs in wetland areas adjacent to the Rippy Trail near Jim Lake; on wetlands on the south side of Swan Lake; and, on wetlands in the eastern portion of the unit near Friday Creek. During winter months frozen ground conditions allow for increased motorized recreational opportunities and access.

Motorized boating occurs on many of the waterbodies. Motorized use from the primitive launches at Jim and Mud lakes is typically by small watercraft with low horsepower. During the fall hunting and fishing seasons, larger watercraft are used on the lakes, streams, and wetlands. The launches at Jim and Mud lakes provide access to other waterbodies within the PUA. Motorized boating use increases during fishing and hunting seasons.

#### Fisheries Habitat

Primary waterbodies in this unit include Jim, Mud, Gull, Swan and Leaf lakes; and Jim and McRoberts creeks. Waterbodies provide habitat for resident and anadromous fish species. Because of the diverse waterbodies and extensive wetlands this area is very productive fish spawning and rearing habitat. Coho salmon are present and/or spawning in all of the waterbodies in this unit. Sockeye salmon are present in Jim and McRoberts creeks and Jim Lake. See Appendix B, Map B-1 for a depiction of those streams and waterbodies included in ADF&G's catalogue of waters important for the spawning, rearing, or migration of anadromous fish.

## Wildlife Habitat

Habitat consists of expansive areas of lakes, wetlands and streams and forested uplands. The north edge of the unit is delineated by an abrupt transition zone between boreal forest and sub-alpine environments. The extensive wetland areas are interspersed with forested uplands. These uplands are remnant dunes formed after the Knik Glacier retreated. Because of the diversity of vegetation types and extensive wetlands, this unit is very productive wildlife habitat.

Waterfowl utilize the expansive lakes, creeks, and wetlands for resting and staging during their spring and fall migrations. Trumpeter swans frequent the open waters of Mud and Jim lakes in early spring prior to migrating to nesting areas elsewhere in Alaska. In the fall, large numbers of trumpeter swans return to the lakes and wetlands to rest prior to migrating to over-wintering habitat in Canada and the western United States. Many species of waterfowl utilize the habitat for nesting and brooding during spring and summer including many varieties of puddle ducks such as mallards, widgeons, and greenwing teals; diving ducks such as goldeneye, scaup and grebes. Trumpeter swans and loons are known to return annually to nest. See Appendix B, Map B-2 for waterfowl habitat.

Moose habitat ranges from the valley floor to the vegetated sub-alpine areas. Calving and rutting generally occurs in the sub-alpine and on the valley floor. A moose calving concentration area has been identified by ADF&G within this unit. Moose commonly over-winter in this area because of ample forage and minimal snow cover. See *Moose Habitat* Appendix B, Map B-3.

Dall sheep are generally found in the higher elevations but are consistently found at lower elevations at a few locations including by the outlet of Jim Creek Canyon. This area is known locally for its high densities of lambs and ewes, and is often characterized as a "lambing area." See Appendix B, Map B-4 for sheep habitat.

Bears and wolves are occasionally seen and sometimes harvested in this unit. Small game species such as snowshoe hare and spruce grouse can be found in the vegetated areas.

#### **Commercial Use**

This unit receives low to moderate amounts of commercial use from ATV and airboat tours. Currently, no land use authorizations for temporary or permanent commercial facilities have been issued by DNR in this unit. Hunting and fishing guides may operate in this unit.

#### **Facilities**

Primitive recreational facilities include the parking and boat launch areas at Jim Lake.

#### **Trails and Easements**

The Maud Road extension is located on an easement (ADL 206989) reserved to DNR. In addition to facilities developed on easements, a number of trails have been created by users of the area; most notably, the Rippy Trail which connects the Jim Lake parking area to the upper Jim Creek. Other user-created trails in this unit access areas adjacent to this unit within the Public Use Area.

#### **Cultural and Historical**

Resources related to Native cultures and early non-native settlement may be located in this unit. Early accounts of Native cultures using the area describe a village site and a cabin site in this unit. The village site is located on a 160-acre Native allotment on the eastern shore of Swan Lake. The cabin site was used by a local native Alaskan while hunting and fishing in the Knik Valley. Remains of another structure and associated artifacts related to early non-native settlement exists in this unit as well.

#### **Issues**

Issues that affect management in this unit include use of OHV's and airboats in waterbodies, wetlands, and adjacent areas and several trespass structures. Many individuals expressed concern that airboat and OHV use was negatively impacting habitat for waterfowl, wildlife, and spawning salmon. Many other individuals were interested in maintaining their opportunities to use airboats and OHV's for recreation and as a means

to access fish and game resources. Some individuals indicated that some forms of motorized recreation were negatively impacting their own recreational uses. Trespass structures in this unit are primarily "duck shacks" used by waterfowl hunters. These structures, once abandoned, become rundown and eventually end up as litter. They may also have the effect of displacing some recreational users from utilizing the area around them.

One of the primary access points occurs on an existing easement (Maude Road extension) on Eklutna Inc. uplands at Mud Lake. Currently the site has a primitive road and boat launch. It is unclear how much of the current developments are within the existing easement. The use of the easement increases during the hunting and fishing season, but is popular with other users throughout the summer and winter season. The area surrounding the easement on private land is heavily impacted related to use of the easement and adjacent state waterbody. A management agreement between Eklutna Inc. and DNR is necessary before DNR can address the impacts occurring on and adjacent to the easement. If an agreement can be made between the parties, DNR could develop management and facilities recommendations to address impacts associated with use of the easement and adjacent state waterbodies.

There are other issues concerning this unit that apply to the entire public use area. These areawide issues are summarized in Chapter 2 rather than in every unit.

## **Management Intent**

The management intent for the Lakes and Wetlands Unit is to manage for high levels of public use at proposed parking and camping areas, public use sites, and at other popular use areas associated with boat launches, shooting areas, and use of the Rippy Trail. The remainder of the unit will be managed for moderate levels of use. Recreational opportunities will be enhanced by applying management guidelines directed specifically to this unit and those that apply to the entire public use area. It will be managed to provide the full spectrum of public uses and increased use in the future, while minimizing impacts of use on fish and wildlife habitat and protecting public safety. Facilities are proposed to be constructed at key locations that will enhance the public's enjoyment of the area, protect public safety and minimize impacts on fish and wildlife habitat. DNR will also address trail use impacts to identified sensitive fish and wildlife habitats through the TMP as described in Appendix D.

It is intended that DNR will work with ADF&G to monitor the swan population within this unit. If ADF&G concludes that the population of swans within the PUA is declining, DNR will work with ADF&G to identify potential causes and will develop appropriate strategies to address the decline.

## **Management Guidelines**

• DNR will work with ADF&G to monitor trumpeter swan populations within the PUA. Reviews should be conducted annually and should begin within 5 years from the adoption of this plan. Based on the results of this review, further management strategies may be developed.

- Areas for recreational shooting may be developed on the north side of the Maud Road extension, east of Mud Lake or in the forested areas east of the Pavilion Parking area. The area proposed for designation east of Mud Lake is currently used as a shooting area by the public. The proposed shooting areas are depicted on Map 2-1, page 2 17. Time of use or other restrictions will be determined by DNR.
- Maude Road extension should be upgraded.
- Implement an education and signage program to address safety concerns for both Jim and McRoberts creeks. Signs will be posted at major access points into the PUA depicting Jim and McRoberts creeks and will advise boaters of the sometimes narrow and winding nature of these waterbodies. Signs will contain information on the common types of watercraft, and seasonality of use. Additional signs may be posted at the major entry points to Jim and McRoberts creeks.
- Motorized access on Jim Lake and associated wetlands will be restricted to not more than 10 horsepower for watercraft seasonally from April 15 to August 9 annually. The 10hp restriction will be lifted beginning August 10 through April 14 annually. The area affected by this horse power restriction for watercraft is indicated in Map 3-2, page 3 - 11.
- Rippy Trail Development:
  - ONR will designate a multi-use (motorized and non-motorized) trail on the current Rippy Trail alignment extending from the Jim Lake parking area to the wetlands of Chain Lake, east of Jim Creek. The trail will include the commonly used spur routes that go to specific locations (i.e. campsites, scenic viewing opportunities, and hunting locations). The Rippy Trail will be upgraded to sustainable trail standards.
  - Vehicles with a curb weight of greater than 1,500 pounds are prohibited from using the Rippy Trail.
  - o It is intended that a new non-motorized trail will be developed generally parallel and upslope of the existing Rippy Trail. Extensions of this new trail may be appropriate to access campsites, viewpoints, or to connect with other trails.

## **Management Recommendations**

- DNR will work with ADF&G, Habitat Division in the identification of anadromous stream crossings, the catalog process, and the general permits for stream crossings.
- DNR should work with interested parties to achieve the development and maintenance of recommended facilities within the management unit.
- DNR should consider the feasibility of road and trail improvements to enhance public use of the area, to consolidate general access impacts to the extent possible, and to provide for more efficient law enforcement efforts.
- DNR will order the removal of unauthorized structures.
- DNR may identify a possible area for a concession operator for camping area.

## **Facilities Recommendations**

- Jim Lake<sup>1</sup>
  - o Facilities at the Jim Lake shoreline should be designed to maximize day use for multiple groups and users.
  - o The primitive parking lot at Jim Lake may be upgraded to accommodate and facilitate parking for both the current and anticipated future levels of use. The parking facility should be designed to accommodate a wide variety of vehicles including vehicles with trailers. The parking facility should be located away from Jim Lake at or near its current location.
  - A camping area may be developed near the current primitive parking lot.
     Whether or not this camping area includes drive-in campsites or just walk-in sites will be determined at the design phase. The camping area should be located away from Jim Lake.
  - o Sanitation facilities may be constructed in the area of the parking and camping area. These facilities should consist of vaulted toilets (or similar facilities), picnic tables, fire grates, and bear-resistant trash receptacles.
  - The access trail and launch at Jim Lake should be developed to accommodate typical highway vehicles and facilitate the launching of small watercraft at Jim Lake. The access should be sited to minimize impacts to habitat and wetlands. A primitive, hand-carried boat launch/dock may be developed to facilitate access to Jim Lake.

#### **Public Use Sites**

Public use sites are designated for Jim Lake and Jim Creek as depicted on Map 2-2, page 2 - 29. These sites receive high levels of seasonal use. See Chapter 2 for management guidelines for public use sites.

## **Land Use Designation**

All state land is co-designated Public Recreation and Wildlife Habitat. All state land will be retained in public ownership.

## **Allowed/Prohibited Uses**

<sup>&</sup>lt;sup>1</sup> A more detailed site analysis will precede the development of proposed facilities at Jim Lake.

## **Unit C – Upper Knik Flats**

## **Unit Description**

This unit encompasses state and private lands from the terminus of the Knik Glacier downstream to Unit A. It includes all state shorelands in Township 16N, Range 4E, Seward Meridian as well as a small area of upland adjacent to the Knik River in Township 16N, Range 5E as depicted on Map 3-1, *Knik River Management Plan Units* page 3 - 3. The dominant features of this unit are the expansive areas of exposed shorelands referred to as the "flats" and the Knik River.

## **Land Ownership**

There are approximately 17,094 acres of state land within the Upper Knik Flats Unit. See Map 1-2 on page 1 - 5 for generalized land status of the planning area and surrounding lands.

#### Access

Access is provided by the Knik Glacier Trail (RST 17), Knik River Road, Federal lands managed consistent with PLO 3324, and the Knik River itself. Some individuals utilize aircraft for access via a few un-maintained gravel airstrips. Portions of this unit are accessed by motorized and non-motorized users from the Knik Glacier Trail (RST 17) on adjacent federal land. The Knik Glacier is a primary destination for many of users.

## **Recreational Use**

This unit receives low to moderate use levels depending on season. Use levels are moderate during summer and fall and low to moderate during winter and spring. The Knik Glacier is the destination for many users of the Public Use Area.

Non-motorized use occurs at low levels throughout the year. Non-motorized users access the area for a wide variety of recreational opportunities including, hiking, boating, wildlife viewing, horseback riding, and hunting. When ice and snow conditions permit, the Knik River and Flats areas receive a variety of uses including snowshoeing, biking, and skiing. Non-motorized boating occurs during the ice-free periods on the Knik River. Non-motorized watercraft include canoes, kayaks, and rafts.

Motorized uses occur throughout this unit at low to moderate levels. Motorized users access this area for hunting and fishing as well as other forms of recreation. Uses include OHV operation and boating. OHV use occurs primarily on the Flats. During winter months frozen ground conditions allow for increased motorized recreational opportunities and access. Motorized boating occurs on the Knik River. Motorized boating use generally increases during the fishing and hunting seasons. Pilots often use the unvegetated gravel bars for practice landings and takeoffs.

#### Fisheries Habitat

The Knik River is the primary waterbody in this unit. The Knik River provides habitat for resident and anadromous fish species. Coho, sockeye and chum salmon are present and spawn in some portions of the river. See Appendix B, Map B-1 for a depiction of those streams included in ADF&G's catalogue of waters important for the spawning, rearing, or migration of anadromous fish.

#### Wildlife Habitat

Wildlife habitat in the Upper Knik Flats Unit includes both vegetated and un-vegetated areas of state shorelands adjacent to the numerous braids, sloughs and abandoned channels of the Knik River. This unit also includes a small area of vegetated wetlands and uplands at the base of the mountains north and west of the glacier. This habitat is used for forage and cover for many wildlife species.

Migratory waterfowl utilize the water of the Knik River as a stopover during their spring and fall migrations. Habitat for nesting and brooding is limited on the Knik River. Many types of game and non-game species of waterfowl use available habitat during the ice-free periods. See Map B-2 for waterfowl habitat.

Large and small wildlife species utilize available habitat found in this unit. Moose utilize habitat primarily for over-wintering, however, use outside of winter also occurs. A moose calving concentration area has been identified near the terminus of the glacier. Bear habitat encompasses the entire unit. Small game species such as snowshoe hare and spruce grouse can be found in the vegetated areas. See wildlife habitat maps in Appendix B.

#### **Commercial Use**

This unit receives low to moderate levels of commercial use. Upland adjacent to the Knik Glacier is the destination for many of the tours offered. Currently, two land use authorizations for a tour operator have been issued by DNR in this unit. Commercial uses include OHV, jetboat, flightseeing, and airboat tours. Hunting and fishing guides may operate in this unit.

#### Facilities

Other than un-maintained airstrips and commercial operator facilities authorized by DNR, developed facilities do not exist in this unit.

## **Trails and Easements**

The Knik Glacier Trail (RST 17) crosses through a portion of this unit west of Metal Creek. Numerous user created trails exist in the vegetated wetlands and uplands and on the flats.

## **Cultural and Historical**

No cultural or historical artifacts or sites have been reported to date.

#### **Issues**

The primary issue affecting management is the concentration of commercial and non-commercial use in a relatively small area in front of the Knik Glacier. Because the moraine in front of the glacier is a destination for many commercial and non-commercial users, there is a need to provide specific management of this area that is more restrictive than that allowed under the state's generally allowed uses. The use of firearms at this area of concentrated use has been identified by a number of individuals as a concern. Some users suggested the state should ensure safe use of the area by the public and commercial operators.

There are other issues concerning this unit that apply to the entire public use area. These areawide issues are summarized in Chapter 2 rather than in every unit.

## **Management Intent**

The management intent for the Upper Knik Flats Unit is to manage for high levels of public use at popular recreation areas that may develop over time. The remainder of the unit will be managed for moderate to high levels of use. Recreational opportunities will be enhanced by applying management guidelines directed specifically to this unit and those that apply to the entire public use area. It will be managed to provide the full spectrum of public uses and increased use in the future, while minimizing impacts of use on fish and wildlife habitat and protecting public safety. DNR will address trail use impacts to identified sensitive fish and wildlife habitats through the TMP described in Appendix D.

It is intended that OHV and highway vehicle uses continue on the forested uplands adjacent to the Pavilion Parking area and on the un-vegetated shorelands of the Knik River. See Map 2-3, page 2 - 35 for a depiction of this area. Increasing levels of such use are also considered appropriate. DNR has concluded that the continuation of these uses is appropriate in these areas and that rutting and ground disturbing impact from these uses have minimal and an acceptable level of impact on the identified area. The TMP will address potential impacts associated with use of trails in all other areas of the unit. Except for impacts related to rutting and ground disturbance, uses in the area described above remain subject to all local, state, and federal authorities for other impacts associated with their use.

## **Management Guidelines**

• (None)

## **Management Recommendations**

• (None)

## **Facilities Recommendations**

• (None)

## **Public Use Sites**

No public use sites are established.

## **Land Use Designation**

All state land is co-designated Public Recreation and Wildlife Habitat. All state land will be retained in public ownership.

## **Allowed/Prohibited Uses**

## **Unit D – Upper Jim Alpine**

## **Unit Description**

This unit boundary encompasses state lands within Township 17N, Range 3E, Seward Meridian, above the 1000 ft. contour line as depicted on Map 3-1, *Knik River Management Plan Units* page 3 - 3. The dominant feature of this unit is the rugged alpine of the Upper Jim Creek drainage.

## **Land Ownership**

There are approximately 9,402 acres of state land within the Upper Jim Alpine Unit. See Map 1-2 on page 1 - 5 for generalized land status of the planning area and surrounding lands.

#### Access

Access is from adjacent state, federal, or lands owned by Eklutna Inc. Numerous user created trails originate from Maud Road, Maud Road Extension, and the Rippy Trail and provide access to the adjacent Upper Jim Alpine Unit.

## **Recreational Use**

This unit receives low levels of use primarily related to hunting, hiking, wildlife viewing, and climbing. No motorized use occurs in this unit.

#### Fisheries Habitat

The headwaters of Jim Creek are the primary waterbodies in this unit. Habitat for resident fish species is absent. No waterbodies are catalogued by ADF&G as anadromous. See Appendix B, Map B-1 for a depiction of those streams and waterbodies included in ADF&G's catalogue of waters important for the spawning, rearing, or migration of anadromous fish.

#### Wildlife Habitat

Wildlife habitat consists of sub-Alpine and Alpine environments. The lower elevations are forested while the higher elevations are rock and scree.

Dall sheep are commonly found in the vegetated sub-alpine to alpine environments. Ewes with lambs congregate in the area of Jim Creek Canyon. A mineral lick utilized by sheep and goats has been identified west of upper Jim Creek. Mountain goat habitat is located at the higher elevations. Moose utilize the alpine and sub-alpine habitat during snow-free periods for feeding and rearing. Bear habitat encompasses the entire unit. Small game species such as snowshoe hare, spruce grouse, and ptarmigan can be found in the vegetated areas. See wildlife habitat maps in Appendix B.

#### **Commercial Use**

Commercial use of the unit is unknown at this time. Currently, no land use authorizations for commercial operators have been issued by DNR in this unit. Hunting guides may operate in this unit.

#### **Facilities**

No facilities exist within this unit.

#### **Trails and Easements**

User-created trails exist; however, no developed or managed trails exist at this time.

#### **Cultural and Historical**

No cultural or historical artifacts or sites have been reported to date.

#### **Issues**

Because of the difficulty in access, there are few if any issues affecting management. Low levels of non-motorized use and no motorized use occurs in the unit.

There are other issues concerning this unit that apply to the entire public use area. These areawide issues are summarized in Chapter 2 rather than in every unit.

## **Management Intent**

The management intent for the Upper Jim Alpine Unit is to manage for low levels of public use and to enhance recreational opportunities by applying management guidelines that apply to the entire public use area. The unit will be managed with an emphasis on enhancing non-motorized opportunities, while mitigating impacts to habitats for fish and wildlife.

## **Management Guidelines**

• (None)

## **Management Recommendations**

• A non-motorized hiking trail(s) may be developed to connect the trail system in Wolverine Valley with trails in the Knik River drainage. This trail would be reserved as a non-motorized easement.

## **Facilities Recommendations**

• (None)

## **Public Use Sites**

No public use sites are established.

## **Land Use Designation**

All state land is co-designated Public Recreation and Wildlife Habitat. All state land will be retained in public ownership.

## **Allowed/Prohibited Uses**

## **Unit E – Upper Friday Alpine**

## **Unit Description**

This unit encompasses state lands within Township 16N, Range 5 & 6E, Township 17N, Range 5 & 6E, and Township 18N, Range 6E, Seward Meridian as depicted on Map 3-1, *Knik River Management Plan Units* page 3 - 3. The dominant feature of this unit is the rugged alpine of the Upper Friday and Metal creeks drainages.

## **Land Ownership**

There are approximately 76,014 acres of state land within the Upper Friday Alpine Unit. See Map 1-2 on page 1 - 5 for generalized land status of the planning area and surrounding lands.

#### Access

The Knik Glacier Trail (RST 17) provides access adjacent to this unit. A few user created trails provide access from the Knik Glacier Trail (RST 17). Four un-maintained gravel airstrips are located in this unit.

## **Recreational Use**

This unit receives low levels of use primarily related to hunting, hiking, wildlife viewing, and climbing. Motorized use does not occur with the exception of the airplane use of airstrips.

## **Fisheries Habitat**

Tributaries of Metal Creek and the headwaters of Friday Creek are the primary waterbodies. Fisheries habitat is absent. No waterbodies are catalogued by ADF&G as anadromous. See Appendix B, Map B-1 for a depiction of those streams and waterbodies included in ADF&G's catalogue of waters important for the spawning, rearing, or migration of anadromous fish.

#### Wildlife Habitat

Wildlife habitat consists of sub-Alpine and Alpine environments. The lower elevations are forested while the higher elevations are rock and scree.

Dall sheep are commonly found from the vegetated sub-alpine to alpine environments. Mountain goat habitat is located at the higher elevations. Moose utilize the alpine and sub-alpine habitat during snow-free periods for feeding and rearing. Bear habitat encompasses the entire unit. Small game species such as snowshoe hare, spruce grouse, and ptarmigan can be found in the vegetated areas. See wildlife habitat maps in Appendix B.

#### **Commercial Use**

This unit receives low levels of commercial use. Currently, two land use authorizations have been issued by DNR for commercial guide camp facilities.

#### **Facilities**

Other than the un-maintained airstrips, facilities do not exist.

#### **Trails and Easements**

A few user-created trails exist; however, no developed or managed trails exist at this time.

#### **Cultural and Historical**

No cultural or historical artifacts or sites have been reported to date.

#### **Issues**

Because of the difficulty in access, few if any issues affect management. With the exception of the airstrips, this unit currently experiences no motorized use and little non-motorized use.

There are other issues concerning this unit that apply to the entire public use area. These areawide issues are summarized in Chapter 2 rather than in every unit.

## **Management Intent**

The management intent for the Upper Friday Alpine Unit is to manage for low levels of public use and to enhance recreational opportunities by applying management guidelines that apply to the entire public use area. The unit will be managed with an emphasis on enhancing non-motorized opportunities, while mitigating impacts to habitats for fish and wildlife.

## **Management Guidelines**

• (None)

## **Management Recommendations**

• (None)

## **Facilities Recommendations**

• (None)

## **Public Use Sites**

No Public Use Sites have been identified.

## **Land Use Designation**

All state land is co-designated Public Recreation and Wildlife Habitat. All state land will be retained in public ownership.

## **Allowed/Prohibited Uses**

## **Unit F – Grasshopper Valley**

## **Unit Description**

This unit encompasses state lands within Township 15N, Range 5, 6, and 7E, Township 16N, Range 5, 6, & 7E, and Township 17N, Range 5 & 6E, Seward Meridian as depicted on Map 3-1, *Knik River Management Plan Units* page 3 - 3. The dominant feature of this unit is Grasshopper Valley and surrounding alpine areas.

## **Land Ownership**

There are approximately 29,394 acres of state land within Unit F. See Map 1-2 on page 1 - 5 for generalized land status of the planning area and surrounding lands.

#### Access

Few user created trails related to hunting exist in Grasshopper Valley. Seven unmaintained gravel airstrips are located within Grasshopper Valley Unit.

## **Recreational Use**

This unit receives low levels of use primarily related to hunting, hiking, wildlife viewing, and climbing. Motorized use occurs primarily on the airstrips.

#### Fisheries Habitat

Glacier Fork Knik River is the primary waterbody. Habitat for resident fish species may occur. No waterbodies are catalogued by ADF&G as anadromous. See Appendix B, Map B-1 for a depiction of those streams and waterbodies included in ADF&G's catalogue of waters important for the spawning, rearing, or migration of anadromous fish.

## Wildlife Habitat

Wildlife habitat extends from the sparsely vegetated valley floor to the un-vegetated alpine.

Dall sheep are commonly found from the vegetated sub-alpine to alpine environments. Mountain goat habitat is located at the higher elevations. Moose utilize available habitat from the valley floor to the alpine and sub-alpine. Bear habitat encompasses the entire unit. Small game species such as snowshoe hare and ptarmigan can be found. See wildlife habitat maps in Appendix B.

## **Commercial Use**

This unit receives low levels of commercial use.

#### **Facilities**

Other than a few un-maintained airstrips, facilities do not exist.

#### **Trails and Easements**

A few user-created trails exist; however, no developed or managed trails exist at this time.

#### **Cultural and Historical**

No cultural or historical artifacts or sites have been reported to date.

## **Issues**

Because of the difficulty in access, there are few if any issues affecting management. With the exception of the airstrips, this unit currently experiences low levels of motorized use and low levels of non-motorized use. DNR does expect use to increase as the glacier recedes and access to the unit improves. This increased access related to glacial retreat is not expected for some years to come.

There are other issues concerning this unit that apply to the entire public use area. These areawide issues are summarized in Chapter 2 rather than in every unit.

## **Management Intent**

The management intent for the Grasshopper Valley Unit is to manage for low levels of public use and to enhance recreational opportunities by applying management guidelines that apply to the entire public use area. The unit will be managed to provide the full spectrum of public uses, while mitigating impacts to habitats for fish and wildlife.

## **Management Guidelines**

• (None)

## **Management Recommendations**

• A single multiple use sustainable trail may be developed into Grasshopper Valley. This trail will be adjudicated by DNR and reserved as a public easement.

## **Facilities Recommendations**

• (None)

## **Public Use Sites**

No public use sites are established.

## **Land Use Designation**

All state land is co-designated Public Recreation and Wildlife Habitat. All state land will be retained in public ownership.

## **Allowed/Prohibited Uses**

## Unit G – Glacier

## **Unit Description**

This unit encompasses state lands within Township 15N, Range 5 & 6E, and Township 16N, Range 5E, Seward Meridian as indicated on Map 3-1, *Knik River Management Plan Units* page 3 - 3. The dominant feature of this unit is the Knik Glacier and surrounding alpine areas.

## **Land Ownership**

There are approximately 32,046 acres of state land within the Glacier Unit. See Map 1-2 on page 1 - 5 for generalized land status of the planning area and surrounding lands.

#### Access

Access is possible from adjacent state and federal lands as well as from the Knik River.

#### **Recreational Use**

This unit receives low levels of recreational use related to hiking, climbing, and recreation with snowmobiles and OHV's.

#### Fisheries Habitat

Lake Fork Knik River is the primary waterbody. Habitat for resident fish species may occur in this unit. The Knik River is catalogued by ADF&G as an anadromous stream. Coho salmon are present in the Lake Fork Knik River. See Appendix B, Map B-1 for a depiction of those streams and waterbodies included in ADF&G's catalogue of waters important for the spawning, rearing, or migration of anadromous fish.

#### Wildlife Habitat

Because this unit is dominated by the Knik Glacier, there is little habitat for wildlife other than uplands west of the glacier. These uplands provide summer rearing and browsing habitat for moose as well as habitat for sheep and goats. Bear habitat encompasses the entire unit. See wildlife habitat maps in Appendix B.

## **Commercial Use**

Low levels of commercial use occur in this unit.

#### **Facilities**

There are no facilities within this unit.

#### **Trails and Easements**

No trails or easements exist within this unit.

#### **Cultural and Historical**

No cultural or historical artifacts or sites have been reported to date.

#### **Issues**

Lake George has been receiving increased use by commercial and non-commercial pilots causing some additional dispersed recreational use to the south of this area. Over time this use may migrate north into the Glacier Unit. Another issue identified by the public was increased access related to the receding glacier. Although the glacier may be receding, it is doubtful that use patterns will dramatically change before the current plan is amended or revised.

There are other issues concerning this unit that apply to the entire public use area. These areawide issues are summarized in Chapter 2 rather than in every unit.

## **Management Intent**

The management intent for the Glacier Unit is to manage for low levels of public use and to enhance recreational opportunities by applying management guidelines that apply to the entire public use area. The unit will be managed with an emphasis on enhancing non-motorized opportunities, while mitigating impacts to habitats for fish and wildlife.

## **Management Guidelines**

• (None)

## **Management Recommendations**

• A non-motorized trail may be developed on the uplands west of the Knik Glacier. This trail will be reserved as a non-motorized easement to DNR.

## **Facilities Recommendations**

• (None)

## **Public Use Sites**

No public use sites are established.

## **Land Use Designation**

All state land is co-designated Public Recreation and Wildlife Habitat. All state land will be retained in public ownership.

## **Allowed/Prohibited Uses**

## Unit H - Metal Creek

## **Unit Description**

This unit encompasses state lands within Township 16N, Range 5 & 6E, Township 17N, Range 5 & 6E, and Township 18N, Range 6E, Seward Meridian as depicted on Map 3-1, *Knik River Management Plan Units* page 3 - 3. The dominant feature of this unit is the rugged alpine and narrow valley of Metal Creek.

## **Land Ownership**

There are approximately 28,900 acres of state land and 15 acres of private land within the Metal Creek Unit. There are 32 active mining claims in the unit. See Map 1-2 on page 1 - 5 for generalized land status of the planning area and surrounding lands.

#### Access

Access is provided primarily by the Knik Glacier Trail (RST 17) on the west side of Metal Creek. This trail terminates a few miles up the valley at an impassable landslide. A few user created trails are located within the unit as well. The active mining claims are a primary destination for many of the users of this unit.

#### **Recreational Use**

Low levels of recreational use occur on a limited basis, primarily during snow-free periods.

Non-motorized use occurs at low levels. Non-motorized users access the area for a wide variety of recreational opportunities including, hiking, wildlife viewing, and hunting.

Motorized use occurs at low levels in the southern portion of this unit. Motorized users access this unit for hunting as well as other forms of recreation.

#### Fisheries Habitat

Metal Creek is the primary waterbody. Habitat for resident fish species may occur in Metal Creek. Metal Creek has not been catalogued as an anadromous stream by the Department of Fish and Game. See Appendix B, Map B-1 for a depiction of those streams and waterbodies included in ADF&G's catalogue of waters important for the spawning, rearing, or migration of anadromous fish.

## Wildlife Habitat

Habitat in this unit consists of vegetated valley floor and sub-alpine to unvegetated alpine areas of rock and scree. This habitat is used by many game and non-game species.

Migratory waterfowl habitat is limited. See Appendix B, Map B-2 for waterfowl habitat.

Large and small game species utilize available habitat. Moose utilize habitat primarily for rearing and browsing. Bear habitat encompasses the entire unit. Small game species such as snowshoe hare and spruce grouse can be found in the vegetated areas. See wildlife habitat maps Appendix B.

## **Facilities**

There are no facilities except those related to mining claims.

#### **Trails and Easements**

The Knik Glacier Trail (a state recognized RS 2477) provides access to the southern portion of this unit. A few user created trails provide access to areas adjacent to the Knik Glacier Trail.

#### **Cultural and Historical**

Historic structures and artifacts or sites related to mining and Native cultures may be located in the Metal Creek Unit.

#### Issues

Because of the difficulty in access, there are few management issues. Access for private landowners and miners will be maintained.

There are other issues concerning this unit that apply to the entire public use area. These areawide issues are summarized in Chapter 2 rather than in every unit.

## **Management Intent**

The management intent for the Metal Creek Unit is to manage for low levels of public use and to enhance recreational opportunities by applying management guidelines that apply to the entire public use area. It will be managed to provide the full spectrum of public uses, while mitigating impacts of use on fish and wildlife habitat and protecting public safety. Access for private land owners and access for mining will be maintained. DNR will also address impacts to principle fish and wildlife habitats through the TMP described in Appendix D.

## **Management Guidelines**

• DNR will maintain access for mining activities and for private landowners.

## **Management Recommendations**

• (None)

## **Facilities Recommendations**

• (None)

## **Public Use Sites**

No public use sites have been identified.

## **Land Use Designation**

All state land is co-designated Public Recreation and Wildlife Habitat. All state land will be retained in public ownership.

## **Allowed/Prohibited Uses**