# 40-MILE PLANNING UNIT 

## UNIT RESOURCE <br> ANALYSIS



# United States Department of the Interior 

Fairbanks District Office P.0. Box 1150

Fairbanks, Alaska 99706
SEP 201976

## Dear Alaskan:

As promised in our previous letter, this enclosure contains the data on the remaining two parts of Step III and IV of the URA. It is ready for your review in preparation for the public work sessions. As a reminder, I will repeat the information needed from you.

URA Step III Carefully review the enclosed material for adequacy. Is the material included correct? Please submit to us any additions or deletions that from your viewpoint are necessary. Remember, that in the URA, we are only interested in collecting correct and accurate data and are not concerned with potential conflicts.

URA Step IV Again, carefully review the material. In this step we study the potential for the development or enhancement of the area. What are your ideas for additional opportunities? And again, facts without conflicts are the consideration here.

In addition, you need to be thinking ahead for the Planning Area Analysis (PAA) in which we will need information on the present demand for each of the resources and the present desires for use of the area. Step I of the Management Framework Plan (MFP) will follow the PAA and we will need your recommendations for the use of each resource without consideration of conflicting resources. Additional work sessions, meetings, and contacts are planned and you will be notified by mail. If you have questions, contact us by mail or phone the Area Manager, 883-4181 in Tok; or the Planning Coordinator, 452-4725 in Fairbanks.

Public work sessions have been set for the following communities:

| Community | Date | Time | Place |
| :--- | :--- | :--- | :--- |
| Eagle | Oct. 18 | $7^{\text {-n }}$ o.m. | Eagle Community Center |
| Fairbanks | Oct. 22 | $1: 00-4: 00$ <br> $7: 00-10: 00$ | ELM, 1028 Aurora Drive |

Oct. 2310 arm. - 3 p.m.



Delta
To
Glennallen
Anchorage

Oct. 26
7:30 p.m.
Old gym
Oct. 27 7:30 pom.
School library
Oct. 28 7:30 p.m. High School
Oct. 293 p.m.-10 p.m. Pioneer School, 3rd \& Eagle Oct. 30 10 a.m.-3 p.m.

Thank you for your cooperation and participation.
Sincerely yours,


## LANDS STEP III

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                        LANDS: OPPORTUNITIES
UNIT RESOURCE ANALYSIS - STEP III
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# Lands: Opportunities <br> Unit Resource Analysis - Step III 

I. Land Ownership

Current land ownership in the Fortymile Planning Unit is shown on the enclosed tabulation table and overlay.

Selections by the natives have all been made and over-selections did occur. The State of Alaska selections will be completed by 1983.

We will not know the ownership pattern in this planning unit until the State of Alaska and the Doyon Native Regional Corporation completes their final selections.

At the present time, the State of Alaska has selected the majority of their land around the Delta area and east along the Alaska Highway to Tok. This is generally in the southwest and south central portion of the planning unit. The Village Native selection areas are concentrated around Healy Lake, Dot Lake, Tanacross, Tetlin, Northway, and Eagle. Doyon Regional Corporation has selected the area around the Fortymile River Basin and in the Kandik-Nation River areas. This area is generally in the northern portion of the planning unit. The middle portion of the unit at this time remains in Federal ownership and is classified as $D-1$ (public interest lands).

The current significance of the ownership pattern is such that three large land owners will now be managing the land in this planning unit. A few years ago, the Bureau of Land Management was the only significant land management agency. The management practices done on native and State land will impact adjacient Federal lands. This impact could be either compatable or noncompatable to BLM management goals and is dependent upon the type of land use practices used by the two other land owners. Their land management objectives and land use plans are not finalized at this time. Private non-native ownership in this planning unit is small and consists generally of subdivided patented homesteads, trade and manufacturing sites, and homesites. An estimated 5000 acres of this private land is in the Delta area and approximately 2000 acres is found around Tok, Eagle, and in other scattered locations along the highway systems.

OWNERSHIP BREAKDOWIN
IN THE FORTYMILE PLANNING UNIT

Total Acreage - in Planning Unit
18,000,000 Acres

1. State Selections
a. Patented

553,000 Acres
b. T.A'd

1,152,000 Acres
c. Selected

1,705,000 Acres
Total
3,410,000 Acres
2. Native Selections
a. Village

| Patented | $0 \quad$ Acres |
| :---: | ---: |
| T. A'd | $0 \quad$ Acres |
| Selected | $1,205,760$ Acres |
| Total | $1,205,760$ Acres |

b. Regional 11-al

| Patented | $0 \quad$ Acres |
| :--- | ---: |
| Interim Conveyance | $0 \quad$ Acres |
| Selected | 494,000 Acres |
|  | 494,000 Acres |

c. Regional 11-a3 - Kandik Deficiency

| Patented | 0 Acres |
| :--- | ---: |
| Interim Conveyance | 69,000 Acres |
| Selected | 761,000 Acres |
|  | 830,000 Acres |

d. Regional 11 a3 - Fortymile Deficiency

| Patented | 0 | Acres |
| :---: | ---: | :---: |
| Interim Conveyance | 0 | Acres |
| Selected | $2,580,000$ | Acres |
| Total | $2,580,000$ | Acres |

e. Regional - Other

| Patented | 0 | Acres |
| :---: | ---: | :---: |
| Interim Conveyance | 0 | Acres |
| Selected | 18,000 | Acres |
|  | 18,000 | Acres |

3. Classification Orders
a. Copper River Classification Order 184,000 Acres
4. Withdrawals
a. Ft. Greely Army Base

603,500 Acres
b. Gerstle River Artic Test Station 20,000 Acres
c. Blair Lake Air Force Range 11,520 Acres
d. Eielson Air Force Base

276,480 Acres
e. Pipeline Corridor

196,000 Acres
f. BLM Administration Site - Eagle

12 Acres
g. BLM Administration Site - Delta

18 Acres
h. BLM Administration Site - Tanacross

108 Acres
i. BLM Administration Site - Northway

16 Acres
j. BLM Administration Site - Chicken

11 Acres
k. USARRAL Petroleum Dist. System Administration Site - Tok 170 Acres

1. U.S. Customs Administration Site Scotty Creek ..... 17 Acres
m. D2 Withdrawals
2. Yukon-Charley ..... 945,000 Acres
3. Fortymile Wild \& Scenic River ..... 320,000 Acres
n. BLM Recreation Site - Eagle 816 Acres
o. BLM Recreation Site - American Creek 1 Acre
p. BLM Recreation Site - Liberty Creek ..... 3 Acres
q. BLM Recreation Site - Walker Fork 240 ACresr. BLM Recreation Site - Boundary Cutoff40 Acres
s. BLM Recreation Site - South Fork 40 Acres
t. BLM Recreation Site - West Fork
Total2,554,072 Acres
4. Private Ownership (Non-Native) - Estimated 6,000 Acres
5. Federal D-1 Lands
Grand Total

6,664,168 Acres
18,000,000 Acres
II. Current "Intensive" Land Use

Current "intensive" land use areas in the Planning Unit consists of the following catagories: A) Urban and Suburban areas, B) Public Purpose areas, C) Utility Corridors, and D) Communication Sites. We will now describe each catagory in order to show the extent of current land use now taking place within the Planning Unit.

## A. Urban and Suburban Lands

The land in the Fortymile Resource Area is generally undeveloped except for twelve small communities and isolated roadhouses located on the road systems. Land use generally is concentrated around these communities and settlement areas. The exception to this is the intensive activities associated with the construction of Alyeska Pipeline. (See map base for location within the Area). The present situation in these various villages is described below.

1. Big Delta - (Unincorporated) - Urban

Big Delta is a community of 250 people located eight miles north of Delta Junction on the Richardson Highway. Land in this area is State and private. There are 30 homes, two bars, and one church located within the 2 square miles of this community. Thirty-six homes are also located on the highway between Big Delta and Delta Junction. An Alyeska Pipeline camp is also located here. The camp currently houses 1100 pipeline workers. Activity is intense in the 80 acre camp area and on the pipeline corridor which passes through this area. Some agriculture is found in the Big Delta area but most of the agricultural activities is located north of Delta Junction. In summary, land use activities here are residental and industrial, with some agricultural use evident. Local residents intensely use the surrounding area for boating, hunting, fishing, and trapping.
2. Delta Junction (Incorporated 2nd class city) - Urban

Delta Junction is a community of 892 people ( 1975 census). It is an incorporated second class city and it encompasses an area of 14.1 square miles (See overlay). It is located at the junction of the Alaska and Richardson Highways; 8.5 miles Southeast of Big Delta and 100 road miles Southwest of Fairbanks. Land use in this area is intense and consists of residental, commercial, industrial
(Alyeska pipeline corridor), agricultural, and recreational. Trade, service, military (Ft. Greely), and some agricultural activities are the major categories of civilian employment. Activity in the area has increased drastically since pipeline activities started in the area in 1974. The city is important on the highway system as a transportation service center. There are 293 residences, one bank, one post office, two restaurant-bar-hotels, two restaurant-bar-motels, five service stations, seven churches, one medical clinic, two garages, five government offices (State Highway Dept.; State Police; State Fish and Game; Delta City Hall and Fire Dept.; and Bureau of Land Management), a RCA communications center, one shopping center (grocery and department store), two liquor stores, one school (elementary and secondary), one ready-mix concrete plant, one gasoline bulk plant, three trailer parks, one gravel air strip, one BLM campground, one local construction company, one local school bus company.

New homes have been built in the past year. Most new building has been in the farming area north of Delta Junction. Some farming land is being subdivided and sold for residental use. Trailer parks are filled to capacity and they contain many small trailers and tents. These are used to house the influx of pipeline construction workers which have families and can't live at the Alyeska camp. Population has increased in Delta Junction 26.9 per cent since 1970.

Most agricultural land use is in the Delta-Clearwater area which is directly north and east of the city limits. The area consists of approximately 54 square miles. There are several farmers in the area but most of these individuals rely on other income sources. Only a portion of their income is derived from farming. The 1974 value of agricultural production in the area totalled $\$ 760,460$ from a planted acreage of 4,898 acres or an average gross value of production of $\$ 155.26$ per crop acre. The value of production increased $37 \%$ from 1972 to 1974 (1973 for animal products). Of this increase, $21.7 \%$ can be attributed to inflation giving a true increase in production value of $15.3 \%$ or approximately $8 \%$ per year. (See tables number I and II - Agricultural Production and Value 1972 and 1974.)

The number of people involved in farming (part and full time) is estimated to be 100. 200,000 acres is estimated to have agricultural potential and could be developed. This area is now owned by the State of Alaska.

With the current increase in population caused by pipeline construction activities, surrounding State and Federal land is being intensely used for recreational use (boating, hunting, fishing, and trapping).

Forest Product Harvesting is found in the immediate Delta area. The timber located in this area is some of the best commercial timber found within the entire planning unit. Most of this commercial sized timber is located on State and Native Selected lands.

## 3. Ft. Greely - Military Reserve

Five miles south of Delta Junction is the Fort Greely Military Reservation. The Base has a military population of 800 people and contains a land area of 623,500 acres. This land is exclusively used for military maneuvers and for testing military equipment. Many residents of Delta Junction and Big Delta derive their living from jobs at Fort Greely. Fort Greely in the past several years has been a major contribution to the total economy of the Delta area. The military population creates a heavy impact on the hunting, fishing, boating, and trapping resources on State and Federal lands in the immediate area. Recreational ATV and snow machine use by military personnel is also considered to be intense in this area.

## 4. Healy Lake (Rural)

Healy Lake is a remote native village with a reported population of 24 people. The population appears to be transient in nature and in the winter time they reside in the Delta area 30 miles to the southwest. Two families now live permanently in Healy Lake. This area was classified as a native village and was awarded 69,120 acres as part of the native land settlement act. This land is classified as the Healy Lake Village Withdrawal and may be closed to public use when conveyed to the Village Corporation. Residents of Healy Lake currently use this land for subsistance hunting operations. Closure of this land is causing increase timber and recreation use on adjacent State land.

## 5. Dry Creek (Rural)

Dry Creek is a religious, agricultural orientated commune with a population of 125 people. The total acreage obtained by these people through a State of Alaska open to entry land sale in 1973 is approximately 100 acres.

The land is two miles off the Alaska Highway, mile post 1379, forty miles east of Delta Junction. It is intensively used for homesites and for agriculture. The adjacent Federal and State Lands may be impacted by these people because they want to use known wildlife habitat to graze domestic sheep. Hunting, fishing, and trapping on State and Federal lands adjacent to this settlement has increased significently in the past two years.
6. Dot Lake - Suburban

Dot Lake is mostly a native village with a population of 42 people. Dot lake is on the Alaska Highway 40 miles northwest of Tok. There is one highway service station, one motel, one school, a post office, and one church. This village was declared eligible for a Native Village Withdrawal. 69,120 acres was selected under the Native Claims Settlement Act of 12-18-71. Hunting, fishing, trapping, ATV, and snow machine use by local residents on adjacent Federal lands is moderate.
7. Tanacross - Suburban

Tanacross is a native village located two miles off the Alaska Highway 12 miles northwest of Tok. It has a population of 84 ( 1970 census) and it was awarded 92,160 acres under the Native Land Settlement Act. There is some hunting, fishing, trapping, and snow machine use on adjacent Federal and State lands. This has only a moderate impact on the land because many families in the village have full time employment in the Tok area. There is not as much subsistance type living here as compared to other more remote villages. Most of the subsistance hunting, fishing, and trapping is done on their own village lands. Within the village withdrawal are three large fishing and recreation lakes which could attract more public use. Increased public use of these lakes and other village lands in the future may be incompatable with the village's land use management desires.
8. Tok Urban

Tok has an estimated population of 600 people. It has been experiencing some population increase in the past few years. There are no major development activities occurring here at this time. The apparent reason for this influx of new residents may be due to the rural
type of life style now experienced in Tok. Speculation as to the area's growth potential due to projected pipeline and mineral development activities may "also" be a reason. Right now there is no economic base for this population increase.

Tok has five service stations, one automotive repair garage, two lodges, three motels, four bars, four resturants, one bank, a post office, one charter airline service, one department store, three grocery and variety stores, two commercial overnight trailer campgrounds, one gift shop, one school (elementary and secondary), one clinic, four churches, two gravel airstrips, one gasoline and oil bulk plant, three laundromats, a volunteer fire department, one RCA communication complex, and various State, private, and Federal agencies and programs (State Troopers, Magistrate Office, Dept. of Highways, State Fish and Game, State Dept. of Revenue, State Weight Station, State Health Education Welfare Office, State Dept. of Tourism, Upper Tanana Chiefs Council on Alcholism, Rurcap, Ageing Program, Headstart, Public Health Service, Health Aid Program, Tanana Chiefs Conference, State Manpower Office, Division of Family and Children Services, Chamber of Commerce, Regional School Board, United Crow Ban, Upper Tanana Development Corporation, Tanana Survival School, U.S. Coast Guard, Bureau of Land Management, and U.S. Army Petroleum Pumping Station).

The location of the community makes it a natural service center for all vehicle traffic coming into or out of Alaska. It also serves as a service center for all the six native villages located around the community of Tok. (Dot Lake, Tanacross, Mentasta, Tetlin, Northway, and Eagle.) Land is in great demand for residential use and is available only through occasional State of Alaska land sales. Because of the supply and demand situation, land values in the Tok area are going up. If any development activity occurs in the Tok area, land demand and prices will increase drastically. The people who do own land in the Tok area are holding it for speculation purposes. Most of the land speculation appears at this time to be by local residents.

The U.S. Coast Guard is presently putting in a 80 acre LORAN Communications site eight miles east of Tok. Once construction is completed, it will create minimum impact on the area.

Local residents extensively use State and Federal lands surrounding Tok for hunting, fishing, trapping, snow machining, and for ATV use. This use will increase as the population in the area increases. There are also 6 commercial guiding operations which extensively hunt the area for moose and Dahl sheep during the hunting season.

There is an old military pipeline which comes through Tok. It starts in Haines, Alaska and goes through the Yukon Territory in Canada to Ft. Wainwright in Fairbanks. The pipeline has been torn up and all the pumping stations along its route are ready to be reactivated.
9. Tetlin - Rural

Tetlin is a remote indian village located 10 miles south of the Alaska Highway and 20 miles southeast of Tok. It has a population of 114 people ( 1970 census). It is situated within the former Tetlin Indian Reserve which was established by Executive Order on June 10, 1930. The reservation comprises an area of 768,000 acres. This area is closed for public use although trespass surveilance and enforcement is now limited. Commercial guides do hunt moose and Dahl sheep within the reservation boundaries every year. The native population presently utilizes this land area for subsistance purposes.

## 10. Northway - Suburban

The name applies to two settlements. One is primarily a white settlement at the Northway Airport. It consists of a FAA complex, a lodge, one grocery store, one bar and pool hall, one local electric company, one school (primary), one post office, a State Trooper sub-office, and a bush plane charter service.

The other settlement is a native community two miles north of the airport settlement. The combined population is 180. Native land use in the area is for subsistance purposes. The Northway Indian Village was declared eligible under the Native Claims Settlement Act and was given 115,200 acres. At this time, public use is permitted by a letter of non-objection from the village council.

Several non-local commercial guiding outfitters operate out of the Northway airstrip during the hunting season.

The hunting pressure for Dahl sheep is intense and is concentrated in the Nabesna mountain area 60 miles south of Northway. Intensive mineral exploration work by different major mining and oil companies is also being supported out of Northway. These companies are concentrating their work in the Nabesna mountains to the south and in the Ladue River Drainage to the north. Intensive gold mining activity is now being done on the Ladue Drainage just inside the International Border in Canada by two large Canadian mining companies.
11. Chicken - Rural

Chicken is an old mining town located on the Taylor Highway (milepost 68). The Chicken area permanent has a population of 18 and a summer population of 50 . Land use in the area is associated with gold mining activities on Federal Land, and on some patented private property. Impact of this activity has been high due to irreversable surface disturbance and stream siltation. At times, navigability of the South Fork River has been blocked because of water diversion dams. Mining activity in the area has increased significantly in the past two years. There are now 23 small individually owned mining operations active in the Chicken Area. Two years ago there were 3 operations active. In addition, the F.E. Company has a dredge on site, 200 acres of patented land and a closed down mining camp in the Chicken Area. If economic and market conditions improve, this dredging operation could start up again. A caretaker is employed year around by the company in order to see that the dredge and camp facilities are not disturbed by vandels. (See Intensive Land Use overlay).
12. Eagle - Suburban

Eagle is separated into two communities; native and nonnative. A three mile road connects Eagle with the Eagle indian village. The City of Eagle has a population of 172. It has experienced a $450 \%$ population increase in the past five years. However, $75 \%$ of these residents leave Eagle during the winter months. The serenity of this peaceful old style community is very appealing and people are retiring and buying old homes here. This community was the first incorporated city in Alaska (1901). It developed as a mining camp and supply center
for gold mining activities in the area. It has great historical significance, and tourism is increasing each year. BLM and the City of Eagle are stabilizing certain significant buildings. This is making the City of Eagle more attractive as a major tourist center for the entire upper Yukon River area.

The Eagle Native Village was given 92,160 acres of land under the Native Land Claims Settlement Act. The village has a population of 58 (1970 census). Native land use in the area has been for subsistance purposes.

Several large mining and oil companies have been using the City of Eagle as a base of operations for exploration activities in the area.

The Yukon River area around Eagle attracts many recreationists during the summer. Due to the accessibility of the River, an increasing number of occupancy trespass cases have been occurring. These trespassers use the land mainly for subsistance purposes. In the Eagle area, hunting, fishing, trapping, ATV use, and snow machining on Federal lands has been increasing in the past few years. Gold mining activities have also been increasing in Seventymile River area, 30 miles west of Eagle. New mining activities here are creating the same type of environmental impact as was described for the Chicken Area but on a smaller scale. The number of mining operations has increased from 1 to 3 in the past two years and this percentage increase is expected to continue.
B. Public Purpose Areas

Certain lands within the Fortymile Planning Unit have been purposed as national interest lands dedicated principally for public purposes. 2,282,820 acres have been purposed as the Yukon-Charley National Rivers and 320,000 acres have been proposed as the Fortymile Wild and Scenic River. Both of these proposals resulted from the Native Land Settlement Act of 1971. Congress will act on these proposals by December, 1978. If these two proposals are approved, the Bureau of Land Management will manage the Fortymile Wild and Scenic River and the U.S. Park Service will have responsibility for the YukonCharley National Rivers. Since these proposals have been made, the State of Alaska and the Doyon Native Corporation have selected the majority of the lands within these two areas.
C. Utility Systems

1. There are now two oil pipeline utility right-of-ways within the Fortymile Resource Area. One is the Alyeska Pipeline Corridor located in the Delta area. The length of the Alyeska right-of-way going through the Fortymile Resource Area is 96 miles. Forty-eight miles are on Federal lands and 48 miles are on State land. The width of the right-of-way is 54 feet but allows a work area of 300 feet. The other pipeline right-of-way is the Army USARRAL Petroleum System going from Haines, Alaska through a part of the Yukon Territory in Canada to Ft. Wainwright in Fairbanks, Alaska. This route goes through the Fortymile Planning Unit and it parallels the Alaska Highway (See overlay). The pipeline is currently not operational but the right-of-way is still valid (see overlay). The length of the old Army Pipeline right-ofway through the Fortymile Resource Area is 160 miles. Eighteen miles are on Federal lands and 142 miles are on State and private lands. Its width is 50 feet.
2. Other utility systems include the Golden Valley Electric Company which has a 30 foot right-of-way from Fairbanks to the Delta Junction. These right-of-ways are entirely on State selected and patented lands. The Tok-Tanacross area is served by the Alaska Power and Telephone Company. Their right-of-way is on State and Native Selected lands. The Northway Power and Telephone Company's right-of-way is also on State and Native lands (see overlay). RCA has a 50 foot right-of-way adjacent to the Alaska Highway from Fairbanks to the Canadian Border.
D. Communication Sites

There are several different types of communication sites within the Resource Area.

1. RCA has a network of microwave stations located on various portions of the Alaska, Richardson, and Glenn Highways (see overlay). These sites consist of a service road, a service building, and a 150 foot microwave tower. These sites are withdrawn on a 44LD513 to the Air Force and the withdrawal includes the service road and a 2 acre site for the tower and service building.
2. BLM and the community of Tok each have adjacent one acre communication sites 5 miles west of Mt. Newburger. This is State land and each group has a renewable five year Special Land Use Permit. The community of Tok has a TV receiving station and BLM has a repeater site for FM Radio communitactions. (See overlay)
3. BLM also has a withdrawal application in for a 40 acre communication site on Glacier Mountain 20 miles southwest of Eagle. This is a FM radio communication site on Federal land connecting the BLM stations at Eagle and Tanacross.
4. The U.S. Coast Guard is currently constructing a LORAN communication site eight miles east of Tok. This is an 80 acre withdrawal and will consist of 3 service buildings, an access road, and four, seven hundred foot towers. This facility is part of navigation system for oil tankers operating out of Valdez harbor.

Current "Intensive" Land Use Tabulations

Land Use

1. Urban, Suburban, \& Rural Communities

| Big Delta | 640 | Acres |
| :---: | :---: | :---: |
| Delta Junction | 9,023 | Acres |
| Fort Greely | 623,500 | Acres |
| Dry Creek | 100 | Acres |
| Tok (10 sq. miles) | * 6,400 | Acres |
| Chicken | 10 | Acres |
| City of Eagle | 570 | Acres |

Total
640,243 Acres

* Approximations

2. Agricultural

Delta-Clearwater Area

| Area currently under cultivation | 4,898 Acres |
| :---: | ---: |
| Area - agricultural potential | 200,000 Acres |
|  | Total |

3. Public Purpose Areas

| Charley-Yukon Nat'1. Rivers (proposed) | $2,282,820$ Acres |  |
| :--- | ---: | :--- |
| Fortymile Wild \& Scenic River (proposed) | 320,000 Acres |  |
| Copper River Classification Order | 184,000 Acres |  |
| Alyeska Pipeline Corridor | 196,000 Acres |  |
|  | Total | $2,982,820$ Acres |

4. Utility Systems

Alyeska
USARRAL Petrol. Dist. System
Golden Valley Electric Alaska Power \& Telephone Co. Northway Power Co.
RCA
Total

| 320 Acres (Federal) |
| :--- |
| 320 Acres (State) |
| 110 Acres (Federal) |
| 860 Acres (State) |
| 345 Acres (State) |
| 120 Acres (State) |
| 34 Acres (Native) |
| 860 Acres (State) |
| 110 Acres (Federal) |
| 3,074 Acres |

5. Communication Sites

| RCA Akascom | 16 Acres |
| :--- | :---: |
| Tok Community TV Committee | 1 Acre (State) |
| BLM | 40 Acres (Federal) |
| U.S. Coast Guard | 1 Acre (State) |
|  |  |
|  | Total |

See overlay for locations of areas listed above.

## III. Planning and Land Use Controls

Within the Planning Unit there are certain areas which are developing planning and land use controls. These areas are: A) The City of Delta, B) Delta Junction Area Land-Use Management Study, C) The City of Eagle, D) The Alyeska Pipeline Corridor, E) Tetlin Indian Reservation, F) the Native Village and Regional Selection areas, G) The Copper River Classification Order. The objectives and goals are described below for each of these different types of land management areas and are not necessarily BLM's recommendations.
A. The City of Delta Junction

The City of Delta Junction is currently developing a Land Use Plan. A community development plan, volume I - "Basic Studies" was prepared for the City of Delta Junction through a comprehensive planning grant from the State of Alaska, Department of Housing and Urban Development. This report contains goals which reflect how the residents of Delta Junction want their community to develop in future years. These goals will be the basis for the City's land use management plan. These goals are now listed in order to show what may be included in this plan.

1. Goal: To assure that Delta Junction will develop as the center of regional growth.

Reasons for the goal:
a. $59 \%$ of the total respondents to the several questions in the Community Attitude Survey on growth of the City and the area felt that Delta Junction should be the center of future regional growth.
b. The City of Delta Junction is better located to serve the function as the center of regional growth than is any other community in the area because of its continguity to extensive tracts of developed and undeveloped agricultural land, it's location at the confluence of major highway arteries, and it's accessibility to major population centers (especially Fairbanks).
c. Past development trends clearly indicate (if not dictate) that Delta Junction is more likely to develop naturally as the center of regional growth than is any other community in the region.

## Actions:

Some growth and development in the Delta region is inevitable. In order to assure that Delta Junction will be the center of this growth, it will be necessary to provide agricultural processing facilities and other related support facilities in order to foster the agricultural industry. Also, certain public policies (such as taxation) will have to be conducive to the establishment of agricultural-serving businesses within the City limits. Promotion of the tourism industry in the region would result in an increased number of service oriented businesses in Delta Junction.
2. Goal: To assure a stable future economic base, independent of Fort Greely operations level.

Reasons for the goal:
a. Fort Greely is currently the major source of employment in Delta Junction. If at any time Fort Greely operations should significantly decline (there is presently no indication that this will happen), the stability of Delta Junction's economy would be seriously jeopardized. This illustrates the necessity to diversify the economic base of the connumity and to develop additional employment opportunities not related to military operations at the Ft. Greely base.
b. $77 \%$ of the respondents to questions on growth in the Community Survey felt that the growth of the agriculture industry should be encouraged.
c. $64 \%$ of the respondents to questions in the Community Survey on growth felt that Delta Junction should encourage the growth of the tourism industry.

Actions:
As discussed elsewhere in the Basic Studies report, there is excellent potential for agricultural development in the Delta Junction area. Providing agricultural processing and support facilities has great economic potential in Delta Junction, and should be encouraged and fostered by appropriate public and private actions. Tourism can also provide a large percentage of Delta Junction's economic base, on a seasonal basis. This will require the development of accommodations and, if tourism is promoted
by the community, appropriate public policies to encourage the industry in the area. This would include upgrading campground facilities, increasing hotel/motel accommodations and restaurant facilities and providing facilities for tourist attracting functions. Attracting visitors to Delta Junction should be promoted in the State's larger population centers. Care should be exercised, however, in developing the tourist-tourism industry so as to not produce results which detract from the quality of life for Delta area residents.
3. Goal: To maintain the rural community character of the area and protect the environmental quality of the Delta area as growth continues.

Reasons for the goal:
a. The majority of the respondents to the Community Survey indicated that they like the small, rural character of Delta Junction, and that they want it to remain much as it is today.
b. Maintenance of a high level of environmental quality is an important contribution towards continuing the present high quality of life in Delta Junction.

Actions:
To implement a community land use plan that will not conflict with natural restrictions, such as areas of potential flood danger and areas underlain by permafrost or poor soil conditions. The City of Delta Junction should initiate regulations regarding construction in defined areas of flood danger and establish minimum housing standards and programs for upgrading existing substandard housing. It will also be necessary to implement appropriate land use controls to maintain population and land use densities at levels consistent with health and safety standards and to upgrade several community facilities in order to assure a high level of environmental quality. It may prove necessary to install either a community water supply system or a community sewage disposal facility in the more densely populated central area of the community. Relocating the sanitary landfill should be accomplished at an early date.
4. Goal: To assure high quality development and appropriate land use in the City.

Reasons for the goal:
a. A large percentage of the Delta area's agricultural potential may be lost due to land speculation and development (of non-agricultural type) if the potential agricultural areas lying adjacent to the City are sold in small parcels. Much of this land is already being sold in 40 acre and smaller parcels; 320 acres under single ownership is considered to be the minimum size for profitable agricultural development in the area.
b. One of the major reasons for the preparation of a comprehensive plan is to avoid random and indiscriminate development and to provide for the most desirable use of the available land resource.

Actions:
To use zoning, land subdivision regulations, covenants, and public land ownership advantageously to influence land use and parcel size. Certain natural and political restrictions (including corridors and land ownership) must be taken into consideration in the planning stage to avoid unwise land use associated with future development. Some inappropriate land use (such as development in the floodplains, sanitary landfill partly in the river and entirely in the floodplain and intermixing of incompatable land uses) already exists. The existing linear pattern of the developed portion of the City of Delta Junction will be accentuated by the highways and by the installation of additional corridors (i.e., Alyeska Pipeline, possible future gas pipeline). Planning of residential and commercial areas adjacent to major corridors should be devised so as to promote homogeneity of land uses within the community and avoid the extension of linear development patterns.
5. Goal: To minimize the negative impacts and capitalize upon the positive aspects of the Trans-Alaska Pipeline project.

Reason for the goal:
The majority of the impact from the Trans-Alaska Pipeline project upon the Delta Junction community will be economically beneficial due to an increased level of local business activity and an addition of substantial real property valuation in the City. There may be
temporary strain on public services due to the influx of pipeline workers. State aid will help to mitigate the temporary strain of an inflated population. However, the long term impact of the pipeline project upon the Delta community can be extremely beneficial if the short term problems are dealt with properly and if appropriate public policies are adopted and implemented.

## Actions:

Short range public programs to cope with increased law enforcement problems, inadequate housing, possible overcrowding of educational facilities and overtaxed public services should be developed and implemented. Efforts should be initiated to assure that the physical construction phase of the pipeline project does not disrupt the lifestyle in Delta and that minimal damage to the land area occurs. Land use planning should be accomplished along the pipeline corridor through the City to assure that the community is not divided into unrealistic segments. Analysis of the potential for revenue to the City from a property tax upon the pipeline within the City should be conducted.
6. Goal: To develop the appropriate local government administrative structure necessary to provide the means for achieving the wants and needs of the people of Delta Junction.

Reasons for the goal:
In order to assure that the Delta Junction community develops in the way desired by its citizenry, it is necessary that there be a means of influencing the future growth of the community. There must be a means of implementing the public policies and programs resulting from the Community Development Plan. Government is one means by which the people can achieve their common wants and fulfill their common needs that cannot be met on an individual basis.

Actions:
Adequate local government personnel should be acquired to provide the public services and operate the public facilities of the community. Programs directed at meeting the wants and needs of the community should be developed and implemented. Funding for the local government effort should be acquired.
B. Delta Junction Area Land-Use Management Study

The State of Alaska, Department of Natural Resources on November 26, 1974, created a Land Use Management Study for State lands in the Delta Junction area. The purpose of this current study is to collect available information so a Land Use Management Plan can be developed. BLM has contributed manpower and data to this study. (See overlay for Study Area Boundaries.)

The following five goals and objectives statements are the product of the "Goals and Objectives" phase of the Delta Land Management Planning Study. They will be used as a general standard for the final land use management plan. These goals are listed in order to show what may be contained in this land use plan for State lands adjacent to the Delta Junction area.

1. Goal: To insure an orderly development of natural resources on State lands within the study area to best benefit the people of Alaska now and in the future.

Objectives:
a. Arable land (suitable to agriculture) should be designated and maintained as such.
b. Timber resources must be protected from large scale, clear sutting operations while making the mature trees available for harvest.
c. State lands should be opened to mineral exploration and extraction and provisions made for controlled access into areas where they are found.
d. Water quality should be maintained with respect to chemical and physical properties to insure future fish and wildlife habitat.
e. More State land should be made available to Alaskans who wish to live a "frontier" or "wilderness" lifestyle.
2. Goal: Preserve and utilize lands of agricultural potential in the Delta planning region for the maximum benefit of present and future generations.

Objectives:
a. Protect lands of agricultural potential from encroachment and/or preemption by non-compatible uses.
b. Develop in an orderly fashion and maintain lands of agricultural potential with milti-use concepts.
c. Develop and maintain the quality of land and water so that they will remain productive.
3. Goal: The goal is an area wide system of transportation, utilities and regional facilities responsive to the unique needs of the study area.

Objectives:
a. Investigate and possibly establish multi-model transportation systems which will minimize the effect upon the environment and retain the aesthetic value.
b. Develop utility corridors/systems which will provide service to the area while utilizing natural terrain features to minimize the visual impact.
c. Insure that the needs for transportation or utility corridors are fully justified prior to construction.
d. Develop an overall water resource plan to include hydrological data sufficient to effectively manage water resources.
e. Plan for regional facilities throughout the planning area which are responsive to the needs and desires of the people.
4. Goal: To provide an opportunity for a variety of recreational experiences in the Delta Land Management Planning Study Area.

Objectives:
a. Develop certain portions of the area for recreation in a manner compatible with the scenic beauty and protection of the environmental excellence of the area.
b．Maintain certain portions of the area in a wilderness state，as defined by the Federal Wilderness Act．
c．Designate some area for specific recreational uses．
d．Preserve and protect Alaska＇s historical and cultural heritage．
e．Continue development of parks and recreational opportunities by both the public and private sector．

5．Goal：Provide for the present human population and future generations by setting aside the necessary habitat for all existing flora and fauna，and to manage these based first on the needs of the fauna and then on a sustained yield basis．

Objectives：
a．Improve fauna production and availability through concentrated habitat improvement．
b．Maximum utilization of previously disposed land holdings should be realized before wilderness areas are disturbed．
c．All new wilderness access should be considered in light of fauna habitat needs and only undertaken after study and mandatory public hearings．

C．The City of Eagle
The City of Eagle＇s present goal is to retain the old historic nature of the city．Local zoning is attempting to control the type and location of buildings within the city limits．The effectiveness of these building restrictions is varied， depending upon the attitude of the people involved．Enforce－ ment of the zoning laws is lacking．The city＇s goal is to make Eagle into a tourist town through the retension of its old and historic buildings．By controling the type of new buildings being constructed they hope to retain the old time character of the town．The effect of this is that many people each summer are visiting Eagle and this increasing traffic is putting more demands on the public campgrounds all along the Taylor Highway．

D．The Alyeska Pipeline Corridor
The Alyeska Pipeline Corridor was created by PLO 5150 in order to provide a wide enough corridor for the placement of the Alaska Pipeline．Within this planning unit，the area south
of Delta Junction is affected. This Alyeska Pipeline Corridor is classified as a separate planning unit. For additional information, reference should be made to the Corridor Management Unit Plan.
E. The Former Tetlin Indian Reserve

On the reserve there is a subsistance type life style without a current operational land management plan. The immediate objective is to keep the land area as it is by keeping the public's use of this land to a minimum level.
F. Native Village and Regional Selection Areas

The five native villages in the planning unit have just in the last year made their land selections. Full title of the land from the Federal Government will not be received until a survey of the lands can be made. These village lands may be managed by the Doyon Native Corporation and a long range land use plan is now being developed. The immediate objective on native regional lands is economic development and the maximization of profit margins. Development of native lands will effect public lands. Road access into native development projects in many cases will be across Federal land. The public's demand to get into these newly opened areas may become intense. (See land status overlay)
G. Copper River Classification Order

The Copper River Classification Order, PLO No. AA-2779 and F9, dated 12-24-68, classified 184,000 acres in this planning unit for miltiple use management. (See overlay for location) This land has been segregated from appropriation under the Agricultural Land Laws, Native Allotment Act, Trade and Manufacturing Site Act, Townsites, and Selections by the State of Alaska. Since this land has been segregated, no multiple use management plan has been developed and no activity has taken place.
IV. Land Classification

The land within the Planning Unit can be catagorized into the following ownership classifications.
A. State

1. Patented
2. Tentatively approved
3. Selected
B. Native
4. Village
5. Regional
6. Deficiency
7. Allotments
8. Former Reserve
C. Private

Non-native citizens who own property for residental, recreational, or for speculative purposes.
D. Federal

1. Copper River Classification Order - BLM
2. $D 1$ - BLM
3. $\mathrm{D} 2-\mathrm{BLM}$
4. Pipeline Corridor Withdrawal - BLM
5. D2 - Intermin Management - BLM - Yukon-Charley National Rivers Proposal
6. Fort Greely Military Reservation - U.S. Army
7. USARRAL Petrol. Dist. System - U.S. Army

The significance of non-BLM land classifications will be discussed.
A. State

The State is still selecting land within the Planning Unit. To date they have 553,000 acres of patented land, 1,152,000 acres of land Tentatively Approved, and 1,705,000 acres selected. As a result of the Native Land Settlement Act, some native villages were allowed to select State selected land which had not gone to patent. Healy Lake selected 46,080 acres of State land, Dot Lake selected 69,120 acres, Tanacross selected 69,120 acres, and Northway selected 38,400 acres. Final land selections by the State will have to be completed by 1983. It is not known at this time what additional Federal lands within the Planning Unit the State of Alaska will select. The State has been selecting lands around inhabited areas and along major highway systems.
B. Native

All native village and native allotment selections have been made. These are final selections. However, the Doyon Regional Corporation has overselected the lands entitled to them under the Native Land Settlement Act of 1971. This overselection will give them additional time in which to determine what parcels of land will give them the greatest economic return. Their "final" selections were supposed to have been made by December 17, 1975. Until corporation selections are finalized, we will not know which lands the Doyon Corporation will own within Fortymile Planning Unit. There are 2,580,000 acres on which they have selected in excess of their entitlement. If they elect not to accept conveyance of this land, it will then be open for State selection. If the State does not select it, this land will then remain in Federal ownership.
C. Private

There is relatively little land classified as "private -nonnative" within the Planning Unit. This is significant because the desire for private land is great and there are only four types of land owners that will be able to supply this demand. They are: the Federal Government, the State of Alaska, the Doyon Regional Native Corporation, and village corporations. This increasing demand for private property will influence future land management decisions made within all three of these agencies.
D. Federal - (non-BLM)

1. D2 - BLM - Intermin Management - Yukon-Charley National Rivers Proposal (National Park Service)

2,316,502 acres have been set aside for a National Rivers proposal as a result of the Native Land Settlement Act of 1971, 952,964 acres are designated D2, 1,112,056 are designated D1, and 251,482 acres are Native Regional deficiency land. This proposal is significant because of the large acreage involved and the major impact on: 1) wildlife, 2) recreation use, 3) the local market economy, 4) the hydroelectric power potential of the Upper Yukon River, 5) mining and mineral entry, 6) transportation systems and services, 7) cultural resources, and 8) the communities of Eagle and Circle. The major land uses in the Yukon-Charley are now subsistance hunting, mineral exploration, and sport hunting and fishing. Subsistence uses would not be significantly affected by establishment of this proposal. Implementation of the proposal would,
however, result in a shift in emphasis from mineral exploration land uses to recreation oriented activities. Sport hunting and fishing would continue as uses in the area, although these uses could be regulated. Overall, the proposed action would result in a substantial increase in recreational activities while most present use would continue at possibly reduced levels.
2. Fort Greely Military Reservation - U.S. Army

The 623,500 acre withdrawal at Fort Greely is significant in that it contains 2000 acres of contaminated ground. It has been used as a bombing impact and testing site since 1948. Because live ammunition and other types of war materials may be present, any land transfer back to public domain would be impractable until TOTAL decontamination could be completed.
3. USARRAL Petrol. Dist. System - U.S. Army

The USARRAL pipel ine withdrawal contains a 50 foot pipeline right-of-way from Haines, Alaska to Haines Junction, Yukon Territories, Canada; along the Alaska Highway through the Fortymile Planning Unit to Fort Wainwright in Fairbanks, Alaska. This military pipeline has not been operationa? since 1971. However, the pipeline corridor and supporting facilities are in operational condition.

## E. Conclusion

Until ALL land selections by the State of Alaska and by Doyon are finalized, any intensive land use management plan for Federal lands now contained within the Planning Unit would be impractable. Any "final" and detailed management plan made at this time would have to be altered as the ownership classifications continue to change. However, identification of land use opportunities through the Fortymile Planning Unit URA/MFP is now being completed without ownership patterns being a major consideration. This information will enable us to write a comprehensive multiple use management plan for BLM lands, whenever ownership patterns are stabilized. Land ownership in the planning unit could be a checkerboard pattern with many small isolated blocks if adequate land use planning is not done.

## Land Classification Tabulation

 (As of 7176)Type of Classification Acreage
Multiple Use Management - Copper River ..... 184,000
Classification Order
Recreation and Public Purposes
D2 - BLM Fortymile Wild and Scenic ..... 320,000 River Proposal
D2 - BLM - Intermin Management - Yukon-Charley ..... $2,282,820$ National Rivers Proposal (National Park Service)
D1 - BLM Public Purpose Lands ..... 5,967,000
Native Slections
Former Reserve ..... 768,000
Village Selections ..... 437,760
Regional Corporation Selections ..... 3,922,000
State Grants$3,410,000$
Exchanges ..... 0
Agricultural Entry (Homesteads) ..... 1760
N.E.S. (not elsewhere specified)
Unclassified
Total ..... 17,293,340
V. Withdrawals

There are 21 withdrawals on Federal land within the Planning Unit. Please refer to the tabulation sheet on section I (Land Ownership) of this report. Reference should also be made to the Land Ownership overlay for the exact location of these withdrawal areas.

We will briefly describe the purpose of each of these 21 withdrawals, the segregative effect, and the effect of withdrawals on the management of lands, resources, and other possible users.
A. Fort Greely Army Base

By virtue of the authority vested in the Secretary of the Interior by the Act of September 26, 1961, (75 Stat. 687) 571,995 acres were withdrawn from all form of appropriation under the public land laws. This included the Alaska Native Claims Settlement Act of December 18, 1971, (85 Stat 688); selections by the State of Alaska under the Alaska Statehood Act, (72 Stat 339); location and entry under the mining laws, 30 USC Sh. 2; disposal of materials under the Act of July 31, 1974, (30 USC 601-604, 1970); and from leasing under the Mineral Leasing Act of February 25, 1920 ( 30 USC 181-287, 1970) and reserved until September 26, 1976 for use by the Department of the Army for the Fort Greely Maneuver Area. A request for the renewal of this withdrawal for a period of 20 years has been submitted and it is now being processed. The general public can use certain designated portions of these lands for recreation purposes. Other areas are closed to public use because of hazardous military materials and military activities found in these areas. These areas are contaminated and are unsafe for any public use. This withdrawal limits public and other resource use of the area. It also creates increased demand on adjacent State and Federal lands. Under PLO 5187, signed $3 / 15 / 72$, all of the lands embraced in defense or military reservations in Alaska of whatever nature (except those lands in Naval Petroleum Reserve No. 4) are reserved for study and review to determine the proper classification of the lands under section 17(d)(1) of the Alaska Native Claims Settlement Act, so that the public interest will be protected after the lands are no longer needed for military or defense purposes.
B. Gerstle River Artic Test Station

Blair Lake Gunnery Range
Eielson Air Force Base
USARRAL Petroleum Dist. System - Administration Site - Tok
The Gerstle River Artic Test Station, the USARRAL Pump Station
at Tok, portions of the Blair Lake Gunnery Range, and the Eielson Air Force Base lie within the Fortymile Planning Unit. The purpose, the segregative effect, and the effect on the management of lands, resources, and other possible users are all similar to the situation just described for the Fort Greely Army Base.
C. Pipeline Corridor

In this Planning Unit, 196,000 acres were withdrawn from all florms of appropriation under the public land laws except for location for metalliferous minerals. This area is reserved as a utility and transportation corridor. The purpose was to withdraw lands over which the Alyeska Pipeline could travel. The exact routing at the time this PLO was written was not known. The lands withdrawn by this order are subject to administration by the Secretary of the Interior under applicable laws and regulations.

It shall continue to be subject to his authority to make contracts and to grant licenses, permits, rights-of-way, easements, and leases until this order is expressly modified or amended. The public can use all these lands for recreational purposes except for portions on the pipeline right-of-way.
D. BLM Administrative Sites (Eagle, Chicken, Northway, Tanacross, and Delta)

Certain lands in Eagle, Chicken, Northway, Tanacross, and Delta are withdrawn from all forms of appropriation under the public land laws. These lands contain administration buildings and other facilities from which BLM administers various resource management programs. These administration withdrawals give BLM exclusive land use and these sites contain the minimum amount of acreages necessary for management objectives. Public use is not permitted in these areas. The segregative effect is total for the management of these sites and for other types of land uses.
E. Recreation Sites (Eagle, Boundary Cutoff, South Fork, West Fork, Walker Fork, Liberty Cree, and American Creek)

Subject to valid existing rights, these lands which are under the jurisdiction of the Secretary of the Interior are withdrawn from all forms of appropriation under the public land laws, including the mining laws (CH 2, Title 30 USC) but not from leasing under the mineral leasing laws, and are reserved for protection of public recreation values. All these sites contain
developed and intensely used campgrounds with the exception of the sites at the Boundary Cutoff and South Fork. The South Fork site is currently being developed. At the Boundary Cutoff, no development has been planned. These recreational sites are segregated and managed for public recreation purposes only. No other type of land use is currently being carried out at this time.
F. U.S. Customs Administration Site (Scotty Creek)

Seventeen acres of land were withdrawn from all forms of appropriation under the public land laws, subject to valid existing rights for use as an administration site by the U.S. Customs and Imigration Service. This single purpose site is closed for all other types of land and public use.
G. D2 Withdrawals (Yukon-Charley National Rivers and the Fortymile Wild and Scenic River Proposals)

These lands were withdrawn for possible addition to or creation of units of the National Park and Wild and Scenic Rivers Systems. Subject to valid existing rights, these lands are segregrated from all forms of appropriation under the public land laws. This includs selections by the State of Alaska under the Alaska Statehood Act; from location and entry under the mining laws; from leasing under the Mineral Leasing Act; and from selection by Regional Corporations under section 12 of the Alaska Native Claims Settlement Act. Congress will act on these lands by December 18, 1878. If the proposal is passed, these lands will be managed mainly for recreational purposes. Other types of resource management may occur although mining will be restricted.

Detailed management plans will be developed if Congress approves this proposal. If the proposal is not passed, these lands will then be open to appropriation by the State of Alaska and the Doyon Native Corporation. If selection of these lands is not made, they will be classified as Public Interest Lands. They will be opened to entry under current mining laws and will be managed by the Bureau of Land Management.
VI. Permits

There are no permits on Federal land in this Planning Unit.

## A. Trespass Cabins

Within the Planning Unit there is unauthorized use on Federally owned lands. Most of this recent activity has been trespass cabins on D1 and D2 lands, That has occurred within the past three years. There are to date eight occupancy trespass cabins on D1 lands and 22 on D2 lands. Trespass reports have recently been made on those violations. Priority is now being given to D2 lands and violations on Native selected land are being processed. Nineteen cases have been processed at this time and nine on D2 lands will be done this summer (1976). Each trespass violator is given Notice of Trespass with a specified time in which they could either remove the cabin or give it to the government for disposal. Two cabins were removed and three cabins were given to the government. The other cabins are still on sites and available for further occupancy problems. One trespass case reported in 1973 was appealed and the cabin and associated airstrip is still being used for a commercial guiding operation. This case is back to the District Office for their review and necessary action.

Trespass cabins are of two types. One type is where a new cabin is constructed and the other is where an old adbandoned cabin is taken over for private residential use. Seven trespass cabins have airstrips built next to them for access, the others are accessible by riverboat and snow machine. Most violations involve people who are trying to get away from inhabited areas for various reasons. These people try to occupy the cabins year round and they attempt to live a subsistance type of life style. However, two cases on D2 land do involve commercial guides who use trespass cabins for economic profit.

Surveilance of the Planning Unit continues on a year round basis. The fire control detection aircraft reports new occurrances during the summer months. Various private aircraft and air taxi operators in the area also report new occurrances throughout the year. Articles have appeared in the local newspapers warning the public about the consequences if they knowingly trespass on Federal lands. Fire personnel have been quite active in the trespass abatement program during the past several months. Trespass reports are now being served quickly and this trend will continue until all trespass cases are stopped within the Planning Unit.

## B. Mining Claims

Another type of unauthorized use increasing within the Planning Unit in the past two years is the illegal mining claim. Several hundred mining claims have been located on lands closed to mineral entry. Mining was closed in certain areas after the creation of D2 lands under section 17 of the September 17, 1971, Native Land Settlement Act. However, mining claims on Federal land in this Planning Unit are filed in the State of Alaska's Filing Office in Fairbanks. When filings were made, the applicants are not told which areas were closed to mining. As a result, we have many claims filed by people who are not aware they are illegal. Some of these claims are now being worked and are in trespass. The problem in stopping this type of mining trespass is due to the fact that we do not know where all the claims are, and who is the current leasee. Getting this information current will involve several months work at the State Recording Office in Fairbanks. Until this is done, only slow progress will be made on the total abatement of these trespass mining cases. Effective May 26, 1976, the Area's Mining Engineer was assigned the responsibility for abating mining trespass occurrances. With a person now actively working in this area, progress will be made.

## C. Utility Companies

The Northway Power and Light Company has no right-of-way permit for a 10 mile section which crosses native selected land. They are now in trespass. The width of this power line is 30 feet. A trespass notice was filed at the request of the Northway Native Village. A letter of non-objection was asked for by the Northway Power and Light Company and it is now being given by the village council.
D. Indiscriminate Dumping

The last type of known unauthorized land use occurring within the Planning Unit is indiscriminate dumping. This is taking place on various locations around inhabited areas. Most of these areas are on State and Native lands. However, the City of Eagle dump is located on Federal land. The City has no suitable area for a dump and no progress has been made in finding a solution to this problem.
E. Material Sites

See Section VIII; Lands Quality, Condition, and Trend, Item G - Material Sites.

VIII Lands Quality, Condition, and Trend
The Fortymile Planning Unit contains a large percentage of high quality land. Because there has been a limited amount of development and road access within the area. However, this situation is just starting to show change. Activity and interest in the area is rapidly increasing mainly from non-locals. Their values in many cases are different and they are starting to use the Federal lands in a manner which can change current land quality and condition. We will now discuss the various situations which influence land quality, condition, and trend in this Planning Unit.
A. Mining

A big concern is with new mining operators. Some appear not to be legitimate miners and irreversable environment damage is accurring because of poor operational practices. Also in the past three years, new mining roads are being indiscriminately put in irregardless of slope and erosion potential of the soils. Cats and various types of wheeled vehicles are traveling over fragil swampy permafrost areas in the summer time. This equipment gets stuck frequently so new trails are continually being put in. The 1872 mining act legally allows miners to reasonable access to their mining operations.

Sillation of the South Fork of the Fortymile River has been heavy in the past two years. The sillation rate has been beyond limits set up by the Environmental Protection Agency. The excessive sillation continues because the miners know that the Environmental Protection Agency and the BLM have small staffs and the probility of them being forced to do anything has been low. It was recognized that sillation and other types of irreversable environmental mining damage will continue unless we have a person working full time with the miners within the Planning Unit. Effective May 28 of this year, a man was assigned on a full time basis to this task.
B. Incompatible Uses

1. By the nature of the two activities, mining and recreational use of the same land can be incompatable. This
situation is present in the Fortymile River Basin. This river system is being heavily used and valued by both canoeists and miners. The water quality, along with the natural undisturbed aestic value of the area, has been bringing in several hundred recreationists to the area every year. It is estimated that several thousand visitors will be annually using this scenic area within the next 10 years. A few unconcerned mining operators doing excessive environmental damage can easily destroy in a short period of time, the high recreational value of the river system. This conflict with these two types of noncompatable alnd users has the potential for being a very serious problem and it must be resolved through detained land use planning.
2. Road realignment proposals on the Taylor Highway has been in some cases incompatable with maintaining the high scenic values of the area. This problem is being resolved with the State Highway Department by relocating these realignment areas farther away from the scenic corridor of the Fortymile River. Concern for the scenic value of the Taylor Highway area will have to be given more emphasis. The scenic and recreation value of the area can be quickly altered by a poorly located road.

## C. Off Road Vehicle Use

1. Within the Planning Unit, there is an increasing amount of off road vehicle use during the hunting season on areas which contain very fragil soils. This type of use on these types of soils will cause a considerable amount of environmental damage if it is allowed to continue unregulated. This is now occurring in the Mosquito Flats area, the South Fork of the Dennison River area, and on Polly and American Summits on the Taylor Highway. (Mileposts 105 and 135) Other areas in the Planning Unit also contain fragile soils and these areas could receive irreveraible damage as man's ability to drive further back off the road systems increases.
2. Past military maneuvers on public lands have also caused considerable environmental damage on permafrost areas. More applications from the military for maneuver permits are being received yearly. Whenever military vehicles have been involved, they have been rejected because of environmental considerations. However, because there are no environmental controls for recreational users of off the road vehicles, a double standard with the military has been created.
D. Current Land Use Control Violations

There are some land use controls of Federal lands in the Planning Unit. However, the main reason why the land quality is generally high is because of the lack of activity. As population increases, land use and violation of existing land use controls will continue to increase. Since the Alyeska Pipeline construction started in 1974, national interest has centered on Alaska. Alaska has become known as a place for great economic opportunity. Many people are now coming into this particular area in order to take advantage of this opportunity. This trend will continue and the pressure on Federal lands will become very intense.
E. High Land Quality Areas

Existing high land quality is what makes the Fortymile Planning Unit special. Within the Planning Unit, there are lands which possess extremely high quality environments. Two distinct areas which have been recognized for their high quality environments are the proposed Yukon-Charley National Rivers and the proposed Fortymile National Wild and Scenic River. Two other areas which stand out are the Mt. Kimball Glacier area and the 01 igivie Mountain-Tatondic River area (see overlay - high quality environments).
F. Good Development Practices

A good development practice has been occurring in Tok. The majority of homes located on the Alaska Highway near Tok are built out side of the highway visual corridor. This creates a natural scenic effect for visitors driving the highway. It also creates a feeling of privacy and seclusion for individual families who have built homes in this manner. It is a good practice for intensly inhabited communities and it has developed voluntarily over a period of years. Whether this practice continues as the area grows remains to be seen. Similiar to this practice is the current situation of very few bill boards on the visual corridor along the Planning Unit's portion of the Alaska, Taylor, Glenn, and Richardson Highways. This lack of signs increases the scenic qualities of the highways. (Refer to overlays for specific locations of environmental problem areas and areas which contain high quality environments.)
G. Material Sites

There are 202 areas along the Taylor Highway involved in material sites. Approximately 20 of the areas are covered by right-of-way material site permits between Tetlin and the Walker Fork Bridge, and therefore, in compliance with regualtions. Of the remaining pits, those which are outside of the 200 ft . right-of-way are in trespass.

Most of the sites have been left in a ragged condition but approximately 120 can be rehabilitated economically. The remaining pits are better left alone with nature eventually healing the scars. This conclusion is reached since many of the pits have a new vegetative cover which would be destroyed by dressing of the pit area or since the cost of rehabilitation would far exceed the benefits derived.

All of the pits adversely affect the environment. Eight have erosion activity in progress. While none create a hazard to the water resources of the area, they do, however, adversely affect aesthetics. The adverse environmental impact results from:

1. No thought being given to the placement of the pits.
2. No consideration being given to other resource values.
3. No concern for aesthetics.

All material sites on the Alaska, Richardson, and Glenn Highways are shown on the overlay.
IX. Water Needs

The water being used on a yearly basis for land resource purposes on public lands at this time is insignificant.

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# FORTYMILE PLANNING UNIT 

## LAND OWNERSHIP

RESOURCE AREA- - - -
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STATE SELECTED
REGIONAL SELECTED
VILLAGE SELECTED
D-2 LANDS
PIPELINE CORRIDOR
A BLM ADMINISTRATIVE SITEP BLM RECREATION SITEC US CUSTOMS
P ARMY PUMP STATION
D-1 LANDS

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# LANDS STEP III 

## LEGEND

Resource Area Boundary
U Urban Area
SU Suburban Area
(R) Residential Community
(C) Commercial Community
(I) Industrial Community

I Intensive Land Use
A Agricultural
UC Utility Corridor
CS Communication Site
UnCR Area of uncontrolled road development
PD Area of indiscriminate dumping
P Public Purpose Area
T Unauthorized Use Termination
GP Gravel Pit
AS Abandoned Structure
CONTAM Contamination Area
—. ORV Uncontrolled Off-road Vehicle Use Area
1 TO 53 Mining Claims

-     -         -             - DELTA JUNCTION AREA-LAND MANAGEMENT STUDY

Alyeska Pipeline Corridor
__- Wrangell Mountains National Forest
..-. CRCO Copper River Classification Order

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## LANDS STEP IV

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## LANDS: OPPORTUNITIES <br> UNIT RESOURCE ANALYSIS - STEP IV

I. Potential Intensive Land Use
A. Urban and Suburbar Expansion

1. Tok Expansion Area
2. Northway Expansion Area
3. Delta Junction Expansion Area
4. Eagle Expansion Area
5. Chicken Expansion Area
6. Summary
B. Intensive Use Areas (outside of expansion areas)
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8. Commercial Business Leases on Federal Lands
9. New Communities and Settlements
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11. Intensive Mining Development Areas
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B. Miscellaneous Land Use Opportunities
III. Agricultural Opportunities
IV. Potential Utility Systems
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12. Big Delta Dam Site
而
13. Gerstle River Dam Site
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18. Reduction in Populations of Fish, Birds, and Animals
19. Diminution of Aesthetic Quality and Environmental Degration
20. Reduction of Tree Stands

21. Reduction of Water Production
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C. Hazardous Activities
22. Accidents
23. Access Roads
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25. Construction and Operation
26. Developing Granular Material Sources
27. Field Reconnaissance and Preliminary Investigation
28. Stream Crossing
29. Sub-surface Examination
30. Drilling Sumps
31. Waste Disposal, Clean-up, and Restoration
D. Land Quality Conclusions and Recommendations
X.

Land Patterns

Lands: Opportunities<br>Unit Resource Analysis - Step IV

## I Potential Intensive Land Use

The Fortymile Planning Unit has development opportunities and we anticipate it will receive very intensive land use in certain areas within the next 15 years. Mineral development is going to be the biggest single factor in rapidly stimulating this growth.

Mining and gas and oil development will cause :

1. Population and economic growth and the expansion of residental, commercial, and industrial land use in Eagle, Chicken, Tok, and Northway.
2. Expansion of transportation systems throughout the Planning Unit.
3. Expansion of utility systems and corridors throughout the Planning Unit.
4. An increase in the number of communication sites.
5. Intensive recreational use caused by new mining access roads opening up previously inaccessible areas.

Timing of these developments will depend on world market conditions in the mineral, and gas and oil industries. The world's nonrenewable resources are being depleted at a rapid rate and Alaska is the only State in the Union where the mineral potential has not been developed. The rapid increase in mineral exploration work by major corporations within the last three years in this Planning Unit indicates development will occur. It will take place when these corporations feel they can maximize the greatest economic return from their investment. The investment for extracting these minerals is going to be high because of high transportation construction costs. State highway expansion could occur in mineralized areas as the result of royality speculation and stimulation from these large mining corporations.

Another type of land use within the Planning Unit which will increase in the next 15 years is "Recreation". The biggest challenge to the land use planner in the Fortymile Planning Unit is to determine how the "mining" and "recreation" industries can compatibly utilize the same lands without one type of activity adversley affecting the other. Poor mining practices could permanently degrade the high quality recreational experience now available within the Planning Unit. These two industries can be compatible if each group will recognize and cooperate with each other.

Both types of activities will influence the area and the following sections will describe what opportunities exist and what may occur as mining, recreation, and other supporting types of development intensifies. This narrative will describe the reasons leading to the delineation of each area identified on the Lands Management Opportunities overlay. This overlay shows location of potential land uses within the Planning Unit.
A. Urban and Suburban Expansion

## 1. Tok Expansion Area

Tok could be a major supply, service, and transportation center if new mining developments occur in the Fortymile River Drainage area and in the Alaska Range southeast of Tok. This community sits at a stratigic location on the existing highway system.

If mining developments occur, ore coming down the Taylor Highway from the north will come through Tetlin Junction 10 miles east of Tok. Truck service facilities could increase here if the ore goes on through Canada by truck and down the Alaska Highway to Haines. Room for major expansion at Tetlin Junction is limited because of topography. Any "major" service center development would most likely be located in the community of Tok. Here there is adequate room for intensive expansion. If ore volumes within the Interior of Alaska were sufficient over a long period of time, a railroad could come from Fairbanks through Tok and connect with the Canadian Railroad lines to processing plants in the States. Although Northway is closer, ore being mined in the highly mineralized Nabesna area could be transported by truck to Tok and loaded for rail shipment south. A gas line from Prudhoe Bay down the Alaska Highway could also come through Tok within the next two years. If all three of these major activities occur within the next 15 years, Tok should increase in population $400 \%$. ( 3000 people) An additional 4,000 acres of land will be required to meet residental and commercial expansion needs during this period. No Federal lands are within this expansion area but surrounding Federal lands will be impacted from an increase in recreational use. Additional acreage for industrial use could also be required if ore is processed and concentrated in Tok before being shipped by rail. The economy in Tok will be healthy until mining activities cease.

Ten miles west of Tok is the old military airport of Tanacross. The State of Alaska has recently requested conveyance of this airport from the federal government. This airport could experience intensive land use as the Tok area developes. The 2 existing airstrips in Tok could be in the center of the community if anticipated expansion does occur within the next 15 years. This could be undesirable and an airport located outside of the community would not conflict with projected residential land use. The existing paved airport at Tanacross could be developed to support development activities for the entire Tok-Tanacross-Northway areas. Airport support facilities such as: a major fueling operation, crash and rescue facilities, additional air taxi operations, additional hangers and ramp areas, an airport tower, communications and navigation facilities, tie down areas, and office buildings for various federal and state agencies and private companies, could all occur. There is sufficient land area at the Tanacross airport to support a major commercial expansion effort.
2. Northway Expansion Area

Northway is 36 miles north of the Nabesna and Chisana mineralized areas and this mountainous region has high potential for mining development. If this mining development does occur, Northway could become a supply and service center. Ore could come this direction if it is hauled down the Alaska Highway to Haines by truck. However, if a railroad comes thru Tok, the ore could be transported there for shipment by rail. In this case, Northway would be by-passed entirely. Both of these situations could occur if mining development starts before railroad construction is completed. Northway should double its population to 250 in the next 15 years. An additional 1000 acres of State and Native land will be required to meet residental and commercial needs during this period. No Federal land is within this expansion area.
3. Delta Junction Expansion Area

Delta Junction will expand from the results of an increase in agricultural activities in the Delta-Clearwater area.

Some additional expansion should occur if mineralized areas are developed north and south of Delta. These areas generally have less immediate potential for mining development than the Tok and Northway areas. If the railroad and Prudhoe Bay gas line is built down the Alaska Highway, Delta Junction will grow as the result of this upgrading of these transportation systems. Delta Junction will continue to serve as a service and transportation center.

Because of constant gravity winds in the Delta area, air pollution quickly disapates in this area. Because of the pollution dispersal characteristics of wind, an oil refinery located in Delta is a distinct environmental possibility as Interior Alaska developes. A high capacity wind generated electrical plant could also be located here as technology in this field advances. If an oil refinery and an electrical generation plant are constructed within the next 15 years, the Delta area will grow as new jobs are created. Delta could double its population from 1200 to 2400 people (excluding Ft. Greely) in the next 15 years. An additional 20 sq. miles or 12,800 acres of State land will be required to meet agriculture, commercial, and industrial needs during this period. No Federal land is within this expansion area.

## 4. Eagle Expansion Area

Eagle will expand significantly within the next 15 years. It has historic and scenic qualities which gives it exceptionally high recreational value. The tourist industry could increase ( 150,000 people annually) $500 \%$ over a 5 to 10 year period. If the adjacent YukonCharley proposed National Fivers is approved by Congress, demand for tourist services and all types of outdoor recreation would receive a major stimulus. The demand for basic support facilities and accommodations in Eagle should probably prove to be the largest general source of tourist income. Also, tour and guide facilities would undergo significant expansion. The sale of arts and crafts would become a significant source of cash income. The impact on the tourist and general economu of the area would be major and could accrue within the relatively short period of time.

Eagle is also located in a highly mineralized area. Eagle could become a major mining service, supply, and transportation center for the Seventymile River and Upper Yukon River areas. Access roads and gas and oil pipelines could come through Eagle on its way south to rail and future pipeline connections at Tok. The economic and social impact could be substantial and Eagle's population could easily increase 1000\% over the next 15 years. Eagle is unique in that it has value for two industries (mining and recreation) both of which have high potential for giving the sedate historic City of Eagle rapid economic growth and impact. An additional 1000-1200 acres of Federal and Native selected land will be required to meet residental, commercial, and industrial needs during this expansion period.
5. Chicken Expansion Area

If a pipeline and a new highway to Circle goes through Chicken, this community will become a service center for automobile and truck traffic. The demand for a few service stations, resturants, and motels will increase. Recreation opportunities are also available in the area and the tourist industry also has potential for limited expansion. Chicken will be the debarkation point for canoeists vacationing on the Fortymile River. The demand for basic support facilities and accommodations would probably prove to be the largest general source of tourist income.

Chicken is located in an old mining district and gold mining has been increasing in the past two years and population, although now small, is expected to increase slowly. An additional 500 acres ( 3 sq . miles) of Federal land in scattered locations will be required to meet residental and commercial needs during the next 15 years.
6. Summary

All of the above mentioned communities during expansion will need additional land in varying amounts for parks and recreation areas; visual corridors; residential, commercial, and industrial purposes; roads and airports; and for dumps. These types of land use will all be necessary for orderly growth and development. Size and
rate of development will be dependent upon the development of the mining, tourist, and transportation industries in each community. Substained growth in these communities is dependent upon a sound long-term economic base. The mining industry is an extraction operation and the economy from mining will last as long as the minerals are economical to mine. The communities in the Planning Unit must be able to support an on-going industry if substained growth is to be guarenteed. Recreation opportunities are available to most of these communities and the tourist industry could support a stable economy if land use is managed properly as mining activities intensify.
B. Intensive Use Areas (outside of expansion areas)

1. Wilderness Cabin Sites and Trapline Cabins

In recent years there has been a tremendous demand for wilderness cabins. All Federal land is now closed for occupancy until land selections by the State and Native Corporation s have been finalized. After final selections have been made, we feel there are opportunities for using government land for wilderness cabin sites. Certain locations should be classified as wilderness cabin site areas. These areas could be leased to individuals for a specific period with an option for renewal. Leases would require that the cabin be built in only certain locations, to a certain specified standard, and specialized land use requirements would apply. The cabin site would be inspected periodically to determine if lease requirements were being followed.

Another option would be to sell land to individuals after the cabin has been constructed to a specified standard. Wilderness cabins could be located 10 miles apart in wilderness areas which are accessible by boat, snow machine, or float plane. These areas could be located on National interest lands (D2) or only on Public interest lands (D1). Both opportunities exist and management will have to determine whether this type of use is compatable with other activities which are now being planned for these areas.
2. Commercial Business Leases on Federal Lands

As new highways are developed, demand for commercial land
for service stations, restaurants, motels, etc., on these new roads will increase. The Taylor Highway is one example of where this need already exists. After the State and the Doyon Native Corporation have made their final land selections, Federal lands on new highways could be made available for sale or lease in ceratin preselected locations. These areas could be leased to individuals for a 99 year period with renewal options. Leases could require that businesses be built according to certain specifications and kept up to predetermined aesthetic standards. Specific land use stipulations could also become a part of this lease agreement. The other opportunity available is sale of the land after the business operator has built to specifications. Before final title to the land is given, the owner would be on a lease arrangement until he demonstrates that he is operating this business in a manner which is compatable with the land use plan designed for the area.
3. New Communities and Settlements

With mining development, new communities, mining camps, and settlements may occur within the Planning area. The size and number of these new inhabited areas will be dependent upon the intensity and location of mining activities. Mining will occur first in high potential mineralized areas and these are the areas where we expect future habitation. If asbestos is mined on Slate Creek (see overlay), a community of 500 people could occur in the next five years. This would be similar to the asbestos mining community of Clinton Creek in Canada, 30 miles due east of Slate Creek. The Kandik oil field area north of the Yukon River is another area where habitation could occur in the near future. One stratigraphic hole was drilled and three additional test wells are scheduled. If this oil field developes, several mining camps, each containing 100 or more men could appear. This would be similar to the situation which is occurring in the Prudhoe Bay oil fields, but on a small scale. Slate Creek and the Kandik oil fields are on Native ground but the impact of these developments will effect adjacent Federal lands.

As roads are constructed within the Planning Unit, there will be increasing demand for land for small settlements, service stations, motels, and resturants along new connecting
public highways. The areas in which this development could occur are; on the proposed highway from Chicken to Circle, and on the proposed highway from Circle to Eagle. Mining haul roads should not require these types of developments. The exception would be in locations where new major haul roads would meet the State Highway systems away from existing settlement areas. An example of this is where the projected Chisana River road meets the Alaska Highway near Seaton Roadhouse (see overlay). Another possibility would be where the McArthur Creek road would meet the Ladue River road coming from Boundary (see overlay). This location could be a railroad loading center for all mining operations east of the Glenn and Taylor Highways. If this occurs, Tok would receive less emphasis as a railroad center. The shipping center would then be at this new location and a new community would develope. There would be a need for 1280 acres or 2 sq. miles of Federal land to initially support residental, commercial, and industrial activities.

The potential for new communities and settlements developing within the Planning Unit is high as mining increases in intensity. Refer to the overlay for other locations of projected settlement areas which could also occur as the Planning Unit developes and becomes more accessible.
4. Commercial Recreational Development Areas

Commercial recreational areas within the Planning Unit will develop as population and access increases. Recreational values are high and certain lands have been identified as having high value for commercial recreational development. Refer to Step 4 in the Recreation portion of this URA for a detailed description of these opportunities.
5. Intensive Mining Development Areas

As already mentioned in the other portions of this URA Step 4, this Planning Unit has significant land use opportunities in mineralized areas. If these opportunities materialize in the next 15 years, "every" other activity occurring with in the Planning Unit could be affected by mining. Community and economic expansion will be stimulated greatly by this activity. Mining is compatable with many people's desires because it generates economic growth and makes the land accessible so they may use the newly opened land for additional economic or recreational

> purposes. Mining will stimulate intensive land use opportunities of all types within this Planning Unit, some of which are compatible while others will be conflicting. As intensive mining occurs, opportunities for conflict with other land uses such as recreation will increase and the opportunity is present for mining to do irreversable environmental damage which would adversely effect other important land uses. Refer to Step 3 and 4 in the Minerals portion of this URA for a detailed description of mining opportunities and impact.
II. Public Purpose Land Use - Identification of Potential
A. Open Space Reserves

There are two proposed open space reserves located within the Resource Area. These are the 320,000 acre Fortymile Wild and Scenic River Corridor and the 2.23 million acre Yukon-Charley National Rivers Proposal. These two unique open space areas have been recognized as having national significant natural and cultural resources which could be permanently reserved. Congress will act on these two proposals by December, 1978. If these proposals are not passed, the Yukon-Charley National Rivers Area could be reclassified. This reclassification could make these lands available for either State selection, native ownership, or retention under Federal control and designated as units of the National Wild and Scenic River System. Under Federal ownership, the Yukon-Charley National Rivers and the Fortymile Wild and Scenic River areas could also be administered for multiple use sustained yield purposes. The components of this multiple use management could be:

1. Domestic livestock grazing.
2. Fish and wildlife development and utilization.
3. Industrial development.
4. Mineral production.
5. Homesteading.
6. Outdoor recreation.
7. Timber production.

8．Watershed protection．
9．Wilderness preservation．
10．Preservation of public values．
All forms of development could occur under multiple use management on open space lands in the near future．

B．Miscellaneous Land Use Opportunities
Past demands on national resource lands for various uses by Federal，State，local government agencies，and by non－profit private groups shows that these demands could increase within this Planning Unit．At this time，it is difficult to identify what types of public purpose land use will be required．By referring to past demands on national resource lands，some examples of public purpose land use are：

1．Cemeteries．
2．Parks，playgrounds，and other urban type recreational developments．

3．Solid waste disposal sites．
4．Constructed educational facilities，research，and outdoor education areas．

5．Airports．
6．Irrigation works．
7．Public administrative sites．
8．Flood and sediment damage control reserves．
9．Community watersheds（domestic water supply）．
10．Additional open space reserves．
11．Toxic and other water disposal areas．
12．Navigational aids．
With the development of the Planning Unit，demands for public
land for these different type of use could very well occur within the next 15 years.

## III. Agricultural Opportunities

The agricultural potential on Federal lands within the Planning Unit appears to be limited. Latent agricultural opportunities are present on State and Native land in the Delta-Clearwater area and eastward to approximately twelve miles beyond Dot Lake. These areas do have agricultural potential and there are opportunities for development.

Upland loamy soils inthe Delta-Clearwater area are considered to be $50 \%$ usable while the upland loamy soils in the Dot Lake area are 25 to $50 \%$ usable for agricultural purposes. Farther east, 125,000 acres in the Nabesna-Tok areas are climatically marginal to the degree that cultivation is improbable. In the vicinity of Eagle, the Soil Conservation Service Exploratory survey indicates that there is little more than one township containing agricultural soils. Within this Yukon-Canada subregion, the rest of the land is too high, dry, and rough to be considered usable. Burton indicates that in the Yukon-Charley National Rivers proposal area, there are .285 million acres of tillable lands. However, the Land Use Planning Commission shows this area as being climatically marginal for agriculture.

In summation, short seasons, extreme winter cold, and low seasonal precipitation constitutes the major limitations for agriculture on "Federal" lands within the Fortymile Planning Unit.

With grazing, Tombin (1974) has not seen fit to designate any lands at this latitude as domestic livestock range because of the short grazing season and long intensely cold winters. Natural grasslands are not extensive except for 230,000 acres in the Mosquito Flats area. Here adapted native species mature early with accompaning formation of cellulose, shortening further the normal period of rapid weight gains by domestic grazing animals. However, based on the survival and increase of the bison herd established in the Delta area in the early 1930's, attention has been called to the general suitability of a 10 township basin at the 2,200 foot elevation on the Mosquito Fork of the Fortymile River for semidomestication of bison. With comparatively little effort, carrying capacity could be enhanced considerably from its present estimated 250 acres per head. Few facts and no studies are available but the opportunity does exist. There is also a general suitability of
much of the native vegetation for reindeer, however no technique for raising them commercially in forested areas has been developed.

## IV. Potential Utility Systems

A. Dam Sites

For our developing region, reliable low cost power in this Planning Unit is going to be necessary in order to foster industrial and commercial growth. Six potential hydroelectric power sites have been identified in or adjacent to the Fortymile Planning Unit area. These opportunities will be discussed in detail.

1. Big Delta Dam Site

The Big Delta dam and power plant would be on the Tanana River 300 miles upstream from the mouth. The sight is immediately downstream from the confluence of the Tanana and Delta rivers.

The Big Delta Reservoir capacity would provide 90 percent regulation of the Tanana River flows for power production. The proposed plan would develop 113,000 kilowatts of continuous power. The installed capacity of the plant would be 205,000 kilowatts.

The reservoir would be formed by an earth dam across the Tanana River. The dam would have a maximum structural height of 150 feet from the base at elevation 970 to the creat at elevation 1,120. The dam crest would be 140 feet above the river. The crest length would be approximately 2,400 feet.

Approximately 400 people would have to be relocated from the reservoir area.
2. Gerstle River Dam Site

The Gerstle site would operate in conjunction with the upstream Johnson site. The Johnson site would provide regulation for the system. The Gerstle dam and 76,000 kilowatt power plant would be on the Tanana River, 368 miles upstream from the mouth. The site is approximately two miles below the mouth of the Gerstle River.

The drainage area is 10,700 square miles above the dam site.

Permafrost conditions exist in the area.

The average annual runoff at the Gerstle dam site was estimated at 8,000,000 acre feet.

The Gerstle site would operate as a run of the river plant with the reservoir water surface at elevation 1,290 , coinciding with the Johnson site tailwater elevation. The upstream Johnson Reservoir would regulate 96 percent of the Tanana River flows at the Gerstle site for power production. The proposed project as outlined above would be capable of producing 42,000 kilowatts of continuous power. The installed capacity would be 76,000 kilowatts.

Approximately ten miles of road would have to be relocated or constructed to provide access to the project. Construction cost per installed kilowatt $=\$ 1,600$.
3. Johnson River Dam Site

The Johnson site would provide the regulation necessary for the development of the downstream Gerstle site. The dam and power plant would be on the Tanana River, 374 miles above the river mouth. The dam site is just below the confluence of the Johnson and Tanana Rivers.

The drainage area above the dam site is 10,450 square miles.

The average annual stream flow at the Johnson site was estimated at 7,830,000 acre feet.

The Johnson Reservoir would have a normal maximum surface elevation of 1,470 . This capacity would provide 97 percent regulation of the Tanana River flows for power production.

The development of this site as outlined above would be capable of producing 105,000 kilowatts of continuous power at an assumed efficiency of 80 percent. The installed capacity of the proposed plan would be 191,000 kilowatts.

It was estimated that about 50 miles of road in addition to 100 people would have to be relocated.
4. Cathedral Bluff Dam Site

The Cathedral Bluffs dam and power plant would be built on the Tanana River at Cathedral Rapids, 420 miles
upstream from the mouth. The dam would be built in a constricted section of the Tanana valley at Cathedral Bluffs.

Because of the absence of bedrock in the left abutment, this location is geologically unsuitable as a site for a concrete dam. The suitability of the reservoir site is also doubtful due to the highly permeable nature of the materials comprising the left abutment area.

The drainage area above the dam site is 8,550 square miles. The Tanana River Basin lies south of the Yukon River and north of the Alaska Range. Permafrost conditions exist in the drainage basin.

The stream gaging station "Tanana River near Tanacross" is approximately $1 / 4$ mile downstream from the damsite. The average runoff based upon recorded flows is $5,800,000$ acre feet.

The 50 year active storage sediment depletion in the reservoir was estimated at 400,000 acre feet. Full regulation of the flows at the dam site could be achieved with an estimated $4,900,000$ acre feet of storage. The development at 80 percent efficiency could produce 79,000 kilowatts of continuous power. The installed capacity would be 144,000 kilowatts.

Approximately 400 people would have to be relocated from the reservoir area, mainly from the town of Tanacross and Tok Junction. About 70 miles of highway would also have to be relocated.
5. Fortymile River Dam Site

The potential Forytmile project is about six miles upstream from the Canadian border. The project could provide a significant amount of power and furnish any water supply or flood control that might be needed within the Fortymile Basin below the project.

The drainage area above the project is about five percent of the Yukon Basin above Eagle, thus the project's role in broader plans for the Yukon Basin would be relatively minor.

This project contemplates a concrete arch dam raising the water surface to elevation 1,550 feet, or about 390 feet above the present water surface. Estimated firm power potential is 166,000 kilowatts at 50 percent annual load factor with firm energy of 723 million kilowatt hours per year.

Such a plan would involve a reservoir area of about 23 square miles, inundating about 20 miles of the Fortymile River and extending 14 miles up the North Fork and 18 miles up the South Fork. An arm of the reservoir near the dam site extends six miles up $0^{\prime}$ Brien Creek.

Likely project effects on fish and wildlife and other resources remain to be evalutaed. The project would involve minor relocations, including a portion of the Taylor Highway.

Value of the project is probably on the order of $\$ 10$ million per year. Any dicision to build would depend on future developments in the area.

Though it is identified as one of the more favorable of Alaska's hydro potentials, the Fortymile project would likely not be justifiable as a single purpose power development.

Studies have not been made of the benefits that might result from development of the project under appropriate multiple purpose plans.

The project is thus considered to have sufficient value to merit consideration in long range plans for the Fortymile Basin, but of relatively low priority in terms of broader regional needs.

## 6. Woodchopper Dam Site

The Woodchopper Dam site would store and regulate flows from the upper one third of the Yukon basin. It is the only feasible main stem storage site in Alaska above Rampart Canyon. It has potential storage capacity of $92,000,000$ acre feet, with pool elevation at 1,100 feet, and could provide essentially full regulation of the site.

The statewide water powe inventory indicates Woodchopper is one of the five most important nydroelectric potentials of Alaska or tre basis oi size and cost.

The studies of the Woodchopper Project have been largely limited to considerations of the project as a single purpose hydroelectric development. Evaluation of the project as a separate, multiple purpose development would greatly emphasize the importance of the site in longrange plans for the Yukon River Basin.

The most recent project studies are premised on a concrete gravity dam about one half mile below Woodchopper Creek raising the water surface to elevation 1,020 at or about 360 feet above the present river elevation. This would create a storage capacity of $51,000,000$ acre feet and develop most of the hydro potential of the site. It would involve international considerations, with a major portion of the tributary basin and part of the reservoir in Canada.

Estimated firm power potential for this plan is 2,160,000 kilowatts at 75 percent annual load factor with annual firm energy production of 14.2 billion kilowatt hours. For comparison, Rampart Project has an energy potential of about 31.7 billion kilowatt hours per year.

The reservoir under this project plan would have a surface area of about 563 square miles, a shoreline of about 800 miles and an active capacity of $39,000,000$ acre feet. The Alaska portion of the reservoir totals about 470 square miles, is about 115 miles long, and includes the town and village of Eagle.

The 1965 Department of the Interior Field Report, "Rampart Project, Alaska, Market for Power and Effect of Project on Natural Resources" included the following points: 1) It is probable that a substantial portion of the anadromous fish runs that pass the Rampart site also pass the Woodchopper site. Construction of the project would create a barrier to these runs and would require the construction of fish passage facilities. 2) The reservoir area also includes excellent wintering habitat for a high density moose population. 3) Significant portions of the Steese-Fortymile herd of caribou cross the Yukon in the reservoir area during their migrations to and from

Canada. 4) The project would have moderate to insignificant impacts to waterfowl, furbearing, and game animals other than those mentioned. 5) Owing to its relatively small size, construction of the Woodchopper Project would have a lesser fish and wildlife impact than the downstream reservoir sites.

The project studies establish the engineering feasibility and the favorable potential power values estimated at $\$ 100$ to $\$ 150 \mathrm{million}$ per year on the basis of average energy costs of seven to ten mills per kilowatt hour. The studies are of rough reconnaissance grade. More detailed, miltiple purpose studies may show considerable changes in the project plan would be desirable to provide optimum basin benefits.

Any decision to develop and operate the Woodchopper Project would require joint U.S. and Canadian consideration of the resources and long-range needs and alternatives of the Yukon Basin as a whole.

Woodchopper Project is an identified major water resource development potential. There are no active proposals to construct it, and studies to date relate primarily to establishing the resource values involved.

Because of its strategic location for regulation of basin flows and its large energy potential, the Woodchopper Project is considered to have statewide, nationa, and international significance. The energy value of the site indicates the magnitude of the resource--this would be $\$ 100$ to $\$ 150$ million per year assuming average energy cost of from seven to ten mills per kilowatt hours as stated above.

The value of the site for storage, power, and other purposes and the absence of suitable alternatives establishes that a major dam at the Woodchopper site would be a key unit in any long-range plans for the basin.
B. Electrical Distribution Lines

Electrical distribution lines now generally follow existing highway, road, or railroad corridors. Future
lines will continue to do so. Whenever major development occur within this Planning Unit, electrical transmission lines will follow newly constructed transportation systems (see overlay). Wherever electrical power is generated within the State, the Planning Unit could in the next 15 years be included within a Statewide power distribution system. The location, extensiveness, and timing of the power distribution project will depend upon development, population, and customer demand and use. (See overlay for location of projected transmission corridors.) Increased activity and development is expected to first occur in Tok, Delta, Northway, and at various locations along the Alaska, Richardson, and Glenn Highways. Within the next 15 years, development could also occur in sufficient volume to warrent low cost electricity at Eagle, at the Kandik 0il Fields, at the potential asbestos mining community of Slate Creek, along the proposed road from Circle to Chicken, along the proposed road from Northway to Nabesna, along the proposed road from Circle to Eagle, and at the potential railroad community of MacArthur Creek.
C. Oil and Gas Pipeline

Within the next two years, a Prudoe Bay gas pipeline could be constructed on the old eight inch military pipeline from Haines to Fairbanks. This gas line would follow the Alaska Highway and go through the communities of Delta Junction, Dot Lake, and Tok. The Trans-Alaska Oil Pipeline already goes through a portion of the Planning Unit at Delta Junction. If the Kandik oil fields develop, two pipeline routes are possible. One could go from the Kandik Basin northwest through the Circle area connecting with the Trans-Alaska oil pipeline at Fairbanks. The second route could go southeast to Eagle, then south to join the gas line corridor at Tok. At Tok, it would travel east to Haines or it could continue down the Alaska Highway to the States. It is conceivable that within the next 15 years additional North Slope oil and gas pipelines could come down this old Alaska military pipeline corridor. (See overlay for possible route locations of pipeline and electrical corridors.)
V. Road Transportation System Opportunities and Problems
A. New Road Construction

The Planning Units transportation system is in its infancy.

Geographic considerations, large distances involved, and sparse population creates a unique set of transportation needs. However, these needs should not be met by haphazard development of transportation facilities. Land use should determine transportation patterns rather than the reverse. Development of a transportation system must minimize adverse environmental impacts and proliferation of separate right-ofways. Initial identification of new roads in the Planning Unit must take into account anticipated future development for minerals, wildlife, fish, agriculture, timber, scenic, recreational and historic resources in balance with equally high public values for preserving unique natural and primitive aspects. Social, economic, and environmental impacts of new roads must be carefully considered. Opportunities for new road construction within the Planning Unit are imense. 1200 miles of roads could be constructed during the next 15 years as the quest accelerates to find, develop, and export Alaska's large energy and mineral resources. In our transportation overlay, we projected access routes into the mineralized provences which have been identified as having high potential for development. We maintained the shortest practical distance between the primary resource areas and projected Tok as the major transshipment center for the Planning Unit. These roads could all appear as shown, or in various combinations depending on land use decisions. We identified access opportunities into mineralized areas only and did not consider environmental impact or other land use.
B. Mining Access Roads

One problem within the Planning Unit is the increasing occurrance of indiscriminately located mining access roads. Every State and Federal agency has strict regulations governing the location and construction of new roads. Land use regulations should be written to protect the fragile ecosystem during development in order to foster wise use of our lands. Experience is showing that unregulated development and ill-considered land use threaten the stability and aesthetic qualities of the land, its plants and animals, and other revewable resources. The mining access road has the potential for being one of the major resource management problems in this Planning Unit. Fortunately, there are opportunities to control this type of land use problem. All mining access roads should require a permit. The land manager and the miner should reconnoiter the proposed route on air photos, from the air and on the ground.

Route reconnaissance, planning, and marking must be sufficiently detailed to permit anyone to determine the precise path without wandering. The alternative exists for BLM to build mining access roads into mining areas on locations that are accessable environmentally. Summer access should not be permitted in permafrost zones except under special circumstances, each case being considered separately. Heavy tracked vehicles should be walked in during the winter. When access roads are built, there must be a sufficient insulating and cushioning layer to preserve the soil layers intact. Seven percent is the general gradient for all roads; for short distances; and in special circumstances 10 percent slopes maybe tranversed. Tracked vehicles changing direction on vegetated, unprotected slopes will cause excessive disturbance and this type of activity should be avoided.

Access roads are an essential feature of all development activities but the range of problems associated with any access system is large and the risk of environmental harm is also great. Thermal degradation, habitat change, and fire are all possible results. Any future mining road standards should identify and mitagate all possible hazzards so there will be a minimum amount of environmental damage as the number of small mining operations increase.
VI. Communication Site Recommendations

## A. Mt. Fairplay

Mt. Fairplay has potential for being a multi-agency communication site because of its strategic location. Access roads and supporting physical facilities could be constructed on the east side of the mountain in order to maintain the visual corridor along the Taylor Highway. A 40 acre parcel of land should be withdrawn and classified for exclusive communication use. Glacier Mountain is a similiar situation and it also has multi-agency potential.
B. Mt. Newburger

BLM currently has a five year renewable communication lease with the State of Alaska on Mt. Newburger. This three acre lease should be extended for 99 years or permanently obtained from the State of Alaska. This site is an intregal part of BLM communication system within the Fortymile Planning Unit and long-term land tenure is recommended.
C. Other Potential Sites

Other potentiai communication sites and ground satilite stations that could be required within the next 15 years have not all been identified. As the land use planning progresses, identification of these site's should continue as communication site demand and development within the Planning Unit increases.
VII. Withdrawal Restoration Opportunities
A. BLM Administration Site at Delta

Twenty acres withdrawn by the BLM for the Administration site and campground in Delta Junction may not be needed. This appears to be more eminent as the State of Alaska consolidates its ownership and takes over fire control responsibility in the Delta Area.
B. McCarty Reserve

Two acres of land withdrawn by the U.S. Army in 1903 for a telegraph station on the old Washington Alaska Military Communications and Telegraph System in Big Delta appears to be in excess. This area could be transferred to the State of Alaska as a historic site. This site is adjacent to a historic roadhouse which is currently owned by the Alyeska Pipeline Corporation. They have indicated that they would also donate this site to the State for historic use. These two sites under one ownership, could then be effectively protected and managed.

VIII Unauthorized Use Terminations
All unauthorized use described in Step 3 can be terminated in light of policy guidance contained in BLM manuels 2233.15 and 9230. Because gravel pits have been a major problem on the Taylor Highway, this situation will be discussed further. The following recommendations are made in a effort to correct an undesirable situation in regard to gravel pit placement and use, protect the environment, and to maintain a system of well distributed borrow sites for highway maintenance.

1. Prepare a rehabilitation plan for all unauthorized borrow sites in cooperation with the Alaska Department of Highways, together with a time table for this rehabilitation to take place.
2. Evaluate highway needs and establish a system of borrow sites for the Taylor highway from the Walker Fork Bridge to the north. (This has been accomplished from the Walker Fork Bridge to the south.) This should be done in cooperation with the Alaska Department of Highways.
3. Limit the area to be disturbed at any one time to prevent excessive environmental damage.
4. Allow no more than one borrow site every four miles unless closer spacing is adequately justified.
IX. Lands Quality
A. Specific Types of Environmental Damage

The following specific kinds of environmental damage in this Planning Unit could occur and it must be kept to a minimum through enforceable regulations. There is potential for the following types of harm as development and demands on Unit land increases.

1. Reduction in Populations of Fish, Birds, and Animals:
caused by direct action (wildlife is the jurisdiction of the State of Alaska, Division of Fish and Game)
excessive hunting, trapping, or fishing; harrassment or excessive exertion at time of stress such as calving, spawning, or over-wintering.

## caused by indirect action

by destruction of critical range or habitat disturbance during breeding, interruption of migrations.
2. Diminution of Aesthetic Quality and Environmental Degration.

## caused by direct action

A.T.V. use in fragile soils, road building in aesthetically obtrusive locations, over-development and over-commercialization of an area, diminution by wildfire and other types of accidents, and by industrial activities such as strip-mining and dredging.

## caused by indirect action

through desire for economic gain from natural resources,
and through nationwide population growth which results in increasing land use.
3. Reduction of Tree Stands (most commercially forested areas are under the jurisdiction of the State of Alaska, Division of Lands)

## caused by direct action

harvesting without adequate provision for regeneration.
caused by indirect action
by alteration of drainage patterns, by toxic industrial emissions, by too frequent burning, other land uses such as reservation for recreational use.
4. Reduction of Water Production

This is not a topic for consideration at present, but it may well grow in importance with time. (see table \#1)
B. Potential Land Use Activities and Land Quality

Various potential development activities which could cause adverse impacts in the Fortymile Planning Unit are grouped as follows:

1. Agriculture
2. Dam construction and maintenance
3. Fire suppression or control
4. Gas or oil well drilling
5. Highway and road construction and operation
6. Hydroelectric projects
7. Mineral exploration and extraction
8. Pipeline construction and operation
9. Recreational or tourist development
10. Seismic exploration
11. Timber harvesting and allied woods operations
12. ATV use

Environmental damage will not necessarily ensue from any of these activities, nevertheless, the potential for impacts exists in each case. Thoughtful planning and regulation by permit could minimize the hazards created by these types of land use.
C. Hazardous Activities

Some actions that could be taken to alleviate various problems
resulting from man's developments will now be discussed. These types of activities and recommended actions are only a few of many which could in the future affect land quality in this Plannning Unit.

## 1. Adverse Impacts

The possibility of adverse impacts cannot be dismissed. $0 i l$ or chemical spills and wildfires are the most likely events and adequate contingency plans are essential. Emergency equipment must be in readiness at all times but the control and restoration practices must themselves, be environmentally safe.

## 2. Access Roads

Access roads are an essential feature of all development activities and temporary or semi-permanent landing strips, docks and staging areas are components of any access system. The range of problems associated with any access system is large and the risk of environmental harm is also great. Thermal degradation, habitat change, and fire are all possible results. Access of any kind on Federal lands should require a permit so all environmental factors can be carefully reviewed before any construction is started. This is not the case now for mining access roads and ATV trails. This situation should be changed by requiring environmental impact statements and by determining critical environment zones within the Planning Unit.

## 3. Clearing

Clearing of vegetation is an activity about which it is difficult to generalize. Problems resulting from clearing are affected by vegetation and locale by the intensity of clearing and by the time interval between clearing and subsequent activity.

Every locale should be classified according to the presence or absence of permafrost or according to the slopes. Whatever the slope where permafrost occurs, it is important to preserve the organic mat if the thermal state of the soil is not to be drastically altered. Where permafrost is intermittent or discontinuous, the overstory vegetation plays an insulating role as well as the surface organic material.

On steep or alpine terrain free of moist permafrost, conventional but rigorous anti-erosion measures are necessary and sufficient. On steep, permanently frozen terrain, it is necessary to preserve the insulating organic layer and to use suitable measures against mechanical erosion also. Terrain sensitivity based on ice content of the soil material, slope angle, and bearing strength of the soil when unfrozen, must be taken into account when any type of land use permit is being applied for which involves any type of clearing or surface disturbances.
4. Construction and Operating

This covers a broad spectrum with many and severe threats to environmental stability. Camps, all of which generate waste and garbage, may be semipermanent, temporary, or mobile. Fuel storage is necessary for all operations and is hazardous. Explosive storage, too, can be dangerous. Each set of circumstances carries an environmental threat which must be considered separately and land use permits should be issued to control use.
5. Developing Granular Material Sources

This is an operation attended by potentially severe evnironmental hazards. Quarrying can harm nesting or denning sites; digging from riverine deposits may be detrimental to fish production; and both types of operation are frequently aesthetically displeasing.
6. Field Reconnaissance and Preliminary Investigation

This by small, self contained field parties, such as geological survey teams, will have little environmental impact providing that flocks and herds are not disturbed nor harrassed. The small camps used will cause little or no harm providing reasonable care is exercised.
7. Stream Crossing

This can be permanent or temporary. Permanent crossings are usually designed and built with the local environment in mind and so should cause little
harm. Temporary crossings, being expedients are most likely to be troublesome. It is especially important that removal after use is thorough and careful to avoid obstructing fish passage or causing bank damage and siltation.

## 8. Sub-surface Examination

This by drilling or trenching can have severe but local effects. Exploratory drilling requires the establishment of a small temporary camp, the use of drilling equipment, the storage and use of fuels, and possibly explosives. Wildlife disturbance is the most likely undesirable effect. Wildfire and the escape of fuels into water bodies are other possibilities. Trenching risks thermal degradation consequent upon removal of the organic mat and, also the risks normally attendant upon the operation of a small, temporary camp. Trenching should be avoided in soils known to contain large volumes of ice.
9. Drilling Sumps

Drilling Sumps are sources of continuing environmental danger. This future type of activity should require care and unremitting attention.
10. Waste Disposal, Clean-up, and Restoration

Besides camp wastes and garbage, there is a considerable problem and risk in the disposal of mine tailings, which often contain toxins. Leaving derelict machinery, storage drums, and other paraphernalia is aestheitcally unacceptable and if Land Use Regulations are put into effect, it is illegal. Open-pit or strip mining, in particular, demands careful restoration but the final step of every clean-up operation must be to provide for revegetation.
D. Land Quality Conclusions and Recommendations

1. Within this Planning Unit, present land quality is now being affected mainly by no control over mining access roads and ATV trails. Mining access roads will not be controlled until the 1872 Mining Act is repealed or modernized.
2. An Organic Act giving the BLM full management authority on D1 lands is recommended. Full management authority is necessary if future land use is compatable with all of the ecological requirements of our existing environment. After all Federal lands in this Planning Unit have been selected by the State of Alaska and by the Doyon Native Corporation, all remaining D 1 lands could be set aside as a Land Management Area. The purpose of this action would be to protect the ecological balance and current physical quality characteristics of D1 lands within the Planning Unit. Regulations should be written to protect and control use of the land by requiring land use permits for all specified hazardous activities. Every person who violates any regulations or fails to comply with any term or condition of a permit issued pursuant to such regulation is guilty of an offense and liable on summary conviction to a fine. Without management and regulatory authority, we will be ineffective in managing land use on Bureau of Land Management land.
3. Any type of land use by man will affect the aesthics and ecological balance of the environment in some way. Changing the environment to be compatable with man's development has had historically disasterious results. Constructing developments in a manner which is compatable with the landscape is the only way to keep the quality of our environment high.

## X. Land Patterns

It is our prediction that a checkerboard land pattern could develop within this Planning Unit. It is too early to tell how extensive it will be but every effort should be made to consolidate land ownership. By referring to the current land status overlay, one can see where consolidation of State ownership would be effective in the area south of Delta Junction. Other consolidations are also possible. The Copper River Classification Order should be reclassified and made available for State Selection. The Alyeska Pipeline Corridor is another area where this reclassification should be considered. However, at this time in the eastern portion of the planning unit, no recommendations can be made until final selections are made by the State of Alaska and the Doyon Regional Corporation.

## LANDS STEP IV

## LEGEND

_—— Resource Area Boundary
—————A Agricultural

- =-二 P Public Purpose

T Unathorized Use Termination
UC Utility Corridor
U Urban or Suburban Expansion
R Residential
C Commercial
I Industrial
US Utility System
Rd Road Transportation System
RR Railroad
WS Wilderness Site
CS Communication Site











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## RECREATION

 STEP III
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## RECREATION: UNIT RESOURCE ANALYSIS

 STEP IIII Introduction

II Recreation Quality Evaluation
III. Visitor Use
IV. Management Areas
A. Fortymile Mining District
B. Eagle Historic District
C. Fortymile Proposed Wild \& Scenic River
D. Proposed Yukon-Charley National Rivers
E. Taylor Highway
F. Developed Recreation Facilities
V. Bibliography

## I．Introduction

Rich in the heritage of the sourdough，the Fortymile Resource Area exhibits some of the finest examples of cultural resources within BLM Alaska．The Fortymile Mining District，the Eagle Historic District，and Fort Egbert as examples，illustrate the settlement pattern of＂The Great Land．＂Due to this situation，the cultural resource element of the Bureau＇s recreation program is often emphasized more than the recreation，visual，and natural history elements，although the information base remains incomplete．

The Resource Area is also responsible for the interim management of the Proposed Fortymile Wild and Scenic River and Yukon－Charley National Rivers．Access to this area is by the Taylor Highway， part of the Klondike Loop between Dawson City，Yukon Territory，and Whitehorse，Yukon Territory．One of the few highways primarily bordered by National Resource Lands，the Taylor enables the visitor to enter the heart of the region and its recreational resources． An analysis of these recreational resources was completed and inherent quality ratings assigned in the Recreation Information Systen（RIS）．

Visual resource ratings have yet to be accomplished．With assistance from the Resource Area recreation planner，this element is scheduled for completion by the State Office landscape architect．

Pending clarification and definition，natural history resources are limited to those features identified in the RIS for geological sightseeing．

II．Recreation Quality Evaluation
This is the first effort in Alaska utilizing RIS，and the first RIS effort in the Bureau with a planning unit of 18 million acres．The Bureau＇s Recreation Information System，by definition，rates the inherent suitability of an area for a number of different recreation activities．In application of a system designed for Bureau wide use，it was found that most or all rating areas were in the top category for some activities．For example， $85 \%$ of the Planning Unit is highly suitable for primitive values，and without revising the current Quality Evaluation Chart， $66 \%$ of these were outstanding． To compensate and provide a realistic stratification for the decision maker，scoring ranges were adjusted in some instances．

As a result of the planning effort，two new subactivities were identified，dog mushing and cross－country skiing，and accompanying Quality Evaluation Charts developed．

Fishing. Clearwater streams north of the Tanana River, Northway Flats, Mansfield Lake, George Lake, Donna Lake, Clearwater Creek, Rumble Creek, Bear Creek, and Berry Creek scored "A" ratings. All ranked consistently high in water fluctuation, contamination, and propagation factors. Practically every stream and lake identified merited the highest value in propagation. Mansfield Lake is recognized as providing trophy sized northern pike. Although the Fortymile River is known for poor fishing, the region has good fishing opportunities.

Only glacial streams south of the Tanana scored a "C" value, possessing extreme water fluctuation and silt. Of the indicated locations, nine rated "A's", nine "B's", and one a "C".

Hunting. Due to a high game population, waterfowl hunting along the Tanana lowlands managed to earn an "A" appraisal. The ease of movement category stopped it from receiving a 100\% score of 14.

All of the small and big game hunting and trapping evaluations divided equally between "B" and "C" scores. The Tanana Uplands and Alaska Range held the "B" ratings in big and small game hunting while the Yukon and Tanana Basins possessed "B" assessments in trapping. Out of the total 14 evaluations, one merited an "A", six managed "B's", and seven earned "C's".

Winter Sports. Dog mushing, not previously identified as a subactivity, resulted in the composition of a new matrix, which is added. Four areas were located, with the Tetlin/Northway and Tok/Tanacross regions receiving "A's" and Eagle and Dot Lake earning "B's". All areas had low scores in the "temperature" category.

Four of five cross-country skiing areas received "A's" with the other getting a "B". Those rating an "A" were the Yukon/Charley, Goodpaster/Mosquito Flats, Ladue/Tanacross/Nebesna, and Tetlin/ Northway Flats regions. Although a cross-country matrix was developed, it followed the basic format and categories as dog mushing, and is included. Uniform high scores resulted in each category, except "topography variation" in the "B" region. Every location received the lowest possible score in the temperature category.

No potential areas were identified that might possess "A" quality attributes for downhill skiing. Depth of snow, temperature, and wind significantly contributed to this situation. Snow depth averages between two and three feet, temperatures plummet below $-30^{\circ}$ for half the season, and high wind is an adverse factor
occurring routinely. Nevertheless, of the nine areas, roughly an even division developed between class "B" and "C" areas.

Water Sports. From the twenty-three rivers identified for floatboating, six rated an "A", measuring consistently high in water quality, water character, scenic quality, primitive values, and other values (historic and archaeological), with medium scores in the remaining categories. Those rivers comprising an "A" evaluations are situated in the northeast section of the Resource Area. They include the Kandik, Nation, Charley, Seventymile Rivers, North and Middle Forks of the Fortymile River, and Dennison Fork-South ForkMain Fork of the Fortymile River. Scenic quality was subjectively judged and not derived from the visual resource analysis portion of the planning system, due to initiation of RIS prior to release of the VRM manuals. Fifteen of the rivers scored high on the primitive values assessment, and consistently moderate in wildlife and fishing. Eleven managed "B's" and six "C's".

Powerboating was evaluated in its traditional sense of a waterbody sufficiently large enough for a craft to pull a waterskier.
Therefore, both subactivities of powerboating and waterskiing rated identical "A" quality lakes. These were Tetlin Lake, Mansfield Lake, Lake George, Healy Lake, Quartz Lake, Birch Lake, and Harding Lake. The locations scored high in all factors, and moderately in the "wind" category.

Sailboating followed the general pattern of powerboating and waterskiing. Top scores were generated in hazards, size, and shape, with half of the areas again drawing medium scores in water quality. None reached the highest score in wind. The same seven lakes merited "A's" along with Yarger Lake, one merited a "B", and one a "C".

Swimming was eliminated from consideration as a subactivity due to adverse water temperatures during the use season.

Sightseeing. The scenery category has now been excluded, and replaced by the visual resource management section.

Except for the "A" locations, consistent low scores took place for the subactivity of historical sightseeing. The Eagle Historical District scored a perfect score of 20. A majority of the sites surveyed reached a level of good or excellent historical significance. In the extent category a site or region may be evaluated. This should be considered when examining the scores. Approximately eight of the sites received an "A", 14 a "B", and 11 a "C". Those
scoring "A's" were Nation River Coalhouse, Eagle Historic District, the Kink Area, Ketchumstuk, Chicken/Franklin Area, Mitchell's Ranch, Eagle-Valdez portion of WAMCATS, and the Goodpaster section of WAMCATS.

Five archaeological areas were identified. The pipeline corridor comprises many highly marked sites. Donnely Dome houses the Denali Complex, a type site for the period identified, rating a perfect score of 20. The Pipeline Corridor also received an "A" rating. A potentially significant paleontological site of precambrium microfossils was identified by the University of Alaska between the Canadian Border, Tintina Fault, and the Kandik Basin; however, little documentation exists.

Zoological sightseeing maintained uniformly high scores within type and variety among all areas. Recognized as one of the prime nesting locations for peregrine falcon within the United States, the Yukon River received a value of five for the frequency of occurrence.

However, it merited low scores in other categories and managed a "B" assessment. Out of six identified locations, the Alaska Range and the Tanana Hills received an "A", two managed "B's", and two "C's".

With geological sightseeing, only one of the 18 areas identified (Calico Bluffs) merited an "A" rating, scoring high in frequency of occurrence, form, and representative type. A general tendency for low scores, however, occurred in the categories of frequency of occurrence, extent, form, and color. One-half of the locations received a "B", which roughly followed the Taylor Highway. This is probably due to the intensive geological survey along the Taylor. Forty-four percent(8) ended up with "C's", most of them being pingos.

An approximate even division in evaluations among botanical areas occurred, three "B's" and four "C's". All locations possessed low scores in frequency of occurrence, which prohibited any region from reaching the "A" category. Polly Summit, the Alaska Range, and the Tanana Hills rated the maximum score in curiousity and color, while those areas holding "C" appraisals scored low in these criteria.

Collecting. Only two regions were identified for vegetative collecting Both the Tanana hills and the Alaska Range maintain good areas for alpine flora, managing a "B". Since blueberries are universally abundant for three months throughout the Resource Area
below alpine elevations, this activity was not individually rated.
On the otherhand, 43 areas were located for rock and mineral collecting. No sites received an "A" while 26 earned a "B", and 17 a "C". Regularly low scores occurred in all categories but desirability. Of the 43 areas, 26 possessed gold and all were claimed. The locations of the sites follow a rough route down the Seventymile River to Eagle and along the Taylor Highway.

Off Road Vehicles. Three of the four identified regions for snowmobiling missed an "A" rating by one point due to the category of "some but controlled hazards and restrictions." All four received a "B" and scored the maximum in "snow" and "size". Tracksters, multiwheeled vehicles, $4 \times 4$ 's, and cycles managed lower "B's" with two earning a "C" and maintained identical snowmobile scores in the hazard category.

Primitive Values. Over $85 \%$ of the planning unit is essentially primitive by definition. The rating matrix, as written, assigns unwarrantly high scores when applied to the Alaska situation. Following the manual's scoring range, $66 \%$ of the area merited an "A". A revision was required depicting an accurate classification.

After the modification(1), six locations rated in the "A" class, with eight receiving "B's", and seven "C's". Those receiving an "A" were the Glacier Mountain/Arctic Dome, Upper Charley River, Mt. Harper/Mt. Veta, Prindle Volcano, Alaska's Range, and the Nabesna region. Consistent high ratings in the categories of "intrusions," "scenic quality," "wildlife," "size," and "uniqueness" accounted for the "A" evaluations. The commonness of rated areas kept many "B" and "C" locations from receiving better scores.

The number of original high ratings were due to the abundance of animal species, opportunities for isolation, and the size of the units evaluated. In some instances, an area neither qualified as rare or common; therefore, scores were adjusted. Also scenic quality values were subjectively rated because the visual resource analysis portion of the RIS has yet to be completed.

The subactivity of backcountry utilized the same criteria as in the primitive ratings. Scoring ranges were established that depicted a realistic situation, although the same maximum points per category were used. Moderate values generally occurred throughout the categories, but "A" regions, scored well in "size" and either "intrusions" or "scenic quality." The Tok region and Donnelly Dome received an "A" rating.

## FOOTNOTE

(1 )Manual Rating

$$
\begin{aligned}
& A=20 \text { or }+ \\
& B=15-20
\end{aligned}
$$

$$
\text { Modified } A=26-32
$$

$B=21-25$
$C=10-20$

| (1) <br> seable Terrain Features | Good | Fair | Poor $\quad 2$ |
| :---: | :---: | :---: | :---: |
| opography Variation | Flat | Rolling $3$ | $30^{\circ}$ slopes |
| now Depth | Less Than 2' <br> 4 | $2^{\prime}-4 '$ $2$ | Greater Than 4' |
| (2) <br> ength of Season | 5-6 Months | 4 Months | 2-3 Months |
| (3) <br> emperature | $+15^{\circ} \text { to }-5^{\circ}$ | $-20^{\circ}$ | $-35^{\circ}$ |

$$
A=20-16 \quad B=15-11 \quad C=10-6
$$

INIMUM SUITABILITY - The slopes of hills must be less than $30^{\circ}$.
The snow depth must be at least $6^{\prime \prime}$ during the year.
The temperature during the majority of the season cannot be above $+35^{\circ}$ or below $-35^{\circ}$.

1) Useable Terrain Features - This refers to the degree in which physical features inhibit dog mushing. This should include, but not be limited to, surface irregularities (such as drop offs, cliffs, ravines, rocky field, plowed fields, burms, drainage ditches, cattle crossings) and dense vegetation (such as trees and hummocks). Also to be considered are frozen waterbodies if an area is composed predominantly of lakes, rivers, sloughs, etc. In this case useable terrain features might be good during the season; however, open water would severly restrict the scoring. In addition, one should evaluate the period when the trail sets up (the earth freezes). If this occurs before snowfall it is good, and after snowfall it is poor.
2) Length of Season - The number of months the average snow depth is $6^{\prime}$ or greater.
3) Temperature - Temperature ranges applicable for other sections of the United States:
Western U.S. $35^{\circ}$ to $40^{\circ}$
Midwestern U.S. $\quad 10^{\circ}$ to $-20^{\circ}$
Eastern U.S. $\quad 20^{\circ}$ to $-10^{\circ}$


IIMUM SUITABILITY - The slopes of the hills must not be more than $30^{\circ}$. The snow depth must be $6^{\prime \prime}$. For the majority of the season, the temperature must not drop below $-30^{\circ}$.

Useable Terrain Features - This refers to the degree in which physical features inhibit cross-country skiing. This should include, but not be limited to, surface irregularities (such as drop offs, cliffs, ravines, rocky fields, plowed fields, burms, drainage ditches) and dense vegetation (such as trees and hummocks). Also to be considered are frozen waterbodies if an area is composed predominantly of lakes, rivers, sloughs, etc. In this case, useable terrain features might be good during the season.

Length of Season - The number of months the average snow depth is $6^{\prime}$ or greater.
Hazards - Hazards to consider are avalanches, thin ice, rock fall, sheer cliffs, artillery duds, etc.

## III. Visitor Use

Presently the majority of visitor use occurs during the summer. General sightseeing possesses the greatest number of visitor days $(37,797)$, with the majority travelling the Taylor Highway $(20,886)$, but geologic $(16,647)$ and historic $(2,700)$ sightseeing activities also are significant. Of the geologic sightseeing, 15,281 visitor days were estimated for Donnely Dome along the Richardson Highway. These numbers should increase, if as the State Division of Highways estimates, the number of vehicles on the Taylor Highway increases from 75 to 300 per day by 1990. This increase in traffic should also affect the general leisure visitor days of camping $(2,098)$ and picnicking $(4,012)$.

Winter recreational use is primarily snowmobiling, and is many times greater than cross-country skiing or dog mushing. However, cross-country figures should raise in the future as the popularity of the sport continues to rise and absorb new members.

Floatboating currently is estimated 869 visitor days per year, but if the proposed Fortymile Wild and Scenic River designation is passed by Congress, this should increase to approximately "9,000" visitor days per year.(7)

Conflicts between recreationists rarely occur since the locations and seasons of use are exclusive of each other or are compatible; however, a few do take place. Snowmobiling on dog mushing trails does happen, but the known instances in which a dog mushing team confront a snowmobiler appear to be infrequent. Hiking and offroad vehicle enthusiasts occasionally run into each other on Mt. Fairplay. The greatest likelihood of this happening is the time around June 21 when individuals view the Midnight Sun from the summit of Mt. Fairplay.

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(5) Ibid., unnumbered pg.
(6)James D. Mertes and Art Gluk, Preliminary Draft-Interpretive Plan and Cultural Resource Analysis for the Fortymile Resource Area, (Lubbock, Texas; Texas Tech University), unnumbered pg .
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IV. Management Areas

None of the present management areas benefit from 43CFR Part 2070 designation. Analysis shows each to be informally treated as an entity now and in the recent past. Each area is discussed with its identifiable use problems.
A. Fortymile Mining District

Established in name by the U.S. Geological Survey, the Fortymile Mining District was reported through the gold mining bulletins in 1905, and later by the Mineral Yearbook. Encompassing the Fortymile Basin, mining started in 1886 with Alaska's first gold discovery by Howard Franklin at Franklin Creek. (1) Although a minor stampede ensued, the Fortymile was soon eclipsed by the Klondike discoveries at Dawson City, Yukon Territory.

Places such as Walker Fork, Jack Wade Creek, Chicken Creek, Dome Creek, Steele Creek, and Franklin were the major locations for gold mining in the region. These areas can be visited today by foot, automobile, or canoe.

An illustration of the miner's determination to collect gold is the "Kink", a property listed on the National Register of Historic Places. In order to "sluice" one section of the North Fork of the Fortymile River, men dynamited through a rock ridge, and changed the river's course. However, their dreams of stricking it rich proved illusive.

Although placer operations exist today, the dredge hulks of the past characterize this area. Dredges at Chicken Creek, the South Fork of the Fortymile, and Jack Wade Creek stand as good examples. The most accessible is the "Mulvain" dredge at Jack Wade Creek along the Taylor Highway at Milepost 86.

Mingled with the mining past are present commercial operations, including the hydraulic operations at Jack Wade and Lost Chicken providing sightseeing opportunities for visitors along the Taylor Highway.

Today new technology, more disposable income, and increased leisure time have introduced a new miner to this region, the recreational miner. The Fortymile River, due to its accessibility and historical past has become an increasing attraction for him. Utilizing a suction pump, he vacuums the riverbed, and runs his tailings over a floating sluice box.

1. Use Problems

The Fortymile River has been closed to new mineral entry; however, there is a question whether this includes the recreational miner. At present there is no distinction between the recreational miner and commercial operator using a suction dredge. Piles of tailings are being deposited, and in one case, the bank at American Creek Wayside is being eroded away.
B. Eagle Historical District

Opportunities to preserve and protect historic environments that have survived the ravages of time and man with a minimum of alteration rarely occur. The preservation of Eagle, Alaska, is one such opportunity, one inextricably tied to the history and development of Fort Egbert. While Eagle has survived essentially in an unaltered condition, Fort Egbert is a fragment of an important military outpost that protected the interests of United States citizens and businesses in the remote Alaskan interior and contributed significantly to the construction and development of a major communications system.

In 1970, an Eagle Historic District, including Fort Egbert and the town of Eagle, was listed in the National Register of Historic Places, attesting to its historical significance. Eagle was the first seat of civil government, and incorporation in interior Alaska. Norwegian explorer Roald Amundson, the first person to negotiate the Northwest Passage, telegraphed the world of his epic achievement from Fort Egbert. He dog mushed his team 500 miles to Eagle to telegraph the world of his success. Fort Egbert was the first command post for the Army's District of North Alaska above the 61st parallel. Fort Egbert played a significant role in the development of the Washington-Alaska Military Cable and Telegraph System (WAMCATS). Lt. William "Billy" Mitchell first rose to prominence in the WAMCATS construction.

Both Fort Egbert and Eagle afford an important opportunity to preserve and interpret for the American public the history and development of interior Alaska. Both also provide an opportunity to determine feasible courses of action for the protection, preservation, and management of other historic resources in remote environments.

Until 1975, ownership of property was divided among private interests, the town of Eagle, the Alaska Department of Highways and the BLM. Today, property within the incorporated limits of Eagle is owned by private individuals and the town of Eagle. Lands within the Fort Egbert Military Reservation are substantially under federal ownership and are administered by the BLM.

As the owner of property listed in the National Register of Historic Places, the BLM was charged under the provisions of the National Historic Preservation Act of 1966 and Federal Executive Order 11593 to assure the preservation of remaining structures and ruins at Fort Egbert.

Consequently, BLM took important steps to make certain that the five remaining buildings and numerous ruins at Fort Egbert would be immediately stabilized. In addition, BLM determined that short and long-term planning would be undertaken to assure proper treatment and disposition of this resource. BLM also realized the interrelationship of the fort and the town of Eagle and indicated that this interrelationship should be considered in the planning process.

To undertake immediate stabilization and short and long-term planning, the BLM received a congressional appropriation in fiscal year 1975. While the major portion of the funds was
allocated for stabilization work during the summer of 1975, a contract of $\$ 31,555$ was awarded to the National Trust for Historic Preservation to provide architectural assistance for stabilization work and to develop preservation plans for Fort Egbert with complementary recommendations for the future development of historic resources in Eagle.

It is important to note that development of this project involved a marriage of federal, state, and local governments working with private sector representatives to assure the success of the project. Bureau of Land Management staff drew together the expertise and preservation interests of the National Park Service, the Alaska State Historic Preservation Office, the National Trust for Historic Preservation, the town of Eagle and the Historical Society of Eagle. These diverse public agencies and private organizations worked toward a common goal in a spirit of cooperation.(2)

1. Use Problems

## Fort Egbert

In the management plan prepared by National Trust, several problems were discussed. The following are priority elements requiring early resolution.

The landing strip at the parade ground, which intersects the Eagle campground road, creates a hazardous situation for the motorist. Already several misses between automobile and aircraft have occurred. Presently the strip hampers work and prevents required historical archaeology from being accomplished.

The present campground road creates an incompatitle atmosphere with the interpretation of the fort. Fort Egbert's existence was from approximately 1898 to 1911, well before the automobile was introduced into Alaska. Although the existing road is an old fort road, automobiles were not present when in use by the military. Its present location brings campground traffic thru Eagle, clogging up the streets.
C. Fortymile Proposed Wild and Scenic River

The proposal for inclusion of the Fortymile River (Map \#1) into the National Wild and Scenic Rivers System is an outgrowth of two actions. In October 1970, the Secretary of the Interior identified the Fortymile River and its major Alaskan tributaries

for study as a Wild and Scenic River under section 5(d) of the Wild and Scenic Rivers Act of 1968 . In 1971 under section 17(d)(2) of the Alaska Native Claims Settlement Act, the Secretary of Interior was directed to withdraw from all forms of appropriation up to 80 million acres of public lands in Alaska for possible addition to, or creation as units of, the National Park, National Forest, National Wildlife Refuge, and National Wild and Scenic Rivers Systems. As a result, 375 miles of the more than 1000 miles of the Fortymile River and its principal Alaskan tributaries, together with 320,000 acres of land comprising its immediate environments were withdrawn for Congressional action. The proposal would designate 161 miles as "Wild River" areas, 205 miles as "Scenic River" areas, and 9 miles as "Recreational River" areas under administration of BLM.

As the heart of the historic Fortymile Mining District, the Fortymile River possesses many historic structures and artifacts. Franklin, the location of the first gold discovery in Alaska, is within the proposed boundaries, as are many other historic locations. Also the "Kink", a National Register for Historic Preservation site, lies within the proposal, and the WashingtonAlaska Military Cable and Telegraph System line passes through the proposal on the North Fork.

An intermediate to advanced skill level is required to safely navigate the river. Sweepers are not a problem along the river, and above the confluence of the North and South Fork, there is a good ratio of pools to riffles.

The management objectives for the Fortymile River, as a component of the National Wild and Scenic Rivers System are:

1. To preserve the river and its immediate environment in its existing primitive setting which, although in places shows substantial evidence of man's activity, still is pleasing to the eye.
2. To preserve the free-flowing condition of the waters.
3. To prevent degradation of the water quality.
4. To provide high-quality recreational opportunities associated with a free-flowing river for present and future generations.
5. To provide recreational use of fish and wildlife resources, including hunting and fishing, within the framework of appropriate Federal and State laws.
6. To provide for a level of utilization of land and water resources which will leave the existing environment unimpaired for the use and enjoyment of future generations.
7. To provide a variety of opportunities for interpretive, scientific, educational, and wildlife-wildlands oriented uses.
8. To assure preservation of historic values.
9. To assure preservation of archeological values.(3)

Use Problems
Fortymile River
Currently the Fortymile bridge crossing at 0'Brien Creek is the only adequately developed access point to the Fortymile River. Other access points; the West Fork Dennison bridge crossing, the Mosquito Fork bridge crossing, Ckicken, and the South Fork bridge crossing are essentially undeveloped and receive heavy and congested use. Since no definite parking and canoe landings exist, traffic control and visitor flow problems result. This in turn causes vegetation to be trampled and other resource deterioration which could be avoided if planned development existed.

No planned development exists at Joseph, the only "fly-in" access to the Fortymile River. Nothing more than a "bush" airstrip and a 1972 geological exploration shack remains. No campground, trails, or designated access points to the Fortymile exist. Fire Control uses Joseph intermittenly as a "helitack" staging area. Conflicts with recreationists could happen if Fire Control needed this site as a staging area to a large fire in this region.

Soil compaction is such a problem at the confluence of the North and South Forks of the Fortymile River that tree roots have become exposed. This is a popular location for campers; however, there are no planned sites, therefore, vegetation degradation, soil erosion, and compaction take place.

Conflicts happen between recreationists floating the South Fork of the Fortymile River and miners holding valid or invalid claims. This problem reached epic proportions during 1975. At the site of Franklin, a firearm was pointed by a miner at a floater travelling down the river in an alleged effort to protect his gold cache.

No management program exists for cabins that might be nominated to the National Register of Historic Places. Deterioration due to weathering results and no restoration or stabilization
efforts have been initiated. Inventory of these and other sites is being accomplished in accordance with EO 11593.

Presently water pollution due to hydraulic mining occurs near the Lost Chicken mine and Steele Creek, which run into the Fortymile River. The water quality fluctuates due to the amount of mining done at any one moment. The turbidity of the river is increased at this juncture cloudying its clear nature.
D. Proposed Yukon-Charley National Rivers

The proposal (Map \#2) for inclusion of the Yukon and Charley Rivers into the National Park System, and the Charley River within the National Wild and Scenic Rivers System is another result of ANCSA Section 17(d)(2). As a result, the National Park Service proposed the 2,282,820 acre Yukon-Charley National Rivers, to be managed by the National Park Service.

The Department of Interior proposed legislation provides for consideration of the Charley River as a component of the Wild and Scenic River System, even if Congress does not approve the Yukon-Charley entity. In that instance, it may be assumed that BLM would be the manager.

In a Bureau of Outdoor Recreation field report, the Charley River was characterized "from a canoeing/kayaking standpoint one of the best clearwater, whitewater streams in this section of (the) State."(4) An intermediate to advanced skill level with constant maneuvering for safe navigation is required. The ratio of pools to riffles is outstanding until the lower one fourth of the river, (5) and sheep are abundant and can be seen from 100-150 yards.

Currently, BLM has interim management responsibility until Congress has the opportunity to vote on this proposal. BLM's interim management objectives for this area are:

1. To provide essential backcountry experience in those areas away from road ends.
2. Precluding mineral entry.
3. Pursuing an active trespass program.
4. Protecting cultural resources within the corridor.

The historic site of Nation is located on the Yukon within the proposal area. The cliffs nearby provide nesting sites for the endangered peregrine falcon.
$\because \because=2$

E. Taylor Highway

Constructed of crushed gravel during the early 1950's, the Taylor provides easy access to a most historic and scenic portion of the Planning area. Scenic vistas of the Alaska Range and Mt. Fairplay abound. Today as part of the Klondike Loop between Dawson City and Whitehorse, Yukon Territory, it furnishes the visitor to Alaska an alternate route to and from Alaska. Daily traffic during the summer averages 75 vehicles.

The Taylor is the major contact with most of the recreationai opportunities within the Resource Area. The Fortymile River is accessed by the bridges over Logging Cabin Creek, the West Fork of the Dennison, the Mosquito Fork, the South Fork, and the Fortymile at 0'Brien Creek. Individuals can also enter the river just off the Taylor at Chicken.

Historical study abounds, as the highway passes through most of the Fortymile Mining District. Visitors are able to reach the historic city of Eagle, Ft. Egbert, the town of Chicken, and explore an old gold mining dredge on Jack Wade Creek. Access to a walk in trophy sheep hunting area on Glacier Mountain, is possible by a trail just off the road. A Texas Tech report categorized the nature of the Taylor, as a "parkway" and should be managed as such.(6)

1. Use Problems

Taylor Highway
Shooting Bureau signs and litter barrels is a severe and constant problem along the Taylor Highway. Usually this activity happens during the hunting season, when hunters use the signs and barrels to adjust the sight on their rifles. This activity is no stranger to state signs along the highway.
F. Developed Recreation Facilities

The objective for facilities is to serve as a positive people management tool while providing a quality camping and day use experience for individuals travelling along the Taylor and Alaskan Highways. Campgrounds capable of sustaining and facilitating intensive recreation is emphasized along these corridors.

Existing facilities with the exceptions of American Creek Wayside and Eagle Campground are able to adequately handle visitors. (Refer to Recreation Development Inventory in URA Step II.) American Creek is not designed with any defined
traffic flow or parking control. Currently a suction dredge is eroding the bank which supports the Wayside. Visitor safety and environmental problems immediately emerge. The dredging weakens the bank and begins a pattern of earth movement, with the bank eventually sliding into the creek.

During peak season, the Eagle campground is incapable of handling the visitors. Since use is not disbursed, soil compaction occurs hastening water runoff and erosion. Toilets, roads, and litter facilities are taxed. Currently a visitor safety hazard exists at the old well on the northwest side of the campground near the spring. The spring which formerly supplied Fort Egbert and is now a campground water supply may not meet State and Federal quality standards for public resources of potable water. Also erosion problems are present on the trail between the spring and camp sites.

Walker Fork campground's foot bridge crossing Jack Wade Creek is dangerous due to deterioration to its structure.

Liberty Creek campground's access road has completely washed away, making entrance impossible. Some traffic flow and other minor erosion problems exist.

Delta campground possesses numerous spots where tree roots are exposed due to soil compaction. Five of the twenty-four campsites have been reseeded and covered with new topsoil, but nineteen sites and the wayside remain exposed. Many of the existing firepits are virtually demolished with the concrete destroyed due to the extreme temperatures and visitor use. Many visitors drop the iron grill down on the concrete base, which after repeated times cracks the base.

Vegetative covers within a three foot radius of the fire pits and overhanging branches below fifteen feet in height above the fire circle create fire hazards.

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## Individuals





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# RECREATION STEP IV 

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# RECREATION: OPPORTUNITIES 

 UNIT RESOURCE ANALYSIS - STEP IVI. Introduction
II. Management Areas
A. Fortymile Mining District
B. Eagle Historic District
C. Fortymile Proposed Wild and Scenic River
D. Proposed Yukon-Charley National Rivers
E. Taylor Highway
F. Developed Facilities
G. General Areas

Recreation: Opportunities
Unit Resource Analysis - Step IV

## I. Introduction

The opportunities for the development or enhancement of the recreation resources within the planning unit are identified in this section by management areas and in priority by the Recreation Inventory System (RIS) activity. Opportunities have not considered physical or administrative constraints that may be imposed. Additional inventories are needed to identify future opportunities not addressed in this section. Some are currently in progress, others are not. However, inventory needs are identified in each section as they are needed.
II. Management Areas

## A. Forytmile Mining District

Close coordination with the State Division of Highways plan for construction of the proposed highway will be required to assure good Visual Resource Management (VRM), cultural integrity as well as to optimize recreation management adaptability.

Primitive Values
In the Glacier Mountain/Arctic Dome region (Ppr-1/A), cooperate with Alaska Department of Fish and Game in an attempt to increase the fisherman success ratio. Investigate a trail access system, provide interpretation and complete a visitor management plan if warranted for the area. Remove BLM's Fire Control repeater/antenna site on top of Glacier Mountain, or have Fire Control devise a method to successfully screen it from view. Place a primitive designation on the Glacier Mountain/Arctic Dome area. Withdraw it from mineral entry, and close it to ORV use. Should BLM receive an "Organic Act", nominate this region to the Wilderness Presentation System. The same consideration should be given to the Mt. Harper/Mt. Veta region (Ppr-2/A). Wildlife populations should be increased in the Boundary (Ppr-3/A) and Taylor Mountain region (Ppr-4/A) with restricted ORV use recommended.

Historical Sightseeing
Conduct an exhaustive inventory and further research of Gold

Run Creek (Shs-1/B), Montana Creek (Shs-2/B), and the Canyon Creek/Boundary region (Shs-3/B). Investigate access possibilities to the sites. Provide interpretation. Develop a management plan for each site if further research increases the sites significance. Nominate the sites to the National Register of Historic Places if they reach "A" status.

Archaeological Scientific
Conduct further research to determine the extent and significance of the Molly Creek site (Sar-1/B) and the Middle Fork of the Fortymile River (Sar-2/B). If the sites' scientific significance increases to an "A", then nominate it to the National Register of Historic Places. An artifact custodial plan should be proposed.

Rocks and Minerals Collecting
Pursue a mining claim clearance program to prevent potential miner vs. recreationist conflicts. Determine the possibility of obtaining a partial or entire claim, through purchase if necessary, in order to provide the public more opportunities to pan for gold. Investigate access to the areas, and provide interpretation. This should be done at Teddy's Fork (Crm1/B), Gravel Gulch (Crm-2/B), Dome Creek (Crm-3/B), Canyon Creek/ Squaw Gulch (Crm-4/B), Cherry Creek/Walker Fork (Crm5/B), Montana Creek (Crm-6/B), Forty-five Pup (Crm-7/B), and Ingle Creek (Crm-8/B). Survey the size and extent of deposits, consider access and interpretive potentials at Our/My Creeks (Crm-9/B), and Slate Creek (Crm-10/B).

Develop criteria for determining the difference between a recreational miner and a commercial operator using a suction dredge.

Off Road Vehicles
Prepare an inventory of existing ORV trails. Increase the quality by preparing a hazard reduction plan. Determine fragile zones for summer and winter use, and the minimum inches of packed or standing snow for snowmobiles. Investigate access areas, e.g., rivers and rotating trails. Priority location for this effort is the Mt. Harper/Fortymile area (Orv-1/B).

Hunting Big Game, Small Game, and Trapping
Cooperate with Alaska Department of Fish and Game to improve
game populations, e.g., better food sources in the Tanana Uplands (Hbg, sg, tp-1/A). The Tanana Uplands could easily reach the "A" category as a hunting opportunity in the future, and currently merits protection. Allow trappers to use presently designated trespass cabins to increase the "ease of maintaining a trapline" category.

## Fishing

Cooperate with Alaska Department of Fish and Game to increase the fish population in the Fortymile region ( $\mathrm{F}-\mathrm{l} / \mathrm{B}$ ).

## Zoological Sightseeing

Coordinate with Alaska Department of Fish and Game to increase the "frequency of occurrance" and quantity of wildlife in the Tanana Hills (Szo-l/A). If the region's values increase to an "A" classification, then determine visitor access possibilities and provide interpretation.

Geological Sightseeing
Access alternatives should be investigated and interpretation provided at Glacier Mountain/Mt. Eldridge (Sgo-1/B) and Gold Creek (Sgo-2/B). The Glacier Mountain/Mt. Eldridge region should be inventoried to determine its extent. If the values of this area increase to an "A" classification, they should be protected.

## Botanical Sightseeing

Attempt a seeding program of native alpine flowers to increase quantity and color in the Tanana Hills (Sbo-l/B) and the Polly Sumnit (Sbo-2/B) regions. Provide interpretation and access possibilities to areas. Work with Highway Department and permittee to include wild flower seeding and other native vegetation in all site rehabilitation activities.

Cross-Country Skiing
Increase the value of the Fortymile-Chicken-Boundary region (Txc-1/B) through trail construction. This will raise the "useable terrain features" category.

Downhill Skiing
In order to increase the snow depth, utilization of artificial snow making machines on Glacier Mountain (Tsk-1/B), American

Summit (Tsk-2/B), the Polly Summit-Chicken-Boundary region (Tsk-3/B), Taylor Mountain (Tsk-4/B), Mt. Veta (Tsk-6/B), and Mt. Harper (Tsk-7/B) should be considered. Thought also should be given to grading Glacier Mountain, American and Polly Summits, and the Chicken-Boundary region.
B. Eagle Historic District and Ft. Egbert

The values of the Eagle Historic must be protected. (Shs-1/A)
Increased historical research needs to be accomplished, and historical archaeological completed. In order to accomplish adequate maintenance, a structure management plan and artifact custodial plan should be written and implemented, and a custodian hired. Immediately initiate a study of the pros and cons relating to adaptive use of the stabilized structures. In cooperation with the City of Eagle, a visitor management plan should be developed. Seasonal interpreters and photoengraved signs used in order to institute interpretive plans.

Eventually the present road intersecting the parade ground should be phased out. This should occur as a new campground road is constructed (see Developed Facilities - Eagle Campground). This existing road is incompatible with the interpretation and management of Ft . Egbert.

The fort's parade ground should be closed to air traffic as soon as possible. This would eliminate the extremely hazardous situation that exists now, and would allow interpretation and further research.
C. Fortymile Proposed Wild and Scenic River

The following identified opportunities support the Department of the Interior's proposed Fortymile Wild and Scenic River. The recognized values of the river merit protection regardless of the ultimate congressional action. Until such time as congress acts, BLM is obligated to maintain the status quo.

## River Management

Continue to collect baseline information for the proposal. Determine social, ecological and physical carrying capacities of the river system. Prepare for establishment of a quota system and permit system to ration use when aggregate carrying capacity of each river segment is attained. Conduct an exhaustive cultural resource inventory, historical and archaeological, to determine their extent and significance.

Provide adequate access to the river at the South Fork bridge crossing (Wfb-1)first priority, West Fork Dennison bridge crossing (Wfb-2) second priority, Chicken (Wfb-3) and the Mosquito Fork bridge crossing (Wfb-4). The South Fork access should be able to accommodate two types of recreational users; tent campers and trailer campers. Plan for fly-in access/camping at Joseph, and determine if there are alternatives for a separate fire control staging area. If mining occurs adjacent, or in close proximity to the proposal, investigate suitable access to the river.

Develop a camping plan for the Fortymile River, and give special attention to the confluence of the North and South Forks. Revegetate this spot. To institute fire protection at these sites, an area three feet from the fire circle needs to be cleared of vegetation, and overhanging branches below fifteen feet in height above the fire circle should be removed. Either dirt or water should be immediately available to extinguish very small fires.

Pursue a mining claim clearance program to prevent potential miners vs. recreationist conflicts within the entire withdrawal.

If congress does not act to implement the Fortymile Wild and Scenic River proposal by December 18, 1978, BLM should withdraw from mineral entry that portion of the river proposal for Wild River status (Ppr-2A) subject to valid existing rights.

Within the Scenic portion of the Fortymile River, development of new access routes to and from mining sites should be regulated. These regulations would require miners to retain top soil, restore topography and replant mined areas. Structures will be required to conform to uniform design standards (no tar paper shacks for example). The mining purposes and the method and location of discharge outlets from mining operations should be regulated. For example, water quality should be monitored where Lost Chicken Creek ( $\mathrm{Wfb}-5$ ) and Steele Creek (Shs-2A) run into the South Fork of the Fortymile River. In some cases a less direct means of access to and from the mining area would be required.

Provide interpretation for river users e.g., through a brochure. Devise a sign to give adequate warning to recreationists for hazardous rapids and falls, e.g., below Chicken, at the "Kink" (Wfb-6), and at the "Chute" (Wfb-7). These should be aesthetically compatible with the surrounding environment. The red traffic stop signs at the "Kink" should be replaced.

Explore cooperative management possibilities on the lower Fortymile with the Yukon Lands and Forest Service and Parks Canada.

## Primitive Values

Should the Wild and Scenic proposal fail, that portion of the Fortymile presently proposed as "Wild" (Ppr-2/A) warrants best protection with a "Primitive" designation. It should be withdrawn from mineral entry and closed to ORV traffic. In cooperation with the Alaska Department of Fish and Game, attempt to increase the fisherman success ratio in the Fortymile region (Ppr-1/B). Minimize the aesthetic impact of mining and mining exploration. If the area receives an "A" value in the future, it should be designated as "Primitive" and closed to mineral entry and ORV traffic. If BLM receives an "Organic Act" from Congress, nominate these regions for inclusion into the Wilderness Preservation System.

## Historical Sightseeing

Conduct an exhaustive inventory, and further historical research of the Fortymile River (Shs-1/A), Steele Creek (Shs2/A), Bullion Creek (Shs-3/B), Joseph (Shs-4/B), Walker Fork Hassen Airstrip (Shs-5/B), and Jack Wade Community and dredge (Shs-6/B). If further research increases any site's historical significance to an "A", nominate it to the National Register for Historic Places. Nominate to the Register; the Chicken/ Franklin region (Shs-7/A), and in concert with Doyon, Tanacross Village and Eagle Village, Mitchell's Ranch (Shs-8/A), and the Eagle-Valdez (Shs-9/A) and Goodpaster (Shs-10/A) sections of the Washington-Alaska Military Cable and Telegraph System (WAMCATS).

A methodology for determing which cabins should be stabilized, restored, reconstructed, or deteriorated, naturally, and which ones should be considered for adaptive use needs to be done for the withdrawal.

Determine the validity of the mining claims at Steele Creek, and the Chicken/Franklin area. At Steele Creek, consider methods of obtaining the mining claim after the present individual is finished. For example, if the individual leases his claim, have the U.S. Government purchase it, or withdraw the area if it becomes invalid. Determine ownership of the Jack Wade dredge. Simultaneously, work with George Robinson to obtain the rights to the dredge boiler, and community at some future date.

Prepare an artifacts custodial plan of the artifacts along WAMCATS and the Fortymile River.

Provide interpretation. Investigate access possibilities to these sites.

Off Road Vehicles
The South Fork of the Fortymile and the Fortymile River should be under the restricted designation for ORV use. An inventory of existing ORV trails needs to be prepared. Fragile zones for winter use and the minimum inches of packed or standing snow should be determined. Access areas should be investigated, e.g., those portions under scenic and recreation proposed designation.

## Rocks and Minerals Collecting

Pursue a mining claim clearance program to prevent potential miners vs. recreationist conflicts. Determine the feasability of obtaining a partial or entire claim, e.g., through purchase, in order to provide the public more opportunities to pan for gold at historic areas. Provide interpretation. This should be accomplished at O'Brien Creek (Crm-1/B), Steele Creek (Crm2/B), Uhler Creek (Crm-3/B), Franklin (Crm-4/B), Napoleon Creek (Crm-5/B), Jack Wade (Crm-6/B), Walker Fork Campground (Crm-7/B), and Lost Chicken/ Chicken region(Crm-8/B).

## Botanical Sightseeing

Attempt a seeding program with native species to increase the quantity and color of flowers in the North Fork, South Fork, and Fortymile River. Provide interpretation and access possibilities to all areas.
D. Proposed Yukon-Charley National Rivers

The values of the proposed Yukon-Charley Rivers merit protection. The following identified opportunities support the Department of Interior's proposal, and should be referred to if the Charley River becomes a component of the Wild and Scenic River System with BLM possessing management authority; or if the entire withdrawal reverts to D1 status with BLM as the land manager.

Floatboating
The Kandik (Wfb-1/A), Yukon (Wfb-2/B), Nation (Wfb-3/A), and

Charley (Wfb-4/A) Rivers merit protection in order to maintain their present values. Any future plans for an above surface crossing of the Yukon, e.g., pipeline(s), should be vigorously opposed, in order to insure protection of the Yukon River's values. Cooperate with Aldsha Department of Fish and Game to increase wildlife, e.g., by changing habitat and migration routes. Also work with Fish and Game to increase the fisherman success ratio among these rivers. Conduct an exhaustive inventory of the cultural resources along each river to determine their size, extent, and significance. Conduct a mining claim clearance program, in order to prevent miner vs. recreationist conflicts along the rivers. Camping and cabin management plans should be prepared for these rivers. Provide interpretation for users along the river.

Sweepers could be reduced along the Kandik River to increase visitor safety. Should study determine such action is contrary to wild river management standards, assure that all Kandik informational materials highlight the hazard.

## Historical Sightseeing

Nation River Coalhouse (Shs-7/A) should be nominated to the National Register of Historic Places. Further inventory and research needs to be completed for Charley River Roadhouse (Shs-1/B), Noyes Roadhouse (Shs-2/B), the site of Charley River (Shs-3/B), Washington Creek (Shs-4/B), Fourth of July Creek (Shs-5/B), Nation City (Shs-6/B), and Miller's Camp (Shs-7/B), in order to establish these sites authenticity and historical significance. If further research increases any of the sites' historical significance and value to an "A", nominate it to the Register.

A methodology for determining which cabins should be stablized, restored, reconstructed, or deteriorate naturally, and which ones should be considered for adaptive use needs to be accomplished.

Artifacts should immediately be catalogued, interpretation provided, and access alternatives explored.

Paleontological Values
In conjunction with the University of Alaska, conduct further intensive research of the Precambrium microfossils in the Kandik/Tintina Fault region (Spi-1/A). Should future research increase the scientific significance of the area, the site should be nominated to the National Register of Historic Places and interpretation provided.

## Zoological Sightseeing

Coordinate with Alaska Department of Fish and Game to increase the quantity and frequency of occurrence of wildlife in the Kandik/Nation Basin (Szo-3/B) and Yukon River regions(Szo2/B). This would include moose, caribou, wolf, and raptors.

Identified peregrine falcon nesting sites must be protected. A visitor management plan in conjunction with the habitat management plan for these specific locations must be developed. Visitor access alternatives should be explored and interpretation provided.

Primitive Values
In cooperation with Alaska Department of Fish and Game, attempt to increase the fisherman success ratio in the Kandik/ Nation (Ppr-1/B), Yukon Highlands (Ppr-2/B), Lower Charley River (Ppr-3/B), and Upper Charley River (Ppr-4/A) regions. Minimize the aesthetic impact of mining in the first three areas.

The primitive values of the Upper Charley River region deserve protection. If the Yukon-Charley proposal fails, and BLM retains managing authority, this area should be designated as "Primitive" and closed to mineral entry. Off road vehicles should be prohibited (and closely scrutinized as to their desirability in the other areas). Should BLM receive an "Organic Act", the Upper Charley River should be nominated to the Wilderness Preservation System.

Access to these regions should be explored and interpretation provided.

Rocks and Minerals Collecting
Fourth of July Creek (Crm-1/B), Pass Creek (Crm-2/B), Windfall Mountain (Crm-3/B), and Copper Creek (Crm-4/B) should be surveyed to determine their size and extent of deposits. A mining claim clearance program should be pursued to prevent potential miner vs. recreationist conflicts at Fourth of July Creek and Pass Creek. The possibility of obtaining a partial or entire claim at these two creeks should be explored, e.g., through purchase, in order to provide the public more opportunities to pan for gold.

Interpretation and access to the areas should be provided.

Big, Small, Waterfowl Hunting and Trapping (Hbg, sg, wf, tp-1/B)

Coordinate with the Alaska Department of Fish and Game to improve game populations, e.g., improved food sources in the Yukon Basin. Allow trapper's to use presently designated trespass cabins in order to increase the "ease of maintaining a trapline" category.

## Fishing

Coordinate with the Alaska Department of Fish and Game to increase the fish population in the area north of the Yukon ( $\mathrm{F}-1 / \mathrm{B}$ ), the Yukon River ( $\mathrm{F}-2 / \mathrm{B}$ ), the Seventymile region ( $F-$ $3 / B)$, and the Charley region ( $F-4 / A$ ). The Charley area possesses a good possibility for an "A" rating. If the State Division of Highway's proposed road from Circle to the Taylor Highway is constructed, close surveillance of the construction should be made to insure no damage occurs to fish propagation.

Cross-Country Skiing
Increase the values of the Yukon-Charley region (Txc-1/A) through trail construction.

## Geological Sightseeing

Conduct inventories of geological features in the Kandik Basin (Sgo-1/B), Windfall Mountain (Sgo-2/B), and Nimrod Peak (Sgo$3 / A)$ to determine their extent. The values of Nimrod Peak merit protection. Interpretation should be provided, and access investigated, e.g., trail construction.

Botanical Sightseeing
Attempt a seeding program with native species to increase the quantity and color of flowers in the Yukon-Kandik region (Sbo1/B). Provide interpretation and access possibilities.
E. Taylor Highway

Off Road Vehicles
Prepare an inventory of existing ORV trails. Increase the quality by preparing a hazard reduction plan. Determine fragle zones for summer and winter use, and minimum inches of packed or standing snow for snowmobiles. Investigate access
areas, e.g., rivers and rotating trails. Plan for this in the Taylor Highway area (Orv-1/B). (See Off Road Vehicles Opportunities under the Proposed Fortymile Wild and Scenic River heading for those portions of the proposal that impact the Taylor Highway region (Orv-1/B).

Geological Sightseeing
Access alternatives should be investigated for the west side of Mt. Fairplay (Sgo-1/C), and interpretation provided for the entire Fairplay region (Sgo-2/B).

Zoological Sightseeing
Coordinate with Alaska Department of Fish and Game to increase the "frequency of occurrence" and quantity of wildlife along the Mt. Fairplay area (Szo-1/B).

Rock and Minerals Collecting
Survey the size and extent of deposits at American Creek (Crm1/B), Mp 130.8 (Crm-2/B), Mp 122 (Crm-3/B), Alder Creek (Crm4/C), Mp 57.5 (Crm-5/B), Mp 46.8 (Crm-6/B), and Mp 12.5 (Crm7/B). Provide interpretation.

## F. Developed Facilities

To institute fire protection at the following developed facilities, areas three feet from the fire circle need to be cleared of vegetation, and overhanging branches below fifteen feet in height above the fire circle should be removed. Either dirt or water should be immediately available to extinguish very sma 11 fires.

Eagle Campground (DF-6)
Additional camping facilities are needed at Eagle. Study present and future needs and prepare an analysis and plan. Consider that the present location maybe an intrusion on the historic entity. Identify alternative locations, and weigh them against expansion of the present site. Provide for a new or improved water supply to correct the present sanitary problems of the spring. Consider a well at the campground (recognizing that previous attempts were unsuccessful). In well placement and size analysis, consider the possibility of providing water to Fort Egbert primarily for summer fire protection to existing structures. Check erosion on the trail from spring to the campsite. Construct a new campground
access road, which does not intersect Ft. Egbert. Increase interpretive efforts at the campground.

Walker Fork (DF-3)
Jack Wade Creek bridge must be replaced. Interpretation should be emphasized on the bluff overlooking Jack Wade Creek, along the Walker Fork, and at the trailer camping area (Lassen Airstrip). Campground redesign should be planned for, and future expansion considered.

Delta Campground (DF-7)
Seriously consider conveying the campground to the State of Alaska. Reconstruct or repair damaged firepits. Continue reseeding and topsoiling exposed tree roots.

West Fork Dennison (DF-2)
Redesign the campground and initiate some interpretation. Integrate plans with the proposed river access to the West Fork Dennison.

Liberty Creek (DF-4)
Reconstruct the current entrance road, and initiate erosion control. Redesign the campground to improve traffic flow, and consider future expansion. Replace pit toilets with vault toilets, and relocate them 100' from King Solomon Creek. Begin interpretation.

American Creek (DF-5)
Redesign the pullout to increase the efficient flow of traffic. Begin interpretive efforts at the site. Check erosion caused by the suction dredge, either by prohibiting its operation or constructing a bank support.

Logging Cabin Creek Wayside (DF-1)
To increase the size and quality of the site, redesign the pullout area to create better traffic flow, and initiate some interpretation there.
G. General Areas

The specific opportunities identified in this section are in areas throughout the planning unit other than those identified as specific management areas.

Prepare an existing ORV trail inventory. Increase the quality by preparing a hazard reduction plan. Determine fragile zones for summer and winter use and the minimum inches of packed or standing snow required for snowmobiles. Investigate access areas, e.g., rivers, and rotating trails. Plan this in the Tanana Lowlands/Alaskan Highway region (Orv-1/B).

Big, Small, Waterfowl Hunting and Trapping
Cooperate with Alaska Department of Fish and Game to improve game populations in the Tanana Lowlands ( $\mathrm{Hbg}, \mathrm{sg}, \mathrm{tp}-1 / \mathrm{B}$ ). This might entail better food sources or a change in migration routes. The hunting values for waterfowl (Hwf-1/A) in this region deserve protection. Allow trappers to use presently designated trespass cabins in order to increase the "ease of maintaining a trapline" category. If this is done, the area probably will receive an "A" rating, and its values would merit protection.

Cross-Country Skiing
The Ladue/Tanacross/Nabesna area (Txc-1/A) merits protection of its values. Cooperation between snowmobilers and crosscountry skiers for land use should be encouraged.

## Dog Mushing

Increase the "useable terrain features" in the Eagle area (Tdg-1/B) through close cooperation with the Eagle community. This would involve trail construction.

Primitive Values
In cooperation with Alaska Department of Fish and Game, attempt to increase the fisherman success ratio, in the Upper Salcha (Ppr-1/B) Shawnee Peak (Ppr-2/B), Mosquito Flats (Ppr$3 / B)$, Ladue ( $\mathrm{Ppr}-4 / B$ ), and Nabesna ( $\mathrm{Ppr}-5 / \mathrm{A}$ ) regions. Minimize the aesthetic impact of mining in the first four areas.

The primitive values of the Nabesna area deserve protection. This region should be designated as "Primitive" and closed to mineral entry and off road vehicles. Should BLM receive an "Organic Act", the Nabesna area should be nominated to the Wilderness Preservation System.

Access to the areas should be explored and interpretation provided.

## Historical Sightseeing

Conduct further inventory and research for Star City (Shs1/B), the Seventymile region (Shs-2/A), the Alaska Road Commission Trail (Shs-3/B), Nandel (Shs-4/B), and Mansfield Village (Shs-5/B). Until the full significance and extent of these sites has been determined, do not permit any site alteration actions, especially at Star City. Any action concerning Mansfield Village should be done in coordination with the Villages of Tanacross and Dot Lake.

Should Star City and the Seventymile region obtain an "A" quality rating, then nominate the sites to the National Register of Historic Places. A methodology for determining which cabins should be stabilized, restored, reconstructed, or let deteriorate naturally, and which ones should be considered for adaptive use needs to be accomplished.

Artifacts should immediately be catalogued, interpretation provided, and access alternatives explored.

Archaeological Values
Further research and survey needs to be accomplished at the Healy River site (Sar-1/B). The extent and significance of the sites in this region needs further documentation. If the site's scientific signifance increases to an "A" rating, then they should be nominated to the National Register of Historic Places.

Floatboating
Increase the quality by reducing sweepers and log jams along the Tatonduk (Wfb-1/B), Seventymile (Wfb-2/A), East Fork of the Sixtymile (Wfb-3/C), the Ladue (Wfb-4/B), Chisana (Wfb5/B), Nabesna Rivers (Wfb-6/B), Billy Creek (Wfb-7/B), Sand Creek (Wfb-8/B), Healy River (Wfb-9/B), Goodpaster River (Wfb10/B), and Salcha River (Wfb-11/B). The Seventymile River merits protection to maintain and increase its present values. Devise a method to give recreationists adequate warning concerning hazardous falls or rapids along the Seventymile and Tatonduk. In cooperation with Alaska Department of Fish and Game, attempt a change of wildlife habitat and migration in order to increase their populations. Also try to increase the fish population. Inventory all the rivers for cultural values, to determine the extent and significance of each site. Provide
interpretation for river users. Study access alternatives, especially if mining occurs adjacent or in the proximity of the river, e.g., the Chisana.

Work in conjunction with the Village of Northway and Doyon in planning for the Chisana and Nabesna Rivers; Dot Lake/Doyon with Billy and Sand Creeks, Healy Lake/Doyon for Healy River, and the Delta Land Managment Planning Study Team for the Salcha and Goodpaster Rivers.

Rocks and Minerals Collecting
Pursue a mining claim clearance program to prevent potential miner vs. recreationist conflicts. Determine the feasibility of obtaining partial or entire claims, e.g., through purchase, in order to provide the public a better opportunity to pan for gold. Investigate access to the areas and provide interpretation. Do this at Flume Creek (Crm-1/B), Alder Creek (Crm-2/B), Barney Creek (Crm-3/B), Crooked Creek (Crm-4/B), and Fox Creek (Crm-5/B).

Survey the size and extent of deposits at Calico Bluff (Crm6/B), Bluff Creek (Crm-7/B), Slate Creek (Crm-8/B), Prindle Volcano (class "A" potential Crm-9/A). Consider access potential to these regions and provide interpretation.

## Fishing

Clearwater streams north of the Tanana River ( $\mathrm{F}-1 / \mathrm{A}$ ) and the Seventymile region ( $F-2 / B$ ) merit protection to maintain their high values. A joint venture with the Alaska Department of Fish and Game should be entered into as a supplement to the new general agreement so that fish populations can be increased and water quality monitored in these two areas along with the Ladue region ( $F-3 / B$ ). If placer mining descharge levels exceed the maximum, the Department of Environmental Quality should be notified.

Access alternatives should be planned.
Zoological Sightseeing
Coordinate with Alaska Department of Fish and Game to increase the "frequency of occurrence" and quantity of wildlife in the Tanana Lowlands (Szo-1/B).

Geological Sightseeing
Further research needs to be accomplished in order to interpret the Tintina Fault (Sgo-1/B), Calico Bluff (Sgo-2/A), Prindle Volcano (Sgo-3/B), and Donnelly Dome (Sgo-4/B). The values of Calico Bluff merit protection. Interpretation should be provided and access explored.

Botanical Sightseeing
Attempt a seeding program of flowers in the Tanana Lowlands region (Szo-1/B) to increase their color.

Downhill Skiing
Consider using artificial snow making machines to increase snow depth at Sand Peak (Tsk-1/B) and Sixtymile Butte (Tsk2/B).

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## FORTYMILE PROPOSED WILD AND SCENIC RIVER





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P.O. BOX 25047

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