

ALASKA LEGISLATURE SPECIAL COMMITTEE / SUBJECT FILES 86/2

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they replace sled dogs they can be expected to improve markedly the utilization of the kill--much of the meat and fish taken today are fed to dogs.

The limits on the perpetuation and expansion of the subsistence sector are more cultural-economic and environmental than they are functions of population as such. Opportunities for wage employment, however uncertain, educational, health, and recreational opportunities are drawing part of the population to places like Nome, where game is scarce and where the white man's values predominate. In Nome and Kotzebue especially, young people gain neither the skills for subsistence production nor respect for those skills.⁸ The environmental dangers are more difficult to define. All life in the Arctic is exceedingly precarious, and its ecological net is considered to be extremely fragile; the impact of pollution, erosion, overgrazing, etc., seems proportionately more catastrophic than in temperate regions. The effect on the caribou of roads or railways through their main migration routes or of mining wastes on the salmon, char, and sheefish of the Kobuk River and of the small, marginal runs to the north is very uncertain.

C. The Money Economy

The money economy of the region is overwhelmingly the province of its white minority. Though quantification of employment by cultural group is almost impossible from existing information, there seem to be no more than 500 to 600 resident Natives in year-round wage and salary employment (Figures 6-8 and 6-9). In addition to these there are perhaps forty or fifty Native storekeepers, repairmen, and petty entrepreneurs; only a handful of these could be regarded as prosperous or successful. Outside of Nome, almost every family which includes a wage earner or owns a "business" has at least one full-time hunter/fisherman or other ties to the subsistence sector.⁹

The biggest and steadiest source of employment and of income in the region is government (Figure 6-10). Direct federal, state, and local employment accounted for 49.5 percent of average wage and salary employment and 42.4 percent of all payrolls in 1966. In addition, almost all contract construction (1.7 percent of employment and 3.8 percent of payrolls) and a large part of transportation, communications, and utilities (17.8 and 24.1 percent) and of miscellaneous services (14.8 and 18.2) were generated directly by government procurement.¹⁰ Wage and salary employment is highly seasonal, but not exceptionally so for Alaska because of the heavy weight of government employment in the total and the counter-seasonal input of petroleum exploration. Payrolls in the peak quarter of the year run 30 to 60 percent higher than in the lowest quarter, depending mainly on the

FIGURE 6-8
EMPLOYMENT CHARACTERISTICS OF THE WORKING AGE POPULATION
REGION V, 1960

	NUMBER OF PERSONS REGION V			PERCENTAGE OF TOTAL				
	Total	White	Non-White	REGION V			Alaska	U.S.
				Total	White	Non-White	Total	Total
<u>Persons 14 Years and Over</u>	6,851	1,870	4,981	100.0	100.0	100.0	100.0	100.0
Labor Force	3,518	1,648	1,870	51.4	88.1	37.5	68.8	55.3
Armed Forces	742	644	98	10.8	34.4	2.0	21.8	1.7
Civilian Labor Force	2,776	1,004	1,772	40.5	53.7	35.6	45.0	53.9
Employed	2,112	1,515	1,170	30.8	81.0	23.5	39.1	51.1
Unemployed	659	62	597	9.6	3.3	12.0	5.7	2.8
(Percent of Civ. Labor Force)				(23.7)	(6.2)	(33.7)	(12.6)	(5.0)
Not in Labor Force	3,333	223	3,110	48.7	11.9	62.4	33.1	44.6
Inmates of Institutions	0	0	0	0.0	0.0	0.0	0.6	1.4
Enrolled in School	644	133	511	9.4	7.1	10.3	6.0	8.2
Other under 65	2,282	158	2,124	33.3	8.4	42.6	24.0	25.2
Other 65 and over	407	32	375	5.9	1.7	7.5	2.6	9.9
<u>Males 14 Years and Over</u>	4,135	1,469	2,666	100.0	100.0	100.0	100.0	100.0
Labor Force	2,786	1,418	1,368	67.4	96.5	51.3	85.3	77.4
Armed Forces	742	644	98	17.9	43.8	3.7	36.6	2.8
Civilian Labor Force	2,044	774	1,270	49.4	52.7	47.6	48.7	74.6
Employed	1,525	724	801	36.9	49.3	30.0	41.6	70.8
Unemployed	519	50	469	12.5	3.4	17.6	7.0	3.7
(Percent of Civ. Labor Force)				(25.4)	(6.4)	(36.9)	(14.3)	(5.0)
Not in Labor Force	1,349	52	1,297	32.6	3.5	48.7	14.7	22.6
Inmates of Institutions	0	0	0	0.0	0.0	0.0	0.7	1.7
Enrolled in School	389	14	375	9.4	1.0	14.1	5.3	8.2
Other under 65	735	13	722	17.8	0.9	27.1	6.3	4.8
Other 65 and over	225	25	200	5.4	1.7	7.5	2.4	7.9
<u>Females 14 Years and Over</u>	2,716	401	2,315	100.0	100.0	100.0	100.0	100.0
Civilian Labor Force	732	230	502	27.0	57.3	21.6	36.9	34.4
Employed	587	218	369	21.6	54.3	15.9	35.5	32.6
Unemployed	140	12	128	5.2	3.0	5.5	3.8	1.9
(Percent of Civ. Labor Force)				(19.1)	(5.2)	(25.5)	(10.3)	(5.5)
Not in Labor Force	1,984	171	1,813	73.0	42.6	78.3	60.3	65.5
Inmates of Institutions	0	0	0	0.0	0.0	0.0	0.3	1.1
Enrolled in School	255	19	236	9.4	4.7	10.2	7.1	8.2
Other under 65	1,547	145	1,402	57.0	3.6	60.6	50.0	44.5
W/own children under 6	876	83	793	32.3	20.7	34.3	27.4	17.2
Married, W/husband	838	83	755	30.9	20.7	32.6	26.7	16.4
Other 65 and over	182	7	175	6.7	1.7	7.6	2.9	11.7

Source: U. S. Census of Population.

FIGURE 6-9

EMPLOYMENT STATUS OF NATIVE POPULATION
 WESTERN PORTION OF REGION V, SEPTEMBER, 1967
 (Bureau of Indian Affairs Nome District,
 Equivalent to Nome and Kobuk Election Districts)

	NUMBER OF PERSONS			PERCENTAGE OF WORKING AGE POPULATION		
	Total	Male	Female	Total	Male	Female
Total Resident Native Population	9,741	5,112	4,629			
Under 16 Years	4,835	2,518	2,317			
Working Age (16 Years and Over)	4,906	2,594	2,312	100.0	100.0	100.0
Labor Force	2,609	1,793	818	53.1	69.1	35.4
Employed	1,225	899	326	24.9	34.7	14.1
Permanent (more than 12 mos.)	513	385	128	10.4	14.8	5.5
Temporary (incl. persons out of region on seasonal work)	712	514	198	20.4	19.8	8.6
Unemployed	1,386	894	492	28.2	34.4	21.3
(Percentage of Labor Force)				(53.1)	(49.9)	(60.1)
Partially Unemployed (Temporary plus Unemployed)	2,098	1,408	690	42.8	40.4	29.8
(Percentage of Labor Force)				(80.4)	(78.5)	(84.4)
Not in Labor Force	2,295	801	1,494	46.8	30.9	64.6

Source: Bureau of Indian Affairs. Compiler evaluated data as "highly accurate" to "reasonably accurate."

FIGURE 6-10

EMPLOYMENT AND UNEMPLOYMENT, REGION V
1961-1967 by Quarters

YEAR/ QUARTER	TOTAL WORK FORCE	UNEMPLOY- MENT	RATE OF UNEMPLOY- MENT	TOTAL EMPLOY- MENT	NONAGRICUL- TURAL WAGE AND SALARY EMPLOYMENT	MINING	CONTRACT CONSTRUC- TION & OTHERS	TRANSPORT, COMMUNICA- TIONS, UTILITIES	TRADE	SERVICES	GOVERNMENT
1961 1	2,181	623	30.8	1,508	1,307	42	23	344	283	108	507
2	2,765	665	24.0	2,100	1,743	101	158	510	335	121	518
3	2,908	228	9.9	2,620	2,156	105	189	575	557	131	599
4	2,170	351	16.2	1,819	1,566	81	85	379	317	133	571
1962 1	2,154	699	32.4	1,455	1,398	24	76*	335	197	156*	610
2	2,601	622	23.9	1,979	1,624	66	81*	493	221	166*	657
3	2,760	333	12.3	2,421	2,052	94	178*	536	377	154*	713
4	1,946	456	23.4	1,490	1,632	44	73	386	223	204*	703
1963 1	2,224	672	30.2	1,552	1,402	8*	20*	280	184	195	715
2	2,587	707	27.3	1,880	1,685	29	59	361	234	209	793
3	2,752	428	15.6	2,144	1,983	61	128	429	341	188	836
4	2,452	522	20.5	1,930	1,746	52	81	285	249	287	792
1964 1	2,405	669	27.8	1,736	1,582	94	40	229	207	289	723
2	2,573	656	25.5	1,917	1,587	95	76*	264	269	123*	760
3	2,900	457	15.8	2,443	2,102	73	234*	413	314	217*	851
4	2,279	404	17.7	1,875	1,879	76	89	358	273	264*	819
1965 1	2,301	543	23.6	1,758	1,598	61	69	864	212	250	742
2	2,812	680	24.2	2,132	1,886	75	85	396	260	306	764
3	3,221	418	13.0	2,803	2,461	40	277	484	339	285	1,036
4	2,641	538	20.4	2,103	1,886	34	117	302	237	276	920

FIGURE 6-10 (Continued)

YEAR/ QUARTER	TOTAL WORK FORCE	UNEMPLOY- MENT	RATE OF UNEMPLOY- MENT	TOTAL EMPLOY- MENT	NONAGRICUL- TURAL WAGE AND SALARY EMPLOYMENT	MINING	CONTRACT CONSTRUC- TION & OTHERS	TRANSPORT. COMMUNICA- TIONS, UTILITIES	TRADE	SERVICES	GOVERNMENT
1966 1	2,464	624	25.3	1,840	1,690	47	35*	268	206	241*	893
2	2,739	737	29.1	1,942	1,760	16	49*	334	269	269*	823
3	3,027	476	15.7	2,551	2,267	31	142*	457	269*	341*	1,037
4	2,596	610	23.5	1,986	1,888	31	97*	306	232	258*	914
1967 1					1,712			357	213	316	877
2					1,921			434	288	367	986
3					2,498			404	378	396	1,069
GROWTH RATE (Annual, %)	1.4	2.4		1.5	1.9	-2.4#	0.8##	-4.4	-4.4	7.3	4.0
Index of Seasonality	1.26	1.73		1.19	1.39	2.11	4.57	1.74	1.71	1.41	1.19

Note: Region consists of Barrow, Kobuk and Nome Labor Market areas. "Contract Construction and Others" includes numerically minor categories of manufacturing; and finance, real estate and insurance.

An asterisk indicates synthetic figures, one or more of whose components was furnished by projection or seasonal adjustment, or which is a residual depending on one or more synthetic figures.

Growth rate is exponential least squares regression coefficient; index of seasonality is ratio of average in highest quarter to average in lowest quarter. Growth rate and seasonality index calculated simultaneously by multiple regression analysis of series.

#Trend not significant to .75 level.

##Trend not significant to .60 level.

Source: Alaska State Department of Labor.

level of construction activity. The seasonal pattern of tourism with its impact on the transportation and service industries is another source of fluctuation.

In such an economic context, rates of insured unemployment are very poor indicators of economic welfare. They tend to range from about 5 to 10 percent of the labor force during the seasonal employment peaks, to 25 to 40 percent in the seasonal lows. A more meaningful, if imprecise, observation is that virtually every resident white male is employed in the money economy the year round, while only a small minority of resident Native males are employed year round. Non-Native seasonal workers are almost all transients.

Other sources of income for the Native residents include temporary employment in construction work, both inside and outside the region; employment at fish processing plants in Bristol Bay and elsewhere; fire fighting; service occupations catering to tourists; small-scale commercial fishing; trapping and commercial hunting for local markets; reindeer herding and slaughtering; handicrafts such as skin sewing and ivory carving; public assistance and remittances from family members residing outside the region. Of the foregoing, temporary employment is by far the most important. Welfare payments are a remarkably insignificant proportion of total income and actually appear to be declining relative to the population.¹¹

It should be pointed out that the region is not at all homogeneous. The "basic industries" of the Barrow labor market area are, in order of importance: (1) defense installations and contractors (DEW line, etc.) and Department of Defense-supported research (Naval Arctic Research Laboratory), and (2) petroleum exploration. Unemployment rates are relatively low for rural Alaska and average incomes relatively high. About half the permanent civilian employment seems to be held by local Eskimos, thanks to the deliberate efforts of the U. S. Navy and of some government contractors to develop and use the local labor force.¹²

The Nome labor market area's "basic industries" are: (1) government, mainly in the fields of general government; social services; and education; and (2) tourist services. Unemployment and underemployment are both high, and steady employment is overwhelmingly in the hands of the white minority. The most depressed part of the region is the Kobuk labor market area, whose major settlement is Kotzebue. There is some government, tourist, and mineral activity, but none of them is a large source of income or employment at present. The labor force participation rate for Natives 16 to 65 years of age is in the vicinity of 40 percent, and probably over half the Natives regarded as in the labor force are unemployed even at the seasonal employment peak.

2. ECONOMIC DEVELOPMENT POTENTIALS

The potential for economic development of the region rests largely in minerals and tourism. At present, no mineral production is being carried out, but the North Slope as a whole may turn out to be one of the world's richest petroleum provinces, and the general geology of the Brooks Range suggests the possibility of major metallic ore deposits. Actual production of either is unlikely within four or five years, and the future of the mineral industries in the area is still highly speculative. In the present primitive state of mapping, surveys, and exploration, statements about the region's "vast mineral wealth" are prophecies of the faithful more than assertions of fact.¹³ Nevertheless, indications of oil and gas and of other commercial mineral prospects have been sufficient to encourage substantial private investment in exploration.

The general statements concerning fisheries development potential in Region III are applicable to Region V as well; but the latter's resources are even more limited, less effectively utilized, and bring resident fishermen a lower unit price than the former's. Figure 6-11 presents a rough estimate of the produce of the fisheries industries of Region V. The assumptions are the same as in Figure 4-12 (*q.v.*). There are other, offshore and high-seas fisheries resources in the Bering and Chukchi seas, but they are unlikely to be developed from bases in the region.

A. Mineral Resources with a High Probability of Development

The North Slope oil province, extending north from the foothills of the Brooks Range out to and beyond the Arctic Coast, has one proved oil field at Umiat, on the edge of Naval Petroleum Reserve No. 4. There has also been considerable exploration activity in the North Slope area in 1967 and 1968. In January, 1967, 23 offshore Arctic Ocean tracts were leased for \$1.5 million. Exploration drilling has been on two wells near Prudhoe Bay, and significant quantities of both oil and gas have been found.

Wildcatting activity north of the Brooks Range has been generally considered a speculative hedge against the distant future, but the nature of the Prudhoe discovery may have already brought about a spectacular change in this attitude. Initial information indicates that the geologic structure (or structures) tapped by the two wells may very likely be of gigantic proportions. From a technical point of view, the thickness of the pay sections, the indications of high gas saturation (meaning high reservoirs of energy), and the seven-mile distance from the two test wells all point toward a very large discovery.

FIGURE 6-11

POTENTIAL GROSS VALUE OF FISHERIES, REGION V

	VOLUME (1,000 LBS)				AVERAGE RAW FISH PRICE	PROCESSED PRICE		FOB GROSS VALUE (\$)			
	1966 (Actual)	1968	1970	1973 on	1966	1970	1973 on	1966	1968	1970	1973 on
<u>Norton Sound</u>											
Chum Salmon	540		800	800	.10		.30	54,000		240,000	240,000
King Salmon	31		60	60	.20		.50	6,200		30,000	30,000
Pink Salmon	38		300	800	.079		.10	3,000		30,000	30,000
Coho Salmon	40		150	150	.12		.40	4,800		60,000	60,000
Salmon Roe										75,000	75,000
Herring			750	750			.07			52,500	52,500
Bottom Fish				450			.05				22,500
Other Species			250	350			.30			105,000	105,000
TOTAL VALUE								<u>68,000</u>		<u>592,500</u>	<u>615,000</u>
<u>Kotzebue Sound</u>											
Chum Salmon	250	400	450	450	.10	.176	.30	25,000	70,400	135,000	135,000
Salmon Roe									20,000	22,500	22,500
Sheefish	26	100	350	350	.10	.30	.30	2,600	30,000	105,000	105,000
Arctic Char	27	200			.10	.30		2,700	60,000		
Other Species											
Herring			250	250			.07			17,500	17,500
Bottom Fish				450			.05				
TOTAL VALUE								<u>30,300</u>	<u>180,400</u>	<u>280,000</u>	<u>302,500</u>
GRAND TOTAL								<u>98,300</u>		<u>872,500</u>	<u>917,500</u>

Note: Assumptions of this table are: approach to maximum commercial utilization of the product by 1973 based on local storage and freezing or processing in optimum scale facilities along lines contemplated by Kuskokwim Fishermen's Cooperative. Further assumptions are: no major change in technology, ability of local enterprise to sell directly to highest price market in U. S. or Japan, and no change in CIF, U. S., or Japan prices. Average FOB prices are converted on the basis of round fish weight equal to fishermen's delivery weight. See discussion of fisheries in Region III, pp. 275-278.

Industry people familiar with the North Slope have stated that a pipeline to an ice-free port would be a reality if Naval Petroleum Reserve No. 4 had been open to private leasing at the conclusion of federal drilling in 1953. Since it was thought that from one to two billion barrels would have to be discovered on the North Slope to justify either a pipeline to an ice-free port or development of the technology for an alternate means of transport, the decision whether or not to proceed with the development of any North Slope discovery was expected to hinge on the decision to lease NPR #4. However, the apparent size of the Prudhoe strike now leaves this assessment in some doubt. It is certain, for instance, that the companies which made the discovery are now proceeding as fast as possible with pipeline route feasibility studies and have perhaps already entered the design phase, clearly on the assumption that the discovery will turn out to be large enough to support, by itself, the huge investment necessary for the construction of a pipeline.¹⁴

Part of the reason for this rush is the State of Alaska's "discovery incentive" which allows reduced royalties on discovery lease production for a ten-year period *commencing at the date of discovery*. Under this pressure the firms have abandoned their previous policy for working only during the winter months when the frozen ground makes it possible to move equipment overland. For the immediate future, 30-50 men will probably be employed in year-round drilling. If the initial size indications are confirmed, employment will undergo a gradual buildup, peaking during the actual pipeline construction. The most optimistic estimates indicate that this might occur between as early as the winter of 1970-71, but there is little certainty associated with this date. Employment levels would probably reach a maximum of 750-1,000 at the height of construction.

Most of the jobs involved will require high levels of technical skill; this may be no absolute deterrent to employment of residents (Natives) as has been shown by the training and recruitment of indigenous workers by petroleum companies in the Middle East and by the successful development of skilled Eskimo labor by defense contractors on the North Slope and by mining companies in Canada. Although in the long run it may be cheaper for the industry to recruit from a population which is at home in an area whose conditions of life most Americans find intolerable, there is little indication that the industry will on its own take the initiative in this direction.

Anchorage, Kenai, and Fairbanks are now staging points for Atlantic-Richfield's operations at Prudhoe Bay, as was Fairbanks for the Navy's earlier efforts in Naval Petroleum Reserve No. 4. Offices, supply depots, and ancillary facilities for even a larger oil industry on the North Slope will probably continue to be located in the Cook Inlet area, largely because of the harsh climate, long winter nights, and lack of amenities in the North. Oil executives, technicians, and laborers alike will be

disinclined to make their homes in the area; and the high cost of maintaining permanent bases and offices will more than offset the additional cost of moving men and materials as needed from southcentral Alaska.¹⁵

Over 100 million tons of relatively high-grade copper ore are known to exist in the vicinity of Ruby Creek in the Kobuk River drainage. The Kennecott Copper Corporation is now carrying on underground explorations and has probably already invested over \$10 million in the prospect. It was originally thought that a mine here could be operated at a relatively small scale, but the progress of exploratory drilling has convinced the company that only a very large operation, if any at all, would provide the necessary extraction economies. While Kennecott is secretive about both its findings and its intentions, there is a possibility that production will be initiated within the next five years, with 200 to 500 persons engaged directly in the mining facility and perhaps as many in supporting activities. At present Kennecott employs an average of about thirty men in the exploration operation, and some of these workers are Kobuk Valley Eskimos.

B. Mineral Resources with a Limited Probability of Development

The Seward Peninsula and Kobuk River areas are both historically important gold mining areas. At the present time, there seems little likelihood that the onshore placer deposits that formerly dominated the industry will see much development unless there should be either a radical change in the price of gold or a radical advance in placer technology. Offshore placer deposits, however, particularly along the south shore of the Seward Peninsula, are currently being investigated by several organizations, including Shell Oil Company and the U. S. Geological Survey. Underwater dredging and mining techniques are being investigated, and it is conceivable that a significant industry could develop using these techniques. The employment impact of such operations is highly uncertain; the activity would probably be seasonal and extremely capital intensive, requiring only a handful of technical personnel.

The Lost River tin deposit on the Seward Peninsula constitutes the most important domestic U. S. source of tin now known. A smelter was operated here during and immediately after World War II, but expanding foreign supplies and unfavorable cost relationships resulted in its closure. Reduced availability of foreign supplies or national security requirements could conceivably bring about a resumption of production, but known reserves are limited, and additional discoveries would be necessary for continuing production.

C. Mineral Resources with a Low Probability of Development

Huge reserves of bituminous and sub-bituminous coal underlie the area from Cape Lisburne eastward to the Colville and north to Petard Bay, but prospects for marketing are very dim. Other minerals certainly present, not now in known commercial quantities or form, include phosphate rock, fluorite and beryllium, tungsten, lead, and graphite.

D. Tourism

The number of tourists visiting the region annually is now approaching the number of residents. Most visitors spend one night or less in the region, and the bulk of their spending is for transportation in and out rather than for local goods or services. The number of visitors and their average duration of stay may be expected to increase, however, as tourist facilities are provided, such as Alaska Airlines' new 45-unit hotel at Nome. One aspect must be kept in mind in projecting future levels of tourism: The region's attractions to tourists are its reminders of the traditional subsistence activities and way of life of the Eskimos and its unique wildlife resources. If development results in the disappearance of these, the region will have little special for the average traveler but its harsh weather.

3. ECONOMIC FUTURE OF THE REGION

The population and potential labor force of Region V is expected to continue to increase rapidly,¹⁶ and there is little prospect for this increase to be absorbed by local employment opportunities. In addition, the new entrants (and nonentrants) to the labor force will not generally have the education or acculturation for successful outmigration. The only certain sources of growth are in general government, social services, tourism, and Arctic research, each of which will make some contribution to the income and employment of the Native people. There are, however, possibilities for spectacular developments in the mineral industries, but the *assured* economic impact of mineral activity is limited to a continuing growth of exploration. Both the future level of exploration and the likelihood of actual production of oil and gas, copper, or other minerals will be determined mainly by the material quantity and quality of forthcoming discoveries. On the whole, the development of neither a labor force nor an economic infrastructure in advance of proved discoveries seems to be critical.¹⁷ On the other hand, acceleration of mapping and survey activity by either the U. S. Geological Survey or by the state can be expected after two or three years to result in substantially greater exploration effort; and the latter in turn would increase the expectation of actual production commencing in perhaps five to ten years.¹⁸

Even in advance of possible production, the exploration investment in Region V and the public revenues generated from leases will be enormous in resident *per capita* terms, as will the gross value of product and public royalties and revenues when any production begins. But these flows will not generate a direct demand for the labor of local Eskimos *at their present levels of acculturation, education, and skills*, and in conformity with their present customs of employment and livelihood, so that the constructive impact on the indigenous economy may not be great.¹⁹

The secondary labor demand, or "multiplier effect," of large-scale extractive industry will be exceptionally small because the indigenous economy has virtually nothing to sell to the petroleum and mining companies or to their employees--not capital goods, or labor, or transportation services, or foodstuffs, or even the services of local government. The employment multiplier for Region III's "basic industries" (commodity production and government) of 1.18 indicated that five jobs are required in "basic industry" to generate one in trade, transportation and communications, services, and miscellaneous activities in the region. The multiplier coefficient for Region V's mineral activities must be even smaller;²⁰ most of Region III's employees in "basic industry" (overwhelmingly government) at least live in the villages, make some purchases at village stores, travel by common carrier, and the like. In Region V, on the other hand, a much higher proportion of personnel in the extractive industries are expected to be stationed at remote camps supplied directly from Anchorage or Fairbanks and hence effectively isolated from the indigenous subregional economy.

FOOTNOTES

CHAPTER 6

1. The area of the old Barrow, Kobuk, and Nome election districts was 127,064 square miles. As here defined, Region V is these districts plus the remainder of the area north of the crest of the Brooks Range.
2. "Non-Native" and "white," and "Native" and "nonwhite" are roughly interchangeable in the region. The 1960 Census enumerated, in addition to whites, Inidans, and "Others" [Eskimos], 96 Negroes, 22 Japanese, 1 Chinese, and 1 Filipino.
3. Among resident whites over 14 years of age in Region V in 1960, males outnumbered females by more than 4-1/2 to 1.
4. This rate is derived from the 1960 Census enumerations and the 1967 Bureau of Indian Affairs-Federal Field Committee estimates.
5. The relatively low death rate for Natives in Region V is a result of the age profile of the population; specifically, the high proportion of children. Age-sex-specific death rates for Natives in the region are still higher than national averages.
6. A. Hippler and others, *Northwest Alaska Regional Study*, University of Alaska, Institute of Social, Economic and Government Research, for the Federal Field Committee for Development Planning in Alaska (unpublished at date of this writing).
7. Dall sheep, polar bear, and grizzly bear are relatively scarce and could not sustain heavy hunting pressure. But their economic potential to the region is undoubtedly greater as an attraction for the expenditures of nonresident hunters in search of trophies. The caribou of northern Alaska seem to be more abundant now than at any time in recorded history, after a long "disappearance" beginning in the mid-nineteenth century. Their decline used to be explained by the introduction of rifles and by the market hunting on behalf of the whalers. While this account is now almost completely discredited, biologists have not yet satisfactorily explained for the apparent absence of caribou. There is no assurance that interaction with man was not somehow involved or that he cannot again somehow trigger the disappearance of the caribou. On the other hand, the most persuasive theory today is that the crash was caused by an excessive animal population on the range; if this is the case, a high level of harvest may be the only practical way to prevent their catastrophic decline.

8. Hippler, *et al.*, *op. cit.*
9. *Ibid.*
10. The biggest single enterprises in both the "transportation, communications, and utilities" and the "services" groups are defense contractors. More than half the airline passenger traffic to and from Nome, Kotzebue, Barrow, Unalakleet, and Barter Island is paid for directly by government travel request.
11. Hippler, *et al.*, *op. cit.*
12. The Naval Arctic Research Laboratory at Barrow, operated by the University of Alaska for the Department of Defense, alone employs 40 to 50 local Eskimos in permanent jobs.
13. The absence of knowledge of the region's resources is, in our opinion, the main deterrent to their development. There is no conclusive evidence, for instance, that the lack of transport facilities is inhibiting the development of important known resources. See Tussing, Erickson, and Rudd, *Alaska Mineral Policy and Legal Analysis*, University of Alaska (unpublished at date of this writing). See also, Lawrence E. Heiner and Ernest N. Wolff, *Mineral Resources of Northern Alaska*, University of Alaska, Mineral Industry Research Laboratory, Report No. 16, 1968. For a different view of the relation of transportation access to resource development in Northwest Alaska, see the Federal Field Committee's Transportation Task Force report, *Transportation and Economic Development in Alaska*, 1968.
14. Atlantic-Richfield Company announced in August, 1968, its intention to complete a pipeline to an ice-free port by 1970. It is reported in addition that British Petroleum, Ltd., which holds large leases on the North Slope as well as in the Canadian north, has let contracts for a prototype submarine tanker.
15. Fairbanks, while almost three hundred miles closer to the North Slope than Anchorage-Kenai, may be passed over as the major staging point because of the external economies generated by existing Cook Inlet oil activity. One real possibility, however, is for the bulk of the labor force required on North Slope petroleum projects to be housed in Fairbanks and flown daily to the work sites. This strategy would, of course, reduce both the opportunities for and advantages to the industry of local Eskimo hire.
16. The *rate* of increase can be expected to decrease, however,
17. Neither the petroleum industry nor Kennecott Copper Company has given notable encouragement to efforts to extend surface transportation networks into the Arctic.

18. Tussing, Erickson, and Rudd, *op. cit.*
19. The difficulty of matching local labor demand to local labor supply will be exacerbated by the customary (and understandable) practice of large employers, including government agencies, to do their recruiting for remote projects in Fairbanks, Anchorage, Seattle, New Jersey, or other larger labor markets. For instance, the large contractors who would be involved in construction of a pipeline from the North Slope to tidewater or further normally "bring in" their entire work force to any remote project.
20. No multiplier could be calculated for Region V from available employment data because both the "transportation, communications, and utilities" and "services" categories in the employment statistics are dominated by defense contractors who should properly be included in the region's "basic industries." Making these categories part of the independent variable of the multiplier expression, however, would leave only trade as the dependent component and would give a meaningless coefficient.

CHAPTER 7

PUBLIC FINANCE AND REGIONAL DEVELOPMENT

1. THE GENERAL CASE

The traditional broad divisions of public finance--taxation, expenditures, and debt management--are all especially applicable to regional development in Alaska. The dominance of government--federal, state, and local--by almost any measure is the explanation for this. Of particular importance to the strength of the state's economy is government's fiscal behavior both on the revenues side (including taxation and intergovernmental transfers) and the expenditure side (as these translate into income, employment, and social investment).

In reviewing briefly Alaska's tax structure the following types of state taxes are noted: net income tax (individuals and corporations); business license tax; tobacco and liquor tax; insurance, license, mining license, and vending machine license taxes; inheritance and school tax; motor fuel oil tax; and oil and gas properties production tax.¹ At present sales taxes and property taxes are left to governmental units below the state level.

Receipts from taxes typically make up 50 percent of total revenues of the states generally; in Alaska the figure is closer to 25 percent. This does not imply a lagging tax effort on the part of Alaska--rather, that heavy intergovernmental transfers are involved as transitional grants and aids to highways and airports, education, public welfare, employment security, and the like.² In fact, federal payments typically have made up about two-thirds of Alaska's total revenues. This fraction is projected to diminish over the period to less than half by FY 1971. Excluding federal assistance, Alaska follows the pattern of most states in its breakdowns of revenue sources with the income and gross receipts taxes among the chief yielders. Unlike many states, however, rents and royalties from extractive operations and charges for the extensive state ferry system are very important sources.

Alaska follows the pattern of state expenditures in some cases, but it generally diverges rather markedly from the typical patterns. This divergence is to be expected in that the establishment of a viable state as an integral part of the Republic populated mainly with persons used to and demanding of all the public service trappings of a modern society requires great initial expenditures to "catch up." State of Alaska expenditures by type and function are presented in Figure 7-1, and expenditures of federal programs for Alaska are presented in Figure 7-2.

FIGURE 7-1

EXPENDITURE BY TYPE AND FUNCTION: STATE OF ALASKA, 1967
(Millions of Dollars)

Type/Function	Expenditure*	Percent of Total*
<u>Total General Expenditures</u>	<u>\$264.4</u>	<u>100.0 %</u>
Education	59.4	22.5
Highways	116.1	43.9
Public Welfare	9.6	3.6
Hospitals	4.6	1.7
Health	3.1	1.2
General Control	5.7	2.2
Correction	3.1	1.2
Natural Resources	8.9	3.4
Employment Security Administration	2.4	0.9
Housing and Urban Renewal	9.4	3.6
Airports	8.5	3.2
Water Transport and Terminals	0.6	0.2
Miscellaneous Commercial Activities (State Ferry)	6.0	2.4
General Public Buildings	6.5	2.6
Interest on General Debt	3.2	1.2
Insurance Trust Expenditures	8.0	3.0
Miscellaneous and Other	10.8	4.1

*Columns may not add in detail due to rounding.

Source: *State Government Finance in 1967*, U. S. Department of Commerce,
Bureau of the Census, Table 9.

FIGURE 7-2

AGGREGATE EXPENDITURES OF FEDERAL PROGRAMS FOR ALASKA BY AGENCY
FY 1967

AGENCY	EXPENDITURE
Defense Department	\$320,734,500
Air Force	\$185,791,500
Army	104,755,000
Navy	30,188,000
Commerce Department	58,940,572
Health, Education & Welfare	50,628,932
Independent Agencies	49,416,841
Interior Department	46,921,576
Treasury Department	15,364,000
All Other	<u>23,972,185</u>
GRAND TOTAL	<u>\$565, 978,606</u>

Source: News Letter, *Report from Washington*, from the Office of Senator E. L. Bartlett, February 4, 1966.

From this heavy governmental involvement some have concluded that Alaskans are contributing fiscally far less than their revenue capacities and, specifically, that their tax effort is less than it "should" (could) be. It is true that the history of the revenue capacities of the states is one marked with great resilience and resourcefulness; i.e., their capacities are almost always underestimated; and Alaska is perhaps no exception. Considerable care must be exercised, however, in the computations of tax burdens and efforts in the Alaskan case. Per capita total tax payment by Alaskans in 1965 was a respectable \$213 *vs.* \$162 for all states. Within this comparison, the income tax payment (corporate and individual) was \$96 *vs.* \$36. Licenses and miscellaneous charges are significantly above the 50-state averages. But even these comparisons seriously understate the tax effort made by the Alaskan citizenry. From its quarter million population, several substantial "subtractions" must be made in arriving at a reasonable denominator. Of the 46,000 Eskimos, Indians, and Aleuts, perhaps 30,000 could be at all considered as members of family economic units participating in the economy. Another 50,000 persons should be largely subtracted as military population residing on military bases and generally exempt from Alaska taxes. Using the adjusted population figure of 184,000, the per capita tax payments become \$315, with the income tax going to \$141 per person.

A further fiscal constraint on local governments in the case of the property tax comes from the dominance of federal ownership of land in Alaska. Federal government land holdings in Alaska make up about half of its total U. S. holdings (359 million out of 700 million acres).³ In 37 states the federal government owns less than 10 percent with the overall public land acreage totaling a third of the U. S. land area.⁴ This compares with a 98 percent figure for Alaska frequently cited. Furthermore, the great amount of federal (and state) properties and real estate established to house and operate governmental activities are tax exempt though, in many cases, they are in very valuable locations and they enjoy the public services provided by the community in which they are located. The acquisition cost of the major real estate properties owned by the federal government in Alaska is estimated at over \$2 billion.⁵ Since many are admittedly located in remote areas not even incorporated by a subordinate governmental unit, it is not here argued that private properties would necessarily be constructed or utilized in the absence of public real estate. Nor is the point denied that the taxes foregone are vastly more than made up in terms of the economic activity generated by government. The point is simply that they are separate features of the fiscal finances in Alaska. Alaska typically receives about half of the 50 state average in the per capita amount of property taxes--\$53 *vs.* \$111.⁶ This has meant that the property tax yields about 24 percent of the total tax revenues in Alaska as opposed to a 50-state average of 44 percent. In the case of the upcoming sale of the Alaska Communication System (now operated by the Air Force) to the private sector, revenues from the several direct tax sources would amount to over a quarter million dollars annually, exclusive of the corporate income tax. This is revenue foregone and is estimated conservatively on

the basis of a \$10 million fair market property value for the utility and \$16 million annual gross receipts. If the Alaska Railroad were privately owned, the \$130 million value of its facilities would, of course, come on the tax books. This last is mentioned only as a further case in point.⁷

2. SOME PARTICULAR CASES

In the private sector some major industrial facilities are soon due to yield tax receipts to state and local units. Alaska Lumber & Pulp Company is presently in the final years of its 10-year tax concession from Sitka and the state. The new petrochemical plants on the Kenai Peninsula are variously estimated to yield up to \$6 million yearly in state income taxes (\$4 million annually on the ammonia-urea plant and \$2 million annually on the gas liquefaction plant) beginning in 1970.⁸ A third pulp mill is due on the scene in southeastern Alaska in the coming three-year period as Champion-U. S. Plywood makes its selection of site and construction for the commercial usage of its recent purchase of Forest Service timber. Additional smaller facilities can be expected to spring up in the fisheries, forestry, and tourism industries. And, if further tax concessions are withheld or limited in their granting, the tax base of communities can be moderately strengthened with valuations increasing. Use of the sales tax will, as elsewhere, likely be expanded for it continues to be a "good yielder."

But by far the major private source of tax receipts paid the State of Alaska will come from the oil and gas industry in the foreseeable future. Figure 7-3 presents two sets of projections of future state revenues from oil and gas. These figures, assuming as they do no bonus payments or rentals from new leases, are exceedingly conservative.⁹ Nevertheless, disposing of even \$40 million annually, other than through debt retirement or holding it as idle funds, will, of course, give rise to additional Alaska income.

3. DEBT MANAGEMENT

As with most other costs in Alaska, the cost of contracting and managing public debt is high. It is viewed by the finance markets as a relatively high-risk area with a limited financial history and a tradition of high prices, including interest (the price of money). Accordingly, the bond ratings for most of Alaska's communities having any experiences in money markets is relatively low. At the moment, the state and the major communities within it have a bond rating of BAA. This situation can be expected to change gradually over the coming half dozen years as the economic soundness of particular communities (and the state) is demonstrated and the lingering myths about the region are dispelled.

FIGURE 7-3

ESTIMATED FUTURE RECEIPTS BY STATE OF ALASKA FROM
OIL AND GAS RENTALS, BONUSES, ROYALTIES, AND PRODUCTION TAXES ON PROVED FIELDS
1967-1972

	1967-68	1968-69	1969-70	1970-71	1971-72
OIL INDUSTRY ESTIMATES^a					
Oil and Gas Production Tax ^c	\$ 2,278,030	\$ 5,893,023	\$ 5,838,427	\$ 6,069,643	\$ 5,257,493
Bonuses from Oil and Gas Leases ^b	22,742,700	4,236,000	2,050,000	2,050,000	2,050,000
State Oil and Gas Royalties	13,814,505	31,840,951	31,680,659	33,439,506	30,034,560
Federal Oil and Gas Rentals and Royalties ^{b,d}	7,002,700	6,906,200	6,930,800	6,862,500	5,446,400
State Mineral Lease Rentals ^{b,d}	3,067,800	3,315,800	3,721,000	4,036,000	4,451,000
Oil Industry Totals	\$48,905,735	\$52,191,974	\$50,220,886	\$52,457,649	\$47,239,453
STATE ESTIMATES^b					
Oil and Gas Production Tax ^c	\$ 1,952,000	\$ 4,205,000	\$ 4,971,000	\$ 4,520,000	\$ 3,951,000
Bonuses from Oil and Gas Leases	22,742,700	4,236,000	2,050,000	2,050,000	2,050,000
State Oil and Gas Royalties	8,706,000	20,863,000	26,034,000	23,870,000	20,351,000
Federal Oil and Gas Rentals and Royalties ^d	7,394,000	7,336,000	7,361,000	7,293,000	8,114,000
State Mineral Lease Rental ^d	3,067,800	3,315,800	3,721,000	4,036,000	4,451,000
State Totals	\$43,862,500	\$39,955,800	\$44,137,000	\$41,769,000	\$38,917,000

Sources: ^aWestern Oil and Gas Association, presentation to Second Session, Fifth Alaska State Legislature, February, 1968.

^bAlaska Department of Natural Resources, Division of Mines and Minerals, February 19, 1968, estimates.

Notes: ^cReflects 1 percent Disaster Severance Tax effective October 11, 1967.

^dIncludes a small amount of revenue from lease rentals on minerals other than oil and gas.

FOOTNOTES

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1. Portions of the analysis for this section are drawn from Douglas N. Jones' "Development Constraints on State Tax Policy Formulation," contained in the *National Tax Association Papers and Proceedings*, 1966, pp. 445-463.
2. With total intergovernmental federal revenue contributions running eight times the 50-state average (within which Education was eight and Highways ten times the average), the result is for Alaska's per capita Total General Revenue to be about three and one-half times that for other states. At the same time, however, state and local taxes as a proportion of personal income were 49th among the 50 states. *State Government Finances in 1967*, U. S. Department of Commerce, Bureau of the Census.
3. *Public Land Statistics*, 1966, U. S. Department of the Interior, Bureau of Land Management.
4. *Ibid.*
5. The Army and the Air Force together estimate a figure of \$1.5 billion. The Alaska Railroad is valued at \$130 million and the Federal Aviation Administration holdings at \$36 million. The value of the holdings of the Department of the Interior agencies brings the total to over \$2 billion. The results of the Public Land Law Review Commission's *Alaska Study* may in the longer term have significant effects toward diminishing government land holdings.
6. *Compendium of State Government Finances in 1965*, U. S. Department of Commerce, Bureau of the Census.
7. For some comments on the implications of Native land claims for taxation, see Chapter 9 of this study.
8. Study prepared for the Federal Field Committee for Development Planning in Alaska by Joseph E. Shafer, entitled, *Alaska's Economy in Case of a National Economic Pause: Fiscal Strength through Oil and Gas Receipts*, 1968, p. 18.
9. Preliminary projections, based on the same limited assumptions, completed independently in September, 1968, by the state and by the Western Oil and Gas Association, both show substantial increases over the February, 1968, estimates. In addition, the impact on industry expectations of Atlantic Richfield's Arctic Slope discoveries vastly increases the potential bonus income from future competitive leases in that region.

CHAPTER 8

SCIENCE, TECHNOLOGY, AND ECONOMIC DEVELOPMENT

The broad fields of science, technology, and education have particular relevance to any developing region; and in the case of Alaska this is especially so. Except in the defense area, the United States has limited experience in how to "handle" an arctic and sub-arctic environment. And the defense experiences it does have are not fully helpful in the building of a society in the Middle and Far North because they largely ignore the critical factor of cost. It is one thing, for example, to fashion an early warning defense communications complex in a severe and hostile environment where cost is not a governing consideration and quite another to build and operate a commercial telecommunications system where the cost factor really counts.

The role of science and technology in regional development is a subject receiving increasing attention.¹ Two aspects of this role are the *location* of scientific and technological activity itself and the usefulness of the *results* of that activity in application. Both of these aspects have relevance to Alaska's growth and development. They are here considered under the general proposition of information and information gathering as catalysts to development. The major sectors to be affected in Alaska are the petroleum, forest products, transport, and the construction and engineering industries and the fields of oceanography and meteorology. The institutions related to these are the universities, government, and private research facilities.

It is generally held that (1) there is a direct relationship between the growth of a firm or industry and the level of investment in research and development; and (2) rapid-growth regions include concentrations of technology-intensive industries; concentrations of scientists, engineers, and technicians; and relatively high research and development expenditures.² In Alaska the only commodity industry that ranks high in these terms is oil and gas--forest products and fisheries historically rank very low in scientific and engineering activity and research and development expenditures. And the firms active in these industries are national or international in scope, and have little reason to concentrate research facilities in Alaska. The agglomeration effect of research activities begetting research activities is at present not more than a modest force in Alaska. It has been the Field Committee position that government-agency arctic research activity be centered at the University of Alaska to the extent possible, and this is increasingly taking place. In the four-to-six-year time period, it is quite likely that the southcentral area of the state will experience a moderate increase in research and development activity both from the growth of university facilities and the locating of new government and private facilities in the region.

1. OCEAN PROGRAMS

As a maritime region, Alaska finds its development future, not surprisingly, closely tied to those fields in science and technology embraced by ocean programs. The fact is, the Alaska stake in increasing United States participation in ocean programs is a direct function of several factors: its undeveloped status, existing economic orientation to the marine environment, maritime-rim civilization, quantity and quality share of U. S. continental shelf resources, strategic polar position, and the richness of adjacent ocean waters, estuarine, and river systems.

Nowhere else under the flag of the United States can ocean program payouts be so great as in Alaska simply because so little has been done and the known resource, economic, and social potentials are so great. The state must, therefore, be vitally concerned with the direction and impact of federal ocean programs--in science, fisheries, mineral and fuel resources, transportation, hydrographic and geodetic surveys, pollution, recreation, environmental warning systems, national security, polar sea development, and international collaboration.

Much needs to be done. Alaska waters are largely inadequately surveyed or unsurveyed altogether. Onshore geodetic control is minimal. Bathymetric charts for resource explorations are inadequate, and the securing of navigation charters with up-to-date data is difficult. Oceanographic data taken in the past from federal, state, and university expeditions in Alaska waters are yet to be correlated and placed in a single repository. In short, a great deal of marine survey data are required in order to permit governmental and industrial planning, explorations, and capital investment decisions. The task includes hydrographic surveys to increase the safety and efficiency of ferry and ship operations; geodetic control surveys to adequately plan and reference the development of resources, highways, communications, railroads, port and airport facilities and cities; and geodetic control for resolution of Alaska's seaward boundary; and bathymetric charts for fisheries, mineral and fossil-fuel resource developments on the continental shelf.

The Alaska Institute for Fisheries Development has been proposed in recognition of the importance of fisheries in Alaska's economy and the need for extension of assistance and demonstrational investigation and research for fisheries development. The future for Alaska's commercial fisheries is excellent. Most fishery resources are found on or over the world's continental shelves. Alaska has more than 550,000 of the U. S. total of 862,000 square miles of continental shelf area. Experts have estimated that Alaska's fishery potential is at least 5 to 10 times current production--including a half billion pounds of shrimp, 1.5 billion pounds of flounder, 1.2 billion pounds of cod and pollock, 500 million pounds of sablefish, and 500 million pounds of other species.

Economic development of Alaska's fishery potential can be hastened by an aggressive program of extension and demonstration of existing knowledge and research findings. The assumption is that government can be as effective in transforming knowledge into practice in fisheries as it has been in agriculture. This responsibility stems from the common-property status of the resource and from the basic structure of the industry.

The Fisheries Development Institute is conceived as a focal point for federal-state-industrial cooperation in developing new fisheries. Basically, the concept of the Institute is analogous to the many "college" farms and dairies that have been successful in extending knowledge to practice in the field of agriculture. The Institute would be a comprehensive and integrated venture of federal-state-industry cooperation in research and demonstration of new innovative technology for primary fisheries development and extension assistance to citizens for the development of a larger local share of the harvested fishery wealth.³

Of special interest, too, is the possible inclusion of Alaska in the National Science Foundation's emerging "Sea Grant College" program. Southcentral Alaska is the scene of rapidly expanding marine resource and industrial development. Scientific knowledge of the Alaska marine environment is an essential prerequisite and partner of this growth.

The University of Alaska has an excellent Institute of Marine Science growing in competence and stature. On-campus academic facilities are augmented through association with several governmental research centers in the biological, physical, and environmental sciences. The Institute now has a facility at Douglas Island in southeast Alaska, which has been in operation for the past several years, that offers an excellent outlet to the Alexander Archipelago region of southeast Alaska. This facility has special value for working the marine environment in this area, training students, and maintaining facilities for research on problems that can be especially well researched there. No other facilities permit an outlet to the sea and to the other vast regions of Alaska. The initiation of such other facilities is now especially timely.

In the 1967 legislative session three resolutions were passed encouraging the establishment of marine facilities at three locations along the southern coast of Alaska. These resolutions specified Kodiak, Seward, and Juneau as possible locations. Part of this interest at the state level was stimulated by Public Law 89-688, "The National Sea Grant College and Program Act," which was established for the purpose of accelerating national development of marine resources through support and encouragement to academic institutions, research institutions, and laboratories for which modest funding has been provided for FY 1968. The first such laboratory would likely be placed in one of the southcentral Alaska locations where investigation of the continental shelf of the Gulf of Alaska would be undertaken.

and at the same time permit studies of the very great resource area which includes Prince William Sound, Cook Inlet, Kenai Peninsula, and the Kodiak region. In the longer time period, similar installations might eventually be desired in southwest and northwest Alaska and even to the Arctic Coast.

Placing the above remarks in a time frame leads to the finding that, while the provision of information (if not discovery) is an on-going process, the results of scientific, technological, and engineering inquiry in ocean programs will not have dramatic developmental effects on Alaska over the one-to-three-year period. Results may be notable in the four-to-six year period in the petroleum industry and soon after that in the fisheries industry. Paybacks from research activities on the mining of the continental shelf might not eventuate until substantially later.

2. TRANSPORTATION⁴

The technological aspects of transportation and economic development in Alaska are many and varied. In some respects (though not all) Alaska presents the case in which there is an advantage in "coming last." That is to say, since the transport sector serving the state is generally still in the formative stages--perhaps with the exception of air transportation--there is the opportunity of leaping whole generations of technology, innovating and experimenting with new techniques and approaches, adapting and refining transport methods used elsewhere to the peculiarities of the Alaska case. At the minimum, where the transport sector is emerging and thus the inflexibility that comes with historical investment in particular patterns has not yet been experienced, the premiums on good policy planning are high and the possible paybacks great.

When looking at alternate transport technologies, a system view is, of course, required. Here must be considered both the inputs and the outputs in supplying transport facilities; for example, the relative capital requirements, operating and maintenance costs as well as paybacks, managerial talent, labor skills, associated facility requirements, and social and political impacts. In this context it has been pointed out that science and technology may make even a greater contribution to transportation by lessening the need for carriage than by supplying more capacity. If demands for transport can be reduced, scarce resources can be shifted to other neglected sectors of our economy. After all, it must be remembered that the main objective of our economy is higher standards of living and not merely higher standards of moving.⁵ Advances in communications, like the advent of television to Native villages for use in education (classrooms) and medical services (diagnoses), could result in marked reductions in travel demands presently associated with these two activities.

As all-pervasive as technology is to the total transport problem, its facets can at least be categorized into those associated with the mode

(air, water, road, rail, and pipeline), those with the medium through--or over--which transport takes place (air and water navigation, land surfaces), those with the transport plant (terminals, docks, airports), and those associated with ancillary equipment (containers, materials, handling gear). Improvements in all of these categories will largely be the solution to Alaskan transport difficulties. Some already have come or are on the near horizon in the Alaska transport picture. Containerization in rail and water transport in a part of the Alaskan trade, coupled with modern shore-loading equipment, has shortened turn-around times, lowered transit times and inventories and their costs to the commercial core of the state. Ice-breaking vessels might be utilized to extend the shipping season in the future.

Slow, World War II, converted cargo vessels with equally slow dock equipment and inadequate terminals still describe a large segment of the Alaska sea trade. Piggyback, fishyback, van lines and trainships are methods now familiar to the current scene. The helicopter is a major vehicle for servicing the needs of exploration and extraction of the oil and minerals industry in the state, and hovercraft are now in experimental usage in commercial carriage. The Lockheed C-130 has been placed in scheduled commercial service for the movement of bulk and outsize cargo to, from, and within the state--frequently to remote sites with minimum landing facilities.

The theme is a consistent one. Given the small population and the high price/cost problems of the Alaskan economy, the formula must be: Improved Transport Technology = Capital Intensiveness = Low Total Wage Bill and High Productivity. To quite a degree, the Anchorage-Kenai area of Region II is now enjoying the benefits of transportation advances that have recently come on the scene. A major task now is to continue the development of new transportation technology for the state generally and translate those cost and service benefits presently enjoyed by the Anchorage-Kenai area into improvements throughout the region and to other outlying regions. This last is entirely possible in the one-to-three-year period and should be in full swing in the four-to-six-year period. The really basic breakthroughs in transportation technology (e.g., submarine tanker, VTOL aircraft and ground-effect machines, and associated plant and cargo handling facilities) would seem to be beyond the seven-year time horizon.

3. CONSTRUCTION AND ENGINEERING

Given that the construction cost index is two-to-three times that of Seattle, Washington, in many of Alaska's communities it is proper to look to advances in construction and engineering sciences as an important avenue toward cost reduction. The task is many faceted. It involves moves toward capital-intensive techniques in order to increase efficiencies and reduce the total wage bill. It involves moves toward extending the construction

season by environmental-control techniques which tend to reduce seasonal unemployment; e.g., the pouring of cement at extremely low temperatures. An increase in the attention to and exchange of mining, transportation, and construction information with other countries of the circumpolar community should in the future be helpful here, but no immediate breakthroughs are seen to be on the horizon.

FOOTNOTES

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1. For a good recent compilation of the major themes and works in this field see the U. S. Department of Commerce, Economic Development Administration, publication, *Impact of Science and Technology on Regional Development*, prepared by Midwest Research Institute, December, 1967.
2. *Ibid.*, p. 31.
3. The Institute would be composed of a multi-discipline staff of experts and supportive facilities to develop new technologies throughout the productive chain from the fishermen's nets to the retailers' shelves. The program itself would be problem oriented.
4. Much of this discussion of technology and transportation has been drawn from the recent Federal Field Committee publication, *Transportation and Economic Development in Alaska*, prepared by the Transportation Task Force of the Federal Field Committee, 1968, pp. 114-120.
5. *Transportation*, Vol. V, Science, Technology, and Development, United Nations Conference on the Application of Science and Technology for the Benefit of the Less Developed Nations, p. 16. In the Alaskan case, as elsewhere, the minimizing of the need for movement can take the form of good land-use planning in terms of industrial park locations, the agglomerating of commercial activities close to docks or airports, and the like. Kenai and Kodiak are current examples of this. It can take the form of upgrading the value of the commodity to be shipped through processing and reducing weight and bulk, enabling the commodity to better absorb transport charges. Thus, freezing, drying, and canning of foods may be the technology that is to be pursued and not only transportation technology. From this can come additions to local employment, local capital accumulations, and a more efficient use of the transport system. Finally, the minimizing of the need for movement can come through substitution, for example, the transmission of power over high-voltage lines from a central source instead of the transport of fossil fuels to generate that power at the points of usage. The Anchorage-Fairbanks circumstance might be a case in point.

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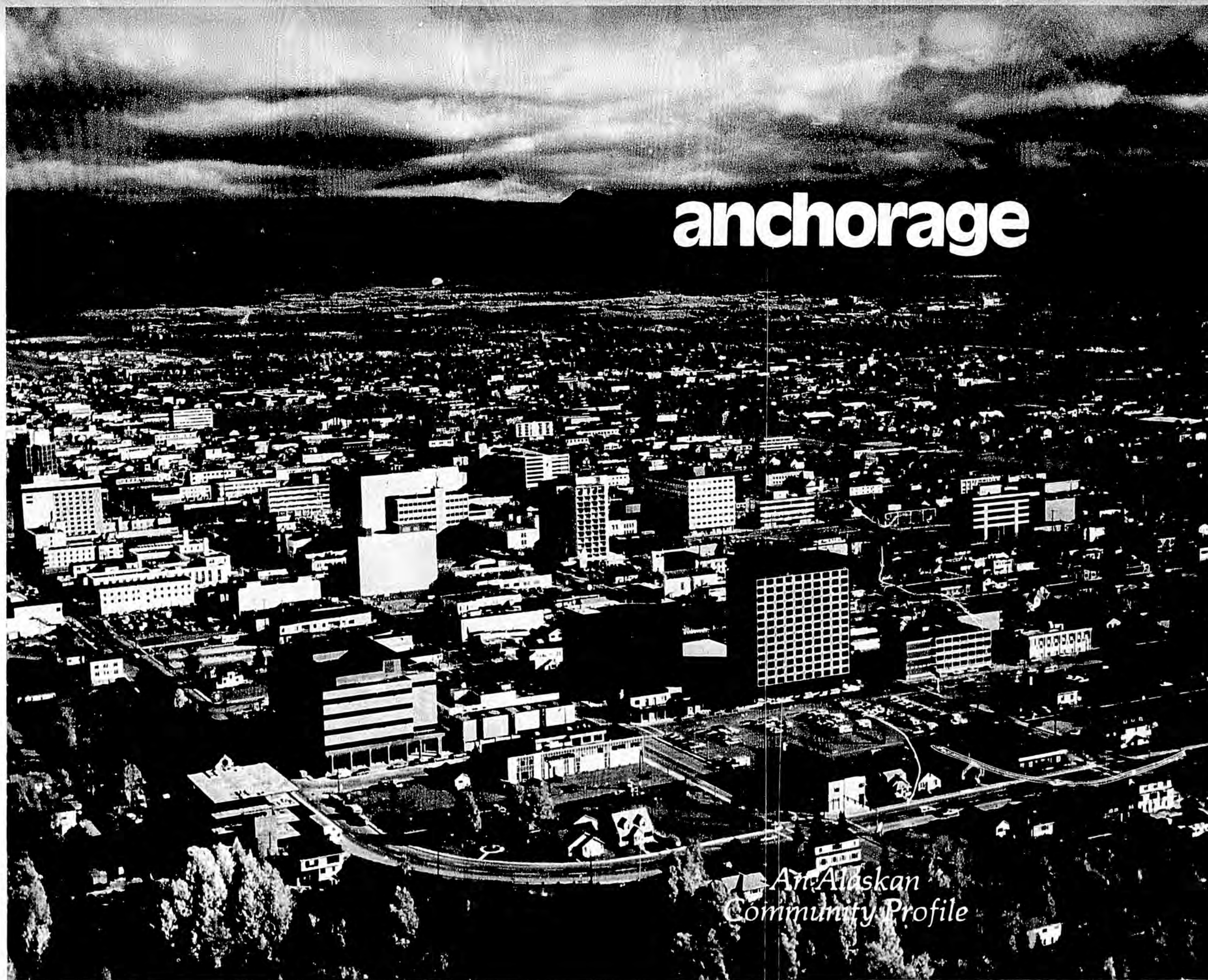
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Produced by:
Greater Anchorage Chamber of Commerce
and
State of Alaska
Division of Economic Enterprise

anchorage



*An Alaskan
Community Profile*

anchorage

Location

Anchorage, the largest city in Alaska, is located at the head of Cook Inlet. The city is at approximately the same latitude as Oslo, Norway, and same longitude as Honolulu, Hawaii. Actual flying time to Juneau is approximately 1 hour; to Seattle, 3 hours.

Population [1975 Est.]

Total Greater Area	173,800
Within City Limits	84,300
Outside City Limits	89,500

Transportation

Rail: Alaska Railroad from Seward to Fairbanks.

Truck: Most major national and West Coast trucking lines are represented by over 30 firms which serve Anchorage.

Air: Anchorage International Airport with a number of similar fields plus a seaplane base service the area. Major carriers include Air France, Alaska Aeronautical, Alaska Airlines, British Airways, Flying Tiger Line, Japan Airlines, KLM Royal Dutch Airlines, Lufthansa German Airlines, Northwest Orient, Reeve Aleutian Airways, Inc., SAS (Scandinavian Airlines), Sabena Belgian World Airlines, Western Airlines and Wien Air Alaska, among others. Additional air services are available through numerous charter, rental and freight firms.

Major Airfields	Length ft.	Surface	Ownership
Anchorage International	10,900	Asphalt	State
Cross Runway	4,742	Asphalt	State
Parallel Runways	10,897	Asphalt	State
E.W.	10,600	Asphalt	State
E.W.	10,897	Asphalt	State
Elmendorf	10,000	Concrete	USAF
Cross Runway	7,500	Concrete	USAF
Merrill Field	4,000	Asphalt	City
Lake Hood	2,470	Asphalt	City
Cross Runway	4,700	Water	State
N-S	2,700	Water	State
NW-SE	1,900	Water	State

Bus: Anchorage Borough Transit System - People Mover, Alaskan Coachways, Mt. McKinley Bus Lines, Tri-City Lines, Westours, American sightseeing, K & E Bus Line and Transportation Serviced, Inc.

Water: Numerous barge and van companies serve the area: Canadian National Railways (hydro-train), Crowley Maritime, Pacific Western Lines, Foss Launch and Tug, and Sea-Land. Port facilities include a city owned and operated general cargo dock with a heated transit shed. also, there is a petroleum dock to accommodate tankers. In addition, Anchorage receives extensive port service from Whittier and Seward facilities via the Alaska Railroad. NOTE: Berthing and docking references for Anchorage marine facilities can be obtained from the Port Director, Port of Anchorage, 2000 Anchorage Port Road, Anchorage, Alaska 99501.

Industrial Utilities Available

Water/Sewer

Water Supplier: City of Anchorage & Central Alaska Utilities

Source: Deep wells and Ship Creek Reservoir

Size of Water Mains: 2-48 inches

Average Daily Consumption: 31 million gallons daily (MGD)

Water Rates: Total monthly rate is sum of base rate demand charge and use charge

Size of Sewer Lines: Variable

Method of Treatment: Primary

Capacity: 34 MGD - average

Sewer Rates: Trunk and lateral assessment and monthly service charge.

Electricity:

Supplier: Anchorage Municipal Light and Power; Chugach Electric Association.

Industrial Rates

Monthly Usage/KWH	Average Cost/KWH
10,000 kwh	\$.0239/kwh
100,000 kwh	\$.0174515/kwh
1,000,000 kwh	\$.012502/kwh

Telephone:

Supplier: Anchorage Telephone Utility

Rates: Business \$17.25 - \$25.50

Residential: \$8.50 - \$14.00

Natural Gas:

Supplier: Anchorage Natural Gas

Rates: Vary with quantity demanded.

Local Government

City: First-class city with a Council-Mayor form of government.

	Property Tax	Valuation
Real and Personal Property	20.34 mills	\$968,933,185

Police Department: 85 patrolmen and 25-40 Alaska State Troopers.

Fire Department: 96 personnel with 81 actual firemen, four Engine Co., two Ladder Co., one petroleum extinguishing truck.

Insurance Classification: 3

Borough: The Greater Anchorage-Area Borough is a second class borough with a Mayor-Assembly form of government.

	Property Tax	Valuation
Real and Personal Property	11.45 to 18.10 mills	\$2,201,016,546

Borough Sales Tax: None

Borough Insurance Classification: 5 to 8.

Community Facilities

Medical/Dental: Five hospitals, with 816 beds, 90 dentists, 41 Alaska Native MC doctors, 44 military and 81 private, 16 clinics, 11 veterinarian clinics with 16 veterinarians, 21 pharmacies plus various other medical services and facilities. A new 180 bed hospital will be completed in 1976, and an additional expansion in one facility of 69 beds is scheduled in 1976.

Education:	Number of Classroom	Number of Pupils	Number of Teachers
Special Education	80	1,236	131
Elementary	774	17,583	727
Jr. High & Sr. High	742	17,280	799
Higher Ed.	113	10,056	520

There are additional private and vocational schools in the area.

Communications: Radio Stations: KANC, KENI, KHAR, KBYR, KFQD, KYAK, KJZZ-FM, KHAR-FM, KNIK-FM. Television: KAKM, KENI-TV, KTVA-TV, KIMO-TV. Newspapers: Anchorage Daily News and Anchorage Daily Times.

Recreation: A community Center, auditorium, two recreation centers, Pioneer Schoolhouse, many park areas with various facilities available including playground equipment, ball fields, tennis courts, hockey rinks, ice skating rinks, picnic areas, ski equipment and slopes, camper parks, stadiums, archery ranges, swimming, curling, snowmobiling, and gymnasiums, among other facilities.

General: Two museums, seven public libraries in the borough, approximately 100 denominations represented, and seven banking institutions with numerous branches, plus 3 savings and loan associations.

Housing

Efficiency rentals \$225 month and up
1 bedroom apartment rentals 300 month and up
2 bedroom apartment rentals 375 month and up
2 bedroom house sales 55,000 and up
3 bedroom house sales 60,000 and up

Hotels/Motels: There are numerous hotel/motel facilities in the area with a wide price range according to services and facilities available and accessibility.

Industrial Sites Available

Inside City Limits: Zoned Acreage Available: 1,800 acres available in North and East Anchorage

Percent Vacant: 26%

Size Lots Available: Variable

Most of the light industrial and warehousing sites are located in the Alaska Railroad Reserve. Some industrial land is also available around the major airfields and along the Alaska Railroad right-of-way.

Outside City Limits: Zoned Acreage Available: 3,100 acres of industrial sites.

Percent Vacant: 78%

Size Lots Available: Variable

Climate

Average Temperature

Period	Min.	Mean	Max.
January	-0.4	6.8	14.0
July	49.9	57.3	64.6
Annual	28.1	35.4	42.6

Total Annual Precipitation 13.42 inches

Elevation 114 feet

Prevailing Wind Direction North

Mean Hourly Speed 6.6 mph

Industry

Anchorage is the center of commerce for the State. Oil, finance, and transportation industries and the Federal Government agencies have headquarters in Anchorage. About 13,000 military personnel are located adjacent to Anchorage, at Elmendorf AFB and Fort Richardson Army Base.

Anchorage Area Payroll & Employment 1973

Average Employment	Industry	Annual Payroll (\$ million)
769	Mining	\$ 14.9
4,178	Contract Construction	75.3
1,286	Manufacturing	16.2
4,625	Transportation Communications & Utilities	65.9
2,475	Wholesale Trade	35.0
8,769	Retail Trade	71.2
2,803	Finance, Insurance & Real Estate	32.0
8,319	Services	77.5
9,558	Federal Government	127.5
8,345	Local & State Gov't	107.6
82	Agriculture, Forestry & Fisheries	.8
13,096	Military Personnel	129.7
64,305	TOTALS	\$753.6

Labor

The Anchorage labor market has available workers in most occupations nearly year round. Dependents of military bases provide a sizable talent pool in clerical and sales occupations. Seasonal factors contribute to the high unemployment rate, which averaged 9.6% in 1973.

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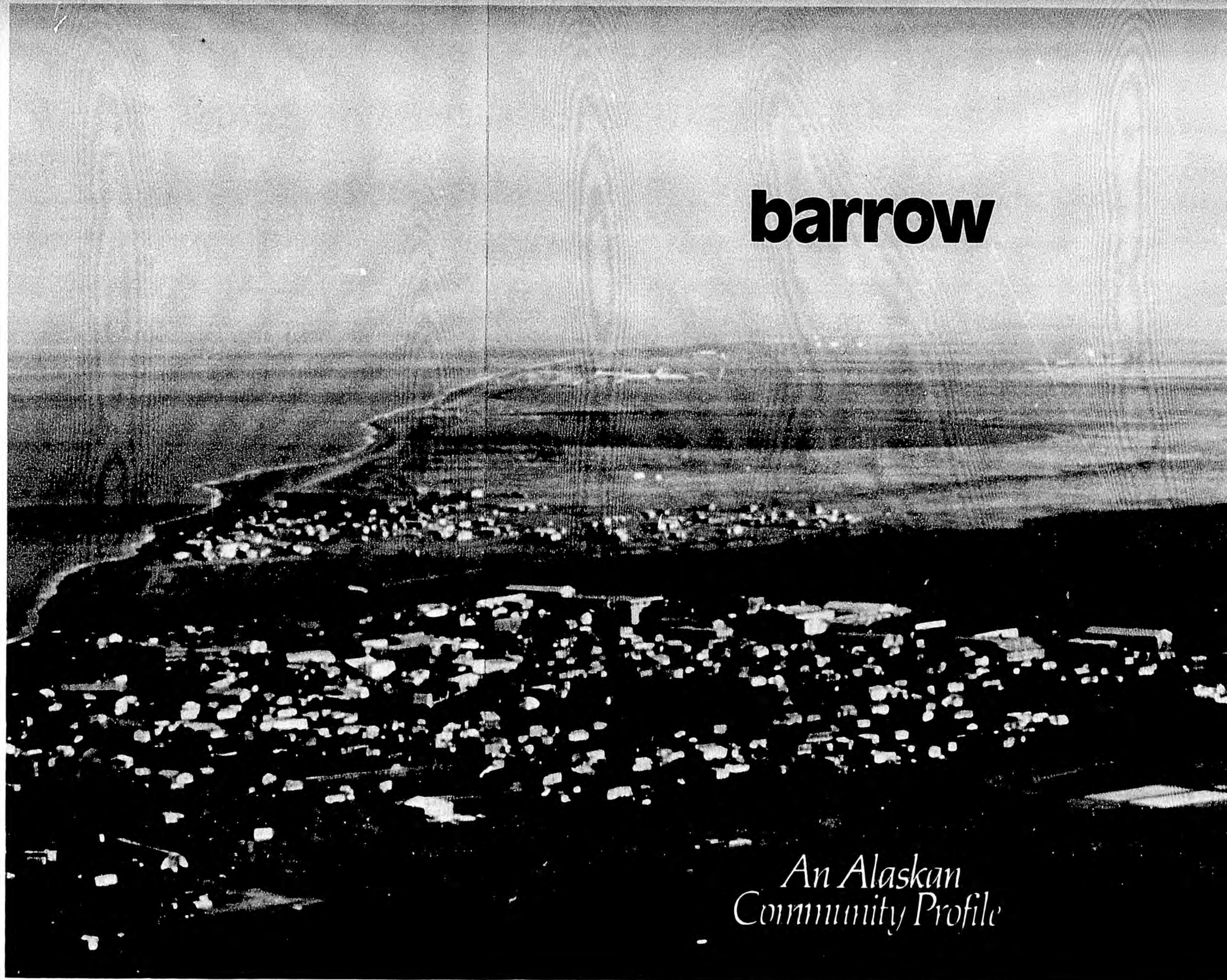
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Division of Economic Enterprise.

barrow



*An Alaskan
Community Profile*

barrow

Location

Barrow is located on the shores of the Arctic Ocean, some 330 miles above the Arctic Circle. It is the northernmost point of land on the North American continent. By air, Barrow is 2 hours 45 minutes from Anchorage; 4 hours 30 minutes from Juneau; and 5 hours 30 minutes from Seattle.

Population

Greater Area	2,869
Within City Limits	2,307

Transportation

Rail: None
Truck: None
Air: 6,500' paved runway. Wien Consolidated Airlines has 2 flights 7 days a week in the summer and once a day in the winter. Also Arctic Guide Charter Service and Fel-Air Taxi Service.

Climate

Average Temperature

Period	Min.	Mean	Max.
January	-21.6	-15.0	-8.4
July	33.2	39.3	45.3
Annual	3.9	9.6	15.3

Average Annual Precipitation . . . 4.3 inches
Elevation Sea Level
Prevailing Wind Direction East
Mean Hourly Speed 11.0 mph

Community Facilities

Medical/Dental: Twelve bed hospital; one clinic; two doctors; one dentist; one pharmacist and one laboratory technician.

Education:	Number of Classrooms	Number of Pupils	Number of Teachers
Elementary	22	115	22
Jr. High	6	40	N/A
Sr. High	2	41	2

Communications: Alaska Forces Radio Network or newspaper; cable T.V. service available.

Recreation: One theater and a community center. Area available for cross-country skiing, snowmobiling, skating, boating (during ice-free season), and camping.

General: Three churches, one library, and one financial institution.

Housing

1 bedroom apartment rental \$125-250/month
2 bedroom apartment rental \$150-500/month
1-2 bedroom house rental . \$150-200/month
1-2 bedroom house sale \$12-15,000
1-2 bedroom house sale \$14-25,000

Hotels/Motels: There are two hotels available, one open only during tourist season.

Industry

Supporting the area economy are defense installations and their contractors, the U.S. Navy Arctic Research Laboratory, and petroleum and natural gas exploration and governmental center of Weather Bureau Service and headquarters of Arctic Slope Regional Corporation.

Estimated Employment

Agriculture	0
Construction	60
Finance	10
Government	250
Mining	30
Manufacturing/Processing	0
Service	160

Trade	45
Transportation, Comm.	86
Total	641

Industrial Utilities Available

Water/Sewer:
Water Supplier: Two Private Hauling Companies.
Source: Fresh Water Lake
Rates: \$.065 per gallon for industrial use.
Sewage: Sewer facilities available at present time only to BIA, PHS Hospital, and U.S. Weather Bureau.

Electricity:
Supplier: BIA to Federal agencies and Barrow Utilities Inc., Barrow Utilities Incorporated to public.
Residential Rates:
\$.15 KWH.
Commercial Rates:
Monthly Usage/KWH Cost/KWH
First 220 KWH \$.15/KWH
220-600 \$.12/KWH
600-1020 \$.10/KWH
Over 1020 \$.09/KWH

Natural Gas:
Supplier: U.S. Navy to Barrow Utilities Inc.
Rates: Commercial \$1.25 to 1.65 per 1000 cubic feet.
Minimum monthly rate \$100.00

Telephone:
Supplier: General Telephone Company
Rates: Business: \$21/month
Residential: \$14/month private
\$12/month party line

Industrial Sites Available

Inside City Limits:
Flat undrained land, permafrost to depths of more than 500 feet with piling necessary.

Acreage Available: Limited space available, approximately two acres.

Breakdown by Zoning: No current zoning ordinance

Percentage Vacant: 100%

Outside City Limits:

None, all property outside city limits is within Naval Petroleum Reserve No. 4.

Labor

The labor force drawn from Barrow and the neighboring villages, includes many skilled and semi-skilled people available for work.

Local Government

City: First-class city with a Council form of government.

Property Tax Valuation

Real Property	None	\$2,500.00 (est.)
Personal Property	None	N/A

City Sales Tax: 3%

Police Department: Two State Troopers, 3 Patrolmen, 1 Chief, 1 Jail Guard

Facilities: Two vehicles, one snowmobile

Fire Department: Twenty-six volunteers.

Equipment:

One 1,200 gallon pumper with reserve assistance available from Arctic Research Laboratory. One truck — 1,000 gallon.

Borough: Barrow is the headquarters for the North Slope Borough, a home rule Borough which has recently assessed a real property tax to finance Borough administrative services.

	Borrow Property Tax	Barrow Valuation
Real Property	13 mills	\$ 2,587,189
Personal Property	13 mills	17,079,565

Borough Sales Tax: 3%

*For further
information
contact*

Manager
Greater Fairbanks Chamber
of Commerce
550 1st Avenue
Fairbanks, Alaska 99701

Mayor
Fairbanks North Star Borough
Box 1267
Fairbanks, Alaska 99707

City Manager
City of Fairbanks
410 Cushman Street
Fairbanks, Alaska 99701

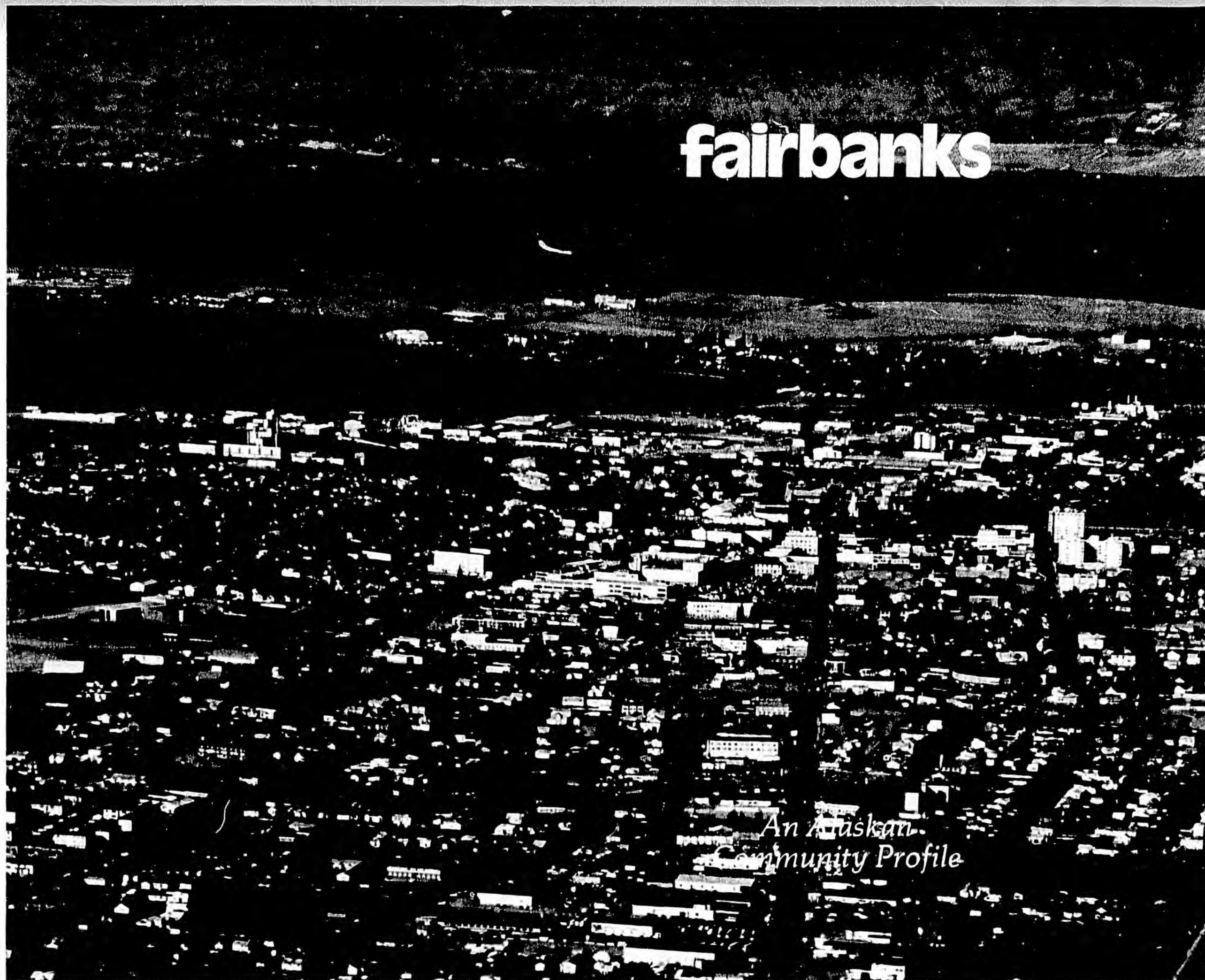
State of Alaska
Department of Commerce &
Economic Development
Division of Economic Enterprise
Pouch EE
Juneau, Alaska 99811



Produced by:
Fairbanks Chamber of Commerce,
The City of Fairbanks,
and
State of Alaska
Division of Economic Enterprise

fairbanks

*An Alaskan
Community Profile*



fairbanks

Location

Fairbanks is located in the heart of Alaska's interior at the northern end of the famed Alaska Highway. By air, Fairbanks is 3 hours from Seattle, 45 minutes from Anchorage, and 2 hours 10 minutes from Juneau.

Population

Greater Area	63,350
Within City Limits	32,975

Transportation

Rail: Alaska Railroad
Truck: Dieringer Trucking Service, Alaska Truck, Ar-dee Alaska Truck, H&S Warehouse, Consolidated Freightways, JC Trucking, PAE, Inc., Continental Van Lines, Fairbanks Trucking, Frank's Trucking, Frontier Transportation, K&W Trucking, Lynden Transfer, Mukluk Freight, Sea-Land Freight, Sig Wold Transfer, Sourdough Express, Weaver Brothers, Inc.
Air: 13 daily flights to Anchorage, 15 daily flights to Seattle, one weekly flight to New York and to Tokyo. Airlines: Wien Air Alaska, Alaska Airlines, Pan American, Alaska International Air, Inc., Air North, Frontier Flying Service, Alaska Central Air, Merric, Inc., Tanana Air Taxi, Wrights Air Service, Tundra Copters, Inc., Winship Air Service, Pacific Alaska, Alaska Air Charter, Aurora Air Service, Flightways. In addition, there are eight freight agencies.
Bus: Inter-city: Alaska Coachways-Service to Whitehorse, etc. Intra-city: Golden Transit, Sturgeon Transit, Fairtrails-Alaska Tours and Sightseeing, Westours, Transportation Services.

Climate

Average Temperature			
Period	Min.	Mean	Max.
January	-23.5	-16.3	-9.1
July	54.1	64.5	74.9
Annual	15.1	24.5	33.8

Average Annual Precipitation . . . 11.22 inches
 Elevation . . . 436 feet
 Prevailing Wind Direction . . . North
 Mean Hourly Speed . . . 5.3 mph

Community Facilities

Medical/Dental: 116-bed hospital, six clinics, 57 doctors, 20 dentists, six veterinarians.

Education:	Classrooms	Pupils	Teachers
Elementary	189	6,613	325
Jr. High	89	2,359	135
Sr. High	71	2,617	160
Priv/Paro.	20	301	24
Higher Ed.	N/A	4,134	385

Vocational: Beauty school, courses at the University of Alaska and in borough schools. Adult Career Development Center, Tanana Valley Community College.

Communications: Radio Stations: KUAC-FM, KFAR, KFRB, KIAK, KJNP; Television Stations: KUAC-Education, KTVF, KFAR. Newspapers: Fairbanks Daily News-Miner, All Alaska Weekly, Tundra Times, River Times.

Recreation: Big Dipper Community Building, swimming pool, Alaskaland, bowling alleys, and theaters (NOTE: Bowling: one community, one civic, one military. Theaters: two community, one civic, two military.) Four city parks, cross country and downhill skiing, recreation sites (Birch Hill, Harding Lake), golf course, tennis, ice skating, curling, dog mushing, ice hockey, and trap shooting.

General: 50 churches, two libraries, seven banking institutions, one synagogue.

Housing

1 bedroom apartment rental	\$190-400/month
2 bedroom apartment rental	\$200-500/month
1-2 bedroom house sales	\$35-45,000
3+ bedroom house sales	\$50,000 & up

Hotels/Motels: There are 23 hotel/motel facilities available.

Industry

Fairbanks serves as the transportation-trade center for Northern and Interior Alaska.

Estimated Employment	
Agriculture	180
Construction	3,400
Finance	700
Government	7,200
Mining	300
Manufacturing/Processing	350
Service	3,200
Trade	3,200
Transportation, Comm.	2,200
Other	1,750
Total	22,480

Labor

Experienced unemployed available for work number about 1,790 of which 1,140 are male, 650 female. Occupations of surplus availability include operatives, professional, managerial, and clerical workers.

Industrial Sites Available

There is a total of 7,640 acres zoned industrial.

Inside City Limits:

Peger Road, Alaska Railroad, Cushman Street.

Breakdown by Zoning:

Southwest Fairbanks	580 acres
North Fairbanks	
Light Industrial	210 acres
Heavy Industrial	130 acres
South Fairbanks	
Light Industrial	40 acres

Percentage Vacant: 35%
 Acreage Available: 340 acres
 Size Lots Available: 10,000 + sq ft.

Outside City Limits:

North Pole, Van Horn, and Airport Area

Breakdown by Zoning:

North Pole	
Heavy Industrial	440 acres
Van Horn	
Heavy Industrial	1,760 acres
Airport	
Air Industrial	4,480 acres

Percentage Vacant: 70%
 Size Lots Available: 40,000 + sq. ft.

Industrial Utilities Available

Water/Sewer:

Water Supplier: Municipal Utilities System
 Source: Processed ground water
 Size of Water Mains: 6-18 inches
 Average Daily Consumption: 2,346,000
 Size of Sewer Lines: 8-10 inches
 Method of Treatment: Primary
 Capacity: 3,500,000 gpd
 Rates: Based on sq. ft. assessment

Within the City of Fairbanks: Industrial sites have water and sewer facilities available.

Electricity:

Supplier: Within Fairbanks, the Municipal Utilities System. Outside Fairbanks, the Golden Valley Electric Association.

Range of Electrical Rates Municipal Utility System

Monthly Usage/KWH	Average Cost/KWH
10,000	\$.0421/KWH
1,000,000	\$.0176/KWH

Golden Valley Electric Association

Monthly Usage/KWH	Average Cost/KWH
10,000	\$.0395/KWH
1,000,000	\$.0301/KWH
+ monthly sur-charge/KWH	

Telephone:

Supplier: Municipal Utilities System
 Rates: Business \$8.40-\$23.00
 Residential: \$6.50-\$10.35

Local Government

City: Home rule with Mayor-Council form of government.

	Property Tax	Valuation
Real Property	11.5 mills	\$279,248,385
Personal Property	None	N/A

City Sales Tax: 3% collected by borough.
Police Department: 72 personnel. Facilities: 13 patrol cars, one mobile crime laboratory
Fire Department: 70 employees. Facilities: Six pumpers, one truck company, three ambulances, one medic unit, one rescue truck, five auxiliary units.

Insurance Classification: 4
 Borough: Fairbanks North Star Borough is second-class with a Mayor-Assembly form of government.

	Property Tax	Valuation
Real Property	6.5 mills	\$610,791,595
Personal Property	None	N/A

Borough Sales Tax: 2%
Insurance Classification: 10

*For further
information
contact:*

Greater Juneau Chamber of Commerce
200 North Franklin Street
Juneau, Alaska 99801

City & Borough of Juneau
Planning Office
155 South Seward St.
Juneau, Alaska 99801

State of Alaska
Department of Commerce &
Economic Development
Division of Economic Enterprise
Pouch EE
Juneau, Alaska 99811



Produced by:
Greater Juneau Chamber of Commerce and
State of Alaska
Division of Economic Enterprise

juneau

*An Alaskan
Community Profile*



juneau

Location

Juneau is located on the southeast coast of Alaska along the inside passage, 1,090 miles north of Seattle. Flight time to Seattle is 2 hours 5 minutes and 1 hour 20 minutes to Anchorage.

Population

Greater Area	19,000
Within City Limits	19,000

Transportation

Rail: None

Truck: Alaska Transfer, Reliable Transfer, Lynden Transfer, Douglas Trucking Company, A.N. Kaiser & Sons Trucking, and Orme Transfer Co., Inc.

Air: Flights three times a day to Seattle and twice daily to Anchorage by Alaska Airlines, flights 3 times a week to Whitehorse and Fairbanks by Wien Consolidated, and charter service by Southeast Skyways, Channel Flying, LAB Flying, Livingston Copters, S&M Flying, Goodwin Air Taxi, and Capital Air, Inc.

Water: Docking facility for 15,000 tons up to 525 feet. Deep water port. Parker Tug & Barge, Foss-AK Line, Inc., Northland Marine Lines. 3 barge landing facilities. Alaska State Ferry System.

Bus: Capital Transit Bus Service, American Sightseeing Co. limousine service.

Climate

Average Temperature

Period	Min.	Mean	Max.
January	20.0	25.1	30.1
July	47.8	55.3	62.7
Annual	33.7	40.1	46.4

Average Annual Precipitation54.6 inches
Elevation12 feet
Prevailing Wind DirectionEast Southeast
Mean Hourly Speed8.6 mph

Community Facilities

Medical/Dental: 67-bed hospital, 13 physicians and 9 dentists. PHS clinic with 3 physicians and 2 dentists.

Education:	Number of Classrooms	Number of Pupils	Number of Teachers
Elementary	99	2363	93
Jr. High	51	1141	52
Sr. High	47	753	47
Alternative High School	NA	114	8
Higher Ed.*	14	1014	65

NA = Not Available

*Includes Full & Part-time Students & Instructors.

Resource and special education services are available to all schools and students. In addition programs for gifted & talented are available in elementary schools.

Communications: 2 AM Radio Stations: KJNO, KINY, and one FM station KTOO. Television: KINY and cable system with two additional channels. Newspaper: Southeast Alaska Empire—5 days/week.

Recreation: 3 motion picture theaters, little theatre, indoor swimming pool, 5 gymnasiums, bowling alley, teenage club, museum, skating, hunting, fishing, 6 small boat harbors, 6 tennis courts, baseball, picnicking and camping facilities, skiing, hiking and cross-country skiing, planetarium, riding stable, year round outdoor sports facility under development.

General: 25 churches, 3 libraries, and 5 financial institutions.

Housing

1 bedroom apartment rental . . \$225-275/month
2 bedroom apartment rental \$300-375/month
1-2 bedroom house rental . . . \$275-350/month
3+ bedroom house rental . . . \$375-475/month
1-2 bedroom house sales \$25-40,000
3+ bedroom house sales \$40-65,000

Hotels/Motels: There are 11 hotel/motel facilities available at various rates.

Industry

Juneau, Alaska's capital city, has been the seat of territorial and State government since 1906.

Estimated Employment - 1974

Agriculture	0
Construction	490
Finance, Ins., & Real Estate	290
Government	4730
Mining	10
Manufacturing/Processing	100
Service	940
Trade	1150
Transportation, Comm.	670
Other	190
Total	8570

Labor

Juneau maintains a tight labor supply on a year around basis and historically has the lowest unemployment rate of any region of Alaska. A small number of professional, clerical, sales, skilled and semi-skilled workers are available.

Industrial Sites Available

Inside Central Service Area: Acreage available: 140 acres zoned for industrial use.

Percent Vacant: 70%

Size Lots Available: Variable

Outside Central Service Area: There is considerable acreage, zoned industrial, approximately 500 acres, located north of Juneau. Large blocks of land are available near the municipal airport for light industrial use.

Industrial Utilities Available

Water/Sewer:

Water Supplier: Juneau Service Area, Douglas Service Area

Source: Reservoirs and wells

Size of Water Mains: 4-16 inches

Average Daily Consumption: N/A

Industrial Water Rates*:

First 25 million \$0.175 per 1,000 gallons
Next 35 million \$0.05 per 1,000 gallons
Over 60 million \$0.175 per 1,000 gallons

Size of Sewer Lines: 8-36 inches
Method of Treatment: Secondary treatment.
Capacity: 2.7 million gallons per day.
Sewer Rates: Vary due to size or type of establishment

*Yearly consumption of 18 million gallons required to qualify. If less than 18 million gallons, rates based on size of water mains, consumption and availability of meters.

Electricity:

Supplier: Alaska Electric Light & Power Company

Commercial Rates:

First 1,000 KWH \$0.058
Next 3,100 KWH \$0.054
All Additional KWH \$0.043

Telephone:

Supplier: Continental Telephone System
Rates: Business: \$18.00-20.50
Residential: \$11.00-18.00 private
6.50-8.75 four party line
Plus 13.4% Surcharge

Local Government

City/Borough: City and Borough of Juneau is a unified home rule city and borough with Council Manager form of government

	Property Tax	Valuation
Real Property	13.6-16.6 mills*	\$199,103,800
Personal Property	None	\$ 47,124,875

*Rates vary according to service area.

City Sales Tax: 2%; Borough: 1%

Police Department: 33 personnel provide coverage for central service area, Douglas and West Juneau. The rural areas and Mendenhall Valley are covered by The Alaska State Troopers.

Fire Department: 12 full-time employees plus a volunteer force in Juneau; 7 full-time employees, plus a volunteer force in the Mendenhall Valley; volunteer forces at Douglas, Auke Bay, and Lynn Canal.

Insurance Classification: Juneau—5;
Douglas—6.

*For further
information
contact:*

City of Kenai
P.O. Box 580
Kenai, Alaska 99611

Kenai Chamber of Commerce
Box 497
Kenai, Alaska 99611

State of Alaska
Department of Economic Development
Division of Economic Enterprise
Pouch EE
Juneau, Alaska 99811

Kenai Peninsula Borough
Planning Department
Economic Development Office
Box 850
Soldotna, Alaska 99669



Produced By:

Kenai Peninsula Borough
Economic Development Office and
State of Alaska
Division of Economic Enterprise

kenai



*An Alaskan
Community Profile*

kenai

Location

Kenai is located south of Anchorage on Cook Inlet and the central Kenai Peninsula. The city is 161 highway miles from Anchorage. By air, Kenai is 3 hours from Seattle, two hours and 19 minutes from Anchorage.

Population

Central Peninsula	12,000
Within City Limits	4,100

Transportation

Rail: None

Truck: Mukluk Freight, Weaver Brothers, Sea-Land, Triple A, Smyth Moving, Homer Freight Lines.

Air: Passenger Service by AAI. Charter services include Kenai Air Service, Bielefeld Air, Andy's Flying Service, Falcon Aviation, Kenai Float Plane Service.

Water: Northland Marine Line and Foss Alaska Line do not operate on regular schedule, but services are available. The Nikiski Dock, located at North Kenai is used by ocean-going freighters. Expanded dock facilities are planned.

Bus: Inter-city: Mt. McKinley Bus Lines is scheduled into Kenai.

Climate

Average Temperature

Period	Min.	Mean	Max.
January	3.7	12.7	21.6
July	46.1	53.5	61.0
Annual	24.5	33.1	41.7

Average Annual Precipitation . . 19.9 inches
Elevation 86 feet
Prevailing Wind Direction North
Mean Hourly Speed 6.6 mph

Community Facilities

Medical/Dental: Three doctors, two dentists, 40-bed hospital located at Soldotna.

Education:	Number of Classrooms	Number of Pupils	Number of Teachers
Elementary	42	557	33
Jr. High	25	406	25
Sr. High	38	539	42
Higher Ed.	42	450	25

Communications: Radio Stations: KSRM (Soldotna), KENI, KBYR, KHAR, KFQD, KYAK, KNIK, (all Anchorage). Television Stations: KENI, KTVA, KIMO, (all Anchorage). Newspapers: Cheechako News, Cook Inlet Courier, Peninsula Clarion.

Recreation: Two theaters, one museum, Fort Kenay Historical site, Russian Orthodox Church National Shrine, 80-acre campground and park, skiing, skating, hiking, boating, fishing, hunting, hockey rink, drag strip, five baseball fields, three football fields, two tennis courts, and snowmobiling.

General: 19 churches, one community library, three financial institutions.

Housing

1 bedroom apartment rental . .	\$250./month
2 bedroom apartment rental . .	\$275./month
1-2 bedroom house rental	\$350./month
3+ bedroom house rental	\$450./month
1-2 bedroom house sales	\$35,000
3+ bedroom house sales	\$40,000
Hotels/Motels: Six hotel/motel facilities available.	

Industry

Kenai was the site of the first major oil strike in 1957 and has served as a center for exploration and production since that time. Commercial fishing and processing contributes to economy. The Kenaitze Wildwood Training and Research Center is located here.

Estimated Area Employment

Kenai — Cook Inlet

Agriculture (and fishing)	870
Construction	350
Finance	80
Government	960
Mining/Oil	560
Manufacturing/Processing (average)	620
Service	580

Trade	490
Transportation, Comm.	290
Other	90
Total	4,890

Industrial Sites Available

Inside City Limits:

Acreage Available: 350 acres
Percentage Vacant: 50%
Size Lots Available: Variable, waterfront heavy industrial and airport light industrial

Outside City Limits:

Unlimited

Industrial Utilities Available

Water/Sewer:

Water Supplier: City of Kenai
Source: 1-10 inch artesian well, 9 wells at 3 locations
Size of Water Mains: 10 inches
Average Daily Consumption: 300,000 gallons
Water Rates: \$.25 per 1,000 gallons; \$.18 per 1,000 gallons in North Kenai.
Size of Sewer Lines: 8-16 inches
Method of Treatment: Tertiary
Capacity: Services a population of 5,000 people.

Rates: 66²/₃% of water rate. Most industrial sites have water and sewer in Kenai.

Electricity:

Supplier: Homer Electric Association

RANGE OF RATES COMMERCIAL & INDUSTRIAL			
Monthly Usage KWH	Maximum Demand	Net Mo. Elec. Bill	Avg. Cost Per KWH
10,000	50 KW	\$ 420.	\$.042
30,000	50 KW	1,000.	.034
100,000	500 KW	3,400.	.034
200,000	500 KW	5,600.	.028
INDUSTRIAL			
Industrial rate available when monthly demand exceeds 1,000 KW.			

Natural Gas:

Supplier: Kenai Utility Service Corporation
Rates: Small commercial/residential

First 2,000 cubic feet \$5.00
Next 3,000 cubic feet \$18/hundred C.F.
All over 5,000 cubic feet . \$11/hundred C.F.
Large commercial \$80/1000 C.F.

Telephone:

Supplier: Glacier State Telephone Company
Rates: Business: \$14.50-22.65
Rates: Residential: \$11-14.85

Labor

The Kenai labor market includes the immediate Kenai community, the North Kenai Road, and the Soldotna and Sterling communities. Within the 20 mile radius of Kenai, there are approximately 30 professional and clerical, 30 sales and service, 70 skilled, 60 semi-skilled and 100 unskilled people available for work.

Local Government

City: Home rule city with a Council — Manager form of government.

	Property Tax	Valuation
Real Property	12.5 mills	\$38,124,957
Personal Property	12.5 mills	\$ 8,020,060

City Sales Tax: 1%
Police Department: City police and Alaska State Troopers

Fire Department: 9 paid personnel plus volunteers. Equipment: 3 class "A" pumpers, one crash/rescue unit, one ambulance.

Insurance Classification: 5 inside city, 9 outside city.

Borough: Kenai Peninsula Borough, second-class borough with Mayor-Assembly form of government.

	Property Tax	Valuation
Real Property	5 mills	\$510,227,332
Personal Property	5 mills	\$ 47,762,190

Borough Sales Tax: 3%

nome

*For further
information
contact:*

City Manager
City of Nome
P.O. Box 281
Nome, Alaska 99762

State of Alaska
Department of Commerce &
Economic Development
Division of Economic Enterprise
Pouch EE
Juneau, Alaska 99811



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City of Nome
and
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*An Alaskan
Community Profile*

nome

Location

Nome is located 510 miles north of Anchorage on the Seward Peninsula, on the Bering Sea. By air, it is 1 hour, 15 minutes from Anchorage, 5 hours from Juneau, and 6 hours 30 minutes from Seattle, including stopover times.

Population

Greater Area 7,000
Within City Limits 2,535

Transportation

Rail: None
Truck: Local service available
Air: Wien Air Alaska

Water: Alaska line. No berthing facilities for large vessels, lightering required. Water depth of eight feet accommodates a vessel with five foot five inches draft.

Highways: 72 mile Nome-Teller Highway (west), 68 mile Nome-Council Highway (east), 87 mile Nome-Kougarok River Highway (north).

Bus: None

Climate

Average Temperature

Period	Min.	Mean	Max.
January	-2.7	4.4	11.5
July	44.4	49.5	54.6
Annual	19.5	26.1	32.6

Average Annual Precipitation 17.9 inches
Elevation 13 feet
Prevailing Wind Direction North
Mean Hourly Speed 11.0 mph

Community Facilities

Medical/Dental: 24-bed hospital, one clinic, three doctors, three dentists.

Education:	Number of Classrooms	Number of Pupils	Number of Teachers
Elementary-			
Jr. High	35	565	35
Sr. High	25	320	30
College*	1	120	5

*Northwest Community College

Communications: Radio Stations: KNOM and KICY. Television: T.V. cable system with three channels and one public T.V. station. Newspaper: Nome Nugget

Recreation: Theater, bowling alley and numerous civic and fraternal groups.

General: Seven churches, one library and one financial institution.

Housing

Apartment rentals \$200-520/month
House sales (limited availability) . . \$25-75,000

Hotels/Motels: There are two hotel/motel facilities in Nome.

Industry

Nome is the transportation and commerce center for Northwest Alaska. Alaska's reindeer industry is centered in the Nome vicinity. The immediate area has rich mineral potential.

Estimated Area Employment

Agriculture (herders)	20
Construction	70
Finance	40
Government	710
Mining	60
Manufacturing/ Processing	30
Service	190
Trade	160
Transportation, Comm.	180
Other	10
Total	1,470

Labor

The labor force of Nome and nearby rural villages ranging from Stebbins to Shismaref, includes a large supply of skilled, semi-skilled and unskilled people available for work.

Industrial Sites Available

Within City Limits:

Acreage Available: 2560 acres
Percent Vacant: 70%
Size Lots Available: Lots 50 feet by 130 feet

Outside City Limits:

Acreage Available: 14 square miles
Percent Vacant: 100%
Size Lots Available: Variable

Industrial Utilities Available

Water/Sewer:

Water Supplier: City of Nome
Source: Moonlight Spring, Snake River
Size of Water Mains: 4-10 inches
Average Daily Consumption: 30,130 gallons
Water Rates (industrial): \$.06 per gallon
Size of Sewer Lines: 8-10 inches
Method of Treatment: Penta-Creosol
Capacity: 6,000 population
Rates: \$4.00/month (residential)

Electricity:

Supplier: Nome Light and Power Utilities
Rates: Average cost per kwh is \$.12 for everyone

Telephone: Supplier: General Telephone Company of Alaska
Rates: Business: \$14.40
Residential: \$9.05

Local Government

City: First-class city with a Mayor-Council form of government

	Property Tax	Valuation
Real Property	17.9 mills	\$7,668,434
Personal Property	17.9 mills	\$3,720,366

City Sales Tax: 3%

Police Department: Seven personnel
Fire Department: 28 volunteers, two trucks
Insurance Classification: City 7, Outside 9

Borough: Nome is not located in an organized borough.

*For further
information
contact*

City Manager
City of Valdez
Box 506
Valdez, Alaska 99686

Valdez Chamber of Commerce
Box 62
Valdez, Alaska 99686

State of Alaska
Department of Commerce &
Economic Development
Division of Economic Enterprise
Pouch EE
Juneau, Alaska 99811

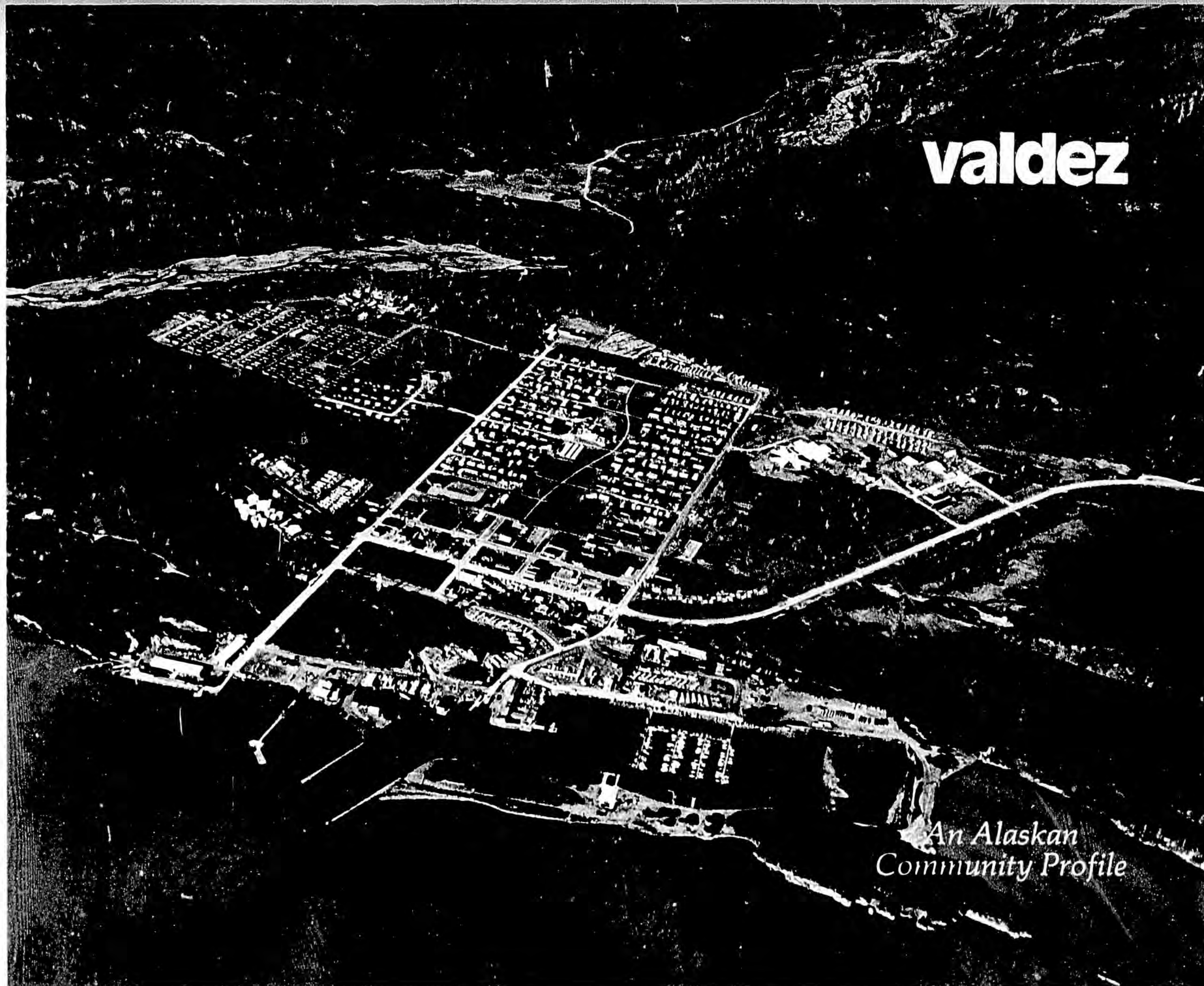


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valdez

*An Alaskan
Community Profile*



valdez

Location

Valdez is located on Prince William Sound in Southcentral Alaska, 120 miles east of Anchorage, in the Lowe River Valley.

Population:

Within City Limits 6,670

Transportation

Rail: There are rail barge facilities, but no rail link to the Alaska Interior.

Truck: Weaver Brothers, Unfer Brothers Trucking, O.G. Ness Trucking, Dieringer Trucking, Copper Freight Lines, Bayless and Roberts, KAPS Trucking, Dicks Trucking, Mukluk Freight Lines.

Air: Scheduled flights, Alaska Airlines, Polar Airways, Alaska Aeronautical Industries, Un-scheduled flights, Kennedy Air Service.

Water: 600 foot deep channel, dock facilities, two warehouses and a private POL dock, Alaska Marine Highway.

Bus: Transportation Services, Inc., - Anchorage to Valdez and return, local service. Air Limosine Service.

Climate

Average Annual Temperature

Period	Min.	Mean	Max.
January	11.7	18.8	25.9
July	45.1	52.8	60.4
Annual	28.2	35.7	43.2

Average Annual Precipitation 60 inches
Elevation 15 feet
Prevailing Wind Direction Southwest
Mean Hourly Speed 6.4 mph

Community Facilities

Medical/Dental: Harborview Memorial Hospital has 144 beds for resident patients. Valdez Community Hospital (operated by Lutheran Hospital and Homes Society of America) with fifteen beds for local use. Fairbanks Medical

and Surgical Clinic with two doctors. One doctor in private practice; one ophthalmologist from Fairbanks; one local dentist; one chiropractor.

Education	Number of Classrooms	Number of Pupils	Number of Teachers
Elementary	21	584	23
Senior High School	17	210+	17

Elementary students in half-day shifts. Eight additional classrooms scheduled for completion by January, 1976 should eliminate the split sessions.

Communications: One local radio station (remote control) and one television station. Cable TV - 3 channels. Newspaper: The Valdez-Copper Basin News (weekly).

Recreation: Theater, teen club building, recreation building, small boat harbor, camper park, two tennis courts, five baseball fields, camping, hiking, hunting and fishing.

General: Six churches, one library, four financial institutions.

Housing

1 bedroom apartment rental	 \$300/month
2 bedroom apartment rental	 \$500/month
1-2 bedroom house rental	 \$700/month
3+ bedroom house rental	.. \$850-900/month +
1-2 bedroom house sales	 \$50,000 +
3+ bedroom house sales	 \$75,000 +

Hotels/Motels: There are four hotel/motel type facilities available.

Industry

The principal industry in Valdez is the oil industry. State Government, particularly Health and Social Services and Highways, provide a substantial number of jobs to the economy.

Estimated Employment

Agriculture (fishing)	10
Construction (local)	150
Construction: pipeline (prof.)	280
Construction: pipeline (trades)	2,730
Finance, Ins., Real Estate	100
Government	340
Mining	5
Manufacturing/Processing	75
Service	130
Trade	90
Transportation, Comm.	130
Total	4,040

Labor

The labor force drawn primarily from Valdez and immediate surrounding area, includes a very small number of professional, skilled and semi-skilled workers. Unemployment currently is negligible. The pipeline labor force comes primarily from other areas.

Industrial Sites Available

Within City Limits:

Acreage Available: 3,000 acres

Recent Vacant: 90 percent

Size Lots Available: Varies, up to full section

Industrial Utilities Available

Water/Sewer:

Water Supplier: City of Valdez

Source: Wells

Size of Water Mains: 8-10 inches

Average Daily Consumption: 1,000,000 gpd

Industrial Water Rates: \$.20/1,000 gallons

Size of Sewer Lines: 8-15 inches

Capacity: 1,500,000 gallons

Electricity:

Supplier: Copper Valley Electric Association

Range of Rates

Monthly Usage/KWH Average Cost/KWH

First 10,000 KWH \$.069/KWH

Next 100,000 KWH \$.061/KWH

Next 1,000,000 KWH \$.060/KWH

Telephone:

Supplier: Copper Valley Telephone Co-op, Inc.

Rates: Business: \$16.00

Residential: \$10.00

Residential Party-line: \$8.00

Local Government

City: Valdez is a home-rule city with a Council-Manager form of government.

Property Tax Valuation

Real Property 10 mills \$205,000,000

Personal Property None N/A

City Sales Tax: 4%

Police Department: Nine Officers

Fire Department: Twenty-one volunteers

Insurance Classification: 9

Borough: Valdez is not located in an organized borough.

Pipeline Description

The southern terminal of the pipeline is being built on the south shore of Port Valdez. Oil received from Prudhoe Bay will be stored there in tanks until loading, by gravity, aboard tankers for shipment to west coast ports.

The terminal site covers about 1,000 acres and will initially include: 18 crude oil storage tanks with 510,000 barrel-capacity; four loading berths to accommodate tankers up to 150,000 DWT, a ballast water treatment facility, power plant and vapor recovery units, an administrative and pipeline operations control center, fire stations and pump building, oil spill contingency equipment, warehouses and shop buildings.

The terminal is scheduled for completion in July 1977 and expected to receive oil from the pipeline at 600,000 bbls. per day with additional throughput for a total of 1.2 million bbls. per day anticipated by November 1977.

SCOMM

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Alaska

A decorative flourish on the left side of the text, featuring a scroll-like design with leaves.

Invest
in the
future...



DIVISION OF ECONOMIC ENTERPRISE

Division Profile



As a promotional, planning, and research-support agency within the Department of Commerce and Economic Development, the Division of Economic Enterprise is charged with the enhancement of Alaska's economic well-being. This goal is achieved by a staff which:

- Prepares and distributes general information and special purpose studies and data.
- Provides technical assistance to private individuals, businessmen, nonprofit groups, and other governmental agencies.
- Collects, analyzes, forecasts, and publishes economic information on Alaska.
- Promotes community and small business development statewide.
- Serves as the statewide planning and coordinating agency for economic development, providing support at the grass roots level for this type of planning.

Headquarters office for the Division is located in Juneau, and the regional office is in Anchorage. All publications issued by the Division are available at both offices. The Anchorage office provides information for new and expanding businesses and coordinates the specialized services available from the headquarter's staff.

Loan Program

The Division furnishes information when requested on six separate Alaska loan programs:

- Small Business Revolving Loan Fund
- Tourism Revolving Loan Fund
- Commercial Fishing Loan Fund
- Veterans' Loan Program
- Agricultural Loan Fund
- Small Business Development Corporation

Funds are available through a number of programs for financing business construction, the conversion or expansion of existing facilities, and the acquisition of new land for industrial development. The Division staff also provides information on the types and availability of federal and other loan programs.

Small Business and Community Development

Small business and community development is one of the primary objectives of the Division. It directs numerous programs aimed at achieving optimal community economic growth, using maximum community input in the planning and development processes. The Division also works with the smaller communities in identifying and preparing for large scale economic and social impacts created by forces external to the local economy.

Community development projects extend from providing aid in the formulation of a city's overall economic development plan, to assistance for local projects such as construction of a municipal dock, water system, or the operation of a public warehouse. Other projects include feasibility studies for resorts, resource development plans, and liaison between several public agencies cooperating on a single project.

Economic consulting to the Native organizations throughout Alaska is provided by the Division. Consultants supply technical assistance to corporations operating in isolated and rural regions. In addition, Native Alaskans are trained, through the Basic Industrial Development Course, to achieve self-sufficiency and skill in the operation of complex commercial enterprises.

The Small Business Development Corporation finances certain new businesses in Alaska that would otherwise not qualify for funds through normal banking channels. Matching federal funds are combined with those of the Department of Commerce and Economic Development to make commercial loans. Enterprises selected must be good investment opportunities subject to predictable, but manageable risk.

Economic Planning

The Division, through a grant from the U.S. Economic Development Administration, is directed to provide comprehensive State economic planning. The approach to be taken by this newly developed planning unit is basically economic problem identification and analysis. Essentially the unit will be research oriented, identifying the existing and impending economic problems and issues that face Alaska. Alternative policies will be developed for the State which will be directed toward the enhancement of favorable trends or developments and the mitigation of adverse impacts. The alternative policies will be developed with full consideration of local area needs and goals.

For Foreign Businessmen

In addition to the substantial Japanese investments in Alaska, Japan is also the primary customer for Alaskan forest products and seafoods exports. As such, the State maintains a permanent office in Tokyo with which this Division works closely, providing assistance and information on Alaska's resources, economy, trade conditions, and tourism to companies in the Far East. Assistance is also given by this Division to businessmen from other Pacific Basin countries, Europe, and the Americas who are exploring business investment opportunities in Alaska.

The State of Alaska's representative in Japan is:

Mr. Yoshio Katsuyama, Director
Alaska State Office
Corporation Akasaka Heights
5/28-8 Chome
Akasaka Minatoku
Tokyo 107, Japan



Economic and Statistical Analysis

The Division continually collects and analyzes a wide range of statistical data to assist in monitoring the performance of Alaska's economy. This information is collected through the statewide Economic Information System, and disseminated inside and outside the State by the Inquiry Answering Service. This system provides individuals and industry with the economic information needed for starting a new business, or refinancing and expanding existing operations. Statistical data, narrative summaries and personal assistance are available upon request.

The statewide Economic Information System provides government and private industry with short and long-range data essential for understanding Alaska's economy and future development. A PERFORMANCE OF THE ALASKAN ECONOMY and the ALASKA STATISTICAL REVIEW are published by the Division as primary sources describing Alaska's social and economic growth.

The Division's research staff is also charged with the responsibility for developing improved econometric techniques for forecasting economic conditions in Alaska. Division economists work closely with research personnel or other departments in determining the impacts of economic development or cyclical changes upon the private sector and of the revenues and expenditures of State and local government.

Business and Corporate Enterprise

The Division is the official State representative to business and corporate enterprise. The staff, with its diversified background and knowledge relating to the economy and problems in Alaska, is in a key position to assist the corporate businessman by providing consulta-

tion and advice, public and private contacts, and through an acceleration of the development process by cutting through some of the unavoidable red tape.

The Division also provides economic data to the corporate decision makers that would assist them in determining the feasibility of their intended project.

Potential industries suitable for development are also studied and identified by this Division. Currently the Division is pursuing, among others, the development of a cement plant, a petrochemical industry, a bottomfish industry, and an expansion of the State's agricultural and mining sectors.

Publications

The Division develops and publishes a number of reports on Alaska's economy, business opportunities, and communities. It also publishes guidelines for those interested in establishing a new business in Alaska. These publications are available from the Department of Commerce and Economic Development, Pouch EE, Juneau, Alaska 99811.

THE PERFORMANCE REPORT OF THE ALASKAN ECONOMY — Published each January and July, this booklet analyzes the trends in Alaska's economy. It includes economic indicators that measure the performance of the State's major industries, and in the January issue, a forecast of economic trends anticipated for the coming year.

ALASKA STATISTICAL REVIEW — This publication is a summary of statistics on the social, economic, and political organization of the State of Alaska.

COMMUNITY PROFILES — This series describes each of the following Alaska communities, including data on population, climate, transportation and industries, available labor, community services, industrial sites and form of municipal government.

Adak	Hoonah	Seldovia
Anchorage	Juneau	Seward
Angoon	Kenai	Sitka
Barrow	Ketchikan	Skagway
Bethel	Kodiak	Soldotna
Cordova	Kotzebue	Unalaska
Craig	Metlakatla	Valdez
Delta Junction	Nome	Wasilla
Dillingham	North Pole	Whittier
Fairbanks	Palmer	Wildwood
Haines	Petersburg	Wrangell
Homer	St. Mary's	Yakutat

ESTABLISHING A BUSINESS IN ALASKA — Outlines governmental requirements, services, and assistance available to private business considering a location in Alaska.

Resources Development

Fisheries

The commercial fishing industry is historically a mainstay of the Alaska economy and the primary employer in many coastal communities. The Division administers a number of projects to collect and disseminate economic information, solve technical and financial problems related to fishing and processing and to improve the regulatory atmosphere for private enterprise. Assistance is provided to communities and organizations interested in developing support facilities such as docks, marine ways, hatcheries, and warehousing.

The Division aids seafood producers experiencing production or marketing problems. Emphasis is on two areas: search for source of supply of Alaska seafood products and analyzing the possibility of new developments.

Specialty seafood products such as snails, sea urchins, or seaweed show promise as a future export market. Its potential is being evaluated by the Division as a cottage or village industry in Alaska.

Development of the clam and oyster industries is another related project. Progress has been blocked in the past by the lack of a simple test to identify paralytic shellfish toxin poisoning. However, encouraging results have been reported by a researcher at the University of California and testing on a commercial basis may be feasible in the near future.

The Division is actively working toward the compilation of a more comprehensive and accessible data base which will permit the State to better manage the fisheries resource from a financial standpoint. This effort is being undertaken in cooperation with other State agencies.

Forestry

The Division acts as a liaison between the logging and timber products industries and the various government resource management agencies, including those agencies charged with environmental protection responsibilities. Of particular concern are the impacts of federal and State forest land management policies, and their charges, on the users of forest resources. The Division also assists potential buyers of Alaska products in locating sources of supply.

The Alaskan geological environment for hardrock mineral occurrence is excellent. Exploration continues to furnish capital investment amounting to several tens of millions of dollars annually. The Division works to encourage this activity at both the prospector and large exploration company levels. Division activities include technical assistance to small producers and prospectors and maintaining contacts with industrial representatives, industrial associations, and State and federal agencies influential in mineral resource matters.

Energy

The Division has been directly involved in research and development projects relating to energy or energy sources, including hydroelectric power projects and fossil fuel distribution. It has participated in planning for the Upper Susitna hydroelectric dams and also with other electric generating facilities located in the Southeastern area of Alaska.

Agriculture

Expansion of agriculture in the State is essential to Alaska's continued development. Three programs for increased growth currently are underway.

The Division was instrumental in securing funds for a \$3.5 million hydroponic research center in Kenai. This project researched controlled environment agriculture in Alaska. Its goals included selection of favorable sites for controlled environment installations, and exploration of markets for hydroponically raised salad vegetables, cut flowers, potted plants and green feed.

In addition, conventional agricultural methods have demonstrated the success of such vegetable crops as green peas. However, distribution of vegetables in Alaska has been limited due to a lack of processing facilities. Entire crops must be marketed at harvest time, depressing prices and limiting the quantities available for sale. The Division is promoting investments in processing facilities to be located in Palmer, and in increasing acreage for vegetable crop plantings.

Increased production and expansion of the existing market for reindeer meat and reindeer by-products is another important Division project. The reindeer industry has the capability of becoming a basic agricultural activity as a source of red meat for Alaskan consumers and in the export of reindeer horns used as aphrodisiacs by the Asian trade.

For Further Information Contact:

State of Alaska
Department of Commerce and
Economic Development
Division of Economic Enterprise
Pouch EE
Juneau, Alaska 99811
Phone (907) 465-2020

or

State of Alaska
Department of Commerce and
Economic Development
Anchorage Field Office
338 Denali Street
Anchorage, Alaska 99501
Phone (907) 277-1936



INTRODUCTION TO ALASKA 1976



It is customary, in a book or brochure about Alaska, to open with a long parade of superlatives: The state has 586,400 square miles of land (Washington, Oregon, California, Idaho, Nevada and Utah combined, give or take a few Rhode Islands); 33,000 miles of shoreline; 375 million acres (about 1,000 acres per person if it was divided that way, which it isn't); 3 million lakes 20 acres or larger; half the world's glaciers; 19 mountain peaks higher than 14,000 feet; 4 time zones spread over 2,400 miles (the distance from Seattle to Miami, invariably measured with an Alaska map superimposed over the smaller states). And so forth.

The reams of statistics are usually true and sometimes interesting, but, confronted with a land of such superlatives, we may better understand the whole if we first glance at each of its distinctively different parts—geographic regions we call the six Alaskas.

SOUTHEASTERN—Alaska's Panhandle country extends 500 miles northwest to southeast from Icy Bay, on the Gulf of Alaska coast, to Dixon Entrance, 35 miles south of Ketchikan. In between is the Alexander Archipelago, with 1,000 of Alaska's 1,800 named islands, rocks and reefs. Southeastern is a moist country of fjords and glaciers and mountains where the annual rainfall is 25 to 155 inches (Little Port Walter, on Baranof Island, had 18 feet of rain one year).

Most of Southeastern—16 million of its acres—is within the Tongass National Forest, which annually yields about 600 million board feet of timber, processed by big pulp mills at Ketchikan and Sitka, and smaller sawmills at Klawock, Ketchikan, Petersburg, Metlakatla, Wrangell and Haines. Fisheries and government employment also are important in Southeastern—the latter especially vital in Juneau, the state capital.

THE GULF COAST—This region curves 650 miles north and west from the Panhandle, flanking some of the highest mountains in North America and reaching into the Gulf of Alaska to include the Kodiak Island group. Center of attention is the Cook Inlet basin (with emphasis on Anchorage, where half the state's residents live).

The Gulf Coast has tremendous geographic variety—including fertile river valleys, rugged mountain ranges, volcanoes, glaciers, islands, both continental and coastal climates, tidal variations of up to 34 feet (compared to about 22 feet in Southeastern and 1 or 2 feet in the Arctic), and vegetation ranging from the spruce and hemlock forests of Prince William Sound to the tundra-type highlands of the Copper River-Nelchina basin.

ALASKA PENINSULA, ALEUTIAN ISLANDS—This is the longest, farthest south and farthest west of them all. The

THE SIX ALASKAS



3



Alaska Peninsula extends 550 miles southwest from Mount Iliamna, on the west shore of Cook Inlet, to its tip at False Pass. The Aleutians reach from there 1,100 additional miles to Adak Island, at the bottom of the Aleutian arc, is the farthest-south point in Alaska—actually closer to Honolulu than any point in California). The region has bad weather—rain, near-constant winds, lots of fog—and claims 57 volcanic mountains. In round numbers, it is populated by 3,000 Aleuts, 5,000 military personnel, 65,000 sea otters, 140,000 Stellar sea lions and a staggering number of birds.

BERING SEA COAST—Often called Western Alaska, this 122,000-square-mile expanse reaches north from Bristol Bay to the Arctic Circle and includes the massive Yukon-Kuskokwim river delta, the Seward Peninsula and many Bering Sea islands. This is closer to "village Alaska" than other regions, with more

Eskimos (about 16,000) than any portion of the state, including the Arctic and Anchorage.

THE ARCTIC—This area is the same size as the Bering Sea coast, and is bounded on the south by the Brooks Range, on the north by the Arctic Ocean, on the east by the Canadian border and on the west by the Chukchi Sea. The waters of this region are frozen over for 7 to 8 months each year, and the land is frozen continuously. This permanent freezing (permafrost) extends to depths of more than 2,000 feet in some areas; only the top few inches or feet thaw during the brief summer. The mostly flat coastal plain, commonly known as the North Slope, is broken by thousands of nameless ponds and lakes; wildlife in this area is somewhat sparse, except for two large species—polar bear and caribou—which have major populations in the Arctic. The region is arid, with cold winters (down to -60° F) and cool summers.

Barrow has less precipitation than any weather station in Alaska, 4.48 inches annually.

THE GREAT INTERIOR—Alaska's Interior country is south of the Brooks Range and north of the Alaska Range; a vast, 166,000-square-mile area drained by the Yukon River and its three major tributaries, the Porcupine, Koyukuk and Tanana. The Yukon, with origins in Yukon Territory, drops only 800 feet in its 1,400-mile course through Alaska; along the way is an incredible waterfowl area, Yukon Flats, which each fall is abandoned by 35 million ducks and geese.

Vegetation includes white spruce, aspen and poplar forests in river valleys, and alpine tundra on foothills and mountain slopes. Center of commerce is Fairbanks, today bursting at the seams from pipeline growth. Biggest visitor attraction in the region—and, for that matter, in the state—is Mount McKinley National Park.

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1 The village of Atka, far out in the Aleutian Islands—a place seldom visited by most Alaskans. (Paul Eskelin)

2 Southeastern Alaska—dominated by water and forest. Fireweed blooms in the foreground of this scene, photographed north of Juneau. (Ed Cooper)

3 Anaktuvuk River, flowing through Anaktuvuk Pass on the north side of the sprawling Brooks Range in Alaska's Arctic region. (Lael Morgan/Staff)

4 Aspen, common in Alaska's Great Interior country along with several other species, including birch, white spruce and several types of willow. (Ed Cooper)

5 The Matanuska Valley, in Alaska's Gulf Coast region, is the state's most productive agricultural area. (Richard Jones)

6 Clarks Point, 14 miles south of Dillingham in the Bristol Bay area, is at the southern reaches of Alaska's Bering Sea Coast region. Population of the village was 138 in 1970. (Lael Morgan/Staff)

6



Pinched in rush-hour Anchorage or Fairbanks traffic, people sometimes lose sight of the "other" Alaska just over the hill—the open spaces that still have 15 square miles per person (or more); the Alaska of yesteryear . . . or last year. (Alaska's statewide population is about the same as that of Miami, Florida.)

In 1880, after the first gold discoveries and before the big rushes North, only about 430 non-Natives were counted in

Alaska. And as recently as 1940 there were only 40,000 whites (and 82,000 Natives) in the territory.

All of that is changing fast. The 1970 census figure of 302,361 has been antiquated by rapid pipeline-oriented growth; Alaska today has roughly 370,000 inhabitants. (If the state's total population is 370,000—and the exact figure is anybody's guess—the ethnic breakdown would be as follows: 300,000 whites, 30,000

Eskimos, 20,000 Indians—mostly Athabascans and Tlingits—6,500 Aleuts and 13,500 minorities including blacks, Chinese, Japanese and Filipinos.)

Alaska must be good for people . . . they're getting younger all the time. The 1970 census showed a median age of 22.1, compared to 28 nationwide, and Alaska's figure is even lower in 1975.

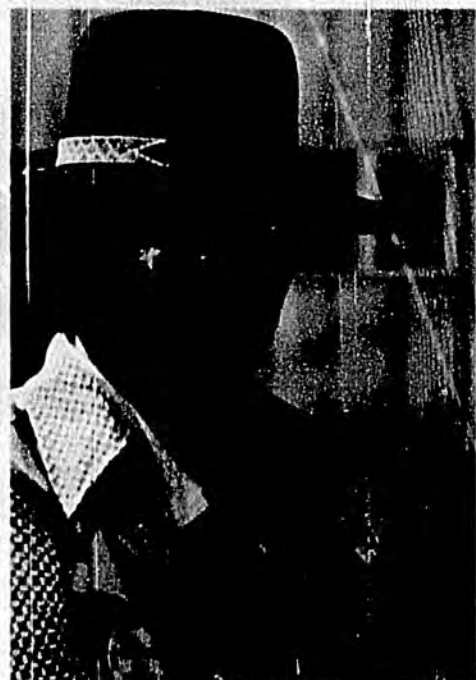
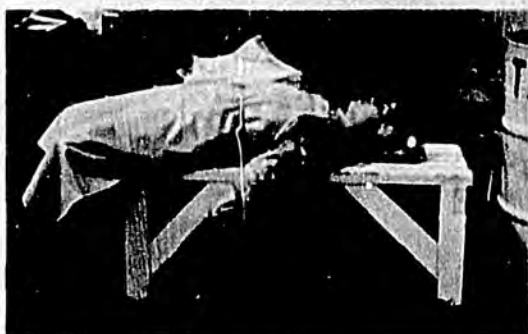
And where do all these young Alaskans live? Following trends set in the Lower 49,



ALEUT

TLINGIT

PEOPLE



the weight is in the larger towns. More than half the state's residents (193,769, according to 1974 estimates), live in the Gulf Coast region, most in the Anchorage trading area; 60,151 are in the Interior; 50,232 in Southeastern; 22,338 along the Bering Sea Coast; 12,828 in the Alaska Peninsula-Aleutians region, and 11,041 in the Arctic.

If you take away military bases and pipeline workers, three out of Alaska's five

geographic regions—the Alaska Peninsula-Aleutians, the Bering Sea Coast and the Arctic—lack towns larger than 3,400. Most towns and villages in these regions have fewer than 500 residents.

Here's a look at Alaska's population growth from 1741, when Russian explorers discovered Alaska:

Year	Native	Non-Native	Total
1741	74,000	0	74,000
1880	32,354	430	32,784

Year	Native	Non-Native	Total
1890	25,354	4,298	29,652
1900	29,542	30,450	59,992
1910	25,331	36,400	61,731
1920	26,558	28,478	55,036
1930	29,983	29,295	59,278
1940	32,458	40,066	72,524
1950	33,863	94,780	128,643
1960	43,081	183,086	226,167
1970	50,654	251,707	302,361
1974	60,000	291,000	351,000

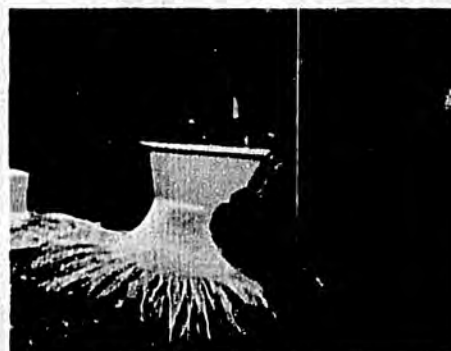


Photo credits
Top to bottom, from far left—

Lael Morgan/Staff,
Sharon Paul,
David Pickel;

Lael Morgan/Staff,
Robert Langlotz;

all Lael Morgan/Staff;

Lael Morgan/Staff on first two,
Sharon Paul;

Robert Langlotz,
Lael Morgan/Staff;

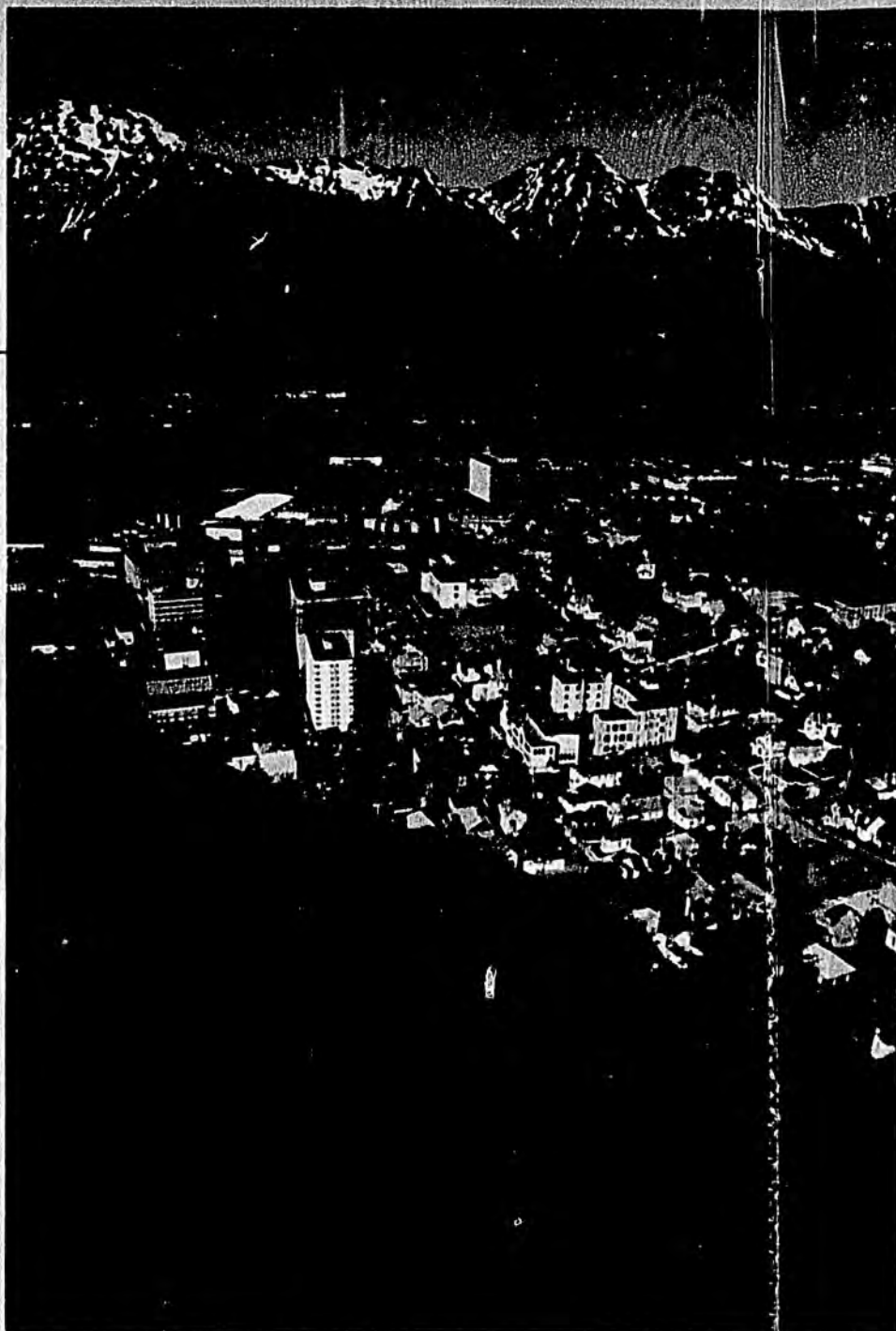
both Lael Morgan/Staff.

Alaska has 134 incorporated communities (it is difficult to use the term *cities* when describing most places in Alaska), and about 150 additional settlements—mostly Native villages—scattered throughout her 586,400 square miles.

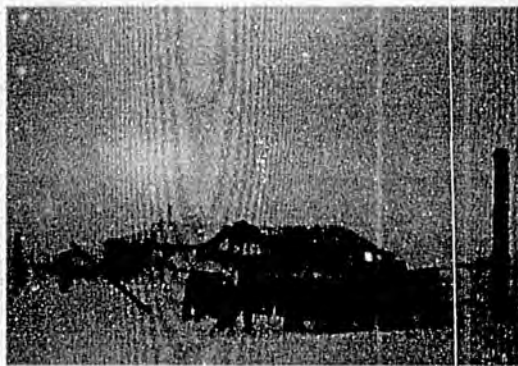
Here are populations for some of those communities (1970 census figures followed by 1975 estimates):

Town	1970	1975
Adak	3,380	4,022
Anchor Point (area)	102	750

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COMMUNITIES

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Town	1970	1975	Town	1970	1975	Town	1970	1975
Anchorage (area)	126,333	180,000	Hoonah	748	860	Petersburg	2,336	2,400
Angoon	400	495	Juneau (area)	13,556	16,000	Seldovia (area)	437	612
Barrow	2,152	2,307	Kake	448	550	Seward	1,587	1,823
Bethel	2,457	3,400	Kenai	3,543	4,100	Shemya Station	1,100	1,131
Cordova	1,459	2,110	Ketchikan (area)	10,041	12,000	Sitka (area)	6,073	6,532
Delta Junction	673	710	Kodiak	3,798	4,300	Skagway	675	850
Dillingham	914	1,025	Kotzebue	1,799	2,306	Soldotna	1,275	1,303
Fairbanks (area)	45,864	63,000	Metlakatla (area)	1,050	1,410	Tok	214	332
Fort Yukon (area)	500	533	Naknek	249	472	Unalakleet	450	470
Galena	302	442	Nenana	362	497	Wildwood	500	650
Haines (area)	1,401	1,980	Nome	2,488	2,550	Wrangell	2,029	2,700
Homer	1,083	1,250	Palmer	1,140	1,482	Yakutat (area)	250	500

1 Juneau, Alaska's capital, with an area population of about 16,000.
(Marty Loken / Staff)

2 Clothes hang out to "freeze dry" at Chevak, an Eskimo village in the Yukon-Kuskokwim river delta. Village population in 1970 was 315.
(Lael Morgan / Staff)

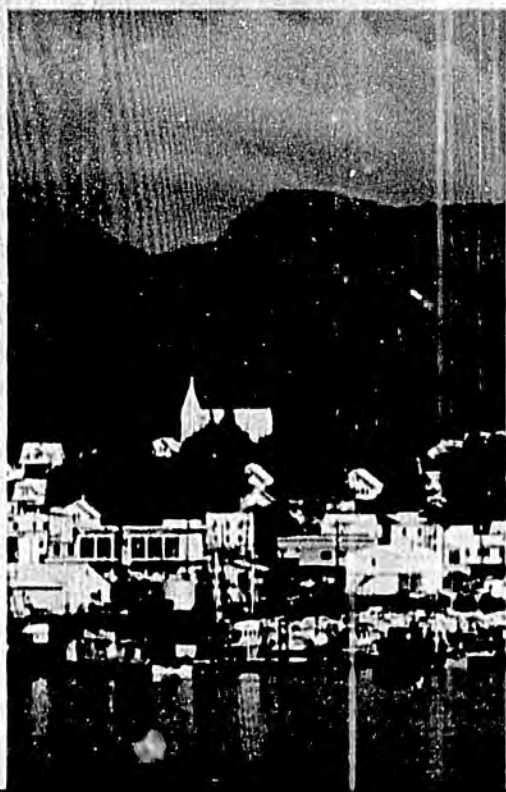
3 Saint Paul, with a population of 378, is an Aleut village in the Pribilof Islands group, 300 miles north of the Aleutian Chain in the Bering Sea.
(Lael Morgan / Staff)

4 The village of Diomed, on Little Diomed Island, clings to a rocky shore only 2 miles across Bering Strait from Russia's Big Diomed Island. (Lael Morgan / Staff)

5 Petersburg, "Little Norway" of Alaska, is a fishing-industry town in the Southeastern region, about midway between Ketchikan and Juneau.
(Ed Cooper)

6 An abandoned post office at Tanana—first established as an Athabascan trading village (Nuklukayet) at the junction of the Yukon and Tanana rivers. The 1970 area population was 349.

7 Anchorage, with half the state's population, is a place where old and new Alaska clash . . . where log cabins (this one is a visitor information center) are built next door to high-rise buildings. (Lael Morgan / Staff)



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Simply put, the history of Alaska since the coming of Russian explorers has followed waves of natural-resource extraction. Russian traders took sea otter and fur seal pelts for the first 100 years; they were followed by whalers, fishermen, cannery operators, gold miners, timbermen and, now, by oilmen.

Here's a brief recap:

1725—Vitus Bering sent by Peter the Great to explore the North Pacific; on a later expedition, in 1741, Alexei Chirikof—with the Bering expedition—discovers Alaska.

1743—Concentrated hunting of sea otter begins, continuing until the species is almost decimated; fur seal hunting begins later.

1774-1792—Explorations of Alaskan waters by Juan Perez, James Cook and George Vancouver.

1779—Alexander Baranof establishes the Russian post known today as Old Sitka; a trade charter is granted to the Russian-American Company.

1794—Vancouver sights Mount McKinley.

1821—Russian-American Company given exclusive trading rights; no foreigners allowed in Russian America.

1824-1842—Russian exploration of the mainland leads to discovery of the Kuskokwim, Nushagak, Yukon and Koyukuk rivers.

1847—Fort Yukon established.

1853—Russian explorer-trappers find the first oil seeps in Cook Inlet.

1857—Coal mining begins at Coal Harbor, Kenai Peninsula, to supply steamers.

1859—Edward de Stoeckl, secretariat of the Russian delegation to the United States, is given authority to negotiate the sale of Alaska.

1867—United States purchased Alaska from Russia; fur seal population begins to stabilize. U.S. Army is given jurisdiction over the Department of Alaska the following year.

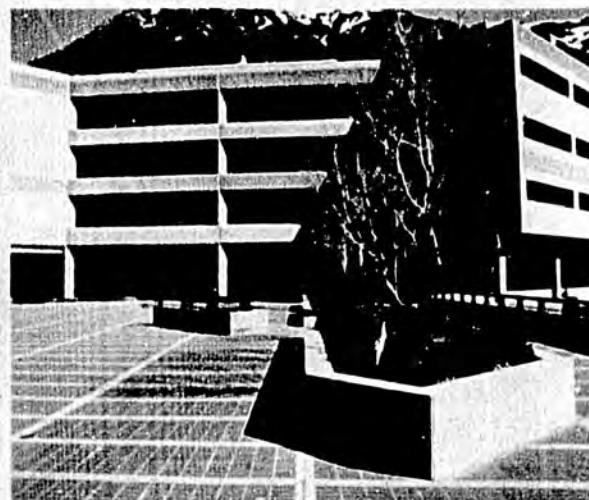
1872—Gold discovered near Sitka. Later discoveries include Juneau, 1876, 1880; Forty Mile, 1886; Circle City, 1893; Sunrise, 1896; Nome, 1898; Fairbanks, 1902; Innoko, 1906; Ruby, 1907; Iditarod, 1909; Marshall, 1913; Chisana, 1913; and Livengood, 1914.

HISTORY, ECONOMY

2



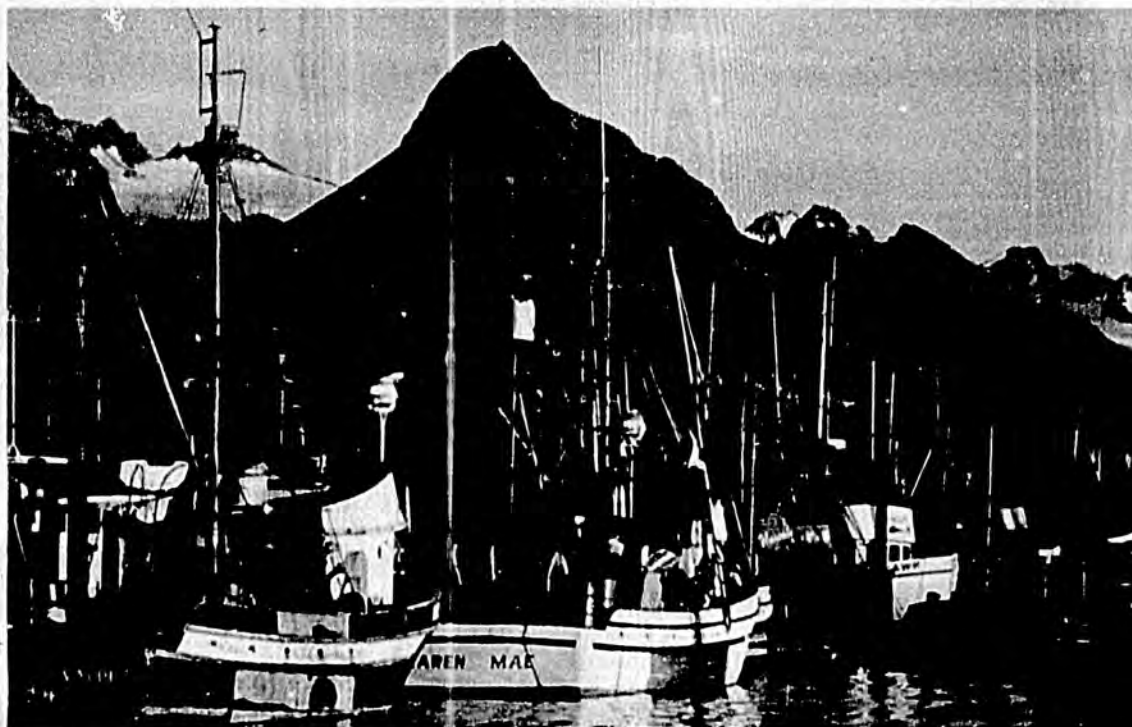
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1882—First commercial herring fishery at Killisnoo; first two Alaska salmon canneries follow.

1891—First oil claims staked in Cook Inlet area.

1897-1900—Klondike gold rush in neighboring Yukon; heavy traffic through Alaska.

1902—First oil production, Katalla.

1912—Territorial status for Alaska; first territorial legislature is convened the following year.

1916—First bill suggesting Alaska statehood introduced in Congress.

1923—President Warren Harding drives spike completing the Alaska Railroad.

1935—Matanuska Valley Project begins, establishing farming families in Alaska.

1936—All-time record salmon catch in Alaska—126.4 million fish. (1973 catch was only 16% of this figure.)

1940—Military buildup in Alaska; Fort Richardson, Elmendorf Air Force Base established. At this point there are only about 40,000 non-Native Alaskans.

1944—Alaska Juneau Mine shuts down.

1953—Oil well drilled near Eureka, on the Glenn Highway, marking the start of modern oil history; first plywood mill at Juneau; first big pulp mill at Ketchikan.

1958—Statehood measure passed by Congress; proclaimed officially January 3, 1959. Sitka pulp mill opens.

1964—Good Friday earthquake, March 27, causing heavy damage throughout the Gulf Coast region.

1967—Alaska Centennial celebration; Fairbanks flood.

1968—Oil and gas discoveries at Prudhoe Bay on the North Slope; excitement begins. \$900 million North Slope oil lease sale the following year; pipeline proposal follows.

1971—Congress approves Alaska Native Land Claims Settlement Act, granting title to 40 million acres of land and providing more than \$900 million in payment to Alaska Natives.

1974—Trans-Alaska pipeline receives final approval; construction buildup begins.

1975—Population, labor force soar with construction of pipeline; Alaska Gross Product hits an estimated \$5.3 billion—double the 1973 figure.



5 *Evidence of Russian Alaska still is abundant. Shown is a Russian Orthodox church at Kodiak. (Ron Caldwell)*

2 *Copper mines once thrived; this is the deserted general store at Ellamar, near Cordova, where a mine was formed in 1898. (Gil Mull)*

3 *Government—federal, state and local—is one of the state's top employers. Shown is the new State Office Building in Juneau. (Marty Loken/Staff)*

4 *Despite poor seasons, commercial fishing continues to be vital to many Alaskan towns, such as Valdez. (Ed Cooper)*

5 *Construction of the trans-Alaska pipeline has swelled Alaska's population—especially in Anchorage, Fairbanks and along the pipeline route from Prudhoe Bay to Valdez. (Rev. L. P. Fitzpatrick)*

6 *Falling a huge Sitka spruce near Thorne Bay, Prince of Wales Island. (Dennis Eames)*

7 *Interior Alaska spruce cants at a lumbermill owned, in part, by the Nenana Native Village Corporation. (Lael Morgan/Staff)*

6



How to go to (and throughout) Alaska . . .

DRIVE: There are two highways to Alaska—overland and marine. The favorite dry-land route is the Alaska Highway, which winds north from Mile Zero at Dawson Creek, British Columbia, cutting across the corner of Yukon Territory on its way to Alaska. Alternatives along the way: Cassiar 37 through northwestern B.C. and two Yukon roads—the Campbell Highway and the Klondike Loop through Dawson City to the Alaska border.

Following the Alaska Highway north from Dawson Creek, motorists travel 1,221.3 miles (1,965.1 kilometers) to the Alaska-Yukon border, than another 298.7

miles (480.6 kilometers) to Fairbanks, or 534 miles (859.2 kilometers) to Anchorage. Once in Alaska, visitors will discover that the state's road system is scenic . . . and short. A motorist covering 2,000 miles of pavement—without backtracking—has blanketed the highway network.

The marine access route may be said to begin "wherever you take off"—from Seattle or Prince Rupert, B.C., aboard Alaska ferries, or from Kelsey Bay, on Vancouver Island, aboard B.C. ferries (which go to Prince Rupert, where motorists may transfer to Alaska ferries).

FLY: Daily nonstop jet service is available from the Lower 49 to several

points in Alaska—Anchorage, Fairbanks, Juneau and Ketchikan, with immediate connections to dozens of other destinations. Carriers are Alaska Airlines (from Seattle); Northwest Orient Airlines (from Seattle, Chicago and Edmonton); Western Airlines (Seattle and Honolulu); and Pan American (Seattle). Sample one-way air fares: Seattle to Anchorage, first class \$155, coach \$120, night coach \$102.

International air carriers touching base in Alaska: Pan Am, British Airways, Air France, JAL, KLM, Northwest Orient, Sabena, Korean Airlines and SAS.

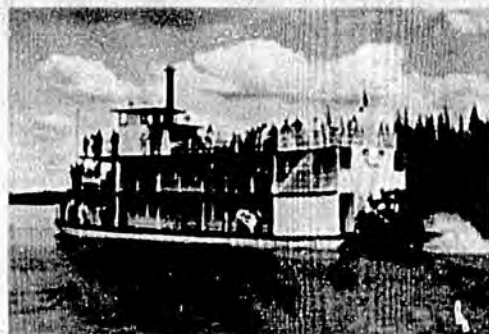
Within Alaska, Wien Air Alaska offers a vast network of flights, including many

TRAVEL

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remote destinations and other carriers—scheduled and otherwise—make it possible to visit virtually any spot in Alaska. (In Alaska, charter planes are as common as taxis in New York . . . but easier to catch.)

TAKE A SHIP: For passenger service to northern British Columbia and Alaska, contact the Alaska State Ferry System, Canadian Pacific Steamship, Westours, Northland Navigation, Princess Cruises, Pacific Far East Line or P & O Lines. Marine-freight companies include Alaska Hydro-Train (to Anchorage); Foss Alaska Lines (to Southeastern); Northland Marine Lines (to Southeastern and Seward); Sea-Land Service (to Anchorage, Kodiak,

Cordova and the Aleutians); Totem Ocean Trailer Express (to Anchorage); Western Pioneer Lines (to Kodiak and the Aleutians); James Griffiths & Sons (to Sitka), and Pacific Western Lines (to Anchorage).

RIDE A BUS: Escorted motorcoach tours to Alaska from Seattle—Greyhound, Westours, Alaska-Yukon Motorcoaches; to Alaska from Portland—Trailways "Green Carpet" Tours; from San Francisco—Continental Trailways. Bus lines within Alaska-Yukon: Alaska Coachways, Transportation Services, American Sightseeing of Alaska, and Gray Line Sightseeing.

RIDE THE RAILS: Service in Alaska-Yukon is limited to the Alaska Railroad (Whittier-Anchorage-Mount McKinley-Fairbanks), and White Pass & Yukon Route (Skagway, Alaska-Whitehorse, Y.T.).

OTHER POSSIBILITIES: Ride a sternwheeler at Fairbanks, or a Yukon River tour boat at Whitehorse, Y.T.; hire a dogsled team for a winter expedition at Mount McKinley National Park, or go for shorter dogsled rides at Nome or Kotzebue; raft down the Yukon River from Whitehorse to Dawson City, or beyond into Alaska. . . . Use your imagination—most anything is possible in Alaska!

5



1 Visitors enjoy a view of Mount McKinley, that state's top tourist attraction, from Stony Hill overlook. (John Johnson)

2 A mail plane makes a final approach over a whale bone-lined graveyard at Point Hope, an Eskimo village in the Arctic. (Lael Morgan/Staff)

3 The riverboat Discovery II, a popular attraction at Fairbanks. (Len Sherwin)

4 Camper rigs, trailers and motor homes are a common sight during summer months in Alaska. (Ron Caldwell)

5 Wilderness guides offer trips to all corners of Alaska—in this case, the Alaska Range. (Leland Brun)

6 The Alaska Railroad offers daily service between Anchorage and Fairbanks, with stops at Mount McKinley National Park. (Ron Caldwell)

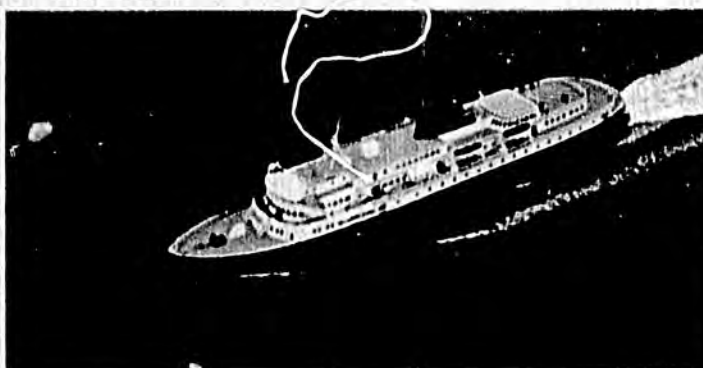
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7 Dogsledding in Mount McKinley National Park. (Dennis Kogl)

8 The Malaspina, one of the state's distinctive blue, white and gold ferryliners. (Ron Caldwell)



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8

Alaska claims some of the world's most impressive creatures, especially in the mammal family. From the pigmy shrew, one of the smallest of them all, Alaskan mammals scale up to the huge brown bear of Kodiak Island, the world's largest land carnivore.

Many of the state's 100-plus mammal species have arrived in geologically recent

times. During the Ice Age, Alaska's mammal checklist included such creatures as the saber-tooth tiger, giant beaver, dire wolf, ground sloth, mastodon, woolly mammoth, as well as moose, caribou and others that still abound. Wild horses, lions, camels, yaks and the native musk ox—to name a few—also have disappeared from the Alaska scene through the ages.

Alaska's birds (more than 225 species in Southeastern and 132 in Mount McKinley National Park, for instance) and her abundant fishes (at least 100 fresh- and salt-water species) are too numerous to list in this brief introduction. Here, though, are some of the state's most common mammals—listed generally from smallest to largest: Shrew, bat, mouse,

1 *A young golden eagle stares back at the photographer from his perch, near the Chitina River in the Gulf Coast region. (Sharon Paul)*

2 *Whales are often seen in Alaskan waters. Shown here is an adult female killer whale. (T. C. Newby)*

3 *Blacktail deer go for a swim in Olga Strait, near Sitka. (Harold Wahlman)*

4 *A caribou bull feeds near Polychrome Pass, in Mount McKinley National Park. (Ueli Ackermann)*

5 *Dall sheep—also photographed near Polychrome Pass. (Gary Axling)*

6 *Sea lions cavort on the west coast of Chichagof Island, in Southeastern Alaska. (Gerald Kirk)*

7 *Biggest member of the deer family, the bulbous-nosed bull moose. (Helen Rhode)*

WILDLIFE



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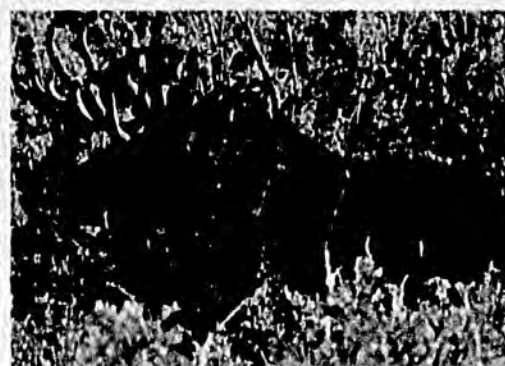
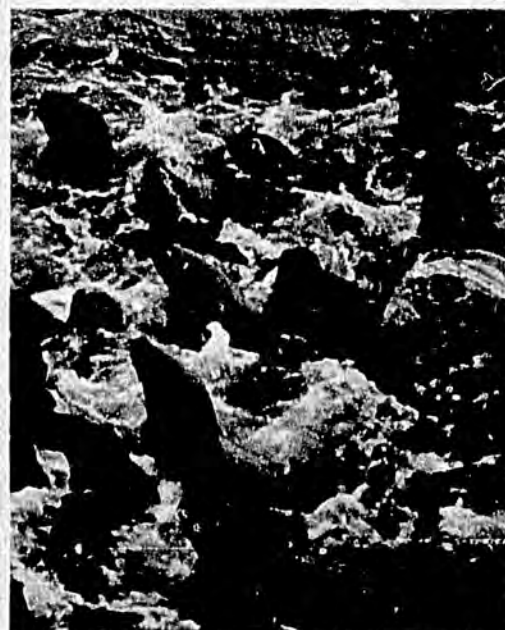
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4 vole, chipmunk, squirrel, lemming, rat, pika, weasel, mink, marten, hare, fisher, marmot, woodchuck, muskrat, porcupine, beaver, otter, wolverine, raccoon, fox, coyote, lynx, wolf, deer, Dall sheep, mountain goat, seal, sea lion, elk, caribou, dolphin, porpoise, bear (brown, grizzly, polar), bison, musk ox, walrus and whale.



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