

Appendix D:
Subsistence in the Vicinity of the TAPS

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D.1 Introduction

Congress has defined subsistence in Alaska as “the customary and traditional uses by rural Alaska residents of wild, renewable resources for direct personal or family consumption” (cited in Federal Subsistence Board 1999). Subsistence activities can involve hunting, fishing, collecting, or trapping. Resources harvested include fish, land mammals, marine mammals and invertebrates, riverine invertebrates, and assorted plants (including wood). Uses of these resources include food, clothing, fuel, transportation, construction, art, crafts, exchange, home goods (e.g., sleeping mats), and customary trade (Wolfe 2002).

Subsistence in rural Alaska tends to play economic, sociocultural, and ceremonial roles, the last two of particular importance to Alaska Natives. Although all of the uses listed above are legitimate components of subsistence, when exploring the importance of subsistence activities researchers frequently emphasize the use as food. During the 1990s, rural residents of Alaska harvested an average of 375 lb of wild foods per capita per year (Wolfe 2000). In communities surveyed by the Alaska Department of Fish and Game (ADF&G) in the 1980s and 1990s, 75–98% of the households harvested fish and 92–100% used fish, and 48–70% harvested wildlife and 79–92% used wildlife. Subsistence resources meet most or all of the caloric and protein requirements in many rural communities (Wolfe 1996). Even if subsistence were only of importance as a source of food, it is easy to understand the high level of concern of rural Alaskans with any activities that might disrupt or otherwise compromise subsistence activities. With the addition of other economic functions, as well as sociocultural and ceremonial functions, the recognized importance of subsistence and the desire to protect this key activity from disruption only grows.

Section 3.24 of this EIS presents background material for an analysis of subsistence in the vicinity of the Trans-Alaska Pipeline System (TAPS), including the differences in legal definitions used by federal and state agencies and an abbreviated summary of much of the data considered. This appendix presents available tabular and cartographic data on subsistence in greater detail to provide more thorough background on this topic in the vicinity of the TAPS and a more complete basis for the evaluation of potential environmental impacts on subsistence.

D.2 Community-Specific Subsistence-Harvest Patterns in the Vicinity of the TAPS

D.2.1 Challenges in the Study of Subsistence Patterns

The data relied upon in this EIS are primarily those collected by the ADF&G Subsistence Division for many rural communities in Alaska. These data are the result of recent ethnographic studies of individual (or small groups) of rural communities that include systematic surveys of subsistence behavior (Fall 1990). Survey results include quantitative data on amounts of various wild resources harvested, used, received, and given, thereby providing a sense of the amount resources obtained and how they were obtained. The *exchange* of subsistence resources, reflected by amounts given and received, provides insight on key sociocultural functions of subsistence as various resources flow through a community. Surveys collected information on a wide variety of fish, land mammals, birds and

eggs, marine mammals, marine invertebrates, and vegetation subsistence resources, thereby enabling researchers to break subsistence activities down in considerable detail.

In addition to the rich detail provided by ADF&G subsistence surveys, the data generated are of particular utility to this EIS because they provide insights on geographically distinct localities. With a focus on communities in the vicinity of the TAPS, this evaluation explores potential impacts to subsistence along an 800-mi transect across Alaska that includes a range of very different ecological and sociocultural settings. The use of ADF&G community harvest data enables examinations that explicitly incorporate such heterogeneity with data collected and compiled in a similar manner — thereby supporting comparisons, as necessary, of subsistence under very different conditions in very different geographic settings.

At first glance, the study of subsistence seems to lend itself to analysis with quantitative data. To a degree this is true. Subsistence harvest activities show relatively consistent patterns, especially in the suite of species harvested and use areas. Most variability comes in quantities of particular resources harvested from year to year, based on changing availability. Overall harvest levels change slowly, as subsistence users increase harvests among some species to make up for others. However, subsistence patterns for a particular locality often vary considerably over space and time. Although it is possible to deal with such variability, the research necessary to understand it ideally requires the systematic collection of data over many consecutive years, which are unavailable for subsistence in Alaska. The data presented in this EIS are useful for understanding the role of subsistence in several communities that could be affected by the renewal of the Federal Grant for the TAPS right-of-way (ROW). They provide a sense of the number and amount of resources harvested, the proportion of community residents involved in their harvest, and the percentage of community residents who use, give, and exchange various resources. However, these data must be considered in context; they provide essentially one or more discrete *snapshots* of community subsistence activity that is changing constantly.

The main difficulty with the quantitative study of subsistence is the nature of subsistence itself: it is an adaptation to available resources. The problem is that availability varies over time. One aspect of this is seasonality, with various resources harvested when they become accessible (e.g., during salmon runs or caribou migrations) or desirable to harvest (e.g., when the coats of certain furbearers are of highest quality). Seasonal harvests characterize all of the communities examined in this study. Recording subsistence data over the course of an entire year — the approach employed by the ADF&G — removes problems with variability between different parts of the year.

A second aspect of changing availability consists of changes from year to year. As fish and animal populations fluctuate and migration patterns change, harvests change as well. Available data for annual harvests over multiple years provide a sense of the degree of variability possible (Figure D-1). However, in many communities, data are available for only one or two years. There is only one case among the communities considered in this study (Chenega Bay) in which data capture subsistence patterns for as many as five consecutive years (ADF&G 2001). The data presented in Section D.2.3 provide an idea of the subsistence patterns that occur in an adaptive process that, by its nature, varies and that, because of this variability, challenges the utility of any quantitative information on harvest levels, participation, and use collected for a couple points in time (see Nelson 1992).

Along with harvest levels, the geographic areas in which subsistence resources are obtained also vary over time. Throughout Section D.2.3, maps of subsistence harvest areas are referenced to provide a sense of the relationship between areas used for subsistence and the TAPS. The same adaptation to available resources that causes variability in harvest *levels* over time also causes variability in harvest *areas* over time (Nelson 1992). However, the ADF&G mapping interviews document uses over 10 years, 20 years, or the lifetime of respondents, so the maps represent areas incorporating variability over a period time.

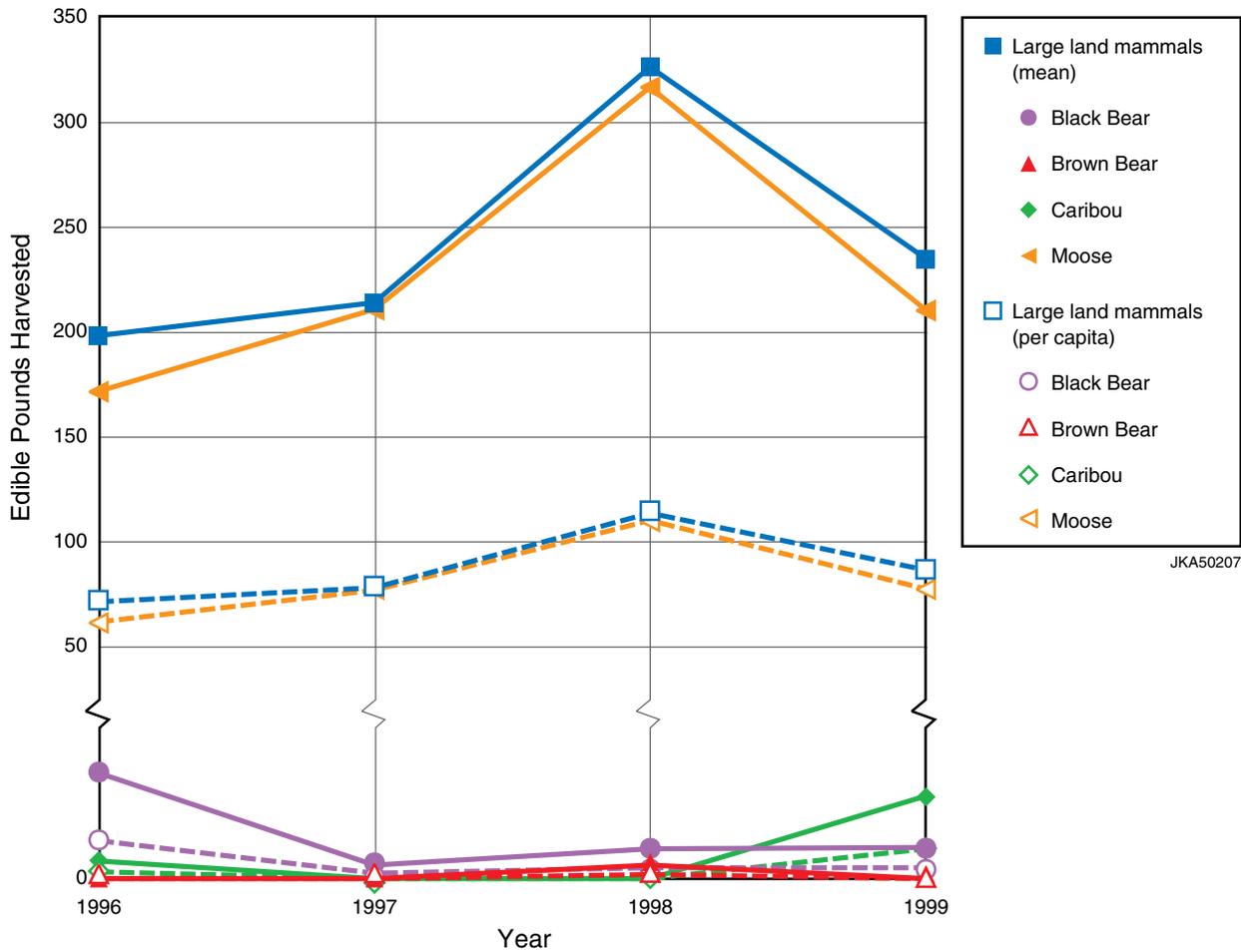


FIGURE D-1 Changing Harvests over Time for Selected Resources in Stevens Village (Data Source: ADF&G 2001)

Maps D-3 through D-24¹ should therefore be viewed as presenting a general picture of geographic subsistence tendencies rather than as maps with strict boundaries that remain unchanged year after year.

The data used in this appendix to characterize subsistence patterns of communities near the TAPS were the best available at the time of EIS preparation. All the information presented is dated — indeed, some as collected two decades ago. That stated, because of the inherent variability in subsistence activities older data are not necessarily of limited utility for present purposes as they may represent *typical* subsistence in the early 21st century. The main exceptions to this statement

likely are some North Slope communities affected by oil development and the communities affected by the Exxon Valdez oil spill. For the five communities examined in this EIS that experienced direct impacts from this spill (Chenega, Cordova, Nanwalek, Port Graham, and Tatitlek), the data presented were collected before and after the 1989 spill, so they do provide a sense of subsistence patterns established following the spill.

D.2.2 Focus of the Subsistence Analysis

As noted above, this EIS examines subsistence at the level of individual

¹ Maps referenced in this appendix are located in Volume 7 of this EIS.

communities to help understand subsistence patterns that have historically varied considerably in different parts of Alaska (see Hosley 1981). The characterization of subsistence relies on ADF&G data for selected settlements located in the vicinity of the TAPS.

This study first identified 45 communities in proximity of the TAPS for potential subsistence analysis. The communities of interest consisted of 21 largely federally recognized tribes identified by the BLM as those that could be potentially directly affected by the renewal of the Federal Grant for the TAPS ROW (BLM 2001) and 24 communities geographically close to the TAPS that were considered so that all places in the vicinity of the TAPS would be treated equally (Map D-1). Three of the places considered were Native villages well south or west of Valdez. Their inclusion reflects their proximity to areas affected by the Exxon Valdez oil spill, the impacts they experienced during that spill, and formal requests to be included within the EIS process as a consequence of those impacts (Map D-2).

This study does not examine subsistence for all 45 communities. As noted in Section D.1, this EIS relies on a federal definition of subsistence that includes the precondition of rural residency. Since 10 of the 45 communities lie within the Fairbanks North Star Borough Nonrural Area and one lies within the Valdez Nonrural Area (USFWS 2001), they were excluded from this study. Ten other communities meet the rural requirement but were excluded because they have never been the subject of detailed subsistence surveys. The remaining 24 communities are examined because they meet the rural requirement and because some sort of subsistence data were available for them (Table D-1).

D.2.3 Descriptions of Community Subsistence Patterns

This section provides brief descriptions of the 24 communities examined in this study for which systematically collected subsistence data exist. The aim is to provide key data in tabular and graphic (map) form to supplement

information presented in Section 3.24 of the EIS. Text is purposefully kept to a minimum, enabling the appendix to function primarily as a source of important information. For reader convenience, all the tables for individual communities are grouped at the end of the Appendix. The maps are in Volume 7. The emphasis of this data presentation is on fish, game, and other wild foods that are harvested. Although data on harvest levels for vegetable foods and wood exist for many communities, this appendix does not consider these resources because they are not typically felt to be affected directly or indirectly by the TAPS.

The following discussions of subsistence data are organized into four broad geographic groupings of communities: North Slope, Yukon River Drainage, Copper River Basin, and Prince William Sound and Lower Cook Inlet. This approach enables the presentation of subsistence patterns in communities that share certain components of their sociocultural systems and generally similar ecological settings — yielding subsistence patterns within a particular grouping with important commonalities.

D.2.3.1 North Slope

The North Slope consists of the portion of north-central Alaska lying north of the Brooks Range. Alaska Natives in this region comprise two Iñupiat sociocultural systems, the Nunamiut and the Tareumiut. The Tareumiut live along the north coast of Alaska and traditionally have relied on a combination of terrestrial and marine resources. The Nunamiut live inland from the coast in the Brooks Range and rely primarily on terrestrial resources, particularly caribou. The communities examined in this EIS include one Nunamiut community, Anaktuvuk Pass, and one Tareumiut community, Nuiqsut.

D.2.3.1.1 Anaktuvuk Pass. Anaktuvuk Pass, the last remaining settlement of the Nunamiut, lies in the central Brooks Range about 49 mi west of the TAPS (Map D-1) (ADCED 2001). The population of Anaktuvuk Pass was 282 in 2000 (Table D-1).

Due in part to geographic isolation and in part to the sociocultural heritage of Anaktuvuk

TABLE D-1 Communities in Proximity to the TAPS, Demographic and Subsistence Overview

Community	2000 Population ^a	Subsistence Survey Years	Sources for Subsistence Data ^b
North Slope			
Anaktuvuk Pass	282	1990, 1991, 1993 ^d 1993 ^c	Unpublished ADF&G analyses
Deadhorse	0 ^d	No survey conducted	
Nuiqsut	433	1985, 1993 ^d 1993 ^c	Fall and Utermohle 1995; unpublished ADF&G analysis
Prudhoe Bay	5	No survey conducted	
Yukon River Drainage			
Alatna ^e	35	1982 ^c , 1983, 1984; 1997, 1998, 1999	Marcotte and Haynes 1984; unpublished ADF&G and USFWS analyses
Allakaket ^e	97	1982 ^c , 1983, 1984; 1997, 1998, 1999	Marcotte and Haynes 1984; unpublished ADF&G and USFWS analyses
Big Delta	749	No survey conducted	
Coldfoot	13	No survey conducted	
College ^f	11,402	No survey conducted	
Delta Junction	840	No survey conducted	
Ester ^f	1,680	No survey conducted	
Evansville	28	1982 ^c , 1983, 1984	Marcotte and Haynes 1984; unpublished ADF&G and USFWS analyses
Fairbanks ^f	30,224	No survey conducted	
Fox ^f	300	No survey conducted	
Harding-Birch Lakes ^f	216	No survey conducted	
Hughes	78	1982 ^c	Marcotte and Haynes 1984
Livengood	29	No survey conducted	

TABLE D-1 (Cont.)

Community	2000 Population ^a	Subsistence Survey Years	Sources for Subsistence Data ^b
Manley Hot Springs	72	No ADF&G survey conducted	Betts 1997
Minto	258	1984 ^c	Andrews 1988
Moose Creek ^f	542	No survey conducted	
North Pole ^f	1,570	No survey conducted	
Pleasant Valley ^f	623	No survey conducted	
Rampart	45	1993, 1994, 1995, 1996, 1997	Betts 1997; unpublished ADF&G analysis
Salcha ^f	854	No survey conducted	
Stevens Village	87	1984, 1993, 1994, 1997	Betts 1997; Sumida 1988; Sumida and Alexander 1985; unpublished ADF&G analysis
Tanana	308	1987 ^c , 1996, 1997, 1998, 1999	Anderson 1992; Case and Halpin 1990; Betts 1997; unpublished ADF&G analysis
Two Rivers ^f	482	No survey conducted	
Wiseman	21	No survey conducted	
<i>Copper River Basin</i>			
Chitna	123	1982, 1987 ^c	Fall and Stratton 1984; McMillan and Cuccarese 1988; Stratton 1983; Stratton and Georgette 1984, 1985; unpublished ADF&G analysis
Copper Center	362	1982, 1987 ^c	Fall and Stratton 1984; McMillan and Cuccarese 1988; Stratton 1983; Stratton and Georgette 1984, 1985; unpublished ADF&G analysis
Copperville	179	No survey conducted	
Gakona	215	1982, 1987 ^c	Fall and Stratton 1984; McMillan and Cuccarese 1988; Stratton 1983; Stratton and Georgette 1984, 1985; unpublished ADF&G analysis

TABLE D-1 (Cont.)

Community	2000 Population ^a	Subsistence Survey Years	Sources for Subsistence Data ^b
Glennallen	554	1982, 1987 ^C	Fall and Stratton 1984; McMillan and Cuccarese 1988; Stratton 1983; Stratton and Georgette 1984, 1985; unpublished ADF&G analysis
Gulkana	88	1982, 1987 ^C	Fall and Stratton 1984; McMillan and Cuccarese 1988; Stratton 1983; Stratton and Georgette 1984, 1985; unpublished ADF&G analysis
Kenny Lake	410	1982, 1987 ^C	Fall and Stratton 1984; McMillan and Cuccarese 1988; Stratton 1983; Stratton and Georgette 1984, 1985; unpublished ADF&G analysis
Paxson	43	1987 ^C	McMillan and Cuccarese 1988; Stratton and Georgette 1985
Tazlina	149	1987 ^C	McMillan and Cuccarese 1988; Stratton and Georgette 1985; unpublished ADF&G analysis
Tonsina	92	1982, 1987 ^C	Fall and Stratton 1984; McMillan and Cuccarese 1988; Stratton 1983; Stratton and Georgette 1984, 1985; unpublished ADF&G analysis
<i>Prince William Sound and Lower Cook Inlet</i>			
Cheneg Bay	86	1984, 1985, 1989, 1990, 1991, 1992, 1993 ^C , 1997	Fall 1991; Fall and Utermohle 1995; Stratton and Chisum 1986; Stratton et al. 1996; unpublished ADF&G analysis
Cordova	2,454	1985, 1988, 1991, 1992, 1993, 1997 ^C	Stratton 1989, 1992; Fall and Utermohle 1995; unpublished ADF&G analysis
Nanwalek	177	1987, 1989, 1990, 1991, 1992, 1993, 1997 ^C	Fall 1991; Fall and Utermohle 1995; unpublished ADF&G analysis
Port Graham	171	1987, 1989, 1990, 1991, 1992, 1993, 1997 ^C	Fall 1991; Fall and Utermohle 1995, 1999;
Tatitlek	107	1987, 1988, 1989, 1990, 1991, 1993, 1997 ^C	Fall 1991; Fall and Utermohle 1995; Stratton et al. 1996; unpublished ADF&G analysis
Valdez ⁹	4,036	1991, 1992, 1993	Fall and Utermohle 1995, 1999

Footnotes on next page.

TABLE D-1 (Cont.)

- a Data are from U.S. Bureau of the Census (2001).
- b Data for survey years listed are as reported in ADF&G (2001).
- c Designated “representative year” by ADF&G.
- d Officially, there are no permanent residents in Deadhorse. The population consists of about 5,000 transient oil workers.
- e 1982, 1983, and 1984 subsistence survey data for Alatna and Allakaket are reported for both communities combined.
- f No subsistence data are reported because the community is in the Fairbanks North Shore Borough Nonrural Area (USFWS 2001).
- g Although ADF&G conducted three subsistence surveys, the EIS does not examine them because Valdez is in the Valdez Nonrural Area (USFWS 2001).

Pass, residents of this community rely heavily on subsistence for economic and other purposes (ADCED 2001; North Slope Borough 1999). The dominant subsistence resource in Anaktuvuk Pass is caribou, the sole subject of ADF&G subsistence surveys in 1990, 1991, and 1993 (ADF&G 2001). Survey data from 1993 indicate that nearly 43% of Anaktuvuk Pass households participated in caribou hunting, producing nearly 220 lb per capita (Table D-2).² Anecdotal data indicate that all households share in the consumption of this resource (e.g., Mekiana 1992). Other data indicate that a range of other species also played a role in Anaktuvuk Pass subsistence, including sheep, grizzly bear, moose, ground squirrel, marmot, wolf, wolverine, ptarmigan, grayling, lake trout, lingcod, and whitefish (Spearman et al. 1979).

The subsistence use area for Anaktuvuk Pass includes a broad expanse of the southern Brooks Range primarily west of the TAPS, in all covering about 11,300 mi² (Map D-3). A small portion of the subsistence use area for this village overlaps with the TAPS. Villagers exploit the vast majority of the subsistence use area for caribou and furbearers, with small subsections used to hunt moose and sheep. Fishing occurs in localized areas, often in lakes.

D.2.3.1.2 Nuiqsut. Nuiqsut is an incorporated community lying on the western

bank of the Nechelik Channel of the Colville River Delta, about 57 mi west of the TAPS (Map D-1) (ADCED 2001). The population of Nuiqsut was 433 in 2000 (Table D-1).

Although some wage employment is available in nearby oil fields and with North Slope Borough and state governments, subsistence remains extremely important to the Nuiqsut economy (North Slope Borough 1999). Moreover, much of Tareumiut sociocultural and ceremonial tradition revolves around the harvest and exchange of subsistence resources. Marine mammals (notably whales), large land mammals (especially caribou), and fish (particularly whitefish) each contributed more than 230 lb of subsistence resource per capita to households surveyed in Nuiqsut in 1993 (Table D-3) (Fall and Utermohle 1995; see Galginaitis 1990). Hunting large land mammals and fishing involved 74 and 81%, respectively, of the Nuiqsut households studied that year. More than 98% of those households used large land mammals, 100% used fish, and nearly 97% used marine mammals for subsistence — providing a sense of the amount of exchange that also occurred involving subsistence resources. Birds, bird eggs, and small land mammals completed the subsistence resources for Nuiqsut in 1993, but the amount harvested was negligible in comparison to the three categories noted above (although more than 95% of households surveyed used birds and bird eggs). Although

² Tables for individual communities are grouped at the end of this Appendix.

detailed data are lacking, available evidence indicates that harvest patterns, in the sense of species mix and level of importance, would be similar over time (Libby et al. 1979; North Slope Borough Planning Commission and Commission on History and Culture 1979; see also ADF&G 1986). Subsistence data from 1994–1995, the year following the representative year presented in Table D-3, indicate that the breadth in subsistence species and in their emphasis was similar then, with caribou being particularly important (Brower and Opie 1997).

The subsistence use area for Nuiqsut covers an irregularly shaped area of roughly 13,200 mi² centered on the Colville River in north-central Alaska (Map D-4). The vast majority of this area involved caribou hunting, with smaller areas used for fishing (primarily the Colville River and its associated delta) and moose hunting. A small portion of the eastern edge of the subsistence use area intersects the TAPS. Map D-4 does not include areas off the coast used for marine mammal hunting.

D.2.3.2 Yukon River Drainage

The Yukon River Drainage consists of a broad expanse of the interior Alaska Plateau between the Brooks Range and the Alaska Range, drained by several rivers and streams that flow into the Yukon River. The Alaska Natives of this region originally were several Athabascan peoples, including Gwich'in, Koyukon, and Tanana. Adaptive strategies of these peoples, as well as rural non-Native sociocultural systems, emphasize combinations of terrestrial mammals and both anadromous and resident fish. Salmon harvests represent a particularly large portion of total subsistence foods in this region. Because the salmon runs to important to subsistence in the Yukon River drainage originate in the ocean waters west of Alaska, this portion of Interior Alaska in a sense relies on conditions (climate, commercial harvests) in the same distant region. This EIS discusses 10 communities that lie in the Yukon River drainage: Alatna, Allakaket, Evansville, Hughes, Manley Hot Springs, Minto, Rampart, Stevens Village, Tanana, and Wiseman. As the data presented reveal, subsistence varies among these localities, although it plays an

important economic, sociocultural, and ceremonial role in each.

D.2.3.2.1 Alatna. Alatna is a small village located on the northern bank of the Koyukuk River, immediately south of its intersection with the Alatna River and about 56 mi west of the TAPS (see Map D-1) (Alaska Department of Community and Economic Development [ADCED] 2001). Alatna has its roots as a trading location, with Kobuk River Iñupiat living on the northern bank of the river in Alatna and the Koyukon Athabascans living on the southern bank in modern-day Allakaket. The population of Alatna in 2000 was 35, with the majority of residents of Kobuk River Iñupiat heritage (Table D-1).

Subsistence dominates the economic activity of Alatna, supplemented by a small amount of wage labor from seasonal work and the production of Native crafts. Much of the subsistence data available for Alatna combine information on this village with data on neighboring Allakaket (Northern Land Use Research, Inc. 2000b). However, the ADF&G conducted surveys of large land mammal harvests in 1997, 1998, and 1999 for Alatna alone. Table D-4 presents results of the 1998 survey, which recorded harvest for caribou and moose. Table D-5 presents 1982 subsistence harvest data for a broader range of resources, but for Alatna combined with Allakaket (Marcotte and Haynes 1984). Subsistence activities reported in the latter table involved a variety of land mammals, birds, and fish, with the latter being of particular importance. Household participation rates for harvests varied widely by resource, with 70% of Alatna households harvesting large land mammals in 1998 and 100% of community households using those resources. Harvest levels were less for these same animals in 1982, with information unavailable on participation rates.

The subsistence use area for Alatna (recorded in combination with Allakaket) covers about 4,400 mi² west of the TAPS. Although this area does not intersect the pipeline, it does include part of south fork of the Koyukuk River downstream of the TAPS (Map D-5). Residents of Alatna use the vast majority of their subsistence use area to harvest furbearing

animals. The area used for moose hunting is much smaller, confined largely to areas near rivers in the vicinity of the village. Fishing occurs primarily in the Alatna, Kanuti, and Koyukuk Rivers.

D.2.3.2.2 Allakaket. Allakaket, a rural village consisting primarily of Koyukon Athabascans, is on the southern bank of the Koyukuk River about 55 mi west of the TAPS (Map D-1) (ADCED 2001). As noted for Alatna, Allakaket occurs at an important trading locality on the Koyukuk, particularly for exchange with the neighboring Kobuk River Iñupiat in Alatna. In 2000, the population of this village was 97 (Table D-1).

Allakaket relies heavily on subsistence for the economic, sociocultural, and ceremonial roles this activity plays in the village. Wage labor, which is primarily seasonal or part time, helps to supplement subsistence in the economy. Subsistence in Allakaket relies on large amounts of both land mammals and fish (Marcotte and Haynes 1984; Brannian and Gnath 1988). As with Alatna, ADF&G harvest data for Allakaket as an individual community to date have focused solely on large land mammals (Table D-6). The data indicate that the majority of the households surveyed harvested these animals and that virtually all households used them. Data from the specified representative year of 1982, which combined Allakaket with Alatna, provide information on subsistence harvest patterns for a broader range of resources in the two villages combined (Marcotte and Haynes 1984) (see Table D-5). Subsistence activities reported in conjunction with Alatna indicate harvests of a variety of land mammals, birds, and fish, with the latter being of particular importance. Household participation rates for harvests varied widely by resource, with about 58% of Allakaket households harvesting large land mammals in 1998 and 100% of community households using those resources (an indication of the breadth of sharing that occurs). Harvest levels were slightly less for these same animals in 1982, with information unavailable on participation rates.

The subsistence use area for Allakaket (recorded in conjunction with Alatna) covers about 4,400 mi² west of the TAPS. Although this

area does not intersect the pipeline, it does include part of south fork of the Koyukuk River downstream of the TAPS (Map D-5). Residents of Allakaket use the vast majority of their subsistence use area to harvest furbearing animals. The area used for moose hunting is much smaller, confined largely to areas near rivers in the vicinity of the village. Fishing occurs primarily in the Alatna, Kanuti, and Koyukuk Rivers.

D.2.3.2.3 Evansville. Evansville is an Interior village located on the southern bank of the Koyukuk River about 22 mi west of the TAPS (Map D-1) (ADCED 2001). Evansville and the neighboring community of Bettles came into being in the 1940s when an airfield was built to support exploration of the Naval Petroleum Reserve No. 4 (Northern Land Use Research, Inc. 2000b). Construction of the airfield attracted both Alaska Natives and non-Natives to the area, with the former settling primarily in Evansville (near the northern end of the airfield) and the latter settling mostly in Bettles (near the southern end of the airfield). The decennial census in 2000 recorded 28 people in Evansville (Table D-1)

In contrast to residents of most rural communities in Alaska, many Evansville residents are engaged in wage labor; most jobs are associated with air transportation, visitor services, and the local and federal government. Nevertheless, subsistence remains important to Evansville residents for economic as well as sociocultural reasons (Marcotte and Haynes 1984). Detailed subsistence surveys in 1982-1984 combined data on Evansville with those from nearby Bettles. In contrast, in 1997, 1998, and 1999 subsistence studies of large game harvests focused exclusively on Evansville (ADF&G 2001). Evansville-specific data for 1998 indicate that large game (caribou and moose) contributed fewer than 84 lb per capita to village residents (Table D-7). Nevertheless, although only about one-third of the households surveyed actually hunted caribou or moose, nearly 92% used these resources, an indication of how much exchange occurred even for a relatively small amount of meat harvested. Subsistence data for Bettles and Evansville combined in 1982 indicate that large game provided nearly 135 edible lb per

capita, while fish contributed nearly as much as 107 edible lb per resident the same year (Table D-8). Harvesting small animals also occurred in 1982, although it contributed little meat and was probably done to obtain skins to sell. In all cases, relatively small percentages of Bettles/Evansville households were involved in the actual harvest of subsistence resources.

The subsistence use area for Bettles/Evansville covers nearly 2,000 mi², with most of the area lying west of the TAPS (Map D-6). Large amounts of the area are used for harvesting fur-bearing animals and hunting moose. Fishing, which also is important to Bettles/Evansville subsistence, occurs relatively close to the two communities, primarily on the John and Koyukuk Rivers. A very small portion of the subsistence use area for Bettles/Evansville intersects the TAPS near PS 5, while another portion includes the south fork of the Koyukuk River downstream of the pipeline.

D.2.3.2.4 Hughes. Hughes is located on a bluff on the eastern bank of the Koyukuk River, some 105 mi west of the TAPS (Map D-1) (ADCED 2001). Located in an area that included Athabascans, Kobuk, Selawik, and Nunamiut, the community of Hughes was founded formally in 1910 as a riverboat landing and supply port for the Indian River gold fields. Its population varied during the 20th century, as gold fields and various economic activities came and went. The most recent decennial census in 2000 recorded 78 people in Hughes (Table D-1).

Subsistence is extremely important to residents of Hughes for economic and cultural reasons. Residents of Hughes harvested a broad range of land mammals, birds, and fish in 1982, the reference year for the community (Table D-9) (Marcotte and Haynes 1984; see also Brannian and Gnath 1988). Overall, Hughes residents harvested nearly 1,500 lb per capita in 1982. Salmon by far contributed the greatest amount of pounds harvested, providing more than 1,234 lb per capita for households surveyed. Ironically, the number of households participating in harvesting was higher for large and small land mammals and birds (and certain other types of fish) than for salmon, although the harvest totals of those species were much lower than those of salmon. Small land mammal and furbearer

harvests were high (in terms of numbers harvested), indicating that trapping played an important role in Hughes subsistence.

The traditional subsistence use area for Hughes covers more than 2,100 mi² well to the west of the TAPS. Although this area does not intersect the TAPS, it does include part of the Koyukuk River downstream of the pipeline — although that section of the area is used primarily for moose rather than fish (Map D-7). The subsistence use area consists of two relatively large areas arranged north-south, with a constriction near its center in the proximity of Hughes itself. Much of the total area is used for furbearers, with a large expanse of river bottom land used for moose hunting. Fishing occurs primarily in discrete sections of the Koyukuk River.

D.2.3.2.5 Manley Hot Springs.

Manley Hot Springs is a small, unincorporated community located about 65 mi west of the TAPS (Map D-1). Lying about 5 mi north of the Tanana River at the end of Elliott Highway, Manley Hot Springs began as a single homestead, supply point for miners, and U.S. Army telegraph station in the early 1900s (ADCED 2001). The hot springs for which the village eventually was named provided the basis for a resort that, mixed with mining and small amounts of government employment, provided a basis for the community's early economy. Wage-based economy eventually faltered, and the population of Manley Hot Springs declined. The total number of inhabitants in 2000 was recorded at 78 (Table D-1).

The current economy of Manley Hot Springs involves employment in diverse areas — such as small businesses, government, and commercial fishing — and involvement in subsistence. Gardening, hunting, and fishing all play important roles in providing food for residents of the village, with salmon and moose being particularly important (Betts 1997; Brannian and Gnath 1988). Specific data on harvest levels, participation rates, and specific subsistence concerns were not available from the ADF&G. However, subsistence data compiled recently for an environmental assessment of road construction in the Manley area indicate that a broad range of large

mammals, small mammals, fish, and birds are exploited (Table D-10) (Betts 1997). Manley Hot Springs residents harvested more than 30,130 salmon in 1995 (more than 386 per person based on 2000 population levels). The residents also harvested 843 whitefish per year and an average of 10.8 moose per year between 1990 and 1995.

The subsistence use area for Manley Hot Springs covers more than 2,800 mi² of Interior Alaska. Although this area does not intersect the TAPS, it does include sections of the Yukon and Tanana Rivers downstream from the pipeline (Map D-8). Large sections of the total subsistence use area are used for moose and small game hunting; the localities used for these resources occasionally are separate from main subsistence use area adjacent to Manley Hot Springs itself. Areas used for salmon fishing include portions of the Yukon and Tanana Rivers, as well as smaller waterways in the vicinity of the village.

D.2.3.2.6 Minto. Minto lies on the western bank of the Tolovana River, about 47 mi south of the TAPS (Map D-1) (ADCED 2001). The precursor of Minto, now called Old Minto, was founded on the Tanana River by members of the Minto band of Athabascans in 1915 (Olson 1981). Gradually, that village grew as a Bureau of Indian Affairs school (founded in 1937) and other amenities attracted members of other bands. The original community was relocated in 1969 after a series of floods (ADCED 2001). In 2000, the population of Minto was 258 people (Table D-1).

Subsistence is extremely important in Minto, providing key resources and serving important sociocultural and ceremonial functions for the largely Alaska Native population. The most important subsistence resource recorded by the ADF&G in 1984 was fish, which yielded more than 860 lb per capita for the households surveyed; of this total, salmon contributed about 687 lb per capita (Table D-11) (Andrews 1988). Many Minto residents were involved in subsistence activities, with nearly all households fishing (often traveling to fish camp during the summer). Large land mammals accounted for nearly 91 lb per capita, with the majority of this being provided by moose. A wide range of small

game hunted or trapped helped to provide both meat and (more importantly) furs to sell for cash. Finally, Minto residents also harvested a large quantity of birds, many coming from Minto Flats immediately to the southeast of the village. Data on sharing are unavailable from the ADF&G survey.

Minto's subsistence use area covers slightly more than 1,300 mi². Most of this area lies well west of the TAPS, although two eastern extensions cross the pipeline slightly north of PS 7, while a larger section includes the Tanana River and associated valley downstream from the pipeline (Map D-9). The geographic configuration of the subsistence use area is quite complicated, as shown in Map D-9. Large expanses are used for moose and furbearers, while smaller portions are associated with bear and waterfowl hunting. The Tanana River, traditionally important for fishing in Old Minto, continues to provide the most important areas for salmon and other fish.

D.2.3.2.7 Rampart. The village of Rampart lies on the south bank of the Yukon River, about 75 mi upstream from its intersection with the Tanana River and about 33 mi south-southwest of the TAPS (Map D-1) (ADCED 2001). Established in 1897 as a supply point on the Yukon River for nearby gold mining operations, the population of Rampart may have reached 10,000 in the first years of the 20th century (Betts 1997). Gold strikes elsewhere depleted the Rampart population just as quickly, and by 1903 only a small Alaska Native community remained amidst the abandoned buildings of a once-thriving frontier settlement. Population varied throughout most of the 20th century, but remained relatively small. In 2000, only 45 people resided in Rampart; closure of the school in 1999–2000 was considered, which if it occurred almost certainly would trigger further decline in population (Table D-1).

Subsistence is the main economic activity in this small village, fulfilling both economic and cultural functions. Data on subsistence use available from ADF&G are less complete for Rampart than they usually are for rural communities. The available data indicate that fishing (mainly salmon and whitefish) and hunting (primarily large game, such as caribou

and moose) provided most of the meat for the community in 1993 (Table D-12; Brannian and Gnath 1988). Lesser amounts of birds and small game, the latter likely used mainly for the furs they provide, completed the subsistence use for Rampart.

The traditional subsistence use area for Rampart covers more than 1,200 mi². Although most of this area lies west of the TAPS, a small extension along the Yukon River intersects the pipeline near PS 6 (Map D-10). The subsistence use area also includes more than 100 mi of the Yukon River downstream of the TAPS. The greatest geographic expanse of subsistence use area involves moose hunting. The most productive subsistence activity, fishing, primarily occurs in the Yukon River and selected tributaries (notably Minook Creek).

D.2.3.2.8 Stevens Village. Stevens Village is located on the northern bank of the Yukon River, about 17 mi upstream from where it crosses the Dalton Highway and 20 mi north of the TAPS (Map D-1) (ADCED 2001). The community was founded in about 1900 by three Athabascan brothers and named after one of them (Old Steven) when he was elected chief in 1902 (Sumida 1988). Although Stevens Village residents provided some services to people involved with the gold rush and received certain modern amenities (e.g., a trading post in the early 1900s, a school in 1907, and a post office in 1936), the population apparently never fluctuated dramatically as did the populations of other nearby communities. In 2000, the decennial census recorded 87 people in Stevens Village (Table D-1).

Most of the economic activity in Stevens Village revolves around subsistence, which also serves key sociocultural and ceremonial functions for the largely Koyukon population. Residents of Stevens Village rely on a broad range of subsistence resources (Table D-13) (Sumida 1988). In 1984, the reference year for this village, fishing provided more than 1,000 lb per capita, with the vast majority coming from salmon (see also Brannian and Gnath 1988). Large land mammals provided much less edible meat per person surveyed, with the majority coming from moose. Stevens Village residents harvested a range of small land mammals,

primarily for fur (although some furbearers, such as muskrat, also were eaten). Birds yielded about 20 edible lb per person. Sharing resources also is important in Stevens Village, despite the high participation in the actual harvesting process, although direct data are limited to certain categories and species.

Residents of Stevens Village use an area in excess of 17,900 mi² for subsistence purposes. The vast majority of this area is east of the TAPS, but a small amount on its western periphery intersects the pipeline, and another section includes a short stretch of the Yukon River downstream of the TAPS (Map D-11). Much of the subsistence use area is used for harvesting land mammals, notably moose and small mammals. The area used for hunting bear is much smaller. Fishing is focused on three stretches of the Yukon River.

D.2.3.2.9 Tanana. The village of Tanana is about 2 mi west of the junction of the Tanana and Yukon Rivers, 83 mi southwest of the TAPS (Map D-1) (ADCED 2001). Located in a prime setting at the confluence of two major rivers in Interior Alaska, Tanana had served as an important trading settlement for Athabascans in the region long before the arrival of Europeans. The introduction of several amenities in and around Tanana in about 1900 (including a school-hospital complex, U.S. Army Fort Gibbon, a post office, and several trading posts) helped to establish Tanana as the dominant community in the region. The village has maintained this role throughout the 20th century and to the present. In 2000, the decennial census recorded 308 inhabitants for Tanana (see Table D-1).

The economy of Tanana is mixed, with a range of wage-labor positions available, both full-time (with the city, village council, or school district) and seasonal (fire fighting, construction, and commercial fishing). However, subsistence continues to play an important role, both economically and as a culturally important activity. Fishing dominated subsistence activities in 1987, the reference year for Tanana, providing more than 1,958 lb per capita. Most of the fish caught were salmon, but other species (notably whitefish) were used as well (Table D-14) (see Andersen 1992; Betts 1997; Case and Halpin

1990). Large land mammals also provided considerable resources, on the order of 141 lb per capita. Although small mammals contributed much less to edible resources, Tanana residents harvested a range of them, presumably for their fur. The majority of households surveyed in 1987 participated in subsistence use of every resource category except small mammals and furbearers. Households using these resources totaled 79% or more for all categories. All of those surveyed used large land mammals.

Although the nearly 3,700-mi² subsistence use area for Tanana does not intersect the TAPS, it does include long stretches of both the Yukon and Tanana Rivers downstream from the pipeline that are used for fishing as well as hunting (Map D-12). Although subsistence resources included a range of terrestrial and riverine resources, the geographic configuration of the subsistence use area has a distinct river orientation. Areas used for moose, bear, and waterfowl cover the greatest geographic expanses.

D.2.3.2.10 Wiseman. Wiseman is a small village located on the western bank of the middle fork of the Koyukuk River, about 1 mi west of both the Dalton Highway and the TAPS (Map D-1). Wiseman began as a single roadhouse built at the intersection of Wiseman Creek and the Middle Fork of the Koyukuk River in the early 1900s. It grew gradually between 1907 and 1912, populated primarily by people who were relocating from nearby Coldfoot to be closer to local gold mines (Northern Land Use Research, Inc. 2000b). Population fluctuated over the years in the wake of continued small-scale gold mining in the area and, more recently, the construction of the TAPS and Dalton Highway from 1974 to 1976 and the formation of Gates of the Arctic National Park and Preserve in 1980. In 2000, the population of Wiseman was only 21 persons (Table D-1).

Very little opportunity for wage labor exists in Wiseman beyond gold mining and limited seasonal work (Scott 1998). As a result, subsistence is an important activity in this community. Available subsistence harvest data from the study by Scott (1998) indicate that most households participate in subsistence, with both hunting and fishing providing key resources.

Because the information in that study was obtained by different methods than those used by the ADF&G, its results are not strictly comparable with the data in other tables in this appendix that show species-specific harvest levels. Wiseman data for 1991 indicate that village residents harvested a range of mammals, fish, and birds (Table D-15). Caribou, hares, grayling, and upland game birds (grouse and ptarmigan) were the most frequently harvested resources in each of the main categories presented in the table. Large game made up only about two-thirds of the harvest that residents felt would be necessary to meet community food requirements. A large section of the subsistence use area for Wiseman intersects the TAPS (Scott 1998).

D.2.3.3 Copper River Basin

The Copper River Basin consists of the southern portion of the Alaskan Interior plateau drained by the Copper River and its tributaries. The region includes Alaska Native villages as well as rural communities inhabited largely by non-Natives. The Alaska Natives who lived in this region at the time of Euro-American contact were Ahtna Athabascans, the people whose sociocultural presence continues to dominate much of the basin. Subsistence in the Copper River Basin emphasizes a combination of fish (particularly salmon) and land mammals (with caribou and moose often the most important in terms of amount harvested), supplemented by small amounts of other resources, such as non-salmon fish, birds and eggs, and marine invertebrates. Heavy reliance on salmon in the Copper River and its tributaries ties much of the subsistence of this region to the ocean waters of south-central Alaska. The EIS discusses subsistence in nine Copper River Basin communities: Chitina, Copper Center, Glennallen, Gakona, Gulkana, Kenny Lake, Paxson, Tazlina, and Tonsina.

D.2.3.3.1 Chitina. The village of Chitina lies on the western bank of the Copper River near its confluence with the Chitina River, about 21 mi east of the TAPS (Map D-1) (ADCED 2001). Likely a home to Copper River Athabascans for centuries, the modern community of Chitina emerged as one terminus

of a railroad to the Kennicott Copper Mine in the early 1900s. Chitina's population grew rapidly in the early 20th century, then plummeted when mine support was relocated to Glennallen in 1938. The 2000 census recorded 123 residents in Chitina (Table D-1).

Although Chitina is located near the Richardson Highway and both year-round and seasonal wage employment opportunities, many village residents practice subsistence (Stratton and Georgette 1984) — testimony to the importance of this activity beyond purely economic functions. Fishing played a particularly important role in village subsistence in terms of pounds harvested, participation (nearly 78% of households), and use (more than 94% of households) in the reference year of 1987 (Table D-16) (see McMillan and Cuccarese 1988; National Park Service 1995). Salmon was by far the most important subsistence resource. Of terrestrial resources, caribou contributed the greatest amount of meat and other material to the Chitina subsistence totals. Despite high levels of participation indicated by participation in actual harvests, exchange of subsistence resources also plays an important role in Chitina — both in giving and receiving resources harvested.

The subsistence use area for Chitina is a complex geographical region covering more than 1,900 mi². Two extended sections of this area intersect the TAPS, one south of the village and one north. The overall subsistence use area consists of one main section near the village, an elongated riverine section along the Gakona and Gulkana Rivers, and an area south of Lake Louise (Map D-13). The first supports primarily moose and sheep hunting, and the other two support primarily caribou hunting. Most fishing occurs at relatively small localities along the Copper River and in nearby lakes and streams.

D.2.3.3.2 Copper Center. Copper Center is located on the western bank of the Copper River, where it joins the Klutina River, only 0.6 mi east of the TAPS (Map D-1) (ADCED 2001). A desirable location at the confluence of two important rivers, the site occupied by Copper Center has a long history of prehistoric and historic settlement. The modern community of Copper Center has its roots largely in the gold

rush and subsequent development of the Kennicott Copper Mine, beginning in the late 1800s. As of 2000, 362 people resided in Copper Center (see Table D-1).

The Copper Center economy is mixed. A variety of local services, businesses, the National Park Service offices for Wrangell-St. Elias National Park, and highway-related tourism provide more opportunities for wage employment than often occur in rural Alaska. However, many residents of Copper Center also practice subsistence, both to obtain important resources and (particularly for Alaska Natives) to maintain an important link with their cultural heritage. Subsistence activities in Copper Center involved a variety of terrestrial and riverine resources in 1987 (Table D-17) (McMillan and Cuccarese 1988; see also Stratton and Georgette 1984; National Park Service 1995; Simeone and Fall 1996). Fish, notably salmon, was the most important resource in terms of edible pounds per capita; more than 90% of the households surveyed used salmon. Caribou and moose each contributed about the same amount of edible pounds per capita, between about 26 and 28 lb, respectively; birds and small game provided much less. Although all of the households surveyed by the ADF&G in 1987 participated in subsistence resource harvests, nearly all also received resources as gifts — testimony of the importance of exchange in subsistence that transcends pure economic considerations.

The subsistence use area for Copper Center extends over more than 6,000 mi² of the Copper River Basin. Much of this area overlaps with the TAPS — notably a nearly 200-mi-length of the Richardson Highway corridor used for hunting moose and caribou (Map D-14). Much of the remaining part of the subsistence use area also is used for moose, caribou, or some combination of the two. Fishing, for both salmon and other species, occurs both in sections of rivers, including sections of the Copper and Gulkana Rivers, and in Klutina Lake. Sections of the subsistence use area used for other resources are depicted in Map D-14.

D.2.3.3.3 Gakona. Gakona is a small community located about 6 mi west of the TAPS, adjacent to the confluence of the Copper and

Gakona Rivers at MP 2 of the Tok Cutoff to the Glenn Highway (Map D-1) (ADF&G 2001). The site of Gakona was originally used for Ahtna Athabascan settlements. As a transportation system developed in the Copper River valley, a non-Native presence began to be seen in Gakona early in the 20th century, initially in the form of roadhouses and a post office (Northern Land Use Research, Inc. 2000a). The population in Gakona was 215 in 2000 (Table D-1), although this number reflects a dispersed settlement along the Tok Cutoff (Northern Land Use Research, Inc. 2000a).

The economy of Gakona relies largely on wages obtained from local businesses and seasonal tourism. Subsistence remains important to residents of Gakona, as demonstrated by the high level of participation in harvest as well as use (and exchange) of subsistence resources. Gakona residents participating in subsistence obtained approximately equal amounts of meat from large land mammals (47.6 edible lb per capita) and fish (40.9 edible lb per capita) in 1987 (Table D-18) (McMillan and Cuccarese 1988; see also National Park Service 1995; Simeone and Fall 1996; Stratton and Georgette 1984). Nearly 86% of the households surveyed used fish and almost 64% used large land mammals obtained from subsistence activities. Such indirect evidence of exchange, coupled with evidence of widespread use, emerges in a village where many other economic options exist and where economic reliance on subsistence resources is relatively low. This situation provides further evidence of the importance of such resources for more subtle sociocultural and ceremonial reasons.

The subsistence use area for Gakona covers nearly 5,300 mi² of the Copper River basin (Map D-15). Portions used for hunting moose, caribou, waterfowl, furbearers, and fish all intersect the TAPS. The largest expanse of the overall subsistence use area is used for harvesting furbearers, particularly west of the pipeline. Fishing occurs in lakes, such as Lake Louise and Susitna Lake, and in about 50 mi of the Gulkana River both upstream and downstream of the TAPS.

D.2.3.3.4 Glennallen. Glennallen is located on the Glenn Highway near its intersection with the Richardson Highway, about 3.5 mi west of the TAPS (Map D-1) (ADCED 2001). Founded in the early 1940s as a camp for U.S. Army troops building a road and airfield (Stratton and Georgette 1984), the population of Glennallen totaled 554 by 2000 (Table D-1).

Largely because of Glennallen's location at the intersection of two major highways and its proximity to Wrangell-St. Elias National Park, community residents have many more opportunities for wage employment than most rural Alaskans. Wage labor provides most of the livelihood in Glennallen, primarily involving work for government agencies (many of which have local headquarters there) and businesses serving the highway tourism industry (ADCED 2001). However, a large percentage of Glennallen residents also conduct subsistence (Table D-19) (McMillan and Cuccarese 1988; see also National Park Service 1995; Simeone and Fall 1996). Glennallen residents harvested a wide range of terrestrial mammals, fish, and birds. Although nearly 92% of the households surveyed harvested some type of subsistence resource and all of the households used them, none of these resources were harvested in large quantities. Fish and large land mammals provided the greatest amounts (54 and 43 edible lb per capita, respectively).

The traditional subsistence use area for Glennallen (recorded with that of Tazlina) covers more than 8,000 mi² in the Copper River basin. This area intersects the TAPS for more than 75 mi along the pipeline. Much of the subsistence use area involves moose and caribou hunting, with smaller areas used for sheep hunting in the mountains east of Glennallen (Map D-16). Fishing occurs in sections of the Gulkana and Copper Rivers that support fishing downstream from the pipeline, as well as lakes such as Lake Klutina, Lake Louise, and Susitna Lake.

D.2.3.3.5 Gulkana. Gulkana is a small village located on the eastern bank of the Gulkana River where it joins the Copper River, about 3 mi east of the TAPS (Map D-1) (ADCED 2001). This village had its origins as an Ahtna Athabascan settlement, of which there were

several along the Gulkana River at various times in the past. Non-Natives began to occupy the locality of present-day Gulkana in 1901 with the establishment of a trading post and telegraph station. Today the village is home to Natives and non-Natives. The total number of residents reached 88 in 2000 (Table D-1).

The village economy is mixed, combining subsistence hunting, fishing, gathering, and trapping with both year-round and seasonal wage employment in government, construction, and other sectors of the cash economy (Northern Land Use Research, Inc. 2000a). In terms of edible pounds harvested, fish contributed about twice as much as large mammals to the Gulkana subsistence economy in 1987 (Table D-20) (McMillan and Cuccarese 1988; see also National Park Service 1995; Simeone and Fall 1996; Stratton and Georgette 1984). Despite the relatively small amounts of subsistence resources harvested, 90% of the households surveyed harvested at least one type of subsistence resource, while 95% of the households used these resources. The greatest participation and use involved fish and large land animals. About half the households examined in 1987 hunted or trapped small mammals, which suggests trapping might play an important role as a means of supplementing cash income.

The area used for subsistence by residents of Gulkana (recorded as identical to the area used by Kenny Lake) covers more than 3,200 mi² in the Copper River basin and small sections of mountains to the east of the village. More than 130 mi of this area overlaps with the TAPS, much of this common land representing moose hunting area extending south along the Richardson Highway corridor (Map D-17). Large expanses, as well as long linear areas (along rivers), are used for caribou and moose hunting. A broad area mainly west of the TAPS also is used for the harvest of furbearing animals. Fishing occurs in the Gulkana River both upstream and downstream from the pipeline. In addition, the subsistence use area for this community includes part of the Copper River downstream from the pipeline, although this portion of the river was used for moose hunting rather than fishing.

D.2.3.3.6 Kenny Lake. Kenny Lake is a small community located about 7 mi east of the TAPS in the central Copper River basin (Map D-1) (ADCED 2001). Although in the past Ahtna Athabascans lived in the vicinity of Kenny Lake, the modern community consists primarily of non-Native people who homesteaded agricultural land there in the 1950s and 1960s. The total population of Kenny Lake in 2000 was 410, having declined from 507 only a decade earlier (Table D-1). The inhabited area comprises a 16-mi length of the Edgerton Highway (Northern Land Use Research, Inc. 2000a).

The economy of Kenny Lake is dominated by wage labor. The majority of employment involves commercial agriculture, but certain small businesses provide jobs as well (ADCED 2001). Subsistence activities also play an important role in the lives of many Kenny Lake residents. Although harvest levels were relatively small, all households surveyed both participated in subsistence use and used subsistence resources (Table D-21) (McMillan and Cuccarese 1998; see also National Park Service 1995). The largest contribution to subsistence was from fishing, in total contributing 83 lb per capita; salmon alone contributed more than 67 lb per person. Nearly 90% of the surveyed households fished, and 98% consumed fish. Large game provided 47 edible lb per person in households surveyed, with moose providing nearly 23 lb and caribou another 17 lb.

The area used for subsistence by residents of Kenny Lake (recorded as identical to the area used by Gulkana) covers more than 3,200 mi² in the Copper River basin and small sections of mountains to the east of the village. More than 130 mi of this area overlap with the TAPS, much of this common land representing moose hunting area extending south along the Richardson Highway corridor (Map D-18). Large expanses, as well as long linear areas (along rivers), are used for caribou and moose hunting. A broad area mainly west of the TAPS also is used for the harvest of furbearing animals. Fishing occurs in the Gulkana River both upstream and downstream from the pipeline. In addition, the subsistence use area for this community includes part of the Copper River downstream

from the pipeline, although this portion of the river was used for moose hunting rather than fishing.

D.2.3.3.7 Paxson. Paxson is a small rural community lying about 4 mi west of the TAPS in the Copper River basin, at the intersection of the Richardson and Denali Highways (Map D-1) (ADCED 2001). Located in an area of considerable prior Athabaskan occupation, Paxson was first occupied during construction of the Valdez-Fairbanks Trail (later the Richardson Highway) in the early 20th century. An initial roadhouse was augmented by a U.S. Army telegraph station, but the community never evolved beyond a small settlement of a few dozen people. In 2000, Paxson's total population was 43 (see Table D-1).

Paxson has a mixed economy, although wage labor is the dominant component as residents take advantage of their proximity to two major highways to work for small local businesses that provide services to travelers or for the government (primarily in highway maintenance). Subsistence serves as an important means of supplementing this rural cash economy. Large land mammals provided the greatest amount of pounds harvested: about 139 lb per capita in the reference year of 1987 (Table D-22) (McMillan and Cuccarese 1988; see also National Park Service 1995). Fish provided slightly fewer pounds harvested, at 107 lb per capita; fish other than salmon provided more pounds harvested (about 63) than did salmon (about 45 lb). Hunting and trapping small mammals provided a relatively small amount of edible resources. Most animals were harvested for fur, presumably to sell for additional cash. More than 92% of the households surveyed in Paxson both harvested and used some sort of subsistence resource, with participation and use rates varying for specific resources.

The area used for subsistence by residents of Paxson covers more than 3,000 mi² of the Copper River Basin. Nearly 70 mi of this subsistence use area intersects the TAPS (Map D-19). Much of the entire harvest area is used for moose and caribou hunting, with a considerable amount also used for harvesting

fur-bearing animals. Fishing occurs in both rivers — including a section of the Gulkana River both upstream and downstream of the TAPS — and in lakes (including Susitna Lake and Lake Louise).

D.2.3.3.8 Tazlina. Tazlina is a small community located on the Tazlina River near its intersection with the Copper River, about 2 mi northeast of the TAPS (Map D-1) (ADCED 2001). Tazlina was originally an Ahna Athabaskan fish camp, and Alaska Natives had established a permanent village at this location by about 1900. Shortly thereafter, a roadhouse was constructed at Tazlina, and another was built in the late 1920s to take advantage of Tazlina's location on the main trail north to Fairbanks. Copper Valley School, a boarding school built in the village and operated until 1971, provided a basis for some village development. Despite its location on the Richardson Highway, Tazlina never grew very large. Its population in 2000 reached only 149 persons (Table D-1).

In part because of Tazlina's location on a major highway and in part because of its proximity to the largest community in the area (Glennallen, about 5 mi to the north), residents of Tazlina have several opportunities to earn cash income. Wage labor contributes to the livelihood of many in Tazlina, primarily through employment for local businesses or government agencies that date largely to the TAPS period (Northern Land Use Research, Inc. 2000a). Subsistence activities provide additional sources of resources as well as fill key sociocultural and ceremonial roles. Residents of Tazlina harvested approximately 100 lb of animal resources per capita in 1987, the reference year defined by ADF&G (Table D-23) (McMillan and Cuccarese 1988; see also National Park Service 1995; Simeone and Fall 1996; Stratton and Georgette 1985). About 56 lb of this total consisted of fish, with nearly 38 lb of the fish being salmon. Although only 63% of the households surveyed harvested salmon in 1987, nearly 94% consumed it — testifying to the amount of exchange that occurred. Large land mammals made up most of the remaining edible subsistence resources harvested, distributed among six major species (though moose and caribou accounted for most of the harvest). A range of small mammals were also harvested by

Tazlina residents in 1987; the majority of species were taken primarily for their fur.

The traditional subsistence use area for Tazlina (recorded with that of Glennallen) covers more than 8,000 mi² in the Copper River basin. This area intersects the TAPS for more than 75 mi along the pipeline. Much of the subsistence use area involves moose and caribou hunting, with smaller areas used for sheep hunting in the mountains east of Tazlina (Map D-16). Fishing includes sections of the Gulkana and Copper Rivers that support fishing downstream from the pipeline, as well as lakes such as Lake Klutina, Lake Louise, and Susitna Lake.

D.2.3.3.9 Tonsina. Tonsina is a small settlement in the central Copper River basin, located about 2 mi east of the TAPS in the vicinity of PS 12 (Map D-1) (ADCED 2001). The village of Tonsina dates to the beginning of gold mining in the area, at about the turn of the 20th century. A roadhouse was constructed at the current location of Tonsina in about 1900, along the Eagle-Valdez trail. Alaska Natives from the region subsequently relocated to Tonsina, possibly attracted to the roadhouse locality for trading or part-time employment. Despite additional developments, such as a U.S. Army telegraph station (constructed in 1902) and a road connecting it to Chitina (constructed in 1910), Tonsina has not been inhabited continually since its founding (Northern Land Use Research, Inc. 2000a). Much of the growth experienced in Tonsina over the past three decades has been related to the TAPS, a consequence of both construction and continued operation. The 2000 census recorded 92 inhabitants in Tonsina (Table D-1).

Many adults in Tonsina work for wages (ADCED 2001), with employment at PS 12 and on road maintenance crews providing much of the income. Subsistence remains important, however, for economic and noneconomic reasons. Subsistence activities contributed nearly 150 lb per capita to households surveyed in Tonsina in 1987, the representative year for subsistence defined by ADF&G (Table D-24) (McMillan and Cuccarese 1988; see also National Park Service 1995). The amount of pounds per capita harvested were split almost

equally between large land mammals and fish. Caribou and moose composed most of the large mammals by weight, although harvests included seven species in 1987. Nearly 70% of the households surveyed participated in large game harvests, with more than 90% using the resources obtained through the process of exchanging important subsistence resources. By weight, the vast majority of the fish harvested consisted of salmon; more than 83% of the households surveyed harvested fish, while nearly 92% used fish. Tonsina residents also harvested a wide range of small mammals and furbearers.

The subsistence use area for Tonsina covers more than 6,000 mi² of the Copper River basin and neighboring mountains to the east. The TAPS runs through the central portion of this area (Map D-20). The overall configuration of the subsistence use area for Tonsina resembles a series of discrete localities rather than a continuous region. Village residents use much of the area for moose and sheep hunting, with localities exploited for other terrestrial animals and fish more limited in extent. Rivers used for fishing include sections of the Copper, Gulkana, Little Tonsina, and Tiekel, either near or downstream from the TAPS.

D.2.3.4 Prince William Sound and Lower Cook Inlet

Prince William Sound comprises the body of water along the coast of south-central Alaska extending from Cape Puget in the west to Cape Hinchinbrook in the east. The lower Cook Inlet in the present context refers to the marine setting south of Kachemak Bay, on the Kenai Peninsula's most southern reaches. Alaska Natives traditionally associated with the coasts of these bodies of water in south-central Alaska include the Chugach Alutiiq and Eyak, although currently many non-Natives also inhabit the region. Subsistence in these south-central Alaskan coastal communities typically involves a range of marine, riverine, and terrestrial animals, with resources from water environments tending to be most important in terms of total pounds harvested. The EIS discusses subsistence in three Prince William Sound communities — Chenega Bay, Cordova (which includes the

Native Village of Eyak), and Tatitlek. It also examines subsistence in Nanwalek and Port Graham, neighboring communities on the coast of the lower Cook Inlet. These communities all share broadly common ecological locations, providing them access to both terrestrial and marine subsistence resources.

D.2.3.4.1 Chenega Bay. Chenega Bay is a small, unincorporated community located on Evans Island in Prince William Sound about 85 mi southwest of the Valdez Marine Terminal (Map D-1) (ADCED 2001). The original Alutiiq village of Chenega, located at the southern tip of Chenega Island, was destroyed by the 1964 earthquake. The current location was settled in 1984. The population of Chenega Bay was 86 in 2000 (Table D-1) (ADCED 2001).

The residents of Chenega Bay harvest a wide range of land and marine mammals, fish, birds, and marine invertebrates for subsistence purposes (Table D-25) (Fall and Utermohle 1999; see also Fall and Utermohle 1995; Stratton and Chisum 1986). Marine resources play a particularly important role. More than 95% of the households were involved in subsistence fishing, and all households consumed fish. Nearly 74% of surveyed households collected marine invertebrates, and more than 91% of the households consumed resources in this category. Chenega Bay residents also harvested and used marine mammals (particularly seals), although at lower rates than they obtained and used fish and invertebrates. Sharing is an important feature of Chenega Bay subsistence, particularly so in the case of terrestrial mammals, with many more households using this resource than actually harvested them.

The subsistence patterns in Chenega Bay can be placed in historic context dating to shortly after statehood. On the basis of 1984–1986 data (pre-Exxon Valdez oil spill), per capita harvests appear to have declined substantially (42%) from levels in the 1960s. Reasons proposed for the decline included changing regulations and reduced resource levels (Stratton and Chisum 1986).

The traditional subsistence use area for Chenega Bay cover about 380 mi² and occurs primarily in western Prince William Sound. Most

of this area lies more than 50 mi west of the Valdez Marine Terminal, but small portions also occur closer to the south and east of the terminal (Map D-21) (see also Ganley 2001; Ganley and Wheeler 2000). Chenega Island and several neighboring islands provided much of the subsistence use area for terrestrial resources, while fishing occurred in a few well-defined areas near Chenega Island.

D.2.3.4.2 Cordova (and Eyak). Cordova is a small community located about 35 mi south-southeast of the TAPS, in the eastern part of Prince William Sound (Map D-1) (ADCED 2001). This community was founded in 1909 as the southern terminus of the Copper River and Northwest Railroad. Eyak, one of the 21 villages identified by the BLM (2001) as likely to be affected by the TAPS, refers to a locality lying about 5 mi southeast of central Cordova. At one time a separate Alaska Native settlement, Eyak was annexed by Cordova in 1992. The Native Village of Eyak refers to a federally recognized Tribe with offices currently located in Cordova. The population of Cordova was 2,454 in 2000, while that of Eyak (designated an Alaska Native Village Statistical Area by the U.S. Bureau of Census) was 168 in the same year (see Table D-1).

Much of the economy of Cordova is wage-based, relying primarily on commercial fishing and fish processing (ADCED 2001). Despite this availability of wage employment, subsistence continues as an extremely important activity to many residents in Cordova, both Alaska Natives and non-Natives. As in other coastal communities, the range of resources harvested in Cordova is quite broad. For instance, more than 100 species were used in 1992 (Stratton 1992). Harvest levels are lower in terms of per capita pound harvested than in other communities on Prince William Sound that have relatively large Alaska Native populations, such as Chenega Bay and Tatitlek. Fishing was by far the most important subsistence activity in Cordova in 1997, contributing more than 105 lb per capita and involving nearly 94% of the households surveyed (see Table D-26). Hunting large land mammals also involved relatively many Cordova households (77.1% of those surveyed), with deer and moose each

contributing more than 21 lb per capita to the diet.

The subsistence use area for Cordova covers more than 2,850 mi², stretching from Port Wells and the eastern shore of the Kenai Peninsula in the west to Cape Suckling in the east (Map D-22). This area includes a complex combination of islands in Prince William Sound, marine locations, shoreline and upland areas on the mainland, and rivers and streams on the mainland. Much of the terrestrial area defined by Cordova residents in the late 1980s is used for deer hunting. Salmon are harvested from mainland waterways to the east and west of Cordova (and Eyak), including the Copper River delta to the east. Note that the area on Map D-22 showing salmon use areas depicts drainages as opposed to individual streams and rivers.

D.2.3.4.3 Nanwalek. Nanwalek lies at the southern tip of the Kenai Peninsula, about 252 mi west of the TAPS (Map D-1) (ADCED 2001). Originally the site of a Russian trading post called Alexandrovsk, Nanwalek is primarily an Alutiiq village today. In 2000, the decennial census recorded a population of 177 (see Table D-1).

The economy of Nanwalek is mixed, combining subsistence activities and wage labor. Some wage employment is available in or near the village, mainly through seasonal work at the Port Graham Cannery and in commercial fishing. Nevertheless, subsistence remains extremely important to this rural village, its economic role augmented by sociocultural and ceremonial functions. One of the most noteworthy characteristics of subsistence in Nanwalek is the broad range of marine and terrestrial resources harvested by village residents (Table D-27). A marine adaptation is evident in harvest patterns, with fish as a whole providing nearly 200 edible lb per capita. All households surveyed participated in subsistence fishing and used fish for food. Marine mammals (primarily seals) also provide a source of subsistence for Nanwalek residents, as do large land mammals and marine invertebrates. Residents of Nanwalek share many subsistence resources — particularly marine mammals and terrestrial mammals — with the percentage of

households using these resources greatly exceeding the percentage harvesting them.

The subsistence use area for Nanwalek (and Port Graham) covers slightly more than 175 mi², the vast majority lying on the tip of the Kenai Peninsula and the end of Kachemak Bay (Map D-23). The areas used for moose and bear hunting cover the largest areas on land. Areas used for harvesting marine invertebrates and marine mammals, not shown on Map D-23, are in the waters off of the Kenai Peninsula.

D.2.3.4.4 Port Graham. Port Graham is a small fishing community located at the southern end of the Kenai Peninsula, about 223 mi southwest of the Valdez Marine Terminal on the shore of Port Graham (Map D-1) (ADCED 2001). Originally settled by Russians in the 19th century, Port Graham was also the location of a failed coal mine before commercial fishing activities began in the early 1900s. A fish cannery, originally established in 1911 and rebuilt in the late 1900s, has traditionally dominated the village economy. In 2000, Port Graham contained 171 people (see Table D-1).

The economy of Port Graham is mixed (Stanek 1985). Wage employment is available in the nearby cannery and hatchery, and 15 residents held commercial fishing licenses in 2000. However, subsistence remains extremely important both to the village economy and for sociocultural and ceremonial reasons. Residents of Port Graham harvested a broad range of resources, especially marine resources. In 1997, fish provided nearly 220 edible lb per capita (Table D-28). Marine invertebrates and marine mammals, in turn, contributed 13 and 9 edible lb per capita, with terrestrial mammals and birds completing the village subsistence sources. Almost the entire community participated in subsistence fishing, and all households used fish. Large proportions of the community also used marine invertebrates and marine mammals, although only the former were harvested by large numbers of households. Sharing subsistence resources was evident for many Port Graham households, particularly in the case of marine and terrestrial mammals (which were not harvested in particularly large quantities), reflecting a sociocultural role of subsistence in this small village.

The subsistence use area for Port Graham (and Nanwalek) covers slightly more than 175 mi², the vast majority lying on the tip of the Kenai Peninsula and the end of Kachemak Bay (Map D-23). The areas used for moose and bear hunting cover the largest areas on land. Areas used for harvesting marine invertebrates and marine mammals, not shown on Map D-23, are in the waters off of the Kenai Peninsula.

D.2.3.4.5 Tatitlek. Tatitlek is located on the Alaska mainland, on the shore of Prince William Sound in an area called the Tatitlek Narrows, about 17 mi southwest of the Valdez Marine Terminal (Map D-1) (ADCED 2001). It is a historic Alutiiq village that residents moved to its present location in about 1900. Following the 1964 earthquake and tsunami, many residents of Chenega moved to Tatitlek. In 2000, the decennial census recorded 107 people living in Tatitlek (Table D-1).

Subsistence is important to this Alaska Native village, providing important resources, a connection to traditional culture, a means of establishing and maintaining sociocultural links, and a basis for much ceremonial and spiritual life (see Fall 1991). Residents of Tatitlek harvested a wide range of marine and land resources in 1997, the representative year for subsistence identified by ADF&G (Table D-29) (Fall 1991; Stratton 1992; Stratton et al. 1996). Marine resources — notably marine mammals and fish — contributed the greatest amounts of food to the households surveyed, accounting for 165 and 159 lb per capita, respectively. Although only half the households surveyed harvested marine mammals and three-fourths harvested fish, nearly 94% used marine mammals and all households consumed fish — evidence of the amount of exchange that occurred in this small community. Marine invertebrates, birds, and bird eggs also served as subsistence resources. Small land mammals were harvested much less often and only by a small percentage of community residents, apparently for fur. Findings on the breadth of resources harvested were consistent with earlier research on the same community, although the data for different years demonstrate that considerable variability is possible, even between successive harvest years (Tomrdle and Miraglia 1993; see also Stratton 1992).

The traditional subsistence use area for Tatitlek covers nearly 350 mi² in Prince William Sound and on surrounding land. Although this area does not intersect the TAPS, it does include several localities in Prince William Sound close to the Valdez Marine Terminal (Map D-24) (see also Ganley 2001; Ganley and Wheeler 2000). Use areas for salmon, the only localities for marine species shown in Map D-24, occur as close as 2.6 mi from the terminal. The largest portion of the subsistence use area shown on the map is that used for deer, occurring on several islands in Prince William Sound as well as near the coast on the mainland.

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TABLE D-2 Subsistence Harvest Summary for Anaktuvuk Pass in 1993^a

Subsistence Resource	Units, Total Harvested	Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
<i>Terrestrial Mammals</i>						
Large land mammal	574	67,713	846.4	219.4	42.5	NA ^b
Caribou	574	67,713	846.4	219.4	42.5	NA

^a Number of households in sample was 80; number of households in communities was 80.

^b NA = data not available.

Source: ADF&G (2001).

TABLE D-3 Subsistence Harvest Summary for Nuiqsut in 1993^a

Subsistence Resource	Units, Total Harvested	Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
Total Resources	267,818 ^b	267,818	2,943.1	741.8	90.3	100.0
Marine Mammals						
Total marine mammal	113	85,216	936.4	236.0	37.1	96.8
Bowhead whale	3	76,906	845.1	213.0	4.8	96.8
Polar bear ^c	1	0	0.0	0.0	1.6	51.6
Seal	109	8,310	91.3	23.0	35.5	71.0
Terrestrial Mammal						
Large land mammal	691	87,306	959.4	241.8	74.2	98.4
Brown bear	10	734	8.1	2.0	8.1	32.3
Caribou	672	82,169	903.0	227.6	74.2	98.4
Moose	9	4,403	48.4	12.2	9.7	69.4
Small land mammal/furbearer ^d	599	84	0.9	0.2	41.9	53.2
Arctic fox ^c	203	- ^e	-	-	12.9	16.1
Parka squirrel	336	84	0.9	0.2	16.1	17.7
Red fox ^c	63	-	-	-	22.6 ^f	27.4 ^f
Weasel ^c	10	-	-	-	3.2	3.2
Wolf ^c	31	-	-	-	11.3	21.0
Wolverine ^c	19	-	-	-	16.1	22.6
Fishes						
Total fish	71,897	90,490	994.4	250.6	80.6	100.0
Total salmon	272	1,009	11.1	2.8	35.5	71.0
Total non-salmon	71,626	89,481	983.3	247.8	79.0	96.8
Burbot	1,416	5,949	65.4	16.5	56.5	79.0
Char	618	1,748	19.2	4.8	32.3	50.0
Cod	62	7	0.1	-	6.5	12.9
Grayling	4,515	4,063	44.7	11.3	64.5	79.0
Smelt	304	42	0.5	0.1	12.9	33.9
Whitefish	64,711	77,671	853.5	215.1	74.2	95.2
Birds						
Total bird and egg	3,558	4,325	47.5	12.0	75.8	95.3
Migratory bird	2,238	3,540	38.9	9.8	72.6	87.1
Duck	772	1,152	12.7	3.2	38.7	62.9
Goose	1,459	2,314	25.4	6.4	72.6	87.1
Swan	7	73	0.8	0.2	8.1	11.3
Upland game bird	973	681	7.5	1.9	45.2	59.7
Ptarmigan	973	681	7.5	1.9	45.2	59.7
Bird egg	346	104	1.1	0.3	19.4	40.3

See next page for footnotes.

TABLE D-3 (Cont.)

- a Number of households in sample was 62; number of households in community was 91.
- b Total given in pounds, which for some resources involved conversion from individual units; as a result, individual units will not sum to total.
- c Not eaten.
- d Some not eaten.
- e “-” = 0 or a number that rounds to 0 .
- f Data not recorded; value reported is the maximum of those recorded for subcategories.

Source: ADF&G (2001).

TABLE D-4 Subsistence Harvest Summary for Alatna in 1998^a

Subsistence Resource	Units, Total Harvested	Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
<i>Terrestrial Mammals</i>						
Large land mammal	16	4,130	413.0	153.0	70.0	100.0
Moose	5	2,700	270.0	100.0	60.0	100.0
Caribou	11	1,430	143.0	53.0	30.0	100.0

- ^a Number of households in sample was 10; number of households in community was 10.

Source: ADF&G (2001).

TABLE D-5 Subsistence Harvest Summary for Allakaket/Alatna in 1982^a

Subsistence Resource	Units, Total Harvested	Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
All Resources	138,242 ^b	138,242	3,544.7	905.6	NA ^c	NA
Terrestrial Mammals						
Large land mammal	66	18,044	462.7	118.2	NA	NA
Black bear	23	1,357	34.8	8.9	37.1	NA
Caribou	6	724	18.6	4.7	5.7	NA
Dall sheep	6	362	9.3	23.7	11.4	NA
Moose	31	15,600	400.0	102.2	77.1	NA
Small land mammal/furbearer ^d	2,895	3,622	92.9	23.8	NA	NA
Beaver	256	2,255	57.8	14.8	65.7	NA
Fox ^e	99	— ^f	—	—	34.3	NA
Hare	911	1,367	35.1	9.0	80.0	NA
Land otter ^e	4	—	—	—	5.7	NA
Lynx ^e	150	—	—	—	54.0	NA
Marten ^e	1,195	—	—	—	80.0	NA
Muskrat ^e	140	—	—	—	31.4	NA
Wolf ^e	2	—	—	—	5.7	NA
Wolverine ^e	4	—	—	—	11.4	NA
Fishes						
Total fish	24,187	111,689	2,863.9	731.7	NA	NA
Total salmon	13,170	84,641	2,170.3	554.5	NA	NA
Total non-salmon	11,017	27,048	693.6	177.2	NA	NA
Burbot	65	155	4.0	1.0	8.6	NA
Grayling	1,826	1,278	32.8	8.4	54.3	NA
Pike	447	1,252	32.1	8.2	40.0	NA
Sheefish	2,731	19,118	490.2	125.2	68.6	NA
Sucker	535	374	9.6	2.5	37.1	NA
Whitefish	5,413	4,871	124.9	31.9	71.2	NA
Birds						
Total bird and egg	1,658	3,766	96.6	24.7	NA	NA
Migratory bird	1,396	3,635	93.2	23.8	NA	NA
Duck	956	1,434	36.8	9.4	80.0	NA
Goose	440	2,201	56.4	14.4	77.1	NA
Upland game bird	262	131	3.4	0.9	NA	NA
Grouse	90	45	1.2	0.3	37.1	NA
Ptarmigan	172	86	2.2	0.6	45.7	NA

See next page for footnotes.

TABLE D-5 (Cont.)

- a Number of households in sample was 35; number of households in communities was 39.
- b Total given in pounds, which for some resources involved conversion from individual units; as a result, individual units will not sum to total.
- c NA = data not available.
- d Some not eaten.
- e Not eaten.
- f “_” = 0 or a number that rounds to 0.

Source: ADF&G (2001) (sums corrected as necessary).

TABLE D-6 Subsistence Harvest Summary for Allakaket in 1998^a

Subsistence Resource	Units, Total Harvested	Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
<i>Terrestrial Mammals</i>						
Large land mammal	91	26,496	434.4	138.9	58.2	100.0
Black bear	11	1,109	18.2	5.8	12.7	98.2
Caribou	43	5,623	92.2	29.5	25.5	100.0
Moose	37	19,764	324.0	103.6	50.9	100.0

- a Number of households in sample was 55; number of households in community was 61.

Source: ADF&G (2001).

TABLE D-7 Subsistence Harvest Summary for Evansville in 1998^a

Subsistence Resource	Units, Total Harvested	Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
<i>Terrestrial Mammals</i>						
Large land mammal	8	2,345	167.5	83.8	33.3	91.7
Caribou	4	455	32.5	16.3	16.7	66.7
Moose	4	1,890	135.0	67.5	25.0	91.7

- a Number of households in sample was 12; number of households in community was 14.

Source: ADF&G (2001) (sums corrected as necessary).

TABLE D-8 Subsistence Harvest Summary for Bettles/Evansville in 1982^{a,b}

Subsistence Resource	Units, Total Harvested	Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
All Resources	16,903 ^c	16,903	676.1	260.1	NA ^d	NA
Terrestrial Mammals						
Large land mammal	37	8,740	349.6	134.5	NA	NA
Black bear	6	363	14.5	5.6	25.0	NA
Brown bear	1	176	7.1	2.7	5.0	NA
Caribou	14	1,788	71.5	27.5	15.0	NA
Dall sheep	3	163	6.5	2.5	5.0	NA
Moose	13	6,250	250.0	96.2	35.0	NA
Small land mammal/furbearer ^e	585	555	22.3	8.6		NA
Beaver	14	121	4.9	1.9	15.0	NA
Coyote ^f	1	-9	-	-	5.0	NA
Fox ^f	25	-	-	-	20.0	NA
Hare ^f	289	434	17.4	6.7	35.0	NA
Lynx ^f	38	-	-	-	30.0	NA
Marten ^f	193	-	-	-	25.0	NA
Muskrat ^f	16	-	-	-	15.0	NA
Wolverine ^f	9	-	-	-	15.0	NA
Fishes						
Total fish	1,910	6,979	279.2	107.3	NA	NA
Total salmon	676	4,260	170.4	65.5	25.0 ^h	NA
Total non-salmon	1,234	2,718	108.8	41.7	NA	NA
Grayling	614	430	17.2	6.6	70.0	NA
Pike	16	45	1.8	0.7	15.0	NA
Sheefish	265	1,855	74.2	28.5	20.0	NA
Trout	76	152	6.1	2.3	15.0	NA
Whitefish	263	236	9.5	3.6	10.0	NA
Birds						
Total bird and egg	94	159	6.4	2.6	NA	NA
Migratory bird	60	143	5.7	2.3	NA	NA
Duck	45	68	2.7	1.1	15.0	NA
Goose	15	75	3.0	1.2	10.0	NA
Upland game bird	34	16	0.7	0.3	NA	NA
Grouse	9	3	0.2	0.1	10.0	NA
Ptarmigan	25	13	0.5	0.2	25.0	NA

See next page for footnotes.

TABLE D-8 (Cont.)

- a Number of households in sample was 20; number of households in community was 25.
- b Data reported for "Bettles/Evansville." Data reported solely for Evansville (1997, 1998, and 1999) only reported large terrestrial mammal harvests and did not include a "representative year" for harvest levels.
- c Total given in pounds, which for some resources involved conversion from individual units; as a result, individual units will not sum to total.
- d NA = data not available.
- e Some not eaten.
- f Not eaten.
- g "-" = 0 or a number that rounds to 0.
- h Data not recorded; value reported is the maximum of those recorded for subcategories.

Source: ADF&G (2001) (sums corrected as necessary).

TABLE D-9 Subsistence Harvest Summary for Hughes in 1982^a

Subsistence Resource	Units, Total Harvested	Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
All Resources	141,689 ^b	141,689	6,440.4	1,492.3	NA ^c	NA
Terrestrial Mammals						
Large land mammal	56	20,113	914.2	211.8	78.9 ^d	NA
Black bear	17	1,007	45.8	10.6	52.6	NA
Moose	38	19,105	868.4	201.2	78.9	NA
Small land mammal/furbearer ^e	1,121	1,551	70.5	16.3	89.5 ^d	NA
Beaver	113	998	45.4	10.5	63.2	NA
Hare	368	552	25.1	5.8	5.8 ¹	NA
Land otter ^f	5	-9	-	-	10.5	NA
Lynx ^f	63	-	-	-	52.6	NA
Marten ^f	470	-	-	-	84.2	NA
Muskrat ^f	47	-	-	-	42.1	NA
Wolverine ^f	7	-	-	-	21.0	NA
Fishes						
Total fish	21,745	117,180	5,326.4	1,234.1	84.2 ^d	NA
Total salmon	16,939	110,356	5,016.1	1,162.3	68.4 ^d	NA
Total non-salmon	4,806	6,825	310.2	71.9	84.2 ^d	NA
Burbot	69	167	7.6	1.6	10.5	NA
Grayling	1,593	1,115	50.7	11.7	84.2	NA
Pike	244	684	31.1	7.2	52.6	NA
Sheefish	371	2,594	117.9	27.3	78.9	NA
Sucker	57	39	1.8	0.4	31.6	NA
Whitefish	2,472	2,226	101.6	23.4	-	NA
Birds						
Total bird and egg	1,079	2314	105.2	24.4	78.9 ^d	NA
Migratory bird	849	2198	99.9	23.2	78.9 ^d	NA
Duck	585	878	39.9	9.3	78.9	NA
Goose	264	1320	60.	13.9	73.7	NA
Upland game bird	230	116	5.3	1.2	68.4 ^d	NA
Grouse	139	70	3.2	0.7	68.4	NA
Ptarmigan	91	46	2.1	0.5	52.6	NA

See next page for footnotes.

TABLE D-9 (Cont.)

- a Number of households in sample was 19; number of households in communities was 22.
- b Total given in pounds, which for some resources involved conversion from individual units; as a result, individual units will not sum to total.
- c NA = data not available.
- d Data not recorded; value reported is the maximum of those recorded for subcategories.
- e Some not eaten.
- f Not eaten.
- g “-” = 0 or a number that rounds to 0.

Source: ADF&G (2001).

TABLE D-10 Subsistence Resources Harvested by Residents in the Manley Hot Springs and Eureka Area in 1996^a

Subsistence Resource	Amount Harvested
<i>Terrestrial Mammals</i>	
Large land mammal	NA ^a
Black bear	NA
Caribou	NA
Moose	NA
Small land mammal/furbearer	NA
Beaver	NA
Fox	NA
Hare	NA
Land otter	NA
Lynx	NA
Marten	NA
Mink	NA
Muskrat	NA
Porcupine	NA
Squirrel	NA
Weasel	NA
Wolf	NA
Wolverine	NA
<i>Fishes</i>	
Total fish	NA
Total salmon	NA
Total non-salmon	NA
Burbot	NA
Char	NA
Grayling	NA
Greenling (Lingcod)	NA
Pike	NA
Sheefish	NA
Whitefish	NA
<i>Birds</i>	
Total bird and egg	NA
Migratory bird	NA
Crane	NA
Duck	NA
Goose	NA
Upland game bird	NA
Grouse	NA
Ptarmigan	NA

^a NA = data not available.

Source (for species harvested): Betts (1997).

TABLE D-11 Subsistence Harvest Summary for Minto in 1984^a

Subsistence Resource	Units, Total Harvested	Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
All Resources	190,619 ^b	190,619	3,971.2	1,015.4	95.6	NA ^c
Terrestrial Mammals						
Large land mammal	36	16,987	353.9	90.5	86.7	NA
Black bear	16	2,800	58.3	14.9	20.0	NA
Moose	20	14,187	295.6	75.6	40.0	NA
Small land mammal/furbearer ^d	1,502	5,861	122.1	31.2	84.4	NA
Beaver	147	4,122	85.9	22.0	36.0	NA
Fox ^e	20	— ^f	—	—	22.0	NA
Hare	389	1,090	22.7	5.8	60.0	NA
Land otter ^e	16	—	—	—	11.0	NA
Lynx ^e	4	—	—	—	7.0	NA
Marten ^e	299	—	—	—	47.0	NA
Mink ^e	26	—	—	—	13.0	NA
Muskrat	569	398	8.3	2.1	40.0	NA
Porcupine	13	251	5.2	1.3	18.0	NA
Weasel ^e	18	—	—	—	9.0	NA
Wolf ^e	1	—	—	—	2.0	NA
Fishes						
Total fish	36,218	161,510	3364.8	860.2	88.9	NA
Total salmon	24,372	128,891	2685.22	686.6	77.8	NA
Total non-salmon	11,846	32,619	679.6	173.8	73.3	NA
Burbot	151	515	10.7	2.7	31.0	NA
Pike	3,203	14,414	300.3	76.8	60.0	NA
Sheefish	381	2,285	47.6	12.2	27.0	NA
Sucker	1,634	2,451	51.1	13.1	40.0	40.0
Whitefish	6,477	12,954	269.9	69.0	69.0	69.0
Birds						
Total bird and egg	2,428	4,832	100.7	25.8	84.4	NA
Migratory bird	1,846	4,541	94.6	24.2	82.2	NA
Duck	1,339	2,008	41.8	10.7	82.0	NA
Goose	507	2,533	52.8	13.5	64.0	NA
Upland game bird	582	291	6.1	1.6	73.0	NA

See next page for footnotes.

TABLE D-11 (Cont.)

- a Number of households in sample was 45; number of households in community was 48.
- b Total given in pounds, which for some resources involved conversion from individual units; as a result, individual units will not sum to total.
- c "NA" = data not available.
- d Some not eaten.
- e Not eaten.
- f "-" = 0 or a number that rounds to 0.

Source: ADF&G (2001).

TABLE D-12 Subsistence Harvest Summary for Rampart in 1993^a

Subsistence Resource	Units, Total Harvested	Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
All Resources	5,141 ^b	28,666	NA ^c	NA	NA	NA
Terrestrial Mammals						
Large land mammal	7	2,110	NA	NA	NA	NA
Black bear	1	100	NA	NA	NA	NA
Caribou	3	390	NA	NA	NA	NA
Moose	3	1,620	NA	NA	NA	NA
Small land mammal/furbearer ^d	30	19	NA	NA	NA	NA
Beaver	1	9	NA	NA	NA	NA
Fox ^e	1	_f	NA	NA	NA	NA
Hare	3	6	NA	NA	NA	NA
Lynx ^e	1	-	NA	NA	NA	NA
Marten ^e	24	-	NA	NA	NA	NA
Fishes						
Total fish	5,044	26,495	NA	NA	NA	NA
Total salmon	2,766	22,512	NA	NA	NA	NA
Total non-salmon	2,278	3,684	NA	NA	NA	NA
Burbot	4	10	NA	NA	NA	NA
Grayling	143	100	NA	NA	NA	NA
Sheefish	47	258	NA	NA	NA	NA
Whitefish	2,084	3,616	NA	NA	NA	NA
Birds						
Total bird and egg	60	42	NA	NA	NA	NA
Upland game bird	60	42	NA	NA	NA	NA
Grouse	57	40	NA	NA	NA	NA
Ptarmigan	3	2	NA	NA	NA	NA

^a Number of households in sample, and number of households in community, were not recorded.

^b Total given in pounds, which for some resources involved conversion from individual units; as a result, individual units will not sum to total.

^c "NA" = data not available.

^d Some not eaten.

^e Not eaten.

^f "-" = 0 or a number that rounds to 0.

Source: ADF&G (2001).

TABLE D-13 Subsistence Harvest Summary for Stevens Village in 1984^a

Subsistence Resource	Units, Total Harvested	Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
All Resources	102,485 ^b	102,485	3,416.2	1,138.7	100.0	NA ^c
Terrestrial Mammals						
Large land mammal ^d	26	6,600	220.0	73.3	46.7	NA
Black bear	17	1,700	56.7	18.9	40.0	NA
Brown bear ^e	2	_f	-	-	6.7	NA
Moose	7	4,900	163.3	54.4	20.0	NA
Small land mammal/furbearer ^d	1,856	1,856	61.9	20.6	73.3	NA
Beaver	14	210	7.0	2.3	13.3	NA
Fox ^e	40	-	-	-	30.0	NA
Hare	206	412	13.7	4.6	56.7	NA
Land otter ^e	1	-	-	-	3.3	NA
Lynx ^e	26	-	-	-	26.7	NA
Marten ^e	432	-	-	-	46.7	NA
Mink ^e	8	-	-	-	10.0	NA
Muskrat	950	950	31.7	10.6	53.3	NA
Porcupine	3	24	0.8	0.3	10.0	NA
Wolverine ^e	4	-	-	-	3.3	NA
Fishes						
Total fish	92,104	92,104	3,070.1	1,023.4	83.3	NA
Total salmon	82,950	82,949	2,765.0	921.7	73.3	NA
Total non-salmon	9,155	9,155	305.2	101.7	80.0	NA
Burbot	80	280	9.3	3.1	40.0	NA
Grayling	5	4	0.1	-	3.3	NA
Pike	730	2,555	85.2	28.4	66.7	NA
Sheefish	239	1,434	47.8	15.9	46.7	NA
Sucker	53	111	3.7	1.2	23.3	NA
Whitefish	2,511	4,771	159.0	53.0	73.3	NA
Birds						
Total bird and egg	1,761	1,761	58.7	19.6	90.0	NA
Migratory bird	609	1,543	51.4	17.1	76.7	NA
Crane	9	90	3.0	1.0	13.3	NA
Duck	442	663	22.1	7.4	70.0	NA
Goose	158	790	26.3	8.8	73.3	NA
Upland game bird	311	218	7.3	2.4	76.7	NA
Grouse	262	183	6.1	2.0	76.7	NA
Ptarmigan	49	34	1.1	0.4	20.0	NA

See next page for footnotes.

TABLE D-13 (Cont.)

- a Number of households in sample was 30; number of households in community was 30.
- b Total given in pounds, which for some resources involved conversion from individual units; as a result, individual units will not sum to total.
- c "NA" = data not available.
- d Some not eaten.
- e Not eaten.
- f "-" = 0 or a number that rounds to 0.

Source: ADF&G (2001) (sums corrected as necessary).

TABLE D-14 Subsistence Harvest Summary for Tanana in 1987^a

Subsistence Resource	Units, Total Harvested	Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
All Resources	745,940 ^b	745,940	5,827.7	2,157.2	92.2	100.0
Terrestrial Mammals						
Large land mammal	137	48,604	379.7	140.6	68.3	100.0
Black bear	38	3,634	28.4	10.5	14.3	24.8
Brown bear	2	960	7.5	2.8	1.9	3.8
Caribou	40	3,961	30.9	11.5	12.1	30.2
Moose	57	40,050	312.9	11.8	35.1	100.0
Small land mammal/furbearer ^c	2,658	13,350	104.3	38.6	41.0	79.5
Beaver	379	11,357	88.7	32.8	12.8	57.4
Fox ^d	29	- ^e	-	-	11.5	12.4
Hare	891	1,781	13.9	5.2	32.6	43.8
Land otter ^d	14	-	-	-	2.8	3.7
Lynx ^d	34	-	-	-	9.0	12.7
Marten ^d	1,175	-	-	-	21.2	21.2
Mink ^d	37	-	-	-	6.2	6.2
Muskrat	64	167	1.3	0.5	5.3	6.2
Porcupine	6	44	0.4	0.1	4.3	8.1
Wolf ^d	5	-	-	-	3.7	5.6
Wolverine ^d	6	-	-	-	2.8	2.8
Fishes						
Total fish	119,394	677,209	5,290.7	1,958.4	76.7	93.2
Total salmon	86,554	553,266	4,322.4	1600.0	67.4	93.2
Total non-salmon	32,840	123,943	968.3	358.4	63.6	75.7
Burbot	370	370	2.9	1.1	26.7	22.7
Char	12	30	.2	0.1	0.9	0.9
Grayling	626	313	2.5	0.9	28.0	29.9
Pike	1,059	1,588	12.4	4.6	27.4	28.3
Sheefish	5,250	34,127	266.6	98.7	30.1	32.0
Sucker	605	302	2.4	0.9	12.2	12.2
Whitefish	24,918	87,212	681.3	252.2	32.0	50.9
Birds						
Total birds and egg	3,517	5,688	44.4	16.5	86.0	91.3
Migratory bird	1,424	3,710	29.0	10.7	45.4	64.6
Duck	794	1,191	9.1	3.4	36.7	55.0
Crane	12	47	0.4	0.1	3.4	3.4
Goose	618	2471	19.3	7.2	45.4	59.4
Upland game bird	2,094	1978	15.5	5.7	77.3	80.7
Grouse	1,515	1,515	11.8	4.4	77.3	80.7
Ptarmigan	579	463	3.6	1.3	77.3	80.7

See next page for footnotes.

TABLE D-14 (Cont.)

- a Number of households in sample was 45; number of households in community was 128.
- b Total given in pounds, which for some resources involved conversion from individual units; as a result, individual units will not sum to total.
- c Some not eaten.
- d Not eaten.
- e “-” = 0 or a number that rounds to 0.

Source: ADF&G (2001).

TABLE D-15 Subsistence Harvest Summary for Wiseman in 1991^a

Subsistence Resource	Number Harvested	Preferred Total Community Harvest ^a
<i>Terrestrial Mammals</i>		
Large land mammal	20	31
Black bear	0	2
Caribou	10	12
Dall sheep	7	8
Grizzly bear	0	1
Moose	3	8
Small land mammal/furbearer	70	NA ^b
Hare	53	NA
Marmot	– ^c	NA
Porcupine	–	NA
Squirrel	17	NA
<i>Fishes</i>		
Total fish	200	NA
Total salmon ^d	31	NA
Total non-salmon	169	NA
Burbot	5	NA
Grayling	131 ^e	NA
Pike	8	NA
Sheefish ^d	6	NA
Trout	19	NA
<i>Birds</i>		
Total bird and egg	200	NA
Migratory bird	31	NA
Duck	17	NA
Goose	14	NA
Upland game bird	169	NA
Grouse	96	NA
Ptarmigan	73	NA

^a Reflects harvest levels desired to meet food requirements.

^b NA = data not available.

^c “–” = 0 or a number that rounds to 0.

^d Nonlocal harvest.

^e Actual number reported as range, 128–133; value shown is an average, rounded to the nearest whole fish.

Source: Compiled from data in Scott (1998).

TABLE D-16 Subsistence Harvest Summary for Chitina in 1987^a

Subsistence Resource	Units, Total Harvested	Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
All Resources	10,229 ^b	10,229	627.6	342.4	88.9	94.4
Terrestrial Mammals						
Large land mammal	6	1,837	96.7	52.7	27.8	50.0
Caribou	3	412	21.7	11.8	11.1	16.7
Moose	3	1,425	75.0	40.9	16.7	27.8
Small land mammal/furbearer ^c	178	279	14.7	8.0	44.4	50.0
Hare	173	260	13.7	7.5	38.9	44.4
Marten ^d	1	– ^e	–	–	5.6	5.6
Porcupine	4	19	1.0	0.6	22.2	22.2
Fishes						
Total fish	9,239	9,239	486.2	265.3	77.8	94.4
Total salmon	1,726	8,337	438.8	239.4	61.1	72.2
Total non-salmon	902	902	47.5	25.9	61.1	83.3
Burbot	26	63	3.3	1.8	11.1	11.1
Char	117	152	7.9	4.4	16.7 ^f	16.7 ^f
Grayling	258	180	9.5	5.2	33.3	33.3
Halibut	53	53	2.8	1.5	11.1	38.9
Trout	257	359	18.8	10.3	33.3	50.0
Whitefish	106	95	5.0	2.7	5.6	66.7
Birds						
Total bird and egg	110	61	3.2	1.8	33.3	33.3
Migratory bird	26	19	1.0	0.6	5.6	5.6
Duck	24	17	0.9	0.5	5.6	5.6
Goose	2	2	0.1	0.1	5.6	5.6
Upland game bird	83	42	2.2	1.2	33.3	33.3
Grouse	83	42	2.19	1.21	33.3	33.3

^a Number of households in sample was 18; number of households in community was 19.

^b Total given in pounds, which for some resources involved conversion from individual units; as a result, individual units will not sum to total.

^c Some not eaten.

^d Not eaten.

^e “–” = 0 or a number that rounds to 0.

^f Data not recorded; value reported is the maximum of those recorded for subcategories.

Source: ADF&G (2001).

TABLE D-17 Subsistence Harvest Summary for Copper Center in 1987^a

Subsistence Resource	Units, Total Harvested	Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
All Resources	85,895 ^b	85,895	533.5	174.3	100.0	100.0
Terrestrial Mammals						
Large land mammal	153	28,338	176.0	57.5	51.8	78.1
Caribou	100	12,942	80.4	26.3	48.0	72.8
Goat	8	546	3.4	1.1	4.7	4.7
Moose	31	13,870	86.2	28.2	19.1	53.1
Dall sheep	15	979	6.1	2.0	4.7	9.4
Small land mammal/furbearer ^c	237	405	2.3	0.8	27.1	38.7
Beaver	4	67	0.4	0.1	0.7	13.9
Fox ^d	13	- ^e	-	-	6.1	6.1
Hare	112	169	1.1	0.3	6.9	17.9
Marten ^d	11	-	-	-	5.4	5.4
Porcupine	38	170	1.1	0.4	18.8	18.8
Squirrel ^d	33	-	-	-	0.7	0.7
Weasel ^d	24	-	-	-	6.1	6.1
Fishes						
Total fish	54,323	54,323	337.4	110.3	78.1	90.6
Total salmon	10,215	51,006	316.8	103.5	68.1	90.0
Total non-salmon	3,317	3,317	20.6	6.7	57.8	78.1
Halibut	739	739	4.6	1.5	4.5	28.7
Rockfish	20	81	0.5	0.2	1.6	1.6
Burbot	125	300	1.9	0.6	10.1	21.7
Char	476	593	3.7	1.2	-	13.9 ^f
Grayling	1,537	1,076	6.7	2.2	47.4	55.2
Sucker	6	4	0.0	0.0	0.7	0.7
Trout	158	435	2.7	0.9	-	8.4 ^f
Whitefish	98	88	0.6	0.2	3.0	18.4
Birds						
Total bird and egg	1,007	711	4.4	1.4	34.0	42.5
Migratory bird	244	329	2.0	0.7	6.3	6.3
Duck	184	130	0.8	0.3	6.3	6.3
Goose	45	108	0.7	0.2	4.7	4.7
Crane	15	90	0.6	0.2	4.7	4.7
Upland game bird	763	382	2.4	0.8	34.0	42.5
Grouse	607	303	1.9	0.6	29.3	36.3
Ptarmigan	156	78	0.5	0.1	12.3	20.1

See next page for footnotes.

TABLE D-17 (Cont.)

- a Number of households in sample was 39; number of households in community was 161.
- b Total given in pounds, which for some resources involved conversion from individual units; as a result, individual units will not sum to total.
- c Some not eaten.
- d Not eaten.
- e “_” = 0 or a number that rounds to 0.
- f Data not recorded; value reported is the maximum of those recorded for subcategories.

Source: ADF&G (2001).

TABLE D-18 Subsistence Harvest Summary for Gakona in 1987^a

Subsistence Resource	Units, Total Harvested	Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
All Resources	19,916 ^b	19,916	284.5	95.3	85.5	92.7
Terrestrial Mammals						
Large land mammal	58	9,936	141.9	47.6	62.2	63.6
Brown bear	1	100	1.4	0.5	1.4	1.4
Caribou	35	4,609	65.8	22.1	44.9	50.6
Dall sheep	11	727	10.4	3.5	16.0	23.2
Moose	10	4,500	64.3	21.5	14.3	53.5
Small land mammal/furbearer ^c	625	140	2.0	0.7	46.4	46.4
Hare	93	140	2.0	0.7	26.1	26.1
Fishes and Marine Invertebrates						
Total fish	8,549	8,549	122.1	40.9	69.5	85.5
Total salmon	1,195	6,074	86.8	29.1	57.9	68.1
Total non-salmon	2,476	2,476	35.4	11.9	57.9	69.5
Burbot	201	483	6.9	2.3	26.1	27.5
Char	391	539	7.7	2.6	27.5	30.4
Cod	140	140	2.0	0.7	1.4	1.4
Flounder	12	12	0.2	0.1	1.4	1.4
Grayling	725	508	7.3	2.4	50.6	57.9
Halibut	342	342	4.9	1.6	11.6	60.9
Rockfish	2	8	0.1	0.0	1.4	1.4
Trout	176	251	3.6	1.2	18.8	18.8
Whitefish	215	194	2.8	0.9	17.4	17.4
Marine invertebrate	93	93	1.3	0.5	10.1	31.9
Clam	53	53	0.8	0.3	8.7	23.2
Shrimp	40	40	0.6	0.2	1.4	8.7
Birds						
Total bird and egg	790	424	6.1	2.0	52.2	52.2
Migratory bird	140	99	1.4	0.5	8.7	8.7
Duck	140	99	1.4	0.5	8.7	8.7
Upland game bird	650	325	4.6	1.6	52.2	52.2
Grouse	359	180	2.6	0.9	50.8	50.8
Ptarmigan	291	145	2.9	0.7	17.4	17.4

^a Number of households in sample was 25; number of households in community was 70.

^b Total given in pounds, which for some resources involved conversion from individual units; as a result, individual units will not sum to total.

^c Several types of small land mammals (beaver, coyote, red fox, land otter, marten, mink, muskrat, porcupine, tree squirrel, weasel, wolf, and wolverine) were reported as harvested by certain households, although 0 was reported as total harvested. Because of this inconsistency, these small land mammals were excluded from this table.

Source: ADF&G (2001).

TABLE D-19 Subsistence Harvest Summary, Glennallen in 1987^a

Subsistence Resource	Units, Total Harvested	Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
All Resources	46,684 ^b	46,684	274.6	99.5	91.8	100.0
Terrestrial Mammals						
Large land mammal	106	20,053	118.0	42.7	39.3	75.3
Black bear	5	35	0.2	0.1	7.2	7.2
Caribou	68	8,840	52.0	18.8	33.1	56.8
Dall sheep	5	341	2.0	0.7	2.1	3.1
Deer	4	149	0.9	0.3	1.0	1.0
Moose	24	10,688	62.9	22.8	14.0	49.0
Sm. land mammal/furbearer ^c	306	366	2.2	0.8	8.4	8.4
Beaver	22	53	0.3	0.1	1.6	1.6
Coyote ^d	4	— ^e	—	—	1.0	1.0
Fox ^d	4	—	—	—	1.0	1.0
Hare	209	314	1.8	0.7	5.7	5.7
Marten ^d	51	—	—	—	2.6	2.6
Muskrat ^d	12	—	—	—	0.6	0.6
Weasel ^d	6	—	—	—	1.6	1.6
Fishes and Marine Invertebrates						
Total fish	25,287	25,287	148.8	53.9	71.2	95.9
Total salmon	3,785	19,136	112.6	40.8	59.9	94.9
Total non-salmon	6,152	6,152	36.2	13.1	42.4	62.9
Burbot	139	334	2.0	0.7	9.9	11.9
Char	299	335	2.0	0.7	14.0 ^f	14.0 ^f
Grayling	2,119	1,483	8.7	3.2	26.9	37.2
Halibut	1,645	1,645	9.7	3.5	3.1	22.2
Pike	53	147	0.9	0.3	2.1	2.1
Rockfish	110	441	2.6	0.9	2.1	2.1
Trout	1,108	1,575	9.3	3.4	16.0 ^f	16.0 ^f
Whitefish	213	192	1.1	0.4	5.7	5.7
Marine invertebrate	26	26	0.2	0.1	1.0	1.0
Clam ^g	26	26	0.2	0.1	1.0	1.0
Birds						
Total bird and egg	339	174	1.0	0.4	21.2	23.2
Migratory bird	40	25	0.2	0.1	3.1	4.1
Duck	40	25	0.2	0.1	3.1	4.1
Upland game bird	299	150	0.9	0.3	19.1	20.1
Grouse	180	90	0.5	0.2	18.1	19.1
Ptarmigan	119	60	0.4	0.1	5.1	6.2
Bird egg	312	174	1.0	0.4	36.6	37.6

See next page for footnotes.

TABLE D-19 (Cont.)

- a Number of households in sample was 44; number of households in communities was 170.
- b Total given in pounds, which for some resources involved conversion from individual units; as a result, individual units will not sum to total.
- c Some not eaten.
- d Not eaten.
- e “-” = 0 or a number that rounds to 0.
- f Data not recorded; value reported is the maximum of those recorded for subcategories.
- g Unit of measure is gallon.

Source: ADF&G (2001).

TABLE D-20 Subsistence Harvest Summary for Gulkana in 1987^a

Subsistence Resource	Units, Total Harvested	Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
All Resources	10,237 ^b	10,237	465.3	152.6	90.0	95.0
Terrestrial Mammals						
Large land mammal	13	3,036	138.00	45.25	35.0	70.0
Black bear	1	55	2.5	0.8	5.0	5.0
Caribou	8	1,001	45.5	14.9	30.0	55.0
Moose	4	1,980	90.0	29.5	20.0	55.0
Small land mammal/furbearer ^c	308	527	24.0	7.9	50.0	55.0
Beaver	8	116	5.3	1.7	10.0	15.0
Coyote	6	— ^d	—	—	5.0	5.0
Fox ^e	6	—	—	—	5.0	5.0
Hare	81	122	5.6	1.8	30.0	35.0
Lynx	6	22	1.0	0.3	5.0	5.0
Marten ^e	32	—	—	—	10.0	10.0
Mink ^e	11	—	—	—	5.0	5.0
Muskrat	132	238	10.8	3.6	10.0	15.0
Porcupine	7	30	1.4	0.5	20.0	20.0
Weasel ^e	8	—	—	—	5.0	5.0
Wolf ^e	6	—	—	—	5.0	5.0
Wolverine ^e	6	—	—	—	5.0	5.0
Fishes						
Total fish	6,406	6,406	291.2	95.5	90.0	95.0
Total salmon	1,296	5,777	262.6	86.1	60.0	85.0
Total non-salmon	629	629	28.6	9.4	70.0	70.0
Burbot	67	161	7.3	2.4	15.0	2.0
Char	12	15	0.7	0.2	5.0 ^f	5.0 ^f
Grayling	209	146	6.7	2.2	65.0	65.0
Greenling	4	4	0.2	0.1	5.0	5.0
Halibut	55	55	2.5	0.8	5.0	5.0
Sucker	110	77	3.5	1.2	5.0	5.0
Trout	9	12	0.6	0.2	10.0	10.0
Whitefish	176	158	7.2	2.4	15.0	25.0
Birds						
Total bird and egg	117	92	4.2	1.4	20.0	30.0
Migratory bird	58	63	2.9	0.9	15.0	25.0
Duck	36	36	1.7	0.5	10.0	20.0
Goose	22	28	1.2	0.4	5.0	5.0
Upland game bird	58	29	1.3	0.4	20.0	20.0
Grouse	33	17	0.8	0.3	20.0	20.0
Ptarmigan	25	13	0.6	0.2	10.0	10.0

See next page for footnotes.

TABLE D-20 (Cont.)

- a Number of households in sample was 20; number of households in community was 22.
- b Total given in pounds, which for some resources involved conversion from individual units; as a result, individual units will not sum to total.
- c Some not eaten.
- d “-” = 0 or a number that rounds to 0.
- e Not eaten.
- f Data not recorded; value reported is the maximum of those recorded for subcategories.

Source: ADF&G (2001).

TABLE D-21 Subsistence Harvest Summary for Kenny Lake in 1987^a

Subsistence Resource	Units, Total Harvested	Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
All Resources	43,692 ^b	43,692	469.8	136.3	100.0	100.0
Terrestrial Mammals						
Large land mammal	81	15,257	161.9	47.0	61.1	73.0
Black bear	10	1,749	18.8	5.5	10.6	10.6
Caribou	43	5,578	60.0	17.4	37.4	41.1
Deer	12	517	5.6	1.6	10.6	10.6
Moose	16	7,216	77.6	22.5	17.2	37.4
Small land mammal/furbearer ^c	337	196	2.1	0.6	27.8	27.8
Beaver ^d	2	– ^e	–	–	2.4	2.4
Fox ^d	8	–	–	–	8.2	8.2
Hare	131	196	2.1	0.6	19.3	19.3
Marten ^d	0	–	–	–	7.5	7.5
Muskrat ^d	0	–	–	–	–	2.4
Tree squirrel ^d	27	–	–	–	2.4	2.4
Weasel ^d	8	–	–	–	8.2	8.2
Wolf ^d	0	–	–	–	2.6	2.6
Wolverine ^d	0	–	–	–	2.6	2.6
Fishes						
Total fish	26,609	26,609	286.1	83.0	89.4	97.6
Total salmon	4,315	21,616	232.4	67.4	56.6	64.8
Total non-salmon	4,993	4,993	53.7	15.6	83.4	88.3
Burbot	85	204	2.2	0.6	11.9	11.9
Grayling	996	697	7.5	2.2	72.2	72.2
Trout	231	324	3.5	1.0	23.1	23.1
Whitefish	114	102	1.1	0.3	2.4	2.4
Birds						
Total bird and egg	1,059	548	5.9	1.7	44.2	44.2
Migratory bird	91	64	0.7	0.2	4.9	4.9
Ducks	91	64	0.7	0.2	4.9	4.9
Upland game bird	968	484	5.2	1.5	44.2	44.2
Grouse	418	209	2.3	0.7	34.7	34.7
Ptarmigan	550	275	3.0	0.9	19.4	19.4

See next page for footnotes.

TABLE D-21 (Cont.)

- a Number of households in sample was 35; number of households in communities was 39.
- b Total given in pounds, which for some resources involved conversion from individual units; as a result, individual units will not sum to total.
- c Some not eaten.
- d Not eaten.
- e “_” = 0 or a number that rounds to 0.

Source: ADF&G (2001).

TABLE D-22 Subsistence Harvest Summary for Paxson in 1987^a

Subsistence Resource	Units, Total Harvested	Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
All Resources	11,236 ^b	11,236	660.9	289.1	92.9	92.9
Terrestrial Mammals						
Large land mammal	23	5,404	317.86	139.1	50.0	85.7
Bison	1	546	32.1	14.1	7.1	21.4
Caribou	10	1,263	74.3	32.5	42.9	57.1
Dall sheep	5	316	18.6	8.1	28.6	28.6
Moose	7	3,279	192.9	84.4	42.9	64.3
Small land mammal/furbearer ^c	406	971	57.1	25.0	57.1	57.1
Beaver	94	838	49.3	21.6	35.7	35.7
Coyote ^d	4	— ^e	—	—	14.3	14.3
Fox ^d	114	—	—	—	28.6	28.6
Hare	38	56	3.3	1.4	28.6	28.6
Land otter ^d	10	—	—	—	21.4	21.4
Marten ^d	67	—	—	—	35.7	35.7
Muskrat ^d	40	—	—	—	14.3	14.3
Weasel ^d	9	—	—	—	14.3	14.3
Wolf ^d	2	—	—	—	7.1	7.1
Fishes						
Total fish	4,163	4,163	244.9	107.1	78.6	85.7
Total salmon	317	1,730	101.8	44.5	42.9	64.3
Total non-salmon	2,432	2,432	143.1	62.6	78.6	78.6
Burbot	83	198	11.7	5.1	42.9	50.0
Char	186	318	18.7	8.2	64.3 ^f	64.3 ^f
Grayling	182	128	7.5	3.3	78.6	78.6
Halibut	80	80	4.7	2.1	14.3	28.6
Pike	18	51	3.0	1.3	7.1	7.1
Sucker	35	86	5.1	2.2	14.3	14.3
Trout	35	73	4.3	1.9	28.6 ^f	28.6 ^f
Whitefish	1,665	1,498	88.1	38.6	28.6	28.6
Birds						
Total bird and egg	778	583	31.3	15.0	71.4	71.4
Migratory bird	425	407	23.9	10.5	42.9	42.9
Duck	396	262	15.4	6.7	42.9	42.9
Goose	7	13	0.8	0.3	14.3	14.3
Upland game bird	353	177	10.4	4.6	71.4	71.4
Grouse	152	76	4.5	2.0	50.0	50.0
Ptarmigan	202	101	5.9	2.6	64.3	64.3

See next page for footnotes.

TABLE D-22 (Cont.)

- a Number of households in sample was 14; number of households in communities was 17.
- b Total given in pounds, which for some resources involved conversion from individual units; as a result, individual units will not sum to total.
- c Some not eaten.
- d Not eaten.
- e “_” = 0 or a number that rounds to 0.
- f Data not recorded; value reported is the maximum of those recorded for subcategories.

Source: ADF&G (2001) (sums corrected as necessary).

TABLE D-23 Subsistence Harvest Summary for Tazlina in 1987^a

Subsistence Resource	Units, Total Harvested	Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
All Resources	39,182 ^b	39,182	326.5	107.5	68.9	100.0
Terrestrial Mammals						
Large land mammal	70	15,480	128.0	42.5	29.2	62.2
Bison	2	1,038	8.7	2.9	1.9	1.9
Black bear	5	365	3.0	1.0	3.8	10.1
Brown bear	1	343	2.9	0.9	1.0	1.0
Caribou	41	5,306	44.2	14.6	21.6	37.8
Dall sheep	2	150	1.3	0.4	1.9	12.0
Moose	18	8,278	69.0	22.7	14.4	28.7
Small land mammal/furbearer ^c	544	766	6.4	2.1	22.5	22.5
Beaver ^d	27	- ^e	-	-	1.0	1.0
Coyote ^d	25	-	-	-	5.8	5.8
Fox ^d	29	-	-	-	6.7	6.7
Hare	228	342	2.9	0.9	14.8	16.8
Land otter ^d	2	-	-	-	1.9	1.9
Marten ^d	74	-	-	-	3.8	3.8
Mink ^d	13	-	-	-	1.0	1.0
Muskrat ^d	24	-	-	-	1.0	1.0
Porcupine	94	423	3.5	1.2	10.1	10.1
Tree squirrel ^d	14	-	-	-	1.9	1.9
Weasel ^d	7	-	-	-	1.0	1.0
Wolf ^d	7	-	-	-	1.9	1.9
Fishes and Marine Invertebrates						
Total fish	20,524	20,524	171.0	56.3	62.7	93.8
Total salmon	2,852	13,783	114.9	37.8	38.3	89.9
Total non-salmon	6,741	6,741	56.2	18.5	50.8	51.7
Burbot	265	363	5.3	1.7	11.5	13.4
Char	476	452	3.8	1.2	NA ^f	NA
Grayling	1,434	1,004	8.4	2.8	36.9	36.9
Halibut	3,629	3,629	30.2	10.0	15.3	38.3
Sucker	5	3	-	-	3.8	3.8
Trout	537	758	6.3	2.1	NA	NA
Whitefish	288	259	2.2	0.7	10.6	14.4
Marine invertebrate	368	368	3.1	1.0	12.0	12.0
Clam	368	368	3.1	1.0	12.0	12.0
Birds						
Total bird and egg	501	371	3.1	1.0	39.8	39.8
Migratory bird	96	168	1.4	0.5	6.7	6.7
Duck	66	49	0.4	0.1	6.7	6.7
Crane	16	97	0.8	0.3	1.9	1.9
Goose	14	22	0.2	0.1	1.9	1.9

TABLE D-23 (Cont.)

Subsistence Resource	Units, Total Harvested	Edible Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
Upland game bird	406	203	1.7	0.6	37.8	37.8
Grouse	261	130	1.09	0.36	27.8	27.8
Ptarmigan	145	73	0.60	0.20	20.6	20.6

- a Number of households in sample was 31; number of households in community was 120.
- b Total given in pounds, which for some resources involved conversion from individual units; as a result, individual units will not sum to total.
- c Some not eaten.
- d Not eaten.
- e “_” = 0 or a number that rounds to 0.
- f NA = data not available.

Source: ADF&G (2001).

TABLE D-24 Subsistence Harvest Summary for Tonsina in 1987^a

Subsistence Resource	Units, Total Harvested	Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
All Resources	46,310 ^b	46,310	482.4	155.7	91.7	91.7
Terrestrial Mammals						
Large land mammal	123	22,003	229.2	74.0	69.8	90.3
Black bear	7	296	3.1	1.0	4.1	13.8
Brown bear	1	— ^c	—	—	1.4	1.4
Caribou	75	9,743	101.5	32.8	63.7	75.8
Dall sheep	11	691	7.2	2.3	11.1	11.1
Deer	3	141	1.5	0.5	2.4	3.8
Goat	1	95	1.0	0.3	1.4	1.4
Moose	25	11,037	115.0	37.1	24.5	57.1
Small land mammal/furbearer ^d	542	402	4.2	1.4	39.8	39.8
Beaver	12	—	—	—	10.4	10.4
Coyote ^e	15	—	—	—	1.0	2.1
Fox ^e	25	—	—	—	5.9	5.9
Hare	220	330	3.4	1.1	22.9	22.9
Land otter ^e	3	—	—	—	2.4	2.4
Marmot ^e	6	—	—	—	1.0	1.0
Marten ^e	167	—	—	—	8.3	8.3
Mink ^e	27	—	—	—	2.1	2.1
Muskrat ^e	5	—	—	—	1.0	1.0
Porcupine	16	72	0.8	0.2	11.1	11.1
Weasel ^e	14	—	—	—	1.4	1.4
Wolf ^e	14	—	—	—	3.5	3.5
Wolverine ^e	8	—	—	—	1.0	1.0
Fishes and Marine Invertebrates						
Total fish	21,729	21,729	226.4	73.1	83.3	91.7
Total salmon	4,028	19,238	200.4	64.7	63.9	83.3
Total non-salmon	2,492	2,492	26.0	8.4	67.1	69.8
Burbot	52	124	1.3	0.4	3.8	6.5
Char	803	878	9.1	3.0	24.8 ^f	24.8 ^f
Grayling	728	509	5.3	1.7	50.5	51.9
Halibut	536	536	5.6	1.8	3.8	25.9
Smelt	66	16	0.2	0.1	1.4	1.4
Whitefish	54	49	0.5	0.2	2.4	2.4
Marine invertebrate	326 ^g	326 ^g	3.4	1.1	2.1	10.4
Clam	300 ^g	300 ^g	3.1	1.0	1.0	1.0
Crab	21 ^g	21 ^g	0.2	0.1	1.0	1.0
Shrimp	5 ^g	5 ^g	0.1	—	1.0	9.4

TABLE D-24 (Cont.)

Subsistence Resource	Units, Total Harvested	Edible Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
Birds						
Total bird and egg	1,055	554	5.8	1.9	43.2	44.6
Migratory bird	105	79	0.8	0.3	9.6	9.6
Duck	103	76	0.8	0.3	9.6	9.6
Goose	3	3	–	–	1.4	1.4
Upland game bird	949	475	4.9	1.6	41.8	43.2
Grouse	762	381	3.7	1.3	41.8	43.2
Ptarmigan	187	94	1.0	0.3	10.6	10.6

- a Number of households in sample was 34; number of households in communities was 96.
- b Total given in pounds, which for some resources involved conversion from individual units; as a result, individual units will not sum to total.
- c “–” = 0 or a number that rounds to 0.
- d Some not eaten.
- e Not eaten.
- f Data not recorded; data reported is the maximum of those recorded for subcategories.
- g Unit of measure is pound.

Source: ADF&G (2001).

TABLE D-25 Subsistence Harvest Summary for Chenega Bay in 1993^a

Subsistence Resource	Units, Total Harvested	Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
All Resources	27,809 ^b	27,809	993.2	275.2	95.7	100.0
Marine Mammals						
Marine mammal	85	3,528	126.0	34.9	43.5	56.5
Sea otter	6	— ^c	—	—	8.7	13.0
Seal	67	2,531	90.4	25.1	39.1	56.5
Steller sea lion	12	997	35.6	9.9	26.1	43.5
Terrestrial mammals						
Large land mammal	38	1,796	64.2	17.8	47.8	82.6
Black bear	2	141	5.0	1.4	8.7	17.4
Caribou	1	183	6.5	1.8	4.3	8.7
Deer	34	1,473	52.6	14.6	47.8	82.6
Small land mammal/furbearer ^d	13	49	1.7	0.5	13.0	13.0
Land otter ^e	7	—	—	—	8.7	8.7
Porcupine	6	49	1.7	0.5	4.3	4.3
Fishes and Marine Invertebrates						
Total fish	19,980	19,980	713.6	197.7	95.7	100.0
Total salmon	2,686	10,985	392.3	108.7	69.9	95.7
Total non-salmon	8,994	8,994	321.2	89.0	56.5	95.7
Char	61	85	3.0	0.8	21.7	21.7
Cod	315	1,005	35.9	10.0	17.4	43.5
Greenling	252	343	12.3	3.4	21.7	26.1
Halibut	82	3,686	131.7	36.5	52.2	91.3
Herring	73 ^f	40	1.4	0.4	8.7	26.1
Herring roe	5 ^f	34	1.2	0.3	4.3	30.4
Rockfish	1,084	3,229	115.3	32.0	4.35	73.9
Sablefish	180	558	19.9	5.5	8.7	26.1
Shark	1	11	0.4	0.1	4.3	4.3
Wolffish	5	2	—	—	8.7	8.7
Marine invertebrate	1,498	1,498	53.5	14.8	73.9	91.3
Chiton	21	83	3.0	1.0	34.8	47.8
Clam	94	283	10.1	2.8	52.2	65.2
Crab	15	23	0.8	0.2	4.3	8.7
Mussel	4	13	0.5	0.1	13.0	13.0
Octopus	255	1,020	36.4	10.1	34.8	60.9
Oyster	1	4	0.1	—	4.3	4.3
Shrimp	36	71	2.5	0.7	17.4	60.9
Birds						
Total bird and egg	168	151	5.4	1.5	43.5	52.2
Migratory bird	85	106	3.8	1.1	26.1	30.4
Duck	72	60	2.2	0.6	26.1	26.1
Goose	13	46	1.6	0.5	8.7	13.0

TABLE D-25 (Cont.)

Subsistence Resource	Units, Total Harvested	Edible Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
Upland game bird	63	44	1.6	0.4	26.1	30.4
Grouse	63	44	1.6	0.4	26.1	30.4
Bird eggs	19	1	–	–	4.3	8.7

- a Number of households in sample was 23; number of households in communities was 28.
- b Total given in pounds, which for some resources involved conversion from individual units; as a result, individual units will not sum to total.
- c “–” = 0 or a number that rounds to 0.
- d Some not eaten.
- e Not eaten.
- f Unit of measure is gallon.

Source: ADF&G (2001) (sums corrected as necessary).

TABLE D-26 Subsistence Harvest Summary for Cordova in 1997^a

Subsistence Resource	Units, Total Harvested	Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
All Resources	449,841 ^b	449,841	542.0	179.4	89.7	97.6
Marine Mammals						
Marine mammal ^c	391	9,114	11.0	3.6	5.1	11.0
Sea otter ^d	179	— ^e	—	—	3.5	5.5
Seal	212	9,114	11.0	3.6	3.5	8.6
Terrestrial Mammals						
Large land mammal	1,043	131,308	158.2	52.4	47.4	77.1
Black bear	NA ^f	2,473	3.0	1.0	4.7	11.8
Brown bear	26	1,972	2.4	0.8	2.4	2.4
Caribou	13	1,972	2.4	0.8	0.8	7.1
Dall sheep	7	684	0.8	0.3	0.8	4.0
Deer	1,441	62,248	75.0	24.8	40.7	72.7
Elk	26	5,917	7.1	2.4	2.4	2.8
Goat	36	2,860	3.5	1.1	4.0	9.5
Moose	98	53,182	64.1	21.2	10.7	49.4
Small land mammal/furbearer ^c	3,304	5,304	6.4	2.1	26.5	30.0
Beaver	145	345	0.4	0.1	3.2	3.6
Coyote ^d	49	—	—	—	2.8	3.6
Hare	2,443	4,887	5.9	2.0	22.1	24.5
Land otter ^d	118	—	—	—	3.6	3.6
Lynx ^d	3	—	—	—	0.4	0.4
Marten ^d	108	—	—	—	5.1	5.1
Mink ^d	174	—	—	—	4.0	4.7
Muskrat ^d	72	—	—	—	2.4	2.4
Porcupine	7	53	0.1	—	0.8	2.0
Squirrel ^d	118	20	—	—	2.4	2.4
Weasel ^d	59	—	—	—	1.6	1.6
Wolverine ^d	7	—	—	—	0.8	0.8
Terrestrial Mammals						
Total fish	263,712	263,712	317.7	105.2	75.1	93.7
Total salmon	23,061	156,875	189.0	62.6	66.0	88.5
Total non-salmon	106,838	106,838	128.7	42.6	58.5	84.6
Bass	642	642	0.8	0.3	4.4	6.7
Char	1,388	1,943	2.3	0.8	14.2	14.6
Cod	841	2,265	2.7	0.9	11.9	20.2
Grayling	273	191	0.2	0.1	2.8	2.8
Greenling	633	1,202	1.5	0.5	13.4	19.8
Halibut	66,450	66,450	80.1	26.5	44.3	82.6
Herring ^g	831	4,985	6.0	2.0	11.5	13.4
Herring roe ^g	267	1,870	2.3	0.1	4.3	9.1
Rockfish	4,408	12,360	14.9	4.9	22.1	39.5
Sablefish	625	1,936	2.3	0.8	5.1	18.2

TABLE D-26 (Cont.)

Subsistence Resource	Units, Total Harvested	Edible Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
Sculpin	85	43	0.1	–	2.4	2.4
Skate	7	33	–	–	0.4	0.4
Smelt ^g	2,889	9,389	11.3	3.7	19.3	31.6
Sole	134	134	0.2	–	3.2	4.0
Sturgeon	7	224	0.3	0.1	0.8	0.8
Trout	2,113	2,958	3.6	1.2	21.3	27.3
Wolffish	13	7	–	–	1.6	2.0
Marine invertebrate	13,844	13,844	16.7	5.5	29.2	51.7
Chiton ^g	2	7	–	–	0.8	1.6
Clam ^g	1,503	4,510	5.4	1.8	24.9	38.3
Cockle ^g	5	15	–	–	0.8	1.2
Crab	4,909	7,656	9.2	3.0	7.5	28.4
Geoduck ^g	12	37	–	–	0.4	0.4
Limpet ^g	13	20	–	–	0.8	0.8
Mussel ^g	26	40	–	–	3.2	4.7
Octopus	43	170	0.2	0.1	1.6	12.2
Shrimp	995	995	1.2	0.4	9.1	18.2
Squid	197	394	0.5	0.2	0.8	5.1
Birds and Bird Eggs						
Total bird and egg	7,852	5,593	6.7	2.2	30.4	42.3
Migratory bird	5,091	4,056	4.9	1.6	24.1	36.8
Crane	20	165	0.2	0.1	2.0	3.6
Duck	4,708	3,274	3.9	1.3	22.5	35.2
Goose	269	598	0.7	0.2	6.3	8.3
Seabird and loon	3	10	–	–	0.4	0.4
Shorebird	92	9	–	–	3.2	3.2
Upland game bird	1,830	1,281	1.5	0.5	22.5	24.9
Grouse	1,017	712	0.9	0.3	17.8	19.0
Ptarmigan	813	569	0.7	0.2	14.2	15.4
Bird egg	925	252	0.3	0.1	2.4	4.7

a Number of households in sample was 152; number of households in communities was 830.

b Total given in pounds, which for some resources involved conversion from individual units; as a result, individual units will not sum to total.

c Some not eaten.

d Not eaten.

e “–” = 0 or a number that rounds to 0.

f NA = data not available. Value in data table appears to be incorrect for black bear; total for large land mammals reflects inclusion of this value, but this value is not included under the number of black bears harvested for 1997.

g Unit of measure is gallon.

Source: ADF&G (2001) (sums corrected as necessary).

TABLE D-27 Subsistence Harvest Summary for Nanwalek in 1997^a

Subsistence Resource	Units, Total Harvested	Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
All Resources	50,653 ^b	50,653	1,120.9	253.9	100.0	100.0
Marine Mammals						
Marine mammal ^c	69	4,020	105.8	24.0	34.5	89.7
Sea otter ^d	10	- ^e	-	-	6.9	10.3
Seal	53	2,972	78.2	17.7	34.5	89.7
Steller sea lion	5	1,048	27.6	6.3	6.9	27.6
Terrestrial Mammals						
Large land mammal	13	2,023	53.2	12.1	13.8	65.5
Black bear	10	608	16.0	3.6	13.8	65.5
Moose	3	1,415	37.2	8.4	6.9	37.9
Small land mammal/furbearer ^c	14	10	0.3	0.1	6.9	6.9
Land otter ^d	3	-	-	-	3.4	3.4
Porcupine	1	10	0.3	0.1	3.4	3.4
Squirrel ^d	4	-	-	-	3.4	3.4
Weasel ^d	7	-	-	-	6.9	6.9
Fishes and Marine Invertebrates						
Total fish	33,458	33,458	880.5	199.5	100.0	100.0
Total salmon	7,011	26,474	696.7	157.8	100.0	100.0
Total non-salmon	6,984	6,984	183.8	41.6	89.7	93.1
Bass	31	31	0.8	0.2	10.3	13.8
Char	829	1,161	30.6	6.9	65.5	69.0
Cod	719	1,085	28.6	6.5	48.3	69.0
Flounder	3	8	0.2	0.1	3.4	3.4
Greenling	63	94	2.5	0.6	31.0	34.5
Halibut	3,501	3,501	92.1	20.9	55.2	93.1
Herring ^f	8	46	1.2	0.3	10.3	48.3
Herring roe ^f	1	5	0.1	-	3.4	3.4
Rockfish	189	316	8.3	1.9	17.2	24.1
Sablefish	75	232	6.1	1.4	10.3	13.8
Sculpin	38	19	0.5	0.1	10.3	13.8
Shark	1	12	0.3	0.1	3.4	3.4
Skate	1	7	0.2	-	3.4	3.4
Smelt ^f	12	38	1.0	0.2	6.9	51.7
Trout	307	430	11.3	2.6	37.9	48.3
Marine invertebrate	1,512	1,512	39.8	9.0	79.3	82.8
Chiton ^f	221	874	23.0	5.2	58.6	75.9
Clam ^f	59	177	4.7	1.1	17.2	34.5
Limpet ^f	4	6	0.2	-	10.3	10.3
Mussel ^f	34	51	1.3	0.3	34.5	34.5
Octopus	84	335	8.8	2.0	58.6	75.9
Snail ^f	44	66	1.7	0.4	48.3	58.6

TABLE D-27 (Cont.)

Subsistence Resource	Units, Total Harvested	Edible Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
Birds and Bird Eggs						
Total bird and egg	1,106	603	15.9	3.6	44.8	72.4
Migratory bird	430	384	10.1	2.3	34.5	41.4
Crane	3	22	0.6	0.1	3.4	3.4
Ducks	390	331	8.7	2.0	31.0	34.5
Seabird and loon	37	31	0.8	0.2	13.8	17.2
Upland game bird	39	28	0.7	0.2	17.2	17.2
Grouse	39	28	0.7	0.2	17.2	17.2
Bird egg	637	191	5.0	1.1	31.0	62.1

- a Number of households in sample was 29; number of households in communities was 38.
- b Total given in pounds, which for some resources involved conversion from individual units; as a result, individual units will not sum to total.
- c Some not eaten.
- d Not eaten.
- e “-” = 0 or a number that rounds to 0.
- f Unit of measure is gallon.

Source: ADF&G 2001 (sums corrected as necessary).

TABLE D-28 Subsistence Harvest Summary for Port Graham in 1997^a

Subsistence Resource	Units, Total Harvested	Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
All Resources	39,548 ^b	39,548	627.8	253.4	97.7	100.0
Marine Mammals						
Marine mammal	46	1,443	22.9	9.3	27.3	81.8
Sea otter	20	— ^c	—	—	11.4	15.9
Seal	26	1,443	22.9	9.3	20.5	77.3
Terrestrial Mammals						
Large land mammal	3	166	2.6	1.1	4.5	43.2
Black bear	3	166	2.6	1.1	4.5	22.7
Small land mammal/furbearer ^d	10	57	0.9	0.4	6.8	6.8
Porcupine	7	57	0.9	0.4	6.8	6.8
Weasel ^e	3	—	—	—	2.3	2.3
Fishes and Marine Invertebrates						
Total fish	34,292	34,292	544.3	219.7	90.9	100
Total salmon	4,825	22,503	357.2	144.2	86.4	100
Total non-salmon	11,789	11,789	187.1	75.5	63.6	93.2
Bass	36	36	0.6	0.2	4.5	9.1
Char	339	475	7.5	3.0	20.5	27.3
Cod	686	674	10.7	4.3	13.6	40.9
Flounder	100	301	4.8	1.9	18.2	29.5
Greenling	62	96	1.5	0.6	6.8	11.4
Halibut	8,286	8,286	131.5	53.1	56.8	84.1
Herring ^f	217	1,302	20.7	8.3	18.2	61.4
Herring roe ^f	7	60	1.0	0.4	4.5	31.8
Rockfish	153	336	5.3	2.2	15.9	22.7
Sablefish	46	142	2.3	0.9	6.8	18.2
Sculpin	7	4	0.1	—	2.3	2.3
Shark	1	13	0.2	0.1	2.3	4.5
Smelt ^f	7	23	0.4	0.2	2.3	36.4
Steelhead	13	18	0.3	0.1	9.1	13.6
Trout	30	42	0.7	0.3	11.4	18.2
Marine invertebrate	1,994	1,994	31.7	12.8	75.0	86.4
Chiton ^f	238	1,240	19.7	8.0	68.2	84.1
Clam ^f	39	118	1.9	0.8	9.1	25.0
Cockle ^f	2	6	0.1	—	4.5	6.8
Crab ^f	6	4	0.1	—	2.3	13.6
Mussel ^f	3	4	0.1	—	2.3	4.5
Octopus	146	584	9.3	3.7	38.6	68.2
Sea urchin ^f	1	—	—	—	2.3	4.5
Snail	23	34	0.5	0.2	22.7	29.5
Whelk	1	2	—	—	2.3	4.5

TABLE D-28 (Cont.)

Subsistence Resource	Units, Total Harvested	Edible Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
Birds						
Total bird and egg	223	192	3.1	1.2	25.0	31.8
Migratory bird	203	180	2.9	1.2	20.5	22.7
Duck	203	172	2.7	1.1	20.5	22.7
Seabird and loon	3	9	0.1	0.1	2.3	2.3
Upland game bird	17	12	0.2	0.1	11.4	13.6
Grouse	17	12	0.2	–	11.4	13.6

- a Number of households in sample was 44; number of households in communities was 63.
- b Total given in pounds, which for some resources involved conversion from individual units; as a result, individual units will not sum to total.
- c “–” = 0 or a number that rounds to 0.
- d Some not eaten.
- e Not eaten.
- f Unit of measure is gallon.

Source: ADF&G (2001) (sums corrected as necessary).

TABLE D-29 Subsistence Harvest Summary for Tatitlek in 1997^a

Subsistence Resource	Units, Total Harvested	Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
All Resources	32,915 ^b	32,915	1,219.1	406.4	87.5	100.0
Marine Mammals						
Marine mammal ^c	248	13,372	495.3	165.1	50.0	93.8
Porpoise	5	304	11.3	3.8	12.5	18.8
Sea otter ^d	57	- ^e	-	-	18.8	18.8
Seal	167	9,356	346.5	115.5	50.0	93.8
Steller sea lion	19	3,712	137.5	45.8	18.8	25.0
Terrestrial Mammals						
Large land mammal	83	3,720	137.8	45.9	62.5	93.8
Deer	78	3,353	124.2	41.0	62.5	93.8
Goat	5	367	13.6	4.5	18.8	37.5
Small land mammal/furbearer ^c	24	-	-	-	12.5	12.5
Land otter ^d	24	-	-	-	12.5	12.5
Fishes and Marine Invertebrates						
Total fish	12,858	12,858	476.2	158.7	75.0	100.0
Total salmon	1,375	7,552	279.7	93.2	68.8	100.0
Total non-salmon	5,306	5,306	196.5	65.5	62.5	81.3
Cod	94	302	11.2	3.7	31.3	31.3
Greenling	4	17	0.6	0.2	6.3	6.3
Halibut	2,008	2,008	74.4	24.8	43.8	68.8
Herring ^f	119	714	26.4	8.8	31.3	50.0
Herring roe ^f	197	1,382	51.2	17.1	43.8	56.3
Rockfish	237	765	28.3	9.5	50.0	50.0
Sablefish	25	78	2.9	1.0	12.5	18.8
Smelt ^g	12	38	1.4	0.5	12.5	31.3
Wolffish	2	1	-	-	6.3	12.5
Marine invertebrate	1,509	1,509	55.9	18.6	62.5	81.3
Chiton ^f	26	104	3.8	1.3	25.0	50.0
Clam ^f	158	474	17.6	5.9	56.3	56.3
Cockle ^f	51	153	5.7	1.9	25.0	25.0
Crab	407	652	24.1	8.1	31.3	68.8
Octopus	14	54	2.0	0.7	12.5	25.0
Oyster ^f	19	56	2.1	0.7	12.5	43.8
Shrimp ^f	17	17	0.6	0.2	6.3	31.3
Birds						
Total bird and egg	1,750	797	29.5	9.8	68.8	81.3
Migratory bird	403	422	15.7	5.2	50.0	62.5
Crane	7	57	2.1	0.7	18.8	18.8
Duck	370	314	11.6	3.9	43.8	62.5
Goose	27	51	1.9	0.7	31.3	37.5

TABLE D-29 (Cont.)

Subsistence Resource	Units, Total Harvested	Edible Pounds Harvested			Percent of Households Surveyed	
		Total	Household Harvest Mean	Per Capita	Households Harvesting	Households Using
Upland game bird	12	8	0.3	0.1	12.5	12.5
Grouse	12	8	0.3	0.1	12.5	12.5
Bird egg	1,335	367	13.6	4.5	56.3	68.8

- a Number of households in sample was 16; number of households in communities was 27.
- b Total given in pounds, which for some resources involved conversion from individual units; as a result, individual units will not sum to total.
- c Some not eaten.
- d Not eaten.
- e “_” = 0 or a number that rounds to 0.
- f Unit of measure is gallon.

Source: ADF&G (2001) (sums corrected as necessary).

