KVICHAK RIVER SOCKEYE SALMON

SPAWNING GROUND SURVEYS,

1955-2002

Regional Information Report[1] No. 2A02-32

By:

Steve Morstad

Alaska Dept. Fish and Game
Division of Commercial Fisheries
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AUTHOR

Steve Morstad is the Region II Naknek/Kvichak Area Management Biologist for the Alaska Department of Fish and Game, Division of Commercial Fisheries, Box 37, King Salmon, Alaska, 99613.

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INTRODUCTION

Records of the Kvichak River spawning ground observations for the Iliamna Lake and Lake Clark in Bristol Bay, Alaska began in 1920. Bureau of Commercial Fisheries (BCF) agents conducted ground, boat, and to a lesser extent, aerial counts or surveys of a number of spawning areas over the period 1920-1938. During 1939-1955, except 1942 and 1943, BCF personnel established a program of systematically surveying a group of index areas within the Kvichak system which obtained a yearly escapement index. From 1955-1987, except for 1984, the University of Washington, Fisheries Research Institute (FRI) conducted systematic spawning ground surveys in the Kvichak system. The number of stream, pond and mainland/island beaches surveyed increased considerably in relation to the earlier years (Figure 1-4). Due to the funding cuts in 1988, aerial surveys of the Kvichak system were taken over by Alaska Department of Fish and Game (ADF&G) Division of Commercial Fisheries personnel. ADF&G has flown the surveys from 1988-2002. The purpose of this report is to document and archive 1955-2002 Kvichak River drainage spawning ground aerial survey estimates in a readily accessible format (Table 1).

All survey flights were conducted from small fixed-wing, high-wing, wheeled aircraft (Super Cub, Cessna 180, 185 or 206) charted from local air charter companies unless otherwise noted. Counts from fixed-wing aircraft were made at low altitude (300 to 500 feet) and 60 to 90 mph air speeds. Whenever possible, surveys were scheduled to coincide to the historical spawning peak in the individual areas. Counts were registered on hand tally counters and subsequently entered on survey data forms. Only actual, raw counts were reported for each individual system.

Table 1. Numbers of sockeye salmon spawners by area, Lake Iliamna/Lake Clark spawning grounds, 1955-2002.

	Type of Area[a]	Peak of Spawning	Year										
			1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
N.W. STREAMS													
Lower Talarik Creek	1	8/15-9/10		32,000	9,500	250	2,400	306,000	27,000	10,033	3,553	24,480	230,000
Middle Talarik Creek	1	8/15-8/31		2,500	0	0		54,000	700	1,000	100	2,445	66,000
Upper Talarik Creek	1	8/10-8/25	200	6,000	500	0		1,000	1,600	4,200	150	1,070	910
Pete Andrew Creek	1	8/10-8/25						16,600	700	600	100	2,025	14,750
Zackar Creek (Car Cr.)	1									490	100	1,017	7,900
Stream W. of Talarik	1												
Total			200	40,500	10,000	250	2,400	377,600	30,000	16,323	4,003	31,037	319,560
% of Total Escapement			0.1	0.4	0.4	0.4	0.4	2.6	0.8	0.6	1.2	3.2	1.3
NEWHALEN RIVER SYSTEMS													
Newhalen River	1	9/5-9/25	6,078	23,000				300,000		16,418			22,320
Lover's Creek	1												
Little Bear Creek/Ponds	2	9/1-9/30			500	100		750					1,100
Alexi Creek	1	9/1-9/15									3	1	675
Alexi Lakes	4			230	1,000			38,000	200	1,300	40	30	13,790
Steam Bath Creek	1												49,100
Tazimina River	1	8/15-9/1	50	32,500	10,000	600		150	55,000	30,000	3,620	150	
Six Mile Lake Beaches	4												
Pickerel Creek	1												
Pickerel Lakes	4												
Total			6,128	55,730	11,500	700		338,900	55,200	47,718	3,663	181	86,985
% of Total Escapement			2.4	0.6	0.4	0.1		2	1.5	1.8	1.1	0	0.4
N.E. STREAMS													
Roadhouse Creek	1	8/20-9/10					70			200	0	145	1,500
N.W. Eagle Bay Creek	1	8/20-9/10				102				500	0	40	1,300
N.E. Eagle Bay Creek/Ponds	1	8/10-9/1				500	214	2,000	100	1,650	0	430	14,700
Youngs Creek	1	8/15-9/1				0	4,500		819	80	30	245	5,050
Tomkok Creek	1	8/15-9/10								3,100	800	884	4,020
Chekok Creek/Ponds	1	8/15-9/25		3,000		1,200	3,303	833	241	4,700	580	130	420
Canyon Creek	1	8/15-9/15		48,000	9,000	2,700	7,350	18,000	1,040	7,900	700	2,000	15,200
Mink Creek	1	8/25-9/1				84	100			1,200	0		500
Knutson Creek	1	8/5-9/15		3,000	1,500	600				2,300	160	125	800
Russian Creek	1	8/25-9/1								0	30		
Pile River	1	9/1-9/10		6,000		200	450	100				75	
Lonesome Bay Creek	1												
Far-out Cr. (Smokehouse 88)	1												
Total				60,000	10,500	5,386	15,987	20,933	2,200	21,630	2,300	4,074	43,490
% of Total Escapement				0.4	0.4	1.0	2.4	0.1	0.1	0.8	0.7	0.4	0.2

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Table 1. (p 2 of 16)

	Year												
	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
N.W. STREAMS													
Lower Talarik Creek	89,410	14,000	24,626	54,780	103,425	60,450	11,521	1,892	81,270	141,085	28,300	2,900	15,575
Middle Talarik Creek	10,850	1,000	2,766	12,350	33,385	6,760	1,285	125	11,225	28,305	1,800	200	1,290
Upper Talarik Creek	1,450	47	4,920	2,585	1,450	2,950	215	75	32,125	29,770	200	100	10
Pete Andrew Creek	3,780	810	5,062	18,915	20,750	3,365	296	52	3,655	28,185	1,000		1,365
Zackar Creek (Car Cr.)	3,640	300	2,454	5,925	15,425	1,780	175	1	3,375	12,365	1,300	100	0
Stream W. of Talarik										3,950			
Total	109,130	16,157	39,828	94,555	174,435	75,305	13,492	2,145	131,650	243,660	32,600	3,300	18,240
% of Total Escapement	2.9	0.5	1.6	1.1	1.3	3.2	1.3	0.9	3.0	1.9	1.7	0.2	0.4
NEWHALEN RIVER SYSTEMS													
Newhalen River	15,800	172,800	9,345	39,500	237,675	11,042	3,175	97	48,400	220,850	26,900		181,875
Lover's Creek								0					
Little Bear Creek/Ponds			115	925	1,050	160	0	2	1,050	1,860			
Alexi Creek	50	0	325	1,500	1,050	190	15	0	185	490	13,200	0	545
Alexi Lakes		2,700	11,180	18,725	15,900	6,080	190	11	6,165	12,810		800	8,075
Steam Bath Creek		292	1	0					1,505	405			
Tazimina River	4,880	23,000	250	18,800	85,450	12,925	20	12	104,470	149,950	16,800	7,200	146,900
Six Mile Lake Beaches				1,450		500					5,200		150
Pickerel Creek				735	1	60	0	0	312	35	400		
Pickerel Lakes				150		25		0	570	25	100		
Total	20,730	198,792	21,216	81,785	341,126	30,982	3,400	122	162,657	386,425	62,600	8,000	337,545
% of Total Escapement	0.5	6.2	0.8	1.0	2.4	1.3	0.3	0.1	3.7	2.9	3.2	0.6	8.1
N.E. STREAMS													
Roadhouse Creek	150	404	2,800	2,750	4,950	141	273	55	4,286	4,712			105
N.W. Eagle Bay Creek	51	11	5	650	10		98	62	5,306	17,562			400
N.E. Eagle Bay Creek/Ponds	1,930	918	125	3,250	9,225		255	270	18,175	12,945	200		4,465
Youngs Creek	1,044	480	241	1,095	3,560		11	165	3,925	14,970			2,375
Tomkok Creek	1,332	2,160	2,040	7,410	35,100	2,950	645	2,520	25,625	12,245	300		22,975
Chekok Creek/Ponds	400	715	1,830	4,000	8,700		135	575	4,305	2,425	100		3,275
Canyon Creek	6,500	1,620	945	5,897	30,000	3,350	1,176	200	17,725	7,550	500		4,675
Mink Creek	184	22	1	1,400	4,000	1,100	32		2,545	2,265	400		485
Knutson Creek	550	1,340	577	675	300	660	315	1	625	1,210	200		340
Russian Creek			451	2,050	825	200	525	0	5,575	3,735	100		120
Pile River	140	3,090	1,437	985			225		601	23,465	3,800	9,600	3,912
Lonesome Bay Creek									450	2,675	200		
Far-out Cr. (Smokehouse 88)													
Total	12,281	10,760	10,452	30,162	96,670	8,401	3,690	3,848	89,143	105,759	5,800	9,600	43,127
% of Total Escapement	0.3	0.3	0.4	0.4	0.7	0.4	0.4	1.7	2.0	0.8	0.3	0.7	1.0

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Table 1. (p 3 of 16)

	Year											
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
N.W. STREAMS												
Lower Talarik Creek	47,180	51,560	21,180	19,510	17,655			2,500		29,700	21,200	17,400
Middle Talarik Creek	9,700	10,400	2,860	1,685	7,370			800		12,300	5,200	2,200
Upper Talarik Creek	25,600	4,600	1,298	8,235	4,600			100		2,400	1,200	300
Pete Andrew Creek	11,600	8,600		2,746	8,011			300		5,500	1,600	2,300
Zackar Creek (Car Cr.)	400	7,300		382	1,166					1,100	900	900
Stream W. of Talarik				925								
Total	94,480	82,460	25,338	33,483	38,802			3,700		51,000	30,100	23,100
% of Total Escapement	0.8	0.4	1.4	3.0	1.1			0.3		1.3	0.4	0.3
NEWHALEN RIVER SYSTEMS												
Newhalen River	280,700		10,132	64,100	181,007		54,600	1,500	730,900	106,400	48,700	
Lover's Creek					134							
Little Bear Creek/Ponds	800			150	477		0					
Alexi Creek	2,100		60	0	0				6,100			
Alexi Lakes	21,600		5,835	2,275	21,550		16,100	1,500	1,100			
Steam Bath Creek	700		0	30	94							
Tazimina River	503,800		28,215	30,740	212,152		185,800	6,500	246,000	83,000	29,700	4,050
Six Mile Lake Beaches					600		1,000					
Pickerel Creek	1,500		215	2	745		3,000					
Pickerel Lakes	200		10	0	25			300				
Total	811,400	1,461,050	44,467	97,297	416,784		260,500	9,800	984,100	189,400	78,400	4,050
% of Total Escapement	7.2	6.5	2.5	8.6	11.7		3.6	0.8	16.2	4.7	0.9	0.1
N.E. STREAMS												
Roadhouse Creek		2,300		188	305							
N.W. Eagle Bay Creek	6,500		260	2,965	944		400				2,500	600
N.E. Eagle Bay Creek/Ponds	7,900	900	905	5,080	2,384		11,000			2,750	4,400	220
Youngs Creek	26,500	2,300	210	4,190	6,863		7,300			3,500		800
Tomkok Creek	56,600	16,600	2,050	5,000	25,535		27,700			4,935	4,500	4,725
Chekok Creek/Ponds	4,200		0	370	3,035		7,200			1,500	1,000	100
Canyon Creek	15,400		875	1,890	5,727		20,700			3,300	6,400	2,000
Mink Creek	1,400		55		265		6,000			2,200		1,250
Knutson Creek	2,600		1,000	325	1,496		3,500	3,300	6,600		5,800	1,000
Russian Creek	1,700		700		2,260		20,000	200				
Pile River	31,200		2,770	3,560	17,575		39,200	1,100	22,000	2,000	22,200	4,600
Lonesome Bay Creek					32			300				
Far-out Cr. (Smokehouse 88)					1,550					4,800		
Total	154,000	22,100	8,825	23,568	67,971		143,000	4,900	28,600	24,985	46,800	15,295
% of Total Escapement	1.3	0.1	0.5	2.1	1.9		2.0	0.4	0.5	0.6	0.6	0.2

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Table 1. (p 4 of 16)

	Year											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
N.W. STREAMS												
Lower Talarik Creek	24,400	44,100	39,690	48,700	53,500	18,800	25,500	17,550	35,200	18,900	14,100	10,200
Middle Talarik Creek	6,360	3,000	4,200	6,100	8,600	780	200	2,400	39,600	1,550	25	300
Upper Talarik Creek	4,350	800	3,850	7,100	9,300	3,120	4,700	4,900	17,000	2,900	510	1,700
Pete Andrew Creek	3,650	3,350	3,800	4,100	3,600	600	1,800	400	4,300	400	50	
Zackar Creek (Car Cr.)												
Stream W. of Talarik												
Total	38,760	51,250	51,540	66,000	75,000	23,300	32,200	25,250	96,100	23,750	14,685	12,200
% of Total Escapement	0.9	1.1	1.3	0.8	0.7	1.6	2.1	1.7	6.4	1.6	1.0	0.8
NEWHALEN RIVER SYSTEMS												
Newhalen River	2,100	1,500		1,750	59,600	1,800	650	4,100		2,900		
Lover's Creek												
Little Bear Creek/Ponds	200			200	450			650				
Alexi Creek	500			550	2,700			900		-		
Alexi Lakes	200		2,000							2,750		100
Steam Bath Creek	700											
Tazimina River	15,875	13,350	35,880	93,150	54,120	10,050	10,800	24,200	17,000	1,200		
Six Mile Lake Beaches												
Pickerel Creek	1,500											
Pickerel Lakes	200											
Total	21,275	14,850	37,880	95,650	116,870	11,850	11,450	29,850	17,000	6,850	0	100
% of Total Escapement	0.4	0.3	1.0	1.1	1.2	0.8	0.8	2.0	1.1	0.5	0.0	0.0
N.E. STREAMS												
Roadhouse Creek	300	230	400	900	1,800	310	50	110	10			
N.W. Eagle Bay Creek	1,500	1,600	500	500	2,300					500		-
N.E. Eagle Bay Creek/Ponds		3,400	450	4,300		320			4,300	10		150
Youngs Creek	2,000	750	450	8,600	3,600	140	400	1,700	100	40		200
Tomkok Creek	18,500	3,300	7,100	21,900	5,250	6,100	2,600	11,400	3,000	3,000		6,000
Chekok Creek/Ponds	400								200	-		-
Canyon Creek		4,900		28,700	12,300	850			1,900	600		
Mink Creek	2,500	500	1,000	1,700	1,300	140	350	550		450		350
Knutson Creek	800	1,500	2,750	3,800	3,650	650		6,100	600	300		300
Russian Creek												
Pile River	800	12,100	8,700	10,600	4,600	1,800	2,230	700	1,400	250		800
Lonesome Bay Creek												2500
Far-out Cr. (Smokehouse 88)												
Total	26,800	28,280	21,350	81,000	34,800	10,310	5,630	20,560	11,510	5,150	0	10,300
% of Total Escapement	0.6	0.6	0.5	1.0	0.3	0.7	0.4	1.4	0.8	0.3	0.0	0.7

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Table 1. (p 5 of 16)

	Type of Area[a]	Peak of Spawning	Year										
			1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
N.E. PONDS													
Hudson's Creek & Ponds	2	9/10-9/30	30	3,000	384		6,374	6,000	1,000	165	600	250	5,900
Prince Creek Ponds	2	9/15-10/5		11,000	5,000	250	1,200	2,000	500		220	25	6,900
Canyon Springs	2	9/1-9/20				179	364				20	170	4,700
Wolf Creek Ponds	2	8/20-9/20					490	5,200	300	400	90	20	16,200
Knutson Ponds	2	9/10-10/30		1,000		150	148		320	1,880	121	240	6,350
Pedro Creek & Ponds	2	9/10-10/30		1,000	500	1	150	25,000	150	2,000	21	525	34,400
NE Eagle Bay Cr. Ponds	2										200		
Total			30	16,000	5,884	580	8,726	38,200	2,270	4,445	1,272	1,230	74,450
% of Total Escapement			0.0	0.2	0.2	0.1	1.3	0.3	0.1	0.2	0.4	0.1	0.3
ILIAMNA RIVER SYSTEM													
Iliamna River	1	9/1-9/15	3,000	115,000	14,000	10,000	27,000	152,000	23,000	30,600	5,100	8,039	178,800
Bear Creek & Ponds	2	9/1-9/30					146	2,000		2,110	1,150	500	5,600
False Creek	1												
Old Williams Creek	1												
Chinkelyes Creek	1	9/1-9/9	50				2,500	4,000	5,000	5,200	4,000	525	27,300
Total			3,050	115,000	14,000	10,000	29,646	158,000	28,000	37,910	10,250	9,064	211,700
% of Total Escapement			1.2	1.2	0.5	1.9	4.4	1.1	0.8	1.5	3.0	0.9	0.9
S.E. STREAMS													
Swamp Creek	1	9/1-9/15		2,000			25						
Jack Durand Creek (Bear Cr.)	1	9/1-9/20								2,400	60	74	
Surprise Creek	1												6,100
Squirrel Village Creek	1	8/20-9/10				1,024	550	2,165	3,000	650	500	62	4,500
Tommy River	1	8/15-9/15	100	10,000	3,400	1,595	2,196	550	5,000	3,389	930	600	8,400
Boulder Creek	1												
Total			100	12,000	3,400	2,619	2,771	2,715	8,000	6,439	1,490	736	19,000
% of Total Escapement			0.0	0.1	0.1	0.5	0.4	0.0	0.2	0.2	0.4	0.1	0.1
S.E. PONDS													
Tommy Springs	2	9/1-10/10			570	300	750	1,000	100	648	200	170	1,700
Total					570	300	750	1,000	100	648	200	170	1,700
% of Total Escapement					0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0
INTRICATE BAY STREAMS													
Copper River	1	8/15-9/1	11,000	440,000	70,000	20,000	35,000	139,000	120,000	32,300			290,000
Pope Creek	1	8/20-9/1			500					600			
Nancy Creek	1	8/15-9/1			150.0					300.0			
Nick G. Creek	1	8/10-8/30	38	5000	2950	420	484	1,160	265	600	50	190	2,550
Total			11,038	445,000	73,600	20,420	35,484	140,160	120,265	33,800	50	190	292,550
% of Total Escapement			4.4	4.7	2.6	3.8	5.2	1.0	3.2	1.3	0.0	0.0	1.2

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Table 1. (p 6 of 16)

	Year												
	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
N.E. PONDS													
Hudson's Creek & Ponds		218	342	936	2,861	390	18	126	1,025	766			400
Prince Creek Ponds	350	449	310	7,900	34,800	2,615	5	13	3,650	8,410	200		3,570
Canyon Springs	160		325	600	5,000		0	0	550	400	400		850
Wolf Creek Ponds	2,600	150	50	2,150	28,000	910	0	0	16,750	15,450			825
Knutson Ponds	2,460	400	275	800	4,200	150	65	0	885	3,450	300		1,675
Pedro Creek & Ponds	2,900	1,200	4,330	1,910	38,150	840	1,845	198	11,670	3,850	800		3,875
NE Eagle Bay Cr. Ponds					11,700		550		11,050				
Total	8,470	2,417	5,632	14,296	124,711	4,905	2,483	337	45,580	32,326	1,700		11,195
% of Total Escapement	0.2	0.1	0.2	0.2	0.9	0.2	0.2	0.1	1.0	0.2	0.1		0.3
ILIAMNA RIVER SYSTEM													
Iliamna River	71,230	118,400	15,055	55,190	256,750	39,795	16,985	15,910	86,580	364,250	43,000	20,000	67,725
Bear Creek & Ponds		3,000	1,115	1,825	3,100		985	200	695	3,200	900		4,750
False Creek		960	0	250	3,100	100	175	0		2,200	300		
Old Williams Creek		1,120	0	200	2,200	400	300	0		300			
Chinkelyes Creek	6,430	20,000	3,300	5,700	28,000	7,475	4,150	1,210	5,410	44,905	4,100	2,400	3,650
Total	77,660	143,480	19,470	63,165	293,150	47,770	22,595	17,320	92,685	414,855	48,300	22,400	76,125
% of Total Escapement	2.1	4.5	0.8	0.8	2.1	2.0	2.2	7.6	2.1	3.2	2.5	1.7	1.8
S.E. STREAMS													
Swamp Creek				1,800	3,200		35	130	1,165	1,325	200		380
Jack Durand Creek (Bear Cr.)	1,450	7,900	650	1,550	12,300	1,450	375	75	2,300	4,300	500		1,950
Surprise Creek			85	200		425		0	490	75			
Squirrel Village Creek		2	90	450	750	350	0	250	425	6,520	700		451
Tommy River	610	3,350	655	7,600	8,350	2,050	675	35	980	2,475	1,800	300	3,075
Boulder Creek										875			
Total	2,060	11,252	1,480	11,600	24,600	4,275	1,085	490	5,360	15,570	3,200	300	5,856
% of Total Escapement	0.1	0.3	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.0	0.1
S.E. PONDS													
Tommy Springs			70	250	400		100	20	30	600			75
Total			70	250	400		100	20	30	600			75
% of Total Escapement			0.0	0.0	0.0		0.0	0.0	0.0	0.0			0.0
INTRICATE BAY STREAMS													
Copper River	76,200	106,000	80,066	63,110	201,700	74,050	43,950	14,015	32,595	179,490	43,200	44,500	76,450
Pope Creek		0	10	0				1	10	3			0
Nancy Creek		0	0	0				0	0	0			
Nick G. Creek	500	835	554	1,525	1,500		75	30	540	1,150	100		
Total	76,700	106,835	80,630	64,635	203,200	74,050	44,025	14,046	33,145	180,643	43,300	44,500	76,450
% of Total Escapement	2.0	3.3	3.2	0.8	1.5	3.1	4.4	6.2	0.7	1.4	2.2	3.3	1.8

-Continued-

Table 1. (p 7 of 16)

	Year											
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
N.E. PONDS												
Hudson's Creek & Ponds	1,800	700	60	15	181							
Prince Creek Ponds	12,300		10	65	385							250
Canyon Springs	2,700		275	70	308							
Wolf Creek Ponds	14,700		200	6	2,450		8,700					
Knutson Ponds	4,200		225	0	283			900				900
Pedro Creek & Ponds	5,300	5,700	860	200	1,520		10,900	0	800			
NE Eagle Bay Cr. Ponds					330							
Total	41,000	6,400	1,630	356	5,457		19,600	900	800			1,150
% of Total Escapement	0.4	0.0	0.1	0.0	0.2		0.3	0.1	0.0			0.0
ILIAMNA RIVER SYSTEM												
Iliamna River	363,500	265,700	49,610	30,870	140,045		333,300	15,100	180,900	160,000	134,300	25,500
Bear Creek & Ponds	1,800	2,200		375	400		10,300	1,300			800	
False Creek	900	1,200		75			13,300		1,000			
Old Williams Creek	1,000	1,500		275				300	200		900	
Chinkelyes Creek	16,200	15,400	5,250	4,185	11,335			800	14,600		7,500	
Total	383,400	286,000	54,860	35,780	151,780		356,900	17,500	196,700	160,000	143,500	25,500
% of Total Escapement	3.4	1.3	3.1	3.2	4.3		4.9	1.5	3.2	3.9	1.7	0.4
S.E. STREAMS												
Swamp Creek				50	580		7,700		300			
Jack Durand Creek (Bear Cr.)		5,500	825	575	1,203		8,600		4,300			400
Surprise Creek												
Squirrel Village Creek		600	1,325	825	695		10,600	900	2,200		8,700	800
Tommy River		2,600	725	835	4,500				5,100	4,300	4,000	700
Boulder Creek					44		8,100					
Total		8,700	2,875	2,285	7,022		35,000	900	11,900	4,300	12,700	1,900
% of Total Escapement		0.0	0.2	0.2	0.2		0.5	0.1	0.2	0.1	0.2	0.0
S.E. PONDS												
Tommy Springs	775		250	325	1,000							
Total	775		250	325	1,000							
% of Total Escapement	0.0		0.0	0.0	0.0							
INTRICATE BAY STREAMS												
Copper River	155,300	341,100	65,310	63,035	121,275		70,600	4,200	95,100	48,000	98,100	51,200
Pope Creek												
Nancy Creek												
Nick G. Creek	1,000	2,400		775	1,141		300	100	100			100
Total	156,300	343,500	65,310	63,810	122,416		70,900	4,300	95,200	48,000	98,100	51,300
% of Total Escapement	1.4	1.5	3.7	5.6	3.4		1.0	0.4	1.6	1.2	1.2	0.7

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Table 1. (p 8 of 16)

	Year											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
N.E. PONDS												
Hudson's Creek & Ponds												
Prince Creek Ponds	7,000	4,660	2,100	4,500	3,600	350	1,200	3,300				
Canyon Springs										600		
Wolf Creek Ponds									300	100		150
Knutson Ponds	1,300	2,250	990	200	600	350		2,200	150	1,700		400
Pedro Creek & Ponds	1,400	1,800	2,000	800	3,000	1,750	700	5,000	600	525		600
NE Eagle Bay Cr. Ponds												
Total	9,700	8,710	5,090	5,500	7,200	2,450	1,900	10,500	1,050	2,925	0	1,150
% of Total Escapement	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.7	0.1	0.2	0.0	0.1
ILIAMNA RIVER SYSTEM												
Iliamna River	50,700	80,950	60,000	148,300	130,200	73,800	91,350	43,000	35,700	38,000		40,470
Bear Creek & Ponds					2,200	150			400	40		200
False Creek									0	300		100
Old Williams Creek					3,100	300	260	250		100		0
Chinkelyes Creek		16,100	10,200	13,300	13,500	4,850	8,950	7,300	1,000	8,300		6,700
Total	50,700	97,050	70,200	161,600	149,000	79,100	100,560	50,551	37,100	46,740	0	47,470
% of Total Escapement	1.2	2.1	1.7	1.9	1.5	5.5	6.7	3.4	2.5	3.1	0.0	3.2
S.E. STREAMS												
Swamp Creek									100			50
Jack Durand Creek (Bear Cr.)						475				400		600
Surprise Creek												
Squirrel Village Creek	2,100	1,300	1,300	19,100	1,900	1,000	125	700		500		320
Tommy River	1,200	800	1,900	31,200	14,600	750	250	850		400		2,050
Boulder Creek												
Total	3,300	2,100	3,200	50,300	16,500	2,225	375	1,550	100	1,300	0	3,020
% of Total Escapement	0.1	0.0	0.1	0.6	0.2	0.2	0.0	0.1	0.0	0.1	0.0	0.2
S.E. PONDS												
Tommy Springs												0
Total												
% of Total Escapement												
INTRICATE BAY STREAMS												
Copper River	55,800	80,300	102,100	217,300	266,200	78,540	127,050	58,300	0	28,900	97,300	75,000
Pope Creek										50		
Nancy Creek										0		
Nick G. Creek										450		
Total	55,800	80,300	102,100	217,300	266,200	78,540	127,050	58,300	0	29,400	97,300	75,000
% of Total Escapement	1.3	1.7	2.5	2.6	2.7	5.4	8.4	3.9	0.0	2.0	6.5	5.0

-Continued-

Table 1. (p 9 of 16)

Spawning Location	Type of Area*	Peak of Spawning	Year										
			1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
KAKHONAK BAY STREAMS													
Kakhonak River	1	9/1-9/10	225	185,000		250	100				0	0	100
Alec Flyum Creek	1	8/15-9/1	82	2,000	1,370	1,690	600	10,900	300		0	80	
Bear Creek	1											10	
Cabin Creek	1	8/20-9/5	49		215	28				0	0	50	
Granite Creek	1		18		445	83			0	0	0	25	350
Lake Creek	1	8/20-9/1	231	2,900	865	304	700	5,074	100	140	0	200	850
Nick N. Creek	1			500	500			1,500		50	30	30	8,050
Maggot Creek	1												
Total			605	190,400	3,395	2,355	1,400	17,474	400	190	30	395	9,350
% of Total Escapement			0.2	2.0	0.1	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0
GIBRALTAR SYSTEM													
Gibraltar Creek (River)	1	8/15-9/15	334	200,000	30,000	2,980	2,980	397,000	113,000	53,600	8,200	5,055	196,000
Little Gibraltar Creek	1									2,750	10	57	17,600
Leon Creek	1												
Dream Creek	1	9/1-9/10		2,500			300	14,000	500	4,160	40	1,225	23,000
Southeast Creek	1	8/25-9/10					2,500	2,000	150	5,270	120	444	25,500
Trout Creek	1								4,000		300	5	1,700
Gibraltar No. 1 Ponds	2										50.0	455.0	1300.0
Gibraltar Lake Beaches	4	9/1-9/15	19,000	20,000		650	1,700	76,000	17,050	9,430	1,382	2,657	66,000
Total			19,334	222,500	30,000	3,630	7,480	489,000	134,700	75,210	10,102	9,898	331,100
% of Total Escapement			7.7	2.4	1.1	0.7	1.1	3.3	3.6	2.9	3.0	1.0	1.4
S.W. STREAMS													
Camp Creek	1	8/10-9/20	25		2,378					100		25	1,600
Dennis Creek	1	8/20-9/1	94		3,800		310		100	1,600	50	320	8,550
Belinda Creek	1	8/10-8/20	59	5,500	3,600		50		33	3,250	400	2,680	1,930
Total			178	5,500	9,778		360		133	4,950	450	3,025	12,080
% of Total Escapement			0.1	0.1	0.3		0.1		0.0	0.2	0.1	0.3	0.0
ISLAND BEACHES													
Rabbit Island Group	3											5,305	24,800
Eagle Island Group	3			41,000									19,700
Triangle Island Group	3	8/1-8/14							18,500	1,300	170	2,013	352,500
Halfway Island & Reefs	3										2,500	425	65,000
Seal Rookery Island	3											78	65,000
E-2 Island Group	3	8/1-8/10									0	125	152,000
Knutson Island Group	3	8/7-8/14							2,500	500		220	56,000
Hedlund Island Group	3												32,500
Woody Island	3	8/1-9/1							65,050	5,600	520	6,505	607,500
Pedro Bay Island Group	3												88,000
Porcupine Island Group	3											1	300,000
Ross Island Group	3												92,000
Kakhonak Bay Island Group	3												12,500
Middle Island Group	3												750
Intricate Bay Island Group	3												69,000
Total				41,000					86,050	7,400	3,190	14,672	1,937,250
% of Total Escapement				0.4					2.3	0.3	0.9	1.5	8.0

-Continued-

Table 1. (p 10 of 16)

Spawning Area	Year												
	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
KAKHONAK BAY STREAMS													
Kakhonak River	470	962	537	1,350	2,800		92	600	705	5,753		500	300
Alec Flyum Creek		520	470	1,000				125	350	575		100	
Bear Creek									40	815		0	
Cabin Creek	150	238	508	100				10	125	295			
Granite Creek	80	519	428	2,300				45	575	1,691		1,100	
Lake Creek	500	256	820	3,775	3,200			286	1,230	2,325		1,200	
Nick N. Creek	670	449	4,280	13,225	4,450			100	2,515	15,635	900	2,300	6,855
Maggot Creek													
Total	1,870	2,944	7,043	21,750	10,450		92	1,166	5,540	27,089	900	5,200	7,155
% of Total Escapement	0.0	0.1	0.3	0.3	0.1		0.0	0.5	0.1	0.2	0.0	0.4	0.2
GIBRALTAR SYSTEM													
Gibraltar Creek (River)	80,400	40,000	26,600	307,925	92,250	39,400	24,800	5,250	20,835	64,700	14,200	23,700	36,660
Little Gibraltar Creek	3,790		538	3,785	6,850	700	25	40	8,850	9,846	300	400	4,275
Leon Creek				300	700		50				100		
Dream Creek	13,750		4,375	9,000	29,000	18,050	18,350	8,251	10,195	66,150	9,000	6,400	21,450
Southeast Creek	4,700		3,885	8,700	24,700	14,150	7,850	2,611	10,810	28,460	2,800	2,500	12,415
Trout Creek	560		0	2,825	1,170		400	0	850	5,340			550
Gibraltar No. 1 Ponds			275	3,000	3,800	1,200	240	250	950	4,200	400		1,510
Gibraltar Lake Beaches			6,665	10,880	73,620	7,430	1,750	1,520	4,255	34,060	7,100	8,000	14,615
Total	103,200	40,000	42,338	346,415	232,090	80,930	53,465	17,922	56,745	212,756	33,900	41,000	91,475
% of Total Escapement	2.7	1.2	1.7	4.1	1.7	3.4	5.3	7.9	1.3	1.6	1.7	3.1	2.2
S.W. STREAMS													
Camp Creek	29	46	350	1,040				0	1,285	1,035			
Dennis Creek	450	468	1,882	2,925				290	5,190	8,100			
Belinda Creek	220	206	2,162	1,300			2,006	552	8,705	49,078			
Total	699	720	4,394	5,265			2,006	842	15,180	58,213			
% of Total Escapement	0.0	0.0	0.2	0.1			0.2	0.4	0.3	0.4			
ISLAND BEACHES													
Rabbit Island Group	1,880	700	1,915	5,045	19,150	2,235	1	300	2,275	41,230	1,400		25
Eagle Island Group	1,080	110	845	1,600	19,250	1,115	0	2	1,585	26,110	900		125
Triangle Island Group	10,850	2,960	3,020	1,410	74,000	7,950	175	150	42,888	124,025	7,800	200	450
Halfway Island & Reefs	225								17,175	85,150	1,600		
Seal Rookery Island	225				4,450				1,295	9,750			
E-2 Island Group	1,900	100	609	1,015	6,800	485	0	0	1,145	28,025			
Knutson Island Group		800	8,607	15,150	49,100	6,600	1,105	220	6,120	13,311	2,500		30
Hedlund Island Group			2,055		24,500	250	0	0	5,155	2,985	300		50
Woody Island	19,450	12,440	35,955	70,550	194,200	36,450	6,582	3,125	44,375	99,890	23,800	21,000	2,110
Pedro Bay Island Group		140	7,600	5,850	13,000	425	50	200	3,100	6,860	400		110
Porcupine Island Group		960	11,803	28,145	152,915	3,070	1,395	2,000	21,465	49,935	8,800	4,600	3,250
Ross Island Group		435	4,451	1,785	85,425	2,880	1,155	665	11,815	70,005	3,800	2,000	10
Kakhonak Bay Island Group			350	1,300									0
Middle Island Group													
Intricate Bay Island Group			10	1,660									
Total	35,610	18,645	77,220	133,510	642,790	61,460	10,463	6,662	158,393	557,276	51,300	27,800	6,160
% of Total Escapement	0.9	0.6	3.0	1.6	4.6	2.6	1.0	2.9	3.6	4.2	2.6	2.1	0.1

-Continued-

Table 1. (p 11 of 16)

Spawning Location	Year											
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
KAKHONAK BAY STREAMS												
Kakhonak River		2,200		855	310					0		200
Alec Flyum Creek				360	3,420						1,400	600
Bear Creek		1,500			212							
Cabin Creek				190	501							200
Granite Creek				390	1,143							300
Lake Creek				830	4,072					150		1,000
Nick N. Creek	4,800		5,665	2,926	7,108		9,500	300		1,000		3,600
Maggot Creek					712							
Total	4,800	3,700	5,665	5,551	17,478		9,500	300		1,150	1,400	5,900
% of Total Escapement	0.0	0.0	0.3	0.5	0.5		0.1	0.0		0.0	0.0	0.1
GIBRALTAR SYSTEM												
Gibraltar Creek (River)	120,200	136,700	34,145	65,940	89,075		49,500	28,600	59,600	45,000	74,900	20,200
Little Gibraltar Creek	28,000	9,400	610	3,490	4,305		2,500		0	7,900	8,300	1,400
Leon Creek		3,900	75				2,000		100			
Dream Creek	70,500	92,900	28,200	6,540	12,180		24,900	4,600	5,000			7,800
Southeast Creek	66,000	79,300	13,050	11,105	13,810			1,100	7,900			5,100
Trout Creek		1,700	350		230			100			1,600	100
Gibraltar No. 1 Ponds	2,000	6,800	1,325	0	1,238				400		2,700	
Gibraltar Lake Beaches	52,500	44,100	5,900	4,605	17,975		15,300	2,900	7,000			4,800
Total	339,200	374,800	83,655	91,680	138,813		94,200	37,300	80,000	52,900	87,500	39,400
% of Total Escapement	3.0	1.7	4.8	8.1	3.9		1.3	3.2	1.3	1.3	1.1	0.6
S.W. STREAMS												
Camp Creek					1,008						900	400
Dennis Creek	9,200				4,445						11,800	1,440
Belinda Creek	24,200	1,900		6,915	25,956						8,900	900
Total	33,400	1,900		6,915	31,409						21,600	2,740
% of Total Escapement	0.3	0.0		0.6	0.9						0.3	0.0
ISLAND BEACHES												
Rabbit Island Group	3,700		880	275	1		18,900		300	2,300	300	
Eagle Island Group	3,000		275	125	2		11,800			200	400	
Triangle Island Group	37,000	82,800	3,250	90	286		20,400		2,100		1,100	5,025
Halfway Island & Reefs	2,900		50	0	0					175		
Seal Rookery Island		500	10	0	0				2,200		300	
E-2 Island Group	400	2,200	125	0	10		5,400					450
Knutson Island Group	4,200		425	1,700	2		19,000		100			
Hedlund Island Group	4,100		210		0		9,700	200	1,900			
Woody Island	20,900	72,800	14,145	6,595	6,761		158,900	3,500	101,600	10,900	4,500	14,470
Pedro Bay Island Group	1,900	2,200	1,350	420	65		39,200	2,000	2,700	700		
Porcupine Island Group	15,100	24,800	1,750	1,955	1,812		28,800	800	16,500	1,600	1,200	
Ross Island Group	8,200	20,000	595	165	168		39,300	100	1,600			
Kakhonak Bay Island Group												
Middle Island Group												
Intricate Bay Island Group												
Total	101,400	205,300	23,065	11,325	9,107		351,400	6,600	129,000	15,875	7,800	19,945
% of Total Escapement	0.9	0.9	1.3	1.0	0.3		4.9	0.6	2.1	0.4	0.1	0.3

-Continued-

Table 1. (p 12 of 16)

Spawning Location	Year											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
KAKHONAK BAY STREAMS												
Kakhonak River		200							0	950		
Alec Flyum Creek		500								60		150
Bear Creek												
Cabin Creek										100		20
Granite Creek	200	450	650	1,200	1,600	200	250	150	0	900		850
Lake Creek	1,200	400			2,200	400	300	475	0	3,500		20
Nick N. Creek	1,300	1,200	2,100	4,400	4,200	800	175	1,100	100	9,200		80
Maggot Creek												
Total	2,700	2,750	2,750	5,600	8,000	1,400	725	1,725	100	14,710	0	1,120
% of Total Escapement	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	1.0	0.0	0.1
GIBRALTAR SYSTEM												
Gibraltar Creek (River)	24,500	22,140	25,400	45,900	44,000	13,125	24,800	9,400	72,900	31,300	17,600	13,400
Little Gibraltar Creek	1,700	1,020	2,800	17,300	4,150	450	475	1,200	5,900	1,100	550	400
Leon Creek												
Dream Creek	15,900	48,600	24,550	20,100	25,500	4,100	13,300	4,900	14,300	10,600		9,800
Southeast Creek	8,400	13,300	18,550	19,000	11,200	4,400	5,200	8,400		1,600		2,400
Trout Creek	125		150	750	950	300	200	400			50	20
Gibraltar No. 1 Ponds												
Gibraltar Lake Beaches	800			2,000	2,100	650	2,100	800	4,400	300		
Total	51,425	85,060	71,450	105,050	87,900	23,025	46,075	25,100	97,500	44,900	18,200	26,020
% of Total Escapement	1.2	1.8	1.8	1.3	0.9	0.7	3.1	1.7	6.5	3.0	1.2	1.7
S.W. STREAMS												
Camp Creek	300	1,000	700	5,800	3,250	350	300	1,350		20		20
Dennis Creek	2,400	2,900	7,300	46,800	16,500	1,750	3,800	6,700		7,700	1,200	1,400
Belinda Creek	2,050	3,450	1,800	28,300	12,700	1,400	1,650	4,200		4,400	2,700	1,300
Total	4,750	7,350	9,800	80,900	32,450	3,500	5,750	12,250	0	12,120	3,900	2,720
% of Total Escapement	0.1	0.2	0.2	1.0	0.3	0.2	0.4	0.8	0.0	0.8	0.3	0.2
ISLAND BEACHES												
Rabbit Island Group					14,700							
Eagle Island Group												
Triangle Island Group	600	200	500	5,300	54,050	1,150	150	1,100	800	700	50	
Halfway Island & Reefs												
Seal Rookery Island												
E-2 Island Group					4,600				300			
Knutson Island Group					14,900				2,700		100	
Hedlund Island Group												
Woody Island	13,300	14,400	6,500	18,800	132,750	8,300	9,700	11,900	7,700	10,300	3,550	
Pedro Bay Island Group					38,400							
Porcupine Island Group					34,200				11,000	2,300	1,200	
Ross Island Group					23,100							
Kakhonak Bay Island Group												
Middle Island Group												
Intricate Bay Island Group												
Total	13,900	14,600	7,000	24,100	316,700	9,450	9,850	13,000	22,500	13,300	4,900	0
% of Total Escapement	0.3	0.3	0.2	0.3	3.2	0.7	0.7	0.9	1.5	0.9	0.3	0.0

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Table 1. (p 13 of 16)

Spawning Location	Type of Area*	Peak of Spawning	Year										
			1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
N. SHORE BEACHES													
Eagle Bay	4	9/15-11/1											
Chekok Beaches	4												
Knutson Bay	4		2,500	155,000	21,500	15,000	3,000	1,000,000	50,000	17,200	3,200	1,800	177,000
Pedro Peninsula	4												
Pedro Bay Beaches	4												16,000
Lincoln Rock	4												
Lonesome Bay	4	9/10-9/20			3,000	500	287	17,000	400		60	20	9,000
Dumbell Lakes	4												
Chekok Lakes	4												
Total			2,500	155,000	24,500	15,500	3,287	1,017,000	50,400	17,200	3,260	1,820	202,000
% of Total Escapement			1.0	1.6	0.9	2.9	0.5	7.0	1.4	0.7	1.0	0.2	0.8
S. SHORE BEACHES													
Pile Bay	4												
Finger Beaches	4	9/10-10/1		10,000	7,500	2,700	1,500	19,000		2,370	2,250	642	29,100
Southeast Beaches	4	8/20-9/7		21,000	500	1,200			200	260	20	316	38,500
South Shore Beaches	4												
Tommy Beaches	4	8/20-10/1			3,000	350	450	2,000		260	300	400	7,000
Intricate Bay Beaches	4												
Kakhonak Bay Beaches	4												
Total				31,000	11,000	4,250	1,950	21,000	200	2,890	2,570	1,358	74,600
% of Total Escapement				0.3	0.4	0.8	0.3	0.1	0.0	0.1	0.8	0.1	0.3
LAKE CLARK													
Priest Rock Creek & Ponds	2												
Kijik River	1							41,000		3,206		0	
Little Kijik River	1	9/15-10/15		12,000							260	125	8,630
Kijik Lake Tributaries	1	9/15-10/20			5,000		211	5,000		1,017	110	80	
Kijik Lake Beaches	1	9/16-9/30	950	60,000	20,500	1,000	3,575	180,000	25,000	13,384	750	1,379	30,350
Tlikakila River	1	9/16-9/30					0	0		0			
Chokotonk River	1	9/16-9/30											
Currant Creek	1	9/16-9/30									0	0	
Tanalian River	1	9/16-9/30	0					2,500			0	0	500
22 Creek	1	9/16-9/30									0	0	0
Sucker Bay Lake	4	9/5-9/25			2,000	0		1,500		519	10	30	434
Lake Clark Beaches	4												
Total			950	72,000	27,500	1,000	3,786	230,000	25,000	18,126	1,130	1,614	39,914
% of Total Escapement			0.4	0.8	1.0	0.2	0.6	1.6	0.7	0.7	0.3	0.2	0.2
Total All Index Areas			44,113	1,461,630	235,627	66,990	114,027	2,851,982	542,918	294,879	43,960	79,464	3,655,729
Total Tower Escapement			250,546	9,443,318	2,842,810	534,785	680,000	14,630,000	3,705,849	2,580,884	338,760	957,120	24,325,926
Index as % of Total Escapement			17.6	15.5	8.3	12.5	16.8	19.5	14.7	11.4	13.0	8.3	15.0

-Continued-

Table 1. (p 14 of 16)

Spawning Location	Year												
	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
N. SHORE BEACHES													
Eagle Bay				2,700	4,950			0		1,450			
Chekok Beaches					18,300	2,800		0	1,315	625			26,420
Knutson Bay		23,450	4,840	14,800	142,850	18,175	11,920	4,365	58,515	161,360	11,100		
Pedro Peninsula				6,400	17,400	0	0	0	515	1,785	100		0
Pedro Bay Beaches				1,725	43,400		125	0	970	4,840	400		0
Lincoln Rock			250	225	1,500				150	575			240
Lonesome Bay		8,650	1,485	2,525	27,275		500	805	4,515	25,200	4,700	6,000	2,700
Dumbell Lakes				700	4,950	775	60		700	375	700		150
Chekok Lakes										1,221			
Total		32,100	6,575	29,075	260,625	21,750	12,605	5,170	66,680	197,431	17,000	6,000	29,510
% of Total Escapement		1.0	0.3	0.3	1.9	0.9	1.2	2.3	1.5	1.5	0.9	0.4	0.7
S. SHORE BEACHES													
Pile Bay				900	8,000					4,100	100	300	150
Finger Beaches		21,350	2,650	2,550	44,850	2,600	7,475	1,225	21,260	38,950	3,000	9,000	5,050
Southeast Beaches		16,300	2,640	1,200	16,150	2,270	575	575	3,050	24,125	1,600	2,700	1,455
South Shore Beaches					4,200			125		6,685	100	300	525
Tommy Beaches			782	4,050	11,755	4,500	160	350	3,680	10,925	800	700	9,625
Intricate Bay Beaches									105	2,488			
Kakhonak Bay Beaches									125		300		
Total		37,650	6,072	8,700	84,955	9,370	8,210	2,275	28,220	87,273	5,900	13,000	16,805
% of Total Escapement		1.2	0.2	0.1	0.6	0.4	0.8	1.0	0.6	0.7	0.3	1.0	0.4
LAKE CLARK													
Priest Rock Creek & Ponds		1,000	255	0	7,250	1,050	425	200		17,815	3,300		3,650
Kijik River	3,215	7,500	1,766	0	3,925	110	1,500	145	2,625	3,160	3,000		8,175
Little Kijik River	4,820	11,600	1,125	2,450	7,850	3,075	1,625	270	1,775	13,130	2,100		31,850
Kijik Lake Tributaries		1,320	450	0	1,100	1,100	575	75		800	400		5,100
Kijik Lake Beaches		65,100	3,545	12,025	82,200	8,700	3,795	620	2,625	83,620	5,600		101,200
Tlikakila River			2,883	0	3,250	985	350	970		2,760	3,500		1,160
Chokotonk River			1,730	0	680	1,360	297	0		35	700		1,875
Currant Creek	0		10	0	7	15	1	0		0			0
Tanalian River	304	1,600	8	150	325	175	10	0		250			0
22 Creek	10	0	0	0			0	0		10	0		
Sucker Bay Lake		190	941	4,350	4,800	170	150	2	1,115	2,700	200		5,825
Lake Clark Beaches		0	875		24,295	65	11	205	4,750	6,962	3,100		50
Total	8,349	88,310	13,588	18,975	135,682	16,805	8,739	2,487	12,890	131,242	21,900		158,885
% of Total Escapement	0.2	2.7	0.5	0.2	1.0	0.7	0.9	1.1	0.3	1.0	1.1		3.8
Total All Index Areas	456,759	710,062	336,008	924,138	2,624,884	436,003	186,450	74,852	903,898	2,651,118	328,400	181,100	878,603
Total Tower Escapement	3,775,184	3,216,208	2,557,858	8,394,204	13,935,306	2,387,392	1,009,962	226,554	4,433,844	13,140,450	1,965,282	1,341,144	4,149,288
Index as % of Total Escapement	12.1	22.1	13.1	11.0	18.8	18.3	18.5	33.0	20.4	20.2	16.7	13.5	21.2

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Table 1. (p 15 of 16)

Spawning Location	Year											
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
N. SHORE BEACHES												
Eagle Bay	200		125		15							
Chekok Beaches	0		0		75		600		6,800			
Knutson Bay	176,100	31,800	7,405	14,700	55,315		167,500	6,800	340,700		14,900	1,000
Pedro Peninsula	700		0				12,200				3,000	
Pedro Bay Beaches					125		7,500		300		21,600	
Lincoln Rock					83		600					
Lonesome Bay	13,600		1,750	1,925	1,825		28,300	300	9,800			2,600
Dumbell Lakes	0		250					100				
Chekok Lakes			445		1,212							
Total	190,600	31,800	9,975	16,625	58,650		216,700	7,200	357,600		39,500	3,600
% of Total Escapement	1.7	0.1	0.6	1.5	1.6		3.0	0.6	5.9		0.5	0.1
S. SHORE BEACHES												
Pile Bay				10							5,500	
Finger Beaches	68,600	13,500	4,025	6,350	7,475		500	500	26,500		1,300	2,400
Southeast Beaches	33,600		675	790	3,535				14,500		27,000	6,400
South Shore Beaches	4,300			245	665		900	900	1,400			
Tommy Beaches	20,800	23,500	275	3,335	5,875		1,800	1,800	5,100		12,700	1,500
Intricate Bay Beaches					0							
Kakhonak Bay Beaches											400	600
Total	127,300	37,000	4,975	10,730	17,550		3,200	3,200	47,500		46,900	10,900
% of Total Escapement	1.1	0.2	0.3	0.9	0.5		0.0	0.3	0.8		0.6	0.2
LAKE CLARK												
Priest Rock Creek & Ponds	1,200				5,625							
Kijik River	42,075		1,425	2,700	1,650		600			25,200	7,200	2,200
Little Kijik River	45,800	3,700	1,715	7,300	11,214		3,700			200		
Kijik Lake Tributaries	17,800	0	0	1,750	2,050		900			350		
Kijik Lake Beaches	222,400	4,700	725	7,495	11,257		1,900			10,550	6,800	1,400
Tlikakila River	13,180			1,500	822		700					
Chokotonk River	60			20	4		100					
Currant Creek				0								
Tanalian River			275									
22 Creek			0	0	0							
Sucker Bay Lake	7,200	2,100	235	295	531		2,000	100		2,300	6,000	460
Lake Clark Beaches	24,836	900	775	0	10,370		1,600					
Total	374,551	11,400	5,150	21,060	43,523		11,500	100		38,600	20,000	4,060
% of Total Escapement	3.6	0.1	0.3	1.9	1.2		0.2	0.0		1.0	0.2	0.1
Total All Index Areas	2,812,606	2,876,110	336,040	420,790	1,127,762		1,572,400	96,700	1,931,400	586,210	634,300	208,840
Total Tower Escapement	11,218,434	22,505,268	1,754,358	1,134,840	3,569,982		7,211,046	1,179,322	6,065,880	4,061,724	8,317,500	6,970,020
Index as % of Total Escapement	25.1	12.8	19.2	37.1	31.6		21.8	8.2	31.8	14.4	7.6	3.0

-Continued-

Table 1. (p 16 of 16)

Spawning Location	Year											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
N. SHORE BEACHES												
Eagle Bay												
Chekok Beaches												
Knutson Bay	5,100	4,300	23,000	11,300	16,000	12,700	64,000	23,700	16,000	8,800		
Pedro Peninsula												
Pedro Bay Beaches												
Lincoln Rock												
Lonesome Bay												
Dumbell Lakes												
Chekok Lakes												
Total	5,100	4,300	23,000	11,300	16,000	12,700	64,000	23,700	16,000	8,800	0	0
% of Total Escapement	0.1	0.1	0.6	0.1	0.2	0.9	4.3	1.6	1.1	0.6	0.0	0.0
S. SHORE BEACHES												
Pile Bay										2,400		
Finger Beaches	6,300	11,900	10,200	13,800	18,500	5,600	19,500	3,850		4,800		
Southeast Beaches		10,300	1,300							750		
South Shore Beaches												
Tommy Beaches	1,100	5,700	5,500	4,100	3,400		1,800	2,200		3,000		
Intricate Bay Beaches												
Kakhonak Bay Beaches												
Total	7,400	27,900	17,000	17,900	21,900	5,600	21,300	6,050	0	10,950	0	0
% of Total Escapement	0.2	0.6	0.4	0.2	0.2	0.4	1.4	0.4	0.0	0.7	0.0	0.0
LAKE CLARK												
Priest Rock Creek & Ponds												
Kijik River	500	600	1,700	1,800	2,000	400	2,100	500	1,200	500		
Little Kijik River	4,700	13,100	11,800	3,100	6,850	5,850	2,850	3,800	4,850	1,600		
Kijik Lake Tributaries	125	2,000	400	1,800		150	500	150	950	300		
Kijik Lake Beaches	2,300	1,400	8,800	1,200	4,700	2,300	4,300	2,400	7,800	4,800		
Tlikakila River									4,000	1,560		
Chokotonk River		900							200	300		
Currant Creek					900				1,300	1,450		
Tanalian River	75	300	700	700	750	550	800		0	10		
22 Creek									0	0		
Sucker Bay Lake			700						450	270		
Lake Clark Beaches												
Total	7,700	18,300	24,100	8,600	15,200	9,250	10,550	6,850	20,750	10,790	0	0
% of Total Escapement	0.2	0.4	0.6	0.1	0.2	0.6	0.7	0.5	1.4	0.7	0.0	0.0
Total All Index Areas	299,310	442,800	446,460	930,800	1,163,720	272,700	437,415	285,236	319,710	231,685	138,985	179,100
Total Tower Escapement	4,222,788	4,725,864	4,025,166	8,337,840	10,038,720	1,450,578	1,503,732	2,296,074	6,196,914	1,827,780	1,095,348	
Index as % of Total Escapement	7.1	9.4	11.1	11.2	11.6	18.8	29.1	12.4	5.2	12.7	12.7	

*Types of areas surveyed
1=Creek
2=Pond
3=Island
4=Beach

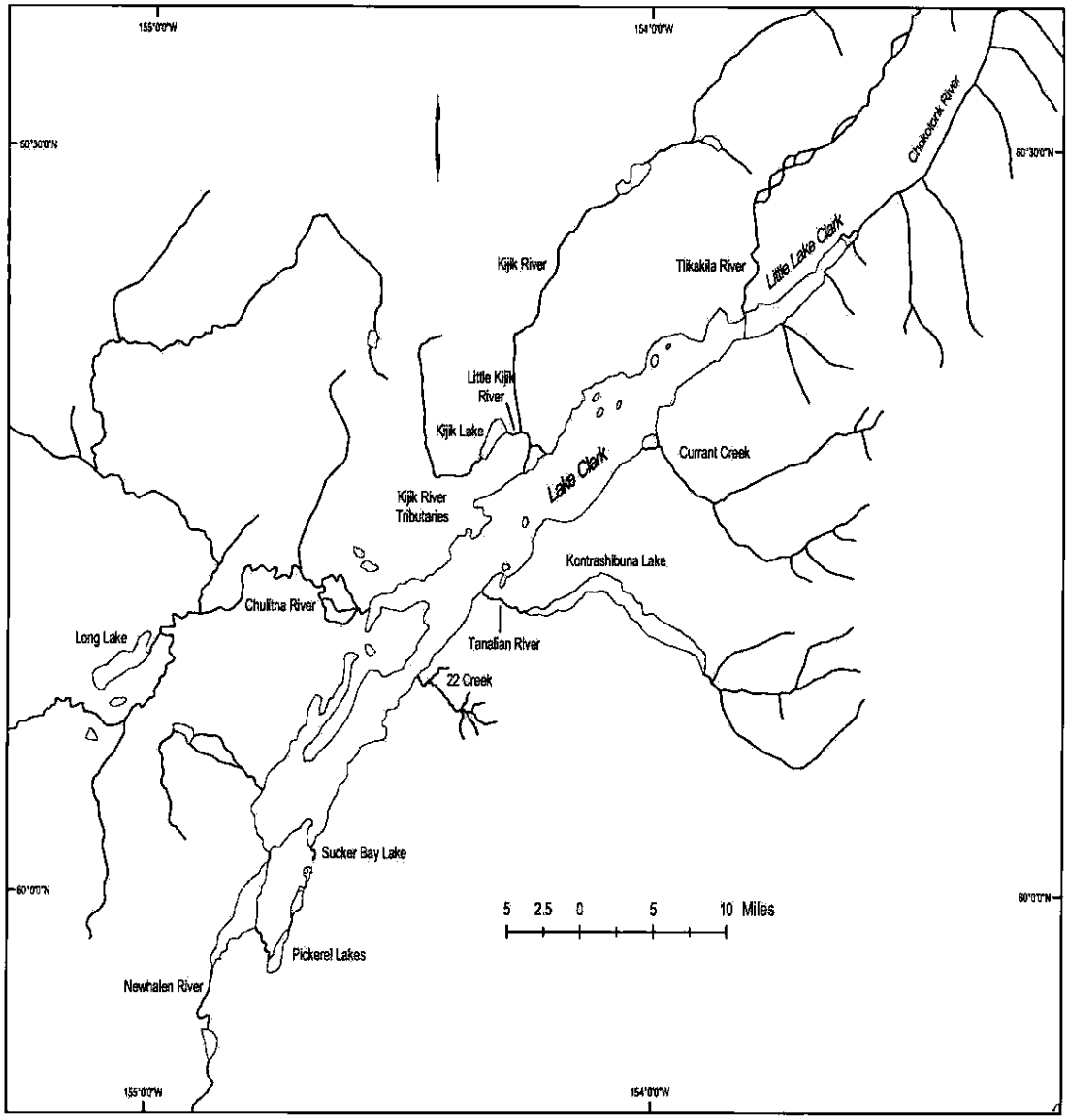

Figure 1. Spawning areas of Lake Clark.

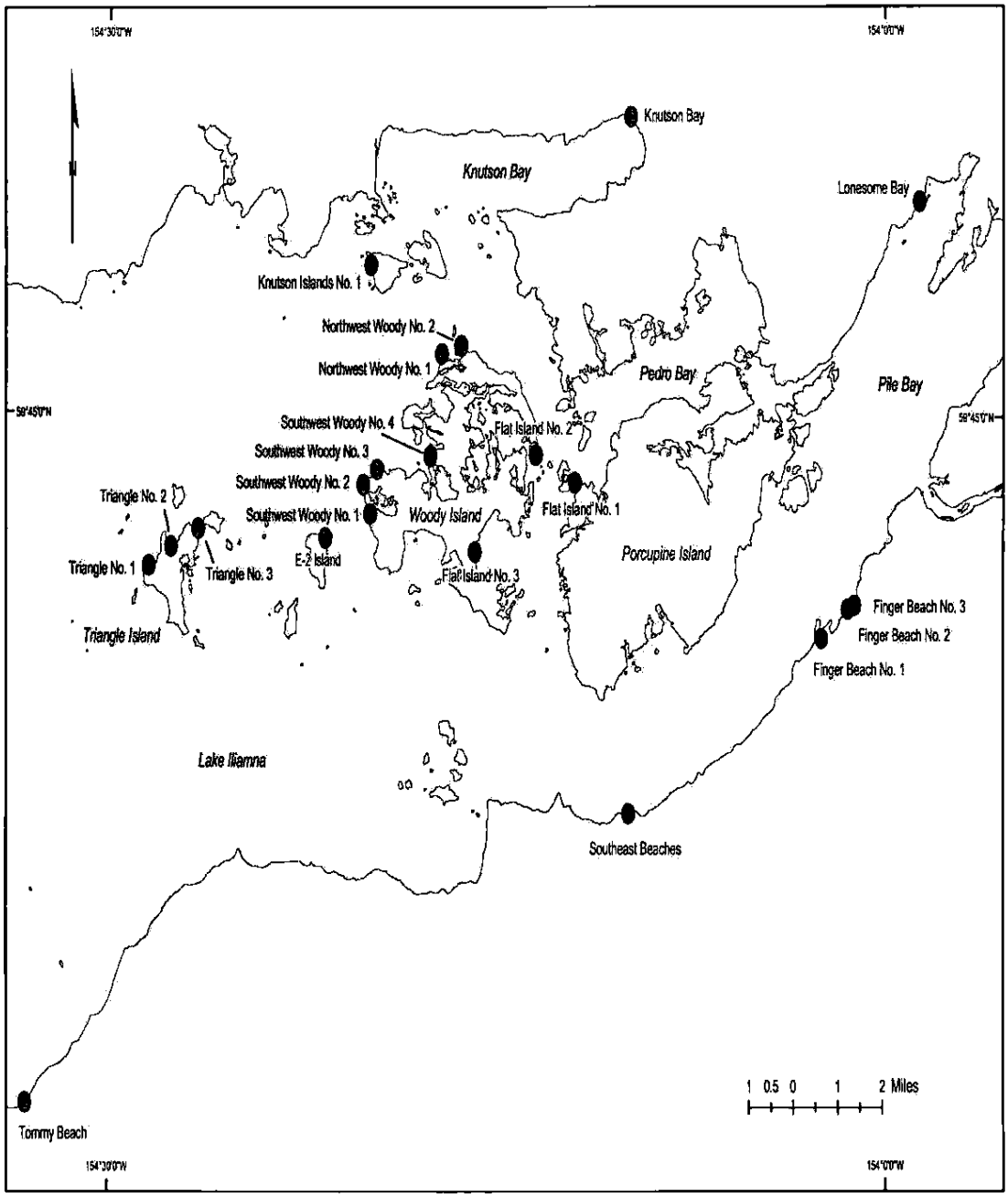

Figure 2. Beach spawning areas of Iliamna.

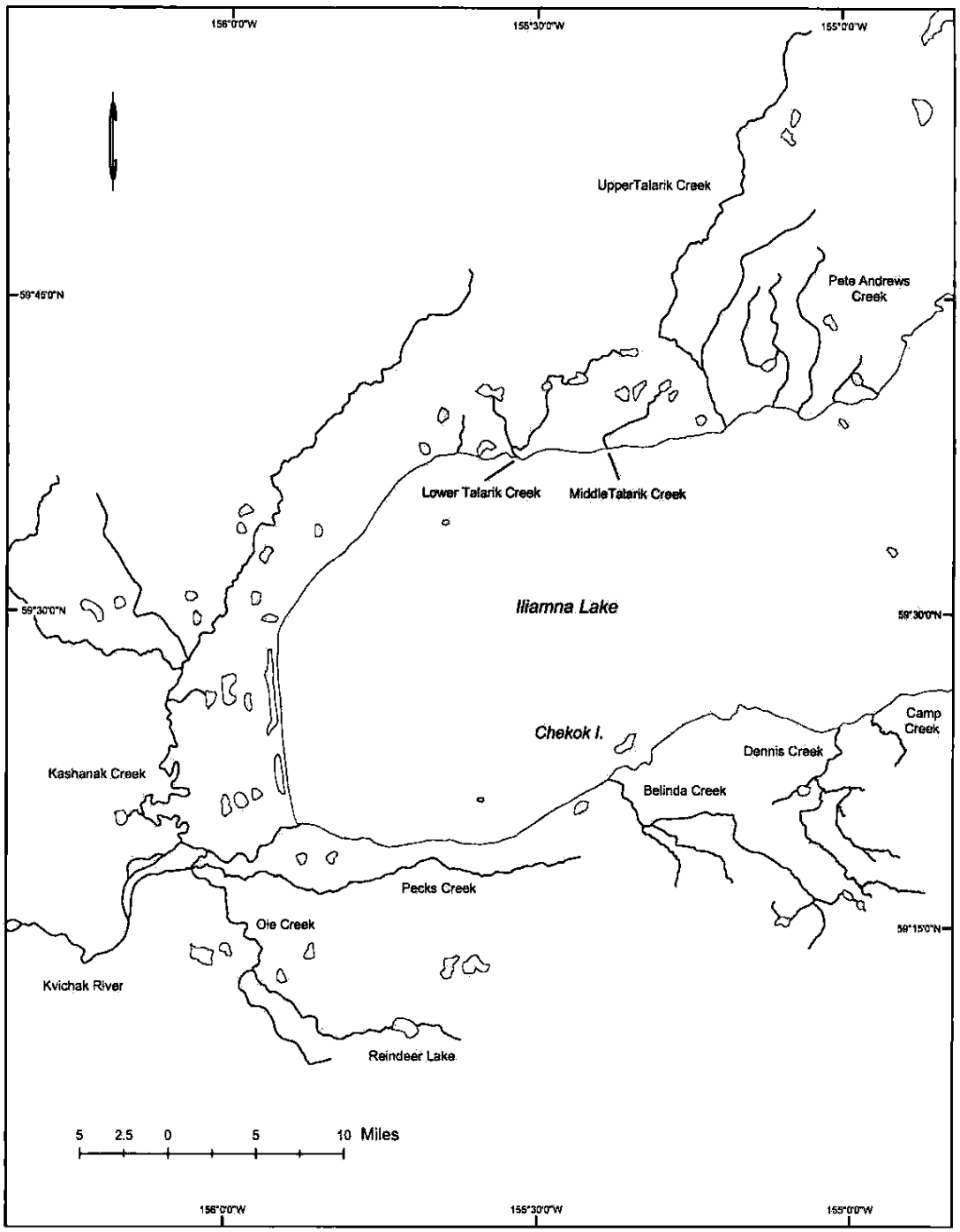

Figure 3. Stream spawning areas, western half of Lake Iliamna.

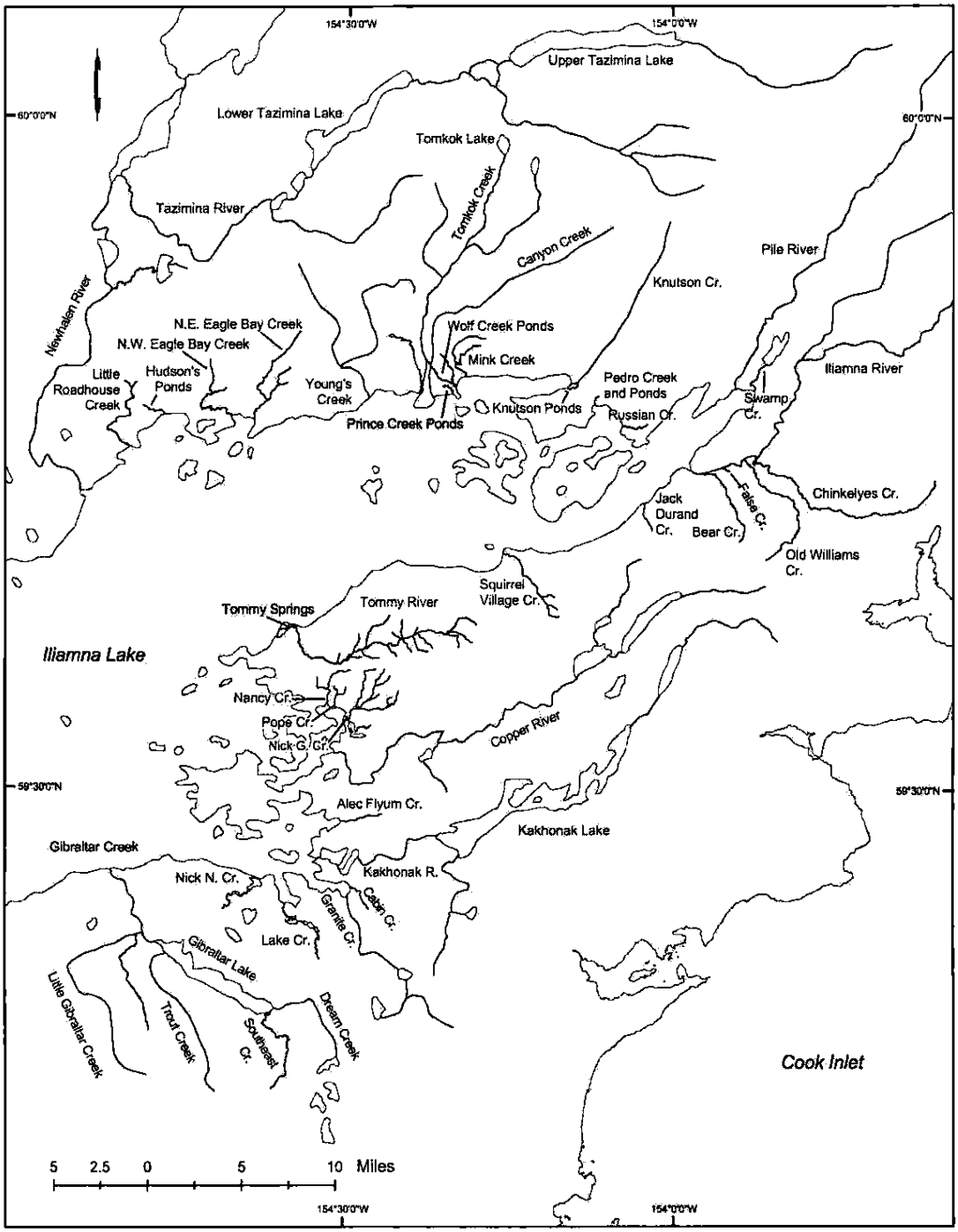

Figure 4. Stream spawning areas, eastern half of Lake Iliamna.