

**Assessment of the rural character of Kenai Peninsula areas
currently classified as non-rural under federal subsistence
management**

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For the:

Native American Rights Fund

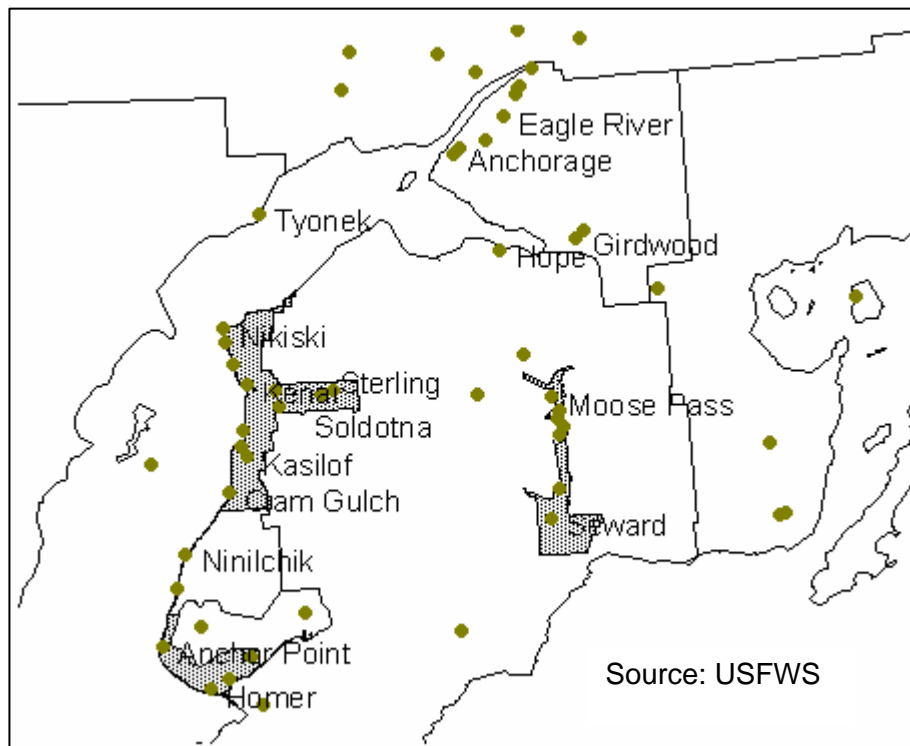
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Assessment of the Rural Character Of Kenai Peninsula Areas Currently Classified As Non-Rural Under Federal Subsistence Management

Current Situation

On January 3, 1991, over the objections of the Kenaitze Indian Tribe (see letter of December 19th, 1990), the Federal Subsistence Board declared an area encompassing the communities of Anchor Point, Clam Gulch, Cohoe, Crown Point, Happy Valley, Homer city, Kalifonsky, Kasilof, Kenai city, Moose Pass, Nikiski, Primrose, Salamatof, Seward city, Soldotna city, and Sterling to be non-rural (see Map 1). This decision affects two-thirds of the population of the Kenai Peninsula (65 percent in 1990). Under this decision, over 26,000 residents of the Kenai Peninsula do not benefit from subsistence preferences which still apply to approximately 98 percent of the land area of the Kenai Peninsula. Included among these 26,000 residents are 58 percent of the Alaska Natives living on the Kenai Peninsula in 1990 (1,689 persons).

In 1995, the Southcentral Regional Advisory Council recommended that the Federal Subsistence Board's 1991 decision be reversed and the entire Kenai Peninsula be declared rural for subsistence purposes.



The Native American Rights Fund commissioned the Institute of Social and Economic Research (ISER) and specifically Jack Kruse, Director of ISER and Professor of Public Policy, to examine the question of whether a reversal of the Federal Subsistence Board's decision is supportable on the basis of available information. This is a final report of findings prepared by Dr. Kruse with the assistance of Virgene Hanna, Research Associate at ISER.

Information Relevant to Determination of Rural Status

Both the State of Alaska and the Federal Subsistence Board have used similar criteria for determining rural status for subsistence purposes (see Table 1) and 56 Fed. Reg. 238. In 1988, the Ninth Circuit Court of Appeals in *Kenaitze Indian Tribe v. Alaska* 860 F.2d 312 (9th Cir. 1988), cert. Denied, 109 S. Ct. 3187 (1989) invalidated the state's criteria for determining rural areas. The court found:

The term rural...is a standard word in the English language commonly understood to refer to areas of the country that are sparsely populated, where the economy centers on agriculture and ranching. See Webster's Third new International Dictionary 1990 (1981). More broadly rural is the antonym of urban and includes all areas in between cities and towns of a certain size.

[860 F.2d 312, 316-317 (9th Cir. 1988)]

The court cited, for example, the US Census Bureau definition of urban populations to include people living in places of 2,500 or more population. If this same argument is applied to the federal process for determining rural areas, then only measures related to population are of primary relevance and the economic character of the area is of secondary relevance. In the next section, we therefore focus first on population measures.

Table 1: Concepts used by the State and Federal Governments in Determining Rural Status

| | |
|---|---|
| FISH & GAME USE <ul style="list-style-type: none">• Variety• Participation• Levels of Harvest• Where Hunting & Fishing Occur | ELECTRICITY <ul style="list-style-type: none">• Cost |
| ECONOMY <ul style="list-style-type: none">• Wage Employment• Unemployment• Income• Diversity of Services• Cost of Food Index• Social Organization of the Economy• Seasonal Cycle of Economic Activity• Economic Differentiation & Specialization• Stability of the Economy | TRANSPORTATION <ul style="list-style-type: none">• Variety• Predominant Means• Road System Miles |
| | EDUCATION <ul style="list-style-type: none">• Level Available |
| | VALUES <ul style="list-style-type: none">• Use Values• Sharing & Exchange |

Application of the 9th Circuit definition of rural

According to the 9th Circuit decision, rural areas are chiefly defined by their population size and density. Many of the Kenai Peninsula communities considered non-rural by the Federal Subsistence Board are relatively small, even by Alaska standards (see Table 2).

| Places | 1990 Population | Alaska Places Larger in Population |
|------------------|-----------------|------------------------------------|
| Kenai city | 6,327 | 6 |
| Sterling CDP | 3,802 | 11 |
| Homer city | 3,660 | 12 |
| Soldotna city | 3,482 | 14 |
| Seward city | 2,699 | 21 |
| Fritz Creek CDP | 1,426 | 31 |
| Salamatof CDP | 999 | 36 |
| Anchor Point CDP | 866 | 39 |
| Moose Creek CDP | 610 | 59 |
| Kasilof CDP | 383 | 100 |
| Kachemak city | 365 | 105 |
| Seldovia city | 316 | 118 |
| Kalifonsky CDP | 285 | 129 |
| Moose Pass CDP | 81 | 243 |
| Clam Gulch CDP | 79 | 245 |

In 1990, none of the communities was larger than the 7,000 population threshold assumed by the Federal Subsistence Board to be a sufficient criterion for designation as non-rural unless the community or area had significant characteristics of a rural nature. Ten of the places had 1990 populations below the 2,500 population threshold assumed by the Board as a sufficient criterion for designation as rural unless the community or area had significant characteristics of a non-rural nature. Considered as separate places, then, Fritz Creek, Salamatof, Anchor Point, Moose Creek, Kasilof, Kachemak, Seldovia, Kalifonsky, Moose Pass, and Clam Gulch would be classified rural lacking any specific discussion of exceptional non-rural characteristics. Again, if considered separate

places, Kenai, Sterling, Homer, Soldotna, and Seward are within the population range in which their rural and non-rural characteristics would be considered of direct relevance to their classification under the Board's approach.

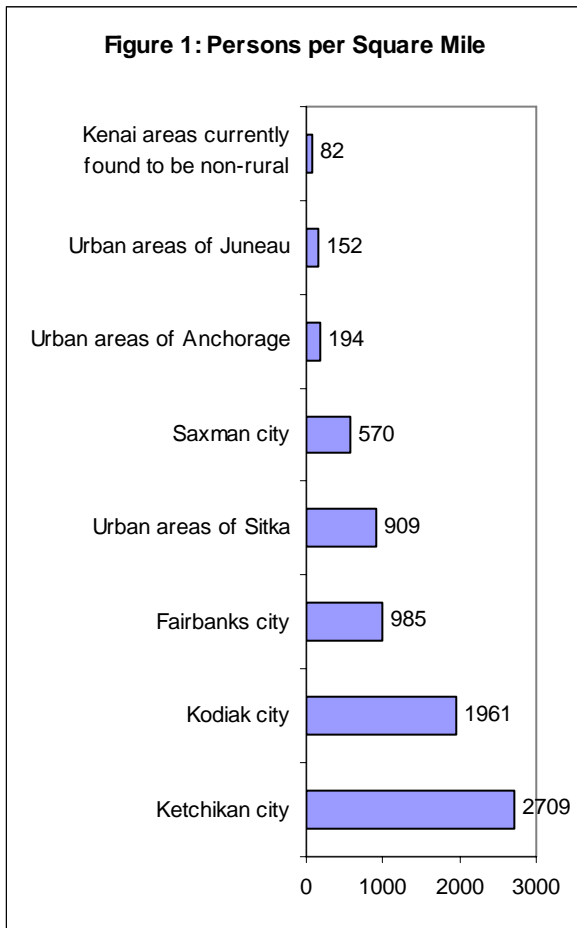
| Community | 1990 Population |
|-------------------|-----------------|
| "Kenai Area" | |
| Kenai City | 6,327 |
| Sterling | 3,802 |
| Soldotna | 3,482 |
| Nikiski | 2,743 |
| Salamatof | 999 |
| Kasilof | 383 |
| Kalifonsky | 285 |
| Clam Gulch | 79 |
| "Area" population | 18,100 |
| "Homer Area" | |
| Homer | 3,660 |
| Fritz Creek | 1,426 |
| Anchor Point | 866 |
| Kachemak City | 365 |
| "Area" population | 6,317 |
| "Seward Area" | |
| Seward | 2,699 |
| Moose Pass | 81 |
| "Area" population | 2,780 |

In its notice of final rural and non-rural determinations, the Board noted that it had aggregated the above fifteen communities into three areas (see Table 3, Federal Register 56(2):238). The Board reported that it aggregated communities when it found that they were socially and economically integrated as indicated by: (1) at least 15 percent of the working people commute from one community to another; (2) they share a common school district; and, (3), daily or semi-daily shopping trips are made.

Areas of Alaska share a common school district include the North Slope Borough, and the Northwest Arctic Borough. The entire Kenai Peninsula is a single school district. As specifically stated, then, this criterion does not distinguish between areas in a meaningful way.

Neither we nor the Kenai Peninsula Borough Planning Office (Jane Gabler personal communication to Virgene Hanna) are aware of data on commuting or shopping patterns that could be applied to communities on the Kenai Peninsula. Data on the percent of workers who work in a community other than their home community are available from the 1990 Census. With the exception of Homer and Seward, more than 15 percent of workers in each of the individual places considered part of one of the non-rural areas on the Kenai Peninsula work outside their home community. It is reasonable to assume that many of these commuters are driving to nearby communities to work. Only one of the three indicators mentioned by the Board, then, exists in meaningful form and might be interpreted to support the aggregation of Kenai communities..

Based on available data, grounds for aggregating most Kenai Peninsula communities into three areas are weak. We have not attempted to conduct an independent analysis of social and economic integration. Adequate data do not exist to support such an analysis and research to collect relevant data is beyond available funding. Instead, we have chosen to compare the combined areas of the Kenai considered by the Board to be non-rural with areas with larger populations determined by the Board to be non-rural.



According to US Bureau of the Census statistics on population and land area, the population density of areas on the Kenai Peninsula currently found to be non-rural was 82 persons per square mile (see Figure 1). This area encompasses the primary settlement areas of the Kenai Peninsula. The population density of the primary settled area of the Sitka Borough is 11 times that of the primary settled areas of the Kenai Peninsula (909 persons per square mile). The population density of the City of Kodiak is 24 times that of the primary settled areas on the Kenai Peninsula (1961 persons per square mile).

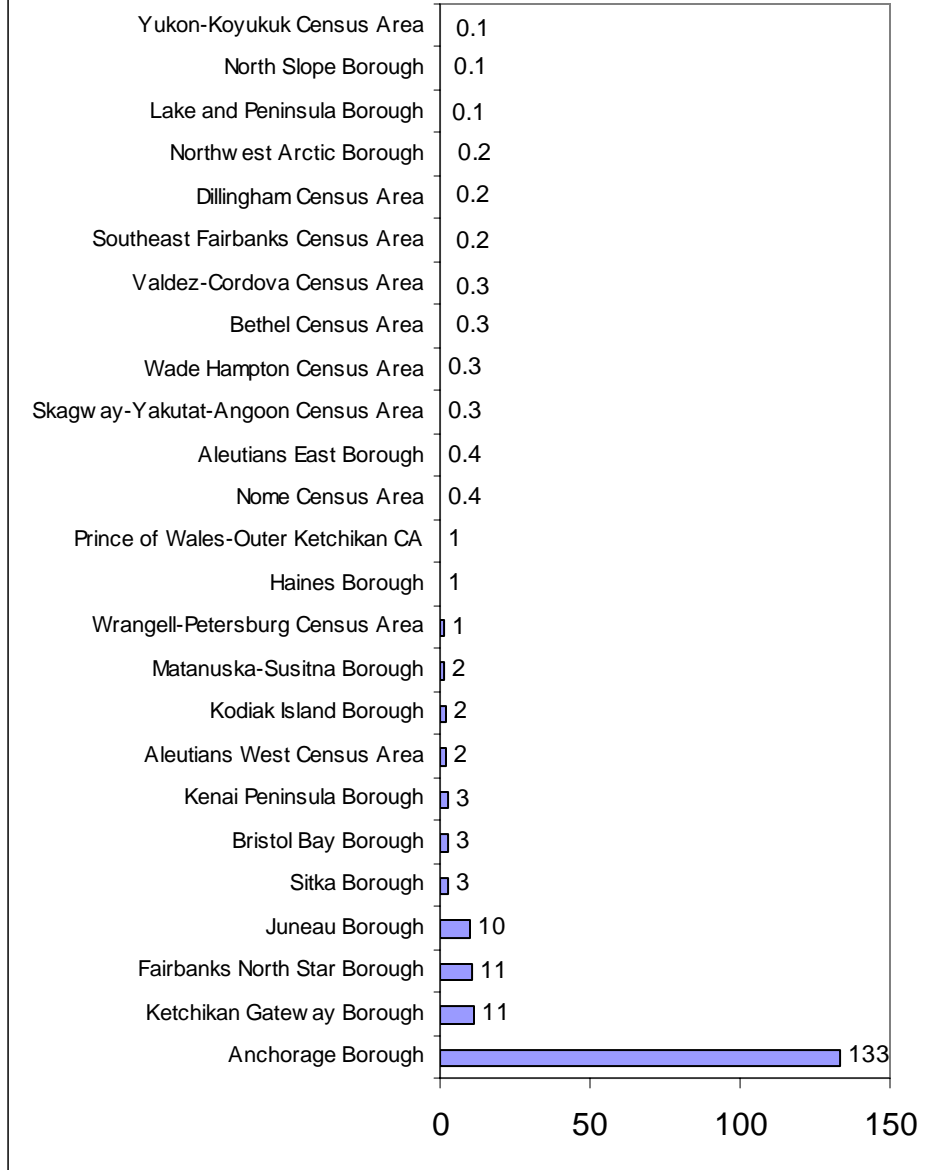
Restricting our analysis to the primary settled areas of the Sitka Borough, Kodiak, and the Kenai Peninsula, then, the primary settled area of the Kenai Peninsula Borough is more sparsely settled. This finding is inconsistent with the Federal Subsistence Board's decision to consider all of the Sitka Borough and all of Kodiak to be rural for subsistence purposes.

Since the issue at hand is the priority use of land for subsistence hunting and fishing, a more appropriate comparison may be of population densities in areas encompassing much of the land used for subsistence hunting and fishing itself. We chose to look at population densities at the borough level. While residents of each comparison borough

hunt and fish outside the borough, the geography of the Sitka, Kodiak, and Kenai boroughs is such that the borough area also approximates the primary subsistence use area.

The Kenai Peninsula Borough has a population density of three persons per square mile. This compares with population densities of two persons per square mile in the Kodiak Island Borough and three person per square mile in the Sitka Borough (see Figure 2). The Kenai Peninsula Borough population density is considerably below that of Juneau (10 persons/sq.mi.), Fairbanks North Star Borough (11 persons/sq.mi.), and Ketchikan Gateway Borough (11 persons/sq.mi.). On the basis of population density, then, we conclude that the Kenai Peninsula Borough as a whole is more like the Kodiak and Sitka boroughs than it is like areas established by ANILCA as urban for purposes of subsistence use.

Figure 2: Persons per Square Mile in Alaska's Boroughs & Census Areas



Source: 1990 US Census

Application of Social and Economic Characteristics to Determinations of Rural and non-Rural status

The Federal Subsistence Board's decision to aggregate communities on the Kenai Peninsula effectively increased the importance of social and economic characteristics relative to population size and density. We examined the concepts and related indicators used in prior federal and state determinations of areas qualifying as rural for subsistence use purposes (see Table 4).

Table 4
Measures Used to Determine Rural Status

| | Federal measures used in 1990 | State measures used in 1992 |
|---------------------------------------|--|---|
| FISH & GAME USE | | |
| • Variety | 1. species/hh | 1. harvest by species per capita |
| • Participation | 1. % of hh | 1. % of hh participating in hunting & fishing 2. % fish with rod & reel 3. % of hunting licenses 4. non-commercial fishing net permits 5. % of hh harvesting & using fish & game & by gear type |
| • Levels of Harvest | 1. averages per capita | 1. lbs per capita 2. annual total fish & game harvest 3. % of protein requirements 4. #s of big game & fish harvested |
| • Where Hunting & Fishing Occur | | 1. primary gmu's 2. areas of harvest listed |
| ECONOMY | | |
| • Wage Employment | 1. low, moderate, or high 2. year round or seasonal | 1. # of jobs by sector 2. major industries 3. seasonal 4. unemployment |
| • Unemployment | 1. 1988 rate | 1. see #4 above |
| • Income | 1. 1985 taxable income | 1. per capita income 2. distribution among racial or cultural groups |
| • Diversity of Services | 1. low, moderate, or high | 1. how developed is the system of commerce 2. cost of food index |
| • Cost of Food Index | 1. 1988 cost index | 1. see #2 above |
| • Social Organization of the Economy | | 1. industrial-capitalism or mixed, subsistence cash economy 2. domestic hh sector is/isn't a major producer & distributor of food |
| • Seasonal Cycle of Economic Activity | | 1. economic activity shows seasonal fluctuations 2. fishing & hunting influenced by resource |

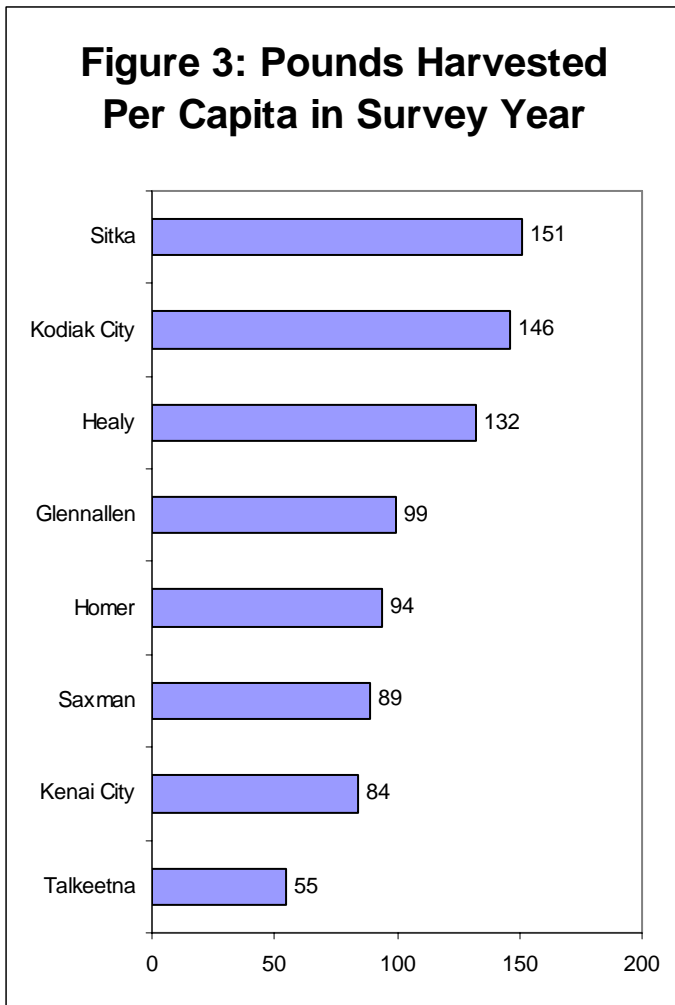
| | | |
|----------------------------|---|---|
| | | availability & regulated seasonal cycles |
| • Stability of the Economy | | 1. population change 2. change in the # of wage paying jobs |
| ELECTRICITY | | |
| • Cost | 1. 1988 \$/kwh | |
| TRANSPORTATION | | |
| • Variety | 1. daily air, air, road, rail, ferry, barge | |
| • Predominant Means | 1. daily air, air, road, rail, ferry, barge | |
| • Road System Miles | 1. # of miles | |
| EDUCATION | | |
| • Level Available | 1. highest level available | |
| VALUES | | |
| • Use Values | | 1. cultural-recreation: break in routine, fair chase ethics, produce wild foods, environmental awareness, non-consumptive uses-Ak Native: for local society, for sharing with elders, for ceremonies,- 2. commercial-employment: guides, charters, retail outlets-economic self-sufficiency, seasonal wage employment 3. types & number of voluntary associations |
| • Sharing & Exchange | | 1. % received |

Subsistence Harvest Comparisons

The criterion given heaviest weight in these determinations has been the level of harvest, usually expressed in terms of total edible pounds of harvest per capita per year. Harvest data are only available for two communities in the area now considered non-rural by the Federal Subsistence Board (Kenai City and Homer). We compared total harvest levels for these two communities with Kodiak City, Sitka, Healy, Glennallen, Saxman, and Talkeetna (see Figure 3). These data come from the Alaska Department of Fish and Game Subsistence Division Village Profile Database. In cases where the Division collected two or more years of harvest data, we selected the year identified as the most representative year of harvest activity by the Division. We should note that the Kenai community data report harvests in 1993. In that year subsistence uses were not allowed on the Kenai Peninsula, so resident harvests had to take place under more restrictive sport and personal use regulations. Homer data report 1982 harvests.

We chose Kodiak City and Sitka for comparison because these were both areas first considered non-rural and then determined to be rural by the Federal Subsistence Board.

Both areas have higher per capita harvest levels than Kenai City and Homer. We chose Saxman for the same reason. The per capita harvest of Saxman residents is, on average, virtually the same as that of Homer and Kenai City residents.



We chose Healy, Glennallen, and Talkeetna for comparison because there is a well established relationship between total harvest and location with respect to the road system (Wolfe and Walker, 1987). According to Wolfe and Walker (1987:66), "Harvests of communities along the road network or marine highway system are 69 percent less than harvests by communities off the road network (171 lbs. compared with 559 lbs. per capita).

The communities chosen for comparison are neither the highest nor the lowest in terms of subsistence harvest among communities on the road network. They illustrate the fact, however, that both Kenai and Homer harvests are within the range of communities considered rural for subsistence use purposes.

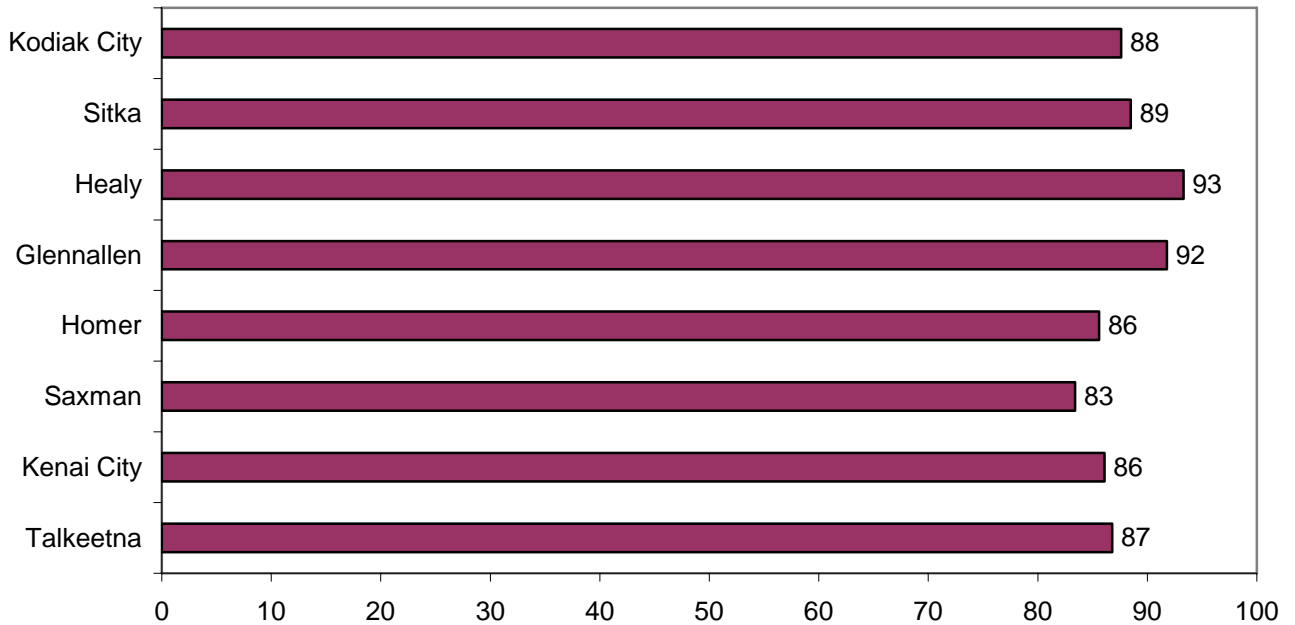
Competition for resources by non-local residents may explain a

significant part of the lower harvest of Kenai and Homer residents. Based on an ISER surveys of anglers statewide and of non-resident anglers, we estimate that 67 percent of the salmon caught on the Kenai Peninsula are caught by non-Kenai Peninsula residents. And, based on hunter surveys conducted by the Wildlife Conservation Division of the Alaska Department of Fish and Game, 19 percent of the moose harvested on the Kenai Peninsula are harvested by non-Kenai Peninsula residents.

Participation in Hunting and Fishing

Another indicator of harvest activity is the extent of household participation in hunting and fishing. Participation rates of Homer and Kenai City households are equivalent to those of the households of Kodiak City, Sitka, Healy, Glennallen, Saxman, and Talkeetna (see Figure 4).

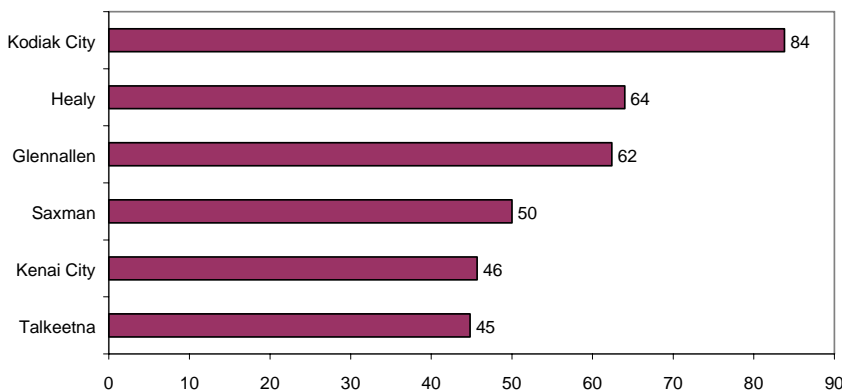
Figure 4: Percent of Households Harvesting Any Resource



Source: ADF&G Subsistence Division Village Profile Database

Households Giving Away Harvest Products

Figure 5: Percent Households Giving Away Harvest Resources in Survey Year in Survey Year

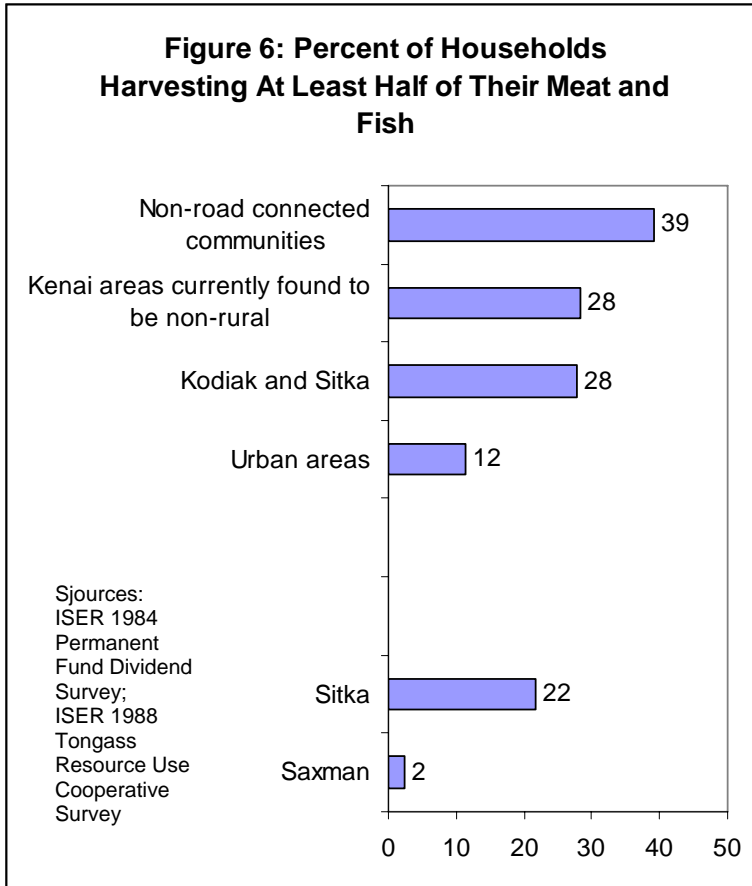


Sharing of harvest products is a characteristic commonly held by Alaska Native cultures and non-Native communities closely tied to the resources in their area. Data on sharing for a representative

sample of households in the area currently treated as non-rural are only available for Kenai City. In this study, 62 percent of Kenai households reported giving away some harvest products (see Figure 5). This figure compares with Kodiak (84 percent), and Saxman (45 percent). We should note that 9 communities considered rural likely have significantly lower rates of sharing: Tok (29%), Kenny Lake (29%), Hyder (33%), Anderson (33%), Skagway (38%), Gulkana (40%), Copper Center (44%), and Saxman (45%).

Proportion of Meat and Fish Harvested

ISER has occasionally asked its survey respondents to estimate the proportion of the meat and fish they eat that comes from harvests by household members. In 1984, ISER asked this question statewide. We found that 28 percent of the residents of the areas on the Kenai Peninsula considered non-rural obtained at least half their meat and fish from the harvest activities of household members (see Figure 6).

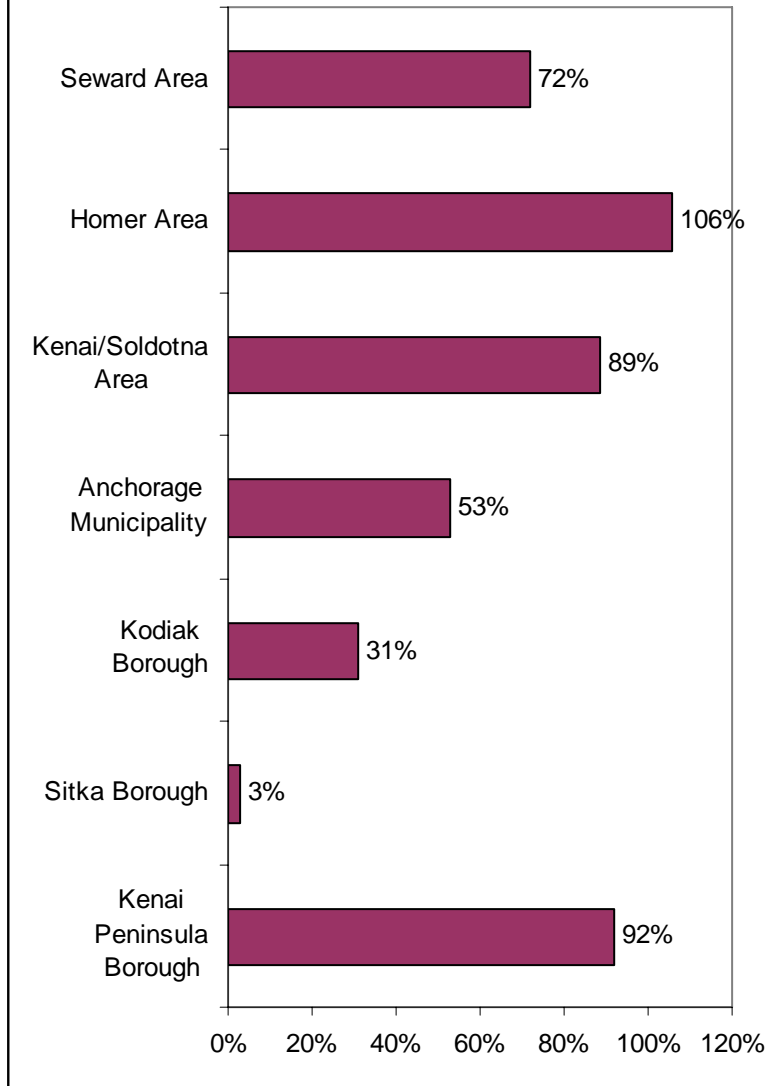


The same percentage of households (28 percent) in Kodiak City and Sitka combined reported harvesting half or more of their meat and fish. In this 1984 survey, the sample sizes for Kodiak and Sitka were too small to report separately. We asked virtually the same question in 1988 in another survey of southeast residents. In this survey, 22 percent of Sitka households reported harvesting at least half of their meat and fish. By comparison, only 12 percent of households in Anchorage, Fairbanks, Juneau, and Ketchikan reported obtaining half or more of their meat and fish from household harvests.

Employment and Unemployment

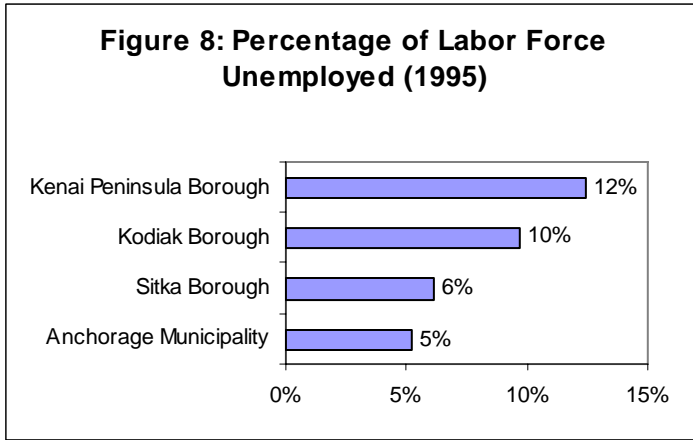
Increased employment has been considered by the state and federal governments as an indicator of loss of rural character. Employment has increased substantially on the Kenai Peninsula in the past 15 years (see Figure 7). Employment has increased more rapidly than in Anchorage, Kodiak, or Sitka.

Figure 7: Percentage Increase in Employment: 1980 - 1995



Source:
AK Dept. of
Labor,
Statistical
Quarterly
Employment
& Earnings
Summary
Reports

Unemployment, however, is higher on the Kenai Peninsula than it is in Kodiak, Sitka, or Anchorage (see Figure 8).

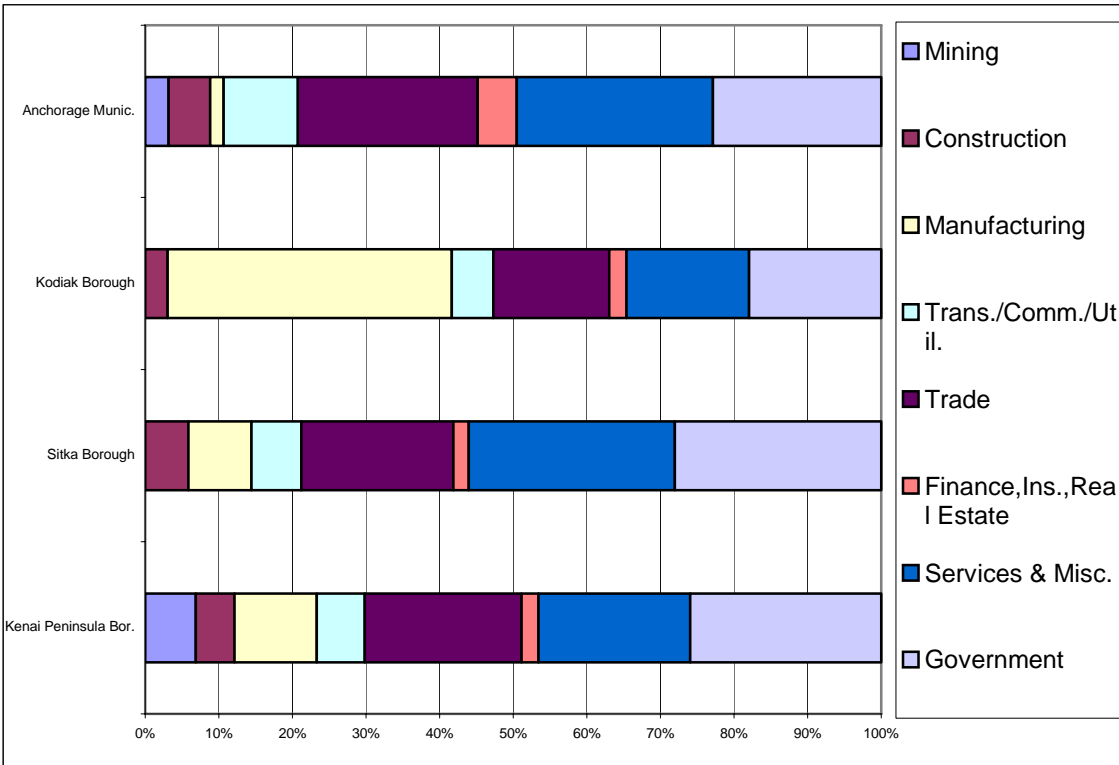


Source:
AK Dept. of
Labor,
Research &
Analysis,
3/3/97

Diversity of the Economy

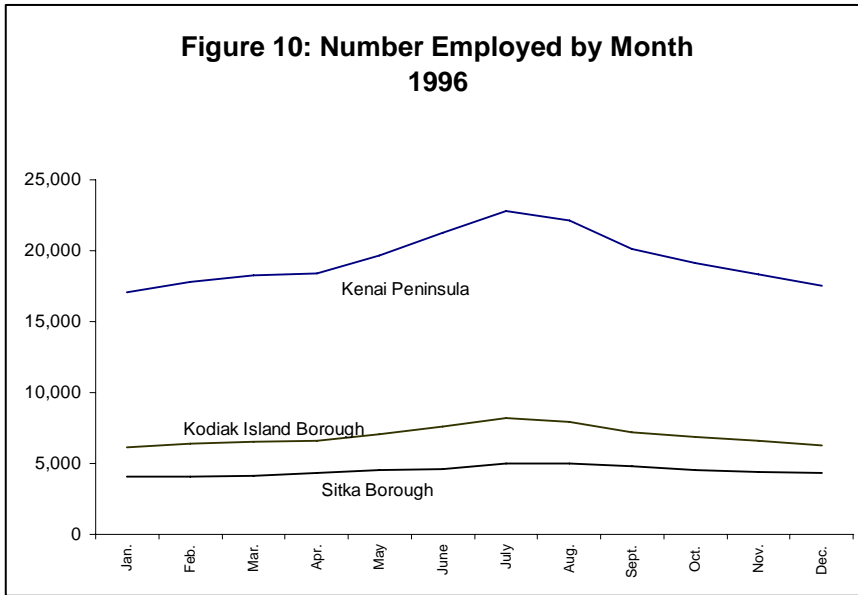
One measure of the diversity of the economy is the degree to which employment is equally distributed among the industry sectors. The Kenai Borough has the most even distribution of employment (see Figure 9).

Figure 9: Employment by Industry



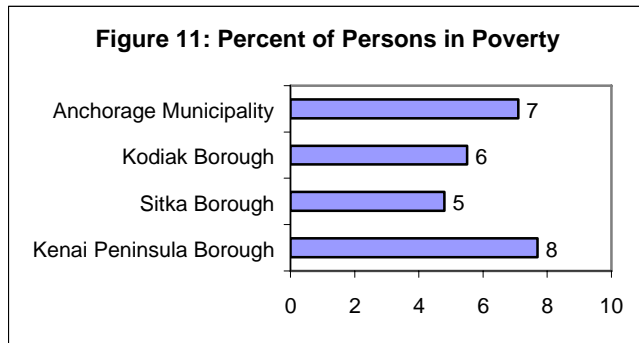
Seasonality of Employment

Source: AK Dept. of Labor,
Statistical Quarterly Employment &
Earnings Reports



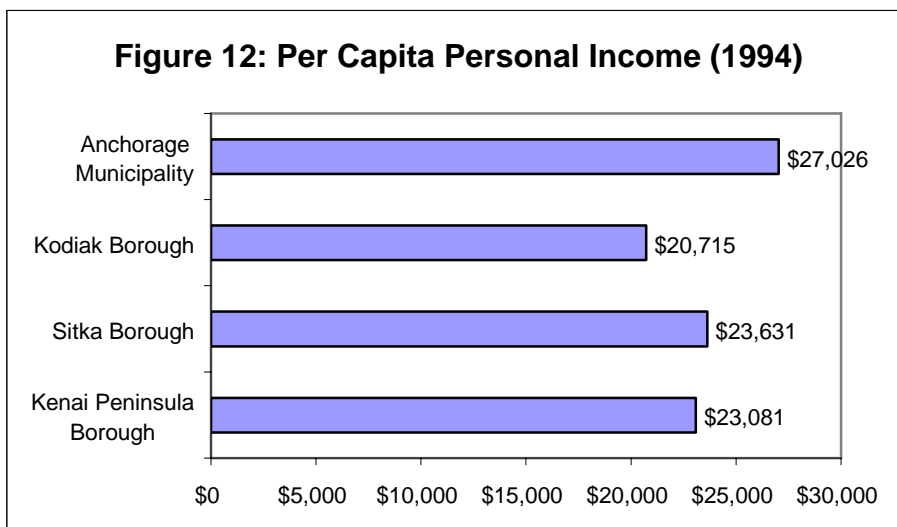
Rural areas are generally expected to have a more seasonal pattern of employment than urban areas. In the case of the Kenai Peninsula, employment varies more by season than it does for the Kodiak or Sitka Borough, both of which are considered rural for subsistence purposes.

Poverty



Eight percent of Kenai residents live below the federal poverty line (see Figure 11). This compares with seven percent of Anchorage residents, six percent of Kodiak residents, and five percent of Sitka residents. Kenai's more diverse economy, then, has not produced a lower poverty rate.

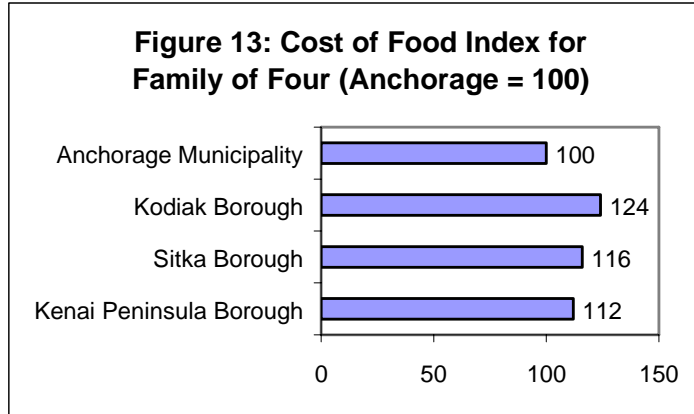
Average Taxable Income



Kenai residents had an average personal income in 1994 equaling that of Sitka residents, slightly exceeding that of Kodiak Borough residents and well below that of Anchorage residents.

Cost of Food

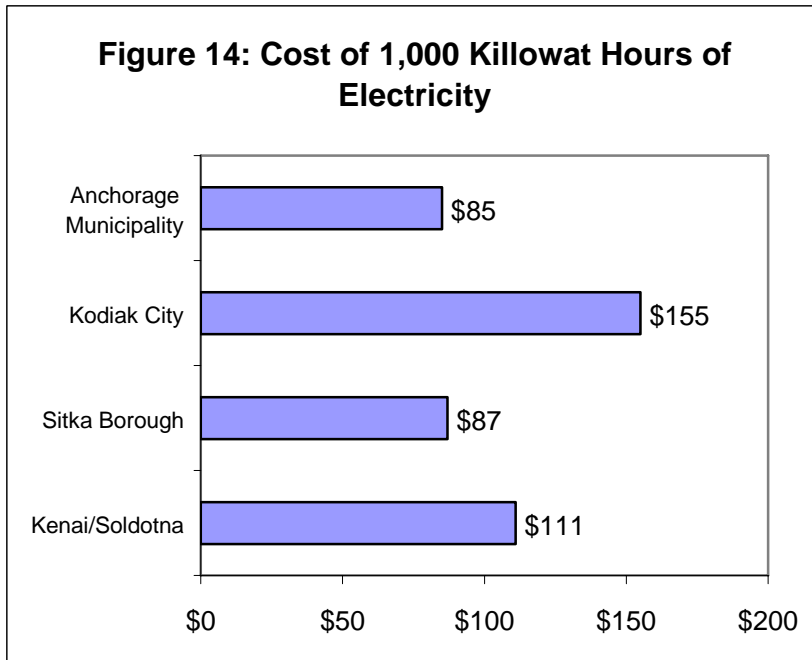
Food costs on the Kenai Peninsula are higher than that of Anchorage, lower than that of Kodiak, and just below that of Sitka (see Figure 13).



Source: AK Cooperative Extension, University of Alaska Fairbanks

Cost of Electricity

Electricity costs in the Kenai/Soldotna area exceed that in Sitka and Anchorage and are below that in Kodiak (see Figure 14).



Source: AK Cooperative Extension Service, University of Alaska Fairbanks

Transportation

All Kenai Peninsula communities currently considered non-rural by the Federal Subsistence Board are located on the state road system and are designated as having an "infinite" number of road system miles. The predominant mode of transportation is clearly the automobile. Residents have a choice of commuter airline connections to and from the Kenai Peninsula, so there are a variety of transportation options for inter-regional travel. Kodiak and Sitka residents also have inter-regional transportation

choices: ferry and airplane. The more important point is that the Kenai Peninsula population is dispersed along the road network. This is indicated by the population density figures presented earlier. The Kenai Peninsula is also at least a two hour drive from an urban center.

Educational Institutions

Since there are community colleges in Kenai, Kodiak, and Sitka, there are comparable educational opportunities in these three communities. However, 61 percent of the population located in the area currently considered non-rural on the Kenai Peninsula live in communities other than Kenai or Soldotna.

Summary

The purpose of this analysis is to determine whether the Kenai Peninsula is "rural", based on measures related to its population, as well as the socio-economic factors relied upon by the Federal Subsistence Board to determine the rural status for subsistence purposes. The analysis compares the rural characteristics of the Kenai Peninsula with those of the Sitka Borough, Kodiak Island Borough and City of Saxman. The latter three areas were initially determined to be non-rural but ultimately were classified as rural for subsistence purposes. To the extent that the Kenai Peninsula is at least equal to these three other areas on measures of rural character, then the case for classifying the entire Kenai Peninsula rural is stronger.

Table 5 summarizes the comparisons of indicators of the rural characteristics of areas of the Kenai Peninsula, Sitka Borough, Kodiak Island Borough, and Saxman. Indicators for which the Kenai area and at least one comparison area are of comparable rural character are shaded.

The Kenai Peninsula Borough is less densely populated than any of the major urban boroughs or municipalities (Anchorage, Fairbanks, Ketchikan, Juneau), and comparable to Sitka and Kodiak. The two percent of the land area of the Kenai Borough which contains two-thirds of the Kenai Borough population is less densely populated than the primary settled areas of Sitka, and the cities of Kodiak and Saxman.

Both Kenai and Homer area residents harvest about the same amount of fish and game as Saxman residents. They participate in hunting and fishing at comparable levels to Sitka and Kodiak residents. Kenai residents share harvests at a rate comparable to that of Saxman residents.

While employment has increased on the Kenai Peninsula more rapidly in the past 15 years than in Sitka or Kodiak and its economy is more diverse, unemployment is higher and employment is more seasonal. The proportion of residents in poverty is higher on

the Kenai Peninsula than it is in the Kodiak and Sitka boroughs. Average personal incomes are comparable between the Kenai Peninsula Borough and the Sitka Borough and somewhat higher than that of Kodiak residents. The cost of food on the Kenai Peninsula is comparable to that in Sitka and lower than that in Kodiak. The cost of electricity in the Kenai/Soldotna area is higher than that in Sitka and lower in Kodiak. Transportation options are comparable in Kenai, Sitka, and Kodiak, but residents are more dispersed along the Kenai road network. Education opportunities are similar.

On all but two measures of rural character (employment growth and employment diversity), including the principal measures offered in the Ninth Circuit Kenaitze decision (population size and density), the Kenai Peninsula compares with one or more of the areas now considered rural by the Federal Subsistence Board. We therefore conclude that, on the basis of either the Ninth Circuit's definition of rural or the measures customarily used by the state and federal governments to determine rural status, and based on a comparison of the rural character of the Sitka and Kodiak boroughs and the city of Saxman, the Kenai Borough should be classified as rural for subsistence purposes.

Table 5: Summary of Comparisons of Rural Character

Gray cells indicate characteristics supporting rural designation for Kenai Peninsula

| | Kenai Peninsula Borough | Sitka Borough | Kodiak Island Borough | Kenai areas now non-rural" | Sitka urban areas | Kodiak City | Saxman |
|---|-------------------------|-------------------|-----------------------|----------------------------|-------------------|--------------------|--------|
| Population Density (persons per square mile) | 3 | 3 | 2 | 82 | 909 | 1961 | 570 |
| Harvest of Fish & Game (pounds per capita/yr.) | | | | 84 (Kenai) 94 (Homer) | 146 | 151 | 89 |
| Household harvest participation (percent) | | | | 86 (Kenai) 86 (Homer) | 89 | 88 | 83 |
| Sharing of harvest (percent giving any harvest) | | | | 46 (Kenai) | | 84 | 50 |
| Percent of meat & fish from household harvests | | | | 28 | 22 | 28 (with Sitka) | 2 |
| Increase in employment, 1980-1995 (%) | 92 | 3 | 31 | | | | |
| Unemployment (percent) | 12 | 6 | 10 | | | | |
| Diversity of employment by industry (rank) | first | second | third | | | | |
| Seasonality of employment | high | medium | low | | | | |
| Persons in poverty (percent) | 8 | 5 | 6 | | | | |
| Personal income (\$ per capita) | \$23,081 | \$23,631 | \$20,715 | | | | |
| Cost of food (Anch.=100) | 112 | 116 | 124 | | | | |
| Cost of electricity (1,000 KWH) | \$111 | \$87 | \$155 | | | | |
| Transportation (inter-regional connections, dispersion) | Auto, air, dispersed | Air, ferry | Air, ferry | | | | |
| Educational Opportunities | Community College | Community College | Community College | | | | |

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