



FWLB1202

CHITINA RIVER, ALASKA —  
A Wild and Scenic River Analysis.

THIS REPORT WAS PREPARED PURSUANT TO PUBLIC LAW 90-542, THE WILD AND SCENIC RIVERS ACT. PUBLICATION OF THE FINDINGS AND RECOMMENDATIONS HEREIN SHOULD NOT BE CONSTRUED AS REPRESENTING EITHER THE APPROVAL OR DISAPPROVAL OF THE SECRETARY OF THE INTERIOR. THE PURPOSE OF THE REPORT IS TO PROVIDE INFORMATION AND ALTERNATIVES FOR FURTHER CONSIDERATION BY THE BUREAU OF OUTDOOR RECREATION, THE SECRETARY OF THE INTERIOR, AND OTHER FEDERAL AGENCIES

MAY 15, 1973

Bureau of Outdoor Recreation  
Alaska Task Force

PRELIMINARY

PRELIMINARY DRAFT ---  
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--- SUBJECT TO REVISION

UNITED STATES GOVERNMENT

# Memorandum

(W&SRS)

TO : Assistant Director Eastman

DATE: May 29, 1973

FROM : Alaska Task Force Leader

SUBJECT: Chitina River Wild and Scenic River Report.

*see next page for title*

Enclosed are two copies of the subject report. The original cut and paste and pencil maps are being forwarded under separate cover to Fred Strack. A copy of the report has been provided to NWRO and BLM, BSF&W, NPS and FS planning teams in Anchorage.

The enclosed report has been revised to reflect comments received on the Discussion Draft distributed in January 1973. Primary revisions were made on the basis of input provided by the BLM, Bureau of Mines, and Alaska Divisions of Geology and Highways.

New data may well cause significant changes in the evaluation. For example, the attached data on highway locations was obtained after this draft was prepared and as such the sections on transportation, river access and alternative boundaries and classifications, must be altered to reflect these data and the highway data is still preliminary.

Field work in the upper river area where the new road is proposed is scheduled during July.

Field work will be conducted on an interagency basis with representatives of FS, BLM, NPS, ADF&G, and Alaska Department of Highways. The enclosed report will be revised into final field form at the conclusion of field work.

Appendices will be provided as other reports are completed.

*Jules V. Tileston*  
Jules V. Tileston.

2 Enclosures

cc: WASO/Fred Strack

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This report evaluates the free-flowing character of the Chitina River, Alaska, as a basis for determining whether the river qualifies for inclusion in the National Wild and Scenic Rivers System and if so whether the river and its immediate environment should be included as a Federally administered component.

Within the next few years a major redistribution of the total land ownership patterns in Alaska will take place. These in turn will largely determine foreseeable uses and availability of public resources. On June 30, 1972, approximately 96.7 percent of Alaska's total acreage was owned by the Federal government. Selections by Natives under the provisions of the Alaska Native Land Claims settlement Act will transfer 40 million acres (11.3 percent of the total land area) into private ownership. Combined with the 103 million acres made available to the State under the provisions of the Alaska Statehood Act, a total of 40.7 percent will move from Federal ownership.

Wild and Scenic Rivers Act

The Wild and Scenic Rivers Act, P.L. 90-542, was approved on October 2, 1968. As stated by the Congress of the United States in that Act:

"It is hereby declared to be the policy of the United States that certain selected rivers of the Nation, which with their immediate environments,

possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations. The Congress declares that the established national policy of dam and other construction at appropriate sections of the rivers of the United States needs to be complemented by a policy that would preserve other selected rivers or sections thereof in their free-flowing condition to protect the water quality of such rivers and to fulfill other vital national conservation purposes."

To implement this policy, Congress: established the National Wild and Scenic Rivers System; designated all or portions of eight rivers having a total of approximately 800 miles of free-flowing stream as initial components, and: designated 27 other rivers having a total of approximately 3,750 miles of free-flowing stream for study as potential additions to the system. None of these are in Alaska.

The task of preserving and administering free-flowing streams is not one that can or should be undertaken solely by the Federal government. Therefore, the 1968 Wild and Scenic Rivers Act directs the various Federal departments to encourage and assist states, political subdivisions and private interests, including nonprofit organizations, in the establishment of wild, scenic and recreational river areas.

For this reason two methods for preserving select free-flowing streams were authorized by the Wild and Scenic



Rivers Act: Act of Congress where Federal administration was appropriate, or; State legislation and the approval of the Secretary of the Interior where State or local groups would administer the area.

Free-flowing rivers within existing or proposed national forest, parks, wildlife refuges or other Federal land management units cannot be added to the national system without enactment of Federal legislation.

#### Alaska Native Claims Settlement Act

The Alaska Native Claims Settlement Act (ANCSA), P.L. 92-203 was approved on December 18, 1971. In that Act the Congress declared that:

"There is an immediate need for a fair and just settlement of all claims by Natives and Native groups of Alaska . . . the settlement should be accomplished rapidly . . . with maximum participation by Natives . . . "

To implement this settlement ANCSA directed that up to 120 million acres or one-third of the total land area of Alaska be made available for potential Native selection. The amount withdrawn for this purpose is approximately three times the 40 million acres which can be selected by Natives, and once the Natives have selected their land, the remainder will be made available for selection by the State under the Alaska Statehood Act or managed by the Bureau of Land Management under the Public Land Laws.

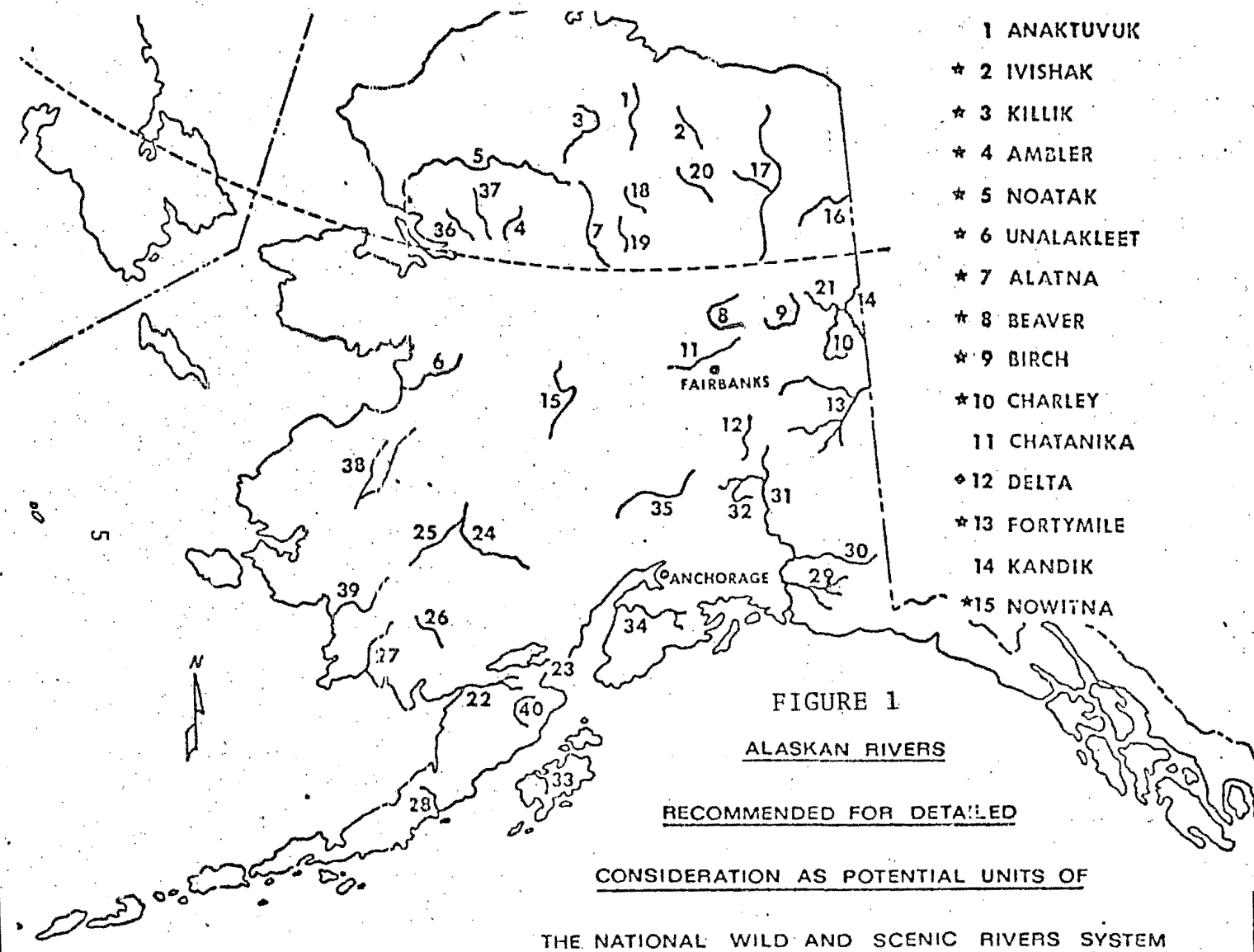
Section 17(d)(2) further directed the Secretary of the Interior to:

" . . . withdraw from all forms of appropriation under the public land laws, including the mining and mineral leasing laws, and from selection under the Alaska Statehood Act, and from selection by Regional Corporations . . . up to, but not to exceed 80 million acres of unreserved public lands in the State of Alaska . . . which the Secretary deems are suitable for addition to or creation as units of the National Park, Forest, Wildlife Refuge, and National Wild and Scenic Rivers Systems . . . . "

The Chitina River, Alaska, has been withdrawn under this provision of ANCSA.

#### Background

It is probable that all Alaskan rivers meet the minimum criteria established by the Congress for inclusion in the National Wild and Scenic Rivers System. Therefore, the first task was to determine the types of Alaskan rivers which should be considered for inclusion in the system and to identify those having the highest potential for inclusion. Federal and State agencies, conservation groups and others knowledgeable about Alaska recommended that some 166 Alaskan river totaling more than 15,000 miles be considered. Through screening and reconnaissance, 40 rivers with more than 3,400 miles were identified by the Bureau of Outdoor Recreation as having high potential value (see Figure 1, p. 5). These rivers were selected without regard to existing or potential ownership by Federal, State or Native groups.



- |                |  |
|----------------|--|
| 1 ANAKTUVUK    | * 16 PORCUPINE                           |
| * 2 IVISHAK    | * 17 SHEENJEK-KONESS                     |
| * 3 KILLIK     | * 18 TINAYGUK                            |
| * 4 AMZLER     | 19 WILD                                  |
| * 5 NOATAK     | * 20 WIND                                |
| * 6 UNALAKLEET | * 21 YUKON                               |
| * 7 ALATNA     | * 22 ALAGNAK                             |
| * 8 BEAVER     | * 23 COPPER (ILIAMNA)                    |
| * 9 BIRCH      | 24 HOHOLITNA                             |
| * 10 CHARLEY   | 25 HOLITNA                               |
| 11 CHATANIKA   | * 26 NUYAKUK                             |
| * 12 DELTA     | * 27 TOGIAK                              |
| * 13 FORTYMILE | * 28 ANIAKCHAK                           |
| 14 KANDIK      | * 29 BREMNER                             |
| * 15 NOWITNA   | * 30 CHITINA                             |
|                | * 31 COPPER                              |
|                | * 32 GULKANA                             |
|                | 33 KARLUK                                |
|                | 34 KENAI-RUSSIAN,<br>SWANSON R.-SWAN LK. |
|                | 35 SUSITNA                               |
|                | * 36 SQUIRREL                            |
|                | * 37 SALMON                              |
|                | * 38 ANDREAFSKY                          |
|                | * 39 KANEKTOK                            |
|                | * 40 AMERICAN CREEK                      |

BOR, OCTOBER, 1972

\* ALL OR SUBSTANTIAL PORTIONS CLASSIFIED UNDER 17(d)(2) OF ANCSA, SEPT. 1972

\* RIVERS WHERE DETAILED STUDIES HAVE BEEN REQUESTED

Land classification and studies of the area have been made by the Bureau of Land Management in the past. These include the Copper River Classification in 1968, and the Wrangell Mountains Unit Resource Analysis and Management Framework Plan of 1970 and 1973. In addition, the Bureau of Outdoor Recreation developed the Wrangell Mountains National Scenic Area Proposal in 1970. Public hearings were held on all of these.

The Chitina River is listed in the Alaska Statewide Comprehensive Outdoor Recreation Plan (1970) as a free-flowing river identified by the Bureau of Land Management as having potential for inclusion in the National Wild and Scenic Rivers System.

On October 28, 1970, the Secretary of the Interior and the Secretary of Agriculture published notice in the Federal Register that the Chitina River, Alaska, in its entirety had been identified as one of six Alaskan free-flowing rivers having high values in their present condition.

Conduct of the Study

The study of the Chitina River, Alaska, as a potential unit of the National Wild and Scenic Rivers System was a cooperative effort under the leadership of the Bureau of Outdoor Recreation. On May 16, 1972, the Bureau created a task force to evaluate free-flowing rivers throughout Alaska and on May 31, 1972, established a temporary task force office in Anchorage, Alaska.

Evaluations and recommendations made by the Bureau of Outdoor Recreation have been coordinated with various Federal, State, Native and private groups. The final recommendations, however, are those of the Bureau of Outdoor Recreation.

Agencies invited to participate in field examinations, provide factual data and to review preliminary drafts included:

Alaska Natives

AHTNA Native Association

State of Alaska

Coordinated through the Governor's Office

Department of Agriculture

Forest Service

Department of the Army

Corps of Army Engineers

Department of the Interior

Alaska Power Administration

Bureau of Sport Fisheries  
& Wildlife

Bureau of Indian Affairs

Geological Survey

Bureau of Land Management

National Park Service

Bureau of Mines

Department of Transportation

Federal Aviation Agency

Federal Highway Administration

Office of the President

Environmental Protection Agency

Joint Federal-State Land Use Planning Commission

Land Use Planning Team

Comments received from these agencies and groups are reflected in this report.

Comments and views presented at hearings held by the Joint Federal-State Land Use Planning Commission in April and May 1973 throughout Alaska and at selected cities in the conterminous 48 states are reflected.

Field investigations were conducted by air and canoe during 1972 and 1973.

## II. SUMMARY OF FINDINGS AND RECOMMENDATIONS

### Findings

This study has revealed that the Chitina River possesses the values which qualify it for inclusion in the National Wild and Scenic Rivers System. The Chitina River fulfills the requirements of the Wild and Scenic Rivers Act, and meets the supplemental criteria established jointly by the Secretary of the Interior and the Secretary of Agriculture, as published in Guidelines for Evaluating Wild, Scenic and Recreational River Areas Proposed for Inclusion in the National Wild and Scenic Rivers System Under Sec. 2, Public Law 90-542, February 1970.

The fundamental assets of the Chitina River are its outstandingly remarkable scenic, geologic, and wildlife and recreational resources.

It has been found that:

- There are no developed areas within the river corridor with the exception of a few isolated cabins.
- The river is unpolluted and, although silt-laden - as are all glacial rivers - it meets the "Aesthetics-General Criteria" developed by the National Technical Advisory Committee on Water Quality, FWQA, Water Quality Criteria, April 1, 1968.

- Existing recreational use of the river corridor is exceedingly light. The heaviest use is during August and September when the mountains bordering the Chitina are used by fly-in sheep hunters. Two landing strips are located in the study corridor.
- There are no channel improvements, impoundments or any type of water resource development within the Chitina corridor; however, on the Copper River, 6 miles below the mouth of the Chitina, there is a potential hydroelectric damsite. The damsite and reservoir lands below 1,000 feet msl are covered by two FPC powersite withdrawals, pp. 2138, July 20, 1953, and pp. 2215, August 13, 1956.
- Wood Canyon project, an important potential for long-range power supplies in Alaska, would create a reservoir offering recreation potential in a highly scenic region. Maximum development of the Wood Canyon damsite would inundate 85 miles or 74 percent of the Chitina valley, a lower proposal would inundate the valley 55 miles from the mouth of the Chitina, approximately 50 percent of the river valley. The remainder would not qualify for inclusion in the national system.



- The entire 77-mile long study corridor lies within lands owned by the Federal government with a few exceptions. A portion of a 96.7 acre patented mining claim and approximately 1,200 acres of a 23,882 acre tract of State owned land. The lower 35 miles of the Chitina lie within lands withdrawn in accordance with ANCSA as Regional Deficiency areas and a Native Village Withdrawal.
- There are three Federal land managing agencies interested in the Chitina River area: the Bureau of Land Management, the Forest Service, and the National Park Service.

### Recommendations

To preserve the Chitina River in its free-flowing condition and to protect and enhance its natural values, it is recommended:

- That the Chitina River be included in the National Wild and Scenic Rivers System as a Federally administered component of the system unless the river is included within a National Recreation area in the proposed Wrangell-St. Elias National Park Complex.

- That the river segment designated be from 3 miles above Marble Creek in T. 10 S., R. 21 E. near its source to the western limit of T. 6 S., R. 11 E. of the Copper River Meridian, a distance of 77 miles.
- That the Chitina be designated a Wild River area as described in Sec. 2(b)(i) of P.L. 90-542, the Wild and Scenic Rivers Act.
- That the Federal land manager of the adjacent land area administer the Wild River area.  
That lateral boundaries be delimited by the administering agency within one year from the date of the Act including the Chitina Wild River in the national system. Such boundaries not to exceed 640 acres per mile from the high water line on each side of the river, approximately 981560 acres, plus 85,000 acres of riverbed, for protection of the river environment and provision of recreation use areas giving special attention to the primary visual corridor and wildlife habitat.
- That the 35-mile river segment below the study reach which has been withdrawn under the Alaska Native Claims Settlement Act for Native selection.

be studied at a later date for possible addition to the Chitina Wild River Area should the Natives select the river corridor and request such a study be undertaken. This lower segment, if included, to be administered by the Native Corporation administering the adjacent area.

● That, in the event the Congress authorizes the proposed Wrangell-St. Elias National Park Complex, separate legislation to designate the Chitina River as a component of the National Wild and Scenic Rivers System not be proposed provided the N.R.A. boundary includes both sides of the Chitina study corridor be proposed. This recommendation is based on the fact that the management concepts presented in the report by the National Park Service, recommending the establishment of the Wrangell-St. Elias National Park Complex are compatible with the intent of preserving selected river areas in a free-flowing condition for the benefit and enjoyment of present and future generations as prescribed in the Wild and Scenic Rivers Act, and that the public and the Congress will make decisions as to the specific types of uses which are in the best long-term interests of the nation for the Chitina River,

### III.

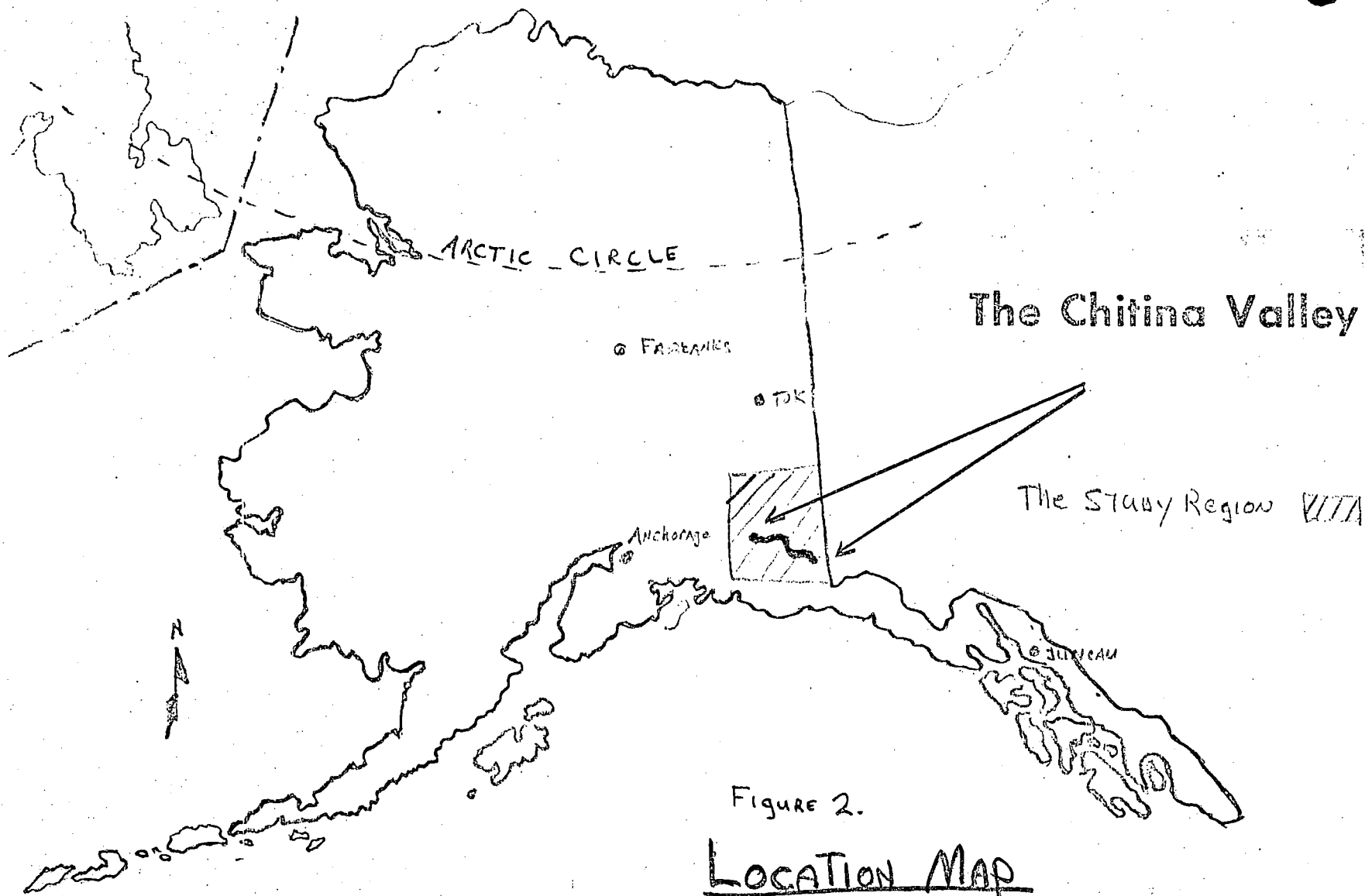
### REGIONAL SETTING

#### Landscape

The region through which the Chitina River flows is located in Southcentral Alaska near the Canadian border (fig. 2). Rising in glaciers, the river flows northwesterly through the Coastal trough which separates the Border Ranges and the Pacific Mountain System. The former includes the Chugach and the latter the Wrangell Mountains. The glaciers at the source of the Chitina spill out of the St. Elias Mountains. This section of Alaska and Canada contains the highest concentration of mountain peaks exceeding 14,500 feet in elevation on the North American continent.

The mountains are mostly comprised of contorted Paleozoic and Mesozoic sedimentary and igneous rocks which have undergone a complex process of uplift and inundation by volcanic extrusions since late Tertiary time. Since Tertiary time, glaciers have been a significant force in the area. At least three times they have advanced and coalesced to inundate and extensively modify the area's lowlands. Because of these glaciers, drainage patterns have been extensively altered and deposits of glacial debris are found over large areas.

From the hydrologic standpoint, the Copper River is the region's dominant drainage system. Almost all of the



Copper's major tributaries including the Chitina, have their origin in the glaciers and ice fields surrounding the river. As a result these rivers carry a heavy silt load in all but the winter season. Water temperatures are cold, seldom exceeding 45 degrees F. The large amount of silt and sand produced by the glaciers is continually deposited and eroded along the major drainage channels.

The region immediately surrounding the Chitina Valley remains a vast wilderness with only scant evidence of human activity which is restricted to small pockets and localized on the north side of the river. The rugged mountains and swift, turbid glacial rivers are formidable barriers to access. From the Chitina, south to the Gulf of Alaska, cultural intrusions are exceedingly limited through this truly primitive area. The western boundary of the Chitina valley is Alaska's third largest river, the Copper.

Vegetation in the region exhibits characteristics of both coastal and interior plant communities. In general vegetation in the area is composed of a combination of a coastal spruce-hemlock forest and shrub thickets interspersed with areas of alpine tundra.

Forest cover, below 2,000 feet in elevation, consists primarily of black spruce, white spruce, birch, aspen and

balsam poplar. In the well drained areas free of permafrost are found the larger spruces, generally white spruce and poplar.

The region supports a wide variety of wildlife. Moose, bear, wolves, goats and Dall sheep are the main big game species. Numerous smaller animals such as beaver, weasel, fox and squirrel may also be found in the area. Waterfowl are abundant in the region with the Copper River Delta being one of the state's high production areas. The delta is the exclusive nesting area of the rare Canada Dusky goose and the area around the mouth of the Bremner River hosts a significant population of trumpeter swans. Upland areas contain sizeable populations of rock ptarmigan.

The rivers of the area support runs of red, king and silver salmon as well as Dolly Varden and grayling.

There are no major agricultural, logging or mining activities taking place in the region. In past times, however, Copper ore was mined extensively in the Chitina River drainage in the northern part of the region and shipped by rail to Cordova via a now abandoned railroad along the north side of the Chitina valley and then downstream along the Copper River.

#### Climate

Climate of the region falls into a transitional zone between that of the Gulf of Alaska and the interior.

This transition is rather abrupt because the Chugach and St. Elias Mountains provide a barrier that is effective in diverting and changing the character of maritime air masses. Precipitation varies widely in the area with approximately 103 inches at Yakataga along the Gulf of Alaska and falling to around 13 inches inland near the town of Chitina. Various gradations between these extremes vary according to local physiographic features. In the valley, precipitation averages around 10 inches while in the mountains it is considerably higher, often double.

Temperatures in the region vary widely with winter lows of -10 degrees F. and summer highs in the 70's being common near the coast and summer highs in the 90's with winter temperatures as low as -65 degrees F. characterizing the interior areas.

Snowfall averages approximately 52 inches at Chitina and decreases north of the Wrangells. South of the Chugach Range, snowfall averages 108 inches as a result of the moist coastal climate.<sup>1/</sup>

Strong winds are not uncommon in the region. Carrying sand and silt from the river bars, the winds often make river travel uncomfortable and even hazardous.

Separated from the moderating influence of the moist gulf coast by the Chugach Mountains, the Chitina valley has the Sub-Polar Continental climate of Interior Alaska.

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<sup>1/</sup> National Weather Service figures for Yakataga - 25 years of record - and Chitina - 23 years of record.



## Population and Economy

### Population

The population in Alaska in 1970 was 302,173, of which 51.6 percent was rural and 48.4 percent urban. Between 1960 and 1970 the population of Alaska increased 32.8 percent while the people residing in urban areas increased 10.5 percent.

Population projections used in the Alaska Statewide Comprehensive Outdoor Recreation Plan (1970) estimates the total State population will be 331,000 by 1975 and 565,000 by 2000.

Anchorage, the closest major population center is nearly 200 miles from the Chitina valley. The regional population, therefore, consists of those living along the highways to the west and north of the valley.

According to data developed in 1970 by BLM, the "highway population" exceeds 1,000 individuals and is generally concentrated in the settlements of Glennallen, Copper Center, Gulkana and Gakona. The balance is distributed among scattered smaller settlements, or at the various lodges, service enterprises, and private residences along the highway network. Natives comprise about one-third of the total.

During the summer months the population increases as a number of the lodges and service enterprises reopen after

being closed down during the long winter.

The Chitina River study region lies within two census divisions. The Cordova-McCarthy census division and the Valdez-Chitina-Whittier census division.

During the ten-year period from 1960 to 1970, the population of the Cordova-McCarthy census division increased 5.6 percent, from 1759 to 1857. The Valdez-Chitina-Whittier census division increased from 2,844 to 3,098, an 8.9 percent change.

In comparison, the "highway population" of the study region increased 86.1 percent. Table 1 summarizes the population data for the "highway population."

TABLE 1. 1960 and 1970 Population of Villages in Close Proximity to the Chitina River Basin, Alaska<sup>1/</sup>

|               | <u>1970</u> | <u>1960</u>      | <u>Percent Change</u> |
|---------------|-------------|------------------|-----------------------|
| Glenallen     | 363         | 169              | 114.8                 |
| Copper Center | 206         | 151              | 36.4                  |
| Gulkana       | 53          | -- <sup>2/</sup> | -- <sup>2/</sup>      |
| Gakona        | <u>88</u>   | <u>33</u>        | <u>116.7</u>          |
|               | 657         | 353              | 86.1 <sup>3/</sup>    |

<sup>1/</sup>Source 1970 Census of Population - Number of Inhabitants, Alaska.

<sup>2/</sup>No prior comparable data.

<sup>3/</sup>Excludes Gulkana.

## Economy

Alaska's economy can be separated into two distinct parts: cash (where dollars earned purchase goods and services) and subsistence (where work is related to direct procurement of food and shelter).

Important elements of the Statewide economy include government, minerals, forestry and tourism. Of these minerals (primarily oil and gas) and tourism have shown the greatest growth and appear to have the greatest potential for future growth.

Growth in the mineral industry other than oil and gas has been fairly slow in recent years. The low rate of growth is related to several factors: low base metal prices, high investment cost, difficult access and uncertainty of future land ownership. These inhibitors are further compounded by the subpolar climate.

Tourism in its broadest sense shows the greatest promise for statewide expansion. The Alaska Survey and Report, 1970-1971, Vol. 2, states:

"Of all parts of the Alaskan economy, tourism can most rapidly provide jobs to the widest spectrum of educational and age levels. It can also, with advertising and investment, direct economic growth to depressed areas of the state."

Between 1964 and 1971 tourism in Alaska increased from 59,200 visitors who spent \$18.2 million to 130,000 visitors

and \$45 million. In 1972 there were slightly more than 161,000 tourists and a preliminary estimate of 190,000 in 1973. Expenditures by tourists were distributed as follows: 30 percent lodging, 20 percent each restaurants and transportation, and 10 percent each food stores, merchandise and other services.

Information developed by the University of Alaska indicates that of the \$45 million generated by tourism in 1971, 64 percent (\$29.8 million) were attributable to visits to the four units of the National Park System in Alaska.

During 1971, the latest year for which complete figures are available, tourism accounted for 3,700 employed persons with total wages of \$22.9 million.

The same factors for investment cost, transportation, resource ownership and climate that inhibit mineral development also depress outdoor recreation growth.

Sport fishing and hunting are also significant contributors to the Alaskan economy. Information developed by the Alaska Department of Fish and Game indicates that sport fishing in Alaska contributed approximately \$22 million in 1972.

Tourism, recreation, transportation, and communications are the basic ingredients of this heavily service and government-oriented "highway" economy. In the private

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Hunters using the area for activities such as its excellent sheep hunting are believed to be by far the largest recreational users of the area. It is estimated that approximately 12 percent of the State's total sheep kill comes from the area, including the world's record Dall sheep. In addition, substantial moose and brown bear kills have been recorded in the area in recent years.

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During the ten-year period from 1960 to 1970, the population of the Cordova-McCarthy census division increased 5.6 percent, from 1759 to 1857. The Valdez-Chitina-Whittier census division increased from 2,844 to 3,098, an 8.9 percent change.

In comparison, the "highway population" of the study region increased 86.1 percent. Table 1 summarizes the population data for the "highway population."

TABLE 1. 1960 and 1970 Population of Villages in Close Proximity to the Chitina River Basin, Alaska<sup>1/</sup>

|               | <u>1970</u> | <u>1960</u>      | <u>Percent Change</u> |
|---------------|-------------|------------------|-----------------------|
| Glenallen     | 363         | 169              | 114.8                 |
| Copper Center | 206         | 151              | 36.4                  |
| Gulkana       | 53          | -- <sup>2/</sup> | -- <sup>2/</sup>      |
| Gakona        | <u>88</u>   | <u>33</u>        | <u>116.7</u>          |
|               | 657         | 353              | 86.1 <sup>3/</sup>    |

<sup>1/</sup>Source 1970 Census of Population - Number of Inhabitants, Alaska.

<sup>2/</sup>No prior comparable data.

<sup>3/</sup>Excludes Gulkana.

## Economy

Alaska's economy can be separated into two distinct parts: cash (where dollars earned purchase goods and services) and subsistence (where work is related to direct procurement of food and shelter).

Important elements of the Statewide economy include government, minerals, forestry and tourism. Of these minerals (primarily oil and gas) and tourism have shown the greatest growth and appear to have the greatest potential for future growth.

Growth in the mineral industry other than oil and gas has been fairly slow in recent years. The low rate of growth is related to several factors: low base metal prices, high investment cost, difficult access and uncertainty of future land ownership. These inhibitors are further compounded by the subpolar climate.

Tourism in its broadest sense shows the greatest promise for statewide expansion. The Alaska Survey and Report, 1970-1971, Vol. 2, states:

"Of all parts of the Alaskan economy, tourism can most rapidly provide jobs to the widest spectrum of educational and age levels. It can also, with advertising and investment, direct economic growth to depressed areas of the state."

Between 1964 and 1971 tourism in Alaska increased from 59,200 visitors who spent \$18.2 million to 130,000 visitors

and \$45 million. In 1972 there were slightly more than 161,000 tourists and a preliminary estimate of 190,000 in 1973. Expenditures by tourists were distributed as follows: 30 percent lodging, 20 percent each restaurants and transportation, and 10 percent each food stores, merchandise and other services.

Information developed by the University of Alaska indicates that of the \$45 million generated by tourism in 1971, 64 percent (\$29.8 million) were attributable to visits to the four units of the National Park System in Alaska.

During 1971, the latest year for which complete figures are available, tourism accounted for 3,700 employed persons with total wages of \$22.9 million.

The same factors for investment cost, transportation, resource ownership and climate that inhibit mineral development also depress outdoor recreation growth.

Sport fishing and hunting are also significant contributors to the Alaskan economy. Information developed by the Alaska Department of Fish and Game indicates that sport fishing in Alaska contributed approximately \$22 million in 1972.

Tourism, recreation, transportation, and communications are the basic ingredients of this heavily service and government-oriented "highway" economy. In the private

sector, lodges, restaurants, service stations, stores, bars, fuel distribution, utilities, big game, guiding, and flying services make up the bulk of activity. In the government sector, several State and Federal agencies employ a sizeable number of persons, chiefly in the Glennallen-Gulkana area. Contract construction activities (primarily relating to highways) provide seasonal employment for residents along the highway network (BLM 1967).

Manufacturing in the region is insignificant. While there are about 10 small sawmills in the area along the highway, only two were in the business of producing lumber for sale as recently as 1968 according to BLM.

Although there is a considerable number of homesteads within the region, virtually all are used for residences with some limited subsistence gardening, or are held for speculation. Commercial agricultural production is non-existent due to the limited marketing and climate factor and because other employment is easier and more financially rewarding.

#### Subsistence

Subsistence is defined as a life style related to obtaining food and shelter directly from the land. Included are activities where the person must secure his food by hunting and fishing or else go hungry, and the pursuit of food as either a matter of choice or as supplemental activity.

Recent changes in life style have increased the shift from a subsistence economy to cash. The advent of the snowmobile may represent the largest factor in this shift as cash must be obtained to purchase fuel for the snowmobile whereas dogs to pull sleds could be fed fish. New housing with more space to heat and the switch from wood to oil burning heaters also requires cash as do water, sewer and electricity. Trapping is the only significant activity in the region which offers cash potential in this life style.

#### Transportation

Although the region does not have any permanent internal roads, peripheral highway access is available in the north at Chitina and along the western edge of the region via the Richardson Highway to Valdez.

A short spur road links Cordova with the Copper River delta but does not extend upriver at this time. Although Cordova itself is landlocked, it does have excellent air and ferry service.

The only automobile access into the vicinity of the Chitina valley is the Edgerton Cutoff, a road connecting the village of Chitina with the Richardson Highway.

In July 1971, a permanent bridge across the Copper River from Chitina to the north side of the Chitina River was completed. A jeep trail generally follows the old Copper River and Northwestern Railway grade for nearly

60 miles to the abandoned mines on Bonanza Ridge east of McCarthy. The Alaska Highway Department plans to develop an all-weather access road along the railroad grade as far as McCarthy.

The region is accessible by air and Gulkana and Northway have paved airstrips for large aircraft. Chitina and McCarthy have scheduled air service by two airlines if prior arrangements are made.

Air access into the Chitina valley is possible as there are numerous lakes suitable for floatplanes as well as gravel landing strips and, except during the flood stage, gravel bars in the river on which light-wheeled aircraft can land.

Access up the river may be possible by jet boat, however, due to the rapid current, turbid water, braided channel and rocky character of the river, this method of access is not recommended.

#### Recreation

At the present time the region lacks any developed public recreation resources. The nearest such facility is BLM's Liberty Falls Campground 10 miles above Chitina on the Edgerton Cutoff.

Although undeveloped, the region contains many excellent recreation resources and the potential for their public use is high.

Present recreational use centers around hunting, fishing and float and power boating on the area's primitive rivers. Detailed information on recreation use of the region is lacking.

The lowlands contain heavy populations of moose, and upper mountain areas support harvestable populations of Dall sheep and mountain goats. Black bear and brown bear are also found throughout the region.

Hunters using the area for activities such as its excellent sheep hunting are believed to be by far the largest recreational users of the area. It is estimated that approximately 12 percent of the State's total sheep kill comes from the area, including the world's record Dall sheep. In addition, substantial moose and brown bear kills have been recorded in the area in recent years.

Because of the present limited access to the hinterlands, hunting pressures for these species along the road system are very heavy. The big game hunter can still get away from crowded hunting conditions, however, by getting back in the bush, where hunting is not only more enjoyable but more productive. Grouse, rabbits, and ptarmigan are hunted throughout the region.



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Sport fishing within the region is relatively light due to the difficulty and high cost of access. The lowland lakes and rivers contain rainbow and Dolly Varden trout, while grayling and lake trout can be found in the vicinity of the Nelchina Plateau. King salmon, silver salmon, sea-run Dolly Varden, and steelhead (as well as the other species of Pacific salmon) run up the major streams and rivers of the area.

Because of relatively limited access to high-quality fishing waters, fishing pressures along the road systems, like hunting pressures, are extremely heavy, comparable in many cases to those found on many of the more popular lakes and streams in the other 49 states.

Recent increased popularity of canoeing and float boating has led to greater use of the area by these persons although their overall numbers are still quite low.

In terms of potential uses, the area contains a multitude of exceptionally scenic areas that can be expected to draw ever increasing numbers of recreationists following such pursuits as photography, nature study and a "wilderness type" camping experience.

#### IV.

#### DESCRIPTION AND ANALYSIS

##### River Setting

The Chitina River originates at Chitina Glacier in the St. Elias Mountains approximately 100 miles northwest of Yakutat and flows in a northwesterly direction for 112 miles to its confluence with the Copper River near the village of Chitina. The study segment begins at the source of the river and extends approximately 77 miles downstream to, but not including T. 6 S., R. 10 E. of the Copper River Meridian; below this point the river flows through land withdrawn for Regional Deficiency areas and Native Village Withdrawals.

The immediate river banks range from forested slopes or open gravel bars to rock palisades. As it travels west towards the Copper the vegetation changes from barren ground and bedrock to willow, birch, alder and cottonwood. At the river's mouth, there are solid stands of white spruce.

Within the 77-mile study reach the river drops from 2,500 feet above sea level at its headwaters to 800 feet where it passes into the Regional Deficiency area, an average drop of 22 feet per mile. Natural stream channels are not well defined for most of this reach as the stream is quite braided. In the headwaters the riverbed is over

3 miles wide although much of the bed is exposed with the main channel approximately 1/4 mile wide with several lesser channels. This braided condition exists from the headwaters for 45 miles just above the confluence with the Tana River. The river then follows a single channel through well defined banks for 21 miles averaging 500 feet in width. At its confluence with the Nizina River, the Chitina again begins to braid and broadens to over a mile in width. See Fig. 3.

#### Stream flow

Although there are no gaging stations on the Chitina River, the U.S. Army, Corps of Engineers, has estimated average annual flow based upon meager hydrologic data and derived principally from drainage area relationships. These estimates were made in 1913, 7 miles above the Nizina River, at which point the Chitina drainage area is 5,400 square miles. The Corps of Engineers estimated the average annual flow to be approximately 15,200 cfs.

The flow fluctuates markedly as a result of glacial melt with 25 percent of the annual flow occurring during July, 18 percent in June and 20 percent in August. By September, the average monthly flow drops to 12 percent of annual. Daily fluctuations occur with the river dropping several inches overnight and rising significantly during high sun, high temperature periods of the day. These

# CHITINA RIVER STUDY AREA

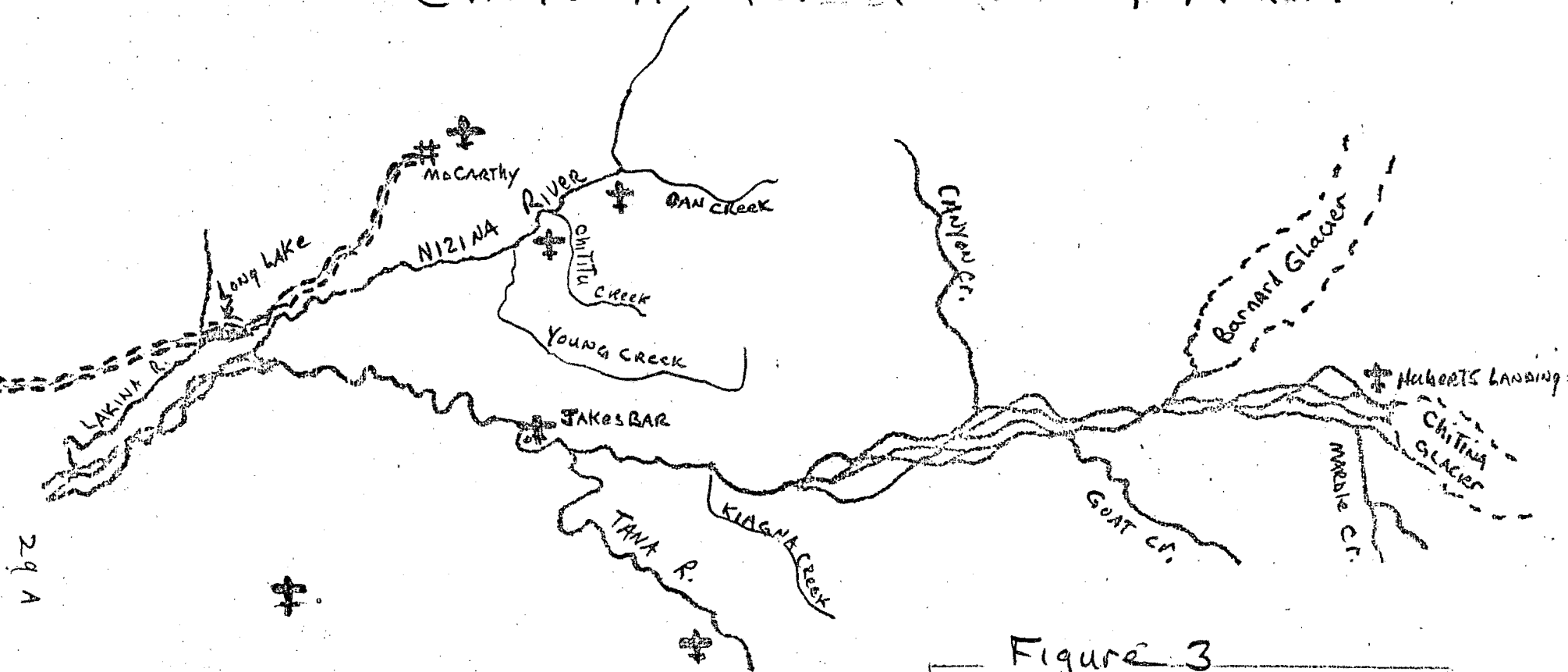
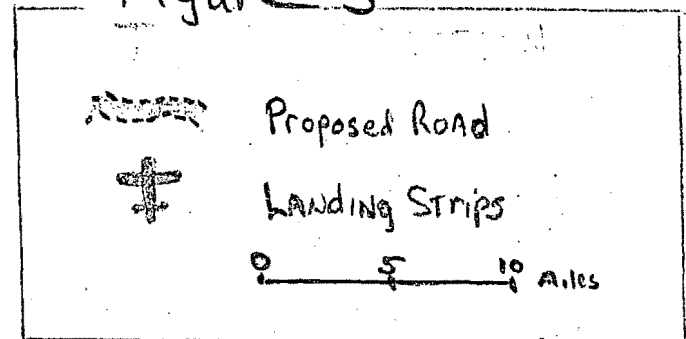


Figure 3



fluctuations must be taken into consideration when selecting a campsite or beaching a canoe for any extended period during the day. -2

#### Water Quality

There have been no water quality studies performed on the Chitina River; consequently, there are no data available to compare with water quality standards. The Chitina River does, however, meet the Aesthetics-General criteria developed by the National Technical Advisory Committee on Water Quality, FWQA, Water Quality Criteria, April 1, 1968.

There are no known sources of sewage or chemical pollution; however, the Chitina is spawned by glaciers and carries an extremely heavy silt load. As a result of the suspended sediment, the river is not suitable for drinking purposes unless the suspended solids are permitted to settle. On some of the gravel bars in the river, water may often be obtained from standing pools which are free of sediment; also there are several clearwater tributaries flowing into the Chitina.

Sec. 12(c) of the Wild and Scenic Rivers Act states that:

"The head of any agency administering a component of the National Wild and Scenic Rivers System shall cooperate with the Secretary of the Interior and with the appropriate State water pollution control agencies for the purposes of eliminating or diminishing the pollution of waters of the rivers."

Section 9(a) of the same Act also directs the administering Secretary to issue mining regulations which " . . . shall among other things, provide safeguards against pollution of the river involved . . . . "

Water quality standards are being revised in accordance with latest regulations and guidelines resulting from the enactment of the Federal Water Pollution Control Act Amendments of 1972.

#### Land Use

Land use patterns along the Chitina River corridor have changed very little over time. There are no developed areas excepting a few isolated cabins and two gravel landing areas. The river flows through what may be termed a "wilderness" environment with no year-round habitation.

Two guides have horse grazing leases in the upper Chitina valley and maintain facilities for their wranglers near Bryson Bar and the Tana River mouth.

Outside the immediate river corridor, mining activity has occurred during the past century. The famed Kennicott Copper mines were located within 15 miles of the river. Today there are a few claims near Bryson Bar,

Much of the area of the south flank of the Wrangell Mountains is geologically favorable for the deposition of metallic sulfides. The best known massive copper sulfide

lodes occur in the lower part of the Chitistone Limestone at the Kennicott mines. These mines produced over one billion pounds of copper over the time period 1900 to 1938, which at present market values would be worth in excess of 500 million dollars. The contact between the Chitistone Limestone and the Nikolai Greenstone extends many miles to the east and west of the Kennicott area and the possibilities of developing rich copper deposits along this trend remains high.

Copper lodes are widely distributed. Veins are generally narrow and discontinuous. Placer copper has been found wherever streams cutting rocks of the Nikolai Greenstone have been worked for gold and is present in pieces that range in size from small shot to masses of several hundred pounds.

Copper occurs in the basaltic lavas of the Strelna Formation which underlies the Nikolai Greenstone and is common throughout it. A few copper deposits in greenstone occur as well-defined fissure veins, but most of the deposition of copper has been in preexisting openings or by replacement of the wall rock along irregular systems of fractures.

Gold has been produced in the Chitina valley from both lode deposits and placers. Gold bearing veins are known in rocks of the Strelna Formation and in rocks of the Chugach Mountains that have been correlated with the Strelna. Placer gold has been mined productively at Dan and Chititu



Creeks and their tributaries. Placer gold also occurs on Young Creek, Canyon Creek, and the Kiagna River. Most of the placer gold has been concentrated in deep bench gravels near the bedrock. These gravels are being reworked by present day streams and reconcentration of the gold is occurring.

Silver occurs in this region associated with the ores of Kennicott, where it is present to the amount of 14 to 16 ounces to the ton; in pyrite-chalcopyrite veins; in the Tetrehedrite veins; and as native silver associated with native copper and gold in placers.

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The mineral potential for this area is considered excellent. This conclusion is supported by the fact that the region lies within a porphyry copper belt, shows many areas of

mineralization in favorable host rocks, and has a large number of mining claims filed within the region. The major economic barrier to mineral exploitation has been lack of access and an economical means of transportation and facilities

There are no commercial timber harvests on record from lands within the Chitina drainage. The upper Chitina valley may contain harvestable timber. Both in quality and quantity the forests are directly related to the distance from the river valley. The heavier stands of timber are found adjacent to the river, usually in patches or stringers. Moving away from the Chitina and up the slopes, tree growth becomes more stunted and sparse, finally giving way to shrub, grass and other alpine tundra growth. White and black spruce plus birch and balsam poplar are the major components of the forest growth. Undergrowth consists mainly of low brush such as willow, dwarf birch and heath shrubs.

#### Water Resource Developments

There are no existing or authorized water resource development projects in the Chitina River basin.

Six miles below the mouth of the Chitina River there is a potential hydroelectric damsite on the Copper River at the head of Wood Canyon. Initial interest in a power development at Wood Canyon was part of the worldwide search for potential alumina reduction sites in the 1940's

More recent studies considered broader regional power needs and established that the Wood Canyon project is an important possibility for long-range power supplies in Alaska.

Various plans for development have been advanced by the Corps of Engineers, Bureau of Reclamation, and the Harvey Aluminum Company for this project. With the maximum proposed pool elevation of 1,400 feet, the impoundment would inundate 83 miles of the Chitina River valley, extending to Bryson Bar. At a 1,000 foot pool elevation the river valley would be inundated nearly to Jake's Bar approximately 55 miles from the mouth.

Should this impoundment be constructed at maximum pool elevation, only 23 miles of the 77-mile long study segment would remain in its natural free-flowing condition. In addition to destroying the free-flowing character of the river, extensive moose and bison range would be lost as well as habitat for furbearers and small game.

The following material is quoted from the June 1967 report:<sup>1/</sup>

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<sup>1/</sup>"Alaska Natural Resources and the Rampart Project," USDI, June 1967, pp. 28-29.

## "Wood Canyon Project

This project would be located at the head of the Copper River Canyon about 180 miles east of Anchorage. It would be centrally located with respect to the Railbelt Area and the deep water ports of Valdez and Cordova. It would create a reservoir with a magnificent recreation potential in a highly scenic area, which is readily accessible by highway from Anchorage, Fairbanks, and the Alaska-Canada Highway.

It would involve a major commercial salmon problem, and other fish and wildlife problems. The latter have been only briefly reviewed and would require further consideration as part of any planning directed toward authorization of the project; they are not of such magnitude as to significantly affect the overall project justification.

Various plans of development have been advanced by the Corps of Engineers, Bureau of Reclamation, and the Harvey Aluminum Company for this project. The plan presented in the Field Report would provide for essentially full development of the hydroelectric potential of the Copper River at the Wood Canyon site. Previous plans for lower dams at that site were reviewed in connection with the Field Report studies and found less desirable. However, subsequent studies indicate that this matter merits further review, as a lower dam might have lower unit power costs.

The project is not favorable to stage development, as a major feature is the proposed arch dam which would involve more than 60 percent of the total generation costs and would need to be constructed initially to its ultimate height.

The fishery mitigation aspect was recognized to be of such significance as to possibly control the project feasibility. Very preliminary studies subsequent to the Field Report indicate that the mitigation facilities required to maintain the existing anadromous fishery of the Copper River would involve capital costs of \$74 to \$90 million and annual operation and maintenance costs of \$1.04 to 1.42 million.

The very real recreation benefits which would be assignable to the project would support a significant nonreimbursable allocation of project costs to recreation.

The estimated bus bar unit power costs of 2.9 to 3.8 mills per kilowatt-hour . . . includes \$90 million<sup>1/</sup> of construction costs and \$1.42 million annually of operation and maintenance costs for fishery mitigation facilities, but they do not reflect the reduction in unit power costs which would result from a nonreimbursable allocation of project costs to recreation."

The plan discussed above is premised on a maximum reservoir elevation of 1,400 feet. The reference to studies of a lower dam related to an alternative plan with a maximum reservoir elevation of 1,000 feet.

Wood Canyon damsite and the reservoir lands below 1,000 feet elevation are covered by two essentially identical Federal Power Commission powersite withdrawals. Withdrawn lands total about 165,000 acres. The first withdrawal (PP 2138 dated July 20, 1953) responded to a project proposal by Harvey Aluminum Company. The second (PP 2215 dated August 13, 1956) related to a proposal by the Central Alaska Power Pool.

Additionally, the Wood Canyon damsite was withdrawn by the Department of the Interior as part of Powersite classification 403 dated March 29, 1950. The land withdrawal for the site is described as "all lands within one-quarter mile of the Copper River for a distance of

<sup>1/</sup>Data furnished by APA in February 1973 indicates that the approximate construction costs are now estimated at \$1,400,000,000 on a 1965 dollar base.

one-half mile upstream and one-half mile downstream" from the damsite. APA identifies this as one of the four or five most important hydroelectric potentials of Alaska.

It is not known how the Wood Canyon project fits into the statewide water plan which is just now being considered as a planning activity under the aegis of the Water Resources Planning Act, P.L. 89-80.

#### Land Ownership

The entire study segment flows through lands owned by the Federal government. Most of the reach flows through a large block of land which has been withdrawn from all forms of appropriation under Sec. 17(d)(2), of the Alaska Native Claims Settlement Act (ANCSA, P.L. 92-203). Portions of the river flow through five townships outside of the large block of (d)(2) land. These townships were withdrawn under Sec. (d)(1) as public interest areas. Within these five townships a two-mile corridor, one mile from mean high water on either side of the river, has been withdrawn under Sec. 17(d)(2) of ANCSA. See fig. 4.

Within the river corridor the only exceptions to Federal ownership are an undetermined portion of a 96.7 acre patented mining claim near Hubert's Landing and approximately 1,200 acres of a 23,882 acre tract of State owned land near Long Lake.

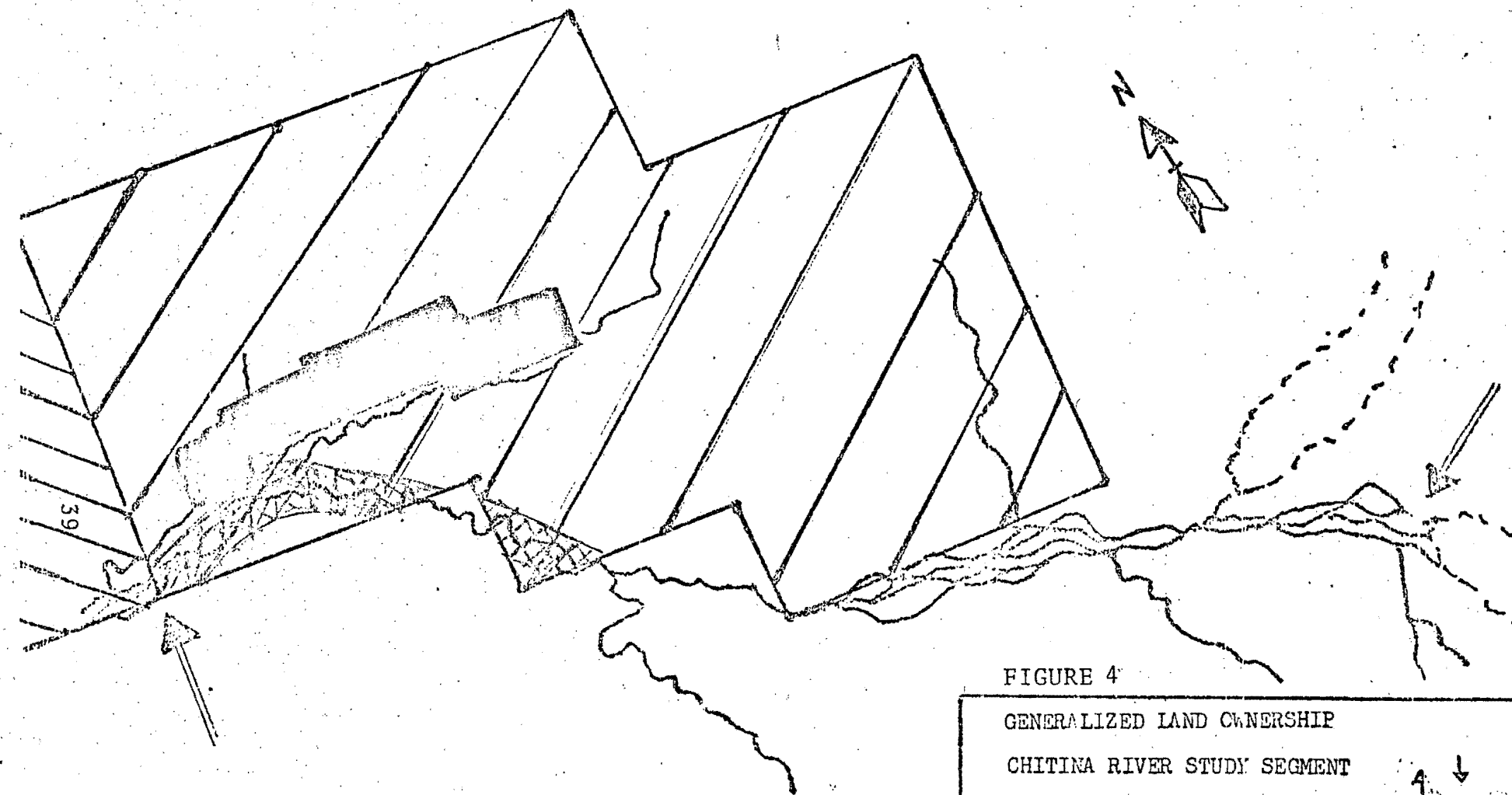


FIGURE 4

GENERALIZED LAND OWNERSHIP  
CHITINA RIVER STUDY SEGMENT



D-1



STATE SELECTION (



D-2 CORRIDOR



D-2



NATIVE WITHDRAWAL

0 5 10 Miles

There are two pending Native Allotment applications under the 1906 Native Allotment Act within the river corridor.

Federal land managing agencies expressing interest in the Chitina River area are the National Park Service, the U.S. Forest Service, and the Bureau of Land Management. Land classifications and studies have been made of the area in the past including the Copper River classification in 1968 and the Wrangell Mountains Unit Resource Analysis and Management Framework Plan of 1970 and 1973 by the Bureau of Land Management and the Wrangell Mountains National Scenic Area proposal by the Bureau of Outdoor Recreation. Public hearings were held on these studies.

#### Water Rights, Navigability and Riverbed Ownership

There are no adjudicated water rights within the river corridor.

Under the Alaska Statehood Act, the State of Alaska owns the stream beds of all "navigable" waters of the State. Under criteria being developed by the State of Alaska to determine stream bed ownership, the Chitina River would appear to be "navigable". Until the recent advent of the water jet attachment for the outboard motor, upstream navigation by watercraft was generally precluded by the swift current, braided and often shallow character of the streambed.



The U.S. Army, Corps of Engineers, does not consider the Chitina River a "navigable" stream. As of the date of this writing, stream bed ownership has not been determined, but it is likely that the state would consider the river "navigable."

Evidence collected in this study indicates that there generally is sufficient water volume to permit a pleasurable recreation experience in raft, canoe or kayak.

#### Access

##### Existing

The study segment of the Chitina River is not road accessible; however, there is a primitive tractor trail leading to Jake's Bar from McCarthy. No other established trails exist within the study segment which lead to the river.

Access by light aircraft is possible at Jake's Bar and Hubert's Landing. Light aircraft can also land on many of the gravel bars throughout the study segment except during flood stage.

##### Potential

Other possible means of access to the river include foot, horseback and ATV use overland, snowmobile use during the long winter and jet boat from the Copper River.

The State of Alaska owns the old Copper River and Northwestern Railroad right-of-way and has proposed construction of a road from Chitina up the Copper River to Chitina, then across the Copper River and along the north side of the Chitina Valley to McCarthy. The railroad right-of-way comes closest to the Chitina near Long Lake at the lower end of the study reach; however, it is over a mile and a quarter from the river and not within the study corridor. In the segment within the Native Village Withdrawal near the mouth of the Chitina, the right-of-way is within a mile of the river for approximately two miles. The State is considering a supplemental road to parallel the Chitina between Jakes Bar and Huberts Landing.

#### Geology and Soils

##### Geology

The glaciers at the head of the Chitina River derive their source from the highest coastal range in the world, the St. Elias Mountains. As the Chitina flows westward it passes south of the Wrangell Mountains with numerous panoramas of the highest peaks, Mt. Blackburn and Mt. Bona. To the south lie the Chugach Mountains with several peaks of 10,000 feet in elevation.

Over the ages the Chitina has slowly eroded through bedrock to expose strata of geologic history. Especially

interesting and having significant value for public interpretation are the exposed strata at Canyon Creek, Goat Creek, Marble Creek and the major glaciers that form the upper river of ice, source of the Chitina.

The Chitina River drainage trends southeast-northwest and lies on the rugged south flank of the Wrangell Mountains. The area of the drainage basin contains a sequence of layered consolidated rocks ranging in thickness from 25,000 feet to 30,000 feet which are cut by small scattered plutons and widespread surficial deposits. These rocks range in age from Mississippian to Quaternary.

#### Soils

The soils along the study segment are characterized as loosely stratified accumulations of glacial and fluvial debris, heavy in humus in the top layer due to slow decomposition of vegetation in this cold climate. In some areas the soil particles have been graded by water but do not show stratified decomposition due to their recent origin in the surrounding glaciers.

#### Vegetation

Plant associations within the basin and especially the immediate environment of the river are varied.

Alpine tundra consists of bare rocks and frost-heaved rubble interspersed between low mat herbaceous and shrubby

plants. Typical plants include alpine bearberry, white mountain-avens, alpine-azalea, dwarf and bog blueberry and mountain-cranberry. Also found are moss-chamion and several sedges and grasses. This vegetative type occurs in the surrounding mountains at elevations of above 3,000 feet.

Closed spruce-hardwood is the dominant forest type along the Chitina River drainage. White spruce stands are found where drainage is good and permafrost is lacking or not close to the surface. Associated with white spruce are paper birch, balsam poplar, bearberry, red current, prickly rose, several willows, mountain-cranberry and bog blueberry. White spruce is the only commercial conifer in the drainage; however, the volume is insufficient to support even one medium-sized sawmill.

Shrub thickets occur along the upper reaches of the Chitina consisting of dense growths of alders, willows and resin birch. The thicket may be extremely dense or they may be open and interspersed with lichens, low heath type shrubs, or patches of alpine tundra. The alders tend to occupy the wetter sites, the birch the mesic sites, and the tundra openings the drier or wind exposed areas.

#### Wildlife and Fishery

##### Wildlife

The Chitina River valley is inhabited by moose, bison,

brown and black bear, wolves, wolverine, lynx and numerous species of small mammals, fur-bearers and birds.

Moose populations vary widely with successional changes in vegetation and are relatively low at present. Historically, periodic wildfire increases browse availability in some areas, while other areas are becoming mature spruce-birch forests with poor forage. This area could produce more moose and would benefit from browse rehabilitation. Due to access limitations and low populations the area is not heavily hunted.

Brown bear are common and may sometimes be near tributary streams with spawning salmon. They are little hunted at present. With an increase in river recreation, occasional bear-man conflicts could be expected. Black bear also occur throughout the Chitina drainage.

A small herd of bison resides in the Chitina River valley above Tana River. It appears to be limited by rather meager, but critical winter range on the river bars.

Wolves, lynx, wolverine, and other fur-bearers are found throughout the region. Trappers of the Chitina-McCarthy area currently utilize the Chitina drainage. Considerable potential for trapping is present.

Trumpeter swan and raptors including peregrine falcons and bald eagles inhabit both the Chitina and Copper drainages.

## Rare and endangered species

The following wildlife species associated with the Chitina River basin are listed in the Department of the Interior's 1966 "Red Book of Rare and Endangered Species":

American peregrine falcon (Falco peregrines anatum) - rare

Timber wolf (Canis lupus lycon) - endangered  
(only in conterminous 48 states)

Grizzly bear (Ursus arctos) - endangered  
(only in conterminous 48 states)

Wolverine (Gulo luscus) - status undetermined

Canada lynx (Lynx canadensis) - status undetermined

In addition, the northern bald eagle is frequently observed along the Chitina River and its tributaries. Although similar in overall appearance, the northern bald eagle is not the same as the endangered southern bald eagle.

## Fishery

Sport fishing in the Chitina drainage is largely a matter of fly-in fishing to the larger lakes. Hanagita and Tebay Lakes are notable for their excellent grayling fishing as well as lake trout. A small steelhead run comes up the Hanagita and Tebay Rivers. Many of the small lakes on both sides of the river contain grayling and Dolly Varden. Tributaries of the Chitina contain grayling, Dolly Varden and salmon. Silver, king and red salmon are all found in the drainage. The Chitina River is not a sport fishing resource.

## History

The river was named by Athapascan Natives, the Atna, or "Ice People," who lived in the upper Copper and crossed the Chitina with foot trails during the winter. One such trail known as the Tana Glacier Trail crossed the Chitina, went up the Tana River and Tana Glacier, over the Bagley Icefield and on to Yakataga. They did not, however, utilize the Chitina as a water trail due to the fast current and constant hazards. The name Chitina means "Copper" in Athapascan.

The first report of the river by white man was from Dall in 1870 who spelled it "Chechitno" and Chitchitno." Later, Lieutenant H. T. Allen reported the river as the "Chittyna" in his 1885 exploration of the Copper River for the U.S. Army.

In 1908 the Chitina was first made accessible by railroad with the development of the Copper River and Northwestern Railroad which was built to haul copper ore to Cordova from the mines at Kennicott. By 1911 copper mining in the Chitina drainage was booming and this situation continued until 1938 when major mining activity terminated.

Throughout recent history, this portion of Alaska has been noted for its mineral wealth and scenic beauty.

In the late 1930's the Wrangell Mountains were evaluated for possible status as a national park or monument. The advent of World War II shelved plans to declare the McCarthy-Kennicott area a national monument by Presidential proclamation.

During the 1920's, trapping in Alaska flourished. There are still a few old trappers cabins in various stages of disrepair along the river corridor. Traps, tools and implements used by the former resident can be found in and around these relics of the past.

### Recreation

#### Resources

The wildlife, mountains, lakes, fish and unpolluted air in a setting of simple vastness offer spectacular recreation opportunities.

The river is silt laden and generally braided -- characteristic of a glacial stream -- is an avenue through an exceptionally scenic region. The glaciers at its source combined with the geologic features along its course are worthy of interpretation. Towering mountains, steep cliffs and beautiful waterfalls characterize its path as it flows past the "Jewels of Alaska" - the magnificent Wrangell Mountains. Near the source of the Chitina, the second highest mountain in North America, Mt. Logan can be seen from the valley floor.



Animal and plant life and their ecological communities are available for interpretation. The river valley and surrounding Chugach and Wrangell Mountains are inhabited by numerous species of small mammals, furbearers, and birds including trumpeter swan as well as wolves, black and brown bear, Dall sheep, goats, moose and even a small herd of bison of about 16 animals. On the river bottom adjacent to Goat Creek, a 240-acre natural area had been considered at one time to be set aside by the Bureau of Land Management for the study of white spruce and bison, grizzly bear environment.

#### Existing Use

The primary recreation season in the Chitina River basin is from May to October, between break-up and freeze-up.

Existing use of the Chitina corridor is limited to fly-in hunting and fishing as the corridor is not road accessible. During late August and September the mountains bordering the Chitina are rather extensively used by sheep hunters. Fishing is primarily in the tributary streams and lakes of the Chitina valley. The river, although not a sport fishing resource, is a migration route for king, red and silver salmon, steelhead, Dolly Varden trout and grayling which spawn in tributary streams. Sportsmen fly in and land in the river corridor but most of their hunting and fishing is done outside of the river corridor.

Direct recreation use of the Chitina River is practically nonexistent due to the lack of road access. Estimates of actual use of the primary reason for using the river are lacking; however, it appears that river use is limited to rafting or kayaking as power boats would have some difficulty in the ever-changing channels and shallows.

#### Potential uses

The Chitina River is rich in high quality outdoor recreation opportunities. The river, though swift, cold and turbid, is suitable for canoe camping by seasoned canoeists. Rafting and kayaking are additional methods of river travel.

Hiking opportunities into side drainages for fishing are excellent. Similarly, hiking potentials are good for routes to and from the historic Kennicott mines and the village of McCarthy. Gold panning on a recreational basis can have considerable appeal.

The abundance of wildlife and the scenic qualities of the basin provide outstanding subjects for the nature photographer or the sightseer. In addition, areas of special geologic significance are suitable for interpretation.

Upon completion of the proposed road from Chitina to McCarthy, winter use could increase as there are good

opportunities for cross-country skiing, snowshoeing, dog sledding and snowmobiling on a segregated basis.

Although camping would generally be associated with all of the above activities, some people engage in this outdoor recreation activity as an end in itself. There are numerous opportunities for primitive camping sites along the Chitina River. The many gravel bars and plentiful firewood in this primitive setting are most attractive for this purpose.

#### Limitations

The temperature of the Chitina River is a limiting factor to recreation use. Being a glacial river, the water is always cold. Recreationists must be aware of the potential danger of canoeing on such a stream. The turbid water obscures rocks and gravel bars and the unwary could readily get into serious trouble in the fast current. To capsize in such cold water could be disastrous and immersion hypothermia is a recognized hazard on glacial rivers. It is advisable that canoeists wear wet suits while negotiating the Chitina River.

The climate of the Chitina valley limits recreational use. The river is frozen from late October through mid-May. Winters are quite cold with strong winds occurring frequently and snowfall averaging 52 inches.

Recreational use is also limited by the lack of access. The study reach is presently not road accessible and only those who can fly into one of the two gravel airstrips, or on gravel bars on the river, presently utilize the resource.

A potential limiting factor is the proposed Wood Canyon hydroelectric damsite on the Copper River, construction of which at maximum surface elevation, would inundate all but 23 miles of the Chitina, transforming it from a natural free-flowing river to a huge slack-water impoundment. Although such an impoundment would provide surface acres for power boating, it would eliminate fast, and sometimes whitewater, canoeing and significantly alter the environment destroying the free-flowing character of the river as well as considerable wildlife habitat.

The State proposal for a road between Chitina and McCarthy, scheduled for completion by 1976, is a significant factor influencing land use. The proposed road would pass close to the study corridor boundary near Long Lake. In addition, the State has plans for a supplemental road to connect McCarthy and Hubert's Landing. The proposed route parallels the north bank of the river. If the road to Huberts Landing is constructed, the Chitina would not qualify as a wild river area.

Should the study segment become road accessible it is possible that overuse would degrade or destroy the primitive character of the river corridor.

The Wrangell Mountains contain a variety of mineral deposits and have an excellent potential for significant future production. The Kennicott mines in the Chitina drainage for many years ranked among the world's foremost copper producers and also yielded important quantities of silver. With improved transportation, it is possible that copper-silver mining would again flourish in the mountains to the north of the river.

The Chitina River and its immediate environment has restricted potential for mineral production; however, there is potential for placer gold. In addition, there are substantial deposits of sand and gravel.

V.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The conclusion of this study is that the Chitina River and its immediate environment possess values which qualify for inclusion in the National Wild and Scenic Rivers System.

Careful review of available information together with on-site inspection shows that:

- The river is in a free-flowing natural condition.
- The river is of sufficient length to provide a meaningful experience to the river user.
- There is sufficient volume of water during normal years to permit full enjoyment of water-related outdoor recreation activities.
- The river and its immediate environment possess outstandingly remarkable scenic, geologic, wildlife, historic and recreational resources.
- Although a glacial river, and consequently silt laden, water quality is good and meets the "Aesthetics - General Criteria" as defined by the National Technical Advisory Committee on Water Quality in the Federal Water Pollution Control Administration's Water Quality Criteria, April 1, 1968.

- There are no channel improvements, impoundments or any type of water resource development within the Chitina corridor; however, on the Copper River, 6 miles below the mouth of the Chitina, there is a potential hydroelectric damsite. The damsite and reservoir lands below 1,000 feet msl are covered by two FPC powersite withdrawals; pp. 2138, July 20, 1953, and pp. 2215, August 13, 1956.
- Wood Canyon project, an important potential for long-range power supplies in Alaska, would create a reservoir offering recreation potential in a highly scenic region. Maximum development of the Wood Canyon damsite would inundate 85 miles of 74 percent of the Chitina valley, a lower proposal would inundate the valley 55 miles from the mouth of the Chitina, approximately 50 percent of the river valley. The remainder would not qualify for inclusion in the national system.
- The entire 77-mile long study corridor lies within lands owned by the Federal government with a few exceptions. A portion of a 96.7 acre patented mining claim and approximately 1,200 acres of a 23,882 acre tract of State owned land. The

lower 35 miles of the Chitina lie within lands withdrawn in accordance with ANCSA as Regional Deficiency areas and a Native Village Withdrawal.

● There are three Federal land managing agencies interested in the Chitina River area: the Bureau of Land Management, the Forest Service, and the National Park Service.

● The river and its immediate environment are capable of being managed to protect and interpret special values and protect the user.

● The wildlife, mountains, river character, lakes, and the primitive setting of simple vastness offer spectacular recreation opportunities.

Hunting and fishing are presently the only major recreational activities along the Chitina River; however, potential exists for many forms of outdoor recreation. The river offers an exceptional experience for skilled canoeists and kayaker or for "floaters" in rubber rafts and the immediate environment offers splendid scenery for the hiker or photographer. Sight-seeing, nature study, rock, gem and fossil collecting and camping in a primitive environment are also activities for which the Chitina River valley offers outstanding opportunity.



- The recreation opportunities, both existing and potential, in the Chitina River corridor are distinctive. These values are not similar to those offered by the adjacent Bremner and Copper Rivers. The former is considerably more remote and inaccessible, offering opportunities for a true wilderness experience. The Bremner rushes through an extensive, constricted canyon; a wild, glacial, whitewater river. The latter is a large, glacial, fast river, suitable for use by powerful river boats as well as rafts and, for experts, kayaks, as it flows through a massive canyon and into a broad lake surrounded by active glaciers. Further, the values of the Chitina River are not duplicated by any of the 39 other Alaskan free-flowing rivers identified by the Bureau of Outdoor Recreation as having high potential for inclusion in the National Wild and Scenic Rivers System.

#### Recommendations

It is recommended:

- That the Chitina River be included in the National Wild and Scenic Rivers System as a Federally administered component of the system

unless the river is included within a National Recreation area in the proposed Wrangell-St. Elias National Park Complex.

- That the river segment designated be from 3 miles above Marble Creek in T. 10 S., R. 21 E. near its source to the western limit of T. 6 S., R. 11 E. of the Copper River Meridian, a distance of 77 miles.
- That the Chitina be designated a Wild River area as described in Sec. 2(b)(i) of P.L. 90-542, the Wild and Scenic Rivers Act.
- That the Federal land manager of the adjacent land area administer the Wild River area.
- That lateral boundaries be delimited by the administering agency within one year from the date of the Act including the Chitina Wild River in the national system. Such boundaries not to exceed 640 acres per mile from the high water line on each side of the river, approximately 98,560 acres plus the 85,000 acres of riverbed, for protection of the river environment and provision of recreation use areas giving special attention to the primary visual corridor and wildlife habitat.

- That the 35-mile river segment below the study reach which has been withdrawn under the Alaska Native Claims Settlement Act for Native selection be studied at a later date for possible addition to the Chitina Wild River area should the Natives select the river corridor and request such a study be undertaken. This lower segment, if included, to be administered by the Native Corporation administering the adjacent area.
- That, in the event the Congress authorizes the proposed Wrangell-St. Elias National Park Complex (which includes a national recreation area on the north side of the Chitina and a national park on the south side), separate legislation to designate the Chitina River as a component of the National Wild and Scenic Rivers System not be proposed provided the NRA boundary include both sides of the Chitina River corridor. This recommendation is based on the fact that the management concepts presented in the report by the National Park Service, recommending the establishment of the Wrangell-St. Elias National Park Complex are compatible with the

intent of preserving selected river areas in a free-flowing condition for the benefit and enjoyment of present and future generations as prescribed in the Wild and Scenic Rivers Act, and that the public and the Congress will make decisions as to the specific types of uses which are in the best long-term interests of the nation for the Chitina River.

## VI.

## CONCEPTUAL RIVER PLAN

### Objectives

The Wild and Scenic Rivers Act, Sec. 10(a), states that:

"Each component of the National Wild and Scenic Rivers System shall be administered in such a manner as to protect and enhance the values which caused it to be included in said system without, insofar as is consistent therewith, limiting other uses that do not substantially interfere with public use and enjoyment of these values. In such administration primary emphasis shall be given to protecting its esthetic, scenic, historic, archeologic, and scientific features. Management plans for any such component may establish varying degrees of intensity for its protection and development, based upon the special attributes of the area."

Accordingly, this conceptual river plan is designed to establish a framework which can be followed by the administering Federal agency in developing detailed boundaries and plans for developments and management of the Chitina Wild River area recommended for inclusion in the National Wild and Scenic Rivers System. Such detailed plans would be completed within one year from the date the river is added to the national system.

The primary objectives of the conceptual river plan for the Chitina River, Alaska, and its immediate environment are to:

- Preserve the river in a free-flowing condition.
- Protect water quality.
- Preserve and make available the history of the river area.

- Provide for present and future generations a high quality outdoor recreation experience in a primitive setting.

#### Appropriate Boundaries

The control boundary for the proposed wild river area will not exceed an average of 640 acres per mile from the high water line, at bank full stage, on each side of the river for protection of the river environment and provision of recreation use areas. Total acreage within the control boundary will not exceed 98,500 acres plus 35,000 acres of the riverbed.

The river reach will extend 77 miles, from the headwaters in T. 10 S., R. 21 E. to the western limit of T. 6 S., R. 11 E. of the Copper River Meridian.

Within one year after inclusion of the 77-mile reach of the Chitina River in the national system, the administering agency will determine definite lateral boundaries within the above parameters.

Rationale used for determining appropriate boundaries are drawn from concepts developed on a number of recent studies concerning Federal, State and local riverway proposals in the conterminous United States and studies of other Alaskan rivers being considered for potential inclusion in the National Wild and Scenic Rivers System. These stress the essential concept that the river and its immediate environment should be considered as a unit

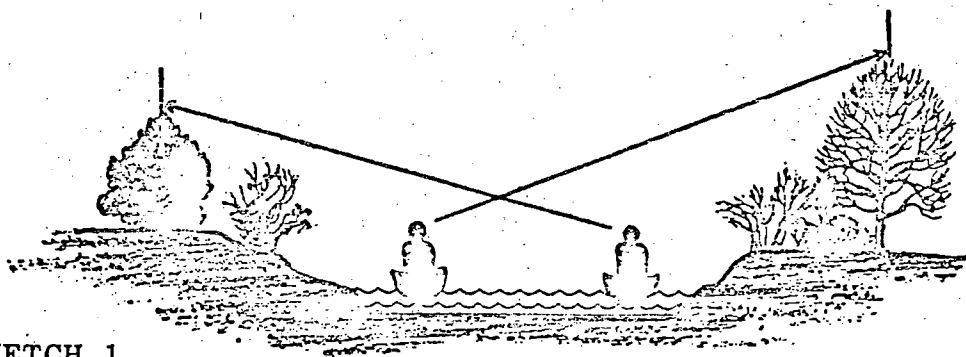
with primary emphasis upon the quality of the experience and overall impressions of the recreationist using the river or the adjacent riverbank. In Alaska a feeling of "spaciousness" dependent upon both isolation and independence is a very important aspect of the overall existing and potential recreation experience along free-flowing rivers.

Selection of detailed lateral boundaries should be made in consultation with existing and potential resource users. The basic element to be considered is the primary visual corridor. The sketches in Fig. 5 illustrate the concept as it applies to typical river cross sections. Essentially, it is the zone of adjacent land which has a visual impact on the river user and must be protected from adverse use if the natural, primitive appeal of the riverway is to be retained.

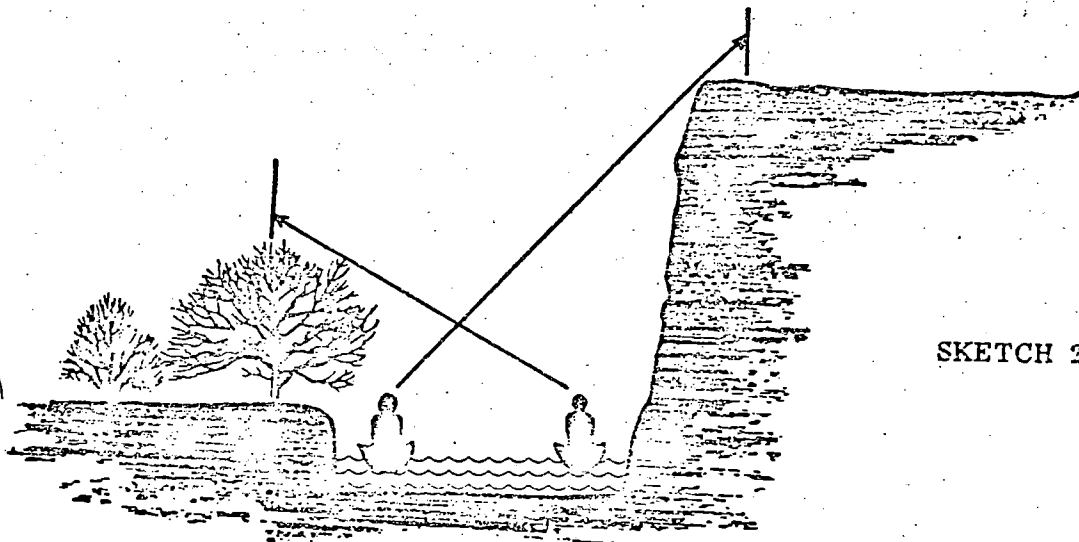
Within this framework, lands will be selected among the river using four basic guidelines:

1. Where the river's banks are low (Sketch No. 1) a strip of land 200 to 400 feet deep on each side of the river will be adequate to protect the view from the river. This strip of land along the bank would support a screen of trees and brush and could also accommodate a hiking and horse trail.

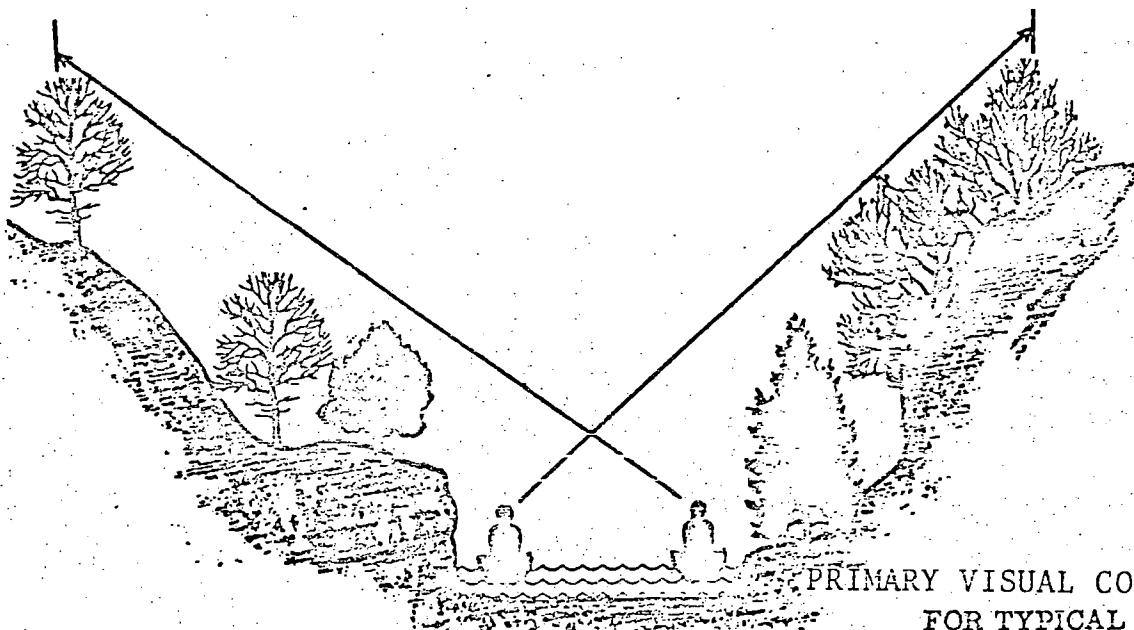
SKETCH 1



SKETCH 2



SKETCH 3



PRIMARY VISUAL CORRIDOR  
FOR TYPICAL  
VALLEY CROSS-SECTIONS

FIGURE 5. CRITERIA FOR SELECTING LATERAL BOUNDARIES



2. Where bluffs or hillsides front the river on one or both sides. (Sketch No. 2 and No. 3) the boundaries should be drawn to the ridge line of the hill or bluff to ensure protection of slopes within view of the stream, and to provide room for routing a riverside trail over the rough terrain.
3. In most cases the lands provided in the previous categories are adequate for accommodations of recreation facilities. However, there are cases where expansion is necessary to provide adequate room to place facilities back from the river.
4. In addition to the minimum areas outlined above, it is desirable to protect adjoining lands where adverse development could damage the environment, historic or geological sites, or critical wildlife habitat.

Because of the significance of the river environment and adjacent land as wildlife habitat, attention should be given to including peripheral woodlands in the boundaries where they could be justified by the wild river program itself.

Further investigations may uncover unique biological areas or important archeological sites

not noted in this study. These areas do not fit under the "primary visual corridor" guidelines, and therefore, should be given special consideration for protection.

### Acquisition Policies and Land Use Controls

#### Private Lands

Almost all of the river and its immediate environment is in public ownership with the Bureau of Land Management managing public lands. The State of Alaska would, under the Alaska Statehood Act, own those portions of the riverbed determined to be navigable.

Accordingly, acquisition of the few acres of land now in private ownership, or lands within the two Native Allotment applications pending transfer to Natives under the 1906 Native Allotment Act, is not recommended unless offered for sale.

#### Mining

Along the Chitina River study segment there are 30 mining claims, 20 near Canyon Creek and 10 near Bryson Bar. Near the headwaters there is a 96.7 acre patented mining claim, a portion of which may be within the eventual control boundary.

In discussing mining, Sec. 9(a) of the Wild and Scenic Rivers Act, P.L. 90-542, states:---

"Nothing in this Act shall affect the applicability of the United States mining and mineral leasing laws within components of the national wild and scenic rivers system except that

(i) all prospecting, mining operations, and other activities on mining claims which, in the case of a component of the system designated in section 3 of this Act, have not heretofore been perfected or which, in the case of a component hereafter designated pursuant to this Act or any other Act of Congress, are not perfected before its inclusion in the system and all mining operations and other activities under a mineral lease, license, or permit issued or renewed after inclusion of a component in the system shall be subject to such regulations as the Secretary of the Interior, or, in the case of national forest lands, the Secretary of Agriculture may prescribe to effectuate the purposes of this Act;

(ii) subject to valid existing rights, the perfection of, or issuance of a patent to, any mining claim affecting lands within the system shall confer or convey a right or title to the mineral deposits and such rights only to the use of the surface and the surface resources as are reasonably required to carrying on prospecting or mining operations and are consistent with such regulations as may be prescribed by the Secretary of the Interior or, in the case of national forest lands, by the Secretary of Agriculture and . . . .

Regulations issued pursuant to paragraphs (i) and (ii) of this subsection shall, among other things, provide safeguards against pollution of the river involved and unnecessary impairment of the scenery within the component in question."

Sec. 12(c) of the same Act requires that:

"The head of any agency administering a component of the national wild and scenic rivers system shall cooperate with the Secretary of the Interior and with the appropriate State water pollution control agencies for the purpose of eliminating or diminishing the pollution of waters of the river."

As there is already in existence a potential mining claim, the administering agency, in consultation with the State of Alaska and all concerned user groups, should develop mining regulations to prevent pollution and unnecessary impairment of the scenery. These should consider the desirability of: retention of top soil; restoration of topography, retention of topographic or vegetative screening between the mine and the water's edge, and replanting or reseeding the mined area.

Mining in a designated Wild River area is an incompatible use of the public resources; however, the following steps are proposed to protect existing valid rights:

Any person who, prior to the withdrawal of the Chitina River study corridor from all forms of appropriation under ANCSA, initiated a valid mining claim or location under the general mining laws and recorded notice of said location with the appropriate State or local office shall be protected in his possessory rights, if all requirements of the general mining laws are complied with, for a period of five years from the date of enactment of Federal legislation designating the Chitina River as a component of the National Wild and Scenic Rivers System and may, if all requirements of the general mining laws are complied with, proceed to patent. At the end of the proposed period all claims not patented would be voided and the minerals withdrawn from location and entry.

Mining activities often require heavy equipment such as bulldozers and stationery engines. Regulations covering such activities where it is necessary to reach valid claims within the river area should consider the desirability of

a permit system. Issuance of such a permit should take into account the necessity for constructing new overland routes to the claim; the possibility of movement of heavy equipment during the winter months; and the feasibility of using aircraft. The purpose of the permit should not be a means to deny access but rather to assure that access is obtained in a manner which causes the least possible impact on the river and its immediate environment.

#### Management Policies

The management objectives for the Chitina Wild River would be to enhance and protect those values which caused it to be added to the National Wild and Scenic Rivers System for present and future public enjoyment and benefit.

Available information suggests that there is high potential for environmental change of the thin soil cover and vegetation by off-road motorized vehicular travel when there is insufficient snow cover. The administering agency in consultation with user groups should give special consideration to the development of regulations governing the use of off-road vehicles for recreational and subsistence activities. The need for snowmobile travel in connection with subsistence activities such as trapping and hunting as well as sport hunting should be recognized in any regulations.

Strong consideration should be given to establishing designated trails for recreational use which promote user safety, protect public and private resources, minimize conflicts among the various existing or potential users of the area and prevent harassment of wildlife and disruption of key wildlife habitat.

Construction of new roads should consider the following aspects: impacts upon the existing life style of local residents using the resources of the Chitina River basin; air and water pollution probabilities; noise pollution; long-term effect on human population distribution and impacts on existing land and water uses; long-term effect on bison populations; long-term effect on Dall sheep populations; and long-term effect on key wildlife habitat areas.

Hunting, fishing and trapping should continue to be managed by the State of Alaska. The management plan for the Chitina River should, however, consider whether zones should be designated where, or periods when, no hunting should be permitted for reason of public safety, administration or public use and enjoyment of the river area.

Special efforts be made to restrict litter and pollution by stressing "bring-back-what-you-take." If this does not prove effective consideration should be given to banning cans, bottles or other nonburnable food and drink containers except at designated developed access points.

Special efforts be made to reduce fire hazards. Such measures as banning open fires or restricting open fires to designated areas should be considered.

Consideration be given to restricting timber harvest within the river corridor for cabin construction or reconstruction of existing cabins as there is ample timber or lands immediately adjacent to the river corridor.

Historic and geologic sites would be protected and interpreted as appropriate. The extent and location measures would be developed during the detailed planning process.

#### Recreation Development

The primary objective of the conceptual development plan is to maintain the wild river environment in as natural a state as possible by providing the minimum of recreation facilities needed for appropriate visitor use and enjoyment of the river corridor.

The degree to which the immediate environment is maintained and the type of recreation facilities would depend upon the classification of the river areas. The Chitina has been recommended as a Wild River area.

"Wild River areas" being the most primitive, inaccessible and unchanged will be developed and managed to preserve and enhance its primitive qualities. Major public-use areas such as large campgrounds, interpretative centers of

administrative headquarters normally would be located outside the river area. Simple comfort and convenience facilities such as fireplaces, shelters and toilets may be provided as necessary to protect popular sites and provide an enjoyable experience. Facilities would be of a design and location to harmonize with its surroundings.<sup>1/</sup>

Consequently, facilities will be located at designated nodes and will be primitive in character, generally consisting of rustic shelters and sanitation. Campsites will be effectively screened from the river.

Informational signing will be discouraged. Information on hazards, recreation opportunities or related information will be provided only at entrance points.

Four initial development sites are recommended. Three of the sites will have gravel landing strips, well screened from the river, for light aircraft. The landing strips will make the river corridor accessible without intruding on the natural scene with vehicular roads. When the State of Alaska constructs the proposed Chitina to McCarthy road, the fourth campsite, at the lower end of the river reach, will be accessible by a spur from the gravel road. Vehicular access will not be closer than 1/4 mile of the river bank.

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<sup>1/</sup>1970. Guidelines for Evaluating Wild, Scenic and Recreational River Areas . . . , U.S.D.I.



Visitor centers should not be located within the river corridor. The administering agency should locate a visitor information center for the Chitina Wild River in one of the nearby communities which will serve as a jumping-off place to the river area.

Canoe and raft rental could be available from the visitor center and airlifted into the river corridor. Retrieval could be by truck from the lower development site which would be accessible from the Chitina-McCarthy road.

The following sites and developments are recommended. Mileage is given from the source, considered 3 miles above Marble Creek (T. 10 S., R. 21 E.). These will be localized in the general vicinity of:

1. Huberts Landing - Mile 6 (T. 10 S., R. 21 E.)  
a gravel airstrip for light STOL type aircraft, primitive campsites, water supply, vault toilet, fire rings and primitive shelter.
2. Canyon Creek - Mile 26 (T. 9 S., R. 18 E.)  
same facilities as Huberts Landing.
3. Jakes Bar - Mile 47 (T. 7 S., R. 14 E.)  
same facilities as Huberts Landing.
4. Long Lake - Mile 75 (T. 6 S., R. 11 E.)  
primitive campsites, water supply, vault toilet, fire rings, primitive shelter, trail to gravel spur from Chitina-McCarthy road.

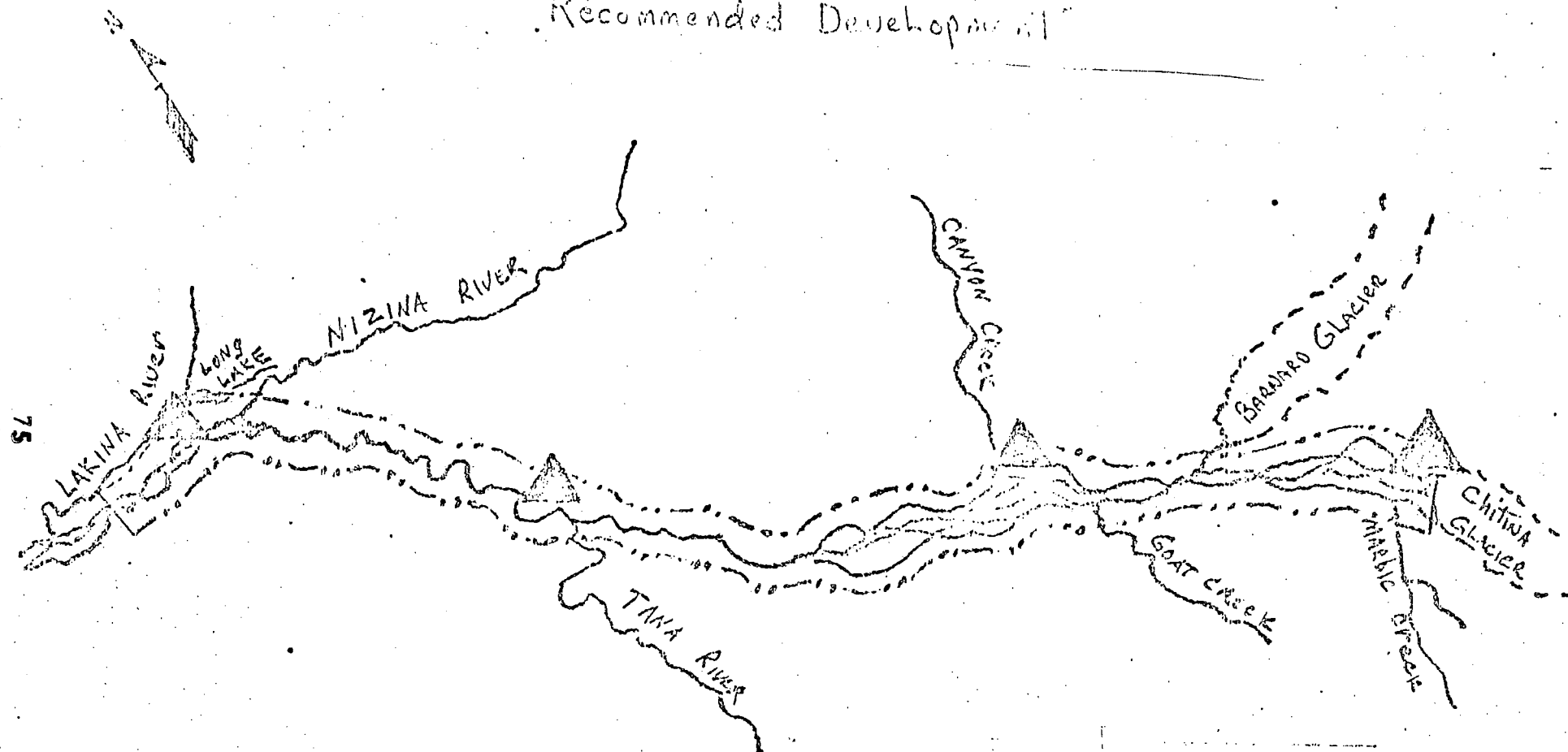
In addition to the four designated roads, natural campsites abound throughout the river corridor. Accordingly, development of riverside campsites would be undertaken only at the point that public use creates sanitation problems, and the local environment is threatened by overuse or where fire hazards were significant.

The administering agency, within one year of the date of inclusion of the river in the national system would prepare a detailed development plan for the Chitina Wild River area based upon the concepts developed in this report. Fig. 6 highlights the development concepts.

FIGURE 5.

# Chitina Wild River

## Recommended Development



### LEGEND

▲ Access sites

--- Control Boundary

0 5 10 miles

VII.

ECONOMIC EFFECTS OF INCLUSION IN THE  
NATIONAL WILD AND SCENIC RIVERS SYSTEM

The Chitina River and its immediate environment is richly endowed with a wide variety of natural resources. The impact of the proposed program on potential uses of these resources, however, is difficult to evaluate.

Recreation

Increasing population pressure and desire for more recreation lands and opportunities, recreational uses in the immediate environment of the Chitina River can be expected to increase with or without inclusion of the river in the National Wild and Scenic Rivers System. However, inclusion in the national system together with development of outdoor recreation facilities as recommended herein will stimulate the long-range rate of increased use. Inclusion of the Chitina River would assure that the increased use was orderly and within the limits of the resource base to sustain a high quality, primitive outdoor recreation experience for both present and future users. This is not expected to occur without implementation of a coordinated, overall management and development of the recreation and nonrecreation resources of the Chitina River and its immediate environment.

There is presently not enough information available regarding the carrying capacity of the resource to predict

total visitor use into the future; however, it is possible to estimate capacity of the anticipated initial development. Whether this development is expanded or reduced will depend upon the results of the monitoring program of the administering agency. Visitor use will not be permitted to endanger the values for which the wild river was designated.

Initial facility development plans call for four access sites. It is assumed all use will be based at these sites. Two shelters and four campsites at each access point would result in a daily capacity of 24 recreators along the river reach. With this daily capacity, annual visitor use could approximate 1,200 recreators exclusive of hunters and fishermen who also use the resource. This estimate is based upon the following assumptions:

- (1) Three capacity days per week.
- (2) Thirteen weeks in the recreation season.
- (3) Seasonal use equals 80 percent of annual use.
- (4) The Chitina River will be added to the National Wild and Scenic Rivers System.
- (5) Recommended development will be provided by the administering agency.

Hunting, fishing and trapping will be additive.

These activities are not restricted to the river corridor and may continue in adjacent land in compliance with appropriate State and Federal regulations.

Economic benefits resulting from initial and continued infusion of capital are anticipated given the impetus of expenditures by recreationists in adjacent communities of Chitina and McCarthy.

The present economy of the Chitina valley is not rapidly changing but the mix would change with development. Decreases are not anticipated in any sector of the economy but increases in the recreation and service sectors will be significant.

Benefits from implementation of the proposed Chitina Wild River area would accrue at three levels; local, State and National.

Benefits to the Nation would accrue through protection, management and development of an outstandingly remarkable free-flowing river and its immediate environment as a unit of the National Wild and Scenic Rivers System for the enjoyment and use of present and future generations. The special qualities of the Chitina River are not duplicated in the existing or proposed system of free-flowing rivers. Such National benefits are primarily intangible.

At the local and State levels, management and development of the Chitina River and its immediate environment

as a component of the National Wild and Scenic Rivers System would assure continued availability of existing high quality outdoor recreation opportunities. In addition, activities such as canoeing, or rafting on a fast, glacial river, and hiking in an environment with little evidence of man's activity would be enhanced. The proposed action would also help assure perpetuation of the local life style which emphasizes use of a natural environment. Development of recreation activities requiring specialized equipment and transportation enhances the opportunity for local residents to gain economic benefits by providing guiding and rental services. This, in turn, would provide economic benefits to the State through increased visitation and longer stays by people attracted by the challenging outdoor recreation opportunities offered by the Chitina River.

A comparison of recreation expenditures at free-flowing river areas indicates that impacts to the local and State economics should be substantial if the Chitina conceptual development plan is implemented. Table 1 highlights the magnitude of recreation expenditures.

TABLE 2. Comparison of Recreation Expenditures at Selected Free-Flowing River Areas

| Area                                    | Cost per trip <sup>1/</sup> | Cost per person       |
|---|-----------------------------|-----------------------|
| <u>Canoe/Kayak (family)</u>             |                             |                       |
| Eel River, Ca.                          | \$280 <sup>2/</sup>         | \$13.33 <sup>3/</sup> |
| Klamath River, Ca.                      | 320 <sup>2/</sup>           | 26.66 <sup>4/</sup>   |
| Trinity-Klamath Rivers, Ca.             | 285 <sup>2/</sup>           | 26.66 <sup>4/</sup>   |
| Kipawa Area, Quebec, Canada             | 360 <sup>2/</sup>           | 13.33 <sup>5/</sup>   |
| <u>Canoe/Kayak (individual)</u>         |                             |                       |
| Buffalo River, Ark. <sup>6/</sup>       | 120                         | 20.00                 |
| Current River, Mo. <sup>6/</sup>        | 110                         | 15.71                 |
| Copper River, Ak.                       | 375                         | 62.50                 |
| Kenai Area, Ak.                         | 365                         | 20.27                 |
| Lewis & Clark Waterway, Mont.           | 140                         | 17.50                 |
| Salmon, Middle Fork, Ida. <sup>7/</sup> | 285                         | 47.50                 |
| Yukon River, Ak.                        | 280                         | 40.00                 |
| Snake River, Wyo.                       | 135                         | 13.20                 |
| <u>Hiking (individual)</u>              |                             |                       |
| Wrangell Mtns., Ak.                     | 330                         | 19.41                 |

<sup>1/</sup>Excludes all transportation and related costs of food and lodging while in transit to and from home and river areas.

<sup>2/</sup>2 adults, 1 child, ea.

<sup>3/</sup>Additional child \$60 for entire trip.

<sup>4/</sup>Additional child \$80 for entire trip.

<sup>5/</sup>Additional child \$110 for entire trip.

<sup>6/</sup>Unit of the National Wild and Scenic Rivers System or related river conservation program.



### Non-Recreation

If the Chitina Wild River were designated by Congress as a component of the national system, certain uses of the river area would be curtailed or eliminated.

Mining in a designated Wild River area has been determined to be an incompatible use of the public resource. Subject to valid existing rights, the minerals in Federal lands which are within the designated Chitina Wild River area will be withdrawn from all forms of appropriation under the mining laws and from operation of the mineral leasing laws.

Any person who initiated a valid mining claim or location under the general mining laws prior to the classification under Sec. 17(d)(2) of P.L. 92-203, and recorded notice of such a location with the appropriate State or local office shall be protected in his possessory rights, provided requirements of the general mining laws are complied with, for a period of five years from the date of enactment of Federal legislation designating the Chitina as a Wild River in the national system, and proceed to patent. At the end of the five-year period all claims not patented would be voided and the minerals withdrawn from location and entry.

Mining on adjacent lands outside the river area or on a valid existing claim or patented lands within the river area should not be affected. Restrictions on mining

operations causing water pollution on tributaries to the Chitina or unnecessary impairment of the scenery would be similar with or without wild river designation of the Chitina.

Development of the potential Wood Canyon hydroelectric site would be foregone if the Chitina River is designated by the Congress as a component of the National Wild and Scenic Rivers System.

Harvest of timber in the immediate environment of the Chitina River for uses other than recreational would be curtailed. Commercial harvest of timber within the immediate environment of the river would be foregone; however, there have been no commercial harvests in the past and there is not enough commercial grade timber to support a sawmill in the corridor.

Permanent occupancy within the immediate environment of the Chitina River would be foregone. There are no permanent residences in the river corridor at this time and, subject to existing valid claims, there would be no disposition of public lands located within the river corridor for homesites, trade and manufacturing sites or related purposes.

Construction of paralleling roads within the wild river area would be foreclosed and motorized land travel on the existing tractor trails will be curtailed.

Hunting, fishing and trapping for subsistence or sport purposes in the Chitina River or its immediate environment would continue to be managed by the State of Alaska with or without wild river designation. It is believed that both subsistence and sport uses of game and fur animals and fish would be enhanced since the primary objective would be to preserve the existing river area in a natural condition. This should strongly favor preservation of key wildlife habitat areas within the river corridor which in turn affects the number, kind and quality of the fish and wildlife available for human use.

## VIII.

## ALTERNATIVES

There are several major alternatives to the recommended inclusion of the Chitina River, Alaska, and its immediate environment in the National Wild and Scenic Rivers System. These include no action, state or local action, different classifications, and inclusion in another national conservation system.

### No Action

The alternative of no action was considered and then discarded on the basis that:

- (1) There is good probability that the existing high quality environment would be adversely affected through increased or unplanned human use and method of access.
- (2) Development of public resource for short-term gain would cause significant adverse environmental impacts and adversely affect existing life style of local residents which depend upon the availability of the existing environment.
- (3) The only practicable method for assuring future availability of the high quality of the Chitina River for the use and enjoyment of present and future generations is to devise a formal plan which provides for careful and thorough review

of the environmental consequences of proposed resource development and human use programs as a means for determining whether to proceed with such programs.

#### State or Local Action

A major principle established with enactment of the Wild and Scenic Rivers Act is that protection and management of free-flowing river areas is a task that cannot be undertaken solely by the Federal government. At the same time it is recognized that a narrow corridor adjoining a river area cannot be managed without considering resource and human programs taking place on adjacent areas. It is realized that the State of Alaska will be actively involved in the management of the public resources of the Chitina River and its immediate environment -- for example, fish and wildlife resources. However, the potential alternative of State or local action was discarded on the basis that:

- (1) There are no known State or local plans to exclusively manage all or most of the public resources of either the adjoining areas or the Chitina River and its immediate environment.
- (2) There are no State or local programs to manage and protect free-flowing river areas in Alaska.

## Different Classifications

Consideration was given to the possibility of classification of the entire river area as scenic or recreational so that mining in the riverbed and its immediate environment could take place. This was discarded since such activities are not consistent with the primary objectives of protection of the existing environment for the use and enjoyment of present and future generations.

## Inclusion in Another National Conservation System

In addition to the inclusion in the National Wild and Scenic Rivers System, there is potential that the Chitina River together with its immediate environment be included as part of other National conservation systems. These are: (1) creation of a national forest; (2) designation as a multiple-use area; and (3) designation as a national park. All three alternatives would involve a substantially larger land area.

The alternative of creating a National Forest has been considered and in the event a national forest is created the Forest Service would administer the river environment as part of the larger land and water resource area. National forests are managed so that all of the various renewable resources are used in the combination that best meets needs of the American people. As part of this resource management the Secretary of Agriculture has assigned to the Forest Service the responsibility for

managing units of the National Wild and Scenic Rivers System within national forests. However, only Congress may designate Federally administered components of the National Wild and Scenic Rivers System. Accordingly, it is recommended that Congress include the Chitina River in the National Wild and Scenic Rivers System in the event a National forest is reestablished. This assures public guidance and Congressional approval of the specific combination of resource uses that best provide for the long-term benefit and enjoyment of the river and its immediate environment as distinct from adjacent "multiple-use" areas.

The alternative of retaining the river and its immediate environment under its present administration by the Bureau of Land Management has been considered. In 1968, the Bureau of Land Management withdrew the river environment as part of a larger classification action, and in 1970 initiated action to establish a Wrangell Mountains National Scenic Area. The Bureau of Land Management is committed by law and regulations to a program of multiple use. As part of this resource management the Secretary of the Interior has assigned to the Bureau of Land Management the responsibility for managing units of the National Wild and Scenic Rivers System within public domain lands. However, only Congress may designate Federally administered components of the National Wild

and Scenic Rivers System. Accordingly, it is recommended that Congress include the Chitina River in the National Wild and Scenic Rivers System in the event adjacent areas are managed by the Bureau of Land Management. This assures public guidance and Congressional approval of the specific combination of resource uses that best provide for the long-term benefit and enjoyment of the river and its immediate environment as distinct from adjacent "multiple-use" areas.

The alternative of creating a national park has been considered. On the basis of information included in the National Park Service proposal to create a Wrangell-St. Elias National Park it is concluded that management of the area as a national park would be consistent with the primary objectives established by the Wild and Scenic Rivers Act. Natural areas like Mount McKinley National Park or the proposed Wrangell-St. Elias National Park are managed so as to safeguard the forests, wildlife and natural features against impairment or destruction. The Secretary of the Interior has assigned management responsibility to the National Park Service for managing certain units of the National Wild and Scenic Rivers System. Since the Congress must approve the designation of all national parks and there is public guidance and congressional approval for the specific types of resource



uses compatible with each national park, units of the National Wild and Scenic Rivers System have not been designated within National Parks. Accordingly, if a national park encompasses the Chitina River and its immediate environment, creation of a National Wild and Scenic River is not recommended.



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF OUTDOOR RECREATION

IN REPLY REFER TO:

NORTHWEST REGION  
~~XXXXXXXXXXXXXXXXXXXX~~ 813 D Street  
~~XXXXXXXXXXXXXXXXXXXX~~ Anchorage, Alaska 99501  
Phone: 265-4850

Dec 29, 1972

Dear Wild & Scenic River Participants;

Enclosed is a discussion draft of the Chitina River Wild & Scenic River Report. The report is based on aerial and field reconnaissance and information obtained from study participants. In some sections information is lacking and in other sections revisions will be necessary. We request your help in supplying whatever additional information you feel is appropriate for the final report, assembly of which will begin on April 1, 1973. Material received after that date will not be included.

The concepts and conclusions that are put forth in this draft will be contained in the final report should there be no serious objections from the Interdepartmental Study Group for Rivers or study participants. Thus, any comments or problems you have concerning the recommendations in the draft should be promptly indicated.

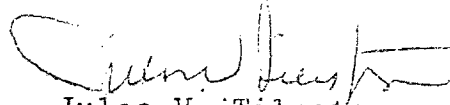
The study team will conduct a field check of the Conceptual plan with particular emphasis on the upper segment during late May. Upon completion of the field evaluation, the report will be forwarded to Washington.

We would appreciate your comments and an indication of what additional information you feel should be included prior to or at the January 10, 1973 meeting of all agencies concerned with the

Alaska Wild & Scenic River studies. This meeting is to be held at 9 a.m. in the BSF&W conference room, 813 D St., Anchorage, Alaska.

Thank you for your cooperation.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "Jules V. Tileston", written over the typed name.

Jules V. Tileston  
Alaska Task Force Leader

2 enclosures

THE CHITINA RIVER  
A Wild and Scenic River Analysis  
Discussion Draft

THIS REPORT WAS PREPARED PURSUANT TO PUBLIC LAW 90-542, THE WILD AND SCENIC RIVERS ACT. PUBLICATION OF THE FINDINGS AND RECOMMENDATIONS HEREIN SHOULD NOT BE CONSTRUED AS REPRESENTING EITHER THE APPROVAL OR DISAPPROVAL OF THE SECRETARY OF THE INTERIOR. THE PURPOSE OF THE REPORT IS TO PROVIDE INFORMATION AND ALTERNATIVES FOR FURTHER CONSIDERATION BY THE BUREAU OF OUTDOOR RECREATION, THE SECRETARY OF THE INTERIOR, AND OTHER FEDERAL AGENCIES.

Bureau of Outdoor Recreation  
Alaska Task Force  
December 29, 1972

PRELIMINARY DRAFT ---  
NOT FOR PUBLIC DISTRIBUTION OR PUBLIC USE  
--- SUBJECT TO REVISION

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To be Developed at a Later Date

Chapter I      Introduction

Chapter II     Summary of Findings and Recommendations

Chapter III    Description of Region Surrounding the  
River

- A.   Physical description, climate,  
      land and water use, and  
      transportation
- B.   Population - present and projected
- C.   Economy - present components and  
      expected major shifts in economic  
      activity
- D.   Public and Private Recreation  
      Resources

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FOREWORD

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The following discussion draft outlines the initial findings and recommendations regarding the Chitina River as a potential addition to the National Wild and Scenic Rivers System. This draft is based upon both aerial and field reconnaissance of the Chitina River, on input provided by various study participants, and an office review of available information. (Field reconnaissance extended from Jakes Bar to the mouth therefore additional field work will be required in the upper reaches during late May prior to submittal of the final report.) The concepts and recommendations contained herein do not necessarily reflect the views of all study participants.

Due to time limitations and the absence of pertinent information, several sections are missing from this draft and will be supplied prior to the completion of the final report. These include: a description of the population, resources, and economics of the State and the region surrounding the study corridor, water rights and ownership of the river bottom, details on highway proposals in or near the study area, development costs as well as economic benefits of the proposed conceptual plan.

Several sections of the draft had to be superficially treated because of limited information available including

PROBATION DEPARTMENT

The conceptual plan presented is intended only as a framework within which normal management latitudes could be taken by the eventual administering agency.

## Summary of Findings and Recommendations

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if such land is designated a National Forest or the Bureau of Land Management if the adjacent land reverts to (d)(1) status.

5. Approximately 35 miles of river downstream of the proposed lower boundary has been withdrawn under the Alaska Native Claims Settlement Act for Native selection. Ownership, public access, and other land questions will not be settled in this area for several years. However, this section has been found to possess outstanding recreational potential and would be a logical extension to a wild river designation upstream. It is recommended that this section be studied at a later date for potential inclusion in the national system should the Native Corporation request and indicate a willingness to fully participate in such a study.



## Chitina River

### Chapter IV - Description and evaluation of the study segment

#### A. Physical Setting

The Chitina River originates at Chitina Glacier in the St. Elias Mountains approximately 100 miles northwest of Yakutat and flows in a northwesterly direction for 112 miles to its confluence with the Copper River near the village of Chitina. The study segment begins at the source of the river and extends approximately 77 miles downstream to, but not including T. 6 S., R. 10 E. of the Copper River Meridian; below this point the river flows through land classified as a Native Regional Deficiency area.

The immediate river banks range from forested slopes or open gravel bars to rock palisades. As it travels west towards the Copper the vegetation changes from barren ground and bedrock to willow, birch, alder and cottonwood. Beyond the study reach, at the river's mouth, there are solid stands of white spruce.

Within the 77 mile study reach the river drops from 2500 feet above sea level at its headwaters to 800 feet where it passes into the Native Regional Deficiency area, an average drop of 22 feet per mile. Natural stream channels are not well defined for most of this reach as the stream is quite braided. In the headwaters the river

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bed is over 3 miles wide although much of the bed is exposed with the main channel approximately 1/4 mile wide with several lesser channels. This braided condition exists from the headwaters for 45 miles just above the confluence with the Tana River. The river then follows a single channel through well defined banks for 21 miles averaging 500 feet in width. At its confluence with the Nizina River, the Chitina again begins to braid and broadens to over a mile in width.

Although there are no gaging stations on the Chitina River, the U.S. Army, Corps of Engineers, has estimated average annual flow based upon meager hydrologic data and derived principally from drainage area relationships. These estimates were made in 1913 7 miles above the Nizina River, at which point the Chitina drainage area is 5,400 square miles. The Corps of Engineers estimated the average annual flow to be approximately 15,200 cfs.

The flow fluctuates markedly as a result of glacial melt with 25% of the annual flow occurring during July, 18% in June and 20% in August. By September, the average monthly flows drops to 12% of annual. Daily fluctuations were observed by the study team while conducting a field evaluation during August 1972. The river would drop several inches overnight and rise significantly during high sun, high temperature periods of the day. These

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fluctuations must be taken into consideration when selecting a campsite or beaching a canoe for any extended period during the day.

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### B. Water Quality

There have been no water quality studies performed on the Chitina River; consequently, there is no data available to compare with water quality standards.

The Chitina River does, however, meet the Aesthetics-General criteria developed by the National Technical Advisory Committee on Water Quality, FWQA, Water Quality Criteria, April 1, 1968.

There are no known sources of sewage or chemical pollution; however, the Chitina is spawned by glaciers and carries an extremely heavy silt load. As a result of the suspended sediment, the river is not suitable for drinking purposes unless the suspended solids are permitted to settle. On some of the gravel bars in the river, water may be obtained from standing pools which are free of sediment.

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##### C. Existing Land Use

Land use patterns along the Chitina River corridor have changed very little over time. There are no developed areas excepting a few isolated cabins and two gravel landing areas. The river flows through what may be termed a "wilderness" environment with no year-round habitation.

Outside the immediate river corridor, mining activity has occurred during the past century. The famed Kennicott Copper mines were located within 15 miles of the river. Today there are a few claims near Bryson Bar.

There are no commercial timber harvests on record from lands within the Chitina drainage. The upper Chitina valley may contain harvestable timber. Both in quality and quantity the forests are directly related to the distance from the river valley. The heavier stands of timber are found adjacent to the river, usually in patches or stringers. Moving away from the Chitina and up the slopes, tree growth becomes more stunted and sparse, finally giving way to shrub, grass and other alpine tundra growth. White and black spruce plus birch and balsam poplar are the major components of the forest growth. Undergrowth consists mainly of low brush such as willow, dwarf birch and heath shrubs.

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##### D. Present Use of the River

There are no water withdrawals, channel improvements, impoundments or any type of water development within the Chitina study reach.

Existing use is limited to fly-in fishing and hunting as the Chitina study area is not road accessible. Fishing is primarily in the tributary streams and lakes of the Chitina valley. The river itself, although not a sport fishing resource, is a spawning area for red salmon.

Recreation use is exceedingly light and, as with hunting and fishing, is limited by the lack of road access. Canoeing and rafting on the river itself are the principal activities. Although figures are not available, it is doubtful whether more than a half dozen people per year avail themselves of the Chitina River resource.

Six miles below the mouth of the Chitina River there is a potential hydroelectric damsite on the Copper River at the head of Wood Canyon. Initial interest in a power development at Wood Canyon was part of the worldwide search for potential alumina reduction sites in the 1940's. More recent studies considered broader regional power needs and established that the Wood Canyon project is an important possibility for long-range power supplies in Alaska.

Various plans for development have been advanced by the Corps of Engineers, Bureau of Reclamation, and the Harvey Aluminum Company for this project. With the maximum proposed pool elevation of 1400 feet, the impoundment would inundate 83 miles of the Chitina River valley, extending to Bryson Bar.

Should this impoundment be constructed, only 23 miles of the 77 mile long study segment would remain in its natural free-flowing condition. In addition to destroying the free-flowing character of the river, extensive moose and bison range would be lost as well as habitat for furbearers and small game.

The following material is quoted from the June 1967 report: 1/

"Wood Canyon Project

"This project would be located at the head of the Copper River Canyon about 130 miles east of Anchorage. It would be centrally located with respect to the Railbelt Area and the deep water ports of Valdez and Cordova. It would create a reservoir with a magnificent recreation potential in a highly scenic area, which is readily accessible by highway from Anchorage, Fairbanks, and the Alaska-Canada Highway.

"It would involve a major commercial salmon problem, and other fish and wildlife problems. The latter have been only briefly reviewed and would require further consideration as part of any planning directed toward authorization of the project; they are not of such magnitude as to significantly affect the overall project justification.

"Various plans of development have been advanced by the Corps of Engineers, Bureau of Reclamation, and the Harvey

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1/ "Alaska Natural Resources and the Rampart Project," USDI, June 1967, pp 28-29.

Aluminum Company for this project. The plan presented in the Field Report would provide for essentially full development of the hydroelectric potential of the Copper River at the Wood Canyon site. Previous plans for lower dams at that site were reviewed in connection with the Field Report studies and found less desirable. However, subsequent studies indicate that this matter merits further review, as a lower dam might have lower unit power costs.

"The project is not favorable to stage development, as a major feature is the proposed arch dam which would involve more than 60 percent of the total generation costs and would need to be constructed initially to its ultimate height.

"The fishery mitigation aspect was recognized to be of such significance as to possibly control the project feasibility. Very preliminary studies subsequent to the Field Report indicate that the mitigation facilities required to maintain the existing anadromous fishery of the Copper River would involve capital costs of \$74 to \$90 million and annual operation and maintenance costs of \$1.04 to 1.42 million.

"The very real recreation benefits which would be assignable to the project likely would support a significant nonreimbursable allocation of project costs to recreation.

"The estimated bus bar unit power costs of 2.9 to 3.8 mills per kilowatt-hour presented in Table 15 includes \$90 million of construction costs and \$1.42 million annually of operation and maintenance costs for fishery mitigation facilities, but they do not reflect the reduction in unit power costs which would result from a non-reimbursable allocation of project costs to recreation."

The plan discussed above is premised on a maximum reservoir elevation of 1400 feet. The reference to studies of a lower dam related to an alternative plan with a maximum reservoir elevation of 1000 feet.



Wood Canyon damsite and the reservoir lands below elevation 1000 feet are covered by two essentially identical Federal Power Commission powersite withdrawals. Withdrawn lands total about 165,000 acres. The first withdrawal (PP 2138 dated July 20, 1953) responded to a project proposal by Harvey Aluminum Company. The second (PP 2215 dated August 13, 1956) related to a proposal by the Central Alaska Power Pool.

Additionally, the Wood Canyon damsite was withdrawn by the Department of Interior as part of Powersite classification 403 dated March 29, 1950. The land withdrawal for the site is described as "all lands within one-quarter mile of the Copper River for a distance of one-half mile upstream and one-half mile downstream" from the damsite.

Existing studies establish that the Wood Canyon Project is one of the four or five most important hydroelectric potentials of Alaska. The studies include preliminary evaluation of engineering feasibility, effect on other resources, and probable costs including facilities required to maintain the Copper River anadromous fishery.

The very large power potential (approximately two thirds the potential of the Rampart Project), favorable location with respect to potential power markets, and comparatively low unit cost suggest the project has major statewide and

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national significance and merits consideration in any long range plans for the Copper River basin.

Alternative scales of development would provide annual firm energy of from 10.3 to 21.9 billion kilowatt hours. Value of the power would be \$70 to \$100 million per year for the higher plan, assuming average energy costs of 7 to 10 mills per kilowatt hour. The recreational and other potential benefits which would likely result from more detailed, multiple-purpose studies have not been evaluated.

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##### E. Land Ownership

The entire study segment flows through lands owned by the Federal government. Most of the reach flows through a large block of land which has been withdrawn from all forms of appropriation under section 17(d)(2) of the Alaska Native Claims Settlement Act (ANCSA, P. L. 92-203). Portions of the river flow through five townships outside of the large block of (d)(2) land. In these five townships a two-mile corridor, one mile from mean high water on either side of the river, has been withdrawn under section 17(d)(2) of ANCSA.

The only known exceptions to Federal ownership and control are four homestead patents with 266, 160, 160, and 40 acres, respectively; one headquarters site of 5 acres; an 80 acre T&M site; a patented mining claim of 96.7 acres; and a portion of a large 1,573 acre state patent.

Federal agencies expressing interest in the Chitina River area are the National Park Service, the U.S. Forest Service, and the Bureau of Land Management. Studies have been made of the area in the past including the Copper River classification in 1968 by the Bureau of Land Management and the Wrangell Mountains National Scenic Area proposal by the Bureau of Outdoor Recreation.

Public hearing were held on both. The Chitina River was one of six river areas in the State selected in 1970 by the Secretary of the Interior and the Secretary of Agriculture as potential wild or scenic rivers in accordance with section 5(d) of Public Law 90-542, the Wild and Scenic Rivers Act.

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F. Access to the River

The study segment of the Chitina River is not road accessible; however, there is a primitive tractor trail leading to Jake's Bar from McCarthy. No other established trails exist within the study segment.

Access by light aircraft is possible at Jake's Bar and Hubert's Landing. Light aircraft might be possible on some of the gravel bars throughout the study segment.

Other possible means of access to the river include ATV use overland, snowmobile during the long winter and jet boat from the Copper River.

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G. Water Rights

This section to be supplied by the State.

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#### H. Recreation Resources and Opportunities

The wildlife, mountains, lakes, fish, and unpolluted air in a setting of simple vastness offer spectacular recreation opportunities. Present recreation use is sparse and primarily associated with hunting and fishing or simply the enjoyment of wilderness; however, there are no visitation figures available for this outstanding resource.

In addition to present uses, potential recreation uses include sightseeing, mountain climbing, hiking, camping, nature exploration, photography, canoeing, kayaking, rafting, and a full range of winter sports.

Although the river itself is not outstanding in the aesthetic sense, being silt laden and generally braided - characteristic of a glacial stream - it is an avenue through an exceptionally scenic region. The glaciers at its source combined with the geologic features along its course are worthy of interpretation. Towering mountains, steep cliffs and beautiful waterfalls characterize its path as it flows past the "Jewels of Alaska" - the magnificent Wrangell Mountains. Near the source of the Chitina, the second highest mountain in North America, Mt. Logan, can be seen from the valley floor.

Animal and plant life and their ecological communities are available for interpretation. The river valley and surrounding Wrangell Mountains are inhabited by numerous species of small mammals, furbearers, and birds as well as wolves, black and brown bear, Dall sheep, goats, moose and even a small herd of bison of about 16 animals. On the river bottom adjacent to Goat Creek, a 240 acre natural area had been considered at one time to be set aside by the Bureau of Land Management for the study of white spruce and bison, grizzly bear environment.

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### I. Historical and Geological Values

The river was named by Athabascan Natives, the or "Ice People," who lived in the upper Copper and crossed the Chitina with foot trails during the winter. They did not, however, utilize the river as a water trail due to the fast current and constant hazards. The name Chitina means "Copper" in Athabascan.

The first report of the river by white man was from Dall in 1870 who spelled it "Chechitno" and "Chitchitno." Later, Lieutenant H. T. Allen reported the river as the "Chittyna" in his 1885 exploration of the Copper River for the U.S. Army.

In 1908 the Chitina was first made accessible with the development of the Copper River and Northwestern Railroad which was built to haul copper ore to Cordova from the mines at Kennicott. By 1911 copper mining in the Chitina drainage was booming and this situation continued until 1933 when major mining activity terminated.

Throughout recent history this portion of Alaska has been noted for its mineral wealth and scenic beauty. In the late 1930's the Wrangell Mountains were evaluated for possible status as a national park or monument. The advent of World War II shelved plans to declare the McCarthy-Kennicott area a national monument by Presidential proclamation.

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During the 1920's, trapping in Alaska flourished. There are still a few old trappers cabins in various stages of disrepair along the river corridor. Traps, tools and implements used by the former resident can be found in and around these relics of the past.

Archeological resources and values of the study segment are not known.

The glaciers at the head of the Chitina River derive their source from the highest coastal range in the world, the St. Elias Mountains. As the Chiltina flows westward it passes south of the Wrangell Mountains with numerous panoramas of the highest peaks, Mt. Blackburn and Mt. Bona. To the south lie the Chugach Mountains with several peaks over 10,000 feet in elevation. ~~

Over the ages the Chitina has slowly eroded through bedrock to expose strata of geologic history. Especially interesting and having significant value for public interpretation are the exposed strata at Canyon Creek, Goat Creek, Marble Creek and the major glaciers that form the upper river of ice, source of the Chitina.

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#### J. Fish and Wildlife Values

The Chitina River Valley and surrounding Wrangell Mountains are inhabited by Dall sheep, goats, moose, bison, brown and black bear, wolves, and numerous species of small mammals and birds, and fur-bearers. The area is noted for a history of producing record book trophy Dall rams. In an area which receives overall light hunting pressure, sheep are hunted rather intensively here. Much of the hunting effort is from guided hunters, who utilize bush strips along the Chitina and in the surrounding mountains. McColl Ridge, which receives particularly heavy pressure, support a good sheep population. Under current trophy management which allows taking only 3/4 curl or larger rams, the population is maintaining itself well, though subject to periodic environmentally caused fluctuations. As with other species in this rather remote region, maintenance of aircraft access is mandatory for utilization of the resource. Completion of the Chitina-McCarthy Highway would provide additional access and probably increase hunting pressure somewhat, but air transportation would remain the major access means for hunting and fishing.

Goats are found mainly on south facing slopes along the Chitina River to Chitina Glacier. They are hunted only lightly by guided hunters.

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Moose populations vary widely with successional changes in vegetation and are relatively low at present. Historically, periodic wildfire increases browse availability in some areas, while other areas are becoming mature spruce-birch forests with poor forage. This area could produce more moose and would benefit from browse rehabilitation. Some areas on the north side of the Chitina River are now being considered for rehabilitation. Due to access limitations and low populations the area is not heavily hunted.

Brown bear are common and may sometimes be near tributary streams with spawning salmon. They are little hunted at present. With an increase in river recreation, occasional bear-man conflicts could be expected. Black bear also occur throughout the Chitina drainage.

A small herd of bison resides in the Chitina River Valley above Tasnuna River. It appears to be limited by rather meagre, but critical winter range on the river bars.

Wolves, lynx and other fur-bearers are found throughout the region. Little trapping or hunting effort for them occurs at present.

Raptors including the bald eagle inhabit both the Chitina and Copper drainages. Under current policy they are managed chiefly for non-consumptive recreational uses, with emphasis on protecting nesting habitat.

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Sport fishing in the Chitina drainage is largely a matter of fly-in fishing to the larger lakes. Hanagita Lake is noteable for its excellent grayling fishing as well as lake trout. A small steelhead run comes up the Hanagita or Toboy River. Many of the small lakes on both sides of the river contain grayling and Dolly Varden. Tributaries of the Chitina contain grayling. Dolly Varden and salmon. Silver, king and red salmon are all found in the drainage.

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### K. Limitations to Recreation

The temperature of the Chitina River is a limiting factor to recreation use. Being a glacial river, the water is always cold. Recreationists must be aware of the potential danger of canoeing on such a stream. The turbid water obscures rocks and gravel bars and the unwary could readily get into serious trouble in the fast current. To capsize in such cold water could be disastrous and immersion hypothermia is a recognized hazard on glacial rivers. It is advisable that canoeists wear wet suits while negotiating the Chitina River.

The climate of the Chitina Valley limits recreational use. The river is frozen from late October through mid May. Winters are quite cold with strong winds occurring frequently and snowfall averaging 30 inches.

Recreational use is also limited by the lack of access. The study reach is presently not road accessible and only those who can fly in to one of the two gravel airstrips can presently utilize the resource.

A potential limiting factor is the proposed Wood Canyon hydroelectric damsite on the Copper River, construction of which would inundate all but 23 miles of the Chitina, transforming it from a natural free-flowing river to a huge slack-water impoundment. Although such an impoundment would provide surface acres for

power boating, it would eliminate fast, and sometimes whitewater, canoeing and significantly alter the environment destroying considerable wildlife habitat.

The State proposal for a road between Chitina and McCarthy, scheduled for completion by 1976, is a significant factor influencing land use. It is possible that the proposed road may pass within the study boundary near Long Lake. (Details on the State's proposal have not been received as of this writing).

Should the lower study segment become road accessible it is possible that over use would degrade or destroy the primitive character of the river corridor.

The Wrangell Mountains contain a variety of mineral deposits and have an excellent potential for significant future production. The Kennicott mines in the Chitina drainage for many years ranked among the world's foremost copper producers and also yielded important quantities of silver. With improved transportation, it is possible that copper-silver mining would again flourish in the mountains to the north of the river.

The Chitina Valley itself has restricted potential for mineral production; however, there is potential for placer gold. In addition there are substantial deposits of sand and gravel.

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The prospect of an all-weather road indicates that revived economic activity in the area is a distinct probability. Placer mining along the river or its tributaries is a potential limitation to primitive recreational opportunities now offered in the river corridor.

Placer mining activities that degrade water quality and modify stream characteristics include stripping and sluicing of overburden by hydraulic means, stream diversions, and sluicing of gold-bearing deposits in stream valleys. Waste waters from hydraulic stripping and from sluicing or washing of placer deposits typically are returned to a stream without any attempt to control solids in the waste effluent.

Apart from their waste pollution aspects, placer operations often leave unsightly tailing piles in their wake. Almost always such piles consist of rocks and miscellaneous mineral soils that do not support vegetation for 50 years after they have been formed. Placer mining has—in the past and continues to leave aesthetically displeasing scars in many stream and river valleys.



## Chapter V - Evaluation and Recommendation

### A. Evaluation

The Chitina River has been found to possess those qualities necessary for inclusion in the National Wild and Scenic Rivers System in that:

- The river is in a free-flowing natural condition.
- The river is of sufficient length to provide a meaningful experience to the river user.
- There is sufficient volume of water during normal years to permit full enjoyment of water-related outdoor recreation activities.
- The river and its immediate environment possess outstandingly remarkable scenic, geologic, fish and wildlife, historic and recreational resources.
- Although a glacial river, and consequently silt laden, water quality is good and meets the "Aesthetics - General criteria" as defined by the National Technical Advisory Committee on Water Quality in the Federal Water Pollution Control Administration's Water Quality Criteria, April 1, 1968.

Coupled with the aesthetic quality of the river area, the recreational resource is probably the most significant value. Hunting and fishing are presently the only major recreational activities along the Chitina River; however,

potential exists for many forms of outdoor recreation. The river offers an exceptional experience for skilled canoeists or for "floaters" in rubber rafts. The river may be used as a snowmobile route in winter and the surrounding mountains offer splendid scenery for the hiker or photographer as well as a challenge to the mountain climber. Sightseeing, nature study and camping in a primitive environment are also activities for which the Chitina River valley offers outstanding opportunity.

B. Recommendations

It is recommended that the Chitina River, from 3 miles above Marble Creek in T10S-R21E near its source to the western limit of T 6 S., R. 11 E. of the Copper River Meridian, a distance of 77 miles, be included in the National Wild and Scenic Rivers System as a wild river to be administered by the Federal government. The river qualifies for wild river designation as described in section 2(b)(1) of Public Law 90-542, the Wild and Scenic Rivers Act: "Wild river areas - Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America." The river corridor should extend 1 mile from the high water line on each side of the river or to the line of sight on the river bluffs, whichever is nearer.

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Approximately 35 miles of river lie between the lower limit of the study reach and its confluence with the Copper River. This stretch of river has been withdrawn under ANCSA for Native selection. Ownership, public access, navigability, and other questions will not be settled in this area for several years. This segment of the Chitina River has been found to possess significant recreational potential and would be a logical extension to a wild river designation upstream. Although not included in this proposal, it is recommended that this lower segment be studied at a later date for possible inclusion in the national system should the Natives request and indicate a willingness to fully participate in such a study.

There are three potential administering agencies for the 77 mile Chitina study reach: The Bureau of Land Management, historically the Federal agency responsible for management of the Chitina watershed prior to its being withdrawn under ANCSA; the National Park Service, the agency which may administer adjacent land should those lands be designated a unit of the National Park System as proposed by that agency in July 1971; and the U.S. Forest Service, should lands adjacent to the river be designated a unit of the National Forest System as proposed by that agency in July 1972. The U. S. Forest Service however has no plans to manage the Chitina River.

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It is recommended that the National Park Service be designated the administering agency for the Chitina Wild River with the stipulation that, should Congress determine the adjacent (d)(2) lands be administered by the U.S. Forest Service, the Forest Service be designated the administering agency. Should neither the National Park Service nor the Forest Service gain control of the adjacent lands, this report recommends that the Bureau of Land Management administer the Wild River Area within the framework of the Conceptual Development Plan which is presented in Chapter VI.

This report recognizes the significance of the "Energy Crisis" in the United States and therefore recommends that legislation designating the Chitina Wild River as a component of the National Wild and Scenic Rivers System specifically provide for consideration and authorization for development of the Wood Canyon hydroelectric project should Congress decide that the project represents the highest and best use of the resource. The provision should require that the project not be authorized unless it provides for the perpetuation of the significant salmon fishery in the Copper River to offset the wildlife habitat which it will destroy.

## Chapter VI - Conceptual Development Plan

This conceptual development plan is designed to provide the proposed administering agency with recommended management policies and developments for the administration of the Chitina River as part of the National Wild and Scenic Rivers System. The boundaries and developments indicated are presented as general recommendations and should not be construed as being the final plan for the Chitina Wild River. Should the Chitina be designated a Wild River by Congress, the administering agency will finalize the plan within the framework presented herein. The plan may be modified and strengthened should the AHTNA Native corporation ultimately select Native Deficiency lands on the lower Chitina and desire to participate in the management and development of the outdoor recreation opportunities of the Chitina.

### A. Management Goals

The management objectives for the Chitina Wild River are to protect and enhance the values which caused it to be recommended for inclusion in the national system; to protect and interpret to the public areas of special historical and geological significance; and to provide a high quality outdoor recreation experience in a primitive setting consistent with protection of the quality of the river and its environment.

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Carrying capacity of this region is not well enough understood at this time; therefore, the optimum level of visitor use cannot be accurately estimated. Efforts must be made by the administering agency to establish visitor use levels which do not endanger the values for which the wild river was designated. A system of periodic evaluation and monitoring focused on the outstanding values and more sensitive elements of the river environment should be developed.

Lateral boundaries will be finalized by the study team.

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B. Boundaries

The control boundary for the proposed wild river area extends 1 mile from high water on each side of the river or to the river bluffs, whichever is less. The river reach extends from the headwaters of the Chitina in T. 10 S., R. 21 E., to the western limit of T. 6 S., R. 11 E. of the Copper River Meridian.

All of the area within the recommended control boundary lies within lands withdrawn under section 17(d)(2) of Public Law 92-203 with the exception of \_\_\_\_\_ acres within a patented State selection; an 80 acre trade and manufacturing site and four patented homesteads of 266,160, 160, and 40 acres, respectively, all near Long Lake; a 5 acre headquarters site on the north side of the river near Bear Island; and a 96.7 acre patented mining claim near Hubert's Landing.

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C. Mining

Within the control boundary there are 30 mining claims, 20 near Canyon Creek and 10 near Bryson Bar.

The Wild and Scenic Rivers Act directs the Secretary of the Interior, where he is responsible for the management of Federally managed components of the National Wild and Scenic Rivers System to issue regulations for the conduct of mining activities which among other things ". . . provide safeguards against pollution of the river involved and unnecessary impairment of the scenery within the component in question."

Mining in a designated Wild River area is an incompatible use of the public resources; however, the following steps are proposed to protect existing valid rights:

For any person who prior to September 15, 1972, initiated a valid mining claim or location under the general mining laws and recorded notice of said location with the appropriate State or local office shall be protected in his possessory rights, if all requirements of the general mining laws are complied with, for a period of five years from the date of enactment of Federal legislation designating the Chitina River as a component of the National Wild and Scenic Rivers System and may, if all requirements of the general mining laws are complied

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with, proceed to patent. At the end of the proposed period all claims not patented would be voided and the minerals withdrawn from location and entry.

Substantial modification of the existing environment within wild river areas by valid mining development would proceed on the basis of the following guidelines:

- ① All mining activities are preceded by an appropriate permit from the Environmental Protection Agency indicating that existing water quality would not be adversely affected by the proposed mining operation.
- ② Notice of all valid claims and assessment work also be filed with the Bureau of Land Management, District Office, Anchorage, Alaska.
- ③ Prospecting or mining with draglines, dredging, or heavy mechanical equipment such as bulldozers, and transportation of mining equipment by mechanized means be undertaken only after the preparation and review of an Environmental Impact Statement and the issuance of a permit by the Bureau of Land Management.

Issuance of such a permit would take into account the extent of impairment of the scenery. Transportation of equipment by motorized means would consider such

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things as the necessity for constructing new or significantly altering existing overland access routes to the river, the possibility of movement of heavy equipment to and from the claim during winter months along the shore of the river ice and the feasibility of using aircraft.

- To the extent practicable mined materials will be returned to their original place by back-filling into the excavation. When the mining operation has concluded or a phase completed, the surface should be given a reasonable amount of sloping of tailing piles to conform to the topography and a covering of overburden replaced.
- To the maximum extent possible a screening of natural vegetation shall be retained between the mining operation and the river.

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### D. Recreation Development

The primary objective of the conceptual development plan is to maintain the wild river environment in as natural a state as possible by providing the minimum of recreation facilities needed for appropriate visitor use and enjoyment of the river corridor.

Four potential development sites have been located along the north side of the study reach. None of the sites will be accessible by automobile; however, Jake's Bar and the Long Lake site will be accessible by tractor trail from McCarthy.

Primitive campsites and rustic shelters are proposed at all four access sites and water and toilet facilities will be provided. Campsites and their attendant facilities will be effectively screened from the river.

No visitor center will be located within the river corridor. The administering agency will locate a visitor information center for the Chitina Wild River in one of the communities which would serve as a jumping off place to the river area.

Three of the access sites will have gravel landing strips for light aircraft, thereby making the river corridor accessible without intruding on the natural scene with vehicular roads.

The use of ATV's other than snowmobiles are deemed inappropriate because of the fragile nature of the natural vegetation in the river corridor. Snowmobile use of the river itself during the winter months is acceptable.

Hunting, fishing and trapping are acceptable resource utilization on the north side of the river, subject to State legislation.

Canoe and raft rental will be available from the visitor center and airlifted into the river corridor; retrieval is by tractor trail at the lower two sites thereby eliminating equipment storage within the wild river environment which would detract from its scenic integrity and primitive setting.

The following sites and developments are recommended. Mileage is given from the source, considered 3 miles above Marble Creek (T. 10 S., R. 21 E.).

1. Hubert's Landing - Mile 6 (T. 10 S., R. 21 E.)

Gravel airstrip for light aircraft. Primitive campground water supply, vault toilet, fire rings, primitive shelter.

2. Canyon Creek - Mile 16 (T. 9 S., R. 18 E.)

Gravel airstrip for light aircraft. Primitive campground water supply, vault toilet, fire rings, primitive shelter. Small commissary.

3. Jake's Bar - Mile 47 (T. 7 S., R. 14 E.)

Gravel airstrip for light aircraft. Primitive campground water supply, vault toilet, fire rings, primitive shelter tractor trail.

4. Long Lake - Mile 75 (T. 6 S., R. 11 E.)

Primitive campground, water supply, vault toilet, fire ring, primitive shelter, tractor trail.

Small primitive canoe camps, accessible only to the river user should also be provided. Their locations can best be determined as future use patterns developed. As a guideline, it is recommended that one canoe camp be located between Hubert's Landing and Canyon Creek, one between Canyon Creek and Jake's Bar and two between Jake's Bar and Long Lake access point.

As the land within the recommended control boundary is already in Federal ownership, there are no acquisition costs involved for the access sites described. Provisions of the recreation developments recommended in this conceptual development plan would cost an estimated \$ \_\_\_\_\_ (to be provided by the National Park Service).

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E. Administrative Arrangements

The overall administration of the river reach will be assigned by the Congress, taking into account the recommendations of the various Federal departments, the Governor of Alaska and the Joint Federal-State Land Use Planning Commission.

Both the U.S. Forest Service and the National Park Service are studying large blocks of lands withdrawn under section (d)(2) of Public Law 92-203 which lie adjacent to the river corridor.

The Forest Service has stated that they fully concur that the Chitina River possesses those qualities necessary for inclusion and is a good potential for inclusion in the national system. Although that agency has recommended establishment of a national forest, there are no plans which can be related to the river corridor, even in conceptual form.

The National Park Service has prepared the conceptual development plan presented in this report. It is recommended that the National Park Service be designated the administering agency for the 77 mile reach of the Chitina River classified as a wild river.

The lower 35 miles of the Chitina River lie within lands withdrawn under provisions of Public Law 92-203 for Native selection. It is possible that, should the

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Natives eventually select the lower Chitina corridor, they may wish to have it included in the National Wild and Scenic Rivers System. Should this eventuality occur, the Natives could develop a management plan consistent with the Wild and Scenic Rivers Act, Public Law 90-542, and, upon approval of the Secretary of the Interior, have it declared a part of the national system. The administering agency should work closely with the Natives in developing an appropriate management plan for the lower segment. The river corridor would then be administered jointly by the Federal government and the Native corporation.

Should the Congress determine that the adjacent block of (d)(2) land be administered by the U.S. Forest Service, it is recommended that the Forest Service be the administering agency for the Chitina Wild River and that they adopt the conceptual development plan presented herein.

In the event that neither the National Park Service nor the Forest Service be designated by Congress to administer the adjacent lands, it is recommended that the Chitina Wild River be administered by the Bureau of Land Management.

As the developments discussed in this report are presented as general recommendations, it is up to the eventual administering agency to prepare a detailed Master Plan for the river area within the guidelines established by Congress.

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F. Costs: FY + 1 through + 5

There are no acquisition costs involved in this conceptual plan as the land within the **control** boundary, with the exception of those acres rated under land ownership, is owned by the Federal government.

(Development costs and those costs associated with operation and maintenance over the first five years after designation by Congress will be supplied by the National Park Service.)

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## Chapter VII - Plan Impact

### A. Potential Use and Benefits

There is presently not enough information available regarding the carrying capacity of the resource to predict total visitor use into the future; however, it is possible to estimate potential visitor use with anticipated initial development. Whether this development is expanded or reduced will depend upon the results of the monitoring program of the administering agency. Visitor use will not be permitted to endanger the values for which the wild river was designated.

Initial facility development plans call for four access sites. It is assumed all use will be based at these sites. Five shelters and ten campsites at each access point would result in a daily capacity of 60 recreators. Assuming an average of four recreators per cabin and campsite there could be a total of 240 recreators along the river. If we further assume four capacity days per week, Saturday and Sunday with the equivalent of two additional over the remaining five days, and a 13-week summer recreation season, we arrive at 12,480 recreation days during the recreation season. Assuming that seasonal use is equivalent to 80 percent annual use, initial development could result in annual use of approximately 15,600 recreation days. A recreation day being defined

as a significant part of a day during which the recreationist has as a primary objective the enjoyment of the river resource.

Hunting, fishing and trapping, while not included in the above figures, will be additive. These activities are not restricted to the river corridor and may continue in adjacent land in compliance with State regulations.

Economic benefits resulting from initial and continued infusion of capital are anticipated given the impetus of expenditures on construction of facilities and operation and maintenance activities and expenditures by recreationists in adjacent communities of Chitina and McCarthy.

The present economy of the Chitina valley is not rapidly changing but the mix would change with development. Decreases are not anticipated in any sector of the economy but increases in the recreation and service sectors will be significant.

The impact of the estimated \$ \_\_\_\_\_ capital investment would range from \$ \_\_\_\_\_ to \$ \_\_\_\_\_ while that of the annual operation and maintenance costs of \$ \_\_\_\_\_ would be from \$ \_\_\_\_\_ to \$ \_\_\_\_\_. Most of these funds will come from Federal sources outside the immediate area. The range of multipliers \_\_\_\_\_ to \_\_\_\_\_ were chosen from studies applicable to the area and depict the possible impact on the local area by these expenditures.

(Figures and multipliers used to be furnished by NPS)

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B. Non-Recreational Uses which may be Curtailed or Eliminated

If the Chitina Wild River were designated by Congress as a component of the national system, certain uses of the river area would be curtailed or eliminated.

Mining in a designated Wild River area has been determined to be an incompatible use of the public resource. Subject to valid existing rights, the minerals in Federal lands which are within the designated Chitina Wild River area, including the river bed, will be withdrawn from all forms of appropriation under the mining laws and from operation of the mineral leasing laws.

Any person who initiated a valid mining claim or location under the general mining laws prior to the classification under Section 17 (d) (2) of Public Law 92-203, and recorded notice of such a location with the appropriate State or local office shall be protected in his possessory rights, provided requirements of the general mining laws are complied with, for a period of five years from the date of enactment of Federal legislation designating the Chitina as a Wild River in the national system, and proceed to patent. At the end of the five year period all claims not patented would be voided and the minerals withdrawn from location and entry.

Future construction of roads within the designated Wild River area will be prohibited and motorized land travel on the existing tractor trails will be restricted.

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Should the Congress designate the Chitina as a component of the National Wild and Scenic Rivers System, the opportunity for future full development of the Wood Canyon damsite would be curtailed. This, however, remains an open decision. As discussed in the recommendations, this report recognizes that there exists an "Energy Crisis" in the nation and therefore proposes that enabling legislation specifically provide for future consideration and authorization of the Wood Canyon Hydroelectric Project should Congress deem this the highest and best use of the resource.

UNITED STATES GOVERNMENT

# Memorandum

TO : Assistant Director Eastman

DATE: April 11, 1973

FROM : Leader, Alaska Task Force

SUBJECT: Fortymile Wild & Scenic River Report, Alaska

Enclosed are two copies of the subject report. The original cut and paste and pencil maps are being forwarded under separate cover to Fred Strack. A copy of the report has been provided to NWRO and BLM, BSF&W, NPS and FS planning teams in Anchorage.

The enclosed report has been revised to reflect comments received on the Discussion Draft distributed in January, 1973. Primary revisions were made on the basis of input provided by the BLM, Bureau of Mines, Alaska Divisions of Geology and Highways and single comment from Natives.

We emphasize that the conclusions are preliminary and at this point reflect only the thinking of the ATF. New data may well cause significant changes in the evaluation. For example, the attached data on highway locations was obtained after this draft was prepared and as such the sections on transportation, river access and alternative boundaries and classifications, must be altered to reflect these data and the highway data is still preliminary.

Field work on the Mosquito Fork and North Fork-Slate Creek areas is scheduled during late May. Special emphasis will be given to evaluating those areas and their potentials and alternative resource uses such as highways involved. Also special attention will be given to boundaries as related to tributary areas where recreational uses are other than boating.

Field work will be conducted on an interagency basis with representatives of FS, BLM, ADF&G, and Alaska Department of Highways and the Solicitor's office, Juneau. The enclosed report will be revised into final field form at that time and submitted to WASO about June 15.

Appendices will be provided as other reports are completed.

  
Jules V. Tileston



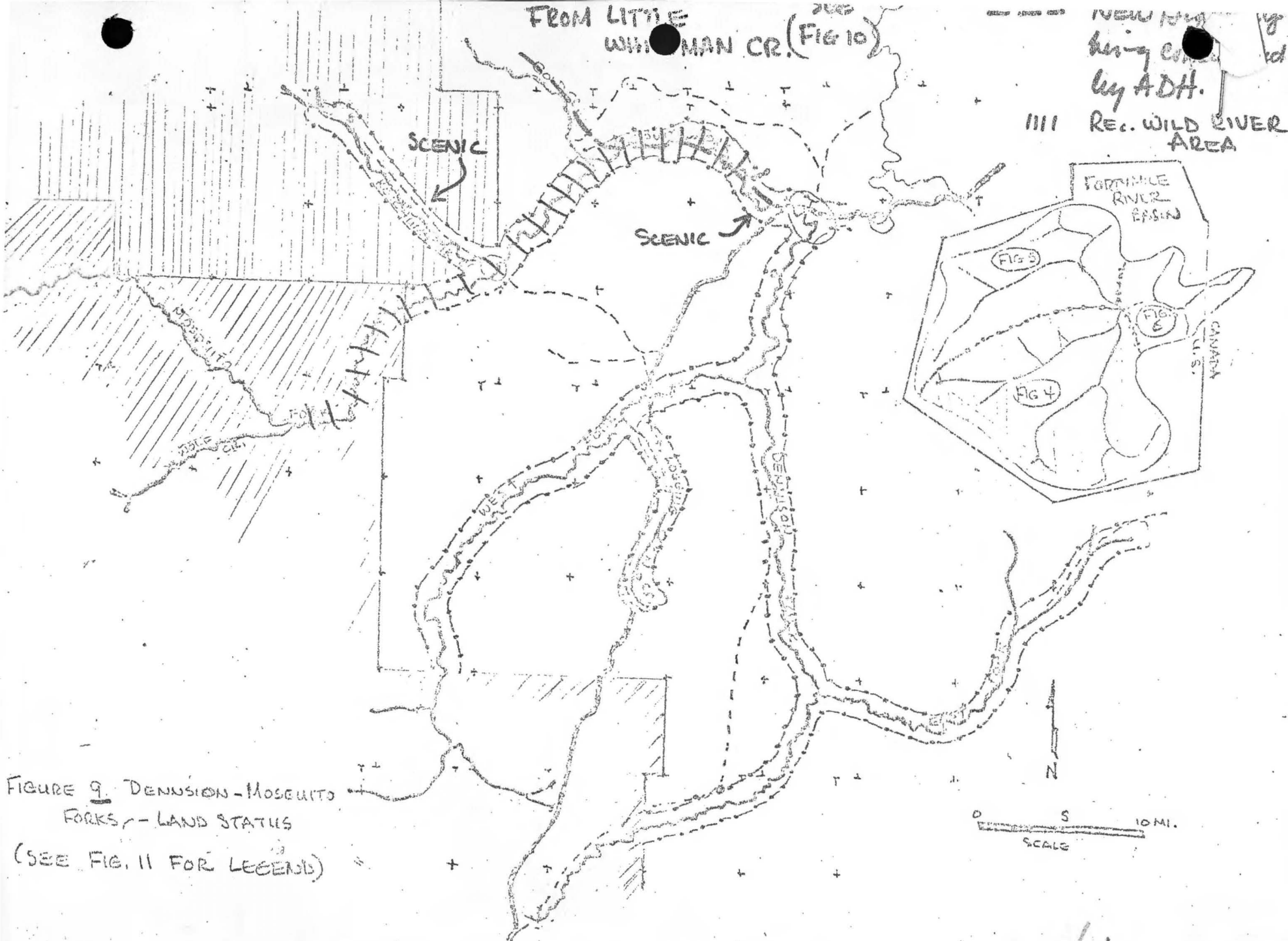


FIGURE 9. DENISON-MOSELITO FORKS - LAND STATUS  
(SEE FIG. 11 FOR LEGEND)

4/9/73

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 AREA

