

ALASKA LEGISLATURE SPECIAL COMMITTEE / SUBJECT FILES 86 / 2

367 SCOM10: LOCAL GOVERNMENT STUDY 1979

Sec. 29.18.080. Report and hearing. (a) The Department of Community and Regional Affairs shall report its findings to the Local Boundary Commission with its recommendations regarding the incorporation.

(b) The Local Boundary Commission shall hold at least one public hearing in the area proposed to be incorporated for the purpose of receiving testimony and evidence on the proposal. (am § 5 ch 212 SLA 1976)

Sec. 29.18.090. Decision on municipal incorporation.

(a) If the Local Boundary Commission determines that a proposed municipality fails to meet the standards for incorporation, it shall reject the petition. If the commission determines that the proposed municipality meets the standards, it shall accept the petition. If the commission determines that the proposed boundaries can be altered to meet the standards, it may alter the boundaries and accept the petition.

(b) A commission decision under this section may be appealed under the Administrative Procedure Act (AS 44.62). (§ 2 ch 118 SLA 1972; am § 6 ch 212 SLA 1976)

Sec. 29.18.110. Incorporation election. (a) The Local Boundary Commission shall immediately notify the lieutenant governor of its acceptance of an incorporation petition. Within 30 days after notification, the lieutenant governor shall order an election in the proposed municipality to determine whether the voters desire incorporation and, if so, to elect the initial officers in the same election. If incorporation is rejected, no officers are elected. The election is held not less than 30 nor more than 90 days after the date of the election order. The election order must specify the dates during which nomination petitions for election of initial officers may be filed. (am § 1 ch 23 SLA 1976)

(b) An Alaska voter who has been a resident of the area within the proposed municipality for 30 days before the date of the election order may vote.

(c) Areawide borough powers included in the incorporation petition are considered to be part of the incorporation question. In an election for the incorporation of a second class borough, each power to be exercised outside cities only is placed separately on the ballot. Adoption of a nonareawide power requires a majority of the votes cast on the question, and the vote is limited to the voters residing outside cities.

(d) The lieutenant governor shall supervise the election in the general manner prescribed by the Alaska Election Code (AS 15.05 - 15.60). The state shall pay all election costs under this section. (§ 2 ch 118 SLA 1972)

Sec. 29.18.120. Election of initial officers.

(b) Nominations for initial officers are made by petition. The petition is in the form prescribed by the lieutenant governor and includes the name and address of the nominee and a statement

of the nominee that he is qualified under the provisions of this title for the office that he seeks. A person may file for and occupy more than one office, but he may not serve simultaneously as borough mayor and as a member of the borough assembly or as mayor and as a member of the council of a home rule or first class city. Petitions to nominate officers of a second class city must include the signature and resident address of 10 voters in the area of the proposed city. Petitions to nominate elected municipal officers must include the signature and resident address of 50 voters in the area of the proposed municipality, or that area of the proposed municipality from which the officers are to be elected under the composition and apportionment set out in the accepted incorporation petition.

(c) The lieutenant governor shall supervise the election in the general manner prescribed by the Alaska Election Code (AS 15.05 - 15.60). The state shall pay all election costs under (a) - (c) of this section.

(d) The initial elected municipal officials take office on the first Monday following certification of their election.

(e) The initial elected borough assembly and city council members shall determine by lot the length of their terms of office so that a proportionate number of terms expire each year, resulting in staggered terms of office for members subsequently elected.
(am §§ 2 - 4 ch 23 SLA 1976)

Sec. 29.18.130. Integration of special districts and service areas. Service areas in a newly incorporated borough or city shall be integrated into the borough or city within two years after the date of incorporation. On integration the borough or city succeeds to all the rights, powers, duties, assets and liabilities of the service areas. After integration, the borough assembly or city council may exercise within a former service area all of the rights and powers exercised by the service area at the time of integration, and may levy and collect special charges, taxes, or assessments to amortize bonded indebtedness incurred by the service area or by a borough or city as successor to the service area. Upon integration no less than all property in the service area at the time of integration remains subject to taxation to pay the principal of and interest on the bonds. The provisions of this section apply to all organized boroughs whether incorporated or organized before or after September 10, 1972. (§ 2 ch 118 SLA 1972)

Sec. 29.18.140. Transition. (a) The powers and functions exercised by home rule or general law cities and service areas which are succeeded to by a newly incorporated borough or city are exercised by them until the new borough or city assumes the powers and functions, which may not exceed two years after the date of incorporation. Ordinances, rules, resolutions, procedures, and orders in effect before the transfer remain in effect until superseded by the action of the new borough or city.

(b) The borough or city shall give written notice of its assumption of the powers, duties and other items enumerated in §§ 130 - 140 of this chapter, to the city, and service area concerned before the assumption. Borough or city officials shall consult with the officials of the city and service area concerned, and arrange an orderly transfer.

(c) After the incorporation of a new borough or city, no service area within it may assume new bonded indebtedness, make any contract, or transfer any assets without the consent of the assembly or council. (§ 2 ch 118 SLA 1972)

Sec. 29.18.150. Challenge of legality. No person may challenge the formation of a municipality except within six months of the date of its incorporation. (§ 2 ch 118 SLA 1972)

YUKON FLATS

REGIONAL GOVERNMENT STUDY

TECHNICAL REPORT No. 2

Data Reconnaissance

Darbyshire & Associates June 1979

DARBYSHIRE & ASSOCIATES

community planning and management services

May 5, 1979

Ms. Lee McAnerny, Commissioner
Department of Community and
Regional Affairs
State of Alaska
Pouch B
Juneau, Alaska 99811

Dear Commissioner McAnerny:

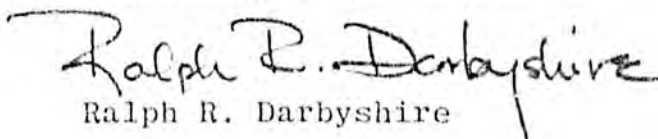
We are pleased to submit this Yukon Flats Regional Government Study - "DATA RECONNAISSANCE". This is the second of several papers that we are to prepare that will examine the requirements and potential for a regional government in the Yukon Flats area. Others to be produced include: "Local Government Options"; "Standards for Incorporation"; "The Incorporation Procedure"; "Borough Service Cost Estimates"; "Potential Borough Revenue Sources"; "Implications for Regional Self-Determination and Local Control"; and "The Feasibility and Viability of Regional Government Alternatives".

When we complete the last of our report "chapters", they will be combined and bound into a single summary report. At that time we will then travel to each of the communities in the proposed borough area and discuss our findings. This should be taking place towards the first part of June.

Throughout this undertaking we have worked closely with Mr. Pat Poland of your Local Governmental Assistance Division in Anchorage. In all instances he has been extremely helpful and eager to assist. Mr. Jonathan Solomon, Ms. Nancy James, and Mr. Sam Peter were also of invaluable assistance and support when we traveled to each of the communities in the region to explain this undertaking. Finally, the Borough Study Committee members were most helpful in organizing and arranging individual community meetings. For all of this we are most grateful and wish to extend our sincere thanks.

Respectfully submitted,

DARBYSHIRE & ASSOCIATES


Ralph R. Darbyshire

RRD/eq
Enclosure

YUKON FLATS REGIONAL GOVERNMENT STUDY
DATA RECONNAISSANCE

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DEPARTMENT OF COMMUNITY AND REGIONAL AFFAIRS
DIVISION OF LOCAL GOVERNMENT ASSISTANCE
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YUKON FLATS REGIONAL GOVERNMENT STUDY

BOROUGH STUDY COMMITTEE

Jonathan Solomon, Chairman - Fort Yukon

Susan Baalam - Birch Creek
Leah Druck - Chalkyitsik
David Evans - Rampart
Nancy James - Fort Yukon
Edward John - Venetie
Steve Joseph - Beaver
Larry Nathaniel - Circle
Jim Reiter - Central
Don Stevens - Stevens Village
Lincoln Tritt - Arctic Village

YUKON FLATS REGIONAL GOVERNMENT STUDY

DATA RECONNAISSANCE

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DATA RECONNAISSANCE*

INTRODUCTION

Organizational, operational, costing, and financial aspects of the proposed borough will be greatly affected by population, land status, economic characteristics, community facilities and services, property values, and other characteristics of the study area. For instance, population directly affects the revenues boroughs collect through property taxation** and federal and state revenue sharing programs. Economic information will be useful to the Local Boundary Commission's deliberations on the feasibility of the proposed borough. State and federal land ownership patterns will affect the lands the borough might obtain through the State's Municipal Land Entitlement Program, as well as the revenues it might receive from the state government in lieu of land selection.

* For a more complete description/analysis of the area, see YUKON-PORCUPINE REGIONAL PLANNING STUDY - 1978, for the U.S. Forest Service, by the Agricultural Experiment Station - School of Agriculture & Land Resources Management, and the Institute of Social and Economic Research - University of Alaska, Fairbanks, Alaska.

** A.S. 43.56 and A.S. 29.53.

This report provides for the collection and analysis of this important information. As such, it examines:

- o The region's geographic characteristics and its relation to adjacent boroughs;
- o The history of the area's human occupation and an analysis of current and projected population characteristics;
- o Present economic conditions and the potential for future economic development;
- o Existing educational, transportation, and communication systems;
- o Existing public facilities and services and an analysis of future priorities and needs on a community-by-community basis;
- o General land ownership patterns as they might affect land selection rights, payments in lieu of land selection, and other state and federal programs; and

STUDY AREA BOUNDARIES* — PROPOSED YUKON FLATS BOROUGH

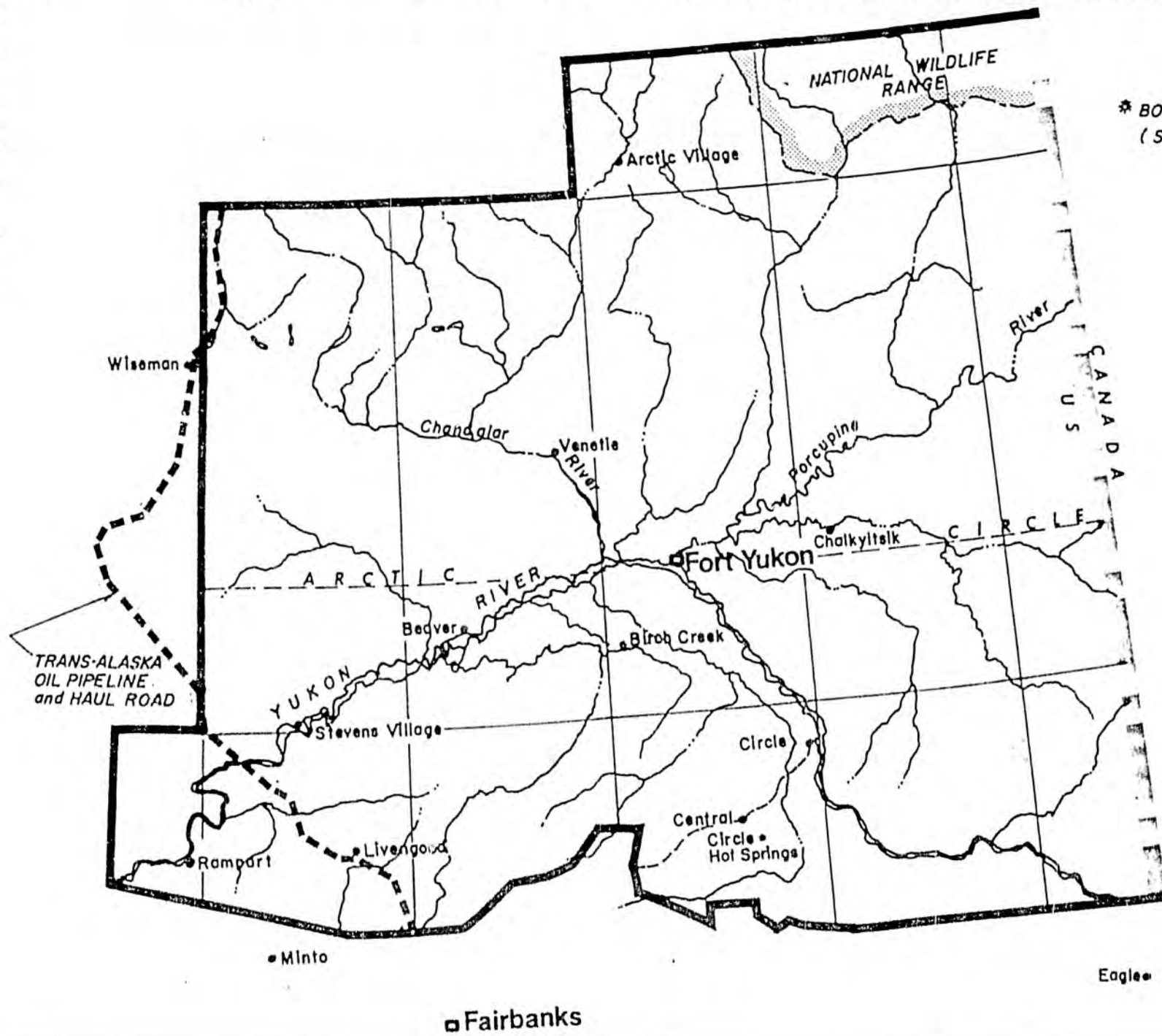
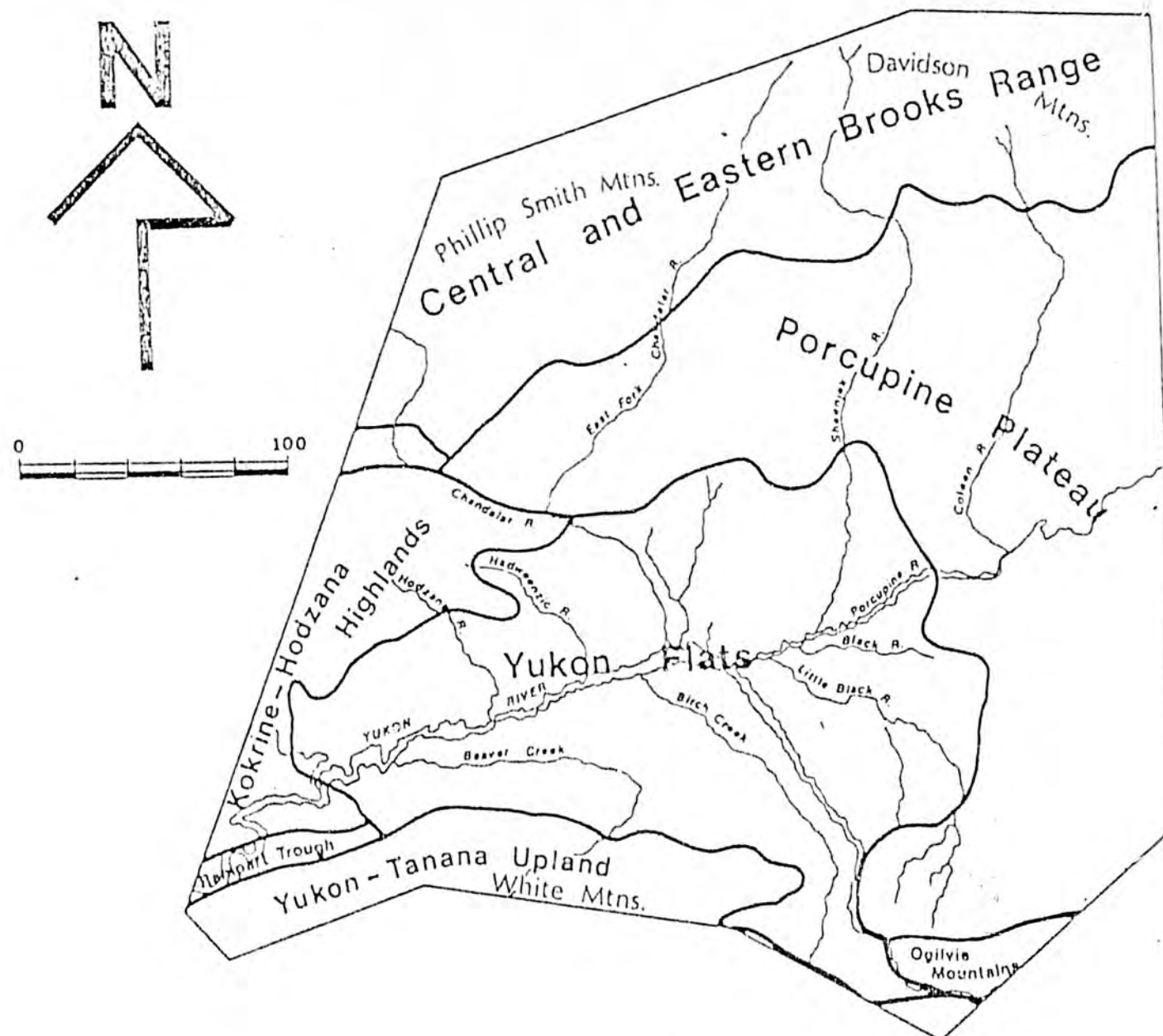


Figure II

Seven different physiographic provinces exist within the study area: Central and Eastern Brooks Range, Porcupine Plateau, Yukon Flats, Ogilvie Mountains, Yukon-Tanana Upland, Rampart Trough, and Kokrine-Hodzana Highlands. (See Figure III, p. 7). Eight of the 11 settlements are located in the Yukon Flats province and the entire area has therefore become commonly known by that name. The Yukon Flats province covers about 10,000 square miles and is characterized by generally flat to gently rolling marshy flood plain lands with thousands of thaw lakes, oxbows, and sloughs.

It has been suggested that the western boundary of the study area was located so that the portion of the Alyeska pipeline would traverse both REAA #13 and REAA #12, which lies immediately to the west. This was apparently done so that both areas would be provided with a tax base should they decide to pursue the formation of a borough government.

The climate of the study area is generally classified as Continental Sub-arctic. It is characterized by great diurnal and annual temperature variations and low precipitation (7-10 inches). Maximum, mean, and minimum temperatures for January approximate the mid 30's, -30's, and -60's (degrees fahrenheit) for the area. For June, they approximate the mid 90's, mid 50's, and mid 20's (degrees fahrenheit), respectively.



From: Yukon - Porcupine Regional Planning Study - 1970 P. 10-2
 Figure III Major Physiographic Provinces in the Yukon-Porcupine Region

Vegetation in the area is about equally characterized by spruce-hardwood forest, spruce-poplar forest, alpine tundra, and barren ground. Moist tundra, low brush, bog and muskeg, and high brush are other vegetation types also found in the region.

Moose, Dall sheep, caribou, black bear, and grizzly bear are the principal big game species found in the study area. While they are not dispersed equally throughout the area, moose and caribou, as well as waterfowl, salmon, pike, and other fish, are the main subsistence foodstuffs utilized.

POPULATION

History: The Yukon Flats area is the center of territory which is considered the historic house of the Kutchin group - a major branch of the Athabascan Indian people. At one time, as many as seven Kutchin sub-groups lived in villages which extended from the junction of the Yukon and Tanana Rivers, throughout the Yukon Flats, and up the Porcupine and Yukon Rivers to and beyond the Canadian Border. The Kutchin's made widespread use of this territory. As noted in Alaska Natives and the Land, "The physiographic sections of Alaska occupied and used by these Kutchin groups center on the Yukon Flats, and extend to all parts of the basin..." (p. 205).

The growth of non-Native population in the region has been related to trapping, trade, and the exploration and extraction of minerals. Because of the cyclical nature of mineral activity that has occurred in rural Alaska, the region's population has varied widely. In some cases, communities have been established, grown sizeable populations, and then been abandoned within a few years. Circle best exemplifies this. In 1896, the population of Circle was estimated at 1,200 people; by 1910, the population had dwindled to 144 residents.

More recently, the search for potential petroleum resources has led to renewed exploration activity in the region. Finally, the construction of the Alyeska oil pipeline has generated some growth in the western portion of the region, with the establishment of maintenance and service camps along the pipeline route.

Seven traditional Native village sites have developed into present-day communities in the study area. These are: Arctic Village, Birch Creek, Chalkyitsik, Fort Yukon, Rampart, Stevens Village, and Venetie. Beaver is also a Native community; however, it is not considered a traditional Kutchin village as it was originally settled by several Japanese and Eskimo people who immigrated to the area from Barrow.

Circle also contains a sizeable Native population and is well within the Kutchin's historical area. As explained earlier, Circle was once a major mining and trading community that was nearly abandoned by the early 1900's. It became the home for residents of Charley's Village after that upriver community was destroyed by floods and ice in 1914.

Livengood, Central, and Circle Hot Springs are all non-Native settlements. Livengood and Central were established as roadhouses and Circle Hot Springs as a resort.

Throughout its history, the region has maintained an identity and cohesiveness based on the growth of Fort Yukon as an educational and trading center. This is less applicable to the communities of Livengood and Central which are connected to Fairbanks by road. They are influenced more by the trade and transportation systems centered in Fairbanks. Circle is also linked to Fairbanks by the Steese Highway. However, as a predominantly Native community located adjacent to the Yukon River, it has remained closely tied to the transportation and commercial networks of the Fort Yukon region.

Current Population Characteristics: Estimates on the current population of the study area vary. This results from the fact that the agencies which have gathered socio-economic information have used different boundaries in their analysis. If U.S. Census data is used, the Upper Yukon

Census Division had a 1970 population of 1,684 people. This, however, includes the community of Eagle and portions of the North Slope Borough and does not include the communities of Livengood and Rampart.. When adjustments are made for these considerations, the estimated 1970 population of the study area is 1,250. (See Table 1, p. 12).

Recent population trends for the region indicate that the area is growing slowly. A 1978 report developed for the U.S. Forest Service* estimates the region's population has risen from 942 persons in 1950 to 1,325 in 1976, a 17-year growth of 383 persons**. Although the accuracy of the census in remote areas can be questioned, the figures can be considered a rough indication of the general trend of modest growth which has occurred in recent years.

Based on 1978 population figures derived from a series of COMMUNITY PROFILES published by the Fairbanks Town & Village Association for Development, the 1978 population of the

* From YUKON-PORCUPINE REGIONAL PLANNING STUDY - 1978, for the U.S. Forest Service, by the Agricultural Experiment Station - School of Agriculture & Land Resources Management, and the Institute of Social and Economic Research - University of Alaska, Fairbanks, Alaska.

** These figures should not be considered as an exact population estimate for the study area as the U.S. Forest Service Study did not encompass the communities of Livengood, Central, Circle Hot Springs, or Alyeska Pipeline Pump Station No. 6.

TABLE 1

ESTIMATED POPULATION
YUKON FLATS REGION
1970 AND 1978

<u>PLACE</u>	<u>1970¹</u>	<u>1978²</u>
Arctic Village	85	111
Beaver	101	83
Birch Creek	52	29
Central	26	20
Chalkyitsik	130	99
Circle	54	76
Circle Hot Springs	8	10
Fort Yukon	448	700
Livengood	29	29 ³
Rampart	36	58
Stevens Village	74	78
Venetie	<u>112</u>	<u>148</u>
SUB-TOTAL	1,155	1,441
Ft. Yukon Air Force Base	<u>95</u>	<u>160⁴</u>
SUB-TOTAL	1,250	1,501
Pump Station #6	<u>-</u>	<u>70⁵</u>
TOTAL	1,250	1,571

- 1 From 1970 U.S. Census, except for Fairbanks Town & Village Association for Development estimate for Birch Creek.
- 2 From Fairbanks Town & Village Association for Development COMMUNITY PROFILES, 1978, and estimates by Darbyshire & Associates.
- 3 Repeat of 1970 figure.
- 4 From Alaska Air Command, Office of Information.
- 5 From phone conversation with Mr. Sam Akin, Alyeska Pipeline Service Company.

region is estimated at 1,571 persons. (See Table 1, p. 12). Compared with a 1970 population estimate of 1,250 people, the Yukon Flats region has shown a growth of about 321 people in eight years. Assuming population increased steadily, the growth translates to a 3% annual increase in the region's population.

Individual village populations have shown marked changes during this same period. (See Table 2, p. 14). Some have shown dramatic increases, while others have suffered major losses in population. This data reflects the extreme dependence of the population on the region's changeable economic, subsistence, and public service systems. The movement of a few families in response to employment opportunities or the local disappearance of subsistence resources, can have a pronounced effect on village population levels.

Aside from an apparently unusual 1960 population figure, the city of Fort Yukon has shown steady growth from the late 1800's. Since the establishment of a Hudson's Bay Company post in 1847, Fort Yukon has served as the commercial center of the Yukon Flats region. The growth of Fort Yukon as a regional center for the administration of public services, including health, housing, education, and cultural programs, has drawn residents from surrounding communities to Fort Yukon. Fairbanks residents, both Natives and non-Natives, have also been attracted to Fort Yukon by the employment

TABLE 2

COMMUNITY POPULATIONS
YUKON FLATS REGION
1950 - 1978

<u>PLACE</u>	<u>1950</u>	<u>1960</u>	<u>1970</u> ¹	<u>1973</u>	<u>1975-76</u>	<u>1978</u> ²
Arctic Village	53	110	85	131	138	111
Beaver	101	101	101	96	-	83
Birch Creek	-	32	40-45 ³	30	40	29
Central	-	-	26	-	-	20
Chalkyitsik	-	27	130	80	85	99
Circle	83	41	54	63	54	76
Circle Hot Springs	-	-	8	-	-	8 ⁴
Fort Yukon	446	701	448	614	637	700 ⁵
Livengood	-	-	29	-	-	148
Rampart	94	49	36	-	34	58
Stevens Village	84	102	74	56	77	78
Venetie	81	107	112	108	160	29

From U.S. Forest Service, YUKON-PORCUPINE REGIONAL PLANNING STUDY - 1978, p. 2-1, unless otherwise noted.

- 1 From 1970 U.S. Census.
- 2 From Fairbanks Town & Village Association for Development COMMUNITY PROFILES, and Alaska Department of Community & Regional Affairs.
- 3 Estimates by Alaska Department of Labor - 1970, and Federal Field Committee - 1969.
- 4 Estimate by Darbyshire & Associates.
- 5 From the Fairbanks Town & Village Association for Development YUKON COMMUNITY PROFILE, 1978.

opportunities in public services and Native corporation activities. Fort Yukon, it appears then, has begun to assume the centralized administrative, transportation, communication, and economic functions for the Yukon Flats region.

There are an estimated 970 registered voters in the Yukon Flats region. The number of registered voters in each community is shown in Table 3, p. 16.

Race: In 1970, approximately 86% of the region's population was Native, compared with 1970 Native populations of 4% for the Fairbanks Census Division, and 18.2% statewide. Within the region, only Livengood, Central, and Circle Hot Springs are non-Native. In fact, no Natives were reported living in these communities in the 1978 Census done by the Fairbanks Town & Village Association for Development.

Age and Sex Characteristics: The age and sex composition of the study region indicates that the area's population structure is rapidly approaching the statewide norm. Figure IV, p. 18, indicates that there has also been a marked decline in the region's birthrate between 1960 and 1970. The number of people in the prime working years of 20-50 years of age has grown between 1960 and the present. However, the marked decrease in the proportion of those aged 10-19 years in 1960, compared with the proportion of the

TABLE 3

REGISTERED VOTERS BY COMMUNITY
YUKON FLATS REGION
MARCH 1978

<u>COMMUNITY/PRECINCT</u>	<u>NUMBER OF REGISTERED VOTERS</u>
Arctic Village -	86
Beaver	57
Birch Creek	(Included with Ft. Yukon)
Central (Includes Circle Hot Springs)	84
Chalkyitsik	52
Circle	61
Circle Hot Springs	(Included in Central)
Ft. Yukon (Includes Beaver)	361
Livengood	(Included in Rampart)
Rampart (Includes Livengood)	127
Stevens Village	58
Venetie	<u>84</u>
TOTAL REGISTERED VOTERS	<u>970</u>

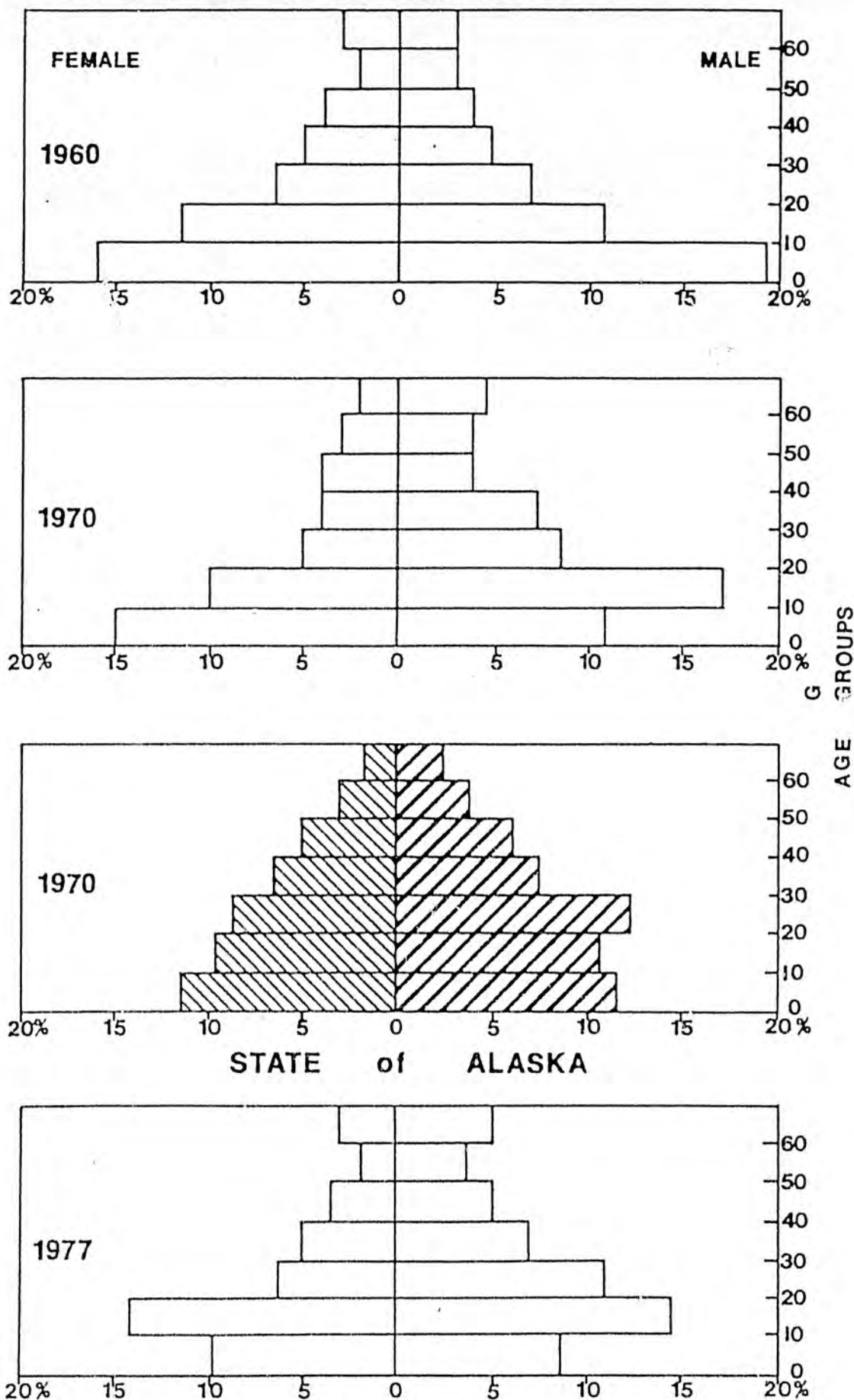
1970 age 20-29 group, indicates that a substantial number of young people are leaving the region. (See Figure IV, p. 18).

Even though movement out of the region by those in the working ages may be continuing, the percentage of the area's population in the working ages is growing. The U.S. Forest Service, YUKON-PORCUPINE REGIONAL PLANNING STUDY, estimates the percentage of the region's population between the ages of 20 and 60 has climbed from 36% in 1960 to 43% in 1976. This compared to 50% of Alaska's statewide population within the same age group.

Education: The level of education for residents in the study area has increased steadily in recent years to a 1970 median level of 9.2 years of school completed by those age 25 and older. (See Table 4, p. 19). In comparison with other organized boroughs, the 1970 educational attainment of the Yukon Flats area residents falls roughly in the center of figures which range from an average of 6.9 years of school to 12.7 years of school completed.

Regional enrollment at the secondary level has increased dramatically from 1970 to the present. Today, 33% of local public school students are enrolled at the secondary level, as opposed to 13% attending high school locally in 1970. (See Table 5, p. 20). This results principally from the "Molly Hootch Case" and the establishment of the REAA in

FIGURE IV
POPULATION PYRAMID
AGE AND SEX CHARACTERISTICS FOR
THE YUKON FLATS REGION - 1960-1977
AND THE STATE OF ALASKA - 1970



From U.S. Forest Service Report, Pg. 2-6, and 1970 U.S. Census

TABLE 4

AVERAGE YEARS OF EDUCATION
ORGANIZED BOROUGHES
1960 AND 1970

<u>BOROUGH</u>	<u>AVERAGE YEARS OF EDUCATION</u>	
	<u>1960¹</u>	<u>1970</u>
REAA #13 Study Area	5.8 ²	9.2 ²
Greater Anchorage Area	12.4	12.6
North Slope	6.9	6.9 ³
Bristol Bay	7.5	12.5
Fairbanks North Star	12.3	12.6
Haines	11.0	11.6
City & Borough of Juneau	12.4	12.7
Kenai Peninsula	11.9	12.4
Ketchikan Gateway	11.9	12.4
Kodiak Island	11.8	12.3
Matanuska-Susitna	11.3	12.4
City & Borough of Sitka	11.3	12.4

From U.S. Bureau of the Census, 1960 and 1970, unless otherwise noted.

- 1 Data is for Census Divisions as no boroughs were incorporated in 1960.
- 2 Figures are from U.S. Forest Service, YUKON-PORCUPINE REGIONAL PLANNING STUDY - 1978, p. 3-1.
- 3 North Slope Borough figures are for the Barrow Census Division.

TABLE 5

SCHOOL ENROLLMENT BY NUMBER AND PERCENT
YUKON FLATS REGION
1970 AND 1978

<u>GRADE LEVEL</u>	<u>ENROLLMENT</u>			
	1970 ¹		1977 ²	
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
Kindergarten and Preschool	12	4	14	4
Elementary	261	83	211	63
Secondary	<u>41</u>	<u>13</u>	<u>108</u>	<u>33</u>
	314	100	333	100

From U.S. Census Bureau and Alaska Department of Education.

1 For Upper Yukon Census Division.

2 For Yukon Flats REAA. Decrease in total enrollment due to exclusion of students in Kaktovik and Eagle.

1975, wherein emphasis has been given to the provision of high schools in the smaller communities in the state. This is in lieu of sending these same students to boarding school outside of the area.

In summary, the educational achievement of the study area's residents is approaching the statewide norm and is, at present, comparable to the educational levels of residents of some other incorporated boroughs. Recent increases in school enrollment, especially at the high school level, indicate that the residents of the study area will rapidly attain an educational level quite comparable to the statewide norm.

Future Population: The future population of the Yukon Flats region can be estimated on the basis of current population trends and on the basis of expected economic growth.

Currently, the region's modest growth in population appears to be accompanied by a decreasing birthrate. In addition, the proportion of the region's population in the working age groups is increasing steadily. This indicates a decrease in the movement of young adults out of the region.

If these current trends continue to support the modest 3% annual population growth shown in the region over the past eight years, the region's population can be expected to reach approximately 2,240 people by 1990 and about 3,010 people by the year 2000. (See Table 6, p. 22).

TABLE 6

ESTIMATED POPULATION
YUKON FLATS REGION
1990 AND 2000

<u>METHOD</u>	<u>POPULATION</u>		
	<u>1978</u>	<u>1990</u>	<u>2000</u>
3% Annual Growth Rate	1,570	2,240	3,010
U.S. Forest Service Economic Forecast - All New Jobs Filled by New Residents	1,571	2,199	2,828
One-half of New Jobs Filled by New Residents	1,571	1,729	2,199

Simply multiplying present population growth rates to some future date assumes that the economy will also expand to provide jobs, goods, and services for the region's "expected" population. However, this might not be the case. A second method of projecting future population growth begins with an analysis of the area's future economy in order to forecast the number of jobs that will be added to the region's employment level. Future population growth can then be estimated on the basis of the number of new workers and their families that will be required to fill the new jobs.

Just such an economic analysis was included in the U.S. Forest Service report on the Yukon-Porcupine Region. In this report, roughly 180 new jobs are expected to be created by 1990, and from 200 to 220 new jobs will be added to the region's economy by the year 2000. If all of these new jobs are filled by workers new to the region, the U.S. Forest Service report projects population increases of 40% to 80% by the year 2000. However, if one-half of the expected new jobs are filled by local residents, the region's population would grow from 20% to 40% by 2000. As shown in Table 6, p. 22, estimated regional population levels, based on the U.S. Forest Service report, range from 1,885 to over 2,199 in 1990 and from about 2,199 to almost 2,828 by the year 2000.

Future School Enrollment: Presently, about 22% of the region's population is enrolled in school. As some high

school students still attend schools outside of the area, further increases in enrollment at the secondary level could raise the proportion of the region's population requiring educational services. A future enrollment level approximating 25% of the region's total population is therefore likely. Based on a 25% enrollment level, projections of future school enrollment can be easily derived from the preceding population estimates. As shown in Table 7, p. 25, future school enrollment levels could range from 471 to 560 pupils in the year 1990, and may increase to approximately 550 to 752 students by the year 2000.

ECONOMY

In a broad sense, the economy of the Yukon Flats region reflects the economic history of much of Alaska. An age-old Native trapping, trading, and subsistence economy provided a base for the development of a commercial fur trapping and trade economy by the mid-1800's. This was marked by the establishment of a Hudson's Bay Company trading post at Fort Yukon in 1847. Shortly afterwards, the discovery of gold deposits at several locations in the region led to the growth of mining activity as the region's major economic activity. Gold discoveries were made in 1873 between Fort Yukon and Fort Selkirk; in 1884 near Circle; from 1891-1893 near Birch Creek; and in 1892 in the Rampart District.

TABLE 7

SCHOOL ENROLLMENT
YUKON FLATS REGION
1990 AND 2000

<u>25% OF ESTIMATED POPULATION</u>	<u>SCHOOL ENROLLMENT</u>		
	<u>1977¹</u>	<u>1990</u>	<u>2000</u>
3% Annual Growth Rate	322	560	752
U.S. Forest Service Economic Jobs filled by new residents	322	550	707
One-half New jobs filled by new residents	322	471	550

1. Source: State of Alaska, Department of Education,
Public School Foundation Program 1978-79 Initial
Report.

As major gold mining activity moved to other areas of Alaska and Canada in the late 1890's (most notably to the Klondike discoveries of 1898), trade and transportation became the region's primary economic base. With an estimated 35 steam-wheelers serving the Yukon River settlements at the peak of mining activity, Fort Yukon maintained its identity as a regional trade and supply center. The communities of Circle, Central, Rampart, Beaver, and Venetie also served as supply, transportation, and trade centers for surrounding mineral developments.

The decrease in mineral activity in the region during the early 1900's resulted in a decline in the area's economy. The loss of mining as a major economic base was not made up by gains in other activities. Consequently, the level of trade and transportation activities in the region also declined. The development of modern road and air transportation networks in the area further weakened the economic health of those off-system communities that were no longer used as supply, transshipment, or trading posts.

With the establishment of Fort Yukon as a regional public service center, some economic stability has returned to the study area. As with other rural areas in Alaska, public service programs, supported by the state or federal governments, provide a form of "basic" economic activity in the region. However, the development of the area's natural

resources, in the form of timber, minerals, and agriculture, holds the potential of a stable regional economic base in the future.

Current Employment Composition: Information on the region's employment has been drawn mainly from a 1977 household survey completed by the University of Alaska's Institute of Social and Economic Research (ISER). This was done as part of the U.S. Forest Service, YUKON-PORCUPINE REGIONAL PLANNING STUDY, effort. It is also supplemented by data published by the Alaska Department of Labor.

The government sector, including the Yukon Flats School District, City of Fort Yukon, Bureau of Land Management fire crews, and various other state and federal agency jobs, is the region's primary source of employment. The ISER survey found that 34% of Fort Yukon's work force was employed in the public sector. In the outlying villages, government employees accounted for 45% of total employment. (See Table 8, p. 28).

Native organizations are the second largest employer in the region. Although employment figures for the profit and non-profit corporation activities were not separated, it is estimated that a substantial proportion of the positions involve the provision of public services. Employment in regional health and housing programs, operated by non-profit

TABLE 8

EMPLOYMENT BY SECTOR AND OCCUPATION
YUKON FLATS REGION
BY PERCENT

<u>EMPLOYMENT SECTOR</u>	<u>PERCENT OF LABOR FORCE</u>	
	<u>FORT YUKON</u>	<u>OUTLYING VILLAGES</u>
Government:		
School District	11	23
Federal	15	15
State	<u>8</u>	<u>7</u>
	34%	45%
Native Organizations	30%	15%
Private Business	20%	18%
Pipeline	9%	9%
Other	<u>3%</u>	<u>3%</u>
TOTAL	100%	100%
<u>OCCUPATION</u>		
Professional-Technical	22%	18%
Managerial-Administrative	11%	13%
Sales-Clerical	20%	8%
Crafts-Operative	23%	21%
Laborer	12%	17%
Service	<u>12%</u>	<u>25%</u>
TOTAL	100%	100%

From U.S. Forest Service, YUKON-PORCUPINE REGIONAL PLANNING STUDY -
1978, p. 6-4.

organizations - funded by state and federal agencies - thus increases the role of government employment in the region's economy.

Private business and the Alyeska pipeline were the next biggest employers in the region. These sectors employed, respectively, 20% and 9% of the region's work force.

The importance of public employment in the area's economy is reflected in the type of occupations found in the region. Approximately one-third of the region's employees were classed as professional, technical, and managerial-administrative in the ISER survey. Sales and clerical positions accounted for approximately 15% of areawide employment. Service, labor, and crafts occupations accounted for slightly over one-half of the region's employment. (See Table 8, p. 28).

Seasonality and Unemployment: As in other rural portions of Alaska, unemployment is high in the Yukon Flats region. ISER estimated that regional unemployment averages 20% year-round. Native employment has a winter peak of 25% to 30%. (See Table 9, p. 30). Unemployment figures, however, consider only those participating in the labor force, i.e., those actively looking for work. The ISER study also estimates that only one-half of the region's working-aged population is in the work force at any time. As a large portion

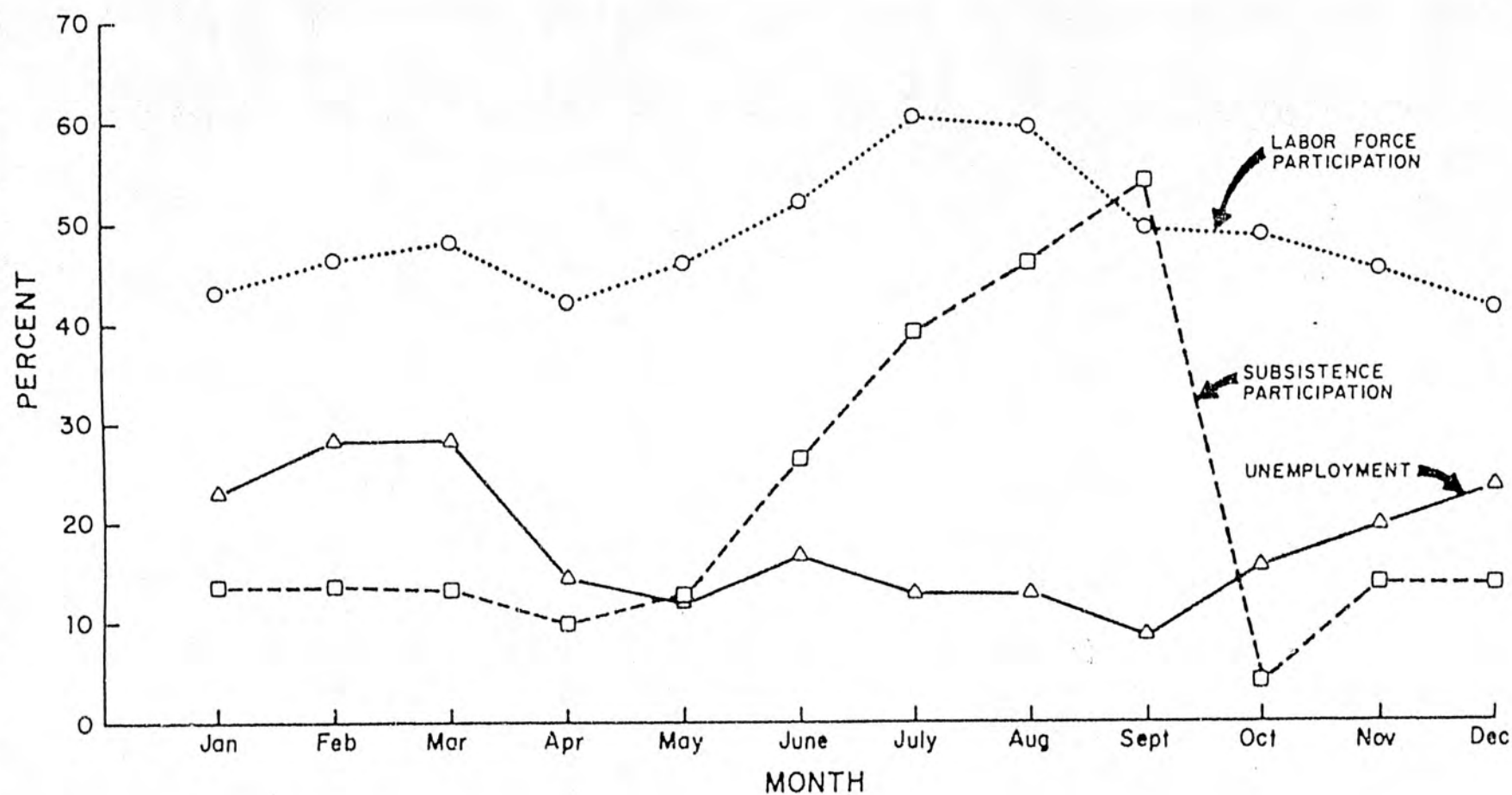


TABLE 9

of rural employment opportunities are highly seasonal, changes in work force size can be expected.

There is some evidence that area residents would remain in the work force if employment opportunities increased. Most of those responding to the ISER survey, for example, stated that there were months during 1976 when they wanted to work, but that jobs were not available. According to the ISER survey, 54% of the region's Native residents wanted a year-round job, while 47% of those surveyed wanted more work during the winter.

Public sector employment in the region can have a stabilizing effect on employment seasonality. Nearly one-half of Fort Yukon's labor force was employed for 10 months or more during 1976; over two-thirds of Fort Yukon's labor force worked for seven months or more. In the outlying villages, however, the duration of employment was reversed. Over one-third of village workers were employed for less than three months and close to 60% worked less than six months during 1976.

Seasonality of employment can create conflicts between wage employment and subsistence activities for individual workers. As with wage employment, subsistence activities are highest during the summer. Participation in subsistence in the Yukon Flats region is concentrated during the months of June

through September, with peak activity in September. Peak participation in the labor force, by comparison, occurs during the months of July and August. The desire for increased employment opportunities during the winter months, then, could reflect a desire to pursue subsistence activities during the summer, as well as a need for year-round wage employment.

Subsistence: Subsistence activities are an important component of the Yukon Flats regional economy. The ISER study found that 52% of the region's total households obtained one-half or more of their food through subsistence activities. Over three-quarter's of the area's households use some form of subsistence food supplies. (See Table 10, p. 33).

About 70% of both Native and non-Native residents desire to pursue both wage employment and subsistence activities. While subsistence is considered primarily as a source of food, and perhaps skins for domestic use, a significant portion of the area's residents look to subsistence as a source of work income. The ISER survey found that 28% of Yukon Flats residents would rather earn money through such activities as trapping, rather than by wage employment. (See Table 11, p. 34).

Yukon Flats residents commit a significant amount of time to subsistence activities. ISER found that 70% of Native heads

TABLE 10

PROPORTION OF FOOD TAKEN THROUGH SUBSISTENCE
YUKON FLATS REGION
ALL HOUSEHOLDS, BY PERCENT

<u>PROPORTION OF FOOD PROVIDED THROUGH SUBSISTENCE</u>	<u>PERCENT OF HOUSEHOLDS</u>
Most	24
Half	28
Some	25
None	<u>23</u>
TOTAL	100%

From U.S. Forest Service, YUKON-PORCUPINE REGIONAL PLANNING STUDY -
1978, p. 5-5.

TABLE 11

PREFERENCES ON SUBSISTENCE ACTIVITIES
YUKON FLATS REGION
ALL RESIDENTS

<u>PREFERENCES OF TIME AND SOURCE OF CASH</u>	<u>PERCENT OF SAMPLE</u>
<u>Prefer Spending Time:</u>	
Mostly on Subsistence	13
Mostly on Wage Employment	18
Both	<u>69</u>
TOTAL	100%
<u>Preferred Source of Money:</u>	
From Subsistence	28
From Wage Employment	61
Both	<u>11</u>
TOTAL	100%

DOES TIME SPENT ON WAGE EMPLOYMENT DECREASE TIME SPENT ON SUBSISTENCE OR
ON AMOUNT OF SUBSISTENCE TAKE?

<u>Does Wage Employment Decrease?</u>	<u>Time Spent</u>	<u>Subsistence Take</u>
Yes	40	31
No	<u>60</u>	<u>69</u>
TOTAL	100%	100%

From U.S. Forest Service, YUKON-PORCUPINE REGIONAL PLANNING STUDY -
1978, pp. 5-2 and 5-11.

of households spent one month or more primarily engaged in subsistence activities. Nearly one-half of those surveyed spent from one to four months primarily in subsistence pursuits. These subsistence activities, as noted earlier, are most likely to take place during the summer months of June through September. (See Table 12, p. 36).

Employment for wages does not appear to substitute for a reliance on subsistence resources. For example, 60% of those surveyed felt that wage employment did not reduce the time spent in subsistence activities. An even larger proportion - almost 70% - felt that wage employment did not decrease the amount of their subsistence take. Regionally, 75% of the Native workers employed year-round reported spending one month or more in subsistence activities. This suggests that yearly vacation time and intensive after-hours or weekend subsistence activities are considered by area residents as time spent "primarily" for subsistence.

The availability of subsistence resources and the ability to ensure continued access to and protection of those resources are, then, important to Yukon Flats residents. Regional land use and resource development decisions will affect subsistence activities and resources. The ability of local residents to have some influence on these regional decisions will be discussed in a later report.

TABLE 12

TIME SPENT ON SUBSISTENCE ACTIVITIES,
BY WAGE EMPLOYMENT
YUKON FLATS REGION
NATIVE HOUSEHOLDS

<u>MONTHS SPENT MOSTLY ON SUBSISTENCE</u>	<u>NATIVE HOUSEHOLDS</u>
0	30
1 - 2	24
3 - 4	22
5 - 6	17
7 - 12	<u>7</u>
TOTAL	100%

<u>MONTHS SPENT MOSTLY ON SUBSISTENCE</u>	<u>MONTHS EMPLOYED</u>		
	<u>1-5</u>	<u>6-11</u>	<u>12</u>
0	14	15	26
1 - 3	39	39	39
4 - 12	<u>47</u>	<u>46</u>	<u>36</u>
TOTAL	100%	100%	100%

From U.S. Forest Service, YUKON-PORCUPINE REGIONAL PLANNING STUDY -
1978, pp. 5-6 and 5-9.

Income and Cost of Living: The average annual income of Yukon Flats residents is among the lowest in the state. At the time of the 1970 Census, the median per capita income of Native residents of the Upper Yukon Census Division was the lowest of any census division in Alaska. The level of income in the region does appear to be rising in relation to statewide income levels. While Native per capita income was only 28% as large as statewide per capita income in 1960, regional income levels increased to 36% of statewide median per capita incomes in 1970 and to 38% by 1976. (See Table 13, p. 38).

On the basis of a regional living cost index developed by ISER of 1.6 times higher than the national cost of living, the federal definition of poverty level family income can be adjusted to \$8,800 per year for a family of four. The ISER survey found that over half of the Native households in the region had 1976 incomes below this limit.

In spite of these low median per capita income levels, the number of Yukon Flats residents earning \$10,000 or more per year has increased dramatically since 1960. While only 13% of the Upper Yukon Census Division residents earned \$10,000 or more during 1959, fully 22% of Yukon Flats residents had achieved this income level by 1973. By 1976, nearly 48% of Yukon Flats residents were earning \$10,000 or more. While a portion of this increase may be due to pipeline employment,

TABLE 13

PER CAPITA INCOME LEVELS
YUKON FLATS NATIVES AND STATE OF ALASKA
1960 - 1977

	<u>PER CAPITA INCOME</u>		
	<u>1960</u>	<u>1970</u>	<u>1976</u>
Alaska	\$2,263	\$3,765	\$8,047
Yukon Flats Natives	640	1,343	3,033
Percent of State	28.3%	35.6%	37.7%

From U.S. Forest Service, YUKON-PORCUPINE REGIONAL PLANNING STUDY -
1978, p. 7-2.

the bulk of this increase must be attributed to the growth of highly paid, full-time public service employment in the region. As noted earlier, slightly less than 10% of the region's 1976 employment was accounted for by pipeline jobs; however, nearly one-fourth of the area's households had an income of \$25,000 or more in 1976. (See Table 14, p. 40).

The high cost of living in the Yukon Flats region places further strain on already low per capita income levels. The ISER survey found that living costs in Fort Yukon averaged almost 60% higher than costs of living in Anchorage. Put conversely, expenditures on cost-of-living in Fort Yukon purchase one-third less than dollars spent in Anchorage. However, the costs among particular types of goods vary widely. The cost of electricity, for example, is over five times higher in Fort Yukon than in Anchorage. (See Table 15, p. 41).

The cost of living in the outlying villages is even higher. Based on data developed by ISER, the cost of food in villages could be as much as 39% higher than Fort Yukon prices, or about twice the cost of food in Anchorage. Because of limited transportation alternatives and the lack of bulk fuel storage capacity, heating fuel prices in the more remote villages may be twice as expensive as in Fort Yukon, or nearly three times the cost of fuel in Anchorage.

TABLE 14

INCOME DISTRIBUTION FOR ALL RESIDENTS
YUKON FLATS REGION
1960 - 1976

<u>INCOME</u>	<u>1960¹</u>	<u>1970¹</u>	<u>INCOME</u>	<u>1973</u>	<u>1976</u>
	<u>Percent</u>	<u>Percent</u>		<u>Percent</u>	<u>Percent</u>
Less than 3,000	60	14	Less than 3,000	35	21
3,000 - 4,999	7	28	3,000 - 4,999	15	9
5,000 - 6,999	10	11	5,000 - 7,999	20	14
7,000 - 9,999	10	5	8,000 - 9,999	8	9
10,000 +	<u>13</u>	<u>42²</u>	10,000 - 11,999	8	8
			12,000 - 14,999	4	8
	100%	100%	15,000 - 19,999	5	8
			20,000 - 24,999	3	10
			25,000 +	<u>2</u>	<u>13</u>
				100%	100%

From U.S. Forest Service, YUKON-PORCUPINE REGIONAL PLANNING STUDY - 1978, p. 7-2; adapted by Darbyshire & Associates.

1 1960 and 1970 figures include Kaktovik and Prudhoe Bay development.

2 Includes roughly 200 employees in Prudhoe Bay area.

TABLE 15

COST OF LIVING IN RELATION TO ANCHORAGE,
SELECTED ITEMS
FORT YUKON AND REGIONAL VARIATION
1976 - 1977

<u>ITEMS</u>	<u>% FORT YUKON COST ABOVE ANCHORAGE</u>	<u>% COST VARIATION WITHIN REGION</u>
Food	43%	39%
Heating Oil	51%	95%
Housing	84%	-
Gasoline	33%	108%
Electricity	550%	-

From U.S. Forest Service, YUKON-PORCUPINE REGIONAL PLANNING STUDY --
1978, p. 7-8.

Future Economy: The current outlook for major economic development in the Yukon Flats region before the year 2000 is not optimistic. In an analysis of the potential for development in six economic sectors, the U.S. Forest Service study found that petroleum development and recreation held the most promise for economic growth in the near future. The potential for large-scale agriculture and timber harvesting activities are severely limited due to the inability of locally produced crops and timber to compete in the national and international markets. Development of alternative energy sources (hydroelectric, wind, solar power, and geothermal means) have limited potential in the region due primarily to physical factors.

There is some possibility of future hard-rock mineral development activity. In addition to the region's existing gold mining, there are some resource estimates of the potential amount of mineralization in the Yukon Flats region. An accurate assessment of the types and occurrence of minerals awaits more extensive exploration, however. Major increases in the price of minerals on the world market; guarantees of access to mineralized lands; and major improvements in the regional transportation network are required before most types of mineral development can proceed economically. Thus, only limited exploration activity is expected to occur in the region in the near future.

Gold mining, on the other hand, is expected to remain stable over the next 10 to 20 years, with increases in both placer and lode mining if the price of gold on the world market rises significantly.

Increased regional employment related to petroleum activity (assuming moderate development in the Kandik Basin and limited exploration in the Yukon Flats) is expected to peak at roughly 125 to 150 people through the year 2000.

Additional regional employment resulting from increased mineral activity (primarily gold mining) could add between 60 and 200 jobs to the region's economy by the year 2000.

The U.S. Forest Service analysis develops four alternative scenarios for future economic growth in the Yukon Flats region. These are: limited development, maximum development, regional interest, and compromise alternatives. As the Forest Service states, the maximum development scenario assumes activities which are not, at present, economically feasible. Projected regional employment in the three remaining scenarios are almost identical. (See Table 16, p. 44). Roughly 180 new jobs are expected in the region by 1990 and from 200 to 220 new jobs by the year 2000.

Based on this level of added employment, the U.S. Forest Service projects an increase in population of 40% to 80% regionwide. However, these projections assume that these

TABLE 16

FUTURE EMPLOYMENT INCREASES,
FOUR SCENARIOS
YUKON FLATS REGION
1990 - 2020

<u>SCENARIO</u>	<u>INCREASED EMPLOYMENT</u>		
	<u>1990</u>	<u>2000</u>	<u>2020</u>
Limited Development	180	220	390
Maximum Development	1,800	4,000	3,900
Regional Interest	160	190	250
Compromise Alternates	180	220	320

added jobs will be taken by non-local workers who will in turn bring their families to the region. It is likely that a number of these new jobs requiring laborers and semi-skilled workers could be filled by workers from the region. A substantial portion of the employment associated with the expected growth in tourism, local trade and service industries, local construction and road maintenance, small-scale agricultural and timber development, and increased placer and lode gold mining also matches the job skills of the region's labor force. If half of the expected new jobs could be filled by the resident labor force, regional population increases of 20% to 40% could be expected by the year 2000.

As the region grows, the distribution of population could change dramatically. As economic development takes place, the role of Circle as a major transportation and distribution center will increase. This is especially true if oil development occurs in the Kandik Basin. Further, the movement of goods and materials to the oil field and the return transportation of oil or gas would likely be routed through or near Circle.

Similarly, if mining, timber, or agricultural developments occur in the region, the Yukon Crossing (i.e., the point at which the Pipeline Haul Road crosses the Yukon River) could become an important transportation center in the region.

Raw materials or produce could be moved downriver and loaded on trucks at the Yukon Crossing. In any event, the Yukon Crossing provides more direct river access to the communities of Rampart, Stevens Village, and Beaver than is currently available. Increased pressure to establish some type of community in the vicinity of the Yukon Crossing seems very likely.

Fort Yukon is expected to maintain its identity as the region's administrative, cultural, and economic center. The increased trade and transportation development projected at Circle and at the Yukon Crossing would likely tie those communities more closely to the Yukon Flats region and Fort Yukon. In short, growth and development in the Yukon Flats region should result in the increased involvement of that portion of the study area south of the Yukon River in the economy of the Yukon Flats region.

PUBLIC FACILITIES AND SERVICES (See Table 17, pp. 54-55 and Table 18, p. 58)

This section of the Data Reconnaissance provides a general description of the region's transportation, communications, and educational systems. In addition, an inventory of public facilities and services is included to give an indication of the nature and level of public improvements in the region. Finally, the public service priorities expressed by

community representatives are discussed in terms of the types and levels of desired local improvements.

Regional Transportation: The Yukon Flats area is served by regionwide air and water transportation systems. The communities of Livengood, Central, and Circle also have road connections to the Fairbanks area. The major link within the region between road and water transport networks is at Circle. Considerable barge traffic to the area also originates at Nenana via the Tanana River.

Air transportation systems in the area connect each of the region's communities to each other, to Fort Yukon, and, in turn, to the Fairbanks area. At the present time, scheduled air service connects Fort Yukon with Arctic Village, Beaver, Birch Creek, Chalkyitsik, and Venetie. The communities of Central, Circle, Livengood, Rampart, and Stevens Village, because they are closer to Fairbanks than Fort Yukon, are regularly served by flights originating in Fairbanks.

Charter flights are also an important component of the region's air transportation system. Charter flights provide quick transportation of passengers and cargo within the region and between Fairbanks and the Yukon Flats communities. Three charter flight services are located within the region - two in Fort Yukon and one at Circle. Other charter services operate principally out of Fairbanks. It has been

estimated that as much as 20% of the total air cargo in the region is handled by charter flights. Charter services also apparently account for as much as one-fourth of all passenger flights in the region.

Air cargo consists primarily of food and general merchandise. Fuel and building materials, however, must be air-shipped to those communities without river access barge service. One-sixth of all cargo moved into the Yukon Flats region is estimated to travel by air. The remainder of the region's cargo is shipped by barge.

A total of 12 airports serve the communities of the region. (See Table 17, p. 49). In addition, several airstrips have been built in association with, and adjacent to, the trans-alaska oil pipeline. The Yukon River and numerous other rivers and lakes provide landing spots for float planes in summer and wheel or ski planes in winter. Many of the airstrips are unusable during break-up. The Fort Yukon field is the only facility with lights and navigational aids.

Water transportation is the second major network in the Yukon Flats region. The Yukon and Porcupine Rivers, sloughs, and lakes provide a means of movement between communities and to the area's resources. Transportation to fishing sites and other locations of subsistence resources by riverboat is common during the summer months. In addition,

TABLE 17

AIRFIELDS
YUKON FLATS REGION

<u>AIRFIELD</u>	<u>OWNER</u>	<u>LENGTH (FT)</u>	<u>RUNWAY SURFACE</u>
Arctic Village	Private	4,400	Gravel
Beaver	State	3,650	Gravel
Birch Creek	State	4,150	Dirt
Central	State	3,200	Cravel
Chalkyitsik	State	2,500	Gravel/Dirt
Chandalar	State	4,500	Gravel
Circle	State	2,900	Gravel/Dirt
Fort Yukon	State	5,019	Gravel
Livengood	Public Domain	1,250	Turf
Rampart	State	2,500	Gravel
Stevens Village	State	2,200	Dirt
Venetie	Private	3,700	Dirt

From ALASKA REGIONAL PROFILES: YUKON REGION, for the State of Alaska and the Joint Federal-State Land Use Planning Commission for Alaska, by the University of Alaska - Arctic Environmental Information and Data Center; 1977, p. 307.

heavy materials (such as building supplies, equipment, and fuel) are transported by barge, as are other goods which can be ordered and shipped in volume.

The region is served primarily by two barge lines. Hunn Navigation, headquartered in Circle, serves Birch Creek, Chalkyitsik, and Fort Yukon. Fort Yukon, Beaver, Stevens Village, and Rampart are served by Yutana Barge Lines, located in Nenana. As noted earlier, approximately five-sixth's of the region's cargo travels by barge.

Of these two routes, the Nenana-Fort Yukon route handles approximately 20 times the volume of cargo as the Circle-Fort Yukon alternative. The Nenana-Fort Yukon route is a longer water route, but requires shorter more economical overland truck transport. In addition, Nenana is accessible by highway from Anchorage and Fairbanks year-round for staging and warehousing.

The road network in the area is limited to intra-community roads and two gravel highways. Only the communities of Circle, Central, and Livengood have highway access to the rest of the state. (See Figure I, p. 4). The Steese Highway terminates at Circle and connects Circle, Central, and Circle Hot Springs with Fairbanks. In its entirety, it is open only in summer although that portion between Central, Circle Hot Springs and Circle is kept open in the winter. Access is provided to the Yukon River at Circle. As noted, this supports the operation of one of the region's two major barge lines.

The Elliot Highway/North Slope Haul Road form the second portion of the region's road network. The Elliot Highway, and associated roads, link Fairbanks with Livengood. In turn, the North Slope Haul Road links Livengood with the Yukon River Crossing and then the Prudhoe Bay area.

Paralleling the trans-alaska oil pipeline, the North Slope Haul Road traverses western portions of the proposed borough area. The remaining eight communities in the area are without road access.

Regional Communication: The region's communications network is comparable to that in other rural areas of Alaska. The state's program, which provides small satellite communications stations in smaller villages, has resulted in the extension of telephone service to all of the communities. In addition, Fort Yukon has a telephone system operated by Interior Telephone Company.

Commercial radio broadcasts from Fort Yukon or Fairbanks can be heard in all communities. Television is limited to Fort Yukon.

Newspapers available in the area include: the Fairbanks News-Miner, Tundra Times, All Alaska Weekly, and the locally published River Times. Subscription services are available with delivery by mail.

Education: Excepting for the B.I.A. school at Beaver and the B.I.A. elementary school at Venetie, education services in the area are provided by the Yukon Flats School District. This is one of 21 Regional Education Attendance Areas (REAA #13) created by the State in 1975. As such, the full costs for educational services and facilities are borne by the state, while a locally elected school board administers the education program.

The district operates facilities in all communities within the region, except for Central.

Additions to existing schools, remodeling, and construction of two new high school facilities are either budgeted or under construction.

Approximately 332 students are presently enrolled in the system. Student populations are expected to increase to between 471 and 560 by 1990, and to reach approximately 560 to 752 by the year 2000.

Like all Regional Education Attendance Areas, the Yukon Flats School District is governed by a locally elected School Board. Decisions on program needs and policies, curriculum, and facilities expansion are the primary responsibility of the School Board. A district superintendent, hired by the Board, administers the educational program. The State of Alaska, however, maintains responsibility for

the actual construction of facilities and cost of the district's operation.

Police and Fire Protection: Public services and facilities in the Yukon Flats area are extremely limited. While Fort Yukon enjoys city police and fire protection, the rest of the area relies on the services of State Troopers stationed in Fort Yukon and Fairbanks for police protection. Most of the communities have no organized system of fire protection, and those with volunteer fire departments lack firefighting equipment and facilities.

Water: Community water systems exist in only four of the region's communities. In each instance, these systems consist of a water treatment/storage facility that serve as watering points where individuals obtain water for their own use. The communities of Fort Yukon, Arctic Village, and Beaver have public water distribution points and laundry and showers combined in a single facility. Similar facilities are planned for Venetie and Stevens Village. In Circle, water is provided by a private operator with delivery to homes available. In the remaining seven communities, including Stevens Village and Venetie, water must be hauled from a stream or the Yukon River. This oftentimes necessitates the melting of ice to obtain water in the winter.

TABLE 18

PUBLIC FACILITIES AND SERVICES
ALL COMMUNITIES
YUKON FLATS REGION

<u>COMMUNITY</u>	<u>PUBLIC SAFETY:</u> <u>POLICE</u>	<u>FIRE</u>	<u>WATER</u>	<u>SEWER*</u>	<u>ELECTRICITY</u>	<u>HEALTH</u>
Arctic Village	State Troopers	No	Central Water- ing Point	No	No**	Health Aides, Clinic, No Water
Beaver	State Troopers	No	Central Water- ing Point	No	No**	Health Aides, Clinic, No Water
Birch Creek	State Troopers	No	No	No	No**	No Health Aides, No Clinic
Central	State Troopers	No	No	No	Private Utility	No Health Aides, No Clinic
Chalkyitsik	State Troopers	No	No	No	No**	Health Aide, No Clinic, No Water
Circle	State	No	Private Water Distribution	No	Private Utility	Health Aides, No Clinic
Fort Yukon	City Police	City Vol. Fire	Central Water- ing Point/Haul System	No	Private Utility	Health Aide, PHS Staff, Large Clinic
Livengood	State Troopers	No	No	No	No**	No Health Aide, No Clinic

TABLE 18 CONTINUED

Rampart	State Troopers	No	No	No	No**	Health Aides, Clinic, No Water
Stevens Village			No (Planned Central Water-ing Point)	No	No**	Health Aides, Clinic, No Power
Venetie	State Troopers	No	No (Planned Central Water-ing Point)	No (Septic Tanks Under Construction)	No**	Health Aides, No Clinic, No Water

From Fairbanks Town & Village Association for Development COMMUNITY PROFILES, 1978, and visits to the villages in January/February, 1979.

* Consists mostly of privies, although some seepage pit, cesspool, and honeybucket use exists.

** Have small village generation serving school and community center and/or washeteria.

Sewer: Community-wide sewage collection and disposal facilities are nonexistent. Some closed systems exist at several of the school facilities. Most sewage disposal, however, is taken care of by pit privies. Some seepage pit, cesspool, and honeybucket use also exists. Construction of a number of individual septic tanks is scheduled for Venetie this year. This action is, however, being reconsidered.

Electricity: All school facilities have their own electric generation systems. In some instances, lines from these systems have been extended to the community hall or washeteria - if one exists. Community-wide electrical systems are found only in Fort Yukon, Circle, and Central. The remaining eight communities have no electrical systems, although one or two individuals have their own small light plants.

Health: Health care, in contrast to other public services, is available to a limited extent in most of the region's communities. The Tanana Chiefs Health Authority has provided training for village health aides under a state program. The Authority has also coordinated the construction and stocking of health clinics in most of the communities. Health aides operate under the general direction of the U.S. Public Health Service staff at the Alaska Native Health Service Hospital in Fairbanks. The presence of telephone communications in all communities allows health aides to obtain

medical advice when required. This cooperative PHS-health aide service is called Medical Phone.

Community health aides are located in seven villages in the area, in addition to the Public Health Service staff located in Fort Yukon. Health clinics are held in eight communities. Three of these clinics are held in the health aides' homes, and five of the eight clinics lack running water.

The closest full-scale hospital facilities are located in Tanana and Fairbanks. An Alaska Native Health Service Facility is located in Tanana and is used by the residents of Rampart and Stevens Village. A larger Alaska Native Health Service Facility is located in Fairbanks. This has a complete range of medical and dental services.

Public Facility and Service Priorities: (See Table 19, p. 58). Local priorities on public service improvements reflect the lack of basic utility services in the Yukon Flats region. Six of the region's 11 communities rated water and sewer improvements and/or the construction of a centralized village water and sewer utility building as their first or second priority. Seven communities ranked village electrification as one of their top three priorities. In five of the seven villages, electrification was one of the top two public service priorities.

TABLE 19

PUBLIC FACILITY AND SERVICE PRIORITIES
ALL COMMUNITIES
YUKON FLATS REGION

	<u>PUBLIC FACILITIES</u>										<u>EDUCATION</u>							
	ELECTRIFICATION	AIRPORT IMPROVEMENTS	CENTRAL UTILITY BUILDING	HOUSING	COMMUNITY BLDGS./ CENTERS	ROAD IMPROVEMENTS	FIRE EQUIPMENT	MAINTENANCE EQUIPMENT	WARM STORAGE	BULK FUEL	DUMP	COMMUNICATIONS IMPROVEMENTS	DRAINAGE	HEALTH CLINIC	SCHOOL EXPANSION	GYMNASIUM	LIBRARY	CHILD CARE
Arctic Village	2				1	3												
Beaver	2	6	1	3					5			4						
Birch Creek	3	5	1		6		7	4				8			2			
Central																		
Chalkyitsik	1	3	2			6		8		9					4	7	5	
Circle		3	2	5		4	6				7			1				
Fort Yukon				5	6		5		1									
Livengood	NOT AVAILABLE																	
Rampart	3		2	1	4											5	6	
Stevens Village	2	3	1	4						8	5		7		6			
Venetie	2												1					
TOTAL NO. VILLAGES	7	5	6	5	4	3	3	2	2	2	2	2	2	1	3	2	2	1
AVERAGE SCORE	2.1	4	1.5	3.1	4.3	4.3	6	6	3	8.5	6	6	4	1	4	6	5.5	4

From Fairbanks Town & Village Association for Development - COMMUNITY PROFILES - 1978.

Even though the provision or improvement of water and sewage facilities was one of the most desired public improvements, the region's communities do not consider large, piped utility systems as necessary. In most cases, centralized watering points or sewage disposal facilities were specifically mentioned as the most desirable type of utility service.

Although lower in average priority, housing and airport improvements were listed as community needs by five communities. Road improvements and maintenance equipment were listed by four communities as important public service needs.

Bulk fuel storage is not considered a priority public facility by the region's communities. Only two communities listed bulk fuel storage as a desirable improvement. The availability of bulk fuel storage facilities in the villages, however, will make the provision of such services as electricity, water, sewage, and a centralized laundromat/shower/utility building much more economical. Thus, although the direct benefit to village residents is not readily visible, ✓ the provision of bulk fuel storage facilities in the region's communities is almost a prerequisite for the overall upgrading of the region's public facility and service systems.

Warm storage facilities provide a place for the storage and repair of community maintenance equipment, parts, and supplies. Such facilities are sometimes used for the staging or subassembly of portions of other local construction projects as well. The construction of warm storage facilities presents a problem similar to the provision of bulk fuel storage. Although not directly providing a service to community residents, the presence of a warm storage facility in a village makes the construction of other public services more efficient and supports the continued maintenance of community facilities. While local residents may not think of warm storage facilities as an important public improvement, the availability of such facilities is very useful from the point of view of those providing other capital improvements.

STATE LANDS

Alaska Statutes (A.S. 29.18.203) provide that "the general grant land entitlement of a municipality (borough) . . . is 10% of the total (state) acreage of vacant, unappropriated, unreserved land within the boundaries of that municipality." In other words, if a proposed Yukon Flats Borough came into existence it would be eligible to select for ownership the surface estate to 10% of the state general grant lands within its boundaries.

Historically, this program has resulted in borough entitlements ranging from 2,800 acres in the case of the Haines Borough to 353,210 acres for the Matanuska Borough. Obviously, the effects this legislation would have with respect to a proposed Yukon Flats Borough becomes an important consideration.

With Native and state land selection programs, associated interim and final land conveyances, d-2 legislation, conflicting state and federal opinions on selections, etc., it is nearly impossible to calculate the entitlement of a proposed Yukon Flats Borough. We have, however, obtained some information that gives an insight into the potential that exists.

According to a land status map dated April 1976* the state had selections pending for approximately 2,376,800 acres of land in the study area. More recently, an Alaska Division of Lands map** shows that the state has selections pending on 13,923,840 acres of land.

* ALASKA REGIONAL PORFILES -YUKON REGION, State of Alaska, by the University of Alaska Arctic Environmental Information & Data Center, p. 283.

** GENERALIZED STATE LAND ACTIVITY, Alaska Division of Lands, current to 3-31-79.

The state would have to classify its lands before borough selection could take place. This would probably reduce the boroughs entitlement somewhat. The state still, however, has some selections left to make. It is therefore possible that the state's acreage in the study area could increase.

In sum, there are no current means to accurately gauge the lands the proposed borough might be entitled to. On the other hand, an entitlement of between 200,000 and 2,000,000 acres does not seem an unreal expectation at this time.

YUKON FLATS

REGIONAL GOVERNMENT STUDY

TECHNICAL REPORT No. 3

Incorporation Standards

Darbyshire & Associates **June 1979**

DARBYSHIRE & ASSOCIATES

community planning and management services

May 24, 1979

Ms. Lee McAnerny, Commissioner
Department of Community and
Regional Affairs
State of Alaska
Pouch B
Juneau, AK 99811

Dear Commissioner McAnerny:

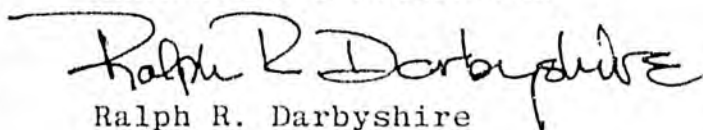
We are pleased to submit this Yukon Flats Regional Government Study - "INCORPORATION STANDARDS". This is the third of several papers that we are to prepare that will examine the requirements and potential for a regional government in the Yukon Flats area. Others to be produced include: "Local Government Options"; "Data Reconnaissance"; "The Incorporation Procedure"; "Borough Service Cost Estimates"; "Potential Borough Revenue Sources"; "Implications for Regional Self-Determination and Local Control"; and "The Feasibility and Viability of Regional Government Alternatives".

When we complete the last of our report "chapters", they will be combined and bound into a single summary report. At that time we will then travel to each of the communities in the proposed borough area and discuss our findings. This should be taking place towards the first part of June.

Throughout this undertaking we have worked closely with Mr. Pat Poland of your Local Governmental Assistance Division in Anchorage. In all instances he has been extremely helpful and eager to assist. Mr. Jonathan Solomon, Ms. Nancy James, and Mr. Sam Peter were also of invaluable assistance and support when we traveled to each of the communities in the region to explain this undertaking. Finally the Borough Study Committee members were most helpful in organizing and arranging individual community meetings. For all of this we are most grateful and wish to extend our sincere thanks.

Respectfully submitted,

DARBYSHIRE & ASSOCIATES



Ralph R. Darbyshire

RRD:jmp
Enclosure

YUKON FLATS REGIONAL GOVERNMENT STUDY
INCORPORATION STANDARDS

PREPARED FOR:

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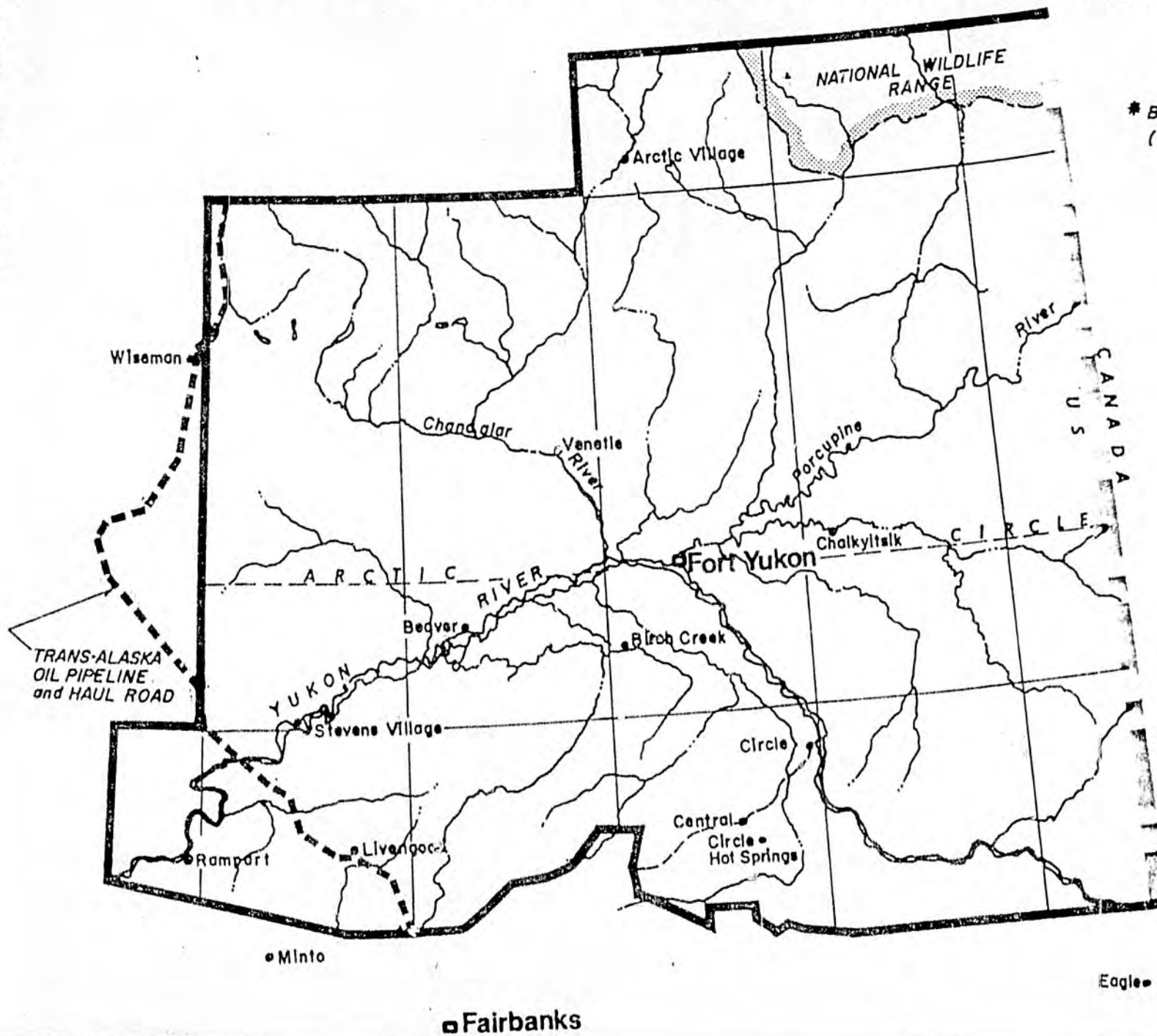
YUKON FLATS REGIONAL GOVERNMENT STUDY

INCORPORATION STANDARDS

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STUDY AREA BOUNDARIES* — PROPOSED YUKON FLATS BOROUGH



* BOUNDARIES of REAA #13
(See Appendix A)

Figure 11

INCORPORATION STANDARDS

INTRODUCTION

During the incorporation process, ~~both~~ the Department of Community and Regional Affairs and the Local Boundary Commission are required to evaluate a petition to form a new borough on the basis of certain "standards for incorporation" contained in Alaska law. The incorporation standards, defined in broad social, economic and geographic terms, set basic requirements that an area must meet before it is eligible to incorporate as a borough.

The purpose of this technical report is to evaluate how well the study area meets the standards for incorporation contained in State law. The State Department of Community and Regional Affairs will undertake the same type of evaluation if borough incorporation is pursued by residents of the study area. Therefore, it is important that any possible problems the area might have in meeting the incorporation standards be identified now, early in the incorporation process. In this way, a later incorporation petition could be designed to overcome any weaknesses in meeting state incorporation standards, thereby assuring approval of the incorporation petition.

This technical report provides an analysis of the incorporation standards and their applicability to the Yukon Flats study area. The subject areas covered in this analysis include:

- o The constitutional background and basis for the incorporation standards;
- o A description of the state law setting standards for incorporation of a new borough;
- o A comparison of each standard with the Yukon Flats study area; and
- o An evaluation of how well the study area meets the minimum standards for incorporation, based on the past interpretation of those standards by the Department of Community and Regional Affairs, the Local Boundary Commission, and the State Supreme Court.

(A complete description of the process of incorporation is contained in Technical Report #1, THE INCORPORATION PROCESS.)

THE CONSTITUTIONAL BACKGROUND

Provisions for the creation of local government are contained in Article X of Alaska's Constitution. This article also contains provisions for the creation of both the Local Boundary Commission and a local government agency, which is the Division of Local Government Assistance in the Department of Community and Regional Affairs.

In Section 3 of Article X, Alaska's constitution requires that new boroughs shall be established in accordance with standards provided by law. The constitution itself does not contain those standards. Instead, the constitution, in Article X, directs Alaska's legislature to develop the standards for borough incorporation.

The constitution, in Section 3 of Article X, does indicate the overall scope of those standards for incorporation. The standards are to consider "population, geography, economy, transportation, and other factors" (Section 3, Article X, Constitution of the State of Alaska). The specific definition of minimum standards for incorporation in each of these subject areas was left to the state legislature.

However, the constitution does provide some direction for

the legislature in developing standards for incorporation. In Section 3, the constitution directs that "Each borough shall embrace an area and population with common interests to the maximum degree possible." This constitutional mandate provided an overall goal for the legislature in drafting standards for incorporation. This same constitutional mandate also provides one basis for evaluating later proposals for borough incorporation.

The constitution also states the overall purpose of Alaska's system of local government. As set out in Section 1 of Article X, the purpose of local government in Alaska is to "...provide for maximum self-government with a minimum of local government units...". This statement has been interpreted by the Local Boundary Commission and the Department of Community and Regional Affairs to mean that, in part, the constitution supports the creation of boroughs which cover large geographic areas.

As documented in the report "Borough Government in Alaska"*, the constitution was originally designed to allow for a wide range of future borough governments, from densely populated

* Borough Government in Alaska, A Study of State-local Relations, Thomas Marcha^{MORE HPOSE}use and Victor Fischer, Institute of Social, Economic and Government Research, University of Alaska, Fairbanks, Alaska, 1971. 184 pp.

nt
urban areas to larger, more rural, sparsely populated areas. The intent of the constitutional delegates was to enable areas with very different geographic and socioeconomic conditions to qualify for self-government, if and when desired by local residents. The constitution's support for flexibility in the creation of local governments is shown in its general approach to the standards for incorporation.

The provisions of the constitution and the statements of intent drafted during the constitutional convention have been used by the legislature in drafting specific laws relating to the form, powers, and creation of cities and boroughs. The state courts have also relied on the constitution and statements of intent to guide judicial interpretation of state laws on borough formation in a number of cases. Thus, the provisions of the constitution have given strong support to the creation of new boroughs under a wide range of conditions.

THE STANDARDS FOR INCORPORATION

In response to the constitutional mandate, Alaska's legislature has adopted state laws which outline the minimum standards for borough incorporation. These standards are found in Title 29, Section 18, of the Alaska Statutes. The four standards that an area wishing to incorporate must meet are set out in AS 29.18.030.* (See Appendix C for the complete text of AS 29.18.030).

*date
for
note in
report*

(Note: State laws are called 'statutes', and are published by subject area. Each subject area is called a 'title'; Title 29 of the Alaska Statutes contains almost all laws relating to the form, powers, and operations of local government. In referring to specific parts of state law, the title, chapter, and section numbers are all given. For example, the reference AS 29.18.030 means that the particular law being discussed is found in Alaska Statutes, Title 29, Chapter 18, Section 30; for more specific references, subsection numbers may be included in parentheses after the section number, as in AS 29.18.030(1)-(4).)

In general terms, the incorporation standards provide guidelines on the social, economic, transportation, and communications characteristics that must be met by an area petitioning for incorporation. As in the constitution, these incor-

poration standards in state law are not detailed; there are no specific requirements on the number of residents or acres of land a new borough must contain. Instead, the incorporation standards simply indicate the types of social, economic, and geographic characteristics that must be considered in the formation of a new borough.

Further, minimum conformance to the incorporation standards makes an area eligible for incorporation. In a case involving the incorporation of the North Slope Borough, the Alaska Supreme Court stated that the broad constitutional mandate on local government upholds the creation of boroughs if the requirements for incorporation have been minimally met.* This means that the broadest possible interpretation of the standards for incorporation will be applied to any petition to form a new borough government.

The Division of Local Government Assistance, in the Department of Community and Regional Affairs, has the primary responsibility for determining whether or not a proposed borough conforms to the standards for incorporation set out in

* See Mobil Oil Corporation, et al, V. Local Boundary Commission of the State of Alaska, et al, before the Supreme Court of Alaska, January 16, 1974, in Pacific Reporter, 518 P2 92.

AS 29.18.030. The Department's report is, in turn, submitted to the Local Boundary Commission for action on a borough petition.

As noted above, the four standards for incorporation are contained in AS 29.18.030. The incorporation standards include guidelines on evaluating the following regional characteristics:

- o The social, cultural, and economic integration of the area;
- + o Its ability to support organized borough government;
- o The relation between the boundaries of the proposed borough and natural geography;
- o The areas necessary for development of local services;
- o The capability of the area's economy to provide local services; and
- o The regional transportation system's ability to allow for the development of integrated local government.

The meaning of each of these guidelines, their relation to the study region, and the ability of the Yukon Flats study area to meet these guidelines has been analyzed. This analysis is presented in the remainder of this report, on the basis of the four standards for incorporation included in AS 29.18.030.

AS 29.18.030(1), Regional Integration and Stability: AS 29.18.030(1) requires that an area could incorporate as a borough if "...the population of the area is interrelated and integrated as to its social, cultural and economic activities, and is large and stable enough to support organized borough government." The first step in interpreting this standard is to break it down into separate subjects.

First, the area's population must be "interrelated and integrated" in social and cultural terms. Very generally, this means that the social and cultural identity of an area should be uniform throughout the region. In order to include all areas sharing a common social or cultural identity, the geographic limits of a region may be extensive. An example is the North Slope Borough; one of the determinants of the extent of that borough's boundaries was the common cultural identity of the area's Inupiat Eskimo residents.

Socially and culturally, the Yukon Flats communities from Circle to Rampart show a high degree of social and cultural interrelationships. This social identity is reflected in the boundaries established for the Yukon Flats REAA; this attendance area was, in part, designed to fit the historical pattern of Kutchin Indian settlement of the region, as exhibited by the locations of present-day communities.

While Livengood and Central are not traditionally closely interrelated to the social and cultural systems of the Yukon Flats, the future relationships between the region's communities must be considered. The common identification of the region as an administrative sub-unit of a number of state and federal agencies effectively "links" the Yukon Flats communities into an integrated system. At present, such agencies as the state department's of Education, Health and Social Services, Transportation and Public Facilities, and Natural Resources, as well as federal agencies such as the Forest Service and Bureau of Land Management, have geographic sub-units which cover the study area in varying combinations. In addition, communities within the region are linked by shared election precincts and existing health care, housing, and educational programs.

The provision and administration of a variety of government sponsored programs on a regional basis will increasingly strengthen the common identity and integration of the