4K91-23

NORTH ALASKA PENINSULA SALMON

REPORT TO THE ALASKA BOARD OF FISHERIES

FALL 1991

By

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Regional Information Report[1] No. 4K91-23

Alaska Department of Fish and Game
Division of Commercial Fisheries
211 Mission Road
Kodiak, Alaska 99615

November 1991

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INTRODUCTION

The North Peninsula is that portion of the Alaska Peninsula and Unimak Island draining into the Bering Sea between Cape Menshikof (the southwestern Bristol Bay area boundary) and Cape Sarichef (at the west end of Unimak Island). Bechevin Bay is included in the North Peninsula (Figure 1). There are approximately 62 salmon producing systems along the North Peninsula, of which 32 produce sockeye. The North Peninsula is comprised of two districts, the Northern (Figure 2) and the Northwestern (Figure 3).

Sockeye are the major salmon species along the North Peninsula with harvests averaging 1,960,000 during the period from 1982 through 1991. Chum salmon are generally the second most important species, averaging a 365,000 annual harvest during the past ten years. Coho salmon may be more important than chums during some years. The 1982-1991 coho harvest averaged 189,000. Chinook are important locally in specific locations such as Nelson Lagoon and Port Heiden but are of minor importance in the North Peninsula as a whole. The chinook harvest has averaged 13,000 fish during the past six years. This is down from the average harvest of 22,000 during 1978-1985 even though parent escapements were at high levels. Pink salmon are the least important species although occasionally unexpected high catches occur as happened in 1990 when about 500,000 pink salmon were harvested in Herendeen Bay. During the past ten years, the even year pink harvest has averaged 129,000 fish while the average odd year pink salmon catch was only 3,000. Salmon harvests during 1982 through 1991 are listed in Table 1.

AREA M - T OVERLAP

There is an overlap area where both Bristol Bay (Area T) and Alaska Peninsula (Area M) fishermen are allowed to fish. Area T fishermen are not allowed to fish in any portion of the Alaska Peninsula area during July. Until 1990, Area T fishermen were allowed to fish

prior to and after July during the open season in the Inner Port Heiden, Outer Port Heiden, and Cinder River Sections. In addition, Area T fishermen could fish in the entire Ilnik Section after July. The season did not open until August 1 in the Outer Port Heiden and Cinder River Section outside of Cinder River Lagoon. Consequently, the only place that Area T fishermen could fish prior to July was in Cinder River Lagoon and the Inner Port Heiden Section. At that time what is now the Outer Port Heiden Section was part of the Cinder River Section.

The overlap area was created about the time of Statehood so that Port Heiden fishermen could fish chinook at home, then fish sockeye salmon in the Bristol Bay Area, and fish coho at home during the fall. Cinder River is also close to the Bristol Bay villages of Pilot Point and Ugashik.

A coho fishery has taken place at Cinder River since at least the early 1970's with fishermen from throughout Bristol Bay participating. To the author's knowledge, there has only been one incidence of an Area M permit holder fishing at Cinder River.

In 1986, non Port Heiden Area T fishermen began fishing in the Ilnik Section and what is now the Outer Port Heiden Section. Area M fishermen complained of Area T fishermen targeting Bear River sockeye and Port Heiden fishermen expressed concern over coho salmon interception outside Port Heiden Bay. The approximate number of salmon caught by Area T fishermen fishing the Ilnik and Outer Port Heiden Section and the number of permit holders during 1986 through 1989 are listed in Table 2.

During its January 1990 meeting, the Board of Fisheries implemented the following regulation changes:

1. Eliminated Area T fishermen from the Outer Port Heiden Section and that portion of the Ilnik Section located outside of Ilnik Lagoon.

2. Closed the fishing season completely in the Outer Port Heiden Section.

3. Delayed the fishing season until July 15 from July 5 in that portion of the Ilnik Section located between Unangashak Bluffs and Strogonof Point as scale analysis indicated substantial numbers of Bristol Bay destined sockeye were intercepted by Area M fishermen near Strogonof Point.

In 1991, approximate North Peninsula salmon fishing effort by Area M permit holders was 10 seiners, 162 drift gillnetters and 37 set gillnetters. Effort by Area T permit holders was 70 drift gillnetters and 12 set gillnetters.

INTERCEPTION ISSUE

Northwestern District and Black Hills Section

Fishermen from other management areas sometimes claim that stocks traveling to other areas are intercepted in the Northwestern District and Black Hills Section. If large numbers of migrant salmon were available in these locations, major interception fisheries would have begun there several decades ago. Bristol Bay sockeye do not migrate through False Pass, instead they travel through larger passes to the west. Ocean conditions will bring a few migrant fish into the southern end of the Bechevin Bay Section and for that reason the Bechevin Bay Section is managed as part of the South Unimak June fishery. The Dublin Bay Section is closed until July 10. The Black Hills Section receives extensive effort when the Bear River fishery is closed, yet the catch is small.

There are terminal salmon runs to the Black Hills and Bechevin Bay Sections. The major Northwestern District salmon harvests take place in or at mouths of lagoons at Urilia Bay or in the Izembek-Moffet Bay Section. Figures 4, 5, and 6 show the average catch and escapement for the Northwestern District, Bechevin Bay Section, and Black Hills Section during the past five years. Escapements are indexed totals which are generally considerably lower than the actual escapement. The escapement size in relation to the harvest shows that the Northwestern District and Black Hills Section are terminal harvest areas.

Port Moller to Strogonof Point

Scale pattern analysis work was done during 1988 and 1990 to segregate the major stocks comprising the Port Moller to Strogonof Point sockeye harvest. These studies indicated that large numbers of Bristol Bay and Nelson Lagoon sockeye were at times present in this area. The results of these studies will be discussed in a separate report.

The Port Moller to Strogonof Point catch and escapement during 1962 through 1991 is shown in Figure 7.

Prior to 1983, the majority of the Port Moller to Strogonof Point sockeye catch was taken west of Cape Seniavin. Beginning in 1983, effort has shifted causing the Cape Seniavin to Strogonof Point harvest to equal or exceed the Port Moller to Cape Seniavin harvest. The reason for the shift in effort was due to the following:

1. Fishermen obtained larger and faster boats which made it possible to operate in rougher water and to often run to safe anchorages before the weather became too severe.

2. The number of fishermen fishing at Port Moller expanded since the 1970's due to more processing capacity, and people with two permits selling one permit. This caused crowded fishing conditions.

3. An abundance of sockeye in the Three Hills and Ilnik Sections.

The Port Moller to Cape Seniavin and Cape Seniavin to Strogonof Point sockeye harvests during 1962 through 1991 are shown in Figure 8.

The three largest sockeye producing systems located between Port Moller and Strogonof Point are Bear River, Sandy River, and Ilnik. Bear and Sandy Rivers are located in the Bear River Section (Port Moller to Cape Seniavin) and Ilnik is the only substantial sockeye system between Cape Seniavin and Strogonof Point. Figure 9 illustrates the escapement to all three systems during 1973 through 1991. Scale pattern analysis has indicated that a substantial number of Nelson Lagoon destined sockeye are harvested between Port Moller and Strogonof Point. Nelson Lagoon sockeye escapements and harvests have averaged 205,000 and 275,000 respectively during 1982-91.

Bear River's sockeye run is of unusually long duration compared to other sockeye runs of the Bering Sea drainage. The run starts in early June and continues through at least the first half of September. The Sandy River sockeye run (the Sandy River terminus is located only 5 to 8 miles northeast of the Bear River terminus) begins in early June and is usually over by July 10. Ilnik's sockeye run covers June until about July 15.

The Bear River and Nelson River sockeye escapement numbers plus the 1991 Ilnik sockeye escapement number are based on weir and tower counts and therefore represent total escapements. All other North Peninsula salmon escapement numbers (except the 1962-1964 Sandy

River Tower counts) are indexed totals derived from aerial surveys. The indexed totals are lower than the actual escapements in most, if not all, cases and are considered minimum estimates of the total escapements.

The fishing effort in the Port Moller to Strogonof Point Area is usually concentrated in two locations. One concentration is near the Bear River markers and the other is usually at the eastern boundary (Cape Seniavin, Three Hills, Unangashak Bluffs, or Strogonof Point).

Since the expanded effort into the Three Hills and Ilnik fisheries, Bear River sockeye escapement goals have not been exceeded to the extent during strong runs that they were during 1978-1982. This is likely due to a previous build up of fish all along the coast which rapidly entered to terminal area and river every time high winds prevented the fleet from fishing. The escapement is much easier to control with some of the fish being harvested away from the terminal area. Fishermen are presently able to fish rougher weather now due to having better boats.

Another factor causing sockeye salmon escapement goals to be greatly exceeded during years when fish size is small is the regulation prohibiting the use of gill net mesh size of less than 5-1/4 inches. This was a major factor in 1990 and 1991 when the Bear River escapement goal was exceeded by 297,000 and 356,000 fish respectively.

The Northern District chum salmon harvests are mostly taken in the Herendeen-Moller Bay and Bear River Sections. Quality due to water marking is often a problem.

The North Peninsula is a major coho producer with its harvests occurring late in the season. North Peninsula coho runs peak in late August and early September.

PROJECTED 1992 HARVESTS

The projected 1992 North Peninsula sockeye harvests (with 1991 regulations) are as follows:

Chinook	10,000
Sockeye	1,800,000
Coho	200,000
Pink	250,000
Chum	250,000

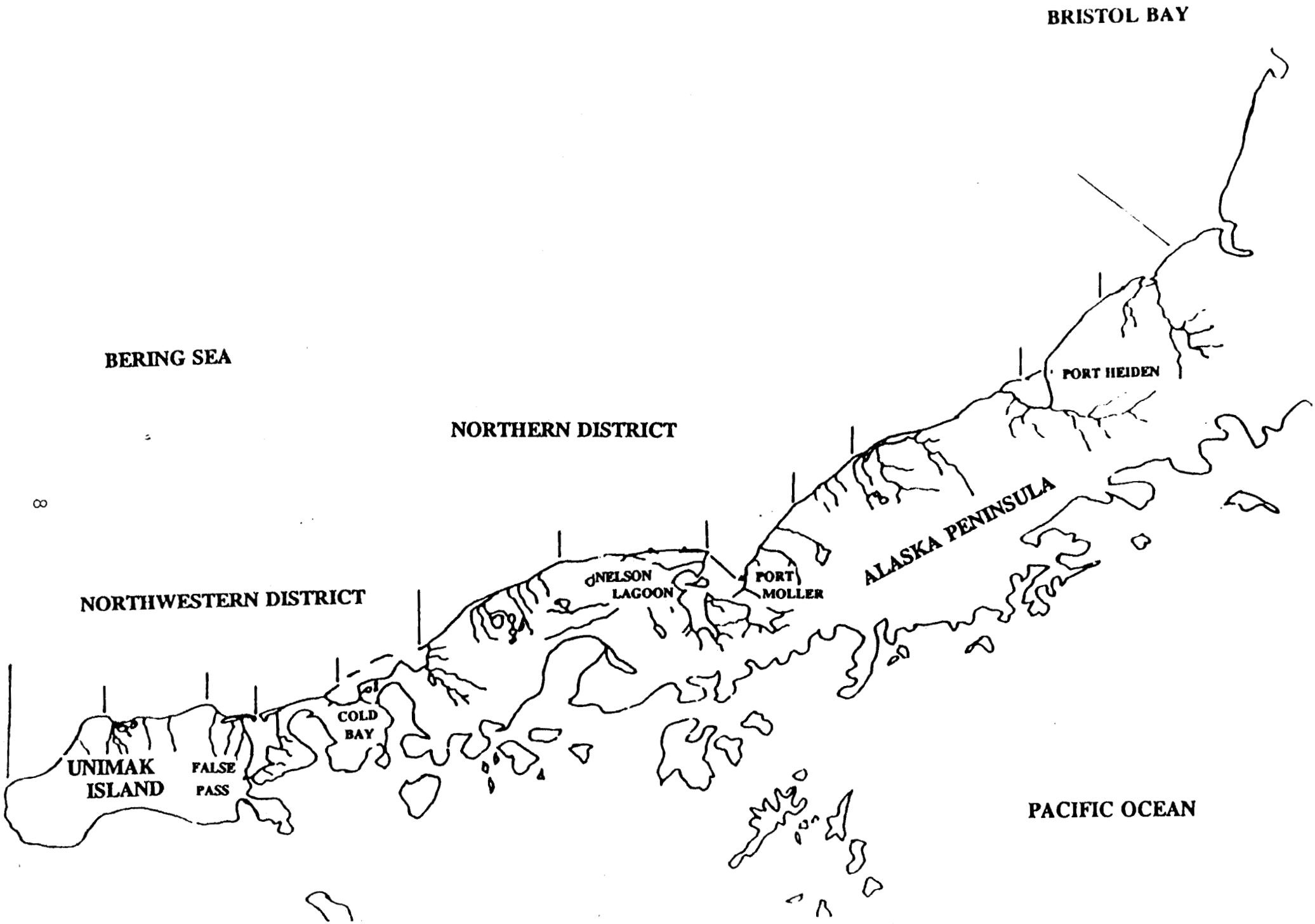

Figure 1. Map of North Peninsula (Northwestern and Northern Districts).

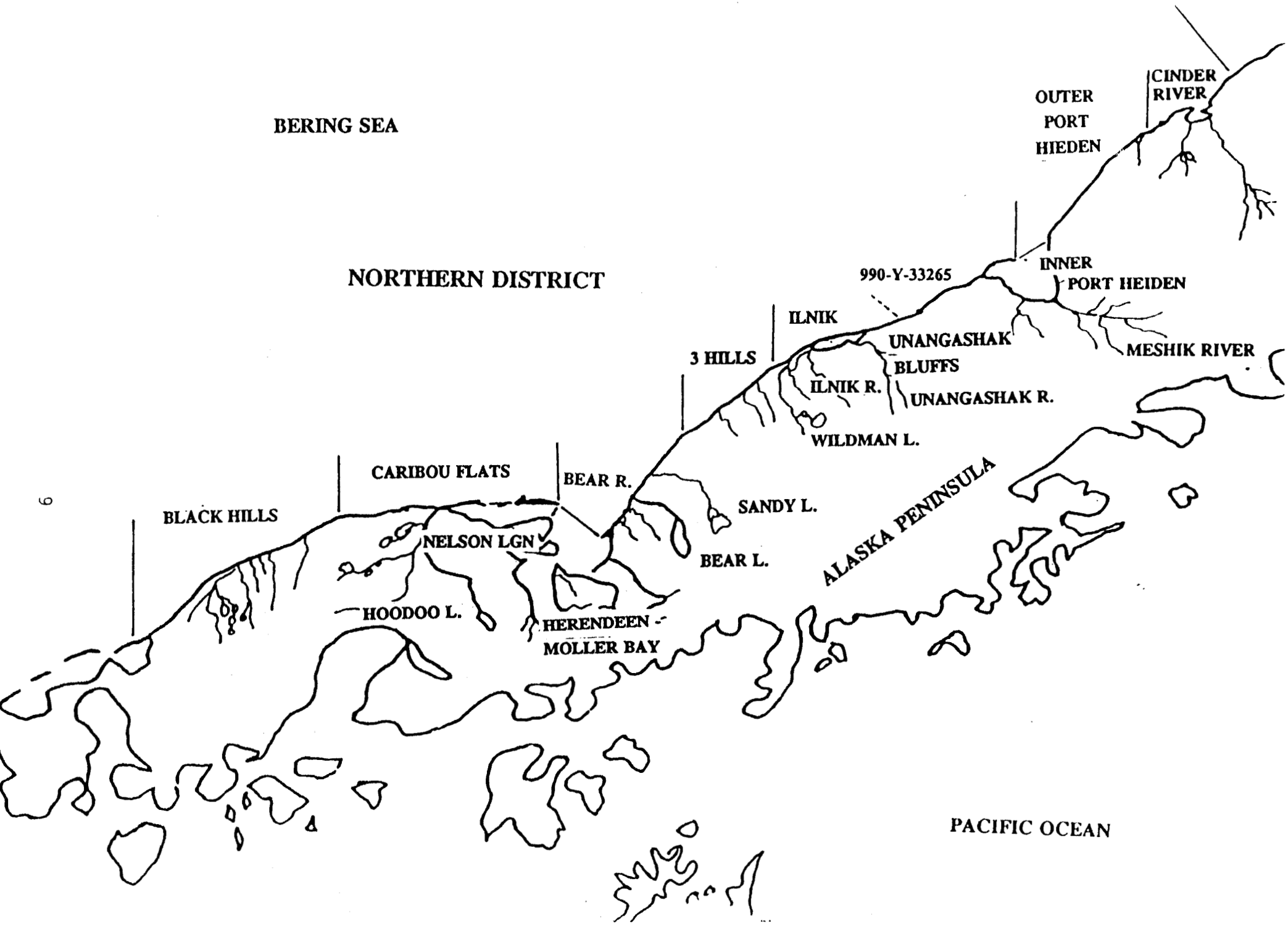

Figure 2. Northern District Map.

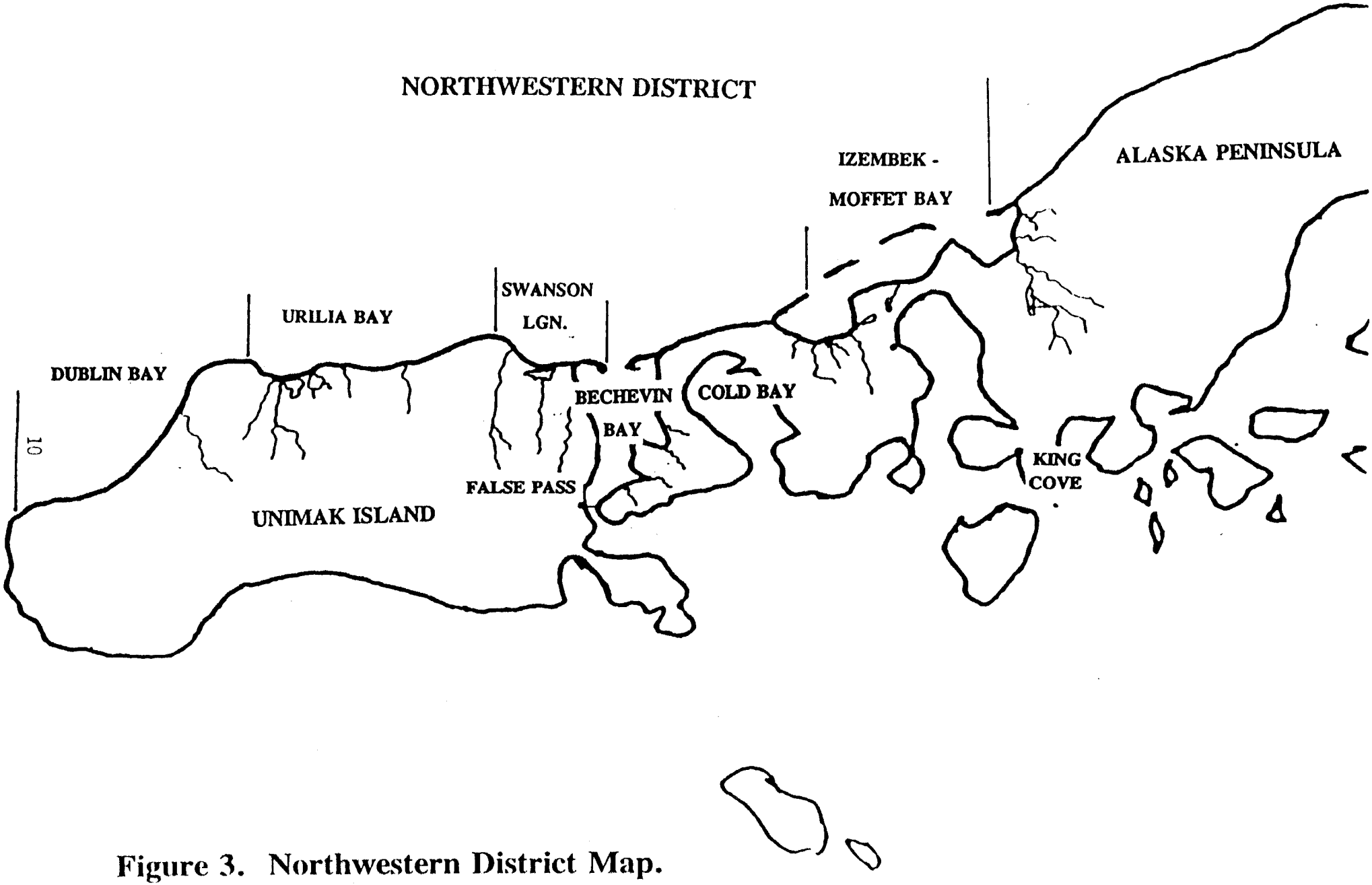

Figure 3. Northwestern District Map.

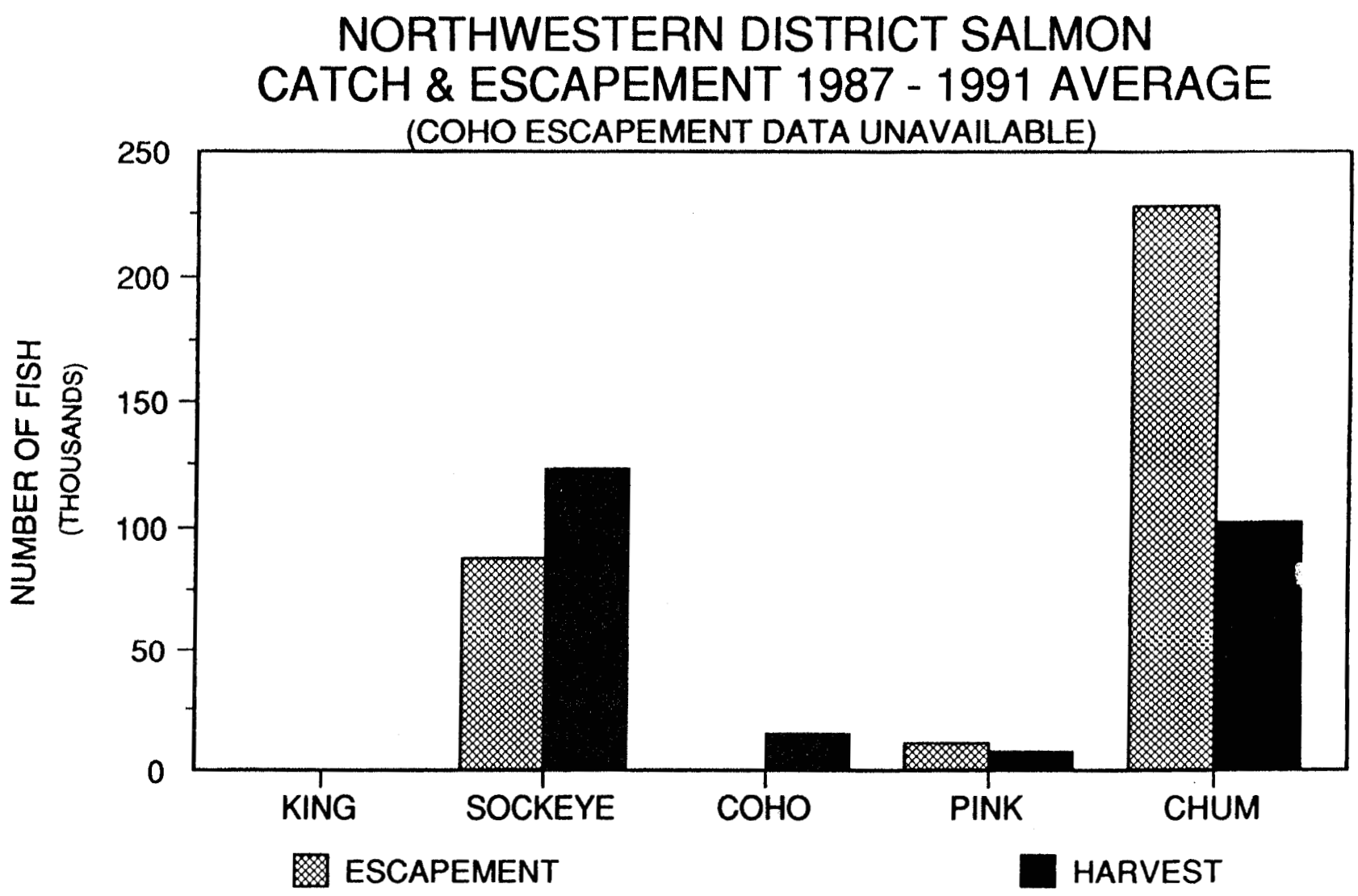

FIGURE 4. AVERAGE 1987 - 1991 SALMON ESCAPEMENT AND CATCH IN NORTHWESTERN DISTRICT.

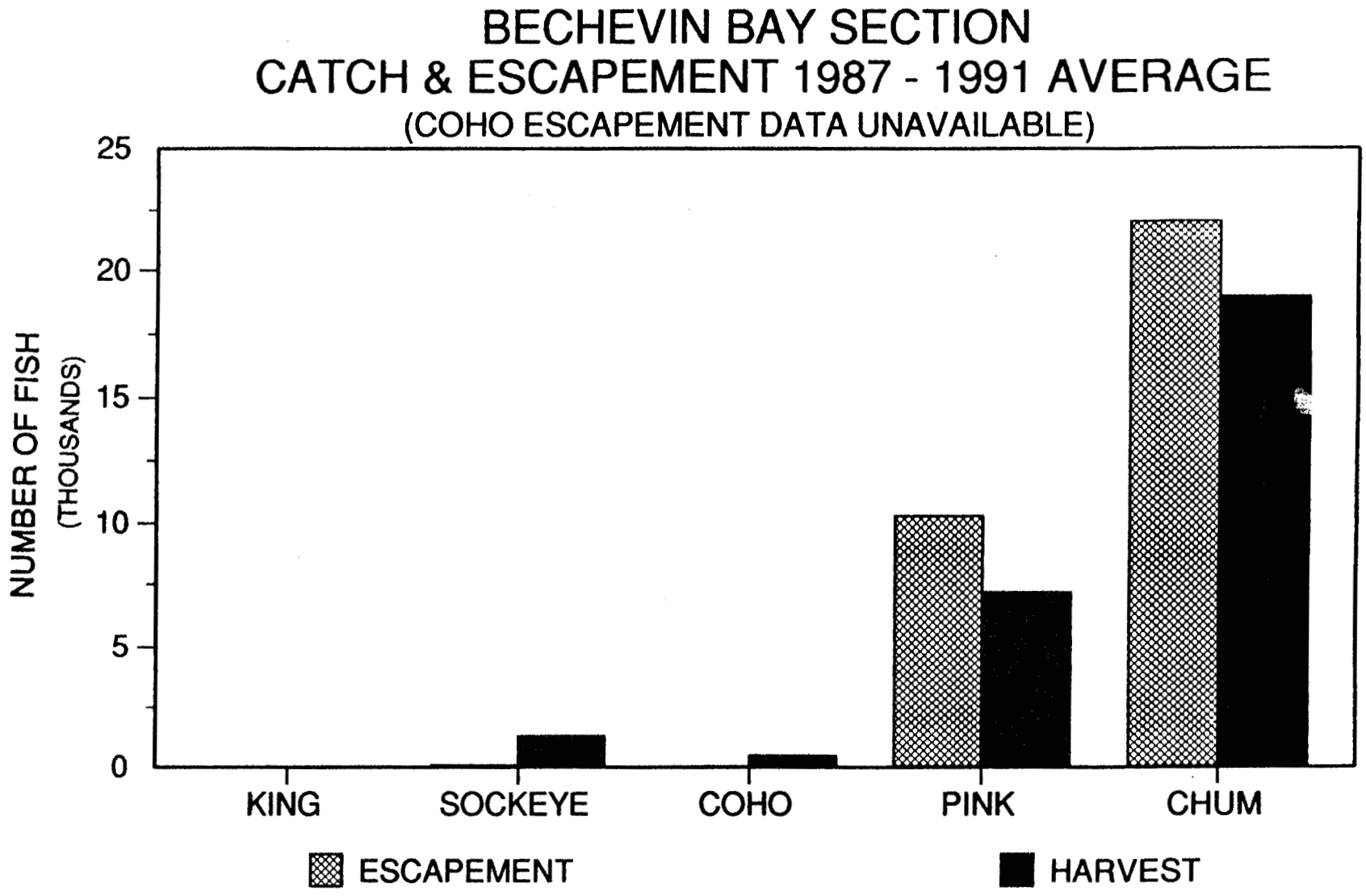

FIGURE 5. AVERAGE 1987 - 1991 SALMON ESCAPEMENT AND CATCH IN BECHEVIN BAY SECTION.

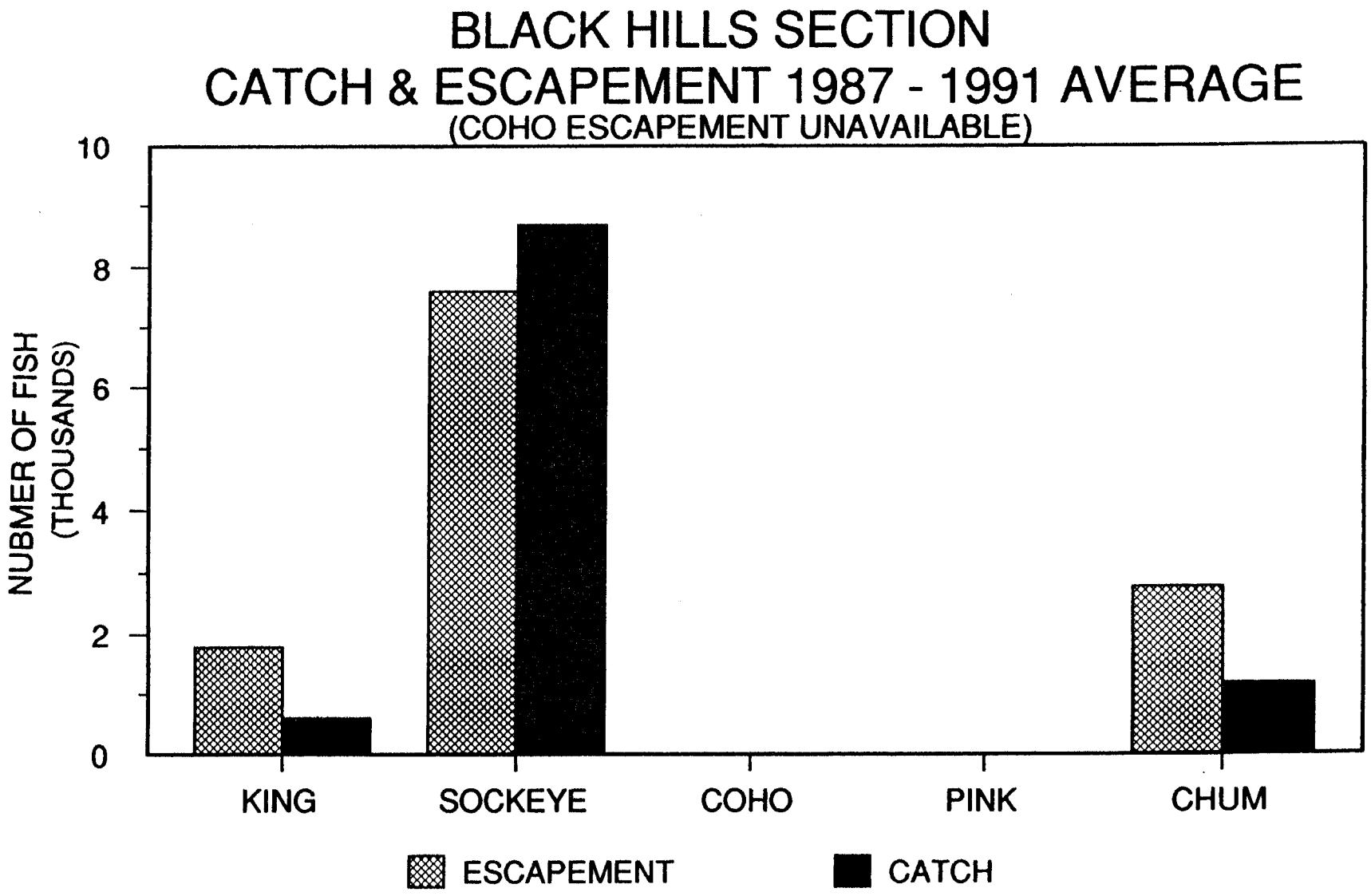

FIGURE 6. AVERAGE 1987 - 1991 SALMON ESCAPEMENT AND CATCH IN BLACK HILLS SECTION.

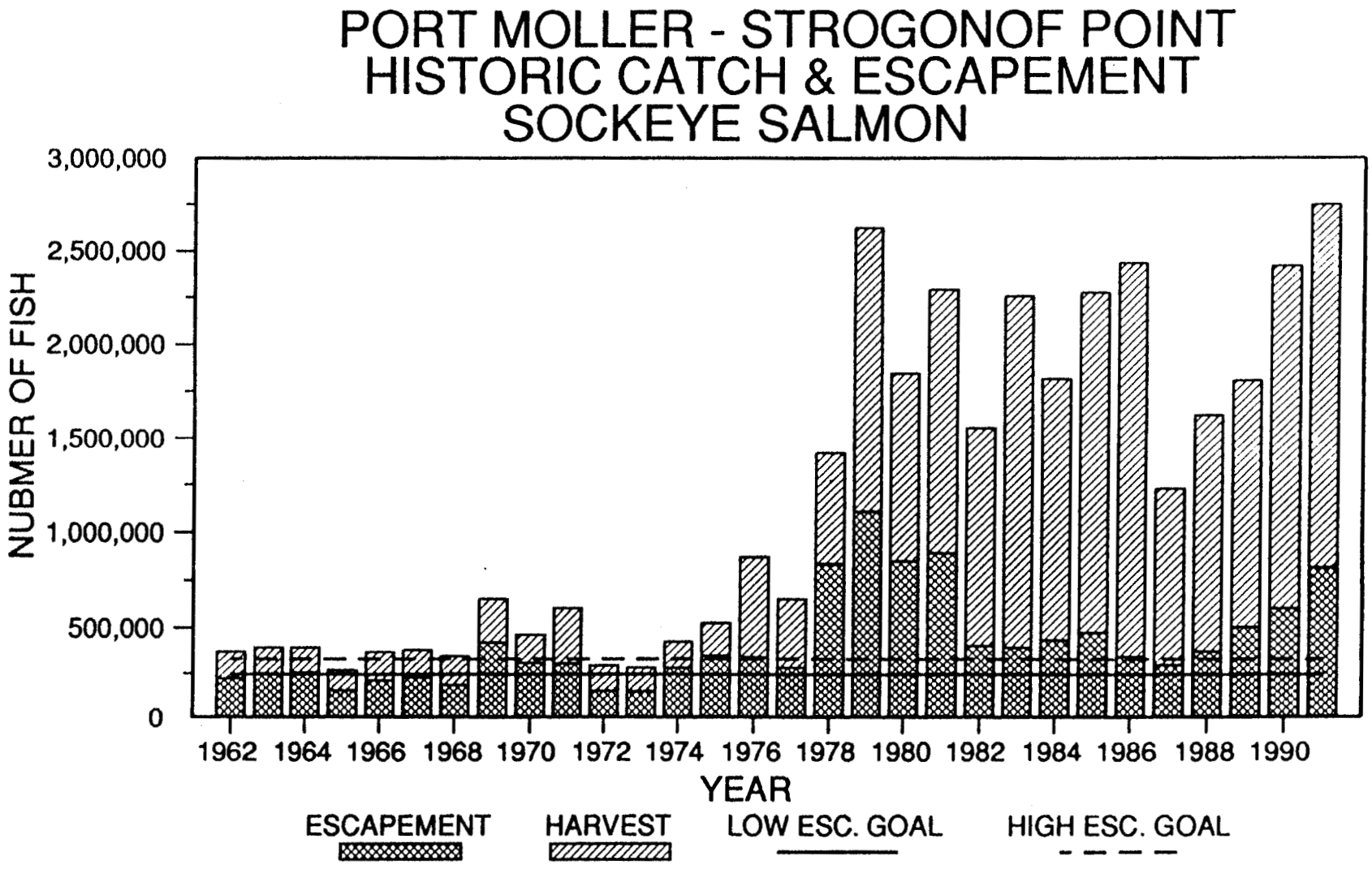

FIGURE 7. PORT MOLLER TO STROGONOF POINT SOCKEYE CATCH AND ESCAPEMENT, 1962 - 1991.

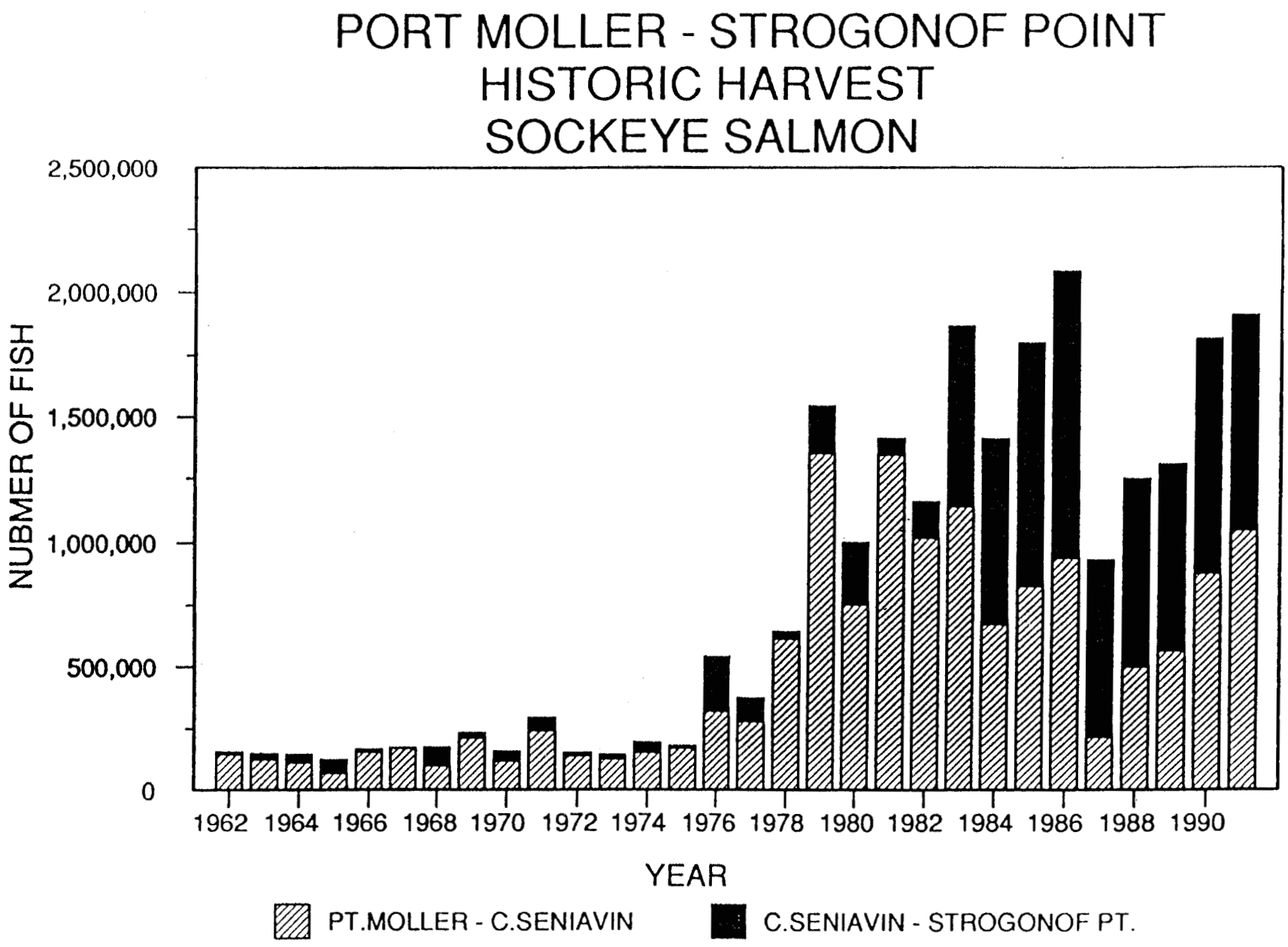

Figure 8. Port Moller to Strogonof Point sockeye harvests, 1962 - 91.

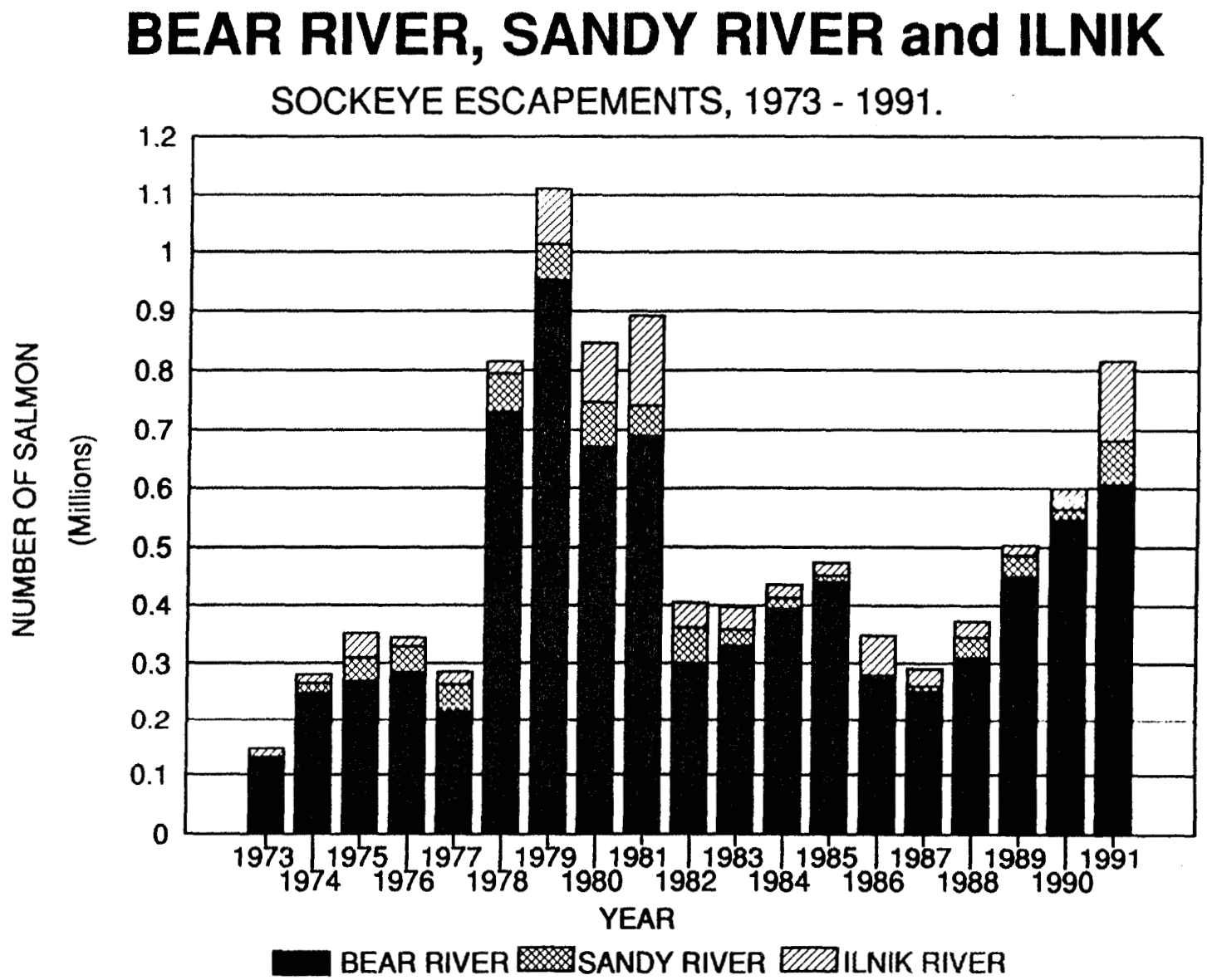

Figure 9. - Bear River, Sandy River, and Ilnik sockeye escapements, 1973 - 1991.

Table 1. North Peninsula salmon harvests in numbers of fish by species 1982-1991.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
1982	30,100	1,435,300	238,000	12,300	331,100	2,046,800
1983	29,500	2,093,400	75,100	3,400	348,700	2,550,100
1984	23,000	1,734,900	198,500	27,400	796,700	2,780,500
1985	23,500	2,600,500	167,800	3,100	671,100	3,466,000
1986	11,700	2,463,700	164,100	22,600	271,200	2,933,300
1987	14,200	1,209,400	171,800	3,500	368,700	1,767,600
1988	16,800	1,528,100	234,000	65,200	393,500	2,237,600
1989	10,900	1,718,800	227,600	4,100	157,100	2,118,500
1990	12,300	2,415,900	192,800	517,700	125,800	3,264,500
1991*	9,700	2,400,000	215,000	1,300	193,500	2,819,500

*1991 figures are preliminary.

Table 2. Ilnik and Outer Port Heiden August-September salmon catches by Area T fishermen 1986-89.

Year	Effort # of Permits	Number of Salmon Sockeye	Coho	Total
1986	18	9,000	2,000	11,000
1987	17	5,000	9,000	14,000
1988	19	27,000	27,000	54,000
1989	29	12,000	19,000	31,000

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