

KAKTOVIK SNAPSHOT

	2003	2010
Total Population	286	308
Sample Population	195	234
Population Growth Since 1990	27.7%	37.5%
Population Growth Since 1980	73.3%	86.7%
Population Growth Since 1970	132.5%	146.4%
Percent Female	49.5%	45.8%
Percent Inupiat	88.2%	85.9%
Percent Caucasian	7.7%	12.8%
Percent Other	2.0%	1.3%
Number and Percent of Population Fluent Inupiaq Speakers	49/20.9%	42/14.6%
Number and % of Population ≤ 16 (dependency ratio)	71/36.4%	97/33.7%
Number and % of population 16-64 (Labor Force)	98/54.6%	188/65.3%
Number and % of population ≥ 65 (dependency indicator)	14/6.6%	9/3.1%
Median Age of Females	28	29
Median Age of Males	29	34
Median Age of Total Population	28	33
Size of Labor Force	98	143
Number of Individuals with permanent full-time employment	63	74
Number and percent of Labor Force unemployed	14/14.3%	37/22.6%
Number and Percent of Labor Force Underemployed*	18/25.7%	41/29%
Number and Percent of Labor Force Underemployed**	37/37.8%	38/25.7%
Total Number of dwelling units	94	102
Number of Vacant Units and Vacancy Rate	n/a	9/7.5%
Total Number of Occupied Households	94	93
Total Number of Households Surveyed	59	68
Average Number of People per Household	3.32	3.44
Percent of Households in Census	62.8%	73.1%
Percent of total Population in Sample	68.5%	75.9%
Percent of Inupiat Households Using Subsistence Foods	100.0%	100.0%
Percent of Households Receiving Half or more of diet from Subsistence foods	68.6%	66.7%

*Individuals working less than 10 months ** individuals who perceive themselves to be underemployed.

Kaktovik: Economic Profile and Census Report 2010

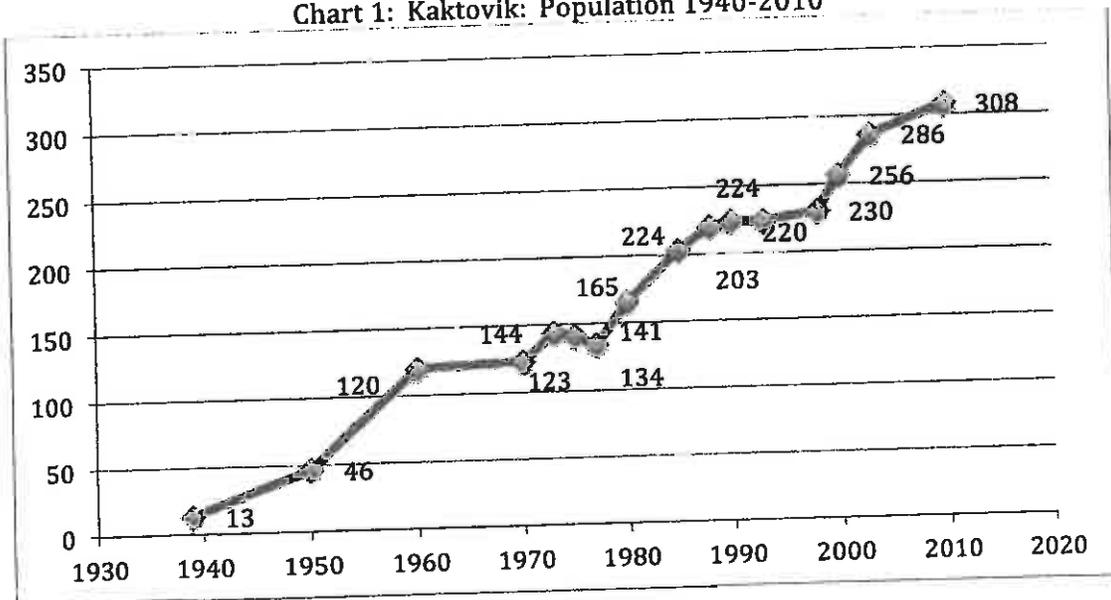
Table 1 below indicates the sampling proportion for Kaktovik in 2003 and 2010. In 2010 sixty-eight households were interviewed, about 73 percent of the 93 occupied households indicated to be in the community from enumeration of residential electrical hookup data and the independent audit of occupied housing units in the North Slope Borough. The sixty-eight households interviewed in 2010 represent about a 13 percent increase in sample size over the 59 households interviewed in 2003. Thus the 2010 sampling proportion of 73 percent is higher than the 2003 NSB Census when 59/94 households, or 63 percent were interviewed. As a consequence, when one calculates the standard error of the proportion for both surveys the 2010 Census provides tighter estimates of population proportions.

Our best estimate would then indicate an increase of 22 individuals in Kaktovik between 2003 and 2010, given the slight increase in the average household size between 2003 and 2010 and the reduction of one only household during this same period.

Table 1: Kaktovik Community Population Estimates 2003 to 2010.

Community	Kaktovik 2003	Kaktovik 2010
HH Sample Size (n)	58	68
#HH's Estimate (N)	94	83
Standard Error of Proportion{+/-}**	+/- 8.01%	+/- 5.2%
Sample - Ave. Household Size	3.32	3.44
Low Pop. Estimate	287(286*)	272
Mid-Point Estimate	312	286
High Pop. Estimate	337	308

Chart 1: Kaktovik: Population 1940-2010



The ethnic composition of Kaktovik for the sample population is detailed in Table 2, below. As can be seen from this table and the one following it, the Iñupiat proportion of the total population has remained fairly constant at about 86%. However, the 2010 figures represent nearly a doubling of the Caucasian population with a drop in the proportion of "other" ethnicities and a concurrent minor drop of about 2% in the Iñupiat proportion.

Table 2: Kaktovik 2010 - Ethnicity of Sample Population in Percent

Ethnicity	Frequency	Percent	Cumulative Percent
Iñupiat	201	85.9	85.9
Caucasian	30	12.8	98.7
Other (specify)	3	1.3	100.0
Total	234	100.0	

Table 3: Kaktovik Ethnic Proportions of Population (Individuals) 1998-2010

ETHNICITY	1998	2003	2010
Percent Iñupiat	85.1%	88.2%	85.9%
Percent Caucasian	6.2%	7.7%	12.8%
Percent Other Ethnicities	8.7%	4.1%	1.3%

Chart 2: Kaktovik 2010 Population Pyramid - Individuals from Sample.

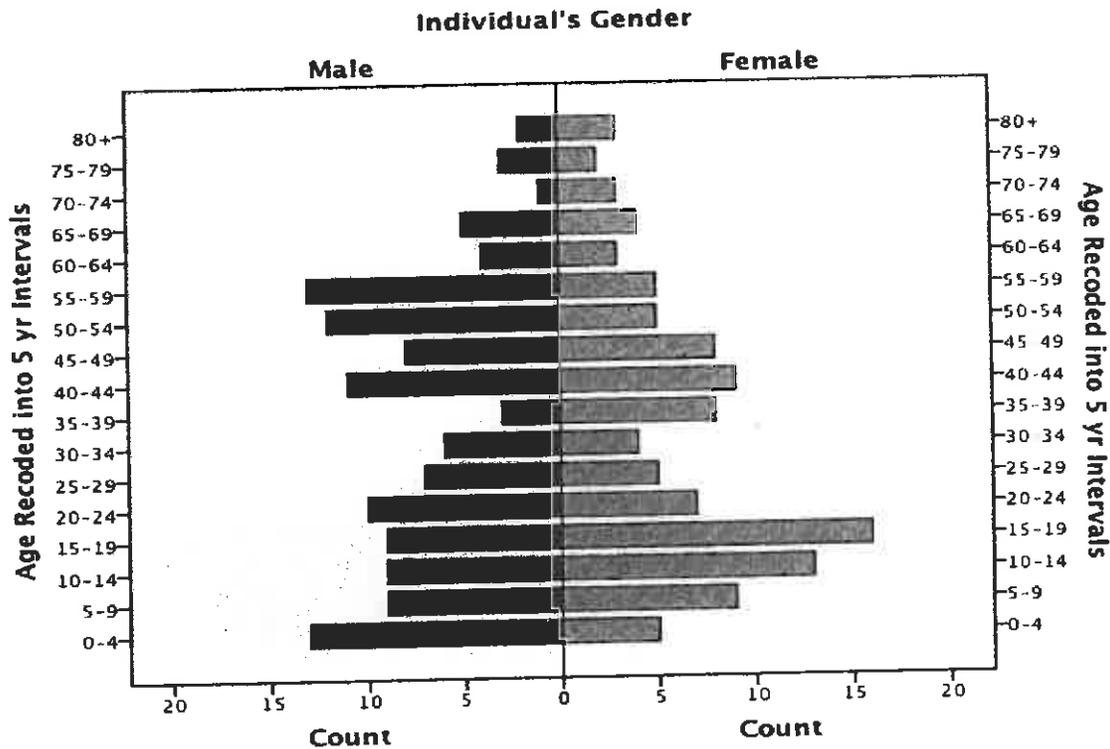
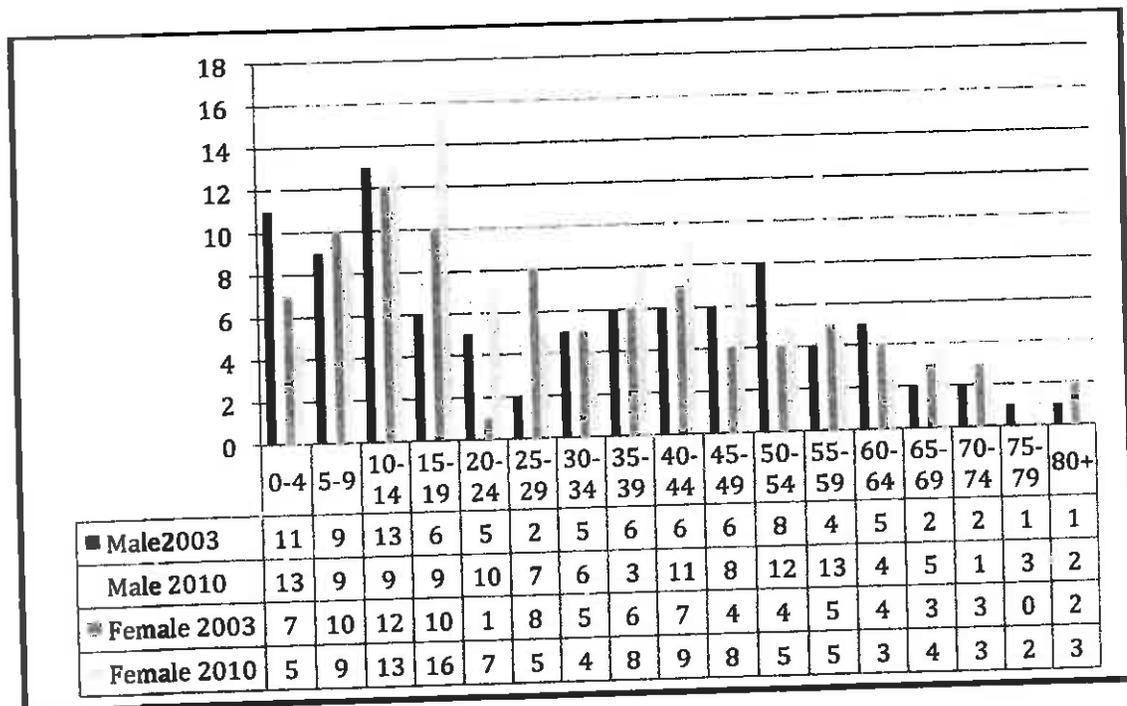


Chart 2, above, provides a population pyramid for Kaktovik in 2010 in five year age intervals for all ethnicities. Chart 3, below provides a comparison of the age intervals for all individuals within the community between 2003 and 2010 for all ethnicities. Interestingly, for the whole population there is very little difference in 2003 in the number of young men (12) and young women (14) between the ages of 20 and 34. In contrast by 2010 the proportions had changed considerably with young men (23) outnumbering young women (14) by nearly forty percent.

Chart 3: Kaktovik 2003 - 2010 - Population by Gender and 5 yr. Age Interval



The 2003 numbers contradict the generalization about small rural, mostly indigenous communities. The received view is that these communities usually tend to have a sharp drop in the number of women in younger age intervals (e.g., between 20-34) as they are usually better equipped with academic skills and have other incentive for migration to larger communities in search of employment. Conversely, young men in this age cohort tend to stay put because of their detailed knowledge of the local subsistence landscape. While the 2003 numbers contradict this generalization for all ethnicities the 2010 counts seem to support it.

However, when we compare only Iñupiat young men and women in this age range for Kaktovik between 2003 and 2010 we find, as Table 4, below indicates; very little confirmation for this assertion. In 2003 there were 11 young Iñupiat men between the ages of 20-34, whereas there were 9 young Iñupiat women in the same age cohort - nearly equal

proportions. By 2010 there were 18 young Iñupiat men in this age range and 14 young Iñupiat women, not quite parity but fairly close.¹

Table 4: Kaktovik 2003 – 2010. - Iñupiat Population in 5 yr. Age Intervals by Gender.

Age 5 yr. Intervals	Iñupiat 2003		Iñupiat 2010	
	Male	Female	Male	Female
	Count	Count	Count	Count
0-4	10	7	12	4
5-9	9	8	9	7
10-14	13	12	8	11
15-19	6	9	9	15
20-24	5	1	9	7
25-29	2	6	6	5
30-34	4	2	3	2
35-39	5	6	3	5
40-44	5	6	10	9
45-49	5	4	7	7
50-54	6	3	12	5
55-59	2	4	10	1
60-64	4	3	2	3
65-69	2	3	4	3
70-74	2	3	0	3
75-79	1	0	3	2
80+	1	2	2	3
Total	82	79	109	92

With respect to household size, Table 6, below, indicates that nearly three fourths of all Caucasian households have 1 or 2 members whereas nearly 60 percent of Iñupiat households have three or more members. On average Iñupiat households have one more member than Caucasian households (see Table 5, below) and average 35 years of residency (see Table 7, below), a lifetime.

Table 5: Kaktovik – NSB Sample - Average Household Size by Ethnicity.

Iñupiat Average Household Size	Caucasian – Average Household Size	Kaktovik 2010 All HH's Average Household Size
3.62 people	2.45 people	3.44 people
n= 53	n=11	n=68

¹ The 2003 NSB Census did not report Iñupiat only results on this variable. Additional analysis of the 2003 data set was completed to provide an ethnic breakdown for comparison.

Table 6: Kaktovik 2010 – Household Size by Ethnicity.

Recode Number of Persons in Household to Ordinal For Comparison	Recode Ethnicity into Three Categories					
	Iñupiat		Caucasian		Other	
	Count	Column %	Count	Column %	Count	Column %
1	11	20.8%	3	27.3%	1	25.0%
2	11	20.8%	5	45.5%	1	25.0%
3	4	7.5%	1	9.1%	1	25.0%
4	8	15.1%	0	.0%	0	.0%
5	7	13.2%	1	9.1%	0	.0%
6	7	13.2%	1	9.1%	0	.0%
7	3	5.7%	0	.0%	0	.0%
8	1	1.9%	0	.0%	0	.0%
9	1	1.9%	0	.0%	1	25.0%

Average Length of Residency:

Most Iñupiat household heads are lifetime residents of Kaktovik. In contrast, about two thirds of Caucasian household heads, drawn by employment and other reasons, have lived in Kaktovik 2 years or less. Note, however, that two Caucasian households have lived in the community more than 13 years. All three of these tables substantiate the permanent lifetime Iñupiat family relationship to the community and landscape while sharply contrasting with the transitory nature of the majority of small Caucasian households

Table 7: Kaktovik 2010 Average Length of Residency Household Head by Ethnicity.

Iñupiat Household Head – Average Length of Residency	Caucasian Household Head – Average Length of Residency
35.19 years	4.73 years
n= 53	n=11

Dependency Ratio's:

Table 8 below compares the proportion (%) of the total Kaktovik population that fall into various age intervals (cohorts). These age intervals are selected to create a total dependency ratio, a child dependency ratio and an age dependency ratio.

The important thing to note in this table is the sharp 16 percent drop in the total dependency ratio for Kaktovik between 2003 and 2010. Most of the change can be attributed to a slight decrease in the number of individuals in the youth cohort 0-15 years of age between 2003 and 2010. What the implications of these modest changes mean will require further detailed analysis.

Table 8: Kaktovik – Age Cohorts and Dependency Ratios 2003 and 2010.

	Kaktovik 2003	Kaktovik 2010
% 15 yrs. & under	36.01%	27.4%
% 18 yrs. & under	41.0%	31.6%
% 18-24 years of age	5%	11.1%
% 55-64 years of age	10.3%	10.3%
% 62 years and older	9.8%	10.3%
% 65 years and older.	6.6%	9.4%
%16-64 years of age	55.2%	61.6%
% 18-64 years of age	51.3%	58.6%
Youth Dependency Ratio	59.4	44.4
Age Dependency Ratio	13.1	15.2
Total Dependency Ratio	71.0	59.7

Employment:

Table 9, below details the distribution of months worked by Kaktovik residents who are in or potentially in the labor force. Note that only about half the valid respondents had worked full time or 12 months out of the year. In addition, slightly fewer than 50 percent of the workforce had worked 10 months or less – one definition of underemployment. Of some importance is the fact that about 20 percent of the work force had no employment whatsoever, a slight increase from the 17 percent without any employment during 2003.

Table 9: Kaktovik 2010 – Employment – Individual Household Member's Months of Employment.

Number of Months	2010 Frequency	2010 Percent	2010 Cumulative Percent
0	27	20.3	20
1	3	2.3	23
2	6	4.5	27
3	7	5.3	32
4	6	4.5	37
5	4	3.0	40
6	4	3.0	43
7	1	.8	44
8	3	2.3	46
9	4	3.0	49
10	1	.8	50
12	67	50.4	100
Total	133	100.0	

In 2010 we note a significant increase in the number of people who have self-defined as being within the labor force. This number is slightly lower than the number of individuals 16-64 years of age. There has been an increase of 45 individuals (31 percent) added to the labor force between 2003 and 2010. However, this increase reflects a level of labor force participation equal to that found in 1998. The one major difference is the dramatic doubling of the number of individuals who evaluate themselves as being underemployed. This is a key statistic and while it is a personal respondent evaluation (sometimes by proxy) it is bolstered by the empirical measure, which indicates nearly half of those employed had worked ten months or less during the reference year. Finally, average months worked has decreased by about 15 percent since 2003 while average months unemployed has increased slightly.

Table 10: Employment Characteristics of Kaktovik 1998 -2010.

Kaktovik	1998	2003	2010
Total Population	256	312 (196*)	286 (234*)
Persons 16-64*	152	107	176(144*)
Persons in Labor Force	141	98*	143*
Respondents Reporting Underemployment	19 (13.5%)	18* (18%)	41* (29%)
Respondents Reporting Working < 10 months*	58	37*	65* (48.9%)
Ave. Months Employed	-	8.54^	7.41** (9.29) ^
Ave. Months Unemployed	-	8.79*	8.99*

*Sample population **Average includes unemployed individuals in the denominator ^Persons with some employment

As Table 11, below indicates, only about 45 percent of the workforce considers themselves permanent and full time in their occupation. About 20 percent of the workforce is temporary seasonal or part time. If we remove retired workers from the total nearly half (48 percent) of the workforce is unemployed or depending on part-time or temporary seasonal employment.

Table 11: Kaktovik 2010 Individual Employment Status (plus retirees) in the Work Force.

Employment Status	2010 Frequency	2010 Percent	Cumulative Percent
Permanent full time	74	45.1	45.1
Temporary seasonal	8	4.9	50.0
Part-time	24	14.6	64.6
Unemployed	37	22.6	87.2
Retired	21	12.8	100.0
Total	164	100.0	

Comparing 2003 with 2010 on these same measures finds a 12 percent decrease in full time employment, a reduction of nearly half in seasonal employment, a substantial jump in part-time employment and a 35 percent increase in unemployment. Certainly wage employment opportunities have decreased in the last seven years and might partially explain the in- and out-migration noted by the State of Alaska as occurring in rural communities over the past few years.

Table 12: Kaktovik Comparison of Employment Status 2003 to 2010 (in %).

For Individuals 16-64 yrs. Of age.	Percent 2003	Percent 2010
Permanent Full Time	57.2%	45.1%
Seasonal Employment	9.0%	4.9%
Part-time Employment	8.0%	14.6%
Unemployed	14.5%	22.6%
Retired	10.9%	12.8%

With respect to employment by gender for the Iñupiat work force we notice more men in the work force with a lower proportion of full time employment when compared with women (36 percent to 44 percent respectively). In addition, men experience a 37 percent higher proportion of unemployment.

Table 13: Kaktovik 2010: Employment Status – Iñupiat Only, by Gender

Iñupiat	Employment 2010	Count	Column N %
Male Employment	Permanent full time	27	35.5%
	Temporary seasonal	4	5.3%
	Part-time	11	14.5%
	Unemployed	23	30.3%
	Retired	11	14.5%
	Total	76	100.0%
Female Employment	Permanent full time	28	44.4%
	Temporary seasonal	3	4.8%
	Part-time	10	15.9%
	Unemployed	12	19.0%
	Retired	10	15.9%
	Total	63	100.0%

Looking first only at Iñupiat - women are much more likely to work in City government than are men (8:3) and both genders are much more likely to work for the City

Table 14: Kaktovik 2010 - All Individuals - Employer by Gender by Ethnicity.

		Iñupiat	Caucasian	Other
Federal government	Male	0	1	0
	Female	0	0	0
State government	Male	0	0	0
	Female	0	0	0
City government	Male	3 (1)	1	0
	Female	8 (1)	0	0
NSB government	Male	14 (16)	3	0
	Female	7 (10)	1	0
NSB School district	Male	2 (3)	3	0
	Female	7 (5)	6	0
NSB CIP	Male	2	0	0
	Female	0	0	0
Oil industry	Male	1 (1)	0	0
	Female	0	0	0
Private construction firm	Male	2 (5)	0	0
	Female	0	0	0
ASRC or subsidiary	Male	0 (3)	0	0
	Female	1 (2)	0	0
Village corp./subsidiary	Male	10 (10)	0	0
	Female	5 (7)	0	0
Finance/insurance	Male	0	0	0
	Female	0	0	0
Transportation	Male	0	0	0
	Female	1	0	0
Communications	Male	0	0	0
	Female	0	0	0
Other	Male	10	4	0
	Female	11 (1)	2	1
Total	Male	44	12	0
	Female	40	9	1

Note: numbers in parenthesis represent counts from the 2003 NSB Census

in 2010 than in 2003 (11:2). These proportions are reversed for employment with the Borough where twice as many men work for the NSB than do women (14:7) although this employment represents nearly a 25 percent drop in employment with the Borough between 2003 and 2010. Village Corporation employment has remained fairly steady between 2003 (17) and 2010 (15) both in terms of total jobs and in the proportion of twice as many men working in this sector.

Employment for Caucasians is concentrated in the school district where women outnumber men by a ratio of 2:1. This is reversed for employment by the NSB where three men and one woman are employed. These two employers account for two thirds of Caucasian employment in Kaktovik in 2010.

Over half the male respondents report an inability to find a job as their major reason for unemployment. The modal response by females (43 percent) as to their unemployment was family responsibilities, such as the care of an elder. Three male Iñupiat (~8 percent) cited conflicts with subsistence activities as a reason for unemployment; interestingly five Iñupiat males (13 percent) did not wish to find wage employment.

Table 15: Kaktovik 2010 – Iñupiat Individuals – Reason for Unemployment by Gender.

Household Member's Reason for Unemployment		Count	Column %
Did not want job	Male	5	100.0%
	Female	0	.0%
Could not find job	Male	22	78.6%
	Female	6	21.4%
Physical disability/poor health	Male	3	60.0%
	Female	2	40.0%
Wage work with conflict with subsistence	Male	3	75.0%
	Female	1	25.0%
Family responsibilities (e.g. care of elder)	Male	1	10.0%
	Female	9	90.0%
College or technical training	Male	1	33.3%
	Female	2	66.7%
Other	Male	4	80.0%
	Female	1	20.0%
Total	Male	39	65.0%
	Female	21	35.0%

Income:

Analysis of income for individuals and households in Kaktovik is going to be more complicated than analysis contained in previous surveys. The 2010 survey questionnaire contained many more detailed questions about household income and this makes comparisons with the 2003 survey difficult. In addition, the large amount of missing information in the "estimated" total household income variable creates certain concerns about the representativeness of this measure although since the same question was asked on both the 2003 and 2010 surveys it does provide for direct comparisons on this measure.

As mentioned, a second factor confounding the results for 2010 for Kaktovik was the high proportion of missing information for the variable "estimated total household income". In 2010 about 41 percent (28/68) of the households did not provide information to the question - "What was the total household income that you and all other members of your household received in 2009?" About 71 percent of this non-response was due to missing information (another 8 households refused to answer). By missing information we mean that the coding boxes for this variable were empty - why they were empty is difficult to discern. It could be the case the respondent could not come up with an answer or it might be that after getting no response the interviewer didn't pursue the question and it might be a case of a polite or tacit "refused to answer".

In contrast to the 2010 results (41 percent of households missing information) we find that in 2003 about 31 percent (18/59) of the interviews contained missing information on the variable "estimated total household income". In 2010 of the 68 households contained in the sample 40 (59 percent) contained "estimated" household income. In 2003 and 2010 "estimated average household income" was calculated by dividing the sum of reported income by the number of households reporting income. This means that in 2010, for example, the aggregate community income of \$2,308,676 was divided by the 40 households who estimated their total household income - yielding an average "estimated" household income of \$57,716. Calculating per capita income is trickier. In 2010 we took the 40 households who estimated total household income (\$2,308,676) and divided this number by the number of individuals residing in those 40 households (132); yielding a per capita income of \$17,490. To yield valid comparisons we recalculated the 2003 amounts into 2010 "constant" dollars. We note that after these calculations a substantial decrease of slightly over 20 percent both in household and per capita incomes for the sample populations of Kaktovik between 2003 and 2010.

Table 16: Kaktovik - Comparison of Average Estimated Household Income and Per Capita Income (weighted for non-response) 2003 vs. 2010.

Income	2003 in constant \$'s	2010 (% change)
Average "Estimated" Household Income	\$70,325 (\$59,342)*	\$57,716 (-22%)
"Estimated" Per Capita Income	\$21,200 (\$17,889)*	\$17,490 (-21%)

*Numbers in parenthesis for these measures are in 2003 dollars.

In Table 17 below we compare "estimated" versus "calculated" average incomes. It is important to note that the sample of "estimated" income was 40 households (that is households that gave valid responses) whereas the sample of "calculated" incomes was around 99 percent of the sample. Given the differences between the averages we might surmise that household heads who "estimate" their income are higher earners (with smaller

household sizes) than those who don't. In fact, average "calculated" total household income is about 9 percent lower than total "estimated" household income and per capita income (larger household sizes and less income) is about 12 percent lower. For the most part in our analysis we use the calculated household income because it appears to be more representative of Kaktovik's entire income distribution.

Table 17: Kaktovik 2010 - Comparison of Estimated versus Calculated Household Income.

Income	Calculated	Estimated
Average Household Income	\$52,695*	\$57,716 (+8.7%)
Per Capita Income	\$15,313	\$17,489 (+12.5%)

*Eliminating one household that reported no income from any source.

In Chart 4 below we note that 58 percent of Kaktovik's total income comes from wage work. This is fairly comparable with the 62 percent of Anaktuvuk Pass's total income that comes from wage sources. Analysis in a separate chapter will compare these proportions for all NSB communities. It is important to note that over a quarter of total income inputs to Kaktovik is derived for corporate dividends, and when these dividends are combined with the State Permanent Fund Dividends produces nearly a third of all household income in Kaktovik.

Chart 4: Kaktovik 2010 - Proportional Contribution to Total (Calculated) Household Income by Source:

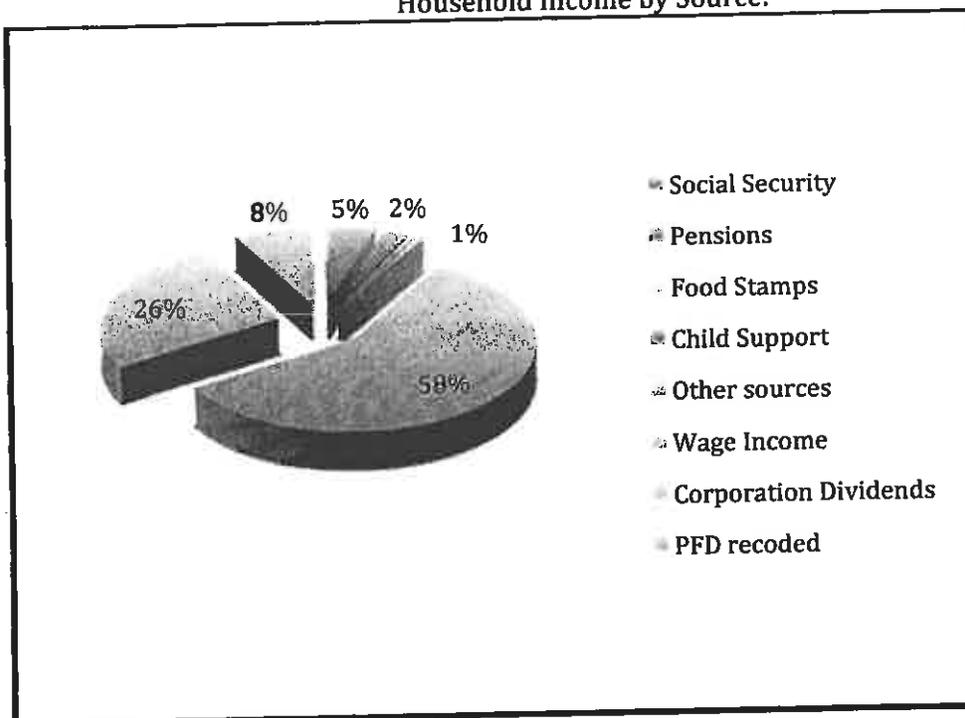


Table 18: Data Table for Chart 4: Kaktovik 2010 – Proportional Contribution to Total (Calculated) Household Income by Source:

Source of Income	Total \$ Amount	Percent
Social Security	\$170,653	4.8%
Pensions	\$87,400	2.4%
Food Stamps	\$9,900	0.3%
Child Support	\$8,964	0.3%
Other sources	\$23,350	0.7%
Wage Income	\$2,076,692	58.0%
Corporation Dividends	\$937,487	26.2%
PFD recoded	\$268,830	7.5%
Total HH Income - All Sources	\$3,583,276	100%

When we break down “estimated” total household income by ethnicity we see that 70 percent of Iñupiat households earn less than \$50,000 while 90 percent of Caucasian households earn more than this amount.

Table 19: Kaktovik 2010 – Estimated Total Household Income by Ethnicity.

Recode Estimated Total Household Income #3 into 12 Categories	Recode Ethnicity into Three Categories					
	Iñupiat		Caucasian		Other	
	Count	Column %	Count	Column %	Count	Column %
0-\$15,000	5	16.7%	0	.0%	0	.0%
15,001-29,999	8	26.7%	0	.0%	0	.0%
30,000-39,999	4	13.3%	0	.0%	0	.0%
40,000-49,999	4	13.3%	1	11.1%	1	100.0%
50,000-59,999	0	.0%	1	11.1%	0	.0%
60,000-69,999	1	3.3%	1	11.1%	0	.0%
70,000-79,999	3	10.0%	2	22.2%	0	.0%
80,000-89,999	1	3.3%	0	.0%	0	.0%
90,000-99,999	1	3.3%	0	.0%	0	.0%
100,000-124,999	3	10.0%	1	11.1%	0	.0%
125,000-149,999	0	.0%	1	11.1%	0	.0%
150,000+	0	.0%	2	22.2%	0	.0%
Total	30(53)*	100.0%	9 (11)*	100.0%	1 (4)*	100.0%

*Number in parenthesis represents total number of Households of that ethnicity in 2010 sample.

When one uses “calculated” total household income (rather than “estimated”) these proportions are marginally reduced with 62 percent of Iñupiat households earning less than \$50,000 while over 80 percent of Caucasian households earn more than the \$50,000 threshold.

Table 20: Kaktovik 2010 – Calculated Total Household Income by Ethnicity.

Recode of Calculated Total Household Income into 12 Categories	Recode Ethnicity into Three Categories					
	Iñupiat		Caucasian		Other	
	Count	Column %	Count	Column %	Count	Column %
0-\$15,000	12	22.6%	2	18.2%	2	50.0%
15,001-29,999	10	18.9%	0	.0%	0	.0%
30,000-39,999	6	11.3%	0	.0%	0	.0%
40,000-49,999	5	9.4%	0	.0%	2	50.0%
50,000-59,999	2	3.8%	2	18.2%	0	.0%
60,000-69,999	2	3.8%	1	9.1%	0	.0%
70,000-79,999	3	5.7%	2	18.2%	0	.0%
80,000-89,999	3	5.7%	0	.0%	0	.0%
90,000-99,999	3	5.7%	0	.0%	0	.0%
100,000-124,999	6	11.3%	0	.0%	0	.0%
125,000-149,999	1	1.9%	2	18.2%	0	.0%
150,000+	0	.0%	2	18.2%	0	.0%
Total	53	100.0%	11	100.0%	4	100.0%

Whatever measure we employ to represent total household income it is clear that the average Caucasian household has income twice that of an average Iñupiat household.

Table 21: Kaktovik 2010 – Average Estimated & Calculated Total Household Income by Ethnicity.

	Iñupiat	Caucasian	Other
Ave. Estimated Total Household Income.	\$44,156 (30)	\$104,335 (9)	\$45,000 (1)
Ave. Calculated Total Household Income	\$46,861 (53)	\$90,060 (11)	\$27,243 (4)

Numbers in parenthesis represent the number of households from the sample population used for calculation.

Using 2009 poverty thresholds 21 out of 68 households (31 percent) in Kaktovik fall below the poverty line. If only Iñupiat households are considered then 17 out of 53 (32 percent) of these households fall below the poverty line. Iñupiat households represent 81 percent of all households below the poverty line and they comprise 82 percent of all households in the community. Thus, while Iñupiat households, in absolute terms, constitute nearly all of households below the poverty line, they are not necessarily over represented, especially when one considers households of "Other" ethnicity, which are usually Alaska Natives (from outside of the NSB) or American Indians.

Table 22: Kaktovik 2010 Household Size by Poverty Income Threshold.

Recorded Calculated Total Household Income to Poverty Level	Recorded HH Size to Ordinal for Poverty Calculations								
	1	2	3	4	5	6	7	8	9
	Count	Count	Count	Count	Count	Count	Count	Count	Count
\$0-13,530	1	7(6)	2 (1)	1(1)	2(2)	1(1)	1(1)	0	1
\$13,351-18,210	1	1(1)	0	0	0	0	0	0	0
\$18,211-22,890	1	0	1(1)	0	0	0	0	0	0
\$22,891-27,570	3	0	0	0	1(1)	1(1)	0	0	0
\$27,571-32,250	1	1	0	0	1(1)	0	0	0	0
\$32,251-36,930	2	0	0	1	0	0	0	0	0
\$36,931-41,610	2	0	0	0	0	0	0	0	0
\$41,611-46,290	1	1	0	0	1	2	0	0	0
\$46,291-50,970	1	0	0	0	0	0	0	0	0
\$50,971-55,650	1	0	0	0	0	1	0	0	0
\$55,651-60,330	0	0	1	2	0	0	0	0	0
\$60,331-65,010	0	0	0	0	0	1	0	0	0
\$65,011-highest	1	7	2	4	3	2	2	1	1
Total	1/15	8/17	3/6	1/8	4/8	2/8	1/3	1	1/2

Numbers in parenthesis are Inupiat Households.

Educational Attainment:

Educational attainment over time indicates some positive trends for Kaktovik. Failure to finish high school has decreased by more than two-thirds during the last decade. In addition, high school graduation rates have improved by nearly 50 percent in the last several years. However, higher education is one area where we note little improvement. The proportion of residents going to college has been hovering around 11 percent since 1998. In addition, attainment of college degrees shows little change since 1998.

Table 23: Kaktovik Educational Attainment of Household Members 1998 - 2010

	1998	2003	2010
Has Not Started School	7%	10%	8%
Still in Elementary School	21%	13%	17%
Still in Middle School	6%	10%	7%
Still in High School	8%	9%	8%
Did Not Finish High School	20%	18%	6%
GED	4%	3%	3%
High School Diploma	17%	21%	31%
Some College	11%	7%	11%
Vo/Tech. Graduate	3%	2%	3%
B.A. Degree	3%	3%	3%
Master's Degree	0%	3%	2%
Professional Degree/ P.H.D.	0%	<1%	1%
Other	0%	1%	0%
Total	100%	100%	100%

With respect to perceptions about the relationship between education and employment we are not very confident about the results. The differences in the comparison between 2010 and 2003 are so dramatic that one suspects a change in coding procedures. The omission of the "retired" from the 2010 questionnaire really has very little impact on the current distribution as it accounted for only 7 percent of the responses in 2003. If taken at face value we notice a huge six fold reduction in the "primarily a student" category, a significant increase (37 percent) in permanent jobs and more than a seven fold (!) increase in the proportion of individuals who see no connection between employment and educational attainment.

Table 24: Kaktovik 2003-2010 Training and Educational Background for Inupiat Household Members.

BACKGROUND/INTEREST	2003 Number	2003 Percent	2010 Percent	2010 Number
1. Primarily a student	57	41.9%	6.9%	8 (9)
2. Job situation unsettled	38	27.9%	16.0%	18 (21)
3. Job is permanent	23	16.9%	26.7%	22 (35)
4. See no connection	9	6.6%	50.4%	62 (66)
Total	136	100.0%	100.0%	108 (131)

Numbers in parenthesis are sample totals for all ethnicities.

As in past surveys there continues to be a considerable contrast in educational achievement by ethnicity. Slightly more than 10 percent of the Iñupiat individuals within the community have some college experience, a B.A. and/or advanced degrees. This contrasts with one third of the Caucasian population who have a B.A or graduate degree and with the fact that 60 percent of the Caucasian respondents have at least some college experience. Thus, like many other NSB communities the non-Iñupiat labor force is mostly college educated and disproportionately drawn to the NSB by the employment opportunities that require these skills. Of course the nature of how highly skewed Iñupiat college participation is demonstrated by comparing Kaktovik Iñupiat respondents with measures from the general U.S. population. For example, about 40 percent of all 18-24 years old in the U.S. are enrolled in college and this is certainly not the case for Iñupiat of northern Alaska where only one in ten Iñupiat of any age has had some college experience.

Table 25: Kaktovik 2003-2010 Background and Educational Experience of All Household Members.

Individual's Highest Level of Education	Ethnicity Recoded 3 Attributes					
	Iñupiat		Caucasian		Other	
	Count	Column %	Count	Column %	Count	Column %
Has not started school	17	8.6%	1	3.3%	0	.0%
Elementary school	34	17.2%	6	20.0%	0	.0%
Middle school	17	8.6%	0	.0%	0	.0%
High school	17	8.6%	1	3.3%	0	.0%
Did not finish high school	12	6.1%	1	3.3%	0	.0%
High school diploma	70	35.4%	1	3.3%	2	66.7%
GED	7	3.5%	0	.0%	0	.0%
Voc./Tec graduate	4	2.0%	2	6.7%	0	.0%
Some college	17	8.6%	7	23.3%	1	33.3%
B.A. degree	1	.5%	6	20.0%	0	.0%
M.A. degree	0	.0%	4	13.3%	0	.0%
Professional degree	2	1.0%	0	.0%	0	.0%
Other (specify)	0	.0%	1	3.3%	0	.0%
Total	198	100.0%	30	100.0%	3	100.0%

The low enrollment of Iñupiat in college in 2010 is of some concern. This concern is heightened with a perusal of Table 26 below which indicates that the proportion of Iñupiat students never enrolled in college has increased from 62 percent in 1998 and now stands at seventy five percent. In addition, the proportion of students who have completed college courses for credit has declined three fold (!) from 30 percent in 1998 to about 10 percent in 2010.

Table 26: Kaktovik 1998 – 2010 Iñupiat Individuals' College Experience.

STATUS	1998 Number	1998 Percent	2003 Number	2003 Percent	2010 Number	2010 Percent
Never enrolled	51	62%	55	68.80%	104	75.36%
Enrolled, no courses completed	7	8.50%	4	5.00%	13	9.42%
Currently enrolled for first time	0	0%	2	2.50%	2	1.45%
Completed courses for credit	24	29.50%	19	23.80%	15	10.87%
Graduated from college	0	0%	0	0%	4	2.90%
Total	82	100%	80	100%	138	100%

Training:

Along with the dramatically low college enrollment rates for Iñupiat is the decreasing proportion of individuals who see a positive relationship between education and career goals. Respondents who believed that education could help their careers dropped from a majority of individuals in 2003 (57 percent) to around one third (36 percent) in 2010. This presents a very pessimistic view by Kaktovik residents, where nearly two thirds see no relationship between education and a better career.

Table 27: Kaktovik 2003 -2010 Iñupiat Individuals' "Can Additional Education Help Career?"

	2003 Percent	2010 Percent	2010 Count
Yes	57%	36%	43
No	43%	65%	78
Total	100% (75)*	100%	121

*Number in parenthesis is 2003 sample count.

Despite their skepticism about the utility of additional education in advancing their careers an increasing number of Iñupiat would leave home for additional training. Declining employment opportunities and higher levels of concern about their underemployment may help explain the 10 percent jump between 2003 and 2010 in respondents willing to leave home for additional training.

Table 28: Kaktovik 2003- 2010 Iñupiat Individuals' "Would Individual Leave Home for Additional Training?"

	2003 Percent	2010 Percent	2010 Count
Yes	62%	72%	34
No	38%	28%	13
Total	100% (47)*	100%	47

*Number in parenthesis is 2003 sample count.

The 2010 NSB Census saw a gradual return to the preference of Ilisagvik (30 percent) as a location for new training - doubling the 2003 proportion but far short of the 1998 overwhelming (63 percent) preference. UAA as a preferred destination has seen a steady growth in its proportion and now ranks as the second preference at 25 percent. What has remained fairly constant over the last two decades is the strong preference to remain in Alaska whatever the specific destination within the state.

Table 29: Kaktovik 1998 – 2010 Iñupiat Individuals' Preferred Location for New Training.

LOCATION	1998 Percent	2003 Count	2003 Percent	2010 Count	2010 Percent
Ilisagvik	62.5%	4	10.3%	7	29.2%
UAF	12.5%	11	28.2%	4	16.7%
UAA	0%	3	7.7%	6	25.0%
Voc.-Tech school	12.5%	2	5.1%	3	12.5%
College outside Alaska	12.5%	1	2.6%	2	8.3%
Other	0%	14	35.9%	2	8.3%
Total	100%	35	90%	24	100%

Despite the behavioral evidence of low enrollment proportions - individuals' preference for a four-year college degree has tripled in the last seven years, which is accompanied by a doubling in the preference for two-colleges. What has changed in the last seven years is a 30 percent drop in the preference for on-the-job training (whether short or long term).

Table 30: Kaktovik 2003 -2010 – Iñupiat Individuals' Preferred Length of Training to Obtain New Skills.

Preferred Length	2003 Count	2003 Percent	2010 Percent	2010 Count
Short term on-the-job	20	42.6%	31.0%	9
Long term on-the-job	18	38.3%	20.7%	6
Two-year program	4	8.5%	17.2%	5
Four-year degree program	6	10.6%	31.0%	9
Total	47	100%	100%	29

The 2010 NSB survey records several drops to zero in a number of preferred occupations including English, Computer programmer, oil field worker, food service, teacher, welding and electronics, presumably reflecting local pessimism in employment in these occupations. Word processing, business management and carpentry are the current highest ranked preferences, although the highest preference is for "other" perhaps suggesting the necessity of updating the attributes for this question.

Table 31: Kaktovik 1998 – 2010 Iñupiat Individuals – Preferred Occupations for Additional Training.

Occupation	1998 Percent	2003 Percent	2010 Percent	2010 Count
English	9.09%	0%	0%	0
Word processing	12.7%	7.7%	13.8%	4
Accounting	7.3%	5.1%	6.9%	2
Heavy equipment	10.9%	10.3%	6.9%	2
Public Administration (& paralegal)	5.5%	10.3%	3.4%	1
Food service	3.6%	0%	0%	0
Business management	9.0%	2.6%	10.3%	3
Land management	5.5%	1.0%	3.4%	1
Computer programmer	5.5%	10.3%	0%	0
Oil field worker	0%	2.6%	0%	0
Teacher	0%	2.6%	0%	0
Health worker	3.6%	7.7%	6.9%	2
Carpentry	5.5%	7.7%	13.8%	4
Welding	3.6%	7.7%	0%	0
Mechanic	0%	10.3%	6.9%	2
Electronics	3.6%	7.7%	0%	0
Other	18.2%	15.4%	27.6%	8
Total	100%	100% (39)	100%	29

Housing:

Type of residence has changed very little since 2003 with about 95 percent of families living in single-family households. However, during this same period there has also been a slight increase in mobile/home trailer occupancy.

Table 32: Kaktovik 2003 – 2010 Households by Type of Living Structure

TYPE	2003 Count	2003 Percent	2010 Percent	2010 Count
Mobile home/trailer	1	1.7%	2.9%	2
One-family house	57	96.6%	94.1%	64
Building for 3 or 4 families	1	1.7%	0%	-
Other	-	-	2.9%	2
Total	59	100%	100%	68

Nearly two thirds (63 percent) of families in Kaktovik live in rentals with the majority of those rentals (54 percent) owned either by TNHA or private individuals.

Table 33: Kaktovik 2010 - Who Owns Respondent's Building?

	2010 Count	2010 Percent	2010 Valid Percent
TNHA (rental)	18	26.5	27.7
North Slope Borough (rental)	5	7.4	7.7
UIC (rental)	1	1.5	1.5
Privately owned rental	17	25.0	26.2
TNHA (Mutual help home ownership)	1	1.5	1.5
Owned by you (or someone in HH) with mortgage/loan	3	4.4	4.6
Owned by you (or someone in HH) through LIPP	1	1.5	1.5
Owned by you or someone in household free and clear	19	27.9	29.2
Total Valid Responses	65	95.6	100.0
Not Applicable	1	1.5	
Missing Information	2	2.9	
Total Responses	3	4.4	
Total	68	100.0	

The average number of rooms for a residence in Kaktovik during 2010 was 4.75. Between 2003 and 2010 there has been virtually no change in the proportion of houses with four rooms or less – both censuses indicate that one third of the families live in dwellings with four rooms or less. Of course, conversely, two thirds of the families have dwelling with five rooms of more, a figure consistent in both 2003 and 2010.

Average Household Area (ft²):

Average size of a Kaktovik dwelling was 1,200 ft² but this average is skewed by a high non-response rate with only 36 out of 68 respondents reporting the square footage of their dwelling. Of the 36 reporting households, 20 (56 percent) reported houses of 1,000 square feet or less.

Table 34: Kaktovik 2003 - 2010 Total Rooms in Dwelling (excluding bathrooms).

ROOMS	2003 Count	2003 Percent	2010 Percent	2010 Count
1	2	3.4%	1.5%	1
2	1	1.7%	1.5%	1
3	5	8.6%	11.8%	8
4	11	19.0%	17.6%	12
5	24	41.4%	50%	34
6	10	17.2%	13.2%	9
7	3	5.2%	-	-
8	1	1.7%	4.4%	3
9	1	1.7%		
Total	58	100%	100%	68

Utilities - Heating and Water Systems:

Kaktovik's heating systems have undergone substantial change since 1998. Heating from stand-alone stoves has decreased considerably during this period to the point that in 2010 only 10 percent of the sample dwellings used this form of heating. Across time, stand-alone space heaters have decreased from a high of about 30 percent in 2003 to a current proportion in 2010 or less than 20 percent. The major trend has been a steady conversion to baseboard/boiler systems to the point that the majority of households (55 percent) now use this type of heating system.

Table 35: Kaktovik Heating Systems 1998 - 2010

SYSTEM TYPE	1998 Percent	2003 Percent	2010 Percent	2010 Count
Stand-Alone Stove	-	22.0%	10.3%	7
Stand-Alone Heater	29%	8.5%	17.6%	12
Forced-Air Furnace	59%	25.4%	17.6%	12
Baseboard/ Boiler System	9%	42.4%	54.4%	37
Portable Heater/Other	3%	1.7%	-	-
Total	100% (69)	100% (59)	100%	68

In 2010 only one household in the Kaktovik sample did not have running water, which represents a steady decrease from 1998 in the number of such households.

Table 36: Kaktovik 1998 - 2010 Does the Dwelling Have Running Water?

Running Water?	1998 Percent	2003 Percent	2010 Percent	2010 Count
Yes	90%	90%	98.5%	67
No	10%	10%	1.5%	1
Total	100% (69)	100% (59)	100%	68

Converting 2003 utility costs into constant dollars reveals a sharp increase in monthly heating costs in 2010 but even sharper decreases in the cost of electricity and water. When all costs are aggregated in constant dollars, current residents of Kaktovik, on average, pay slightly less (-4 percent) than they did 7 years ago. Nevertheless \$636 per month for utilities for the average Kaktovik family is still a considerable amount, perhaps twice that of an average Anchorage household.

Table 37: Kaktovik 1998 - 2010 - Utility Costs.

Average Monthly Utility Costs	1998	2003	2003 Constant \$'s	2010	Percent Change
Heating	\$238	\$256	\$303	\$377	+20%
Electricity	\$106	\$178	\$211	\$163	-30%
Water	\$80	\$122	\$145	\$96	-51%
Total Average Utility Costs	\$424	\$556	\$659	\$636	-4%

During the last seven years the average mortgage payment or rental costs has increased by about 10 percent in constant dollars.

Table 38: Kaktovik Rental and Mortgage Costs 1998 - 2010

CATEGORY	1998	2003	2003 Constant \$'s	2010	Percent Change
Average monthly mortgage payment	\$247	\$354	\$420	\$467	+10%
Average monthly rental payment	\$335	\$391	\$463	\$508	+9%

Nearly half the sample households in Kaktovik had not heard about the AHFC energy program. However, about 20 percent of the households had received energy assistance or were waiting to be audited. Only two of the five households receiving energy assistance reported their reimbursement, which averaged about \$850.

Table 39: Kaktovik 2010 - "Did your household receive any AHFC Energy Assistance during 2009?"

Did your household receive any AHFC Energy Assistance during 2009?	Count	Percent	Valid Percent
Yes we received	5	7.4	8.9
We applied waiting to be audited	6	8.8	10.7
Planning to apply to program	3	4.4	5.4
Haven't heard about the program	26	38.2	46.4
No plan to utilize program	16	23.5	28.6
Total Valid Responses	56	82.4	100.0
Not Applicable	10	14.7	
Missing Information	2	2.9	
Total Responses	12	17.6	
Total	68	100.0	

About 18 percent of the Kaktovik sample of households in 2010 reported they were in the process of receiving weatherization benefits but only one sample household had actually received such a benefit.

Table 40: Kaktovik 2010 - "Did your household receive any Weatherization Benefits during 2009?"

Did your household receive any Weatherization Program benefits during 2009?	2010 Frequency	2010 Percent	2010 Valid Percent
Yes we received new ...	1	1.5	1.9
Public housing on waiting list	3	4.4	5.7
Low income awaiting energy audit	6	8.8	11.3
Planning to apply to program	10	14.7	18.9
Haven't heard of program	13	19.1	24.5
Don't plan to utilize program	20	29.4	37.7
Total Valid Responses	53	77.9	100.0
Not Applicable	12	17.6	
Missing Information	3	4.4	
Total Responses	15	22.1	
Total	68	100.0	

Subsistence:

There is some consistency over the last seven years in dietary dependency on subsistence resources within Kaktovik. Between 2003 and 2010 roughly one third of Kaktovik households (all ethnicities) depend on subsistence resources for less than half of their diet. Conversely about two thirds depend on subsistence for half or more of their nutrition. However, we can note differences when we include the 1998 results. In 1998 about 83 percent of households depended on subsistence for half or more of their diet this decreased to about 67 percent in 2003 and has remained constant since then. In addition, there has been a substantial drop since the 1998/2003 findings where the proportion of households depending on subsistence for all of their dietary needs has dramatically dropped from ~ 17 percent of all households during this period to one household in 2010.

Table 41: Kaktovik – Subsistence Use Amounts of Local Resources 1998 -2010 (All Households).

AMOUNT	1998 Percent	2003 Percent	2010 Percent	2010 Count
None	2%	0%	0%	-
Very little	2%	15%	9.5%	6
Less than half	13%	17%	23.8%	15
Half	18%	20%	28.6%	18
More than half	30%	7%	22.2%	14
Nearly all	20%	24%	14.3%	9
All	15%	17%	1.6%	1
Total	100%	100%	100%	63

Table 42: Kaktovik 2010 Amount of Diet from Local Subsistence Foods by Ethnicity.

Subsistence - how much of your household diet came from subsistence foods in 2009?	Recode Ethnicity into Three Categories					
	Iñupiat		Caucasian		Other	
	Count	Column %	Count	Column %	Count	Column %
1. None	0	.0%	0	.0%	0	.0%
2. Very little	3	5.7%	2	33.3%	1	25.0%
3. Less than half	10	18.9%	3	50.0%	2	50.0%
4. Half	17	32.1%	1	16.7%	0	.0%
5. More than half	14	26.4%	0	.0%	0	.0%
6. Nearly all	8	15.1%	0	.0%	1	25.0%
7. All	1	1.9%	0	.0%	0	.0%
Total	53	100.0%	6	100.0%	4	100.0%

However, if we take ethnicity into account we find that three fourths of Iñupiat households depend on subsistence for half or more of their diet, while only two of the ten non-Iñupiat households have a similar dependency (see Table 42 above).

The 2010 NSB Census asked more finely grained questions about subsistence change, moving from a general perception (in 1998 and 2003) of change to a specific judgment for each resource type. Clearly the modal response, as exemplified in Table 43 below, was “stayed the same” with more than half of all respondents (with the exception of 2003 general perceptions) seeing no change in the level of their subsistence activities. There is one clear difference between the current census and previous ones. Previous censuses indicated a decrease in subsistence activities for a quarter to a third of respondents. In contrast the more detailed 2010 Census shows less than a 10 percent decrease across all categories.

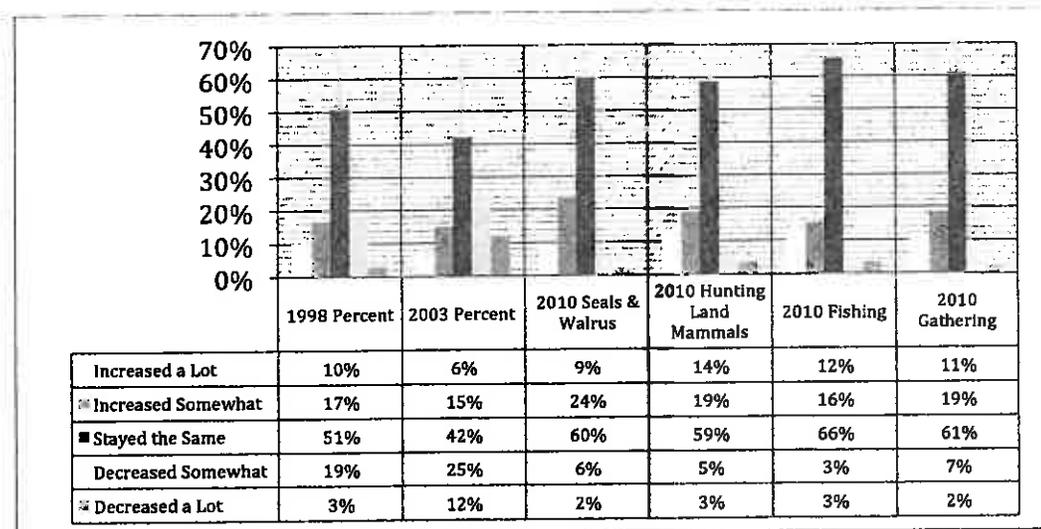
Table 43: Kaktovik Changes in Subsistence Activities Last Five Year 1998 -2010

DEGREE OF USE	1998 Percent	2003 Percent	2010 Seals/Walrus	2010 Land Mammals	2010 Fishing	2010 Gathering
Increased a Lot	10%	6%	9%	14%	12%	11%
Increased Somewhat	17%	15%	24%	19%	16%	19%
Stayed the Same	51%	42%	60%	59%	66%	61%
Decreased Somewhat	19%	25%	6%	5%	3%	7%
Decreased a Lot	3%	12%	2%	3%	3%	2%
Total	100% (59)	100% (52)	100%(55)	100% (58)	100%(58)	100% (54)

Numbers in parenthesis represent number of sample responses.

These results are graphically illustrated in Chart 5 below. Notice the high red bars indicating “no change” in the level of subsistence activities from 1998 to 2010. In contrast the height of the bars to the right of the red bar, which indicates a decrease in activity, are much lower across all categories for 2010 than are the results from earlier research.

Chart 5: Kaktovik 1998 – 2010 - Changes in Subsistence Activities During Last Five Years.



The results of the 2010 survey indicate that a dependence on other households as a source of subsistence resources has declined in some categories over time. Consistently two thirds of Kaktovik households have received less than half of their subsistence resources from other households, i.e., most households depend on themselves for the

majority of their subsistence needs. However, what has changed is a substantial drop between 2003 and 2010 in the proportion of households (presumably elderly or single parent households) that rely on others for a majority (i.e., “more than half” to “all”) of their subsistence resources. This proportion has dropped by a third (from 29 percent in 2003 to 19 percent in 2010).

However, one needs to be cautious of potential sampling artifacts in his finding because the proportions in 1998 and 2010 (*in contrast to 2003 vs. 2010*) are nearly the same (21 percent vs. 19 percent).

Table 44: Kaktovik 1998 – 2010: Percent of Subsistence Diet Received from Other Households.

	1998	2003	2010
None	5%	5%	5%
Very Little	32%	29%	26%
Less than half	25%	29%	34%
Half	17%	9%	16%
More than half	15%	13%	3%
Nearly all	4%	9%	8%
All	2%	7%	8%
Total	100%	100%	100%

Percentages of subsistence foods being given away vary over time but a majority of Kaktovik households, varying from 60 percent in 1998 to 53 percent in 2010 give less than half of their subsistence foods away. A significant proportion of households, hovering in the 40 percent range, give half or slightly more of their subsistence harvests to other households.

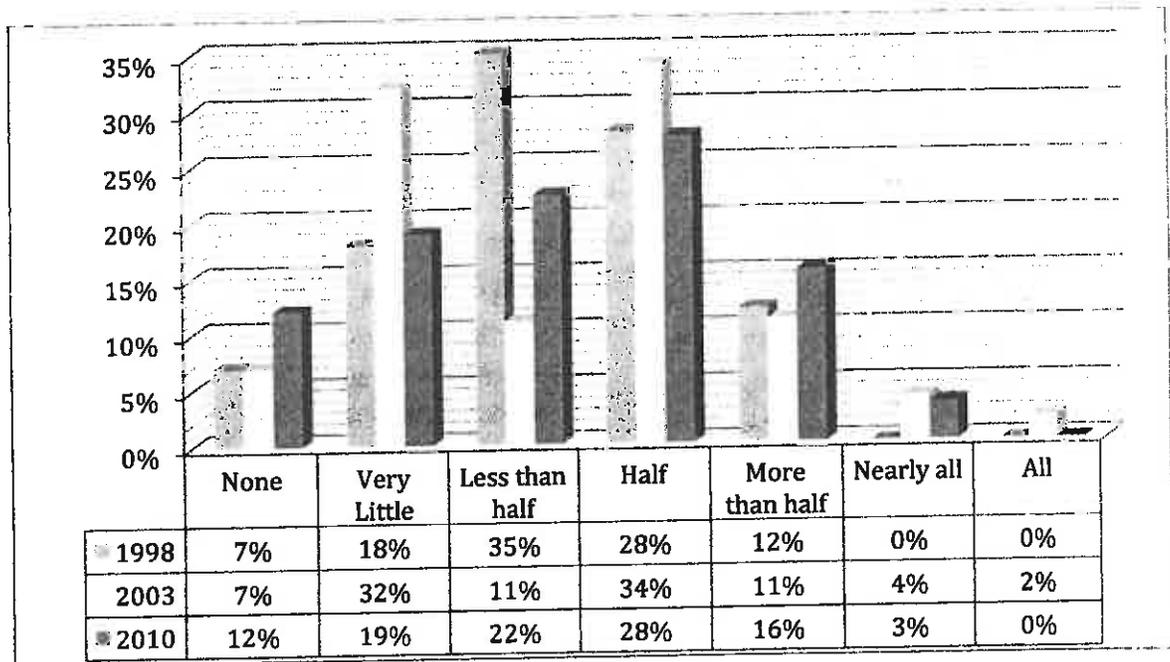
Table 45: Kaktovik 1998 – 2010: Percentage of Subsistence Foods Given Away.

	1998	2003	2010
None	7%	7%	12%
Very Little	18%	32%	19%
Less than half	35%	11%	22%
Half	28%	34%	28%
More than half	12%	11%	16%
Nearly all	0%	4%	3%
All	0%	2%	0%
Total	100%	100%	100%

Chart 6 below shows that while bar heights vary over time for the first three attributes (“none” to “less than half”) there is a fairly solid grouping at all temporal points around “half” and “more than half”. One might conclude that there is a consistent level of giving, probably among high harvesting households, of half to slightly more of their

subsistence harvests to other households in Kaktovik (and to a lesser extent other NSB communities).

Chart 6: Kaktovik 1998 – 2010: Percentage of Subsistence Foods Given Away.



Participation in Subsistence Activities:

All the following tables on subsistence participation document Iñupiat participation only. For fall whaling a fairly equal proportion of men and women participate, with women having a slightly higher proportion (52 percent vs. 46 percent) but with a smaller absolute participation (46 women to 51 men). This is not to imply equal participation in whaling crews but participation by young and old, men and women in the overall activity, which includes not only hunting but processing, preparation and distribution of whale meat. Participation in fall whaling activities by women is at its highest in the 15-19-age category but for men occurs in the 40-44-age category.

Table 46: Kaktovik 2010: Iñupiat Individuals Who Participate in Fall Whaling by Age and Gender.

Age Recoded into 5 yr. Intervals	Subsistence participation - does individual HH member participate in Fall Whaling?			
	Yes		No	
	Individual's Gender		Individual's Gender	
	Male	Female	Male	Female
	Count	Count	Count	Count
0-4	0	1	10	3
5-9	2	2	7	3
10-14	5	5	3	5
15-19	6	11	3	4
20-24	6	4	3	3
25-29	4	3	2	2
30-34	2	1	1	1
35-39	1	3	2	2
40-44	8	4	2	5
45-49	2	4	5	3
50-54	6	2	6	3
55-59	4	0	6	1
60-64	2	1	0	2
65-69	2	2	2	1
70-74	0	2	0	1
75-79	1	1	2	1
80+	0	0	2	3
Total	51	46	56	43

There is a bimodal distribution of participation by men, where men under fifty who participate in fall whaling outnumber those that don't. After about age fifty there are more men who don't participate than there are those that do. Recruitment for engaging in whaling activities seems fairly optimistic with substantial numbers of individuals, both men and women from age 10 to 45 participating in each age cohort.

There are strong gender differences in marine mammal hunting with twice the number of men participating, although non-participants, both men and women, are about equal in number. With respect to recruitment men 10 to 30 years of age, who participate in marine mammal hunting (18 individuals), actually outnumber the 31 to 50 year old cohort (12 individuals). Strikingly there are 15 individuals over the age of 50 who participate in

marine mammal hunting. This distribution implies strong recruitment for marine mammal hunting activities from younger cohorts.

Table 47: Kaktovik 2010: Iñupiat Individuals Who Participate in Marine Mammal Hunting by Age and Gender.

	Subsistence participation - does individual HH member hunt sea mammals?			
	Yes		No	
	Individual's Gender		Individual's Gender	
	Male	Female	Male	Female
	Count	Count	Count	Count
0-4	0	1	10	3
5-9	0	0	9	5
10-14	4	2	4	8
15-19	4	6	5	9
20-24	7	4	2	3
25-29	3	2	3	3
30-34	0	0	3	2
35-39	2	1	1	4
40-44	7	2	3	7
45-49	3	3	4	4
50-54	7	1	5	4
55-59	4	0	6	1
60-64	1	0	1	3
65-69	1	0	3	3
70-74	0	1	0	2
75-79	2	0	1	2
80+	0	0	2	3
Total	45	23	62	66

Male land mammal hunters in Kaktovik, like marine mammal hunters (and certainly there is considerable overlap between the two groups), outnumber women participants by about two to one. In addition, there are about a third more men who engage in hunting land mammals when compared to marine mammal hunters. There are 27 Kaktovik men and boys between the ages of 10 and 30 who hunt land mammals. This is nearly equal to all the men over thirty who hunt land mammals (31 individuals). Certainly recruitment of land mammal hunting is strong in Kaktovik with strong participation by younger age cohorts that will sustain this activity.

Table 48: Kaktovik 2010: Iñupiat Individuals Who Participate in Land Mammal Hunting by Age and Gender.

Age Recoded into 5 yr. Intervals	Subsistence participation - does individual HH member hunt land mammals?			
	Yes		No	
	Individual's Gender		Individual's Gender	
	Male	Female	Male	Female
	Count	Count	Count	Count
0-4	0	1	10	3
5-9	1	1	8	4
10-14	7	3	1	7
15-19	9	6	0	9
20-24	7	5	2	2
25-29	4	3	2	2
30-34	1	0	2	2
35-39	2	2	1	3
40-44	10	3	0	6
45-49	4	6	3	1
50-54	8	1	4	4
55-59	6	0	4	1
60-64	1	0	1	3
65-69	1	0	3	3
70-74	0	2	0	1
75-79	2	0	1	2
80+	0	0	2	3
Total	63	33	44	56

Fishing is certainly a subsistence activity with wide spread participation. For all age groups three times as many individuals participate in fishing when compared to those that don't. Participation by gender is nearly equal with slightly more males participating. As one might expect participation in this activity occurs at an earlier age than some of the other subsistence activities. In fact in many Alaskan Native communities, ice fishing provides an important context for elders and grandparents to participate with the children and grandchildren. In Kaktovik we have substantial participation in fishing by the age of

five. If we divide the age cohorts into three intervals we see strong recruitment potential in the pipeline. If we add in the 12 children under the age of 10 then there are 70 individuals, under the age of 30 prepared, as they grow older, to supplement the 73 individuals over the age of 30 that currently engage in this subsistence activity. This is certainly strong evidence for the sustainability and continuity of this activity.

Table 49: Kaktovik 2010 – Involvement in Subsistence Fishing by Age Cohort and Gender.

Fishing – Age Cohort	Male	Female	Total
10-30 years of age	29	29	58
31-50 years of age	20	19	39
51 years of age and older	20	14	34
Total	69	62	131

Table 50: Kaktovik 2010: Iñupiat Individuals Who Participate in Fishing by Age and Gender.

Age Recoded into 5 yr. Intervals	Subsistence participation - does individual HH member fish?			
	Yes		No	
	Individual's Gender		Individual's Gender	
	Male	Female	Male	Female
	Count	Count	Count	Count
0-4	1	1	9	3
5-9	6	4	3	1
10-14	5	9	3	1
15-19	9	10	0	5
20-24	9	5	0	2
25-29	6	5	0	0
30-34	2	0	1	2
35-39	2	3	1	2
40-44	9	9	1	0
45-49	7	7	0	0
50-54	6	5	6	0
55-59	7	1	3	0
60-64	2	1	0	2
65-69	2	2	2	1
70-74	0	3	0	0
75-79	2	0	1	2
80+	1	2	1	1
Total	76	67	31	22

As one might anticipate skin sewing is heavily correlated with gender. Only a handful of men sew skins, and perhaps reflecting historical specialization, among women non-sewers are outnumbered by three to one. In terms of recruitment, although the numbers are small there is consistent participation in terms of individuals along the age cohorts. Nine or ten women are enumerated in each of the 20-year cohorts (10-30, 31-50, 51>) indicating a small but steady supply of sewers.

Table 51: Kaktovik 2010: Inupiat Individuals Who Sew Skins and Clothes by Age and Gender.

Age Recoded into 5 yr. Intervals	Subsistence participation - does individual HH member sew skins and clothes?			
	Yes		No	
	Individual's Gender		Individual's Gender	
	Male	Female	Male	Female
	Count	Count	Count	Count
0-4	0	0	10	4
5-9	0	0	9	5
10-14	0	1	8	9
15-19	0	4	9	11
20-24	1	2	8	5
25-29	0	2	6	3
30-34	0	1	3	1
35-39	0	3	3	2
40-44	2	2	8	7
45-49	0	3	7	4
50-54	2	1	10	4
55-59	0	1	10	0
60-64	0	0	2	3
65-69	0	2	4	1
70-74	0	3	0	0
75-79	0	2	3	0
80+	0	0	2	3
Total	5	27	102	62

Even more specialized is the predominantly male oriented subsistence activity of sled or boat building. Only 21 individuals, two of whom are female, build boats/sleds. With respect to recruitment eight out of the 19 male boat/sled builders are under the age of thirty, with most of these individuals under the age of 25. This distribution appears to indicate a prognosis of continuity for this specialized activity within the community.

Table 52: Kaktovik 2010: Iñupiat Individuals Who Make Sleds & Boats by Age and Gender.

Age Recoded into 5 yr. Intervals	Subsistence participation - does individual HH member make sleds and boats?			
	Yes		No	
	Individual's Gender		Individual's Gender	
	Male	Female	Male	Female
	Count	Count	Count	Count
0-4	0	0	10	4
5-9	0	0	9	5
10-14	2	1	6	9
15-19	3	0	6	15
20-24	2	1	7	6
25-29	1	0	5	5
30-34	0	0	3	2
35-39	0	0	3	5
40-44	3	0	7	9
45-49	1	0	6	7
50-54	4	0	8	5
55-59	1	0	9	1
60-64	0	0	2	3
65-69	1	0	3	3
70-74	0	0	0	3
75-79	1	0	2	2
80+	0	0	2	3
Total	19	2	88	87

Sharing, cooking and processing wild foods appears to be participated in equally by both genders, although the questionnaire does not measure intensity or frequency of this participation, so what might appear general equality on the surface may actually be general equality in participation but with much of the responsibility and effort being performed by women. Not surprisingly individuals participating in this activity, slightly outnumber non-participants by about 5 percent and many of the non-participants are clustered in males under the age of 15.

Table 53: Kaktovik 2010: Iñupiat Individuals Who Share, Cook & Process Wild Foods by Age and Gender.

Age Recorded into 5 yr. Intervals	Subsistence participation - does individual HH member share, cook and process wild foods?			
	Yes		No	
	Individual's Gender		Individual's Gender	
	Male	Female	Male	Female
	Count	Count	Count	Count
0-4	1	1	9	3
5-9	0	2	9	3
10-14	4	3	4	7
15-19	5	11	4	4
20-24	7	6	2	1
25-29	4	3	2	2
30-34	1	1	2	1
35-39	2	4	1	1
40-44	9	5	1	4
45-49	4	5	3	2
50-54	5	3	7	2
55-59	6	0	4	1
60-64	1	2	1	1
65-69	3	3	1	0
70-74	0	3	0	0
75-79	1	2	2	0
80+	0	0	2	3
Total	53	54	54	35

Only about 5 percent of the population of Kaktovik participates in trapping furbearers. The nine individuals in the sample population who do trap are almost equally weighted by gender with five men and four women participating. The questionnaire was not specific as to what is trapped so we can't differentiate by difficulty, i.e., lynx or wolverine versus smaller mammals. It is disconcerting to note that all but one of the males who trap is over forty years of age and only two women are under forty years of age. So three individuals under forty seem a small number to sustain this difficult and arduous subsistence activity. Especially given that trapping when all costs are considered is economically hardly a break-even activity.

Table 54: Kaktovik 2010: Iñupiat Individuals Who Trap fur Bearers by Age and Gender.

Age Recoded into 5 yr. Intervals	Subsistence participation - does individual HH member trap furbearers?			
	Yes		No	
	Individual's Gender		Individual's Gender	
	Male	Female	Male	Female
	Count	Count	Count	Count
0-4	0	0	10	4
5-9	0	0	9	5
10-14	1	0	7	10
15-19	0	1	9	14
20-24	0	0	9	7
25-29	0	0	6	5
30-34	0	1	3	1
35-39	0	0	3	4
40-44	2	1	8	8
45-49	1	0	6	7
50-54	1	0	11	5
55-59	0	0	10	1
60-64	0	0	2	3
65-69	0	1	4	2
70-74	0	0	0	3
75-79	0	0	3	2
80+	0	0	2	3
Total	5	4	102	84

Hunting of birds is a well-supported subsistence activity with a majority of all respondents engaged in this activity. About a third more men and boys hunt birds but both genders are well supported in the younger age cohorts. Exactly half (30/60) of the males who hunt birds are under the age of 30 and many young men and women under the 15 (about 25 percent of the total hunters) participate in this activity, a certain indicator of the sustainability of this subsistence activity.

Table 55: Kaktovik 2010: Iñupiat Individuals Who Hunt Birds by Age and Gender.

Age Recoded into 5 yr. Intervals	Subsistence participation - does individual HH member hunt birds?			
	Yes		No	
	Individual's Gender		Individual's Gender	
	Male	Female	Male	Female
	Count	Count	Count	Count
0-4	2	2	8	2
5-9	5	1	4	4
10-14	7	6	1	4
15-19	7	9	2	6
20-24	6	5	3	2
25-29	3	2	3	3
30-34	0	0	3	2
35-39	2	3	1	2
40-44	9	4	1	5
45-49	2	5	5	2
50-54	7	0	5	5
55-59	5	0	5	1
60-64	1	0	1	3
65-69	1	1	3	2
70-74	0	2	0	1
75-79	2	0	1	2
80+	1	0	1	3
Total	60	40	47	49

Interestingly although a majority of Iñupiat in Kaktovik hunt birds, only a very small proportion, about 18 percent, gather bird eggs. Among these individuals in this 18 percent category, males gather bird eggs at a slightly higher proportion than do females. Again the

questionnaire was not detailed enough to enumerate what kind of bird eggs were gathered. For example, colonial nesters on cliffs are much more difficult to access than are tundra laying species. Nevertheless, a majority of individuals (of both genders) who gather bird eggs are under the age of 30. This suggests strong recruitment for the future of gathering bird eggs.

Table 56: Kaktovik 2010: Ifñupiat Individuals Who Gather Bird Eggs by Age and Gender.

Age Recoded into 5 yr. Intervals	Subsistence participation - does individual HH member gather bird eggs?			
	Yes		No	
	Individual's Gender		Individual's Gender	
	Male	Female	Male	Female
	Count	Count	Count	Count
0-4	1	1	9	3
5-9	1	0	8	5
10-14	3	2	5	8
15-19	2	4	7	11
20-24	3	2	6	5
25-29	1	0	5	5
30-34	0	0	3	2
35-39	1	1	2	4
40-44	2	2	8	7
45-49	2	2	5	5
50-54	3	0	9	5
55-59	1	0	9	1
60-64	0	0	2	3
65-69	0	0	4	3
70-74	0	0	0	3
75-79	1	0	2	2
80+	0	1	2	2
Total	21	15	86	74

The distribution, by age and gender, of Kaktovik individuals who gather berries and plants was a surprise. Far more individuals harvest fish or hunt birds than gather plants and berries. In fact only about a third of the sample gathered plants and berries with a

slight majority of these being men. However, of those individuals who did gather berries and plants more than 50 percent were under the age of thirty. Given the nature of the activity and the high proportion young people involved there seems to be no doubt of the sustainability of this activity.

Table 57: Kaktovik 2010: Iñupiat Individuals Who Gather Berries & Plants by Age and Gender.

Age Recoded into 5 yr. Intervals	Subsistence participation - does individual HH member pick berries and plants?			
	Yes		No	
	Individual's Gender		Individual's Gender	
	Male	Female	Male	Female
	Count	Count	Count	Count
0-4	1	1	9	3
5-9	4	2	5	3
10-14	7	1	1	9
15-19	2	6	7	9
20-24	6	3	3	4
25-29	1	2	5	3
30-34	0	0	3	2
35-39	1	4	2	1
40-44	6	3	4	6
45-49	1	5	6	2
50-54	5	1	7	4
55-59	2	0	8	1
60-64	1	0	1	3
65-69	1	0	3	3
70-74	0	1	0	2
75-79	0	0	3	2
80+	0	0	2	3
Total	38	29	69	60

Clearly there has been dramatic increase in sharing subsistence foods within Kaktovik between 1998 and 2010. The difference is so dramatic that one wonders if a systematic misinterpretation of the question occurred in 1998. Nevertheless in 2010 nine

out of ten households shared subsistence foods with other households within the community. This figure represents nearly a 10 percent gain in intra-community sharing within the last seven years, however, the biggest jump during the time interval occurred in sharing with Fairbank’s households whose proportion has more than tripled. In addition, during this time period we can see that the number of households that shared with other NSB communities more than doubled, leading to the current situation where a majority of Kaktovik households share subsistence foods borough wide.

Finally dramatic increases in food sharing with NANA communities has occurred during the last seven years where now one in five Kaktovik households share subsistence foods with NANA communities up from one in twenty households in 2003. During the interval between the 2003 and 2010 NSB censuses a number of local airlines retired from flying and this, coupled with much higher fuel costs, seems to be solid evidence that these increases in sharing have not been facilitated by increased transportation access. Further detailed analysis of this topic is needed but the results certainly indicate expanded inter-community social networks despite (or perhaps because of) difficult economic times.

Table 58: Kaktovik 1998 - 2010 Communities Where Households Say They Share Subsistence Foods.

LOCATION	1998 Yes (83 respondents)	2003 Yes (59 respondents)	2010 YES (60 respondents)
Kaktovik	33%	82%	90%
Other NSB community	34%	21%	53%
NANA	1%	2%	20%
Anchorage	8%	4%	12%
Fairbanks	20%	14%	43%
Other areas	4%	7%	12%

Another topic requiring a more detailed examination is the astonishing increase in distance travelled to accomplish subsistence activities during the last five years. While 40 percent of sample respondents asserted an increase in the number of subsistence trips, nearly two thirds indicated an increase in distance travelled. Careful consideration of household characteristics such as the presence or absence of marine mammal hunters, cost of subsistence activities, household income and age of household head will all have to be considered in analyzing the factors that contributed to this outcome of increased distance travelled. Although it will be hard to pin down, given the nature of questions on the current questionnaire, it might be the case that subsequent surveys will need to pay more careful attention to the possible impacts of climate change. This finding on the increase in distance travelled is all the more remarkable given that over a third of sample households in Kaktovik indicated that they had decreased the number of places they used for subsistence activities in the last five years (see Table 60, below). In addition, this increase in distance travelled occurs in a context of dramatic increases in the cost of fuel (\$9/gal.) in most NSB communities.

Table 59: Kaktovik 2010 “During the last five years has number of trips for subsistence activities changed?” “Has distance for subsistence activities changed?”

	Number of Trips	Distance Traveled
1. Decreased a lot	2%	-
2. Decreased somewhat	9%	-
3. Stayed the same	50%	36%
4. Increased somewhat	33%	54%
5. Increased a lot	6%	11%
Total	100% (54)	100% (56)

Number in parenthesis indicates sample size.

Table 60: Kaktovik 2010 - Subsistence – “Are there areas you used to hunt/fish 5 years ago that you do not use now?”

	2010 Count	2010 Percent
Yes	22	38%
No	36	62%
Total	58	100

Forty-seven households (out of the 68 households in the 2010 sample) reported subsistence expenses during the last twelve months. Of these forty-seven households, thirty-nine were Iñupiat, five were Caucasian and three were other ethnicities. These Iñupiat households spend an average of \$4,810 each on subsistence activities, although four households reported no expenses and slightly less than 40 percent of all Iñupiat households reported spending less than \$1,000. If one excludes those households who spend no money on subsistence activities from the denominator then the average subsistence cost for Iñupiat households rises to \$5,360 per household. Total community aggregate cost of subsistence activities from those Iñupiat sample households who reported expenses is \$187,6000. Per capita costs (depending on the denominator) run about \$850 per Iñupiat person.

Expenditures among Iñupiat households were clearly not normally distributed with slightly more than 46 percent of Iñupiat households spending \$5,000 or more. In contrast, the five Caucasian households that engaged in subsistence activities spent an average of about \$2,340, with one household spending no money and the aggregate expenditure of Caucasian households being \$11,700.

Table 61: Kaktovik 2010: Best Estimate Your Household Spent on Subsistence Activities Last 12 Months.

Subsistence Costs in \$'s	Frequency	Valid Percent	Cumulative Percent
0	7	15.9	15.9
30	1	2.3	18.2
180	1	2.3	20.5
400	2	4.5	25.0
450	1	2.3	27.3
500	2	4.5	31.8
700	1	2.3	34.1
1000	3	6.8	40.9
1400	1	2.3	43.2
1500	3	6.8	50.0
2000	4	9.1	59.1
2500	4	9.1	68.2
2750	1	2.3	70.5
3000	4	9.1	79.5
4000	1	2.3	81.8
5000	2	4.5	86.4
9000	1	2.3	88.6
10000	2	4.5	93.2
13000	1	2.3	95.5
15000	1	2.3	97.7
20000	1	2.3	100.0
Total	44	100.0	

Kaktovik Health Profile (Jana McAninch)

This village health profile provides a brief summary of the results of the 2010 NSB Census. The intent of this profile is to provide individual communities with information on some basic health measures at the village-level in order to guide community health promotion and planning efforts.

Please refer to the 2010 Census NSB Health Profile section for further discussion of each health question and an overview of the census health module results for the NSB. Also, please refer to the *NSB Community Health Analysis* report for expanded discussions of each of the health topics addressed below as well as many more aspects of community health. At the village-level, some of the small percentages are based on very small numbers of responses, making the estimates less reliable: cells based on fewer than 5 responses are marked. NSB and Alaska estimates are provided for general reference only, and comparisons should be made with caution, as results are not adjusted for differences in the age composition of the populations. In addition, state and national survey methods may vary considerably from that used in the 2010 NSB Census.

Adults:

		Kaktovik Household Heads	NSB Household Heads	All Kaktovik adults*	All NSB adults*	Alaska adults
General Health	"Very good" or "excellent" general health	36%	44%	38%	46%	56% ¹
	"Fair" to "Poor" general health	21%	20%	19%	16%	13% ²
Chronic Health Problems	Ever told by a health professional have:					
	Thyroid problems	3% ^{**}	6%	2% ^{**}	4%	9% (US) ³
	Diabetes	7%	7%	5%	6%	6% ¹
	High Blood Pressure	34%	28%	17%	20%	25% ⁴
	High cholesterol	21%	19%	15%	13%	38% ⁴
	Heart disease	6% ^{**}	7%	4%	5%	12% (US) ¹¹
	In the past 12 months, experienced:					
	Daily pain or arthritis that limits activities or requires prescription pain medicine	31%	29%	22%	21%	() ⁵
	Frequent (3 or more) or chronic ear infections	6% ^{**}	5%	3%	4%	
	Chronic breathing problems (such as asthma, emphysema, or a cough that won't go away)	15%	13%	9%	8%	() ⁶
Health Insurance	Have health insurance, including IHS eligibility	90%	97%			83% ⁷
	Have health insurance, other than IHS eligibility	38%	64%			
Smoking	Smoke tobacco (in any form)	65%	50%	66%	49%	22% ¹
	Of those who smoke:					
	Smoke one or more packs per day	44%	25%			
	Are interested in quitting	64%	71%			
	Have tried to quit in the last	54%	62%			

	12 months					
	Permit smoking in the house	63%	33%			
	Support a tobacco tax to fund tobacco prevention or cessation programs	48%	53%			
Overweight and Obesity	Overweight (BMI 25-29.9 kg/m ² , based on self-reported height and weight)	54%	33%			37% ¹
	Obese (BMI 30 kg/m ² or higher, based on self-reported height and weight)	32%	39%			28% ¹
Physical Activity	Never get 30 minutes of moderate exercise in a day	17%	16%			9% ⁴
	Get at least 30 minutes of moderate exercise 5 days per week or more	50%	44%			47% ⁴
Sugar-sweetened beverages	On average, drink no soda or other sugar-sweetened beverage per day	21%	26%			53% ⁸
	On average, drink two or more sodas or other sugar-sweetened beverage per day	55%	45%			30% ⁸
Food security	Times last year when household found it difficult to get the foods they needed to eat healthy meals	40%	35%			
	If yes, because not able to get enough subsistence foods to eat healthy meals	44%	43%			
	If yes, because not able to get enough store foods to eat healthy meals	88%	90%			
	Percent with household members who at times did not have enough to eat	19%	19%			(4-11%) ¹⁰
Safety: Helmet use	Wear a helmet when riding a snowmachine or 4-wheeler (of household heads who ride on snowmachines or 4-wheelers)	4% ^{**}	18%			(57%) ⁹
Drugs and alcohol	In the past 12 months, felt a household member had been hurt by drugs or alcohol	35%	24%			
	In the past 12 months, felt the health of their community had been hurt by drugs or alcohol					
	Often	41%	57%			
	Sometimes	45%	35%			

*Includes both household head (survey respondent) and all other household members, as reported by the household head. **Based on cell counts less than five (fewer than five respondents)

- A large majority of Kaktovik adults reported general health status to be at least “good”, although the proportion of adults (both Inupiat and all adults) reported to have “very good” to “excellent” health was lower than that in the other North Slope communities overall and lower than the statewide estimate for all adults.
- The prevalence of chronic health problems among Kaktovik adults was similar to adults in the NSB as a whole, with no statistically significant rate differences between Kaktovik and the other communities combined.
- Looking both at Inupiat only and all adults, those living in Kaktovik were significantly more likely to smoke than in the other North Slope communities overall.
- Kaktovik household heads who smoked were significantly more likely to report smoking at least one pack of cigarettes per day than were adults in the other North Slope communities combined.
- Looking both at Inupiat household heads and all, Kaktovik household heads who smoked were significantly more likely than those in other North Slope communities overall to permit smoking in the house.
- Obesity and soda/sugared beverage consumption were high among Kaktovik household heads, as they were throughout the NSB. Physical activity levels were similar to other North Slope communities and to statewide estimates.
- Reported food insecurity was high in Kaktovik, similar to other North Slope communities as a whole.
- Kaktovik household heads were significantly more likely than were household heads in other North Slope communities to feel that a member of their household had been hurt by alcohol or drugs in the last year. This difference persisted when comparing Inupiat household heads only.

Children (under age 18):

		Kaktovik children	NSB Children	Alaska children
General Health	“Very good” or “excellent” general health	66%	63%	89% ¹¹
Chronic Health Problems	In the past 12 months has child had:			
	Frequent (3 or more) or chronic ear infections	10%	19%	5% ¹¹
	Chronic breathing problems (such as asthma, emphysema, or a cough that won't go away)	7%	5%	(5-6%) ^{6,11}
Teen tobacco Smoking (ages 14-18)**	Smoke tobacco (in any form)	26%	16%	Not comparable

As reported by the household head. All the other chronic health problems had a prevalence of less than 1 percent among children in the NSB and were not analyzed or reported by individual village. **based on other NSB surveys, likely significantly underestimates the prevalence of smoking among children and teens as is not comparable to anonymous self-administered surveys used to estimate teen smoking rates statewide and nationally

- Reported general health status among Kaktovik children was similar to reported health status of NSB children as a whole but worse than that of children statewide.
- Kaktovik children were significantly less likely than children in other North Slope communities to have had frequent or chronic ear infections in the last year. The prevalence of these problems was still twice the statewide estimate, however.
- The percent of Kaktovik teens reported (by the household head) to smoke was not significantly different from the percent in the other North Slope communities combined, looking at either Inupiat only or all teens.

Iñupiaq Language Use:

Table 62 below indicates, by proportion, changes in the primary language spoken in Iñupiat homes from 1998 until 2010. It is unclear whether the 1998 sample frequencies included Iñupiat and non-Iñupiat households so the comparisons in this analysis will focus on changes between 2003 and 2010.² Although the numbers are small there seems to be a slight increase in homes that speak mostly Iñupiaq between 2003 (8 percent) and 2010 (11 percent). In addition, the proportion of households that speak both English and Iñupiaq has remained constant during the seven-year interval between NSB Censuses. Given these findings, and in contrast to some other NSB communities, it appears that Kaktovik is sustaining its proportion of Iñupiaq speakers among household head respondents. However, as we shall see, overall fluency within the entire population is on the decline.

Table 62: Kaktovik 1998 -2010 Primary Language Spoken In Iñupiat Households.

LANGUAGE USED	1998 Number	1998 Percent	2003 Number	2003 Percent	2010 Count	2010 Percent
Iñupiaq mostly	5	7%	5	8%	6	11%
Both English & Iñupiaq	33	48%	17	29%	16	30%
English mostly	29	42%	37	63%	30	57%
English & another language	2	3%	0	0%	1	2
Total	69	100%	59	100%	53	100%

The conclusions reached in the preceding paragraph are reinforced by the results in Table 63 below. Monolingual English speakers have remained fairly constant (within error terms) and the number of households with fluent Iñupiaq speakers has also remained fairly constant.

² The 2003 NSB Economic Report and Census Profile tables on this variable reported for all the households (i.e., all ethnicities) in the community. Additional analysis was completed on the 2003 SPSS file to select only Inupiat households for a comparison with the 2010 results.

Table 63: Kaktovik 2003 – 2010 – “How Many Household Members Speak Iñupiaq Fluently?”

MEMBERS OF HOUSEHOLD	2003 Count	2003 Percent	2010 Count	2010 Percent
0	27	45.8%	23	43%
1	17	28.8%	19	36%
2	10	16.9%	9	17%
3	5	8.5%	1	2%
4	0	0%	1	2%
5	0	0%	0	0%
Total	59	100%	53	100%

There seems to be a very slight decrease in the number of individuals fluent in Iñupiaq (regardless of speaking preference) between 2003 and 2010. The aggregated proportion of the first three rows (which indicate Iñupiaq fluency) show an erosion from about 26 percent in 2003 to 21 percent in 2010. In contrast, the percentage aggregations of the last six rows, which indicate minimal fluency, remain virtually constant (47 percent in 2003 vs. 44 percent in 2010).

Table 64: Kaktovik 2003 – 2010 Iñupiat Household Members Competency in Iñupiaq.

COMPETENCY	2003 Number	2003 Percent	2010 Number	2010 Percent
Speaks Fluently & prefers Iñupiaq	28	14.9%	26	13%
Speaks Fluently & prefers English	19	10.1%	16	8%
Speaks Fluently but doesn't prefer	2	1.1%	-	
Speaks with difficulty	11	5.9%	8	4%
Understands well & speaks enough	11	5.9%	4	2%
Understand well but hardly speaks	24	12.8%	58	28.9%
Understands some & speaks enough	10	5.3%	7	3.5%
Understands simple questions & speaks a little	16	8.5%	18	9%
Understands simple questions but hardly speaks	31	16.5%	30	15%
Understands two dozen words	14	7.4%	27	13.5%
Understands 5 or 6 words	7	3.7%	-	
Understands only a few words	15	8.0%	6	3%
Total	188	100.0%	200	100%

Table 65 below reveals the gradual loss of the Iñupiaq language in Kaktovik. In 2003 seven individuals under the age of 35 spoke Iñupiaq fluently in 2010 this number had dropped to 5. In 2003 85 percent of the fluent Iñupiaq speakers were over the age of 35 by 2010 this proportion had risen to 89 percent.

Table 65: Kaktovik 2010 - Iñupiat Individuals' Iñupiaq Competency by Age Category.

Iñupiaq fluency - how fluently does individual HH member speak Iñupiaq?	Recode of Individual's Age into Groups for Language Competency Comparison					
	0-2	3-15	16-35	36-60	61+	Total
	Count	Count	Count	Count	Count	Count
Speaks Iñupiaq fluently & prefers this language	0	0	0	10	14	24
Speaks Iñupiaq fluently but prefers another language	0	4	1	6	5	16
Speaks Iñupiaq but with difficulty or with minor flaws	0	1	3	4	0	8
Understands Iñupiaq well & speaks enough	0	0	1	3	0	4
Understands Iñupiaq well but hardly speaks it	1	16	17	22	2	58
Understands some Iñupiaq conversations & speaks enough	0	1	2	3	1	7
Understands simple questions and directions, speaks a little	1	3	9	5	0	18
Understands simple questions and directions but hardly speaks any	2	6	13	9	0	30
Understands at least two dozen Iñupiaq words.	1	14	8	4	0	27
Understands at least five or six Iñupiat words	0	0	0	0	0	0
Does not understand more than a few Iñupiaq words.	6	0	0	0	0	6
Total	11	45	54	66	22	198

Schools

Household heads in Kaktovik varied only slightly from the overall NSB distribution in responses (see NSB Overview). In general, Kaktovik had slightly lower levels of dissatisfaction on most topics; however, with respect to quality of teachers they were far more satisfied than the average NSB household head. In addition, Kaktovik residents' were substantially more positive with respect to their schools preparedness to use technology.

Chart 7: Kaktovik 2010 – Household Head’s Satisfaction with Attributes of Kaktovik Schools.

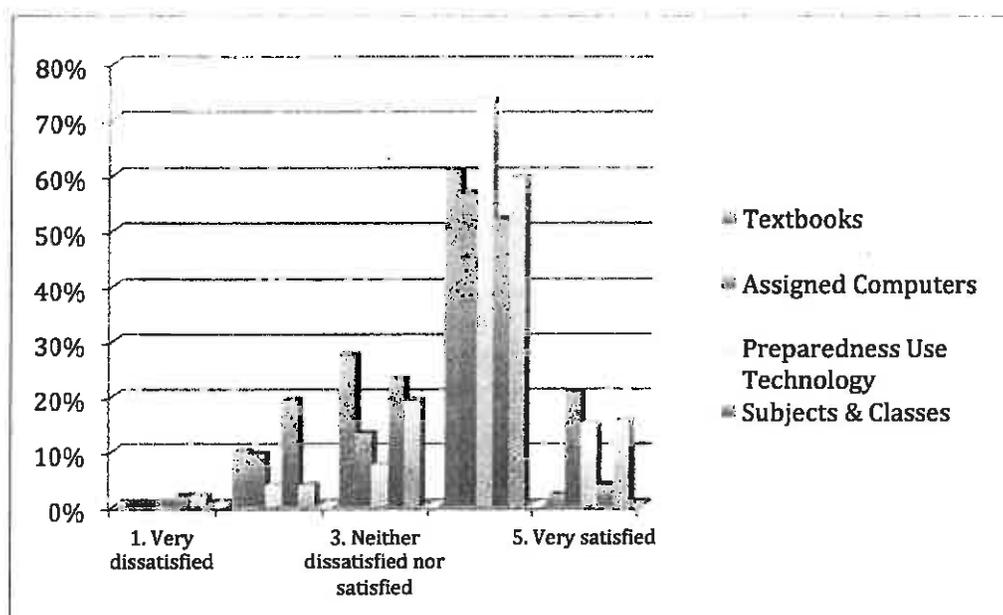


Table 66: Kaktovik 2010 – Household Head’s Satisfaction with Attributes of Kaktovik Schools.

Household Head Opinions about Kaktovik Schools.	Textbooks	Assigned Computers	Preparedness Use Technology	Subjects & Classes	Quality of Instruction
1. Very dissatisfied	0%	0%	0%	2%	2%
2. Dissatisfied	10%	9%	4%	19%	4%
3. Neither dissatisfied nor satisfied	28%	13%	8%	23%	19%
4. Satisfied	61%	57%	74%	52%	60%
5. Very satisfied	2%	21%	15%	4%	15%
Total	100% (51)	100% (53)	100% (53)	100% (52)	100% (52)

Numbers in Parenthesis represent sample size.

In general, parents in Kaktovik thought that students needed to have more homework. The proportion of this opinion increased as one moved from Elementary (27 percent) to High School (49 percent). This trend reversed for the small group of parents who thought students had too much homework, with these opinions being more strongly held for Elementary Schools (18 percent) than for High Schools (6 percent).

Table 67: Kaktovik 2010 Household Head's Opinions about the Amount of Homework.

Opinions About Amount of Homework	Elementary School	Middle School	High School
1. No homework	4%	4%	4%
2. Less homework	14%	7%	2%
3. About the same amount	55%	50%	45%
4. More homework	27%	37%	40%
5. A lot more homework	0%	2%	9%
Total	100% (49)	100% (46)	100% (47)

Numbers in Parenthesis represent sample size.

In Kaktovik parental opinions were dramatically positive, at all levels, about their child's involvement in school. More than eight out of ten parents felt there was a positive connection between their children and the school they attended.

Table 68: Kaktovik 2010 Household Head's Opinions about Child's Involvement in School.

Child's Connectedness & Involvement in School.	Elementary School	Middle School	High School
1. Very disconnected	7%	3%	5%
2. Somewhat disconnected	0%	6%	5%
3. Equally disconnected/connected	10%	8%	5%
4. Somewhat connected	48%	39%	41%
5. Very connected	36%	44%	43%
Total	100% (42)	100% (36)	100% (37)

Numbers in Parenthesis represent sample size.

Nearly every household head in Kaktovik thought that the authority of elders was respected (96 percent). A smaller proportion (59 percent), yet still a strong majority, thought the authority of principals were at least somewhat respected. Note, however, that eight of ten respondents felt that elders were "highly respected", in contrast only 20 percent felt the same level of respect obtained for principals.

Table 69: Kaktovik 2010 Household Head's Rating of Authority and Respect of Principal and Elders in the Community.

Rating of Authority & Respect of Principal and Elders.	Authority of Principal	Authority of Elders
1. Substantially disrespected	8%	0%
2. Somewhat disrespected	2%	3%
3. Tolerated	31%	2%
4. Somewhat respectful	40%	17%
5. Highly respected	19%	79%
Total	100% (48)	100% (65)

Numbers in Parenthesis represent sample size.

Only one in six Kaktovik respondents offered that they knew students who left school because of boredom, being behind in credits, drug/alcohol problems or having a baby. In general, more than 85 percent of Kaktovik respondents knew of no students who dropped out for any reason.

Table 70: Kaktovik 2010 – “Why during the last two years, did NSB students that you knew leave school without graduating?”

Reasons for students leaving school. (n=33)	Yes	No
Illness	0%	100%
Bored with School	15.2%	84.8%
Behind in Credits	15.2%	84.8%
Drug/alcohol Problems	15.2%	84.8%
Needed to work	9.1%	90.9%
Had a baby	12.1%	87.9%
Kicked out of School	6.1%	93.9%

Reflecting earlier opinions, see Chart 7 above, where one in five Kaktovik respondents were dissatisfied with the quality and range of subjects offered in their schools, most felt that offering different courses and/or more activities, was the best solution to the drop out rate, even though the vast majority felt that drop outs were only a modest problem.

Table 71: Kaktovik 2010 – “What do you think would be the best two strategies to improve student attendance?”

Strategies to Improve Student Attendance	Strategy 1	Strategy 2	Total Percent
Stronger penalties for truancy citations	14.6%	2.2%	16.8%
Offer different courses	22.9%	26.1%	49%
Anti-bulling programs	0%	6.5%	6.5%
Provide attendance incentives	8.3%	17.4%	25.7%
More activities	45.8%	34.8%	80.6%
Other (specify)	8.3%	13%	21.3%
Total	100% (48)	100%(46)	

More than seven out of ten Kaktovik respondents' felt that their community schools at least somewhat prepared students for life after High School and more than a third of respondents felt that students were well prepared to lead productive lives after High School.

Table 72: Kaktovik 2010 – “Do you think the NSB schools prepare students for life after high school?”

Do NSB Schools Prepare Students for Life After High School?	Frequency	Percent	Valid Percent	Cumulative Percent
1. Not at all prepared	9	13.2	17.0	17.0
2. Somewhat unprepared	6	8.8	11.3	28.3
3. Somewhat prepared	19	27.9	35.8	64.2
4. Prepared	15	22.1	28.3	92.5
5. Exceptionally prepared	4	5.9	7.5	100.0
Total Valid Responses	53	77.9	100.0	
Not Applicable	11	16.2		
Missing Information	4	5.9		
Total Missing	15	22.1		
Total Responses	68	100.0		

Perceptions about Changes in the Community:

Table 73: Kaktovik 2010 – Perceptions of Change in the Community and Environment.

	Decreased a lot	Decreased somewhat	Stayed the same	Increased somewhat	Increased a lot
Amount of Fish/Game	4.5%	32%	59%	5%	0%
Number of things buy	8%	12%	52%	24%	5%
Number of Good Jobs	6%	24%	49%	18%	3%
Amount drinking & violence	2%	12%	45%	28%	13%
Number of non-Iñupiat	0%	2%	77%	21%	0%
Quality of Teachers	2%	12%	57%	28%	2%
Support from Others	0%	8%	82%	10%	0%
Opportunity to go Whaling	2%	6%	73%	14%	5%
Opportunity to Hunt Marine Mammals	3%	10%	71%	11%	5%
Opportunity to Hunt Land Mammals	3%	11%	72%	13%	2%

For a remarkable number of topics, perceptions of Kaktovik residents have remained stable for approximately the last 15 years with nearly three quarters of all respondents seeing no change in the opportunity to hunt a broad range of marine and land resources. Most striking was the perception by over nine out of ten people that support from other community members had remained the same or had increased. Consistent with opinions expressed on the school questions, and providing a valuable reliability check, nearly 90 percent of respondents believe that the quality of teachers had remained stable or improved (nearly one third saw positive improvement in the quality of teachers). In addition nearly one third of respondents saw an improvement in the availability of goods within their community.

Those topics that respondents felt most concerned about were the increase in drinking and violence and this was the largest negative response with 41 percent of respondents in 2010 believing this problem had increased in the last five years. In 2003, 27 percent of respondents felt this problem was on the increase. The increase in the proportion of respondents concerned this was a rising problem jumped 14 percent (i.e., from 27 percent in 2003 to 41 percent in 2010). This rate of increase indicates that this problem is of a rising concern within the community. And while most respondents felt their opportunity to hunt and fish was unimpaired, a significant number, more than a third (37 percent) perceived decreases in the populations of fish and game that they harvested. Finally, about a third of interviewees reported decreasing availability of jobs.

Chart 8: Kaktovik 2010: Perception of Change in the Community and Environment.

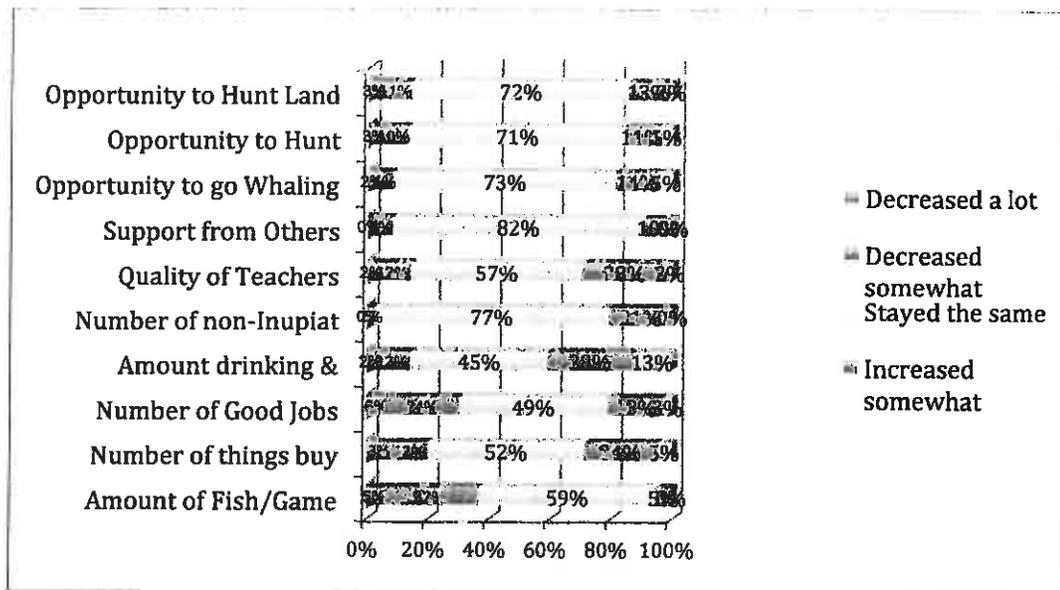


Table74: Kaktovik Community Perception of Change 2003 and 2010.

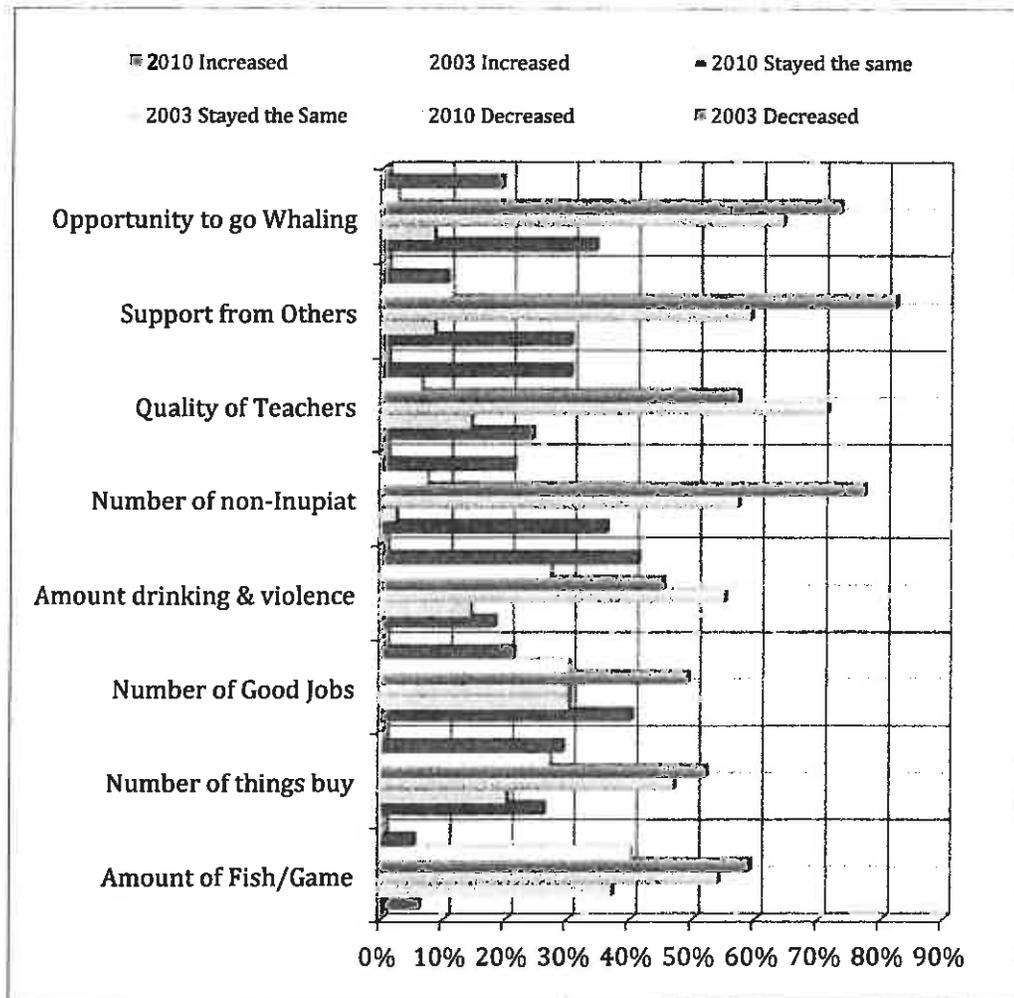
Perception of Change	2003 Decreased	2010 Decreased	2003 Stayed the Same	2010 Stayed the same	2003 Increased	2010 Increased
Amount of Fish/Game	6%	37%	54%	59%	40%	5%
Number of things buy	26%	20%	47%	52%	27%	29%
Number of Good Jobs	40%	30%	30%	49%	30%	21%
Amount drinking & violence	18%	14%	55%	45%	27%	41%
Number of non-lřupiat	36%	2%	57%	77%	7%	21%
Quality of Teachers	24%	14%	71%	57%	6%	30%
Support from Others	30%	8%	59%	82%	11%	10%
Opportunity to go Whaling	34%	8%	64%	73%	2%	19%

Comparing 2003 responses with 2010 responses for Kaktovik residents, we notice a substantial turn around in some topics. For example, respondents are currently more positive about their opportunity to hunt whales. In contrast we see a dramatic negative change in perceptions about the available amount of fish and game over a seven-year period.

Consonant with previous analysis of this year's responses we see a positive shift in residents' perception about the quality of their teachers. One opinion that requires considerable additional scrutiny is the 75 percent decline in negative perceptions of support from others – opinions in 2003 were much more negative in their assessment of changes in support with 30 percent seeing a decrease in 2003. However, by 2010 this proportion had been reduced to just 8 percent.

As noted above, changes in the increase of drinking and violence and the availability of jobs had substantial shifts towards pessimism in 2010 and these perceptions, may in part, be causally connected.

Chart 9: Kaktovik Community Perception of Change 2003 and 2010.



Voting:

In 2010 the number questions on voting behavior was substantially increased. What the 2010 results seem to indicate is the high levels of participation, in the 80 percent range, for adults within the community. For 2010 there does seem to be a slight, but noticeable, increased turnout for State and National elections in contrast to local and regional elections. With respect to comparisons with 2003, on those measures that we have comparable data, there seems to be a slight decrease in participation although levels of registration for NSB issues seems fairly consistent at very high levels of around 90 percent.

Table 75: Kaktovik 2010 – Voting Behavior & Selective Comparisons with 2003.

Voting Behavior	Yes 2003	Yes 2010
Are you a registered voter in the North Slope Borough?	93%	90%
Did you vote in the last Borough election?	-	78%
Did you vote in the last City election?	-	71%
Did you vote in the last State election?	93%	84%
Did you vote in the last National election?	-	85%

Registration to vote in the NSB seems comparable by gender. In addition, voting in state and national elections seems fairly equivalent between men and women. One slight difference is that women seem less likely to vote in city and borough elections.

Table 76: Kaktovik 2010: Household Head's Voting Behavior by Gender and Ethnicity.

		Recode Ethnicity into Three Categories					
		Iñupiat		Caucasian		Other	
		HH's- Gender		HH's - Gender		HH's - Gender	
		Male	Female	Male	Female	Male	Female
		Count	Count	Count	Count	Count	Count
Voting - Are you a registered voter in the NSB?	Yes	24	26	3	4	1	3
	No	2	1	2	2	0	0
Voting - Did you vote in the last Borough election?	Yes	24	20	2	3	0	3
	No	2	7	3	2	1	0
Voting - Did you vote in the last City election?	Yes	22	17	3	2	1	2
	No	3	10	2	3	0	1
Voting - Did you vote in the last State election?	Yes	23	22	4	3	1	3
	No	3	5	1	2	0	0
Voting - Did you vote in the last National election?	Yes	23	21	5	4	1	3
	No	3	6	0	1	0	0

