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SUMMARY OF BRISTOL BAY SOCKEYE SALMON CATCHES
BY GEAR TYPE
1965-1994

REPORT TO THE ALASKA
BOARD OF FISHERIES

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INTRODUCTION

The purpose of this report is to provide the Board of Fisheries with background information regarding the fishing effort and sockeye salmon catches, by gear type, and by salmon fishing district, in Bristol Bay over the last 30 years. Data were obtained from previous reports to the Board of Fisheries (Bill, 1987, and Russell, 1991), from the Commercial Fisheries Entry Commission, and from computerized fish ticket runs. The information in this report supercedes reports to the Board in previous years and is final for the years 1965 through 1993. Data for 1994 is still preliminary. The tables and Figures depict harvest information from 1965-1994 and effort information from 1975-1994.

By regulation (5AAC 06.330), drift gillnets and set gillnets are the only two types of fishing gear legal for use in the Bristol Bay commercial salmon fishery. Drift gillnets are limited to 150 fathoms in length while set gillnets are limited to no more than 50 fathoms in length. Set gillnets fished in the Naknek-Kvichak, Egegik, Ugashik, and Togiak districts must be at least 300 feet apart, while in the Nushagak District set gillnets must be at least 450 feet apart (fishing districts are depicted in Figure 1). In numerous instances drift gillnet permit holders, and some set gillnet permit holders, fished more than one district during a calendar year and were thus counted as part of the total effort in more than one district. Average sockeye catches were computed using total effort for each district. Total effort as used in this report is defined as the total number of permits that made at least one delivery of commercially caught sockeye in the district during the year. The reference to "effective effort" as used in previous reports (Bill, 1987, and Russell, 1991) has been dropped and all calculations reflect use of total effort instead of "effective effort".

When the Bristol Bay commercial salmon fishery first went under "Limited Entry" provisions in 1975 the Commercial Fisheries Entry Commission authorized 2,472 permits for fishery (1,669 for drift gillnets and 803 for set gillnets), but subsequent appeals, court cases, and permit application adjudications have caused that number to increase (Appendix Table 1). Consequently, fishing effort has increased in nearly all districts of the Bay. Both gear types are currently utilized to nearly the maximum extent authorized by the Commercial Fisheries Entry Commission, and any district with an attractive preseason sockeye forecast (or an unexpectedly large inseason return) receives substantial fishing effort for its scheduled commercial openings.

During recent years the drift gillnet fleets have become quite mobile. Competitive interaction between fishermen for maximum harvests, modernization of fishing vessels, and the considerable shift in processing from being almost totally shore-based installations to the current mix of shore-based canneries/freezer plants complemented by floating freezer processing vessels have all contributed to fleet mobility dynamics. Set gillnet mobility is

quite constrained due to several factors; limited availability of fishing sites, existing tideland leases, and the infrastructure necessary to conduct set net fishing operations (mainly fish delivery considerations). However, as the number of set gillnet permits has grown, fishing sites have been pioneered in beach areas previously considered marginal for fishing, and the techniques of set gillnet fishing have been modernized to take full advantage of available fishing opportunity. Both gear groups are currently effective in harvesting substantial numbers of salmon in relatively short time periods and they compete very intensely for fish.

RESULTS

Effort

According to the Commercial Fisheries Entry Commission (Sue Burns, personal communication, 1994) the number of Bristol Bay commercial salmon fishing permits legal to fish during the 1994 season (Appendix Table 1) totaled 2,907 (1,887 drift gillnet and 1,020 set gillnet). Actual historic effort in the fishery, by district, over the span of years from 1975-93 is presented in Table 1, and depicted in Figures 2-6. Figure 7 also presents the same information for the entire Bay combined. As one might expect effort has been greatest in the districts with the largest sockeye harvest predictions (Naknek-Kvichak District and at times the Egegik District). The largest annual drift gillnet effort recorded for a single district was 1,389 permittees delivering in the Naknek-Kvichak District during 1990. The Naknek-Kvichak District drift gillnet effort has exceeded 1,000 permittees in 10 of the 19 years between 1975 and 1993. The Egegik District has exceeded 1,000 drift permittees twice during that interval and the other three districts have yet to reach that level of drift gillnet concentration. The largest set gillnet effort has also occurred in the Naknek-Kvichak District with a peak level of 438 permittees in 1990. The largest apparent increases in drift gillnet effort have occurred in the Egegik and Ugashik Districts. The Nushagak District has lost the most drift effort. Drift effort in the Naknek-Kvichak District has oscillated upward and downward somewhat depending on run forecasts. Set gillnet effort has increased in all districts since 1975.

Sockeye Catch Averages

The percentage of sockeye catch by gear type for Bristol Bay as an entity from 1965-94 is presented in Table 2. Over that three decades the drift gillnet percentage of the total Bristol Bay sockeye harvest has declined from an average of 91% (1965-74) to 87% (1985-94), while set gillnet harvest percentages have increased

from 9% to 13%.

On an individual district-by-district basis there have been differences in the performance of the two gear types around the Bay (Figures 8-12). From 1965-94 drift gillnets have lost percentage-wise in the Naknek-Kvichak, Nushagak, and Togiak Districts (Tables 3, 6, & 7) while gaining percentage-wise in the Egegik and Ugashik Districts (Tables 4 & 5). The reverse is true for set gillnets. The portion of harvest taken by drift gillnets in the Naknek-Kvichak District has dropped from 94% (1965-74) to 87% (1985-94). Over the same span of years the portion of harvest taken by Nushagak and Togiak drift gillnets dropped from 78% to 70% and from 98% to 61% respectively. Comparatively, the portion of harvest taken by drift gillnets in the Egegik and Ugashik Districts has increased from 86% to 91% and from 84% to 92% respectively. The largest percentage increase in a district for drift gillnets from 1965-94 has been 8% in the Ugashik District, and the largest percentage decrease for drift gillnets has been 37% in the Togiak District. Conversely, set gillnet percentages have increased in the Naknek-Kvichak, Nushagak, and Togiak Districts while decreasing in the Egegik and Ugashik Districts. The largest percentage increase for set gillnets over the three decades was 37% in the Togiak District and the largest percentage decrease occurred in the Ugashik District (8%).

Comparison of the average catch volume by gear type for the years 1965-74 with those from 1985-94 (Table 8) indicates the average sockeye catch per permit has more than doubled for each gear type in recent years. Bay-wide, individual drift gillnet fishermen averaged 5,338 sockeye delivered per season from 1965-74, and this increased to 12,015 sockeye per season from 1985-93. Individual set gillnet fishermen averaged 1,529 sockeye delivered per season from 1965-74, which increased to 3,580 per fisherman per season from 1985-93. This occurred in spite of increases in fishing effort (more permits).

The average sockeye catch per permittee by gear type, by district, and by year, for the span of years from 1975-1993 is presented in Table 9 and depicted in Figure 13. These data indicate the Naknek-Kvichak District drift gillnet fishermen have achieved the highest seasonal sockeye harvest per individual permittee of any district's fishermen (7,928 fish/permittee/year) and they recorded the highest single season individual delivery average of 18,585 sockeye/permittee in 1983. Egegik District set gillnet fishermen have recorded the highest individual average catch among Bristol Bay setnet fishermen over the two decades (3,454 sockeye/permittee/year), and Ugashik District set gillnet permittees posted the largest single season individual delivery average on record for setnets of 7,030 sockeye/permittee in 1981. Togiak District fishermen have had the lowest annual average catches in both the drift gillnet and set gillnet gear categories.

LITERATURE CITED

Bill, Donald. 1987. Summary of Bristol Bay Sockeye Salmon Catches by Gear Type, 1965-1987. Alaska Department of Fish and Game, Division of Commercial Fisheries, Bristol Bay Data Report No. 87-7.

Russell, Richard. 1991. Summary of Bristol Bay Sockeye Salmon Catches by Gear Type, 1965-1991. Alaska Department of Fish and Game, Division of Commercial Fisheries, Bristol Bay Data Report No. 2K91-13.

Table 1. Drift and set gill net effort by year and district, Bristol Bay, 1965-94.

Units of Effort (one or more deliveries during season)												
Year	Naknek-Kvichak		Egegik		Ugashik		Nushagak		Togiak		Bristol Bay 1	
	Drift	Set	Drift	Set	Drift	Set	Drift	Set	Drift	Set	Drift	Set
1965											1,395	582
66											1,715	549
67											1,555	439
68											1,237	493
69											1,633	511
1970											1,674	623
71											1,710	421
72											1,467	490
73 a											953	542
74 b											659	214
1975	705	147	235	88	34	8	421	141	92	24	1,235	445
76	664	182	256	96	75	18	422	178	86	31	1,353	501
77	621	179	324	94	47	7	476	166	130	31	1,355	495
78	798	280	386	130	48	4	641	216	151	38	1,569	650
79	1,060	298	332	159	103	23	656	236	162	57	1,711	768
1980	1,011	347	283	179	187	29	666	241	181	47	1,762	804
81	993	348	345	167	270	33	658	260	178	54	1,783	841
82	801	332	420	168	253	49	980	252	202	56	1,791	859
83	1,064	361	483	171	346	47	792	260	251	58	1,797	861
84	1,091	338	573	180	313	53	575	260	225	63	1,798	866
1985	1,165	351	936	181	740	59	406	251	117	54	1,813	872
86	722	298	833	279	844	136	750	340	141	110	1,800	872
87	1,062	318	929	206	633	78	626	284	146	67	1,799	872
88	1,015	354	1,010	193	578	70	534	282	321	123	1,839	922
89	1,213	363	986	213	555	68	375	288	149	97	1,860	973
1990	1,389	438	970	216	425	65	478	350	128	65	1,880	1,016
91	1,091	362	672	215	451	64	467	312	207	106	1,881	1,025
92	979	350	951	205	518	67	527	300	278	116	1,884	1,025
93	835	335	1,189	227	609	71	525	296	155	108	1,886	1,024
94 c											1,887	1,020
Average	962	315	638	177	370	50	578	259	174	69		

- 1 Total permits licensed according to the Commercial Fisheries Entry Commission.
a Sliding gear scale in effect.
b Limited Entry into effect.
c Data not yet available.

Table 2. Bristol Bay sockeye salmon catch in percent and numbers by gear type, 1965-94.

Year	Percentage Catch by gear type		Catch in Numbers by gear type (1,000's)		Total Catch (1,000's) a/
	Drift	Set	Drift	Set	
1965	92	8	22,315	1,940	24,255
66	89	11	8,289	1,025	9,314
67	89	11	3,855	476	4,331
68	90	10	2,514	279	2,793
69	88	12	5,827	795	6,622
1970	93	7	19,271	1,450	20,721
71	90	10	8,626	958	9,584
72	93	7	2,247	169	2,416
73	92	8	700	61	761
74	79	21	1,076	286	1,362
1975	91	9	4,458	441	4,899
76	90	10	5,057	562	5,619
77	89	11	4,341	537	4,878
78	88	12	8,737	1,191	9,928
79	87	13	18,858	2,571	21,429
1980	86	14	20,435	3,327	23,762
81	84	16	22,019	3,584	25,603
82	87	13	13,318	1,942	15,260
83	89	11	33,448	3,924	37,372
84	90	10	22,219	2,486	24,705
1985	90	10	21,352	2,344	23,696
86	86	14	13,356	2,420	15,776
87	87	13	13,911	2,158	16,069
88	86	14	12,038	1,952	13,990
89	86	14	24,642	4,093	28,735
1990	87	13	29,146	4,377	33,523
91	86	14	22,241	3,580	25,821
92	88	13	27,895	3,985	31,880
93	87	13	35,307	5,156	40,463
94 b/	89	11	31,243	4,022	35,265
1965-74 Total			74,720	7,439	82,159
1975-84 Total			152,890	20,565	173,455
1985-94 Total			231,131	34,087	265,218
1965-94 Total			458,741	62,091	520,832
1965-74 Ave.			91	9	8,216
1975-84 Ave.			88	12	17,346
1985-94 Ave.			87	13	26,522
1965-94 Ave.			88	12	17,361

a/ Totals may not add due to rounding.

b/ Preliminary catch figures.

Table 3. Naknek-Kvichak District sockeye salmon catch in percent and numbers by gear type, 1965-94.

Year	Percentage Catch by gear type		Catch in Numbers by gear type (1,000's)		Total Catch (1,000's) a/
	Drift	Set	Drift	Set	
1965	95	5	18,206	964	19,170
66	93	8	5,040	358	5,398
67	90	10	2,115	223	2,338
68	89	11	1,085	132	1,217
69	91	9	4,250	405	4,655
1970 c/	96	4	16,757	724	17,481
71	93	7	5,426	431	5,857
72	96	4	1,062	40	1,102
73	88	12	149	20	169
74	82	18	439	99	538
1975	94	6	2,888	198	3,086
76	93	7	2,363	184	2,547
77	90	10	1,956	211	2,167
78	91	9	4,651	473	5,124
79	90	10	13,548	1,443	14,991
1980 c/	88	12	12,330	1,666	13,996
81	86	14	9,732	1,261	10,993
82	87	13	4,509	659	5,168
83	92	8	19,774	1,785	21,559
84	89	11	13,102	1,444	14,546
1985	87	13	7,154	1,025	8,179
86	70	30	2,014	878	2,892
87	86	14	4,272	714	4,986
88	86	14	3,011	470	3,481
89	89	11	12,265	1,545	13,810
1990	88	12	15,189	2,083	17,272
91	89	11	9,322	1,154	10,476
92	89	11	8,366	1,030	9,396
93	84	16	7,461	1,447	8,908
94 b/	90	10	14,636	1,626	16,262
1965-74 Total			54,529	3,396	57,925
1975-84 Total			84,853	9,324	94,177
1985-93 Total			69,054	10,346	79,400
1965-94 Total			223,072	24,692	247,764
1965-74 Ave.	94	6	5,453	340	5,793
1975-84 Ave.	90	10	8,485	932	9,418
1985-94 Ave.	87	13	8,369	1,197	9,566
1965-94 Ave.	90	10	7,436	823	8,259

a/ Totals may not add due to rounding.

b/ Catches are preliminary.

c/ General District catch all attributed to drift gear.

Table 4. Egegik district sockeye salmon catch in percent and numbers by gear type, 1965-94.

Year	Percentage Catch by gear type		Catch in Numbers by gear type (1,000's)		Total Catch (1,000's) a/
	Drift	Set	Drift	Set	
1965	84	16	2,655	525	3,180
66	88	12	1,849	252	2,101
67	90	10	959	112	1,071
68	93	7	627	44	671
69	80	20	713	176	889
1970 c/	85	15	1,196	208	1,404
71	87	13	1,137	170	1,307
72	91	9	761	79	840
73	90	10	199	22	221
74	78	22	134	38	172
1975	90	10	867	97	964
76	91	9	1,204	126	1,330
77	88	12	1,564	217	1,781
78	84	16	1,009	199	1,208
79	78	22	1,756	501	2,257
1980 c/	69	31	1,875	748	2,623
81	77	23	3,349	1,012	4,361
82	83	17	2,023	425	2,448
83	86	14	5,805	953	6,758
84	92	8	4,752	435	5,187
1985	93	7	6,999	539	7,538
86	89	11	4,336	516	4,852
87	91	9	4,859	498	5,357
88	90	10	5,841	616	6,457
89	90	10	7,968	934	8,902
1990	91	9	9,486	886	10,372
91	91	9	6,164	633	6,797
92	91	9	14,270	1,376	15,646
93	93	7	20,037	1,563	21,600
94 b/	92	8	9,954	844	10,798
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1965-74 Total			10,230	1,626	11,856
1975-84 Total			24,204	4,713	28,917
1985-94 Total			89,914	8,405	98,319
1965-94 Total			124,348	14,744	139,092
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1965-74 Ave.	86	14	1,023	163	1,186
1975-84 Ave.	84	16	2,420	471	2,892
1985-94 Ave.	91	9	8,991	841	9,832
1965-94 Ave.	89	11	4,145	491	4,636

a/ Totals may not add up due to rounding.

b/ Catches are preliminary.

c/ General District catch all attributed to drift gear.

Table 5. Ugashik district sockeye salmon catch in percent and numbers by gear type, 1965-94.

Year	Percentage Catch by gear type		Catch in Numbers by gear type (1,000's)		Total Catch (1,000's) a/
	Drift	Set	Drift	Set	
1965	82	18	760	166	926
66	83	17	370	75	445
67	81	19	133	31	164
68	80	20	66	16	82
69	84	16	142	28	170
1970 c/	77	23	132	40	172
71	89	11	848	106	954
72	28	72	5	13	18
73	75	25	3	1	4
74	50	50	1	1	2
1975	80	20	12	3	15
76	90	10	158	17	175
77	90	10	84	9	93
78	88	12	7	1	8
79	84	16	328	62	390
1980 c/	87	13	778	108	886
81	89	11	1,884	232	2,116
82	87	13	988	151	1,139
83	93	7	3,116	233	3,349
84	92	8	2,456	202	2,658
1985	96	4	6,212	251	6,463
86	94	6	4,765	238	5,003
87	93	7	2,001	128	2,129
88	91	9	1,383	140	1,523
89	87	13	2,752	394	3,146
1990	91	9	1,960	189	2,149
91	89	11	2,617	328	2,945
92	90	10	2,989	332	3,321
93	90	10	3,764	413	4,177
94 b/	94	6	4,110	260	4,370
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1965-74 Total			2,460	477	2,937
1975-84 Total			9,811	1,018	10,829
1985-94 Total			32,553	2,673	35,226
1965-94 Total			44,824	4,168	48,992
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1965-74 Ave.	84	16	246	48	294
1975-84 Ave.	91	9	981	102	1,083
1985-94 Ave.	92	8	3,255	267	3,523
1965-94 Ave.	91	9	1,494	139	1,633

a/ Totals may not add up due to rounding.

b/ Catches are preliminary.

c/ General District catch all attributed to drift gear.

Table 6. Nushagak district sockeye salmon catch in percent and numbers by gear type, 1965-94.

Year	Percentage Catch by gear type		Catch in Numbers by gear type (1,000's)		Total Catch (1,000's) a/
	Drift	Set	Drift	Set	
1965	72	28	693	263	956
66	72	28	840	331	1,171
67	86	14	569	89	658
68	90	10	674	75	749
69	81	19	607	142	749
1970	67	33	791	397	1,188
71	77	23	969	288	1,257
72	92	8	352	30	382
73	93	7	252	20	272
74	73	27	371	139	510
1975	80	20	518	128	646
76	85	15	1,071	195	1,266
77	85	15	529	90	619
78	85	15	2,666	471	3,137
79	82	18	2,713	614	3,327
1980	85	15	3,802	696	4,498
81	81	19	6,100	1,393	7,493
82	90	10	5,299	611	5,910
83	86	14	4,287	833	5,120
84	83	17	1,660	332	1,992
1985	65	35	830	477	1,307
86	76	24	2,032	687	2,719
87	80	20	2,551	703	3,254
88	75	25	1,274	433	1,707
89	58	42	1,609	1,179	2,788
1990	67	33	2,384	1,149	3,533
91	76	24	3,816	1,238	5,054
92	65	35	1,820	970	2,790
93	72	28	3,755	1,482	5,237
94 b/	68	32	2,334	1,099	3,433
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1965-74 Total			6,118	1,774	7,892
1975-84 Total			28,645	5,363	34,008
1985-94 Total			22,405	9,417	31,822
1965-94 Total			57,168	16,554	73,722
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1965-74 Ave.	78	22	612	177	789
1975-84 Ave.	84	16	2,865	536	3,401
1985-94 Ave.	70	30	2,241	942	3,182
1965-94 Ave.	78	22	1,906	552	2,457

a/ Totals may not add up due to rounding.

b/ Catches are preliminary.

Table 7. Togiak district sockeye salmon catch in percent and numbers by gear type, 1965-94.

Year	Percentage Catch by gear type		Catch in Numbers by gear type (1,000's)		Total Catch (1,000's) a/
	Drift	Set	Drift	Set	
1965	100	0	261	0	261
66	98	3	195	5	200
67	95	5	95	5	100
68	99	1	72	1	73
69	99	1	133	2	135
1970	99	1	153	1	154
71	100	0	208	1	209
72	100	0	75	0	75
73	99	1	95	1	96
74	91	9	127	12	139
1975	92	8	174	15	189
76	92	8	277	25	302
77	89	11	196	23	219
78	84	16	378	74	452
79	82	18	376	85	461
1980	83	17	528	107	635
81	79	21	503	136	639
82	84	16	500	96	596
83	80	20	468	120	588
84	77	23	249	73	322
1985	75	25	157	52	209
86	68	32	210	99	309
87	66	34	228	115	343
88	64	36	529	293	822
89	55	45	49	40	89
1990	64	36	126	71	197
91	59	41	322	227	549
92	62	38	450	276	726
93	54	46	290	250	540
94 b/	52	48	209	193	402
<hr/>					
1965-74 Total			1,414	28	1,442
1975-84 Total			3,649	754	4,403
1985-94 Total			2,570	1,616	4,186
1965-94 Total			7,633	2,398	10,031
<hr/>					
1965-74 Ave.	98	2	141	3	144
1975-84 Ave.	83	17	365	75	440
1985-94 Ave.	61	39	257	162	419
1965-94 Ave.	76	24	254	80	334

a/ Totals may not add up due to rounding.

b/ Catches are preliminary.

Table 8. Bristol Bay average sockeye salmon catch, in numbers of fish gear type and year, 1965-94.

Year	Estimated Permits Actually Fished		Average Seasonal Catch of Sockeye (No. of Fish) by Permit Type		Drift Gillnet	Set Gillnet
	Drift	Set	Drift	Set	% of Total Catch	% of Total Catch
1965	1,395	582	15,996	3,333	92	8
66	1,715	549	4,833	1,867	89	11
67	1,555	439	2,479	1,084	89	11
68	1,237	493	2,032	566	90	10
69	1,633	511	3,568	1,556	88	12
1970	1,674	623	11,512	2,327	93	7
71	1,710	421	5,044	2,276	90	10
72	1,467	490	1,532	345	93	7
73	953	542	735	113	92	8
74	659	214	1,633	1,336	79	21
1975	1,235	445	3,610	991	91	9
76	1,353	501	3,738	1,122	90	10
77	1,355	495	3,204	1,085	89	11
78	1,569	650	5,569	1,832	88	12
79	1,711	768	11,022	3,348	87	13
1980	1,762	804	11,598	4,138	86	1
81	1,783	841	12,349	4,262	84	16
82	1,791	859	7,436	2,261	87	13
83	1,797	861	18,613	4,557	89	11
84	1,798	866	12,358	2,871	90	10
1985	1,813	872	11,777	2,688	90	10
86	1,800	872	7,420	2,775	84	16
87	1,799	872	7,733	2,475	87	13
88	1,839	922	6,546	2,117	86	14
89	1,860	973	13,248	4,207	86	14
1990	1,880	982	15,503	4,457	87	13
91	1,881	963	11,824	3,717	86	14
92	1,884	971	14,806	4,104	88	13
93	1,881	971	18,770	5,309	87	13
94	a/	a/	a/	a/		
1965-74 Ave.	1,400	486	5,338	1,529	91	9
1975-84 Ave.	1,615	709	9,465	2,901	88	12
1985-93 Ave.	1,849	933	12,015	3,580	87	13
1965-93 Ave.	1,613	702	9,137	2,853	88	12

a/ Data not yet available.

Table 9. Average sockeye catch per permittee, in numbers of fish, by gear type and district, 1975-94. a

Average Sockeye Catch in Numbers of Fish (Per Permittee)										
Year	Naknek-Kvichak		Egegik		Ugashik		Nushagak		Togiak	
	Drift	Set	Drift	Set	Drift	Set	Drift	Set	Drift	Set
1975	4,096	1,347	3,689	1,102	353	375	1,230	908	1,891	625
76	3,559	1,011	4,703	1,313	2,107	944	2,538	1,096	3,221	806
77	3,150	1,179	4,827	2,309	1,787	1,286	1,111	542	1,508	742
78	5,828	1,689	2,614	1,531	146	250	4,159	2,181	2,503	1,947
79	12,781	4,842	5,289	3,151	3,184	2,696	4,136	2,602	2,321	1,491
1980 b	12,196	4,801	5,936	4,179	3,791	3,724	5,709	2,888	2,917	2,277
81	9,801	3,624	9,707	6,060	6,978	7,030	9,271	5,358	2,826	2,519
82	5,629	1,985	4,817	2,530	3,905	3,082	5,407	2,425	2,475	1,714
83	18,585	4,945	12,014	5,573	9,006	4,957	5,413	3,204	1,865	2,069
84	12,009	4,272	8,293	2,417	7,847	3,811	2,887	1,277	1,107	1,159
1985	6,141	2,920	7,478	2,978	8,395	4,254	2,044	1,900	1,342	963
86	2,789	2,946	5,205	1,849	5,646	1,750	2,709	2,021	1,489	900
87	4,023	2,245	5,230	2,417	3,161	1,641	4,075	2,475	1,562	1,716
88	2,967	1,328	5,783	3,192	2,393	2,000	2,386	1,535	1,648	2,382
89	10,111	4,256	8,081	4,385	4,959	5,794	4,291	4,094	329	412
1990	10,935	4,756	9,779	4,102	4,612	2,908	4,987	3,283	984	1,092
91	8,544	3,188	9,173	2,944	5,803	5,125	8,171	3,968	1,556	2,142
92	8,545	2,943	15,005	6,712	5,770	4,955	3,454	3,233	1,619	2,379
93	8,935	4,319	16,852	6,885	6,181	5,817	7,152	5,007	1,871	2,315
94 c										
1975-93										
Average	7,928	3,084	7,604	3,454	4,527	3,284	4,270	2,631	1,844	1,561

a Averages computed using total effort (see Table 1).

b General district catches not included.

c Effort data not yet available.

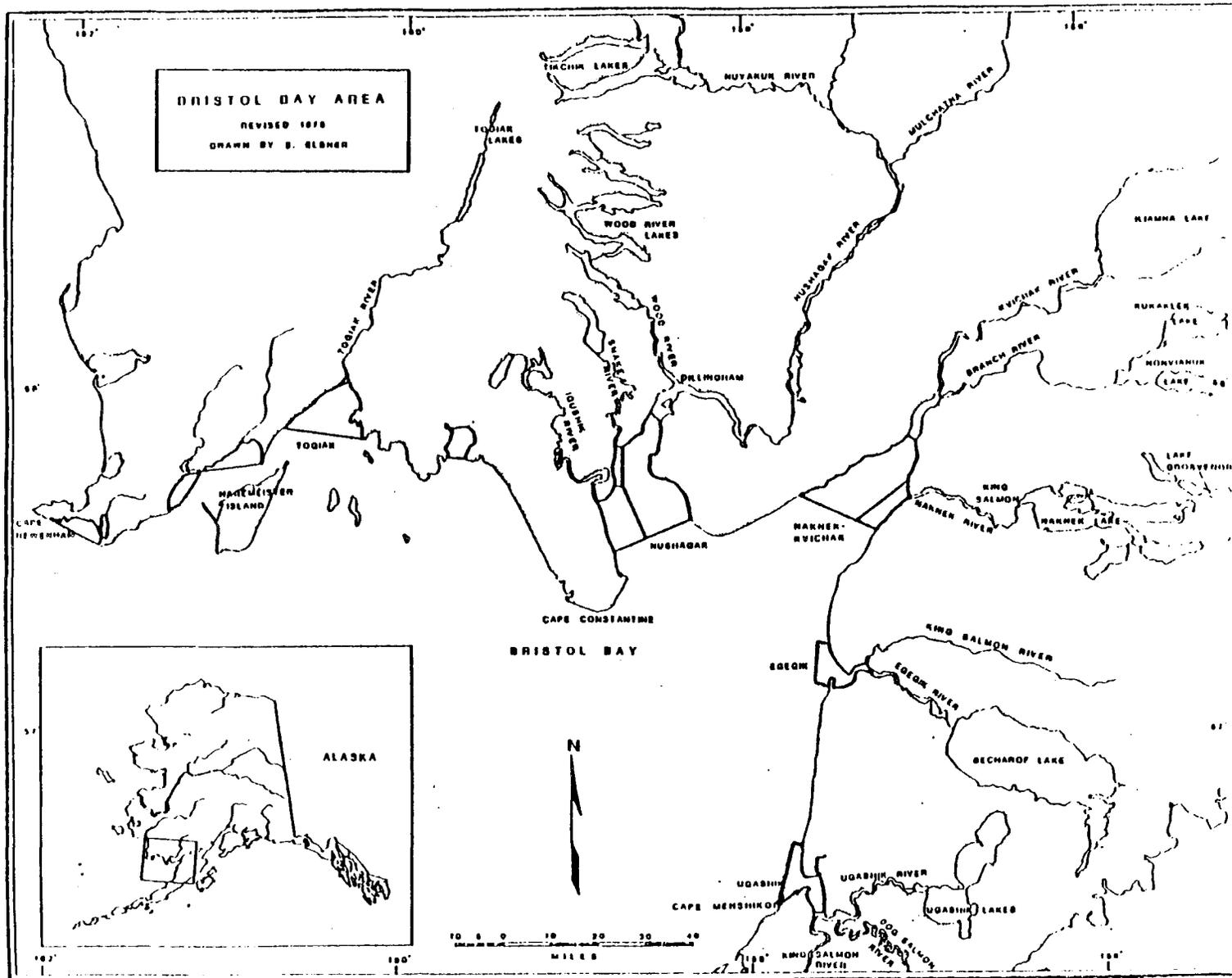


Figure 1. Bristol Bay management area, Alaska.

Bristol Bay Effort By Gear Type 1975-1994

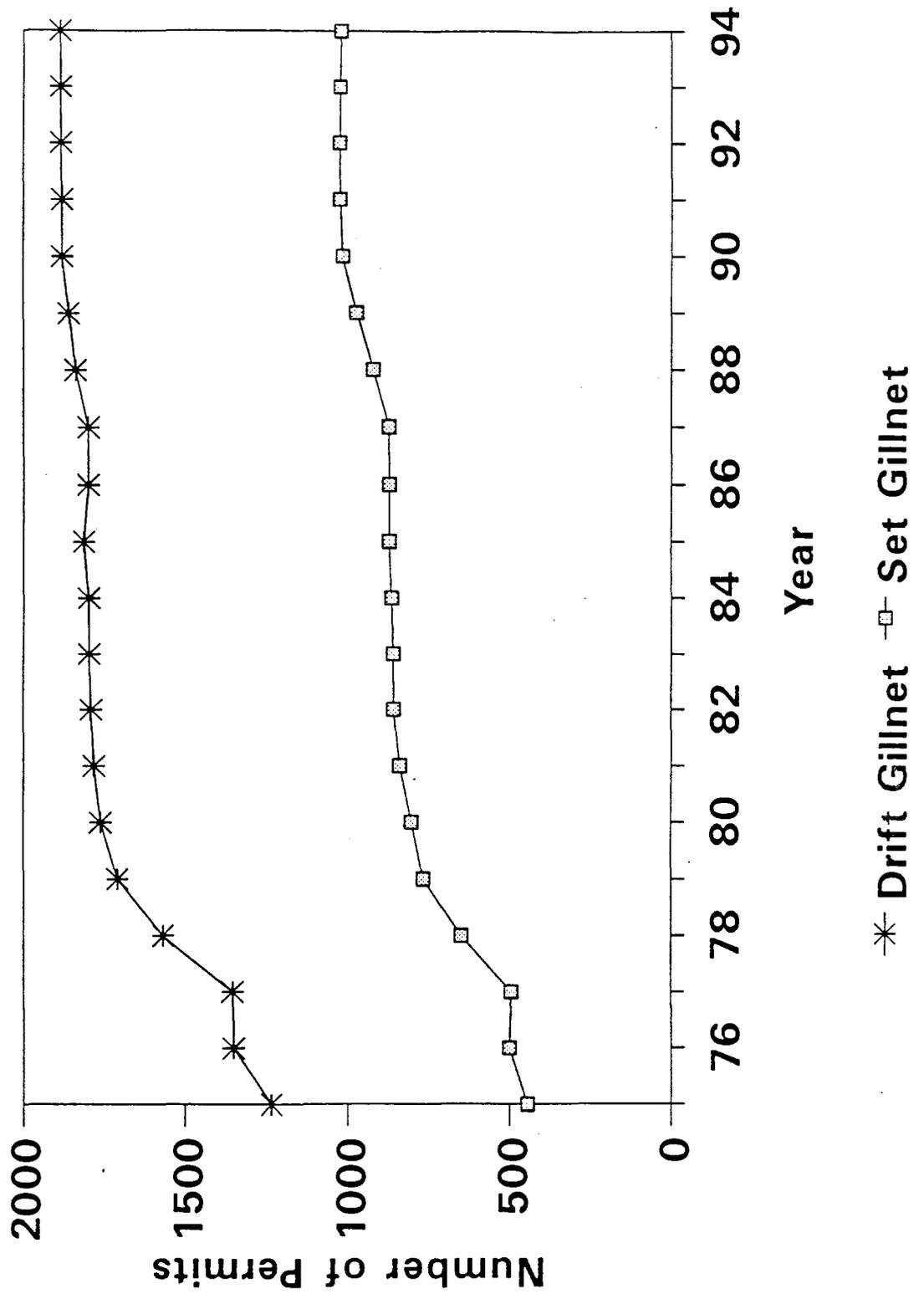


Figure 2

Naknek-Kvichak Effort By Gear Type 1975-1993

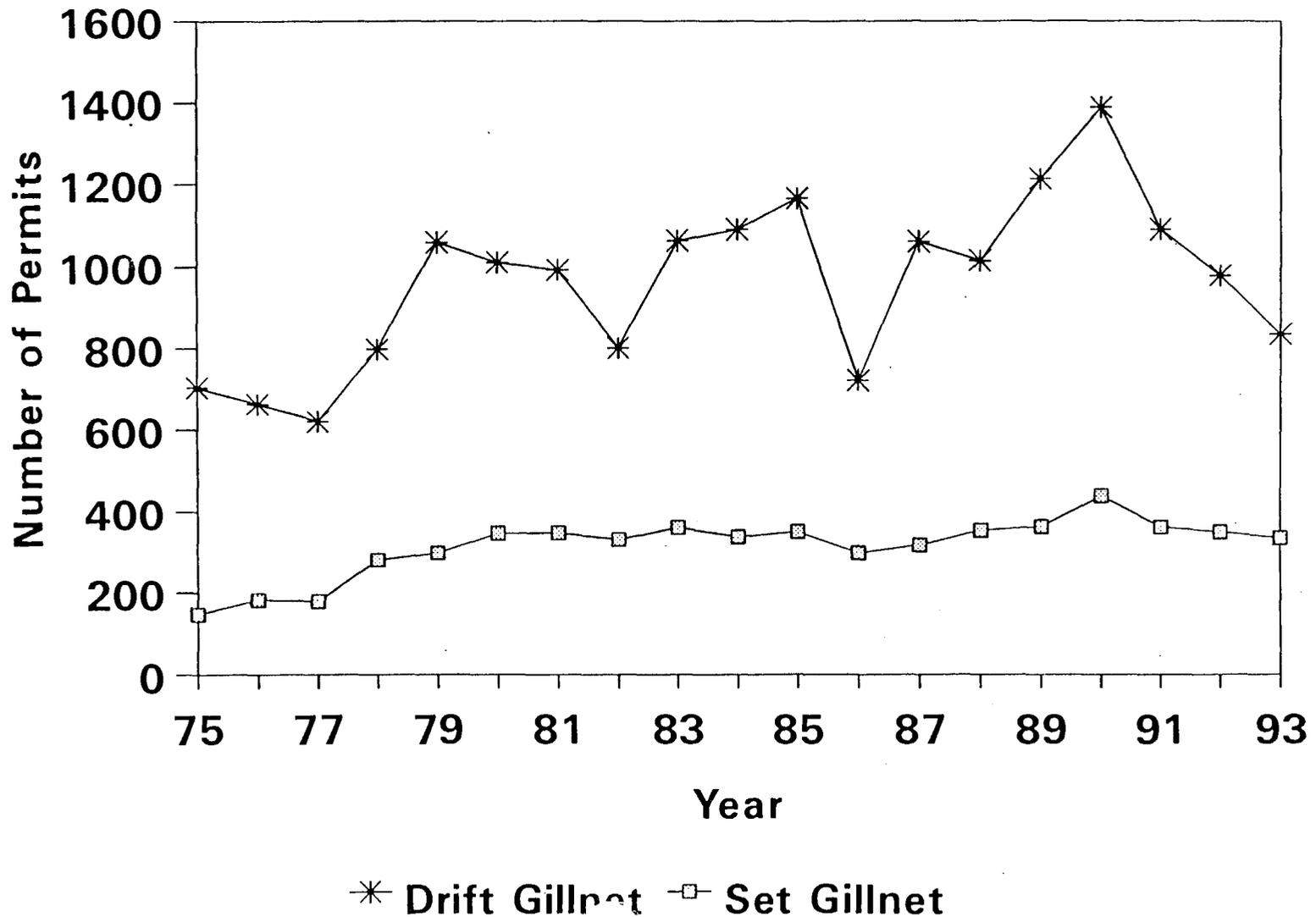
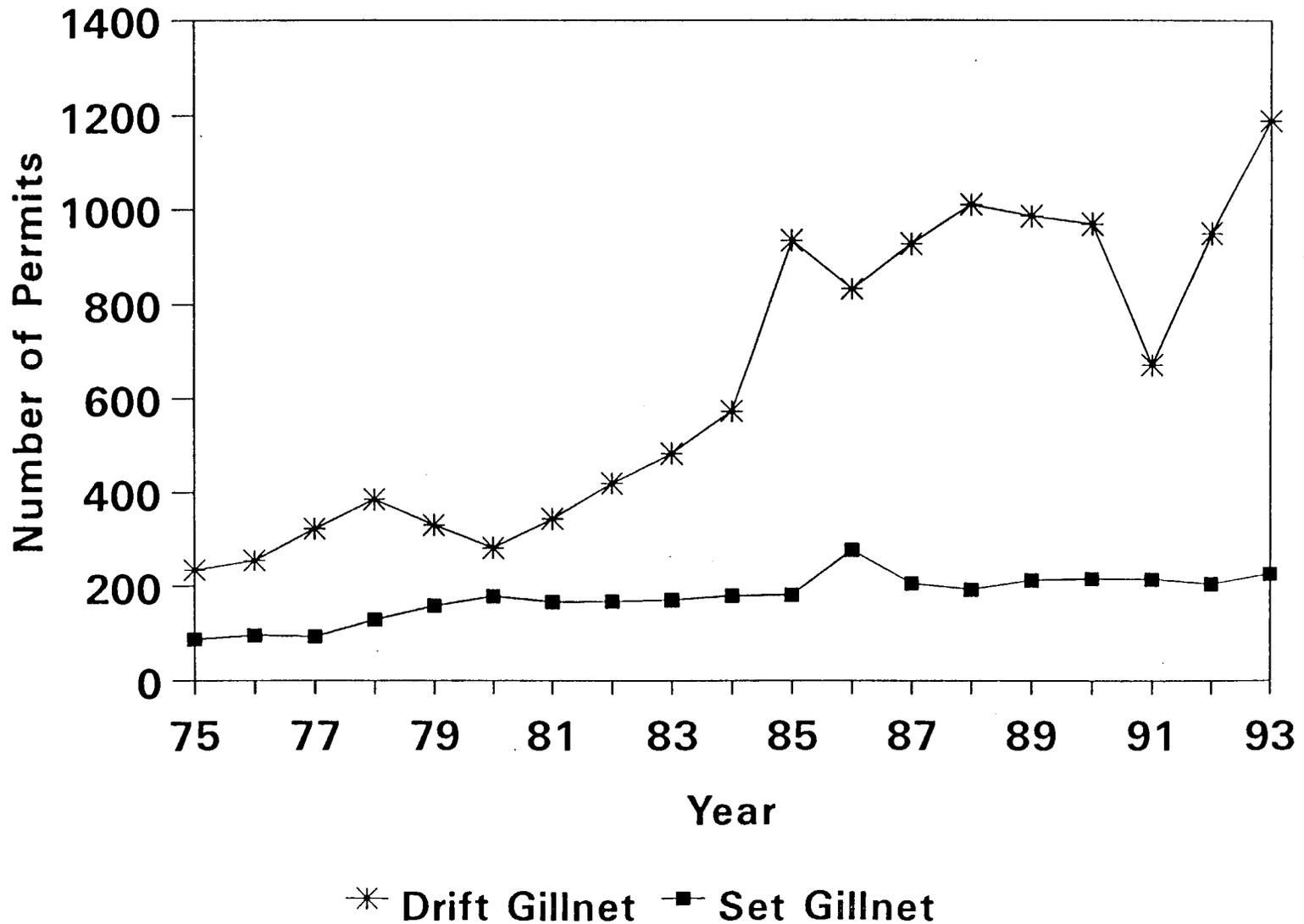


Figure 3

Egegik Effort By Gear Type 1975-1993



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Figure 4

Ugashik Effort By Gear Type 1975-1993

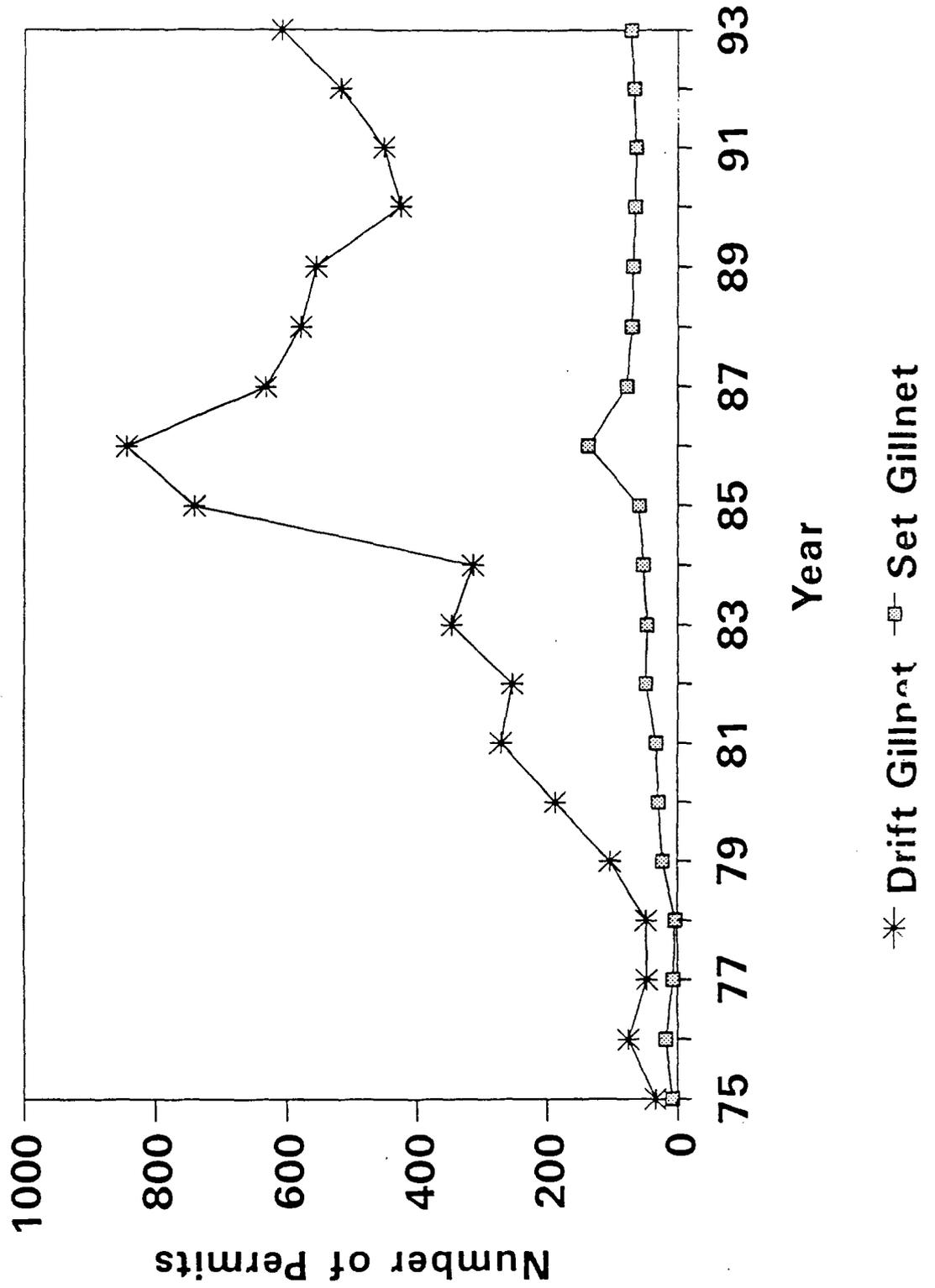
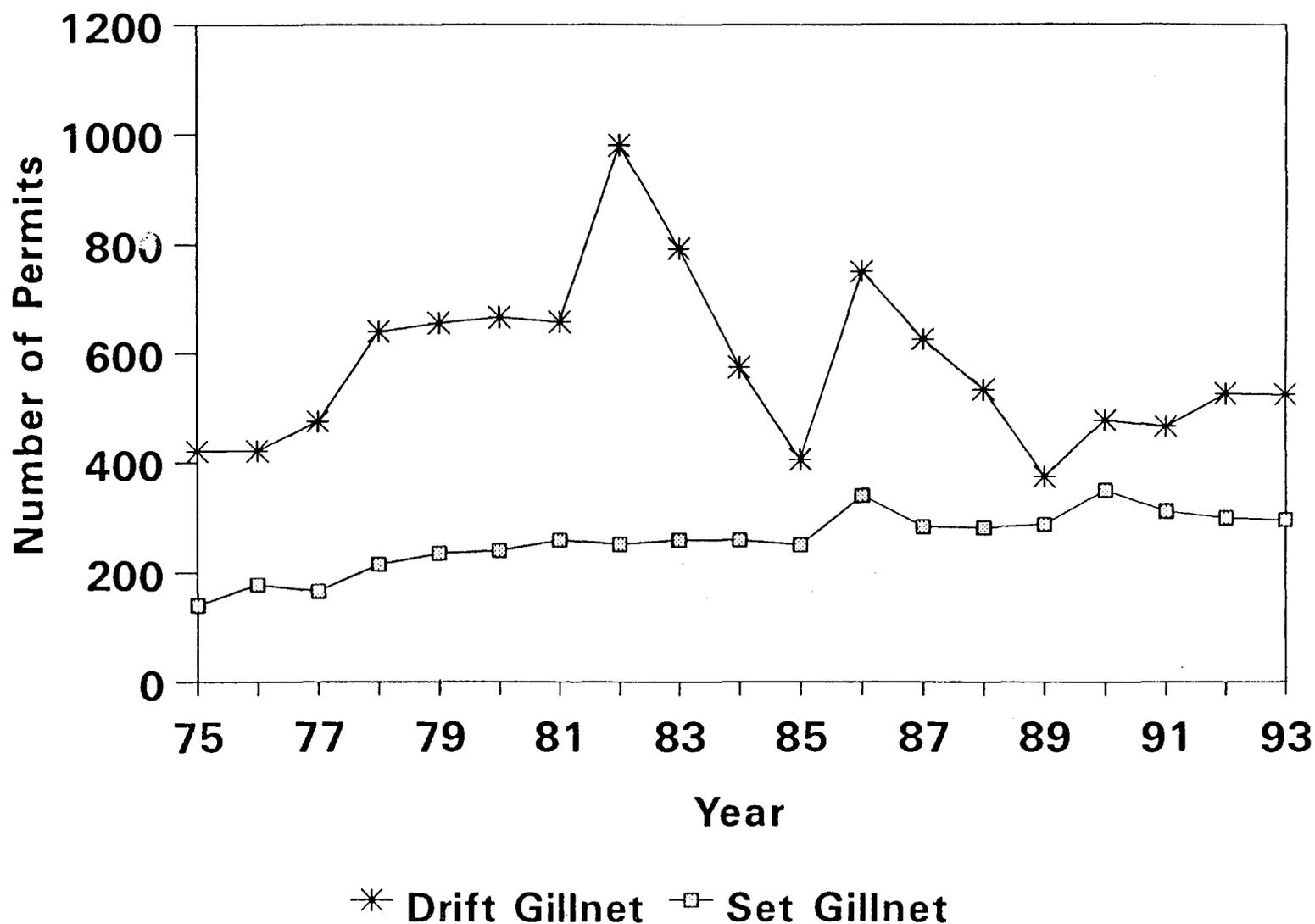


Figure 5

Nushagak Effort By Gear Type 1975-1993



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Figure 6

Togiak Effort By Gear Type 1975-1993

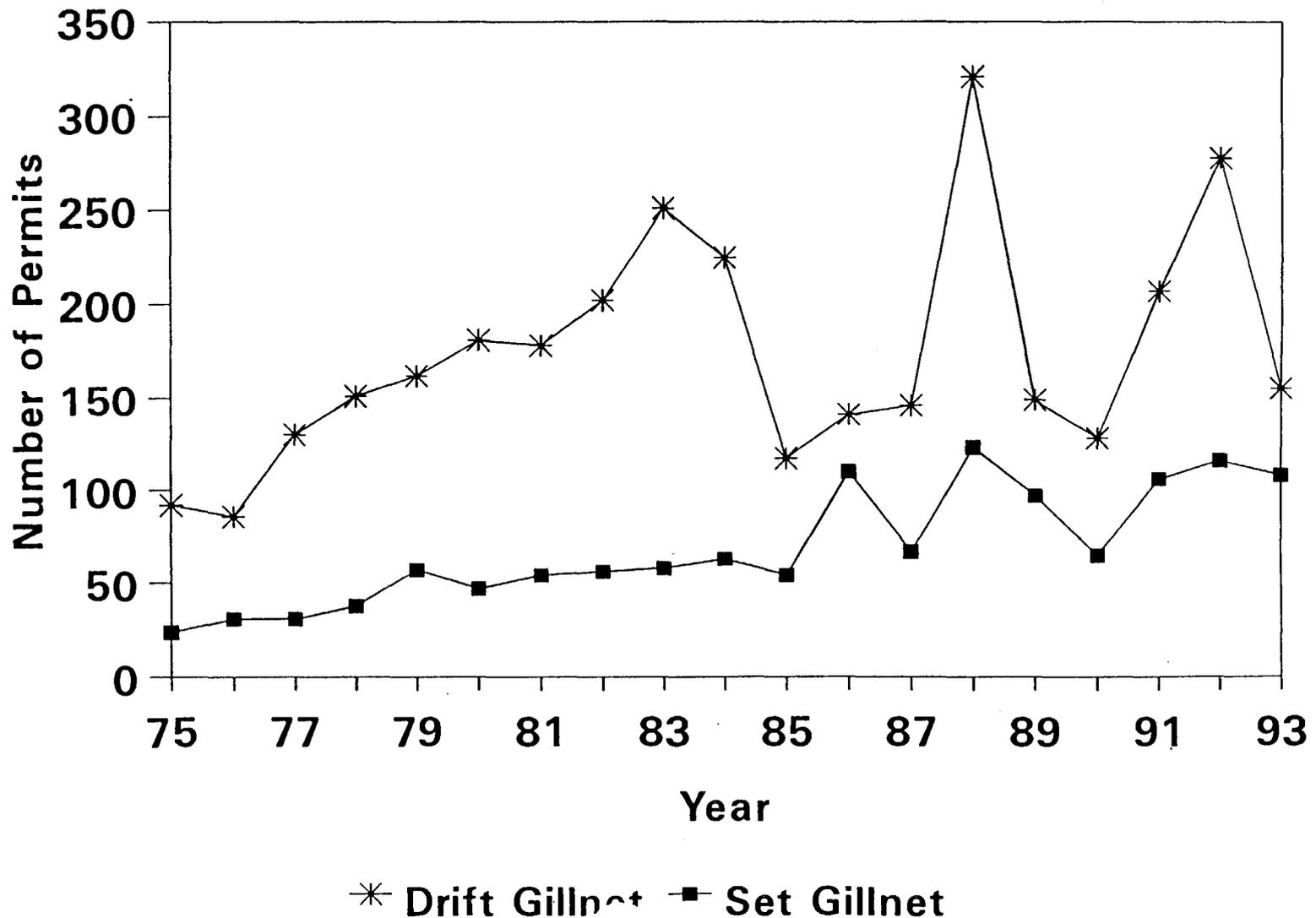


Figure 7

Naknek-Kvichak District Catch By Gear Type 1975-1994

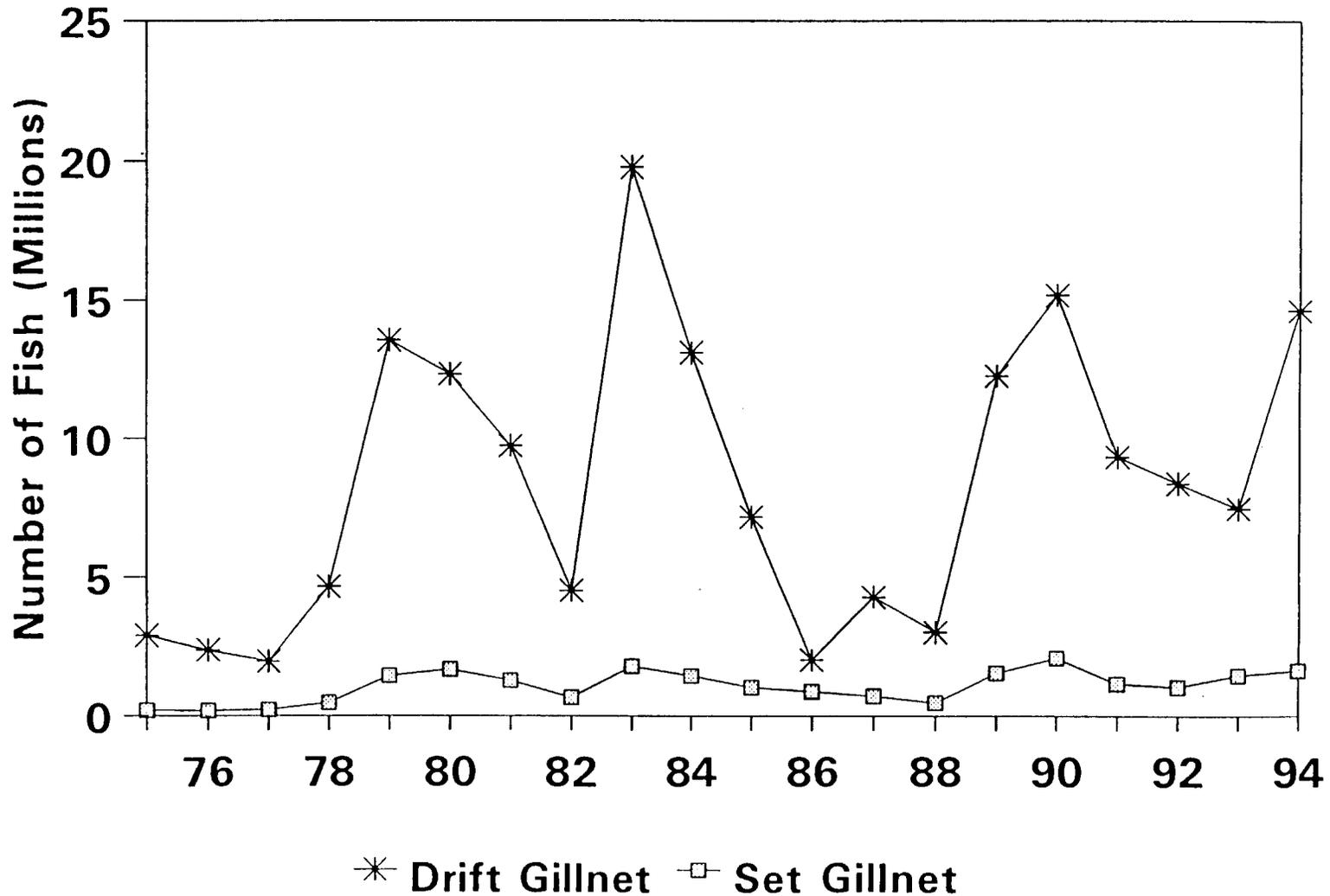


Figure 8

1994 Data is preliminary

Egegik District Catch By Gear Type 1975-1994

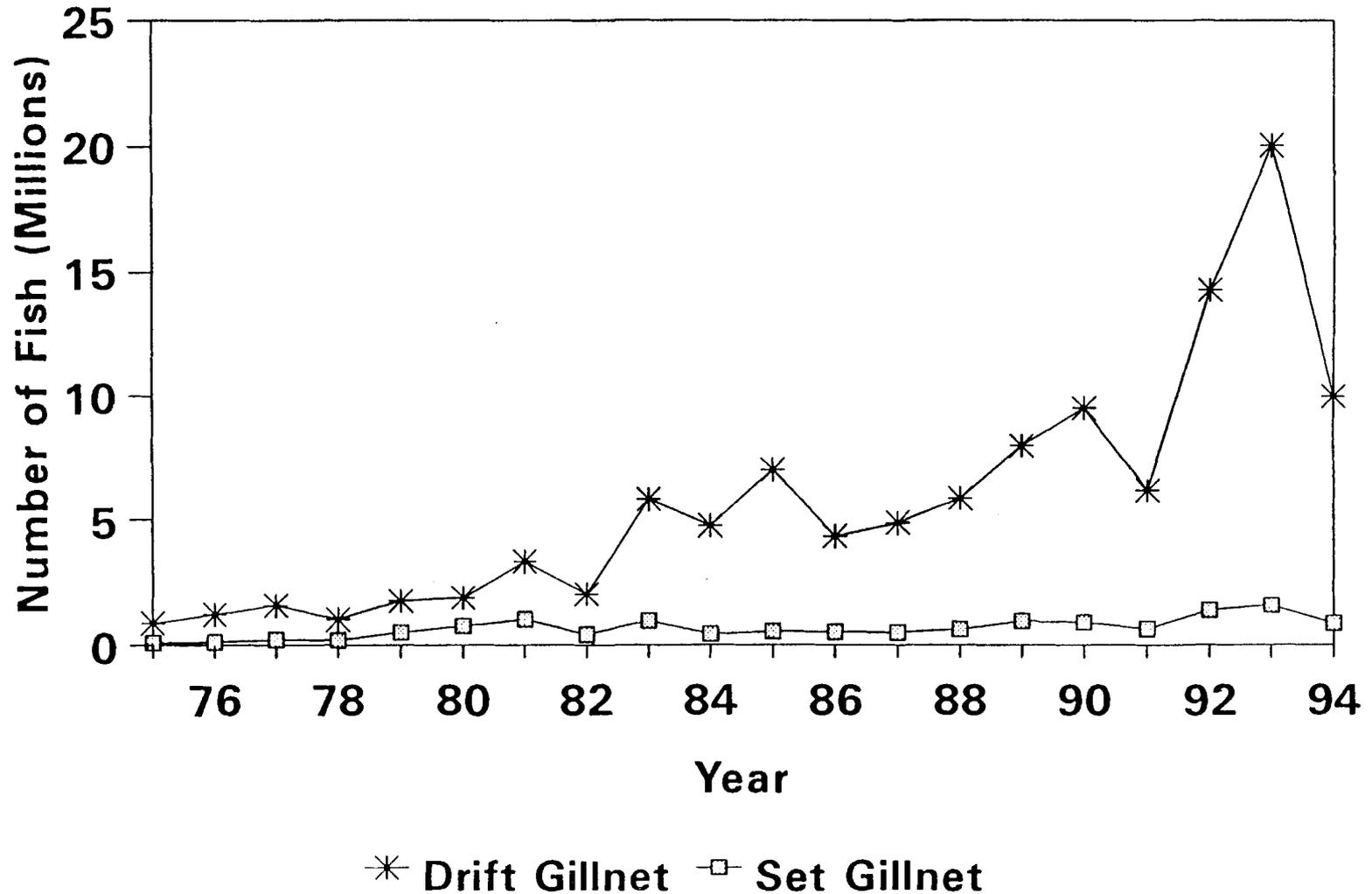


Figure 9

1994 Data is preliminary

Ugashik District Catch By Gear Type 1975-1994

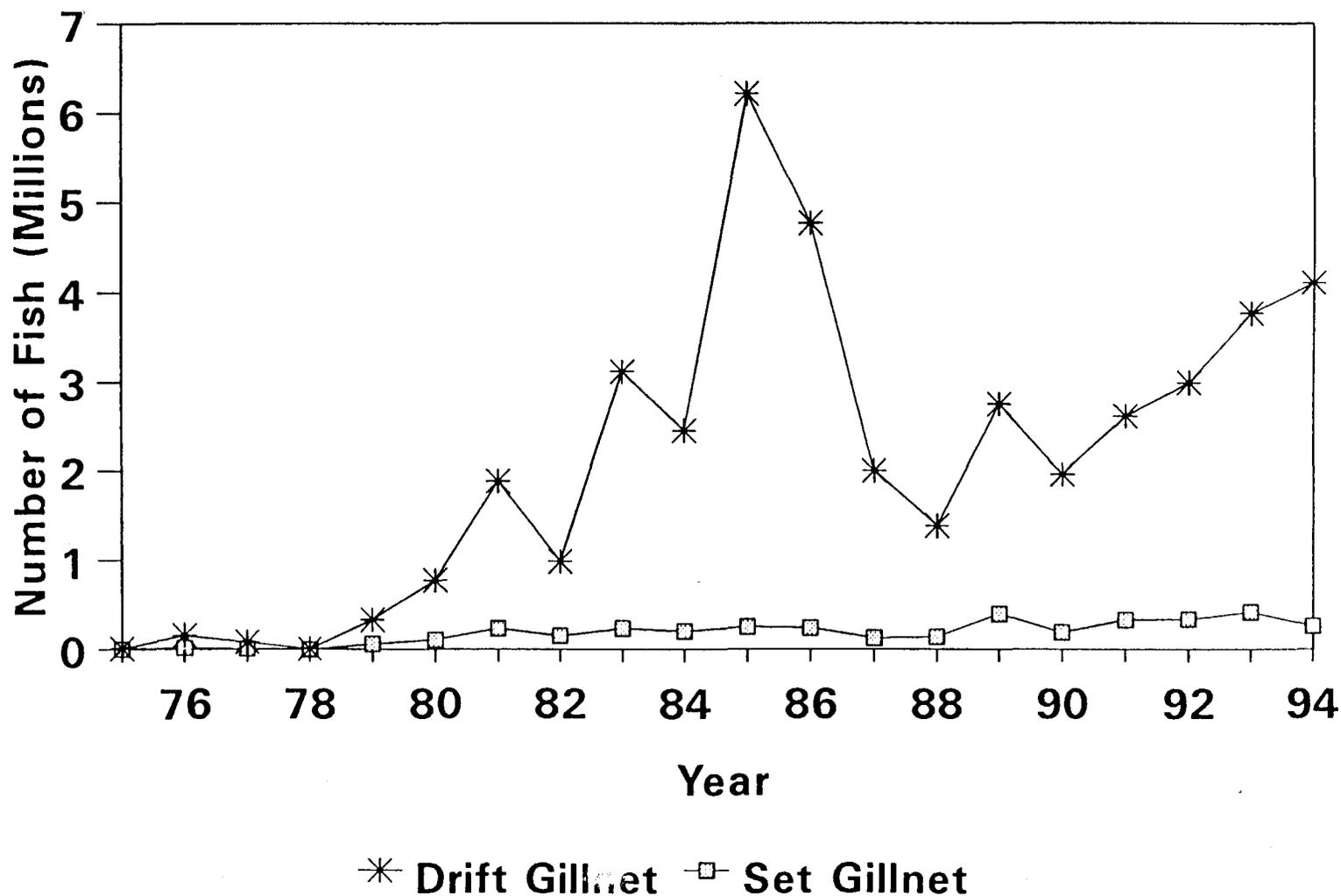


Figure 10

1994 Data is preliminary

Nushagak District Catch By Gear Type 1975-1994

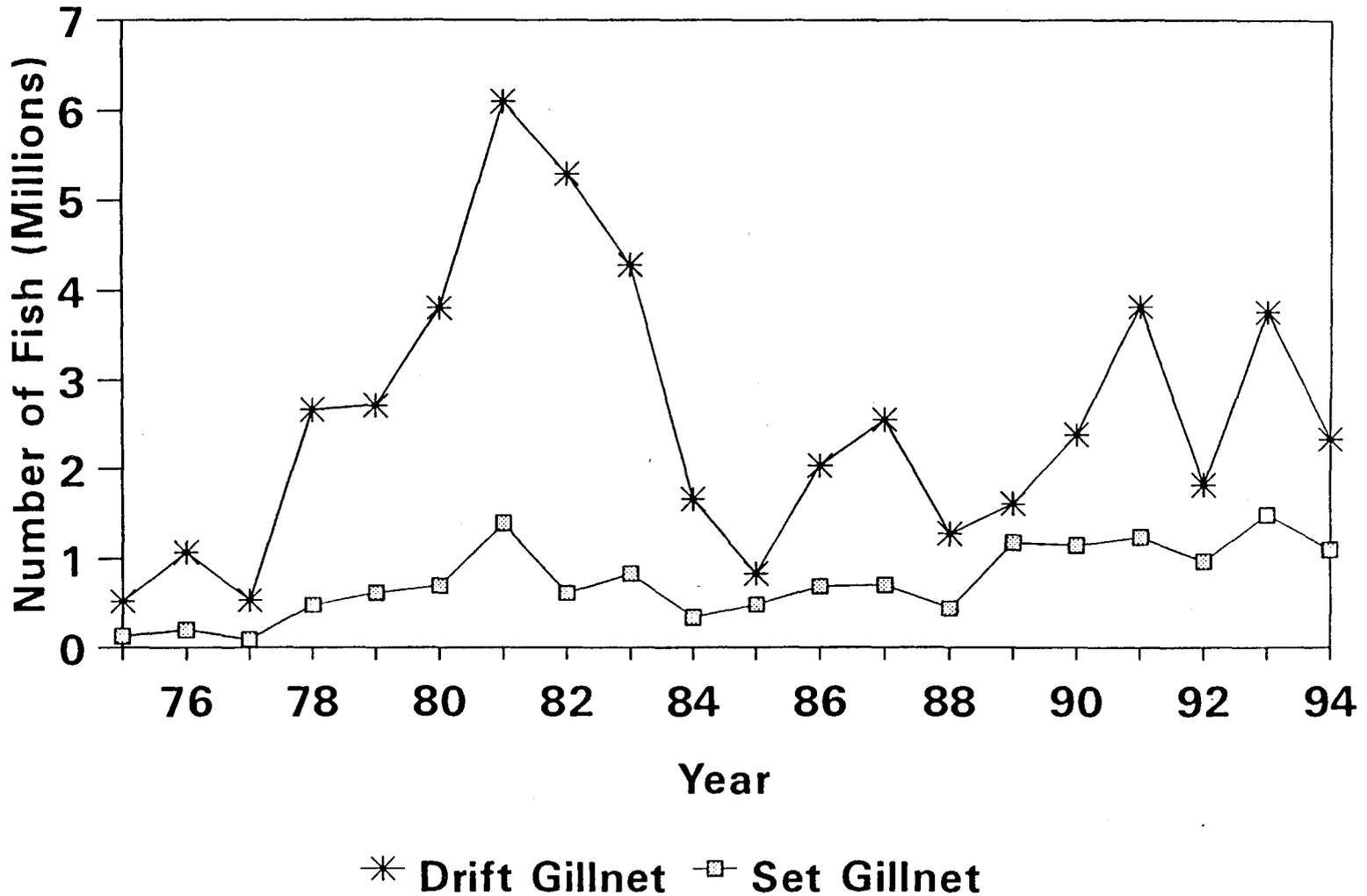


Figure 11

1994 data is preliminary

Togiak District Catch By Gear Type

1975-1994

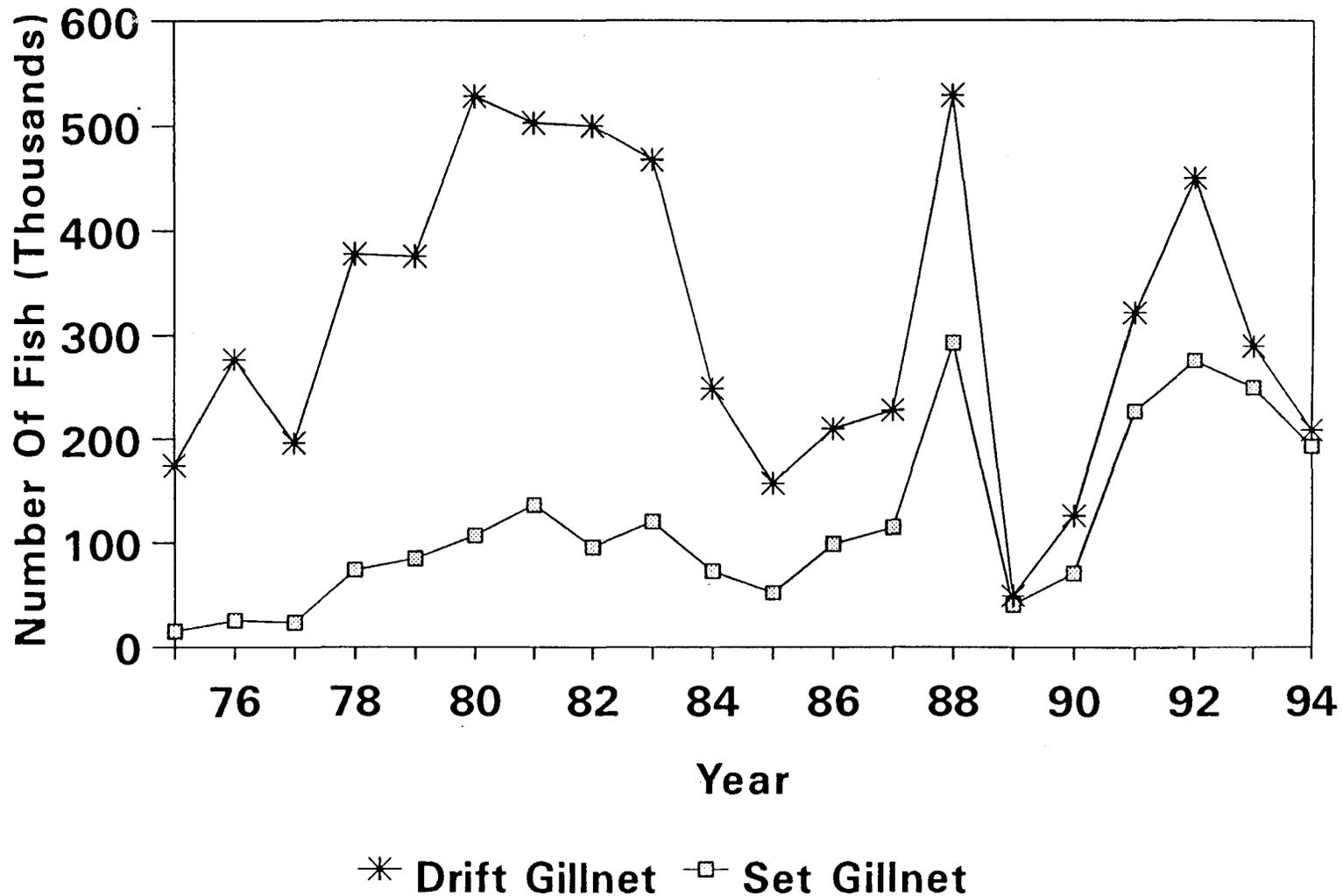
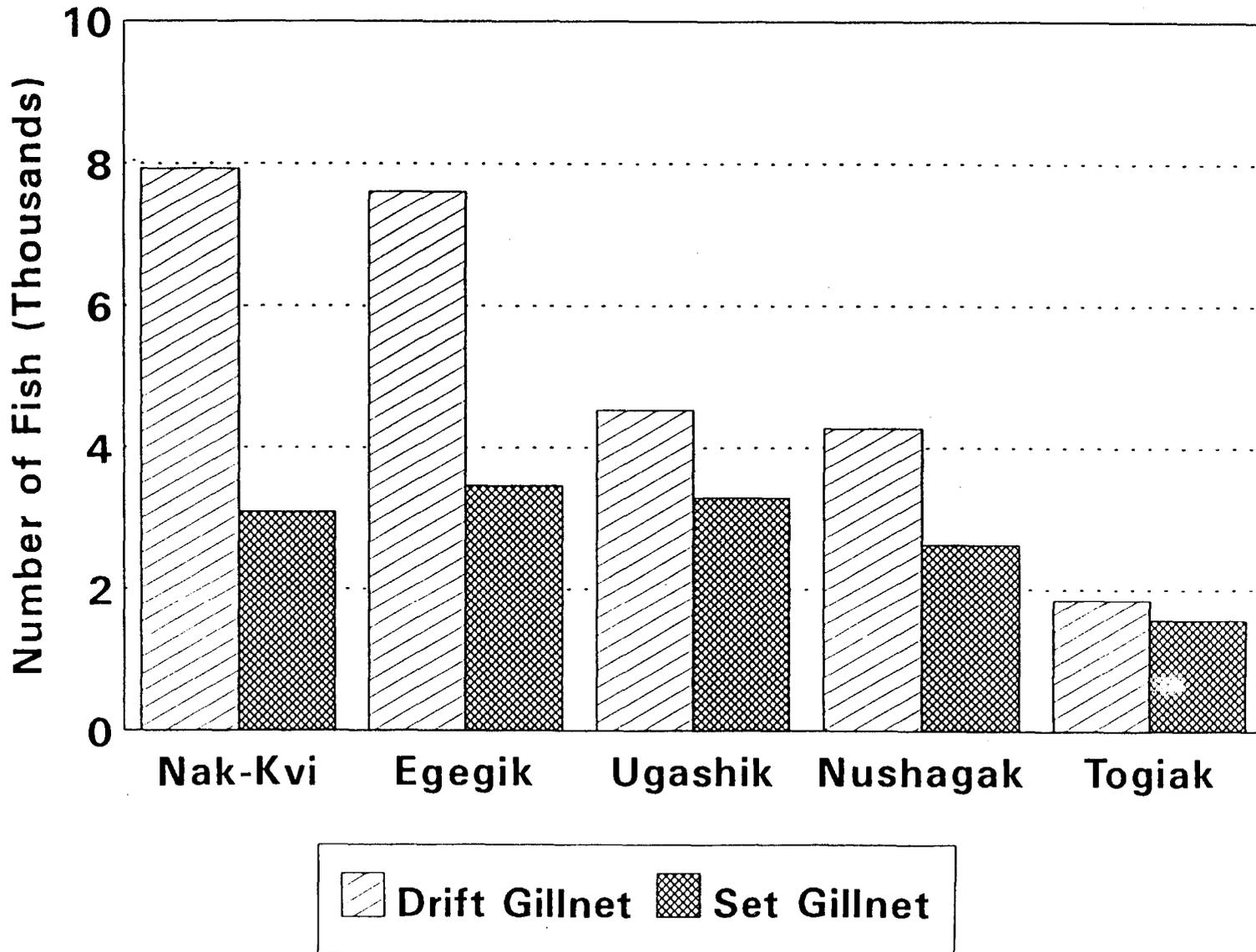


Figure 12

1994 Data is preliminary

Bristol Bay Average Catch By Gear Type, By Area 1975-1993



Appendix Table 1. Salmon fishing interim-use and permanent entry permits actually fished, by gear type, Bristol Bay, 1975-94.

Year	Number of Permits Issued			Number of Permits Fished	
	Int. Use	Permanent	Total	Number	Percent
DRIFT GILL NET:					
1975	644	1,416	2,060	1,235	60
76	99	1,622	1,721	1,353	79
77	65	1,663	1,728	1,355	78
78	77	1,700	1,777	1,569	88
79	83	1,717	1,800	1,711	95
1980	110	1,717	1,827	1,762	96
81	107	1,720	1,827	1,783	98
82	100	1,724	1,824	1,791	98
83	95	1,726	1,821	1,797	99
84	89	1,729	1,818	1,798	99
1985	96	1,738	1,834	1,813	99
86	95	1,743	1,838	1,800	98
87	93	1,745	1,838	1,799	98
88	90	1,749	1,839	1,839	100
89	91	1,770	1,861	1,860	100
1990	93	1,787	1,880	1,880	100
91	88	1,793	1,881	1,881	100
92	87	1,797	1,884	1,884	100
93	81	1,805	1,886	1,881	100
94	77	1,810	1,887	a/	a/
Average	118	1,724	1,842	1,726	
SET GILL NET:					
1975	204	716	920	445	48
76	5	759	764	501	66
77	16	824	840	495	59
78	19	891	910	650	71
79	24	910	934	768	82
1980	34	913	947	804	85
81	42	914	956	841	88
82	41	916	957	859	90
83	36	924	960	861	90
84	31	931	962	866	90
1985	28	922	950	872	92
86	22	928	950	872	92
87	18	943	950	872	92
88	17	932	949	922	97
89	18	989	1,007	973	97
1990	15	1,001	1,016	982	97
91	12	1,013	1,025	963	94
92	8	1,017	1,025	971	95
93	8	1,016	1,024	971	95
94	7	1,013	1,020	a/	a/
Average	30	924	953	815	

/a Data not yet available.

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