

**Overview of the Kodiak Area Sport Fisheries with  
Proposals for Consideration by the Alaska Board of  
Fisheries, January 2008**

by

**Len Schwarz,**

**Donn Tracy**

and

**Suzanne Schmidt**

---

---

December 2007

Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries



## Symbols and Abbreviations

The following symbols and abbreviations, and others approved for the Système International d'Unités (SI), are used without definition in the following reports by the Divisions of Sport Fish and of Commercial Fisheries: Fishery Manuscripts, Fishery Data Series Reports, Fishery Management Reports, and Special Publications. All others, including deviations from definitions listed below, are noted in the text at first mention, as well as in the titles or footnotes of tables, and in figure or figure captions.

<b>Weights and measures (metric)</b>		<b>General</b>		<b>Measures (fisheries)</b>	
centimeter	cm	Alaska Administrative		fork length	FL
deciliter	dL	Code	AAC	mid-eye-to-fork	MEF
gram	g	all commonly accepted		mid-eye-to-tail-fork	METF
hectare	ha	abbreviations	e.g., Mr., Mrs., AM, PM, etc.	standard length	SL
kilogram	kg			total length	TL
kilometer	km	all commonly accepted			
liter	L	professional titles	e.g., Dr., Ph.D., R.N., etc.		
meter	m	at	@	<b>Mathematics, statistics</b>	
milliliter	mL	compass directions:		<i>all standard mathematical</i>	
millimeter	mm	east	E	<i>signs, symbols and</i>	
		north	N	<i>abbreviations</i>	
		south	S	alternate hypothesis	H <sub>A</sub>
		west	W	base of natural logarithm	<i>e</i>
		copyright	©	catch per unit effort	CPUE
		corporate suffixes:		coefficient of variation	CV
		Company	Co.	common test statistics	(F, t, $\chi^2$ , etc.)
		Corporation	Corp.	confidence interval	CI
		Incorporated	Inc.	correlation coefficient	
		Limited	Ltd.	(multiple)	R
		District of Columbia	D.C.	correlation coefficient	
		et alii (and others)	et al.	(simple)	r
		et cetera (and so forth)	etc.	covariance	cov
		exempli gratia	e.g.	degree (angular)	°
		(for example)		degrees of freedom	df
		Federal Information	FIC	expected value	<i>E</i>
		Code		greater than	>
		id est (that is)	i.e.	greater than or equal to	≥
		latitude or longitude	lat. or long.	harvest per unit effort	HPUE
		monetary symbols		less than	<
		(U.S.)	\$, ¢	less than or equal to	≤
		months (tables and		logarithm (natural)	ln
		figures): first three		logarithm (base 10)	log
		letters	Jan, ..., Dec	logarithm (specify base)	log <sub>2</sub> , etc.
		registered trademark	®	minute (angular)	'
		trademark	™	not significant	NS
		United States		null hypothesis	H <sub>0</sub>
		(adjective)	U.S.	percent	%
		United States of		probability	P
		America (noun)	USA	probability of a type I error	
		U.S.C.	United States	(rejection of the null	
			Code	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

### Weights and measures (English)

cubic feet per second	ft <sup>3</sup> /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	pH
(negative log of)	
parts per million	ppm
parts per thousand	ppt, ‰
volts	V
watts	W

***FISHERY MANAGEMENT REPORT NO. 07-58***

**OVERVIEW OF THE KODIAK AREA SPORT FISHERIES WITH  
PROPOSALS FOR CONSIDERATION BY THE ALASKA BOARD OF  
FISHERIES, JANUARY 2008**

by

Len Schwarz,  
Donn Tracy  
and

Suzanne Schmidt,

Alaska Department of Fish and Game, Division of Sport Fish, Kodiak

Alaska Department of Fish and Game  
Division of Sport Fish, Research and Technical Services  
333 Raspberry Road, Anchorage, Alaska, 99518-1599

The Division of Sport Fish Fishery Management Reports series was established in 1989 for the publication of an overview of Division of Sport Fish management activities and goals in a specific geographic area. Since 2004, the Division of Commercial Fisheries has also used the Fishery Management Report series. Fishery Management Reports are intended for fishery and other technical professionals, as well as lay persons. Fishery Management Reports are available through the Alaska State Library and on the Internet: <http://www.sf.adfg.state.ak.us/statewide/divreports/html/intersearch.cfm>. This publication has undergone regional peer review.

*Len Schwarz,*  
*Alaska Department of Fish and Game, Division of Sport Fish,*  
*211 Mission Road, Kodiak Alaska 99615, USA*

*Donn Tracy,*  
*Alaska Department of Fish and Game, Division of Sport Fish*  
*211 Mission Road, Kodiak Alaska, USA*

*and*  
*Suzanne Schmidt*  
*Alaska Department of Fish and Game, Division of Sport Fish,*  
*211 Mission Road, Kodiak Alaska 99615, USA*

*This document should be cited as:*

*Schwarz, L., D. Tracy, and S. Schmidt. 2007. Overview of the Kodiak Area Sport Fisheries with Proposals for Consideration by the Alaska Board of Fisheries, January 2008. Alaska Department of Fish and Game, Fishery Management Report No. 07-58.*

The Alaska Department of Fish and Game (ADF&G) administers all programs and activities free from discrimination based on race, color, national origin, age, sex, religion, marital status, pregnancy, parenthood, or disability. The department administers all programs and activities in compliance with Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act (ADA) of 1990, the Age Discrimination Act of 1975, and Title IX of the Education Amendments of 1972.

**If you believe you have been discriminated against in any program, activity, or facility please write:**

ADF&G ADA Coordinator, P.O. Box 115526, Juneau AK 99811-5526

U.S. Fish and Wildlife Service, 4040 N. Fairfax Drive, Suite 300 Webb, Arlington VA 22203

Office of Equal Opportunity, U.S. Department of the Interior, Washington DC 20240

**The department's ADA Coordinator can be reached via phone at the following numbers:**

(VOICE) 907-465-6077, (Statewide Telecommunication Device for the Deaf) 1-800-478-3648, (Juneau TDD) 907-465-3646, or (FAX) 907-465-6078

**For information on alternative formats and questions on this publication, please contact:**

ADF&G, Sport Fish Division, Research and Technical Services, 333 Raspberry Road, Anchorage AK 99518 (907)267-2375.

# TABLE OF CONTENTS

	<b>Page</b>
LIST OF FIGURES .....	ii
ABSTRACT .....	1
INTRODUCTION .....	1
KODIAK REGULATORY AREA OVERVIEW .....	2
BUSKIN RIVER DRAINAGE COHO SPORT FISHERY .....	6
Associated Board of Fisheries Proposals.....	6
Historical Overview.....	6
Recent Fisheries Performance and Management Actions.....	7
PILLAR AND MONASHKA CREEK SALMON FISHERIES .....	8
Associated Board of Fisheries Proposals.....	8
Historical Overview.....	8
Recent Fisheries Performance and Management Actions.....	9
KARLUK RIVER KING SALMON SPORT FISHERY .....	9
Associated Board of Fisheries Proposals.....	9
Historical Overview.....	9
Recent Fisheries Performance and Management Actions.....	10
AYAKULIK RIVER SALMON SPORT FISHERIES .....	12
Associated Board of Fisheries Proposals.....	12
Historical Overview.....	12
King Salmon .....	12
Sockeye Salmon.....	13
Recent Fisheries Performance and Management Actions.....	13
King Salmon .....	13
Sockeye Salmon .....	14
KODIAK AREA SALTWATER SPORT FISHERIES.....	14
Associated Board of Fisheries Proposals.....	14
Historical Overview.....	14
Kodiak Area Salt Water King Salmon Sport Fishery Management Plan.....	15
Recent Fisheries Performance and Management Actions.....	15
REFERENCES CITED .....	16

## LIST OF FIGURES

<b>Figure</b>	<b>Page</b>
1. The Kodiak Management Area: Kodiak Island Archipelago, Alaska Peninsula, and Aleutian Islands. ....	3
2. Kodiak Regulatory Area showing Road Zone and Remote Zone. ....	4
3. Angler-days of sport fishing effort expended by anglers fishing Kodiak Regulatory Area waters, 1987-2006. ....	5
4. Number of fish harvested and released, by species, by sport anglers fishing Kodiak Regulatory Area waters during 2006. ....	5
5. Buskin River coho salmon sport harvest above the weir and spawning escapement, 1998-2007. ....	6
6. Current upriver salmon closure on the Buskin River. ....	7
7. Karluk River king salmon sport harvest above the weir and spawning escapement, 1988-2007. ....	10
8. Timeline of management actions on the king salmon sport fishery in the Karluk River system, 2001-2007. ....	11
9. Ayakulik River king salmon sport harvest and spawning escapement, 1988-2007. ....	13
10. Kodiak Regulatory Area estimated saltwater king salmon sport fishery harvest, 1997-2006. ....	14

## ABSTRACT

This report provides a detailed summary of sport fisheries in the Kodiak Regulatory Management Area for which the Alaska Board of Fisheries (BOF) is considering proposals in January 2008. Included in each section is a historical overview, recent fisheries performance and management actions, and associated Board of Fisheries proposals.

Key words: Kodiak Regulatory Management Area, Alaska Board of Fisheries, sport fisheries overview, Buskin River, Pillar Creek, Monashka Creek, Karluk River, Ayakulik River, coho salmon, Chinook salmon, king salmon, sockeye salmon, *Oncorhynchus kisutch*, *O. tshawytscha*, *O. nerka*.

## INTRODUCTION

The Kodiak Sport Fish Management Area comprises two regulatory areas. The Kodiak Regulatory Area is covered under chapter 64 of the Alaska Administrative Code and includes all waters circumjacent to the Kodiak and Afognak archipelagos. The Alaska Peninsula/Aleutian Islands Regulatory Area is described in chapter 65 of the Alaska Administrative Code and includes all waters of the Alaska Peninsula west of Cape Douglas on the Pacific side and west of Cape Menshikof on the Bering Sea side, extending to the international dateline, including waters circumjacent to the Aleutian and Pribilof islands (Figure 1).

The most commonly harvested species in the Kodiak Sport Fish Management Area include coho salmon *Oncorhynchus kisutch*, halibut *Hippoglossus stenolepis*, sockeye salmon *O. nerka*, pink salmon *O. gorbuscha*, Dolly Varden *Salvelinus malma*, and Chinook salmon *O. tshawytscha*. In order to maintain consistency with regulatory language, “king salmon” shall be used throughout this report to mean “Chinook salmon.”

The following proposals will be considered by the Alaska Board of Fisheries (BOF) in January 2008 and will directly affect sport fisheries.

**Proposal 60:** Remove the current salmon sport fishing closure in effect for the Buskin River drainage upstream of Bridge 1 from August 1 – September 15.

**Proposal 61:** Remove Pillar Creek from the list of streams that are closed to sport fishing for salmon.

**Proposal 62:** Close the Pillar Creek and Monashka Creek drainages to all sport fishing above the highway all year.

**Proposal 63:** Lower the freshwater king salmon daily bag and possession limit for king salmon that are 20 inches or greater in length to 2 fish.

**Proposal 64:** Prohibit the use of bait in the Karluk River drainage downstream of Karluk Lake from June 1 through July 25.

**Proposal 65:** Establish a management plan for the Ayakulik River king salmon sport fishery. The plan would contain an optimal escapement goal (OEG) to allow conservation catch and release when the biological escapement goal (BEG) is not met, establish benchmark interim weir goals, with specified management actions if goals are not achieved.

**Proposals 66-68:** Establish an OEG for Ayakulik River king and sockeye, to allow for a conservation catch and release fishery to occur even if the BEG will not be achieved.

**Proposal 69:** Establish a BEG and OEG for Ayakulik coho returns, use a method to verify that fish are in the river, and allow conservation catch and release when the newly established BEG will not be achieved.

**Proposal 70:** Establish catch and release or fly fishing only restrictions early in the season on the Ayakulik River when returns are low.

**Proposal 71:** Provide the BOF and the public the opportunity to review the status of the saltwater king salmon fishery and make adjustments to the management plan if deemed necessary.

**Proposal 72:** Establish an exclusive use area for salt water sport fishing charter operations for the Kodiak area.

## **KODIAK REGULATORY AREA OVERVIEW**

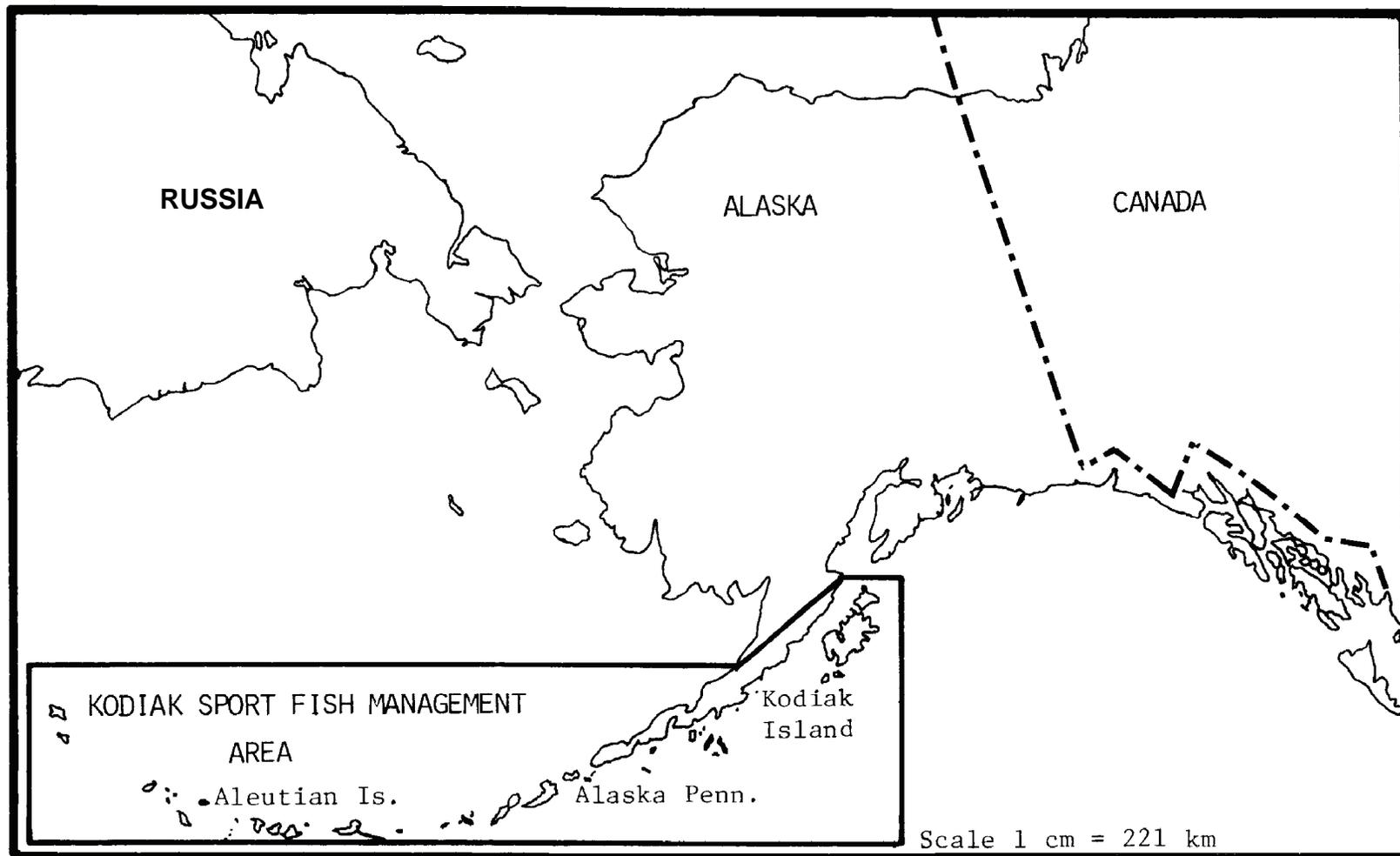
The population along the Kodiak Island road system is approximately 13,000 people. The town has a road system with approximately 70 miles of roads. There are also six outlying villages, which have a combined population of approximately 1,000 people. The Kodiak Regulatory Area is divided into two zones, the Road Zone and the Remote Zone (Figure 2). The Road Zone and its adjacent salt water receive significantly more fishing effort than the Remote Zone because of its easier access. As a result, several Road Zone regulations are more conservative than the Remote Zone.

For the purposes of effort, harvest, and catch reporting, the Statewide Harvest Survey (Mills 1979-1980, 1981a-b, 1982-1994; Howe et al. 1995, 1996, 2001 a-d; Walker et al. 2003; Jennings et al. 2004, 2006a-b, 2007, *In prep.*) is used throughout this report unless specified otherwise. Catch was estimated by the Statewide Harvest Survey beginning in 1990. Estimates of effort, catch and harvest from the Statewide Harvest Survey are available through 2006. Escapement counts from weir projects are available through 2007.

Angling effort in the Kodiak Regulatory Area averaged 94,880 angler days for 1997 through 2006, with an estimated 95,220 angler-days in 2006. Angling effort has been fairly stable over the past 20 years and has not fluctuated more than 28% from the 1997 through 2006 average (Figure 3). Area wide angling effort is divided about equally between fresh water and saltwater fisheries.

The two most heavily fished areas include the Buskin River and Chiniak Bay, which are also the closest salt and freshwater bodies to the town of Kodiak. These two areas have both averaged slightly over 15,000 angler days each over the past 10 years. Together they account for roughly 33% of the annual angling effort in the Kodiak Regulatory Area.

Average areawide annual harvest for 1997–2006 was 34,230 coho salmon, 21,470 halibut, 11,510 sockeye salmon, 10,720 pink salmon, 8,450 Dolly Varden, and 8,390 king salmon. Although varying by species, anglers in the Kodiak Regulatory Area in 2006 released an estimated 64% of the fish they caught (Figure 4).



**Figure 1.-**The Kodiak Management Area: Kodiak Island Archipelago, Alaska Peninsula, and Aleutian Islands.

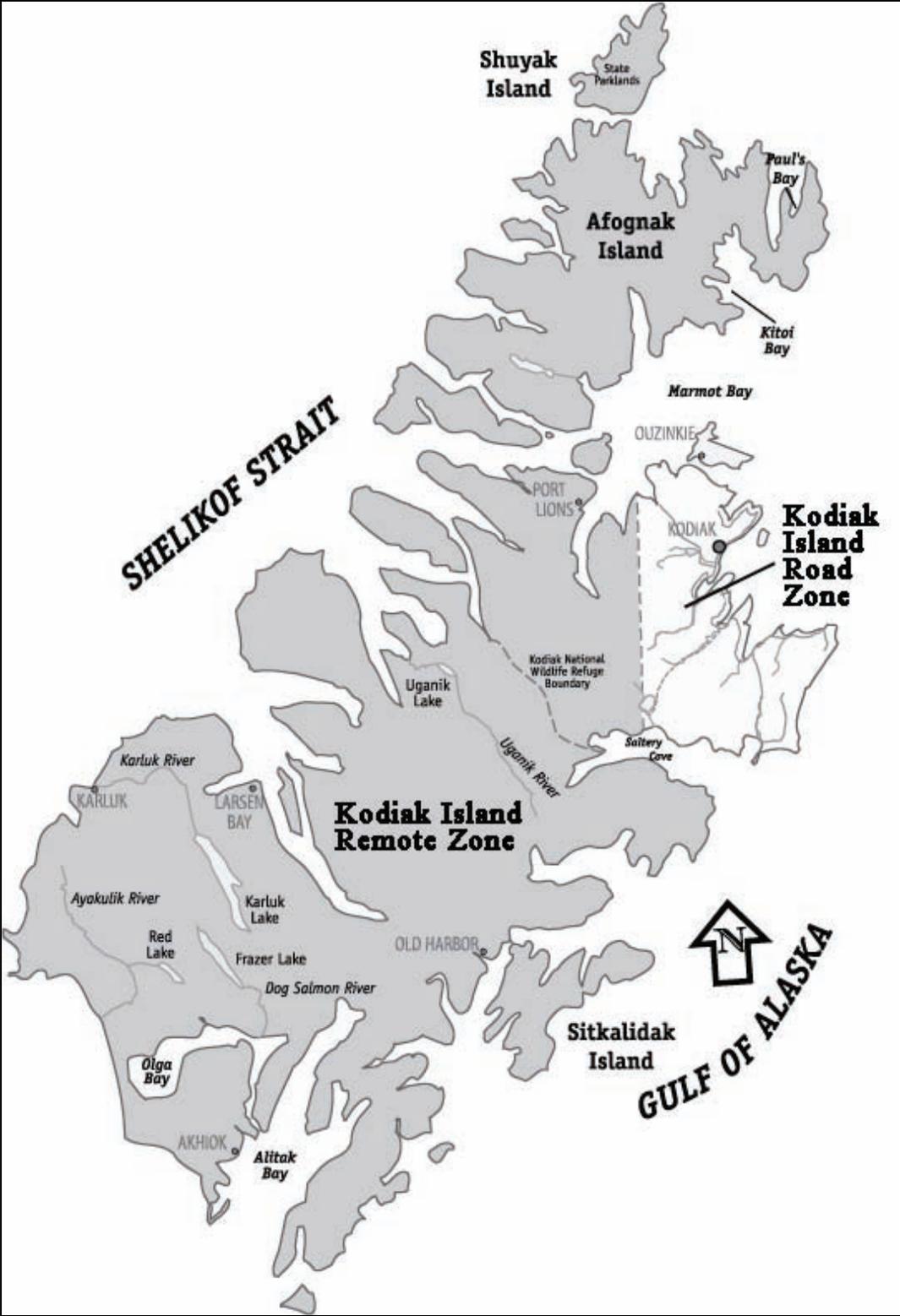
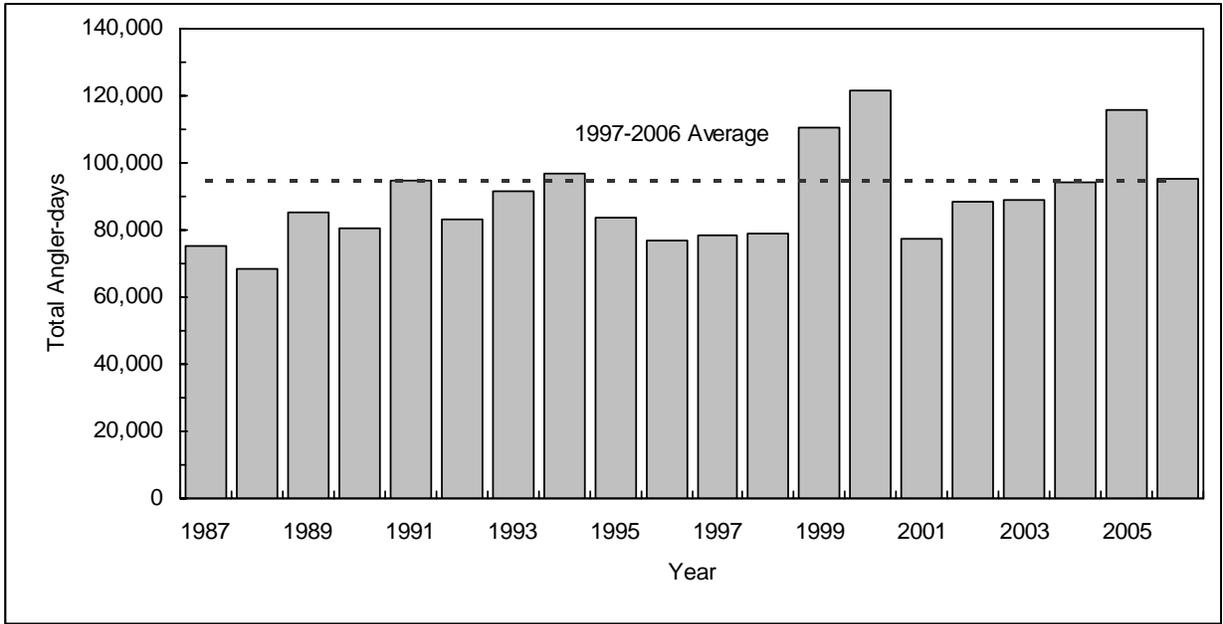
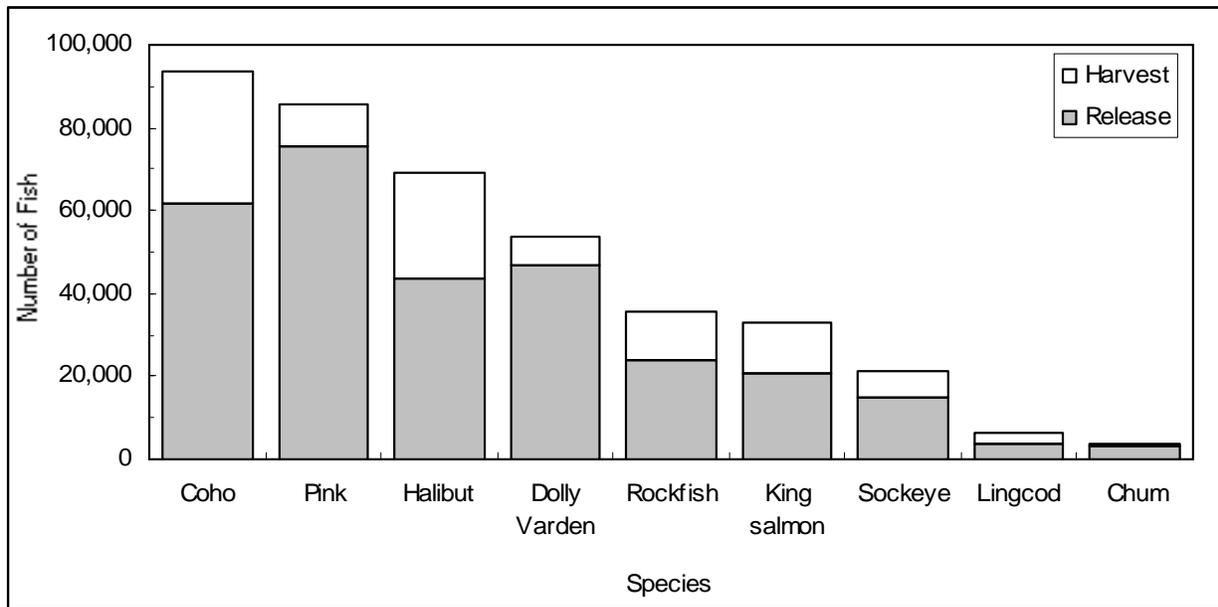


Figure 2.-Kodiak Regulatory Area showing Road Zone and Remote Zone.



**Figure 3.-**Angler-days of sport fishing effort expended by anglers fishing Kodiak Regulatory Area waters, 1987-2006.



**Figure 4.-**Number of fish harvested and released, by species, by sport anglers fishing Kodiak Regulatory Area waters during 2006.

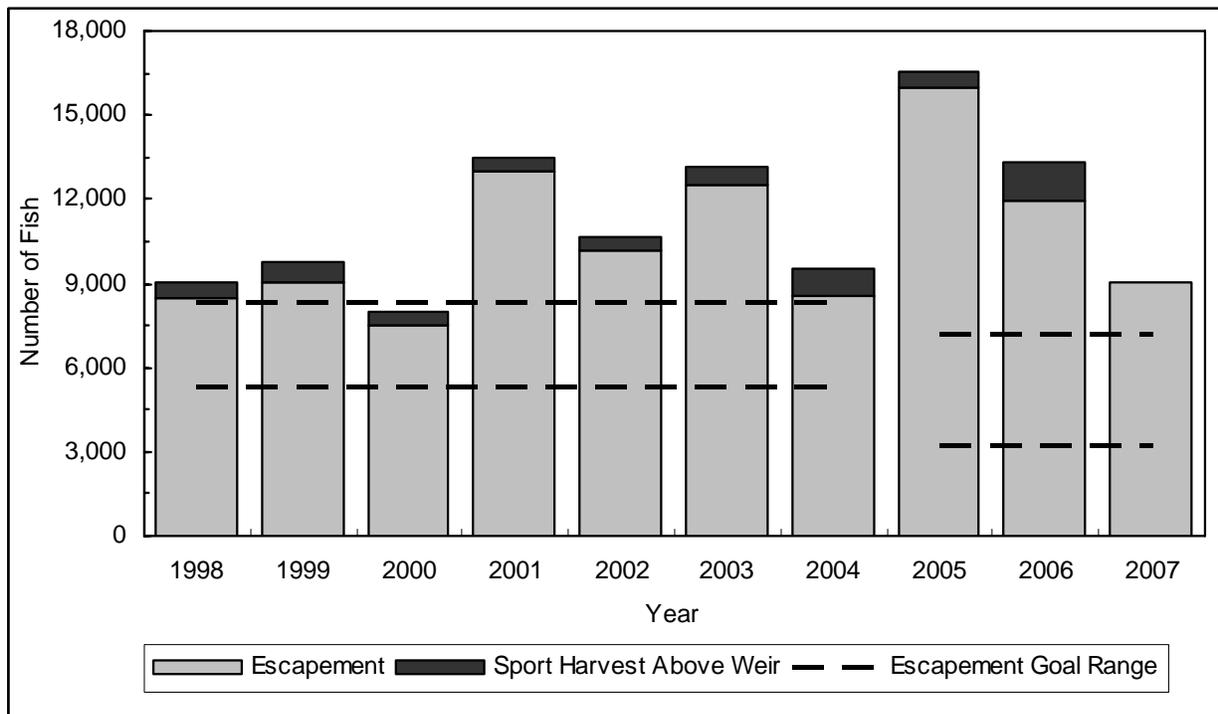
# BUSKIN RIVER DRAINAGE COHO SPORT FISHERY

## ASSOCIATED BOARD OF FISHERIES PROPOSALS

**Proposal #60** is a department proposal, which would open waters currently closed to salmon fishing: Buskin River drainage water above bridge #1 from August 1 – September 15. The department supports this proposal.

### HISTORICAL OVERVIEW

The Buskin River produces the largest coho return in the Kodiak Road Zone. The department has operated a weir on the Buskin River to enumerate coho salmon since 1985. Weir counts have ranged from 6,222 to 16,596, averaging 9,770 fish over this 23 year period. Figure 5 depicts the last 10 years of weir counts and the estimated spawning escapement, which is calculated by subtracting the estimated sport harvest which occurs above the weir from the weir count. The spawning escapement goal range was changed in 2005 from 5,300-8,300 coho to 3,200-7,200 in 2005.



Note: Sport harvest not yet available for 2007.

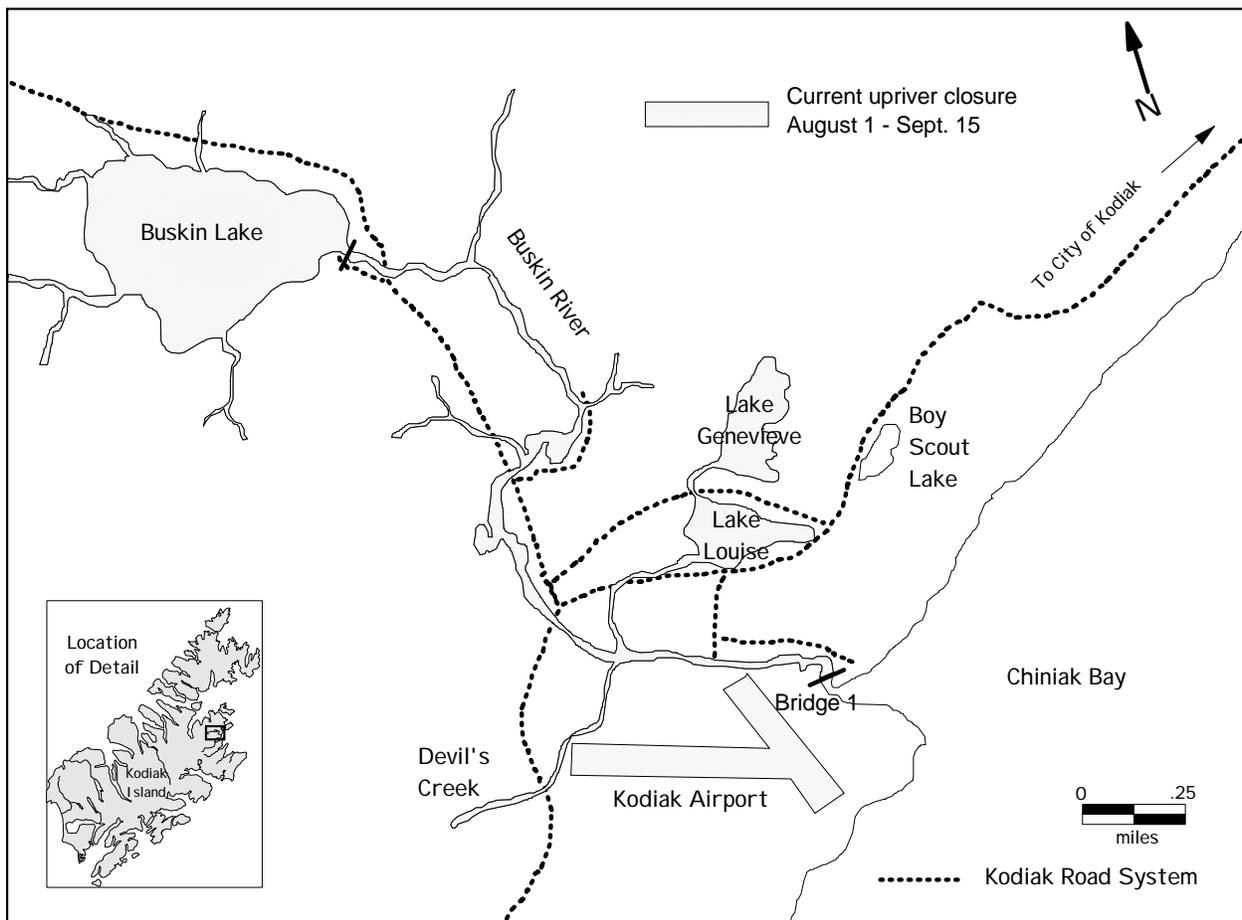
**Figure 5.**-Buskin River coho salmon sport harvest above the weir and spawning escapement, 1998-2007.

Sport fish harvests averaged 3,400 coho salmon over the past 10 years (1997 – 2006). There is also a subsistence and commercial fishery which operate in Woman’s Bay.

Sport fishing regulations in the Buskin River drainage include a daily bag and possession for salmon 20 inches and longer, of which 2 may be coho salmon. Buskin River drainage waters above bridge number one, which is located several hundred yards from the ocean mouth (Figure 6), are also closed to salmon fishing from August 1 – September 15, in order to protect spawning pink salmon and coho salmon which enter the river earlier.

## RECENT FISHERIES PERFORMANCE AND MANAGEMENT ACTIONS

Recent escapements of Buskin River coho have been very strong, and the recent 10 year average (1997-2006) has increased to 10,590 fish from the previous 10 year average (1987-1996) of 7,560 fish. Four of the highest counts ever documented occurred within the past seven years. The escapement goal range was lowered in 2005 to 3,200-7,200. Over the past 10 years, the upper end of the new escapement goal range has been exceeded every year (Figure 5). Regulations were liberalized and the bag limit was increased by emergency order to 5 coho per day and in possession in 2005, 2006 and 2007. In addition, waters above bridge number one, which are closed by regulation to salmon fishing from August 1 – September 15, were opened to salmon fishing by those emergency orders.



**Figure 6.**-Current upriver salmon closure on the Buskin River.

# PILLAR AND MONASHKA CREEK SALMON FISHERIES

## ASSOCIATED BOARD OF FISHERIES PROPOSALS

**Proposal 61** This department proposal would open Pillar Creek to sport fishing for salmon. The department supports this proposal.

**Proposal 62** This department proposal would close waters upstream of the highway to all sport fishing for the entire year in both Pillar and Monashka creeks. The department supports this proposal.

The following summarizes current and proposed regulations:

Current Regulations	Proposed Regulations
<p><b><u>Monashka Creek</u></b></p> <p>Closed to all sport fishing above highway</p> <p>May 1 – Sept 15.....Change: Closed all year</p>	<p><b><u>Monashka Creek</u></b></p> <p>Closed to all sport fishing above highway</p> <p>May 1 – Sept 15.....Change: Closed all year</p>
<p><b><u>Pillar Creek</u></b></p> <p>Closed to salmon fishing all year.....Change: Open below highway all year</p> <p>Species other than salmon</p> <p>Open all year.....Change: Closed above highway all year</p>	<p><b><u>Pillar Creek</u></b></p> <p>Closed to salmon fishing all year.....Change: Open below highway all year</p> <p>Species other than salmon</p> <p>Open all year.....Change: Closed above highway all year</p>
<p><b><u>Result if regulations adopted:</u></b> Both Pillar and Monashka Creeks will be open to all sport fishing below the highway and closed to all sport fishing above the highway, year round.</p>	

## HISTORICAL OVERVIEW

Pillar and Monashka creeks are at the northeast end of the road system and drain into Monashka Bay (Figure 2). Both of these streams are small and have relatively small salmon populations compared with other road system streams. Over the past 10 years escapement counts in Pillar Creek have averaged 9,000 pink and 150 coho salmon. During the same period escapement into Monashka Creek has averaged 9,700 pink salmon and 160 coho salmon. Sport fishing effort at Monashka and Pillar creeks is so small that estimating catch and harvest have not been possible through the Statewide Harvest Survey.

Both Pillar Creek and Monashka Creek reservoirs serve as municipal drinking water sources. In addition, both streams have hatchery facilities located below the municipal reservoir dams.

In the early 1970s Pillar Creek was de-watered when a reservoir outflow valve malfunctioned. The de-watering caused catastrophic mortality of rearing salmon fingerlings and developing eggs. As a result of the de-watering, Pillar Creek was closed to sport fishing for salmon by the Board of Fisheries in 1973 to protect and rebuild the salmon returns and has remained closed. In the mid 1970s and mid 1980s ADF&G stocked the creek with coho salmon fingerlings from the Buskin River to help rebuild the return.

A king salmon enhancement program began in Monashka Creek in 2002, when 60,000 smolt were released. Returning adults are to be utilized as brood stock for future returns as well as create a sport fishery for king salmon in the bay and lower creek.

Current Road Zone regulations close waters upstream of the highway to salmon fishing from August 1 – September 15, for those streams flowing into Monashka and Chiniak bays. Pillar Creek is currently closed all year to salmon fishing. In addition to the August 1 – September 15 closure, Monashka Creek is also closed from May 1 – August 1 to all sport fishing upstream of the highway, in order to protect the collection of king salmon brood stock. Monashka Creek brood stock is being used to create king salmon returns in Monashka Bay, American River and the Olds River, primarily to enhance sport fishing on the road system.

## **RECENT FISHERIES PERFORMANCE AND MANAGEMENT ACTIONS**

The fishing effort in Monashka and Pillar creeks is relatively small and estimates of effort and catch are not available through the Statewide Harvest Survey. Anglers generally fish in the waters below the highway in Monashka Creek primarily for pink salmon, but also for coho and Dolly Varden.

The department noticed small numbers of king salmon were straying from the Monashka Creek release site into Pillar Creek, which is several miles away. As a result, the department installed a weir in Pillar Creek and in 2005-2007 opened sport fishing by emergency order for king salmon downstream of the weir from June 1 – August 1, in order to provide harvest opportunity for stray hatchery king salmon.

## **KARLUK RIVER KING SALMON SPORT FISHERY**

### **ASSOCIATED BOARD OF FISHERIES PROPOSALS**

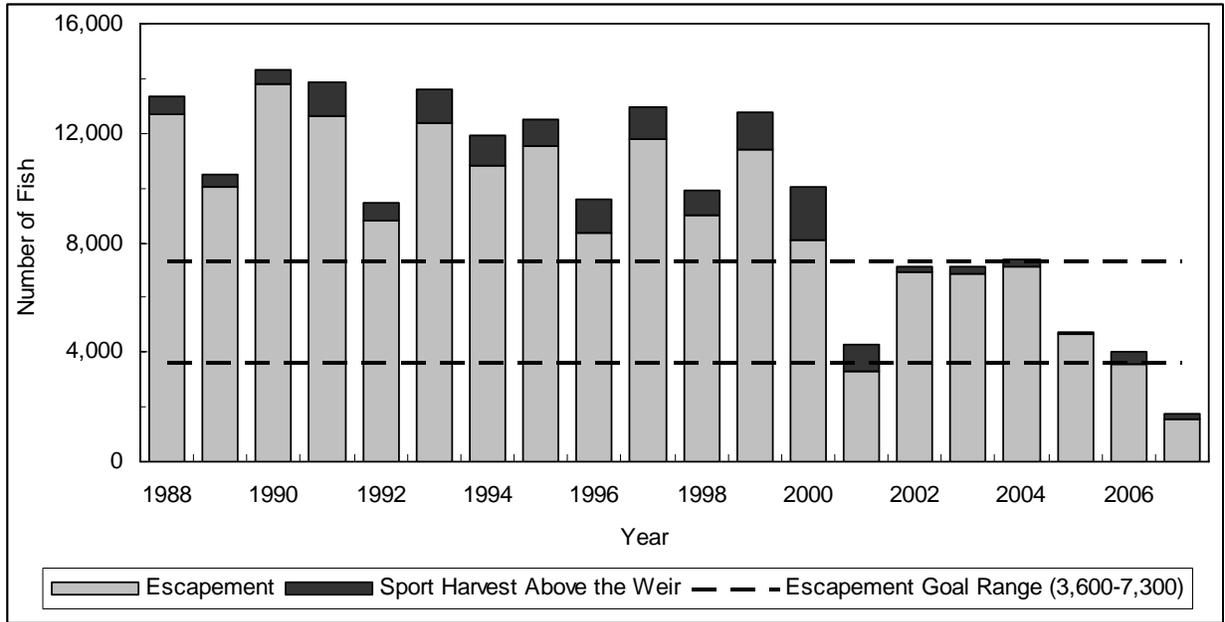
**Proposal 63** was submitted by the department and would lower the freshwater bag and possession limit for king salmon 20 inches and larger to 2 fish. This proposal would include all freshwaters within the regulatory area. The department supports this proposal.

**Proposal 64** is a public proposal that would prohibit the use of bait in the Karluk River drainage downstream of Karluk Lake from June 1 through July 25. The department opposes this proposal.

### **HISTORICAL OVERVIEW**

Spawning escapement of Karluk River king salmon ranged from 8,330 to 13,360 fish during the 1990s, with an average spawning escapement of 11,060 fish (Figure 7). Sport harvest of king salmon during this period averaged 1,370 fish. From 2001 to 2007, spawning escapement decreased significantly and ranged from 7,110 to 1,540 fish, averaging only 4,850, less than half of the previous 10-year average. King salmon are also harvested in a commercial fishery, which targets sockeye salmon, as well as a subsistence fishery.

The BEG range for king salmon in the Karluk River is 3,600 to 7,300 (Figure 7). The spawning escapement is measured by subtracting sport fish removals (which include harvest and hooking mortality) above the weir from the weir count.



**Figure 7.-**Karluk River king salmon sport harvest above the weir and spawning escapement, 1988-2007.

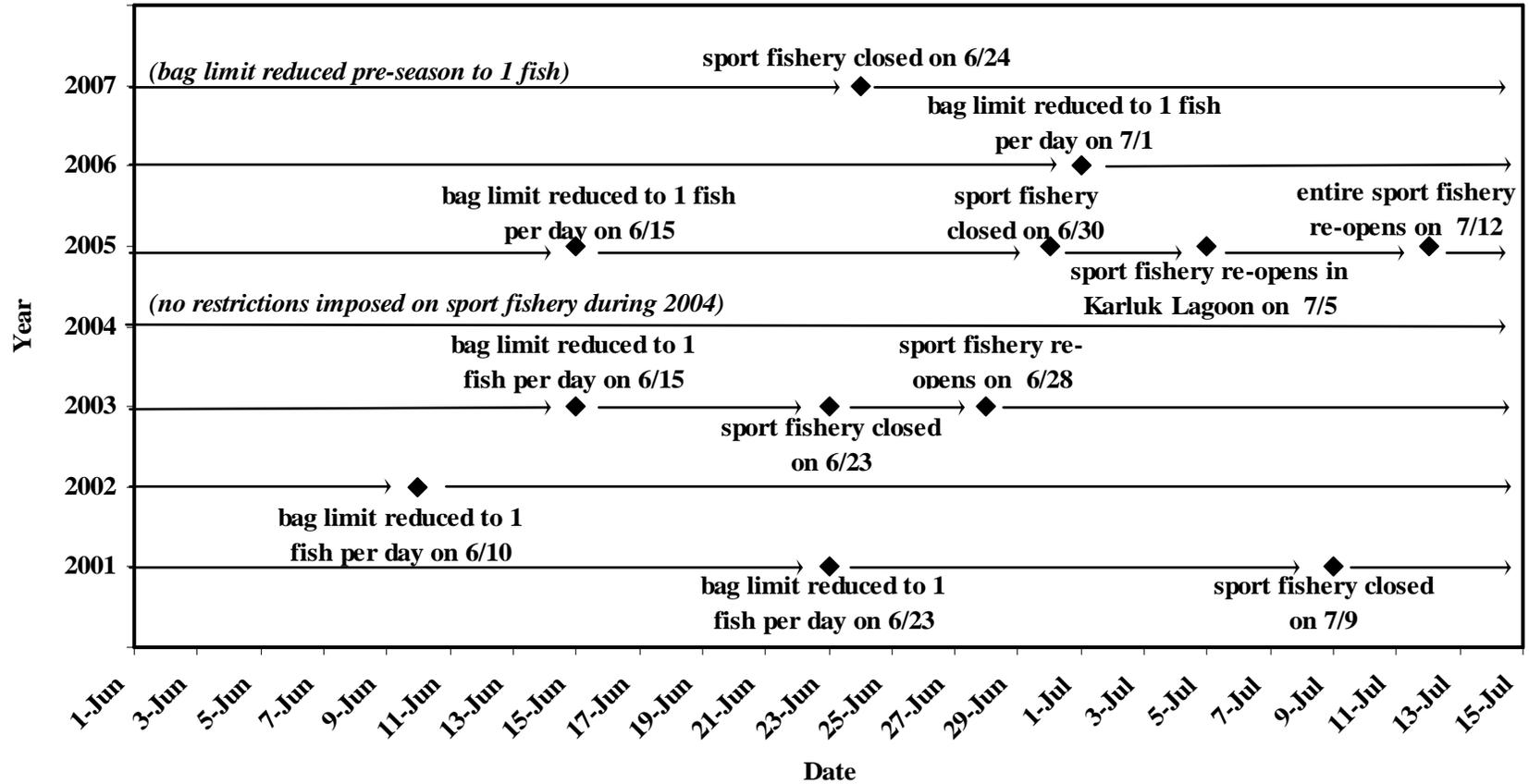
## RECENT FISHERIES PERFORMANCE AND MANAGEMENT ACTIONS

During the past seven years of below average returns (2001 – 2007), the king salmon escapement goal was achieved in four years. The lower end of the goal was missed slightly in 2001 and 2006, by 320 fish and 370 fish respectively. However the 2007 escapement was more than 2,000 fish below the goal. During the 2001 – 2007 seven year period, bag limits were reduced during 6 years, and the fishery was closed during 4 years, by emergency order. Figure 8 provides a timeline of management actions which have occurred during the Karluk River king salmon sport fishery. Sport harvest during this period of poor returns dropped to an average of 720 king salmon. During 2003 and 2005, the season was closed but later reopened as counts increased unusually late in the season.

In anticipation of a poor king salmon return to the Karluk River in 2007, and emergency order was issued in May reducing the bag and possession limit to one king salmon per day and in possession, regardless of size. On June 20, there were only 841 king salmon counted through the Karluk weir and the department projected that the escapement goal range of 3,600 – 7,300 would not be achieved. An emergency order closing the king salmon sport fishery in the Karluk River drainage, including the lake and lagoon, was issued on June 22, effective June 24. The use of bait was prohibited in the drainage and any king salmon accidentally caught while fishing for other species (primarily sockeye) were not to be removed from the water but were to be released immediately. The escapement goal for sockeye salmon was exceeded and the bag limit for sockeye salmon was increased to 10 per day and 20 in possession effective June 21 – July 15.

A total of 267 anglers rafted through the weir and expended 602 angler days of effort in 2007 as reported from a creel census, and the reported harvest at the weir was 156 king salmon, with

### Karluk River King Salmon Sport Fishery Management Actions, 2001-2007



**Figure 8.-**Timeline of management actions on the king salmon sport fishery in the Karluk River system, 2001-2007.

a release of 262 fish (S. Schmidt, Personal Communication, Alaska Department of Fish and Game, Kodiak). Anglers can also exit above the weir at Portage, and we have no information on the catch and effort from this exit location. However based on information collected in the past, the harvest and effort from the Portage exit location has been significantly less than anglers exiting through the weir.

Subtracting the sport harvest and hooking mortality for released fish (estimated at 7%) from the weir count, the 2007 estimated spawning escapement is 1,544 king salmon, 2,055 fish (57%) below the minimum BEG (Figure 7).

There is also a sport harvest in Karluk lagoon below the weir. The lagoon sport fishery is not censused but the harvest there has been the same order of magnitude as the inriver harvest above the weir. The preliminary 2007 estimate for the entire Karluk drainage is a harvest of 400 and a release of 600 king salmon.

In 2007 for the commercial fishery, an emergency order requiring non-retention of king salmon 28 inches or greater in length in the Inner and Outer Karluk Sections was in effect the entire time these areas were open to commercial fishing (June 12 – July 16). Preliminary harvest in these sections through July 15 was 313 king salmon. The statistical area (254-10) adjacent to Inner and Outer Karluk Sections is open to all gear types and harvest of king salmon was allowed. Preliminary harvest in this statistical area, which begins approximately 10 miles from the Karluk River mouth was 269 king salmon through July 15.

## **AYAKULIK RIVER SALMON SPORT FISHERIES**

### **ASSOCIATED BOARD OF FISHERIES PROPOSALS**

**Proposal 65** requests the BOF create an OEG and Ayakulik River King Salmon Management Plan. The department is neutral on this proposal.

**Proposals 66-68** requests the BOF establish an OEG for king salmon and/or sockeye on the Ayakulik River, to allow for a conservation catch and release fishery to occur even if it has been determined that the BEG would not be achieved. The department is neutral on these proposals.

**Proposal 69** requests that a BEG and OEG be established for Ayakulik River coho returns. The department opposes this proposal.

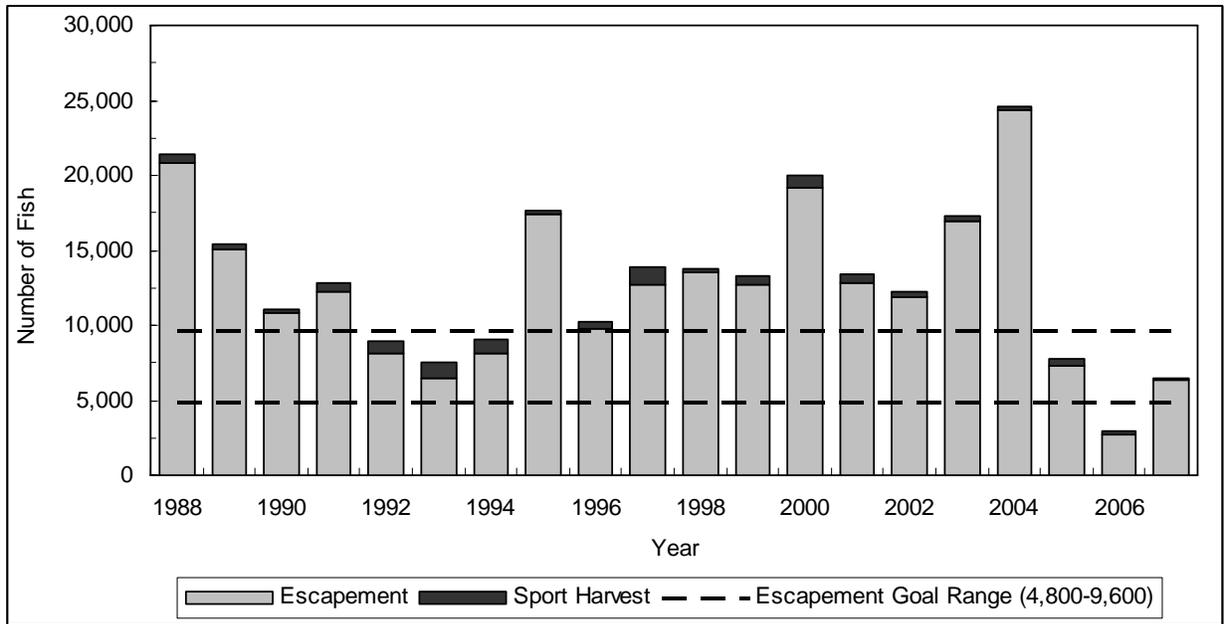
**Proposal 70** calls for catch and release or fly fishing only restrictions early in the season on the Ayakulik River. The department opposes this proposal.

### **HISTORICAL OVERVIEW**

#### **King Salmon**

Over the past 20 years, the BEG for king salmon (4,800 – 9,600) has been achieved in every year except 2006, when spawning escapement was only 2,730 king salmon (Figure 9). Spawning escapement for the 10 years prior to 2005 (1995-2004) ranged from 9,790 to 24,330 with an average escapement of 15,130. Escapement decreased to 7,320, 2,730 and 6,410 in 2005, 2006 and 2007 respectively.

Inseason management actions occurred for the first time on the Ayakulik River in 2005, when the bag limit was reduced to 1 king salmon per day. The sport harvest of king salmon from 1997-2006 averaged 510, with an average release of 4,970 fish.



**Figure 9.**-Ayakulik River king salmon sport harvest and spawning escapement, 1988-2007.

### Sockeye Salmon

The current SEG for sockeye salmon is 200,000 – 500,000. Over the past 20 years, the goal was achieved or exceeded every year except 2003 and 2006, which had counts of 198,000 and 88,000 respectively. The estimated annual sport harvest of sockeye salmon over the past 10 years averaged 750 fish with a release of 2,600.

## RECENT FISHERIES PERFORMANCE AND MANAGEMENT ACTIONS

### King Salmon

In 2006, the king salmon bag limit was reduced to one king salmon per day on June 15 and the fishery was completely closed on July 1. The final weir count was 3,106 king salmon, spawning escapement was 2,730 after accounting for sport harvest and hooking mortalities, and the escapement goal was not achieved (Figure 9).

In 2007, 2,482 king salmon had been counted through the Ayakulik weir through June 24, and the department projected the escapement goal range of 4,800 – 9,600 would not be achieved. An emergency order closing the king salmon sport fishery in the Ayakulik River drainage was issued on June 25, effective June 27. Use of bait was prohibited in the drainage and any king salmon accidentally caught while fishing for other species were not to be removed from the water and were to be released immediately.

King salmon began entering the Ayakulik River in increased numbers and the sport fishery was reopened on July 2. The 2007 Ayakulik king salmon return was unusual, as fish arrived very late. In 2007 only 40% of the return had entered the river by June 27, whereas normally 84% of the return has passed the weir by that date.

The 2007 Ayakulik spawning escapement of 6,410 king salmon was the second lowest during the last 20 years (1988-2007; Figure 9).

Sport harvest was documented through a census conducted at the weir, with rafters and guided clients harvesting 59 king salmon and releasing 950. The spawning escapement of approximately 6,410 king salmon fell within the escapement goal range (4,800 – 9,600).

### SOCKEYE SALMON

The escapement goal for sockeye salmon was not expected to be achieved, and the sport fishery was also closed at the same time as the king fishery. On June 24, the sockeye weir count was 77,303 fish, with a projection for an end of the season count of 129,000 sockeye, well below the lower end of the escapement goal range of 200,000 – 500,000. Similar to king salmon, the sockeye salmon return was also exceptionally late. Normally 60% of the return has been counted through the weir by June 24, but in 2007, only 36% of the return had occurred. The lower end of the escapement goal range was achieved on July 27 and the sockeye sport fishery was reopened on July 28. The 2007 final weir count was 283,000 fish.

## KODIAK AREA SALTWATER SPORT FISHERIES

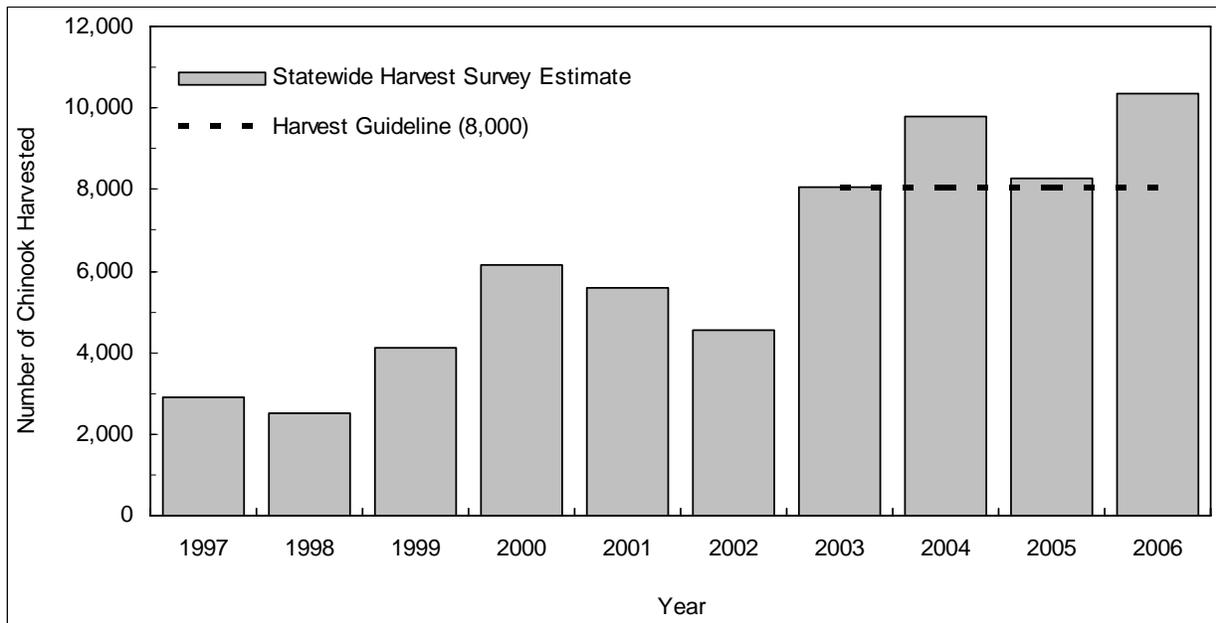
### ASSOCIATED BOARD OF FISHERIES PROPOSALS

**Proposal 71** was submitted by the department to provide the BOF and the public the opportunity to review the status of the fishery and management plan. The department supports this proposal.

**Proposal 72** seeks to create an exclusive use area for saltwater sport fishing charter operations for the Kodiak area. The department takes a neutral position for this proposal.

### HISTORICAL OVERVIEW

Saltwater sport harvest of king salmon in the Kodiak area over the past 10 years (1997-2006) ranged between 2,520–10,330 (Figure 10).



**Figure 10.**—Kodiak Regulatory Area estimated saltwater king salmon sport fishery harvest, 1997-2006.

*Note:* Sport harvest estimate not yet available for 2007.

## **Kodiak Area Salt Water King Salmon Sport Fishery Management Plan**

In October 2002, the BOF established a management plan for this fishery (5 AAC 64.060). This regulation states that the purpose of the management plan is to stabilize the sport harvest of king salmon in the salt waters of the Kodiak Area. Elements of the plan include:

- 1) A guideline harvest level of 8,000 king salmon.
- 2) Sport harvest will be estimated annually by the department's Statewide Harvest Survey.
- 3) King salmon taken in Monashka Bay will not count towards the guideline harvest level.
- 4) Bag and possession limit for king salmon is 2 fish, with no size limit
- 5) There is not an annual limit nor is a harvest record required.
- 6) If the guideline harvest level is exceeded, the BOF will consider restrictions that may be necessary to avoid exceeding the guideline harvest level at a regularly schedule meeting for the Kodiak Area. If the BOF finds that restrictions are necessary, the BOF will adopt one or more of the following restrictions in the following order:
  - a) Reduce the nonresident bag and possession limit for king salmon in salt waters to 1 fish.
  - b) Prohibit a person who is engaged in sport fish guiding from taking a king salmon while a client is present or is within the guide's control or responsibility.
  - c) Allow only king salmon 28 inches or greater in length to be retained.
  - d) Reduce the resident bag and possession limit for king salmon in salt water to 1 fish.

### **RECENT FISHERIES PERFORMANCE AND MANAGEMENT ACTIONS**

Figure 10 shows that the harvest guideline has been exceeded each year since it became effective in 2003 with an average yearly overage of 1,072 fish. The saltwater harvest began to noticeably increase in 2003. Saltwater harvest averaged 4,500 king salmon before 2003 (1998-2002) and increased to 9,120 (2003-2006; Figure 10).

The department supports Proposal 71, which was submitted to provide the BOF and the public the opportunity to review the status of the Kodiak saltwater king salmon sport fishery, and consider adjustments to the management plan.

## REFERENCES CITED

- Howe, A. L., G. Fidler, A. E. Bingham, and M. J. Mills. 1996. Harvest, catch, and participation in Alaska sport fisheries during 1995. Alaska Department of Fish and Game, Fishery Data Series No. 96-32, Anchorage. <http://www.sf.adfg.state.ak.us/FedAidPDFs/fds96-32.pdf>
- Howe, A. L., G. Fidler, and M. J. Mills. 1995. Harvest, catch, and participation in Alaska sport fisheries during 1994. Alaska Department of Fish and Game, Fishery Data Series No. 95-24, Anchorage. <http://www.sf.adfg.state.ak.us/FedAidPDFs/fds95-24.pdf>
- Howe, A. L., R. J. Walker, C. Olnes, K. Sundet, and A. E. Bingham. 2001a. Revised Edition. Harvest, catch, and participation in Alaska sport fisheries during 1996. Alaska Department of Fish and Game, Fishery Data Series No. 97-29 (revised), Anchorage. [http://www.sf.adfg.state.ak.us/FedAidPDFs/fds97-29\(revised\).pdf](http://www.sf.adfg.state.ak.us/FedAidPDFs/fds97-29(revised).pdf)
- Howe, A. L., R. J. Walker, C. Olnes, K. Sundet, and A. E. Bingham. 2001b. Revised Edition. Harvest, catch, and participation in Alaska sport fisheries during 1997. Alaska Department of Fish and Game, Fishery Data Series No. 98-25 (revised), Anchorage. [http://www.sf.adfg.state.ak.us/FedAidPDFs/fds98-25\(revised\).pdf](http://www.sf.adfg.state.ak.us/FedAidPDFs/fds98-25(revised).pdf)
- Howe, A. L., R. J. Walker, C. Olnes, K. Sundet, and A. E. Bingham. 2001c. Revised Edition. Participation, catch, and harvest in Alaska sport fisheries during 1998. Alaska Department of Fish and Game, Fishery Data Series No. 99-41 (revised), Anchorage. [http://www.sf.adfg.state.ak.us/FedAidPDFs/fds99-41\(revised\).pdf](http://www.sf.adfg.state.ak.us/FedAidPDFs/fds99-41(revised).pdf)
- Howe, A. L., R. J. Walker, C. Olnes, K. Sundet, and A. E. Bingham. 2001d. Participation, catch, and harvest in Alaska sport fisheries during 1999. Alaska Department of Fish and Game, Fishery Data Series No. 01-8, Anchorage. <http://www.sf.adfg.state.ak.us/FedAidPDFs/fds01-08.pdf>
- Jennings, G. B., K. Sundet, and A. E. Bingham. 2007. Participation, catch, and harvest in Alaska sport fisheries during 2004. Alaska Department of Fish and Game, Fishery Data Series No. 07-40, Anchorage. <http://www.sf.adfg.state.ak.us/FedAidPDFs/fds07-40.pdf>
- Jennings, G. B., K. Sundet, and A. E. Bingham. *In prep.* Participation, catch, and harvest in Alaska sport fisheries during 2005. Alaska Department of Fish and Game, Fishery Data Series, Anchorage.
- Jennings, G. B., K. Sundet, A. E. Bingham, and D. Sigurdsson. 2004. Participation, catch, and harvest in Alaska sport fisheries during 2001. Alaska Department of Fish and Game, Fishery Data Series No. 04-11, Anchorage. <http://www.sf.adfg.state.ak.us/FedAidPDFs/fds04-11.pdf>
- Jennings, G. B., K. Sundet, A. E. Bingham, and D. Sigurdsson. 2006a. Participation, catch, and harvest in Alaska sport fisheries during 2002. Alaska Department of Fish and Game, Fishery Data Series No. 06-34, Anchorage. <http://www.sf.adfg.state.ak.us/FedAidpdfs/fds06-34.pdf>
- Jennings, G. B., K. Sundet, A. E. Bingham, and D. Sigurdsson. 2006b. Participation, catch, and harvest in Alaska sport fisheries during 2003. Alaska Department of Fish and Game, Fishery Data Series No. 06-44, Anchorage. <http://www.sf.adfg.state.ak.us/FedAidpdfs/fds06-44.pdf>
- Mills, M. J. 1979. Alaska statewide sport fish harvest studies. Alaska Department of Fish and Game, Federal Aid in Fish Restoration, Annual Performance Report 1978-1979, Project F-9-11, 20 (SW-I-A), Juneau. [http://www.sf.adfg.state.ak.us/FedAidPDFs/FREDf-9-11\(20\)SW-I-A.pdf](http://www.sf.adfg.state.ak.us/FedAidPDFs/FREDf-9-11(20)SW-I-A.pdf)
- Mills, M. J. 1980. Alaska statewide sport fish harvest studies. Alaska Department of Fish and Game. Federal Aid in Fish Restoration, Annual Performance Report, 1979-1980, Project F-9-12, 21 (SW-I-A), Juneau. [http://www.sf.adfg.state.ak.us/FedAidPDFs/FREDf-9-12\(21\)SW-I-A.pdf](http://www.sf.adfg.state.ak.us/FedAidPDFs/FREDf-9-12(21)SW-I-A.pdf)
- Mills, M. J. 1981a. Alaska statewide sport fish harvest studies. Alaska Department of Fish and Game, Federal Aid in Fish Restoration, Annual Performance Report 1980-1981, Project F-9-13, 22 (SW-I-A), Juneau. [http://www.sf.adfg.state.ak.us/FedAidPDFs/FREDf-9-13\(22a\)SW-I-A.pdf](http://www.sf.adfg.state.ak.us/FedAidPDFs/FREDf-9-13(22a)SW-I-A.pdf)
- Mills, M. J. 1981b. Alaska statewide sport fish harvest studies. Alaska Department of Fish and Game, Federal Aid in Fish Restoration, Annual Performance Report 1980-1981, Project F-9-13, 22 (SW-I-A), Juneau. [http://www.sf.adfg.state.ak.us/FedAidPDFs/FREDf-9-13\(22b\)SW-I-A.pdf](http://www.sf.adfg.state.ak.us/FedAidPDFs/FREDf-9-13(22b)SW-I-A.pdf)

## REFERENCES CITED (Continued)

- Mills, M. J. 1982. Alaska statewide sport fish harvest studies. Alaska Department of Fish and Game, Federal Aid in Fish Restoration, Annual Performance Report 1981-1982, Project F-9-14, 23 (SW-I-A), Juneau. [http://www.sf.adfg.state.ak.us/FedAidPDFs/FREDf-9-14\(23\)SW-I-A.pdf](http://www.sf.adfg.state.ak.us/FedAidPDFs/FREDf-9-14(23)SW-I-A.pdf)
- Mills, M. J. 1983. Alaska statewide sport fish harvest studies. Alaska Department of Fish and Game, Federal Aid in Fish Restoration, Annual Performance Report 1982-1983, Project F-9-15, 24 (SW-I-A), Juneau. [http://www.sf.adfg.state.ak.us/FedAidPDFs/FREDf-9-15\(24\)SW-I-A.pdf](http://www.sf.adfg.state.ak.us/FedAidPDFs/FREDf-9-15(24)SW-I-A.pdf)
- Mills, M. J. 1984. Alaska statewide sport fish harvest studies. Alaska Department of Fish and Game, Federal Aid in Fish Restoration, Annual Performance Report 1983-1984, Project F-9-16, 25 (SW-I-A), Juneau. [http://www.sf.adfg.state.ak.us/FedAidPDFs/FREDf-9-16\(25\)SW-I-A.pdf](http://www.sf.adfg.state.ak.us/FedAidPDFs/FREDf-9-16(25)SW-I-A.pdf)
- Mills, M. J. 1985. Alaska statewide sport fish harvest studies. Alaska Department of Fish and Game, Federal Aid in Fish Restoration, Annual Performance Report 1984-1985, Project F-9-17, 26 (SW-I-A), Juneau. [http://www.sf.adfg.state.ak.us/FedAidPDFs/FREDf-9-17\(26\)SW-I-A.pdf](http://www.sf.adfg.state.ak.us/FedAidPDFs/FREDf-9-17(26)SW-I-A.pdf)
- Mills, M. J. 1986. Alaska statewide sport fish harvest studies. Alaska Department of Fish and Game, Federal Aid in Fish Restoration, Annual Performance Report 1985-1986, Project F-10-1, 27 (RT-2), Juneau. [http://www.sf.adfg.state.ak.us/FedAidPDFs/FREDf-10-1\(27\)RT-2.pdf](http://www.sf.adfg.state.ak.us/FedAidPDFs/FREDf-10-1(27)RT-2.pdf)
- Mills, M. J. 1987. Alaska statewide sport fisheries harvest report, 1986. Alaska Department of Fish and Game, Fishery Data Series No. 2, Juneau. <http://www.sf.adfg.state.ak.us/FedAidPDFs/fds-002.pdf>
- Mills, M. J. 1988. Alaska statewide sport fisheries harvest report, 1987. Alaska Department of Fish and Game, Fishery Data Series No. 52, Juneau. <http://www.sf.adfg.state.ak.us/FedAidPDFs/fds-052.pdf>
- Mills, M. J. 1989. Alaska statewide sport fisheries harvest report, 1988. Alaska Department of Fish and Game, Fishery Data Series No. 122, Juneau. <http://www.sf.adfg.state.ak.us/FedAidPDFs/fds-122.pdf>
- Mills, M. J. 1990. Harvest and participation in Alaska sport fisheries during 1989. Alaska Department of Fish and Game, Fishery Data Series No. 90-44, Anchorage. <http://www.sf.adfg.state.ak.us/FedAidPDFs/fds90-44.pdf>
- Mills, M. J. 1991. Harvest, catch, and participation in Alaska sport fisheries during 1990. Alaska Department of Fish and Game, Fishery Data Series No. 91-58, Anchorage. <http://www.sf.adfg.state.ak.us/FedAidPDFs/fds91-58.pdf>
- Mills, M. J. 1992. Harvest, catch, and participation in Alaska sport fisheries during 1991. Alaska Department of Fish and Game, Fishery Data Series No. 92-40, Anchorage. <http://www.sf.adfg.state.ak.us/FedAidPDFs/fds92-40.pdf>
- Mills, M. J. 1993. Harvest, catch, and participation in Alaska sport fisheries during 1992. Alaska Department of Fish and Game, Fishery Data Series No. 93-42, Anchorage. <http://www.sf.adfg.state.ak.us/FedAidPDFs/fds93-42.pdf>
- Mills, M. J. 1994. Harvest, catch, and participation in Alaska sport fisheries during 1993. Alaska Department of Fish and Game, Fishery Data Series No. 94-28, Anchorage. <http://www.sf.adfg.state.ak.us/FedAidPDFs/fds94-28.pdf>
- Walker, R. J., C. Olnes, K. Sundet, A. L. Howe, and A. E. Bingham. 2003. Participation, catch, and harvest in Alaska sport fisheries during 2000. Alaska Department of Fish and Game, Fishery Data Series No. 03-05, Anchorage. <http://www.sf.adfg.state.ak.us/FedAidPDFs/fds03-05.pdf>