

Customary and Traditional Use Worksheet II-1, Salmon: Bristol Bay Area

Prepared by

Alaska Department of Fish and Game

Division of Subsistence

November 2022

Alaska Department of Fish and Game

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Symbols and Abbreviations

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Weights and measures (metric)

centimeter	cm
deciliter	dL
gram	g
hectare	ha
kilogram	kg
kilometer	km
liter	L
meter	m
milliliter	mL
millimeter	mm

Weights and measures (English)

cubic feet per second	ft ³ /s
foot	ft
gallon	gal
inch	in
mile	mi
nautical mile	nmi
ounce	oz
pound	lb
quart	qt
yard	yd

Time and temperature

day	d
degrees Celsius	°C
degrees Fahrenheit	°F
degrees kelvin	K
hour	h
minute	min
second	s

Physics and chemistry

all atomic symbols

alternating current	AC
ampere	A
calorie	cal
direct current	DC
hertz	Hz
horsepower	hp
hydrogen ion activity (negative log of)	pH
parts per million	ppm
parts per thousand	ppt, ‰
volts	V
watts	W

General

Alaska Administrative Code	AAC
all commonly-accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.
all commonly-accepted professional titles	e.g., Dr., Ph.D., R.N., etc.
at	@
compass directions:	
east	E
north	N
south	S
west	W
copyright	©
corporate suffixes:	
Company	Co.
Corporation	Corp.
Incorporated	Inc.
Limited	Ltd.
District of Columbia	D.C.
et alii (and others)	et al.
et cetera (and so forth)	etc.
exempli gratia (for example)	e.g.
Federal Information Code	FIC
id est (that is)	i.e.
latitude or longitude	lat. or long.
monetary symbols (U.S.)	\$, ¢
months (tables and figures)	first three letters (Jan.,...,Dec)
registered trademark	®
trademark	™
United States (adjective)	U.S.
United States of America (noun)	USA
U.S.C.	United States Code
U.S. state	two-letter abbreviations (e.g., AK, WA)

Measures (fisheries)

fork length	FL
mid-eye-to-fork	MEF
mid-eye-to-tail-fork	METF
standard length	SL
total length	TL

Mathematics, statistics

*all standard mathematical signs,
symbols and abbreviations*

alternate hypothesis	H _A
base of natural logarithm	e
catch per unit effort	CPUE
coefficient of variation	CV
common test statistics	(F, t, χ^2 , etc.)
confidence interval	CI
correlation coefficient (multiple)	R
correlation coefficient (simple)	r
covariance	cov
degree (angular)	°
degrees of freedom	df
expected value	E
greater than	>
greater than or equal to	≥
harvest per unit effort	HPUE
less than	<
less than or equal to	≤
logarithm (natural)	ln
logarithm (base 10)	log
logarithm (specify base)	log ₂ , etc.
minute (angular)	'
not significant	NS
null hypothesis	H ₀
percent	%
probability	P
probability of a type I error (rejection of the null hypothesis when true)	α
probability of a type II error (acceptance of the null hypothesis when false)	β
second (angular)	"
standard deviation	SD
standard error	SE
variance:	
population	Var
sample	var

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**CUSTOMARY AND TRADITIONAL USE WORKSHEET II-1, SALMON:
BRISTOL BAY AREA**

Prepared by

Alaska Department of Fish and Game
Division of Subsistence

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NOTE

The following document was originally produced in 1993 and used to support the customary and traditional use (C&T) and amount necessary for subsistence (ANS) determinations for Bristol Bay Area salmon fisheries as reflected in 5 AAC 01.336:

Customary and traditional subsistence uses of fish stocks and amounts necessary for subsistence uses

(a) The Alaska Board of Fisheries (board) finds that the following fish stocks are customarily and traditionally taken or used for subsistence in the Bristol Bay Area:

(1) all finfish;

(2) herring spawn on kelp in the waters of the Togiak District as described in 5 AAC 27.805(a).

(b) The board finds that

(1) 157,000–172,171 salmon are reasonably necessary for subsistence uses in the Bristol Bay Area, including 55,000–65,000 Kvichak River drainage sockeye salmon; this finding does not include salmon stocks in the Alagnak River;

(2) 250,000 usable pounds of finfish other than salmon are reasonably necessary for subsistence uses in the Bristol Bay Area;

(3) 4,100–12,700 usable pounds of herring spawn on kelp are reasonably necessary for subsistence uses in the Togiak District as described in 5 AAC 27.805(a).

ORIGINAL

CUSTOMARY AND TRADITIONAL USE WORKSHEET II-1

SALMON: BRISTOL BAY AREA

**Prepared by the Division of Subsistence
Alaska Department of Fish and Game**

February 1993

Note: The Alaska Board of Fisheries has made positive customary and traditional use findings for salmon in the Nushagak District (1987), the Togiak District (1987), and the Naknek/Kvichak districts (1982). No findings have been made for the Egegik and Ugashik districts.

Criterion 1. A long-term consistent pattern of use and reliance on the fish stock or game population that has been established over a reasonable period of time, excluding interruption by circumstances beyond the user's control, such as unavailability of the fish or game caused by migratory patterns.

There has been human occupation of the Bristol Bay area for at least 9,000 years (Wright et al. 1985:18). Archaeological and ethnohistorical data provide evidence of the central role of salmon in the subsistence strategies of local communities from the time of earliest occupation until the present (VanStone 1967).

Table 1 reports the 1990 population of the Bristol Bay Area. Substantial documentation of the contemporary subsistence salmon fisheries of the Bristol Bay Area is available through community studies conducted by the Division of Subsistence in every community in the region and reported in the division's technical paper series and the Community Profile Database (Scott et al. 1992). Records of subsistence salmon harvests are also available based upon subsistence salmon permit data. The latter database is maintained by the Division of Subsistence with annual and time series data appearing in the area annual management reports prepared by the Division of Commercial Fisheries. A very large percentage of the participants in the Bristol Bay subsistence salmon fishery in most communities obtain and return permits with harvest records.

Table 2 summarizes data on participation in the use and harvest of salmon in Bristol Bay communities based upon Division of Subsistence harvest surveys. As shown in Figure 1, use of salmon for subsistence purposes in these communities is virtually universal. As shown in Figure 2 (see also Table 2), harvests as measured in useable pounds per person are relatively large, ranging from about 100 pounds per person to over 700 pounds per person. The largest harvests, which occur in communities of the Nushagak River and in the Kvichak District, are among the highest subsistence salmon harvests in Alaska.

Tables 3, 4, 5, 6, 7, and 8 summarize household survey data for each species of salmon and for "redfish" (spawned sockeyes). Large percentages of households use the kinds of salmon that are available in each district.

Table 9 summarizes data from permit returns for the Bristol Bay Area. Information for each district is available if needed (ADF&G 1992), as are data on harvests by each local community. The 20 year average total subsistence harvest for 1972 - 1991 was 164,643 salmon, an average of 192.1 salmon per permit. The ten year average (1982 - 1991) was 172,835, with an average catch of 179.5 salmon per permit. Of the 20 year average, about 80 percent was sockeye salmon.

Criterion 2. A use pattern recurring in specific seasons of each year.

Seasonal rounds of subsistence activities for each subregion of the Bristol Bay Area (Togiak, Nushagak Bay and River, Iliamna/Kvichak/Lake Clark, Naknek River, and Alaska Peninsula) appear in Wright et al. 1985:36,43,50,58,67,75,84; cf. Gross 1987, Seitz 1990). Generally, each species is taken in accordance with its run timing. Generally, fishing for kings begins in mid May. Fishing for fresh sockeyes and chums starts in early to mid June and lasts into August. Pinks are generally taken in July and August. Subsistence fishing for coho salmon begins in July and lasts into October. Fishing for "redfish," spawned and spawning sockeye salmon, begins in September and may last through October or later.

Criterion 3. A use pattern consisting of methods and means of harvest which are characterized by efficiency and economy of effort and cost.

Most salmon are taken for subsistence purposes with set gill nets. Spears are also legal gear in the Togiak District only. Other methods which have been used in the past and which may be used to a more limited degree today include beach or "sweep" seining (Togiak, Iliamna Lake) (Gross 1987:38; Townsend 1981:626) and drift gillnetting (Togiak River) (Gross 1987:39). Gross (1987) contains detailed information on fishing methods used in the Togiak River and lake.

Salmon are also removed from commercial catches for home use and harvested with rod and reel. Data on salmon harvests by gear type are available in the Community Profile Database (Scott et al. 1992) if needed. The vast majority of the home use harvest of salmon in the Bristol Bay area occurs with subsistence methods.

Subsistence harvesting activities take place near each community, near fish camps (Ekuk, Igushik, Lewis Point, for example), in lakes, along river corridors, and along the coast in Bristol Bay and other bays. Access is varied and includes skiffs, commercial fishing boats, ATVs, and on foot.

Criterion 4. The area in which the noncommercial long-term and consistent pattern of taking, use, and reliance upon the fish stock or game population has been established.

Most of the river corridors, coastline and lakes in the Bristol Bay Area are used for subsistence salmon fishing. Maps of areas used in the 1960s, 1970s, and early 1980s appear in the Habitat Management Guide Reference Map Atlas (ADF&G 1985). Detailed information on specific fishing locations each year is available through the Division of Subsistence permit database for the Bristol Bay Area.

Criterion 5. The means of handling, preparing, preserving, and storing fish or game which has been traditionally used by past generations, but not excluding recent technological advances where appropriate.

A variety of methods are used, including drying, smoking, half-drying, canning, fermenting, jarring, and freezing. Detailed descriptions of preservation methods appear in several Division of Subsistence technical papers (e.g. Morris 1982, 1983 on Naknek River communities; Schichnes and Chythlook 1988 on Manokotak; Fall et al. 1986 on Dillingham).

Criterion 6. A use pattern which includes the handing down of knowledge of fishing or hunting skills, values, and lore from generation to generation.

Most subsistence salmon fishing in the Bristol Bay area is a structured activity of extended family groups, with roles assigned by age and sex. Descriptions of fishing groups and processing groups appear in

several Division of Subsistence technical papers (e.g. Morris 1983 on the Bristol Bay Borough; Schichnes and Chythlook 1988 on Manokotak; Seitz 1990 on Nushagak Bay).

Catching the first king salmon each year is a major event in Dillingham (Fall et al. 1986:96), marking the beginning of a new year of resource-oriented activities. A discussion of "the cultural and social values of harvesting wild resources" in the Bristol Bay area appears in Wright et al. (1985:28-31). Among other things, it provides information on sharing with elders, integration of newcomers into communities through participation in subsistence activities, the role of wild resources in cultural celebrations, the various traditional products produced from wild foods, and the belief system which shapes hunting and fishing activities in Bristol Bay communities. More specific information also appears in technical papers on each community.

Criterion 7. A pattern of taking, use, and reliance where the harvest effort or products of that harvest are distributed or shared, including customary trade, barter, and gift-giving.

Salmon and salmon products are shared widely within and between communities in the Bristol Bay region. Table 2 provides information on the percentage of sampled households in each community which received and gave away salmon during particular study years. Specific examples of sharing appear in technical papers.

Criterion 8. A pattern that includes taking, use, and reliance for subsistence purposes upon a wide variety of the fish and game resources and that provides substantial economic, cultural, social, and nutritional elements of the subsistence way of life.

Subsistence harvests in Bristol Bay communities are among the highest in Alaska. Annual harvests range from about 200-250 pounds per person in the larger regional center communities (Dillingham, Bristol Bay Borough) to 600 - 800 pounds or more per person in communities of the Nushagak River and Illamna Lake area. Harvests are diverse, and in addition to salmon include a wide variety of other fish, land mammals, birds, marine mammals, and wild plants (Wright et al. 1985; Scott et al. 1992).

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TABLE 1. POPULATION OF THE BRISTOL BAY AREA, 1990

<u>Community</u>	<u>Population</u>	<u>Number of Households</u>
<i>Dillingham Census Area</i>		
Aleknagik	185	57
Clarks Point	60	18
Dillingham	2,017	691
Ekuik	3	1
Ekwok	77	30
Koliganek	181	47
Manokotak	385	90
New Stuyahok	391	88
Portage Creek	5	3
Togiak	613	151
Twin Hills	66	25
Balance	29	14
Subtotal	4,012	1,215
<i>Bristol Bay Borough</i>		
King Salmon	696 ^a	158
Naknek	575	208
South Naknek	136	39
Balance	3	2
Subtotal	1,410 ^a	407
<i>Lake and Peninsula Borough (portion)</i>		
Egegik	122	48
Igiugig	33	13
Iliamna	94	30
Kokhanok	152	38
Levelock	105	39
Newhalen	160	36
Nondalton	178	54
Pedro Bay	42	17
Pilot Point	53	17
Port Alsworth	55	17
Ugashik	7	4
Balance	31	17
Subtotal	1,032	330
GRAND TOTAL	6,454	1,952

^a Includes 267 in group quarters.

Source: Alaska Department of Labor 1992

Table 2

HARVEST SUMMARY FROM DIVISION OF SUBSISTENCE HOUSEHOLD SURVEYS
RESOURCE: Salmon

Community	Year	Percentage of Households					Estimated Number Harvested	Estimated Pounds Harvested	Pounds Harvested	
		Used	Attempt	Harvested	Received	Gaveaway			----- Household	Percapita
Clark's Point	89	100.	88.2	88.2	76.5	76.5	1639	9912	583.0	177.0
Dillingham	84	88.2	67.3	65.4	43.8	34.6	46103	288651	417.7	141.4
Egegik	84	96.	92.	92.	56.	56.	1631	9128	217.3	93.6
Ekwok	87	89.7	65.5	65.5	51.7	48.3	8392	48827	1525.8	456.1
Igiugig	83		33.3	33.3	33.3		7740	30961	2814.6	444.4
Iliamna	83		65.	65.	10.		11758	47149	1309.7	335.8
King Salmon	83			79.1			5794	37854	310.2	102.6
Kokhanok	83		89.5	89.5	26.3		18141	73018	2704.3	508.7
Koliganek	87	83.3	71.4	71.4	61.9	52.4	14291	67520	1406.6	362.4
Levelock	88	92.6	92.6	70.4	77.8	48.1	18160	71887	2178.3	660.8
Manokotak	85	100.	92.6	88.9	57.4	63.	7624	41847	709.2	135.8
Naknek	83			76.9			7763	39259	319.1	102.4
New Stuyahok	87	90.	77.5	77.5	65.	32.5	22840	144394	1951.2	408.6
Newhalen	83		45.5	45.5	0.		21216	85124	3274.0	679.5
Nondalton	73			76.			19603	78401	2613.3	506.4
Nondalton	80			71.			34870	139480	3985.1	832.7
Nondalton	81			58.			25226	100903	2882.9	507.1
Nondalton	83		95.2	90.5	19.		53756	215447	3989.7	768.6
Pedro Bay	82		82.4	82.4	47.1		11031	44532	2120.5	720.9
Pilot Point	87	100.	100.	100.	17.6	70.6	1259	6133	340.7	94.9
Port Alsworth	83		61.5	61.5	7.7		4552	18209	867.0	239.8

Table 2

HARVEST SUMMARY FROM DIVISION OF SUBSISTENCE HOUSEHOLD SURVEYS
 RESOURCE: Salmon

Community	Year	Percentage of Households					Estimated Number Harvested	Estimated Pounds Harvested	Pounds Harvested ----- Household Percapita	
		Used	Attempt	Harvested	Received	Gaveaway				
South Naknek	83			76.2			2114	11514	234.9	83.6
Ugashik	87	100.	100.	100.	0.	80.	616	3201	640.2	320.1

Table 3

HARVEST SUMMARY FROM DIVISION OF SUBSISTENCE HOUSEHOLD SURVEYS
RESOURCE: Chinook Salmon

Community	Year	Percentage of Households					Estimated Number Harvested	Estimated Pounds Harvested	Pounds Harvested	
		Used	Attempt	Harvested	Received	Gaveaway			-----	
									Household	Percapita
Clark's Point	89	94.1	70.6	70.6	52.9	58.8	331	4422	260.1	78.9
Dillingham	84	83.7	57.5	56.9	36.6	27.5	7095	107844	156.0	52.8
Egegik	84	76.	60.	64.	32.	36.	153	2079	49.5	21.3
Ekwok	87	86.2	55.2	55.2	48.3	41.4	1382	19079	596.2	178.2
Igiugig	83		0.	0.	0.		0	0	0.0	0.0
Iliamna	83		5.	5.	0.		11	162	4.5	1.1
King Salmon	83			72.1			1421	20753	170.1	56.2
Kokhanok	83		21.1	21.1	0.		41	618	22.8	4.3
Koliganek	87	78.6	52.4	52.4	50.	42.9	1001	13826	288.0	74.2
Levelock	88	66.7	59.3	44.4	55.6	29.6	188	2689	81.4	24.7
Manokotak	85	87.	81.5	75.9	35.2	44.4	756	9300	157.6	30.1
Naknek	83			71.2			816	11915	96.8	31.0
New Stuyahok	87	87.5	72.5	70.	55.	30.	5084	70208	948.7	198.6
Newhalen	83		9.1	9.1	0.		24	355	13.6	2.8
Nondalton	83		47.6	28.6	0.		39	578	10.7	2.0
Pedro Bay	82		5.9	5.9	0.		37	556	26.4	9.0
Pilot Point	87	94.1	94.1	94.1	0.	41.2	111	1448	80.4	22.4
Port Alsworth	83		0.	0.	0.		0	0	0.0	0.0
South Naknek	83			61.9			301	4395	89.6	31.9
Ugashik	87	100.	100.	100.	0.	40	50	651	130.2	65.1

Table 4

HARVEST SUMMARY FROM DIVISION OF SUBSISTENCE HOUSEHOLD SURVEYS
RESOURCE: Sockeye Salmon

Community	Year	Percentage of Households					Estimated Number Harvested	Estimated Pounds Harvested	Pounds Harvested	
		Used	Attempt	Harvested	Received	Gaveaway			----- Household	Per capita
Clark's Point	89	100.	70.6	70.6	58.8	52.9	745	3144	184.9	56.1
Dillingham	84	67.3	50.3	49.7	26.1	23.5	16372	78587	113.7	38.5
Egegik	84	76.	68.	68.	32.	28.	581	2616	62.2	26.8
Ekwok	87	82.8	51.7	51.7	37.9	27.6	4065	17155	536.0	160.2
Igiugig	83	66.7	66.7	33.3	33.3		7630	30521	2774.6	438.1
Iliamna	83	75.	60.	60.	5.		7067	28267	785.2	201.3
King Salmon	83			39.5			3132	12216	100.1	33.1
Kokhanok	83	89.5	68.4	68.4	21.1		15769	63078	2336.2	439.4
Koliganek	87	73.8	47.6	47.6	42.9	38.1	7442	31406	654.3	168.5
Levelock	88	92.6	92.6	66.7	70.4	48.1	10294	43161	1307.9	396.7
Manokotak	85	100.	90.7	81.5	44.4	51.9	5521	25396	430.4	82.4
Naknek	83			57.7			5601	21845	177.6	57.0
New Stuyahok	87	82.5	65.	60.	47.5	17.5	12188	51432	695.0	145.5
Newhalen	83	63.6	45.5	45.5	0.		19301	77206	2969.4	616.3
Nondalton	73			76.			19603	78401	2613.3	506.4
Nondalton	80			71.			34870	139480	3985.1	832.7
Nondalton	81			58.			25226	100903	2882.9	507.1
Nondalton	83	95.2	76.2	76.2	14.3		43586	174343	3228.5	622.0
Pedro Bay	82	82.4	82.4	76.5	35.3		10191	40765	1941.1	660.0
Pilot Point	87	88.2	76.5	70.6	17.6	35.3	361	1553	86.2	24.0
Port Alsworth	83	61.5	61.5	61.5	7.7		4221	16884	804.0	222.3

Table 4

HARVEST SUMMARY FROM DIVISION OF SUBSISTENCE HOUSEHOLD SURVEYS
 RESOURCE: Sockeye Salmon

Community	Year	Percentage of Households					Estimated Number Harvested	Estimated Pounds Harvested	Pounds Harvested	
		Used	Attempt	Harvested	Received	Gaveaway			-----	
									Household	Percapita
South Naknek	83			66.7			1304	5087	103.8	36.9
Ugashik	87	80.	80.	80.	0.	40.	310	1333	266.6	133.3

Table 5

HARVEST SUMMARY FROM DIVISION OF SUBSISTENCE HOUSEHOLD SURVEYS

RESOURCE: Chum Salmon (general)

Community	Year	Percentage of Households					Estimated Number Harvested	Estimated Pounds Harvested	Pounds Harvested	
		Used	Attempt	Harvested	Received	Gaveaway			-----	
									Household	Percapita
Clark's Point	89	70.6	58.8	58.8	29.4	41.2	130	549	32.2	9.8
Dillingham	84	23.5	18.3	18.3	8.5	7.2	1874	9183	13.2	4.5
Egegik	84	20.	16.	16.	8.	8.	54	269	6.4	2.7
Ekwok	87	65.5	48.3	48.3	17.2	17.2	1402	6269	195.9	58.5
King Salmon	83			4.7			145	622	5.1	1.6
Koliganek	87	50.	40.5	40.5	9.5	2.4	1733	7742	161.3	41.5
Levelock	88	40.7	59.3	33.3	22.2	29.6	2108	8781	266.1	80.7
Manokotak	85	57.4	55.6	33.3	24.1	27.8	403	1854	31.4	6.0
Naknek	83			11.5			322	1384	11.2	3.6
New Stuyahok	87	62.5	47.5	47.5	35.	17.5	3252	14538	196.4	41.1
Pilot Point	87	23.5	23.5	23.5	0.	5.9	32	147	8.1	2.2
South Naknek	83			14.3			86	371	7.5	2.6
Ugashik	87	20.	20.	20.	0.	0.	0	0	0.0	0.0

Table 6

HARVEST SUMMARY FROM DIVISION OF SUBSISTENCE HOUSEHOLD SURVEYS
RESOURCE: Pink Salmon

Community	Year	Percentage of Households					Estimated Number	Estimated Pounds	Pounds Harvested	
		Used	Attempt	Harvested	Received	Gaveaway	Harvested	Harvested	Household	Percapita
Clark's Point	89	35.3	23.5	23.5	17.6	23.5	57	132	7.7	2.3
Dillingham	84	29.4	20.3	20.3	11.1	8.5	3152	8513	12.3	4.1
Egegik	84	12.	8.	8.	8.	8.	124	398	9.4	4.0
Ekwok	87	13.8	10.3	10.3	3.4	6.9	42	96	3.0	0.9
King Salmon	83			2.3			142	355	2.9	0.9
Koliganek	87	4.8	2.4	2.4	2.4	0.	6	13	0.2	0.0
Levelock	88	37.	48.1	29.6	22.2	29.6	1899	4946	149.8	45.4
Manokotak	85	46.3	46.3	22.2	20.4	18.5	70	314	5.3	1.0
Naknek	83			3.8			52	130	1.0	0.3
New Stuyahok	87	17.5	15.	15.	7.5	5.	100	229	3.0	0.6
Pilot Point	87	0.	0.	0.	0.	0.	0	0	0.0	0.0
South Naknek	83			4.8			44	111	2.2	0.8
Ugashik	87	0.	0.	0.	0.	0.	0	0	0.0	0.0

Table 7

HARVEST SUMMARY FROM DIVISION OF SUBSISTENCE HOUSEHOLD SURVEYS
 RESOURCE: Coho Salmon

Community	Year	Percentage of Households					Estimated Number Harvested	Estimated Pounds Harvested	Pounds Harvested	
		Used	Attempt	Harvested	Received	Gaveaway			----- Household	Percapita
Clark's Point	89	76.5	64.7	52.9	47.1	47.1	337	1577	92.7	28.1
Dillingham	84	61.4	47.1	45.8	25.5	17.	8698	41750	60.4	20.4
Egegik	84	88.	72.	72.	32.	32.	627	3258	77.5	33.4
Ekwok	87	75.9	48.3	48.3	31.	27.6	1246	5718	178.6	53.4
King Salmon	83			44.2			953	3909	32.0	10.6
Koliganek	87	73.8	57.1	57.1	33.3	19.	2437	11184	233.0	60.0
Levelock	88	59.3	59.3	29.6	44.4	37.	1654	8277	250.8	76.0
Manokotak	85	79.6	77.8	55.6	33.3	37.	874	4807	81.4	15.6
Naknek	83			48.1			972	3986	32.4	10.4
New Stuyahok	87	52.5	37.5	37.5	25.	7.5	1373	6300	85.1	17.8
Pilot Point	87	100.	100.	100.	0.	17.6	533	2631	146.1	40.7
South Naknek	83			57.1			378	1550	31.6	11.2
Ugashik	87	100.	100.	100.	0.	60.	226	1116	223.2	111.6

Table 8

HARVEST SUMMARY FROM DIVISION OF SUBSISTENCE HOUSEHOLD SURVEYS
RESOURCE: Spawnouts, Salmon

Community	Year	Percentage of Households					Estimated Number Harvested	Estimated Pounds Harvested	Pounds Harvested	
		Used	Attempt	Harvested	Received	Gaveaway			----- Household	Percapite
Clark's Point	89	47.1	11.8	11.8	35.3	17.6	39	78	4.5	1.3
Ekwok	87	34.5	20.7	20.7	20.7	6.9	255	510	15.9	4.7
Igiugig	83		33.3	33.3	33.3		110	440	40.0	6.3
Iliamna	83		15.	15.	5.		4680	18720	520.0	133.3
King Salmon	83			0.			0	0	0.0	0.0
Kokhanok	83		57.9	57.9	10.5		2331	9322	345.2	64.9
Koliganek	87	42.9	23.8	23.8	31.	12.2	1673	3346	69.7	17.9
Levelock	88	37.	18.5	18.5	29.6	25.9	2017	4033	122.2	37.0
Naknek	83			0.			0	0	0.0	0.0
New Stuyahok	87	32.5	25.	25.	12.5	2.6	844	1687	22.8	4.7
Newhalen	83		27.3	27.3	0.		1891	7564	290.9	60.3
Nondalton	83		81.	81.	4.8		10131	40526	750.4	144.5
Pedro Bay	82		23.5	23.5	17.6		803	3212	152.9	52.0
Pilot Point	87	5.9	5.9	5.9	0.	0.	42	85	4.7	1.3
Port Alsworth	83		15.4	15.4	0.		331	1325	63.0	17.4
South Naknek	83			0.			0	0	0.0	0.0
Ugashik	87	0.	0.	0.	0.	0.	0	0	0.0	0.0

TABLE 9. ESTIMATES OF SUBSISTENCE SALMON HARVESTS BASED UPON RETURNED PERMITS, BRISTOL BAY AREA, 1972 - 1991

	Permits	<u>Sockeye</u>	<u>Numbers of Salmon</u>		<u>Pink</u>	<u>Coho</u>	<u>Total</u>
			<u>Chinook</u>	<u>Chum</u>			
20 Year Average, 1972 - 1991	857	131,478	10,981	9,912	6,790	8,260	164,643
1972 - 1981 Average	751	126,700	9,140	10,420	7,080	6,170	156,450
1982 - 1991 Average	963	136,256	12,821	9,404	6,500	10,350	172,835

Note: Averages for pink salmon for for even years only.

Source: ADF&G 1992

Figure 1. Percentage of Sampled Households Using Salmon , Bristol Bay Area Communities

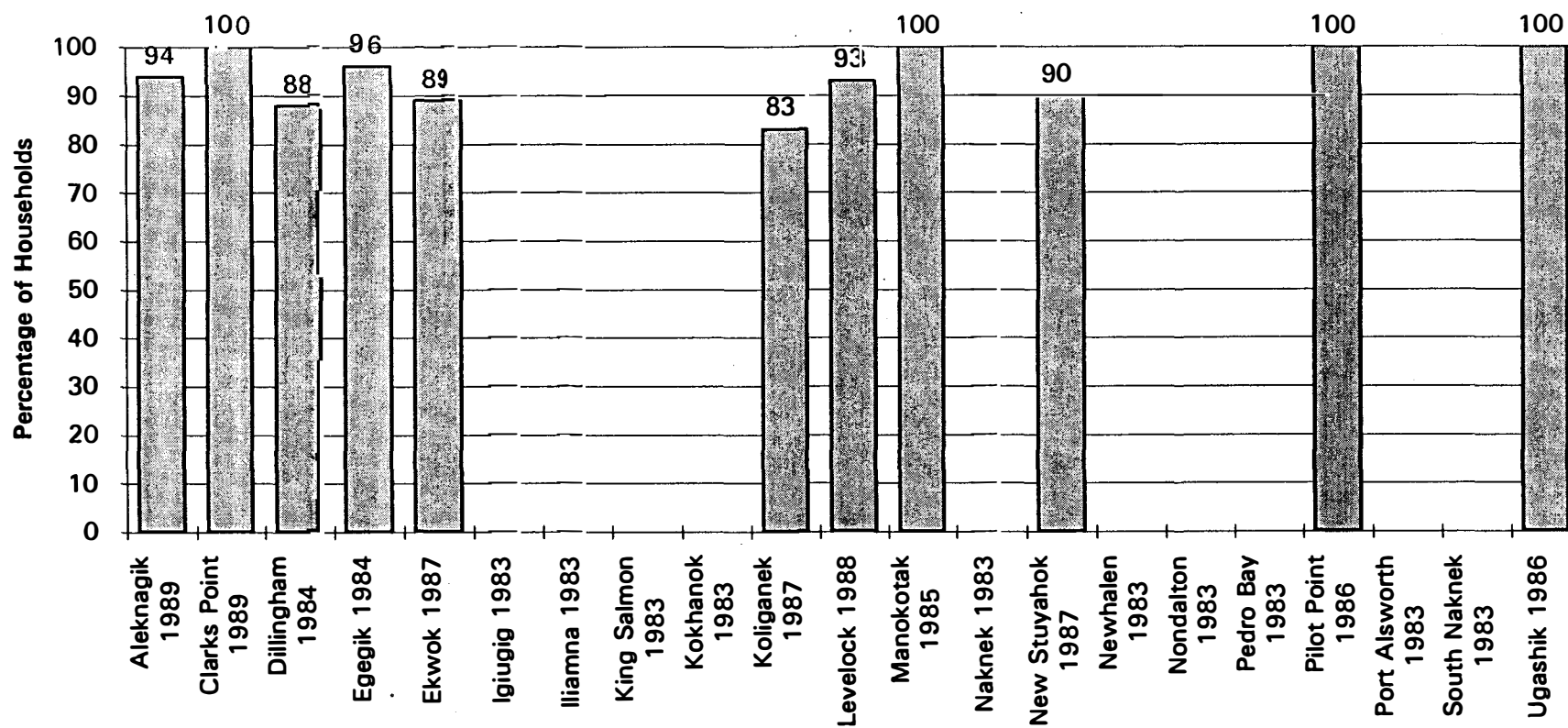


Figure 2. Subsistence Salmon Harvests, Pounds Useable Weight Per Person, Bristol Bay Area Communities

