

Fishery Management Report No. 07-53

**Area Management Report for the Recreational
Fisheries of Anchorage, 2005 and 2006**

by

Matt G. Miller

and

Dan Bosch

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Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries



Symbols and Abbreviations

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Weights and measures (metric)		General		Measures (fisheries)	
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.	Mathematics, statistics	
meter	m	at	@	<i>all standard mathematical</i>	
milliliter	mL	compass directions:		<i>signs, symbols and</i>	
millimeter	mm	east	E	<i>abbreviations</i>	
		north	N	alternate hypothesis	H _A
Weights and measures (English)		south	S	base of natural logarithm	<i>e</i>
cubic feet per second	ft ³ /s	west	W	catch per unit effort	CPUE
foot	ft	copyright	©	coefficient of variation	CV
gallon	gal	corporate suffixes:		common test statistics	(F, t, χ^2 , etc.)
inch	in	Company	Co.	confidence interval	CI
mile	mi	Corporation	Corp.	correlation coefficient	
nautical mile	nmi	Incorporated	Inc.	(multiple)	R
ounce	oz	Limited	Ltd.	correlation coefficient	
pound	lb	District of Columbia	D.C.	(simple)	r
quart	qt	et alii (and others)	et al.	covariance	cov
yard	yd	et cetera (and so forth)	etc.	degree (angular)	°
		exempli gratia	e.g.	degrees of freedom	df
Time and temperature		(for example)		expected value	<i>E</i>
day	d	Federal Information	FIC	greater than	>
degrees Celsius	°C	Code		greater than or equal to	≥
degrees Fahrenheit	°F	id est (that is)	i.e.	harvest per unit effort	HPUE
degrees kelvin	K	latitude or longitude	lat. or long.	less than	<
hour	h	monetary symbols		less than or equal to	≤
minute	min	(U.S.)	\$, ¢	logarithm (natural)	ln
second	s	months (tables and		logarithm (base 10)	log
		figures): first three		logarithm (specify base)	log ₂ , etc.
Physics and chemistry		letters	Jan, ..., Dec	minute (angular)	'
all atomic symbols		registered trademark	®	not significant	NS
alternating current	AC	trademark	™	null hypothesis	H ₀
ampere	A	United States		percent	%
calorie	cal	(adjective)	U.S.	probability	P
direct current	DC	United States of		probability of a type I error	
hertz	Hz	America (noun)	USA	(rejection of the null	
horsepower	hp	U.S.C.	United States	hypothesis when true)	α
hydrogen ion activity	pH		Code	probability of a type II error	
(negative log of)		U.S. state	use two-letter	(acceptance of the null	
parts per million	ppm		abbreviations	hypothesis when false)	β
parts per thousand	ppt, ‰		(e.g., AK, WA)	second (angular)	"
volts	V			standard deviation	SD
watts	W			standard error	SE
				variance	
				population	Var
				sample	var

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Matt G. Miller,
Alaska Department of Fish and Game, Division of Sport Fish, Anchorage
and

Dan Bosch,
Alaska Department of Fish and Game, Division of Sport Fish, Anchorage

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

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*Matt G. Miller,
Alaska Department of Fish and Game, Division of Sport Fish,
333 Raspberry Road, Anchorage, AK 99518, USA*

*Dan Bosch,
Alaska Department of Fish and Game, Division of Sport Fish
333 Raspberry Road, Anchorage, AK 99518, USA*

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ABSTRACT

This report provides a detailed summary of sport fisheries in the Anchorage Management Area for which the Alaska Board of Fisheries (BOF) is considering proposals in February 2008. Included are a description and historical overview of each fishery, how the fishery is managed, and sport fishery performance and escapement for 2005 and 2006.

Key words: Anchorage Management Area, Area Management Report, Alaska Board of Fisheries, sport fisheries overview.

INTRODUCTION

This report provides a detailed summary of sport fisheries in the Anchorage Management Area (AMA) for which the Alaska Board of Fisheries (BOF) is considering proposals in February 2008. Included are a description and historical overview of each fishery, how the fishery is managed, and pertinent sport fishery performance and escapement.

The Anchorage Sport Fish Management Area (AMA) consists of all waters flowing into eastside Knik Arm and north-side Turnagain Arm from the Eklutna River drainage in the north to Ingram Creek in the south (Figure 1). Local communities within the area include Anchorage, Eagle River, Chugiak, Birchwood, Peters Creek, Eklutna, Indian, Bird, Girdwood, and Portage; and two military reservations, Elmendorf Air Force Base, and Fort Richardson Army Post. Of Alaska's 626,932 residents (U. S. Census Bureau 2000 data), 42% or 260,283 people reside in the AMA. Access to area sport fisheries is primarily by road. AMA land managers include private individuals, Municipality of Anchorage (MOA), Alaska Railroad Corporation (ARRC), Alaska Department of Natural Resources (ADNR), U.S. Forest Service (USFS), U.S. Bureau of Land Management (BLM), U.S. Department of Defense, and Alaska Native organizations. Management and research functions for AMA sport fisheries are conducted by Alaska Department of Fish and Game (ADF&G), Division of Sport Fish staff from the Anchorage regional office.

Codified regulations for AMA sport fisheries are found in the Anchorage Section under Chapter 59 of the Alaska Administrative Code (AAC). For the purposes of effort, harvest, and catch reporting, the Statewide Harvest Survey (SWHS) is used (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.*). Catch was estimated by the SWHS beginning in 1990. AMA fisheries fall under Area L in the SWHS. Estimates presented in the text of this report are rounded to the nearest 10 fish; tables present estimates to the nearest 1 fish to maintain consistency with the SWHS. Estimates of effort, catch and harvest from the SWHS are available through 2005; escapement counts are available through 2006.

AREA-WIDE OVERVIEW

AREA-WIDE EFFORT

In 2005, angler effort in the AMA was estimated at 98,370 angler days (Table 1, Figure 2), about 4% of the total statewide sport fishing effort and 6% of the total Southcentral Alaska effort.

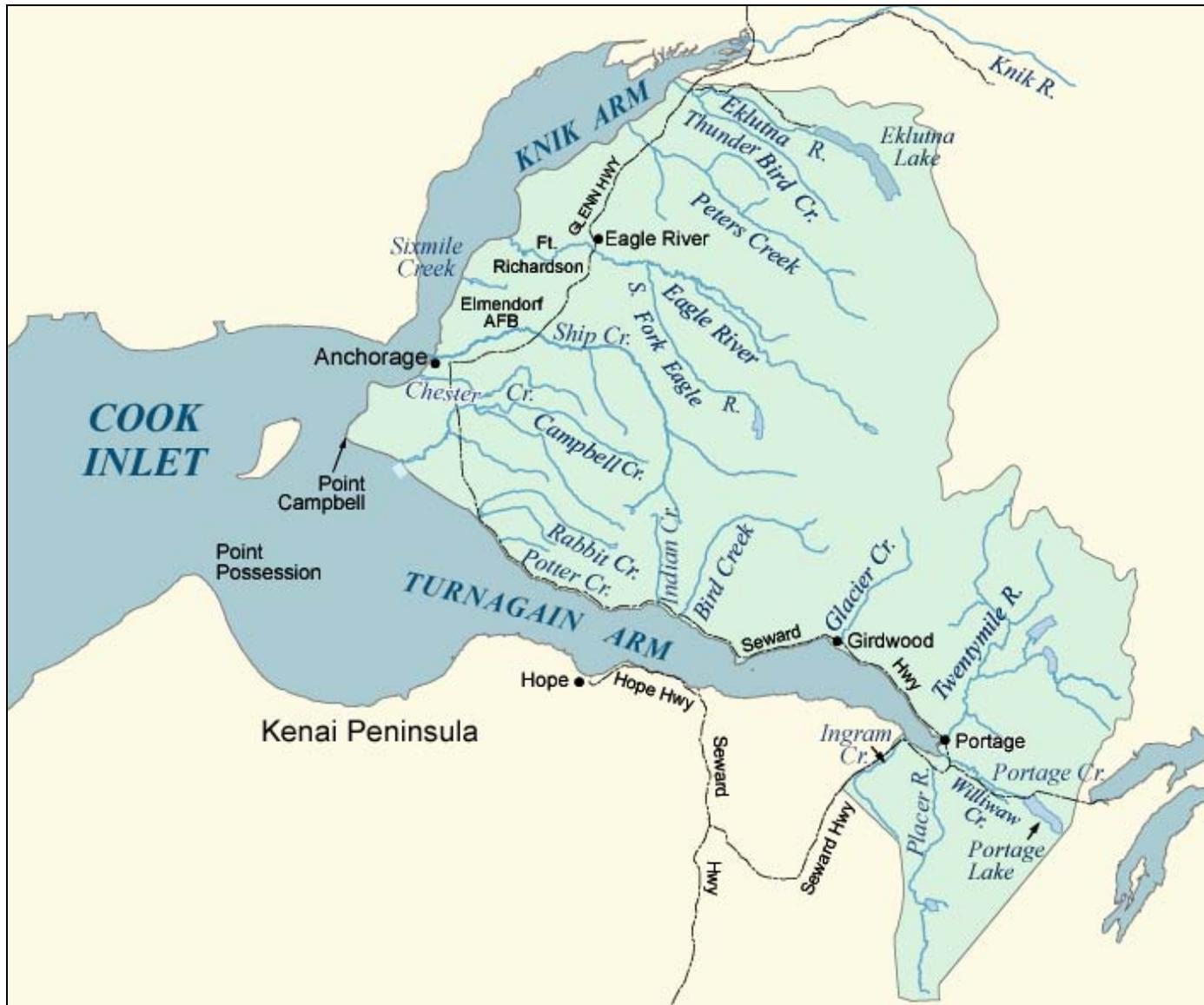


Figure 1.-The Anchorage Management Area.

Streams accounted for 61% of the total 2005 AMA fishing effort, lakes accounted for 36%, and saltwater angling represented about 3% (Table 2). Effort expended in AMA streams grew significantly during the 1990s mostly as a result of ADF&G's urban coho *Oncorhynchus kisutch* and Chinook *O. tshawytscha* salmon stocking programs (Table 3, Figure 3). The Ship Creek salmon sport fishery is the most popular stream fishery in the area. In 2005, Ship Creek accounted for 64% of the AMA stream effort, up from 19% in 1985 before stocked fish became available in the fishery. Other AMA streams that receive substantial effort are Bird Creek (14% of 2005 total stream effort), Campbell Creek (11%), and Twentymile River (4%). Bird Creek angler effort increased after the previous three years (2002-2004) of low effort due to construction of a new parking area and a break in the department's Bird Creek stocking program. Coho salmon were not stocked in 2001-2003 to avoid attracting anglers to Bird Creek during construction of a parking lot just north of the creek along the Seward Highway.

Effort expended in AMA lakes has declined from a peak of 85,720 in 1990 (Table 4, Figure 4). The recent five year (1996-2005) average effort for area lakes is 51,140 angler days. Angler effort appears to be fairly well distributed among most of the thirty Anchorage stocked lakes. The most popular area lakes in 2005 were Jewel Lake (17% of total lake effort), Mirror (11%), Clunie (6%), Otter (4%), and Sixmile (5%) lakes. Other lakes combined accounted for 55% of the angler effort in the AMA. Effort on lakes located on the two military bases, Elmendorf Air Force Base and Fort Richardson, has dropped since increased security after September 11, 2001 limited civilian access to those lakes.

AREA-WIDE CATCH AND HARVEST

Anadromous salmon catch and harvest in the AMA has varied in the past ten years (1996-2005) with a peak in 1998 (Table 5, Figure 5). Coho salmon comprised the largest anadromous catch (25,940 coho salmon caught) by area anglers in 2005 (Table 5), followed by pink salmon *O. gorbuscha* (10,740), Chinook salmon (9,200), chum salmon *O. keta* (2,380), and sockeye salmon *O. nerka* (1,000). Rainbow trout *O. mykiss* (55,870) dominated the freshwater species catch followed by landlocked salmon (16,900), Dolly Varden *Salvelinus malma*/Arctic char *S. arcticus* (9,980), and Arctic grayling *Thymallus arcticus* at 630 (Table 6 and Figure 6). In 2005, anglers released most of their catch including chum salmon (90% released), pink salmon (94%), Arctic grayling (74%), rainbow trout (75%), Dolly Varden/Arctic char (86%), and landlocked salmon (71%) (Tables 5 and 6). Anglers released 45% of their sockeye salmon catch, 53% of their Chinook salmon catch, and 42% of their coho salmon catch (Table 5).

STOCKED LAKES FISHERIES

FISHERY DESCRIPTION

Few AMA lakes supported resident fish populations of recreational interest before the initiation of stocking efforts. Most lakes are landlocked and threespine stickleback *Gasterosteus aculeatus* was the only species present. In the 1960s, the department began a rainbow trout stocking program to increase sport fishing opportunity within the AMA. Locations of stocked lakes can be found in Figure 7.

A creel survey to evaluate the stocking program was conducted during 1986 on four AMA lakes (Havens et al. 1987). Results of this survey indicated that youth and adult males were the primary recreational fishers. The main objective of the survey was to determine if a single annual spring release of a large number of rainbow trout was suitable for the area lakes. Data

indicated that catch rates remained high for 2 to 6 weeks after stocking, then dropped to below one fish per angler-hour. It was recommended, and adopted, that initial stocking occurs after ice-out and then stocking is repeated in 4 to 6 weeks. Multiple stocking of high use lakes appears to increase fishing success throughout the open water season. The AMA stocked lakes and streams program has increased sport fishing opportunities for the general public. This increase in opportunity has led to the development of educational fishing classes for youth and adults, an annual ice fishing jamboree for disabled and underprivileged anglers, and the Ship Creek Chinook and coho salmon derbies that benefit the Downtown Soup Kitchen.

Daily bag and possession limits in stocked area lakes vary by species. For rainbow trout, limits are 5 per day, 5 in possession, of which only 1 can be 20 inches or more in length. Anglers must immediately record rainbow trout 20 inches or more in length on the back of their sport fishing license, and in all Cook Inlet waters combined, there is a seasonal limit of 2 rainbow trout 20 inches or more in length. Dolly Varden/Arctic char limits are 5 per day, 5 in possession with no size limit in stocked lakes. Arctic grayling limits in stocked lakes are 5 per day, 5 in possession. Landlocked salmon limits are 10 per day, 10 in possession with no size restrictions.

HISTORICAL CATCH, HARVEST AND EFFORT

News releases and weekly fishing reports outlining lake stocking efforts help keep anglers up to date on the status of area lakes. Stocked lakes provide significant urban angling opportunities in the AMA throughout the year and have supported 35%-47% of the annual AMA sport fishing effort from 1996-2005 (Table 2). The most popular AMA lakes include Jewel and Cheney in the Anchorage bowl, Otter and Clunie on Fort Richardson, Sixmile on Elmendorf, and Mirror Lake in Peters Creek (Table 4).

FISHERY PERFORMANCE IN 2005 AND 2006

In 2005, an estimated 85,480 fish were caught in AMA lakes with a harvest of 20,930 (Table 7, Figure 8). Total catch and harvest in area lakes has decreased significantly from its peak of 198,200 fish caught and 44,240 harvested from area lakes in 2000. Rainbow trout were the most popular fish with an estimated 55,870 caught in 2005, and 13,880 retained (Table 7). An estimated 16,900 landlocked salmon were caught with a harvest of 4,850 (Table 7). The sport catch of Arctic grayling in stocked lakes was estimated at 630 of which only 170 were harvested (Table 7). The 2005 Arctic char sport catch from stocked lakes increased to 9,980 with 1,360 harvested (Table 7). Effort, catch and harvest vary in Anchorage lakes, but the 10-year average (1996-2005) is 136,390 fish caught and 35,470 harvested annually.

SWHS estimates for 2006 fishery performance will not be available until fall 2007. Area stocking levels and anecdotal information from monitoring the stocked lakes fisheries in-season suggest effort, catch and harvest may follow current trends and continue to drop. Reductions in the number and/or size of fish available for release in local stocked lakes have had detrimental effects on the popularity and productivity of local stocked lakes fisheries. In 2006, disease concerns at Elmendorf Hatchery required that landlocked salmon be released earlier than scheduled into Jewel Lake. These fish were released in June as fry rather than in December as catchable size fish. Fall surveys conducted in Jewel Lake indicated the landlocked salmon did not survive to achieve a catchable size and the very popular ice fishing program for Anchorage school children was canceled for 2006.

FISHERY MANAGEMENT AND OBJECTIVES

The management objective for AMA lakes is to maintain 75,000 angler-days of effort annually. The 2005 Anchorage lake effort was estimated at 36,830 angler-days. This was the lowest effort since 1968 and follows a trend of decreasing angler-effort since 2000 (Table 4). The most likely reason for this recent drop in effort is that the loss of hot water and other issues affecting production capacity at the two ADF&G hatcheries has resulted in dramatic reductions in stocking levels of many popular area fisheries, including those for rainbow trout, landlocked salmon, and Arctic grayling. Stocking goals, public information programs, news releases, and community school classes are used to attain the management objective.

Northern pike have been illegally introduced and documented in six AMA lakes. The presence and spread of these invasive pike has been identified as a top concern by area managers and regional staff. The pike management program began in 2003 with sampling Lower Fire, Sand, and Cheney lakes using 30 and 48 ft variable mesh gillnets, baited hoop traps, fyke nets, and spear. The presence of ADF&G staff targeting pike in area lakes captured the attention of local anglers and media who reported the sampling trips and helped increase public awareness of the local pike problem. Educating the public and encouraging anglers to harvest pike is crucial in the department's efforts to control pike in area lakes. Staff will continue to set gillnets and hoop traps in Lower Fire, Sand, and Cheney lakes and monitor reports of pike presence in other systems. Additionally, permits are being secured to draw down the water level of Cheney Lake in the fall of 2007. This project, in cooperation with MOA and with the community's support, should lower the lake level down to 3-4 ft allowing for the lake to freeze solid and winterkill the pike. Netting is planned for spring 2008 to determine the success of the winterkill, and if successful, Cheney Lake will be stocked with rainbow trout and that fishery reestablished.

CHINOOK SALMON FISHERIES

AREA-WIDE OVERVIEW

Area-wide Historical Catch, Harvest and Effort

Although several AMA streams support wild Chinook salmon stocks, few are large enough to support a recreational fishery without stocking. As a result, sport fishing for Chinook salmon in streams has been closed with few exceptions. Wild Chinook salmon runs are found in Campbell, Bird, Indian, Rabbit, California (a tributary to Glacier Creek in Girdwood), Peters, Portage, and Ship creeks and Eagle, Eklutna, Glacier, Carmen, Twentymile, and Placer rivers. Chinook salmon return to AMA streams from late May through early July. Due to the timing of these returns, commercial catches of Chinook salmon bound for AMA streams are assumed to be small, and to occur primarily in the June Northern District commercial setnet fishery.

The Campbell Creek Youth Fishery targets wild Chinook stocks and was created in 2005 when the Alaska State Legislature gave the Board of Fisheries the authority to create fisheries for youth 15 years of age and younger (youth are not required to obtain a sport fishing license). Youth may fish for Chinook salmon on Campbell Creek between Dimond Boulevard and the Old Seward Highway between 6:00 am and 10:00 pm daily on the last Saturday and Sunday of June of each year. Campbell Creek is closed to fishing for Chinook salmon the rest of the year.

Eagle River was first stocked with Chinook smolt of Ship Creek origin in 1990 in an attempt to create another urban Chinook fishery and opened to sport fishing in 1992 (Appendix A2). As minimal harvest and participation were documented from 1992-1994 (catch averaged 108 fish,

harvest averaged 51; Table 8), the stocking program was eliminated in early 1995. The Eagle River Chinook salmon season was reduced in time and area beginning in 1996. The area around the Glenn Highway Bridge remains open to Chinook salmon sport fishing for four “3-day weekends” (Saturday, Sunday, and Monday) beginning Memorial Day weekend. This fishery now targets wild fish.

By far the largest Chinook salmon fishery in the AMA is the stocked Ship Creek fishery (Appendix C2). This fishery developed in 1987 beginning with openings of 2-days per week (Appendix A1) to allow stocked Chinook returns to build to harvestable levels. The fishery was expanded to 7 days per week in 1991, resulting in a catch of over 1,600 Chinook salmon and harvest of over 1,100 (Table 8). Small salt water Chinook salmon fisheries occur near the mouths of Ship and Bird creeks (Table 8).

AMA Chinook fisheries are largely driven by the Ship Creek fishery. Ship Creek Chinook and coho salmon fisheries account for an average (1996-2005) of 64% of the total angler effort in Anchorage streams each year (Table 3). Chinook catches in the AMA have averaged 9,930 for the 10-year period from 1996-2005. The average harvest for that period is 3,950 Chinook salmon, or about 40% of the estimated catch (Table 8, Figure 9).

A regulation passed by the Board of Fisheries at the November 2000 statewide meeting standardized the definition of jack Chinook salmon in freshwater as a Chinook salmon less than 20 inches. This superseded existing regulations in the AMA defining jack Chinook salmon in freshwater as a Chinook salmon less than 16 inches. The limit for Chinook salmon less than 20 inches is 10 per day, 10 in possession. The limit for Chinook salmon 20 inches or longer in length in Ship Creek and Eagle River is 1 per day per day, 1 in possession. A signed Chinook salmon stamp, or a Permanent Identification Card, is required to fish for Chinook salmon. Harvest must be immediately recorded in ink on the back of the angler’s sport fishing license or harvest record card, and counts toward the Cook Inlet seasonal limit of 5. Chinook salmon less than 20 inches in length do not need to be recorded on the back of the sport fishing license and do not count toward the Cook Inlet seasonal limit.

SHIP CREEK CHINOOK SALMON FISHERY

Fishery Description

Before World War II, the Ship Creek wild stock Chinook salmon run supported sport, personal use, and subsistence fisheries. However, four dams constructed in the lower 11 miles of the creek during the 1940s and 1950s for power generation and as a water source for both MOA and the military bases reduced Ship Creek wild salmon runs. Attempts to enhance Ship Creek salmon runs occurred from 1966 through 1980 when Chinook salmon of Alaska and Oregon origin (Miller 1990; Stratton and Cyr 1995) were stocked. During this period, eggs obtained from these stocks were incubated at Fire Lake Hatchery. The fry were reared to smolt in the Fort Richardson Hatchery before release. These releases were generally unsuccessful, as consistent numbers of returning adults could not be established. A more successful hatchery enhancement program was established in 1987 using smolt releases from the Elmendorf Hatchery and Ship Creek Chinook salmon brood stock.

Ship Creek was open to Chinook salmon sport fishing from 1957 through 1959, but was closed from 1960 through 1969 (Appendix A1). Chinook salmon fishing was allowed during selected periods in Ship Creek downstream of the Chugach Power Plant dam from 1970 through 1972.

From 1973 through 1986, the creek was closed to Chinook salmon sport fishing due in part to low Chinook salmon abundance throughout Northern Cook Inlet. Beginning in 1987, as returns increased from annual stocking efforts, the lower portion of Ship Creek downstream of the Chugach Power Plant dam was reopened to Chinook salmon sport fishing 2 days per week for 5 consecutive weeks in June and July. The season was expanded to 7 days per week, January 1 through July 13, in 1990. Nighttime closures from 11:00 p.m. to 6:00 a.m. were issued by emergency order to help address enforcement issues, and passed into regulation in 2001. The fishery occurs during late May through early July in the lower 1 mile of Ship Creek, downstream of the Chugach Power Plant dam. The shoreline of the area open to Chinook salmon fishing is owned and managed by ARRC and MOA. The Ship Creek King Salmon Derby began in 1993 and has become an annual event currently sponsored by Grace Alaska to benefit their Downtown Soup kitchen.

The current bag limit for Chinook salmon in those waters of Ship Creek open to salmon fishing is 1 per day, 1 in possession for Chinook salmon 20 inches or greater; and 10 per day, 10 in possession for Chinook salmon less than 20 inches. After taking a Chinook salmon 20 inches or longer, a person may not fish for any species that same day in waters open to Chinook salmon sport fishing. Chinook salmon 20 inches or longer harvested in Ship Creek must be immediately recorded on the back of the angler's sport fishing license or harvest record card and counts towards the annual limit of five Chinook salmon from the fresh waters of Cook Inlet. Chinook salmon less than 20 inches in length do not need to be recorded on the back of the sport fishing license and do not count toward the Cook Inlet seasonal limit. Please refer to the Alaska Fish and Game Laws and Regulations Annotated Chapter 59, or the current Southcentral Sport Fishing Regulations Summary for more details.

Stocking Program

Hatchery-produced Chinook salmon runs in Ship Creek provide a unique opportunity for sport anglers to participate in quality fisheries in an urban setting. The Chinook salmon run is the result of an annual release of 315,000 smolt raised at Elmendorf Hatchery. Adding the average escapement (Appendix B1) and the estimated harvest (Table 8) for the previous five years (2001-2005), gives a conservative estimated annual return of 5,200 adult Chinook salmon to Ship Creek. Chinook salmon typically spend 3-4 years feeding in the ocean before returning to their natal stream to spawn, so in any given year the return will be made up of multiple year classes. A summary of the stocking program can be found in the following reports: Bartlett and Conrad 1988; Bartlett and Vincent-Lang 1989; Bartlett and Sonnichsen 1990; Bartlett and Bingham 1991, 1993; Bartlett 1992, 1994, 1996 a-b.

Historical Catch, Harvest, Effort and Escapement

Angling effort targeting all species in Ship Creek peaked at over 51,000 angler days in 1995, then dropped and peaked again at over 62,000 angler days in 2000 (Table 3). Angler effort has decreased since 2000 with the recent five year average (2001-2005) of 43,770 angler days. The sport catch and harvest of Chinook salmon in Ship Creek peaked in 1999 with 14,280 fish caught and 5,200 harvested (Table 8). Sport fish catch and harvest has decreased and varied since then with a 10-year average (1996-2005) of 8,890 Chinook salmon caught and 3,720 harvested from Ship Creek. The growth and success of this fishery is largely due to the popularity of the annual Ship Creek King Salmon Derby. Runs to Ship Creek are predicted to average about 5,000 Chinook salmon annually.

Total Chinook salmon escapement in Ship creek in 2006 was an estimated 1,710 salmon (including 280 fish used for hatchery brood stock) based on stream surveys conducted in June (Appendix B1). The remaining salmon spawned naturally near the hatchery and provided an opportunity for the public to view spawning Chinook salmon.

Although small returns have made collecting enough brood stock for Ship Creek Chinook problematic in the past, sufficient brood has been collected since 2000 to meet egg take goals and produce not only the 315,000 smolt for Ship Creek, but also provide for other Southcentral releases.

Fishery Performance and Escapement in 2005 and 2006

The sport catch and harvest of Chinook salmon in Ship Creek was good in 2005 with an estimated catch of 7,580 Chinook salmon and 4,080 of those fish harvested (Table 8). That places the catch slightly lower than the previous five year (2000-2004) average of 8,640 Chinook caught; and slightly above the average harvest of 3,510 for that same five year period. Hatchery brood goals vary from year to year based on the number of eggs needed reach to hatchery goals. The brood goal of 200 useable spawning adult Chinook salmon was met in 2005 and 2006 (Appendix B1).

SWHS estimates for 2006 fishery performance will not be available until fall 2007. Anecdotal information and observations of fishery performance inseason suggest the 2006 catch and harvest estimates may be slightly higher than 2005, but within the range of recent years.

Fishery Management and Objectives

The management objectives for the Ship Creek Chinook salmon fishery are to maintain or increase current angler effort through smolt stocking to generate at least 50,000 angler-days of annual sport fishing opportunity directed at stocked Chinook and coho salmon in Ship Creek; and to produce a return of 6,000-9,000 adult Chinook salmon to Ship Creek to assure 750 adult salmon are available (passed above the Knik Power Plant Dam) for natural spawning, fish viewing, and meeting egg-take needs. In 2005, Ship Creek produced an estimated Chinook salmon return of 5,890 Chinook salmon and supported 39,610 angler-days of effort (Table 3). Over 1,800 adult Chinook salmon passed through the fishery to provide brood and viewing needs. Present regulations combined with emergency order authority should achieve these management objectives.

In fall 2005 ADF&G received funding from USFWS for a study evaluating the feasibility of restoring fish passage to Ship Creek upstream of the Elmendorf and Ft. Richardson dams. The report was completed in February 2007 and lists alternatives for each site ranging from “Do nothing” to “Total removal”. Each alternative is described in terms of impacts and pros and cons for issues such as effectiveness of restoring fish passage, effects to water tables, sediment, creek shoreline stability, and costs. The report also identifies issues outside the scope of this initial study (such as social issues) and issues that may require further study. This report will be used by the Department of Defense as the landowner, and agencies, organizations and the public to help chose a course of action that will achieve the goal of restoring fish passage on Ship Creek. When impediments to upstream migration have been removed, efforts should begin to improve passage through the Knik Arm Power plant dam located downstream.

EAGLE RIVER CHINOOK SALMON FISHERY

Fishery Description

The Eagle River drainage originates in the Chugach Mountains with most of its flow contributed by Eagle Glacier. The lower portion of the river flows through flats on Fort Richardson Army Post that were historically used as a large weapon test firing range and impact area. Access to Eagle River from the mouth upstream to Bravo Bridge, approximately 2 miles, is restricted by the military due to the presence of unexploded ordinance, and this reach of river is closed to all sport fishing year round. The portion of Eagle River upstream from Bailey Bridge to the Glenn Highway Bridge is accessed through Fort Richardson. Upstream of the Glenn Highway, the river meanders through dedicated greenbelt as part of Chugach State Park. Developed public access points on Eagle River are limited. These access sites include: (1) the Glenn Highway campground located immediately upstream of Glenn Highway, (2) a day use area upstream of Briggs Bridge, and (3) a parking area and unimproved small boat launch site located at Mile 7.4 of Eagle River Road. The Eagle River drainage is largely used for hiking, camping, and whitewater float trips.

Eagle River is open to fishing for Chinook salmon, only from the Bailey Bridge on Ft. Richardson upstream to ADF&G markers in the Chugach State Park Eagle River Campground on Saturdays, Sundays and Mondays for four consecutive weeks beginning on the Saturday before Memorial Day. The current bag limit for Chinook salmon in those waters of Eagle River open to salmon fishing are 1 per day, 1 in possession for Chinook salmon 20 inches or greater; and 10 per day, 10 in possession for Chinook salmon less than 20 inches. After taking a Chinook salmon 20 inches or longer, a person may not fish for any species that same day in waters open to Chinook salmon sport fishing. Chinook salmon 20 inches or longer harvested in Eagle River must be immediately recorded on the back of the angler's sport fishing license or harvest record card and count towards the annual limit of five Chinook salmon from the fresh waters of Cook Inlet. Chinook salmon less than 20 inches in length do not need to be recorded on the back of the sport fishing license or harvest record card, and do not count towards the Cook Inlet seasonal limit. Please refer to the Alaska Fish and Game Laws and Regulations Annotated Chapter 59, or the current Southcentral Sport Fishing Regulations Summary for more details.

Stocking Program

The Eagle River drainage was closed to Chinook salmon fishing from 1964-1991 (Appendix A2). A small run of wild Chinook salmon returns to the Eagle River drainage during June and early July. The drainage is relatively unproductive, and due to population growth in the surrounding area, the department sought to address the problem of limited sport fishing opportunities in the Eagle River area by creating a stocked Chinook run. The Eagle River Chinook salmon stocking program was designed to generate 6,000 angler-days of effort directed at Chinook salmon annually in Eagle River. In 1990, an annual stocking program was initiated in Eagle River with approximately 105,000 Chinook salmon smolt of Ship Creek origin (Stratton and Cyr 1995). Due to poor returns and difficult fishing conditions, the stocking program was discontinued in 1995. A summary of the stocking program can be found in the following reports: Bartlett and Conrad 1988; Bartlett and Vincent-Lang 1989; Bartlett and Sonnichsen 1990; Bartlett and Bingham 1991, 1993; Bartlett 1992, 1994, 1996 a-b.

Historical Catch, Harvest and Effort

Before the Chinook salmon fishery opening in 1992, angler effort in Eagle River targeting other salmon and resident species averaged about 2,300 angler-days from 1982-1991 (Stratton and Cyr 1997) In 1992, the first year of the Chinook fishery, effort was estimated at about 4,910 angler-days for all species; Chinook catch was estimated at 110, and harvest was estimated at 50 (Table 8). Approximately 300 wild Chinook salmon and 1,000 hatchery Chinook salmon were projected to be available to sport anglers. Effort was estimated at about 3,400 angler-days in 1993 (Table 3), catch was estimated at 90, and harvest was estimated at 50 (Table 8, Figure 9). The low harvest in 1993 was surprising as over 2,300 hatchery Chinook were expected to be available. As the hatchery run failed to materialize and the estimated angler-days of effort were at prestocking levels, the stocking program was eliminated in 1995. Practically no effort was noted once water levels increased in mid-June. The fishery was reconfigured by the BOF in spring 1996. The area open to Chinook salmon fishing was restricted to that portion of Eagle River near the Glenn Highway campground. This small area was only open for four 3-day weekends (Saturday, Sunday, Monday) beginning Memorial Day weekend. Effort was estimated at 1,130 angler-days in 2005. It is thought that this limited fishery will not impact natural Chinook salmon runs.

Fishery Performance and Escapement in 2005 and 2006

Total angler effort in Eagle River was estimated at 1,130 angler days in 2005 (Table 3), and much of that was likely targeted at Dolly Varden. That is the lowest since 1998 and only accounts for 2% of angler effort in all AMA streams. The sport catch and harvest of Chinook salmon in Eagle River was at its lowest since 1991 with an estimated 30 Chinook salmon caught and harvested (Table 8). A small run of Chinook salmon (escapement counts of 120 fish in 2005 and 90 fish in 2006; Appendix B2), the failure to enhance the fishery with hatchery releases, and typically poor fishing conditions with high, fast water during the Chinook open season all likely contribute to low angler effort and success. Statewide Harvest Survey estimates for 2006 fishery performance will not be available until fall 2007. Anecdotal information and observations of fishery performance inseason suggest the 2006 catch and harvest estimates will continue to remain low.

Fishery Management and Objectives

Eagle River is managed to allow small levels of opportunity for Chinook salmon while ensuring wild stock populations are not impacted. The primary species targeted in Eagle River is Dolly Varden. In addition, the fishery is managed to maintain historical Chinook salmon escapement levels, continue natural production, and provide viewing opportunities. A sustainable escapement goal range (SEG) of 50-300 king salmon was established for South Fork Eagle River based on historic escapement counts from foot surveys.

CAMPBELL CREEK CHINOOK SALMON FISHERY

Fishery Description

Campbell Creek, the largest free flowing stream in the Anchorage metropolitan area, supports a small wild Chinook salmon run. This run has averaged 880 fish annually from 1997-2006 (Appendix B3). The upper reach of Campbell Creek is composed of two tributaries, North and South forks, which drain from the Chugach Mountains east of Anchorage. Both forks flow through canyons in their upper reaches that are impassable to upstream fish migration.

Downstream of the canyons, these tributary streams flow approximately 10 miles through the largely undeveloped forests and wetlands of Chugach State Park and Far North Bicentennial Park before converging near Piper Street. Campbell Creek flows through MOA greenbelt and private property from the confluence of the forks downstream to Cook Inlet. The greatest impacts from urbanization have occurred in this reach of Campbell Creek.

MOA has made an effort to obtain and preserve the riparian habitat of Campbell Creek from Lake Otis Parkway downstream to Campbell Lake and improve water quality. In 1981, BLM transferred title to the 4,000-acre Campbell Tract (Bicentennial Park) to MOA. This area comprises the primary spawning and rearing habitat for Chinook salmon. Recent run sizes suggest that Campbell Creek Chinook salmon runs are rebounding.

Chinook salmon sport fishing has not been permitted in Campbell Creek since statehood in 1959 (Appendix A3). The small wild run of Chinook salmon has not been enhanced with hatchery releases and cannot provide a sustainable harvest in such a heavily urbanized location. However, in 2005 the Alaska State Legislature gave the BOF the authority to create fisheries for youth 15 years of age and younger (youth not required to obtain a sport fishing license). The BOF created the Campbell Creek Youth Fishery to give area youth access to a Chinook salmon fishery where they would not have to compete with the mass of adult anglers on Ship Creek. Youth may fish for Chinook salmon on Campbell Creek between Dimond Boulevard and the Old Seward Highway between 6:00 am and 10:00 pm daily on the last Saturday and Sunday of June of each year. Campbell Creek is closed to fishing for Chinook salmon the rest of the year. The current bag limits for Chinook salmon during the Campbell Creek Youth Fishery are 1 per day, 1 in possession for Chinook salmon 20 inches or greater; and 10 per day, 10 in possession for Chinook salmon less than 20 inches. After taking a Chinook salmon 20 inches or longer, a person may not fish for any species that same day in waters open to Chinook salmon sport fishing. Chinook salmon 20 inches or longer harvested in Campbell Creek must be immediately recorded on the back of the youth's harvest record card and count towards the annual limit of five Chinook salmon from the fresh waters of Cook Inlet. Chinook salmon less than 20 inches in length do not need to be recorded on the back of the sport fishing license or harvest record card, and do not count toward the Cook Inlet seasonal limit. Please refer to the Alaska Fish and Game Laws and Regulations Annotated Chapter 59, or the current Southcentral Sport Fishing Regulations Summary for more details.

Stocking Program

There have not been any stockings of Chinook salmon in Campbell Creek. ADF&G has no plans to develop a Chinook stocking plan for Campbell Creek.

Historical Catch, Harvest and Effort

Campbell Creek has been closed to Chinook fishing since statehood so no legal historical catch or harvest has occurred.

Fishery Performance and Escapement in 2005 and 2006

The Youth Fishery started in 2005, however since it is only open to youths 15 years and younger (who do not require Alaska sport fishing licenses) none of them are eligible to receive a Statewide Harvest Survey, from which catch and harvest are estimated, and it is likely their effort was underreported if another member of their household received a survey. In 2005, an estimated 750-1,000 anglers and adults participated in the fishery this first year of the fishery and

they harvested 150-200 Chinook salmon. No estimates were made for the 2006 Youth Fishery, however participation and effort appeared to be lower due to poor weather and high water conditions in the creek.

The escapement estimate for Campbell Creek Chinook salmon in 2005 was 1,100 salmon. The 2006 estimate was 1,050 (Appendix B3). These estimates are based on foot surveys conducted along the length of the creek after the Youth Fishery occurred.

Fishery Management and Objectives

The management objective for Campbell Creek Chinook salmon is to manage and protect the wild Chinook salmon run and achieve an escapement within the SEG range of 50-700 Chinook salmon. The SEG was exceeded in 2005 and 2006.

In 2006 the Campbell Lake Homeowners Association and MOA were permitted to lower Campbell Lake down to the original creek level for three months in order to winterkill aquatic vegetation in the lake. ADF&G staff expressed concern that Campbell Lake, as the only significant deep water body in the Campbell Creek drainage, likely provides significant habitat for the stocks of wild Chinook and sockeye salmon, hatchery enhanced runs of coho salmon, and resident species in the watershed. Permit requests to extend the refill date of May 15, 2007 by a week were filed, but denied. ADF&G will need to monitor the fisheries and escapements on Campbell Creek in order to detect any detrimental affects this action may have on the salmon stocks.

OTHER CHINOOK SALMON FISHERIES

Fishery Description

Small, wild stock Chinook salmon runs are found in Bird, Indian, Rabbit, California (a tributary to Glacier Creek in Girdwood), Peters, Glacier, and Portage creeks, and Glacier (tributary to Twentymile River), Carmen, Twentymile, and Placer rivers. Most of these streams support annual Chinook salmon runs of less than 100 fish each and all are closed to Chinook salmon fishing. The Rabbit Creek Chinook salmon run provides viewing opportunities for Potter Marsh visitors in June and July.

ADF&G foot survey counts of Chinook salmon returning to Bird Creek and its tributary, Penguin Creek, indicate an annual return of 160 Chinook salmon from 1997-2006 with a range from 30 to 500 Chinook salmon (Appendix B4). A series of falls in Bird Creek approximately one-half mile above the Penguin Creek confluence present a complete barrier to upstream migration. Most Chinook salmon are observed within one-quarter mile of the first waterfall in Bird Creek and the lower mile of Penguin Creek. This area comprises the primary spawning and rearing habitat for Chinook salmon.

Stocking Program

Approval to stock Bird Creek with Chinook salmon was given by the Chugach State Park Citizens Advisory Board in fall 1995 and spring 1998 meetings. Department staff worked with ADNR staff in 1997 to test the feasibility of using Bird Creek Chinook for egg takes. A weir was constructed and ADNR volunteers maintained the weir and counted Chinook salmon passing the Penguin Creek site. While about one-half of the Chinook salmon observed in the Bird Creek drainage spawn in Penguin Creek, it does not appear economically feasible to collect Bird Creek drainage Chinook salmon for egg takes. Bird and other area creeks will continue to be considered

for Chinook salmon stocking once the new ADF&G hatchery is online and additional hatchery fish are available for stocking.

A summary of the stocking program can be found in the following reports: Bartlett and Conrad 1988; Bartlett and Vincent-Lang 1989; Bartlett and Sonnichsen 1990; Bartlett and Bingham 1991, 1993; Bartlett 1992, 1994, 1996 a-b.

Fishery Management and Objectives

The management objective and goal for wild stocks of Chinook salmon considered too small to support a harvestable surplus is to maintain historical Chinook salmon escapement levels, continue natural production, and provide viewing opportunities. Escapement goals have not been set for these streams.

COHO SALMON FISHERIES

AREA-WIDE OVERVIEW

Area-wide Historical Catch, Harvest and Effort

Streams supporting runs of coho salmon include Campbell, Rabbit, Bird, Ship, Peters, Glacier, California, and Portage creeks and Eagle, Eklutna, Twentymile, and Placer rivers. The largest AMA coho salmon sport fisheries occur in Bird, Campbell, and Ship creeks and Twentymile River. Ship Creek and Bird Creek contribute significantly to the area's average catch and harvest (Table 9, Figure 10). Twentymile River supports wild coho salmon, while Bird, Campbell, and Ship Creek runs are primarily hatchery produced. Coho salmon typically spend only one year feeding in the ocean before returning to their natal stream to spawn.

Coho salmon return to area streams from mid-July through mid-October. Stocked stream runs peak in mid to late August, while Turnagain Arm runs peak in mid-September. Detailed estimates of stocked coho salmon caught in selected Upper Cook Inlet commercial fisheries can be found in Hoffmann and Hasbrouck (1994), Stratton et al. (1996), Cyr et al. (1997-1999, 2001), and Bosch and Evans (2006). In the fresh waters open to fishing for coho salmon, limits for salmon other than Chinook salmon, 16 inches or greater in length are 3 per day, 3 in possession, only 2 of which may be coho except in stocked streams. Limits for salmon less than 16 inches in length are 10 per day, 10 in possession. Potter and Sixmile creeks are totally closed to all sport fishing, and portions of Rabbit, Campbell, and Ship creeks are also closed.

Prior to the urban coho stocking program which was initiated in 1991, the highest total coho salmon harvest (6,730 coho salmon) occurred in 1988 (Table 9, Figure 10). For the ten-years from 1996-2005, an estimated 36,440 coho salmon were caught annually in area sport fisheries and 22,990 of those fish were harvested. The peak catch in that time was 63,870 coho salmon in 2001 (Figure 10). The increase in AMA coho salmon sport harvest is directly related to increased sport fishing effort on Ship, Campbell, and Bird creeks due to hatchery stocking, and on natural stocks in Twentymile River.

Poor returns of coho salmon to many systems in Upper Cook Inlet in 1997-2000 resulted in closures of the Upper Cook Inlet commercial fisheries, reductions to bag and possession limits and bait restrictions to the sport fisheries, and a conservative approach to coho salmon management region wide. These three years of weak runs were followed by record returns in 2000-2002. The 2000-2002 estimated catches of coho salmon in the AMA are three of the four highest years ever recorded. The area wide catch of 25,940 coho salmon in 2005 was below the

previous five year average, but is within the wide range of catches since the urban coho project began.

SHIP CREEK COHO SALMON FISHERY

Fishery Description

Ship Creek's wild coho salmon run supported sport, personal use, and subsistence fisheries before World War II. The dams constructed in the lower 11 miles of creek for power generation and as a water source for MOA and the military during the 1940s and 1950s reduced Ship Creek salmon runs. To rebuild these runs, the creek was stocked annually with coho salmon smolt from 1968-1977. These efforts proved unsuccessful in providing consistent numbers of returning adults. Nine different brood stocks from Ship Creek, Bear Lake (near Seward), Kodiak, Washington, and Oregon were used (Miller 1990). Eggs obtained from these stocks were incubated at Fire Lake Hatchery and the resultant fry were reared to smolt at Fort Richardson Hatchery. No coho salmon smolt were released in Ship Creek from 1978-1986. From 1987-1994, the department stocked coho salmon smolt in Ship Creek using fish of Ship Creek origin reared at Elmendorf Hatchery. While these efforts have provided consistent coho salmon runs, these runs tend to enter the system slowly throughout the fall. Ideally, coho runs that appeal to sport anglers exhibit a compressed run timing with large numbers of fish available in a relatively short time period. The decision was made to change brood stock for Ship Creek to Little Susitna River origin fish, which exhibit the preferred condensed run timing. The first release of Little Susitna River origin coho salmon smolt occurred in 1995.

Ship Creek was open to coho salmon sport fishing from 1957-1959, and again from 1964 to present (Appendix A1). Currently, only the reach downstream of the Chugach Power Plant Dam is open to salmon fishing. The limits on Ship Creek for salmon (other than Chinook salmon) 16 inches or greater in length are 3 per day, 3 in possession, of which all three may be coho salmon. Limits for salmon (other than Chinook salmon) less than 16 inches in length are 10 per day, 10 in possession.

This popular fishery takes place in a highly industrialized area of the city and concentrates anglers in the lower half-mile of the creek creating crowding, sanitation, and parking problems along the creek and adjacent ARRC and MOA property. The Ship Creek Silver Salmon Derby began in 1995 and has been held annually in August. This derby, currently sponsored by Grace Alaska as a benefit for their Downtown Soup Kitchen, has been embraced by the angling public and is partly responsible for the popularity of the Ship Creek coho salmon fishery.

The potential for conflict exists between sport anglers and land managers including ARRC and MOA. Sanitation and parking facilities in place for the Chinook salmon fishery remain in place for the coho salmon fishery. Development proposed for lower Ship Creek includes access improvements, parking, and trails.

Stocking Program

Hatchery-produced coho salmon runs in Ship Creek provide a unique opportunity for sport anglers to participate in quality fisheries in an urban setting. The coho salmon run is the result of an annual release of 240,000 smolt raised at Elmendorf Hatchery. The Ship Creek coho salmon objectives stated in the Statewide Stocking Plan (Loopstra 2007) are to produce a return of 12,000 adult returning coho salmon to Ship Creek while assuring 1,000 coho salmon are available (past the Knik Arm Power Plant Dam) for natural spawning, fish viewing and

providing for egg take needs; and to maintain or increase current angler effort to at least 50,000 angler-days of annual sport fishing opportunity directed at stocked Chinook and coho salmon in Ship Creek. Adding the average escapement (Appendix B1) and the estimated harvest (Table 9) for the five year period from 2001-2005 gives a conservative estimated annual return of 14,360 adult coho salmon to Ship Creek. A summary of the stocking program can be found in the following reports: Bartlett and Conrad 1988; Bartlett and Vincent-Lang 1989; Bartlett and Sonnichsen 1990; Bartlett and Bingham 1991, 1993; Bartlett 1992, 1994, 1996 a-b.

Historical Catch, Harvest and Effort

Angling effort targeting all species in Ship Creek peaked to 51,090 angler days in 1995, then dropped and peaked again to 62,100 angler days in 2000 (Table 3, Figure 3). Angler effort has dropped since 2000 with the recent five year average (2001-2005) of 43,770 angler days. The Ship Creek coho salmon sport fishery has evolved in recent years with strong returns and resulting in strong catches and harvests since 1999. The recent five year average (2001-2005) of 18,920 coho salmon caught and 12,440 harvested is slightly higher than the 10-year average (1996-2005) of 16,550 coho salmon caught and 10,750 harvested (Table 9). The annual Ship Creek coho salmon sport harvest has ranged from less than 100 fish in the pre-stocking years of 1983 and 1986, to 26,420 fish in 2001.

Fishery Performance and Escapement in 2005 and 2006

The sport catch of Ship Creek coho salmon in 2005 was 10,920 with an estimated harvest of 6,830 (Table 9). Although these numbers fall below catches in the record years of 2000-2002, they fall within the range of expected catch and harvest since the coho salmon stocking program began. In 2005, ADF&G foot surveys conducted in Ship Creek estimated 1,060 coho salmon upstream of the boundaries of the sport fishery (Appendix B1). In order to meet brood goals, 600 of those were harvested at the Elmendorf hatchery for egg-take leaving 470 to spawn naturally in the creek. In 2006, 610 coho salmon were collected for brood stock and 1,450 spawned in the creek.

SWHS estimates for 2006 fishery performance will not be available until fall 2007. Anecdotal information and observations of fishery performance inseason suggest the 2006 catch and harvest estimates of Ship Creek coho salmon will be low. Although early fishery performance in the AMA and throughout Southcentral suggested a strong coho salmon return in 2006, exceptionally heavy rains in mid-late August resulted in high water and flooding in area creeks. These poor conditions were certain to reduce angler effort and success, but likely contributed to high escapements for area streams.

Fishery Management and Objectives

The Ship Creek coho salmon fishery management objectives are to produce a return of 12,000 adult returning coho salmon to Ship Creek while assuring 1,000 coho salmon are available (past the Knik Arm Power Plant Dam) for natural spawning, fish viewing and providing for egg take needs; and to maintain or increase current angler effort to at least 50,000 angler-days of annual sport fishing opportunity directed at stocked Chinook and coho salmon in Ship Creek. Adding the coho salmon harvest of 6,830 (Table 9) and the total escapement of 1,060 (Appendix B1) gives a conservative estimate that 7,890 coho salmon returned in 2005. An estimated 39,610 angler-days of effort were directed at stocked Chinook and coho salmon in Ship Creek. Present

regulations provide for the harvest of coho salmon in excess of spawning and viewing requirements and allow optimum utilization of Ship Creek coho salmon.

In fall 2005 ADF&G received funding from USFWS to conduct a study evaluating the feasibility of restoring fish passage on Ship Creek upstream of the Elmendorf and Ft. Richardson dams. The report was completed in February 2007 and lists alternatives for each site ranging from “Do nothing” to “Total removal”. Each alternative is described in terms of impacts and pros and cons for issues such as effectiveness of restoring fish passage, effects to water tables, sediment, creek shoreline stability, and costs. The report also identifies issues outside the scope of this initial study (such as social issues) and issues that may require further study. This report will be used by the Department of Defense as the landowner, and agencies, organizations and the public to help choose a course of action that will achieve the goal of restoring fish passage on Ship Creek. Once fish can access habitat upstream, efforts should begin to improve passage through the Knik Arm Powerplant Dam located downstream.

CAMPBELL CREEK COHO SALMON FISHERY

Fishery Description

Although wild coho salmon historically returned to Campbell Creek during August and September, the number of returning adults was insufficient to support a viable sport fishery. Coho salmon hold in Campbell Lake, which is closed to all fishing, before moving into the creek. Most fish migrate upstream of Lake Otis Parkway, and spawn in both North and South Forks. Campbell Creek coho salmon escapement surveys averaged 159 fish annually from 1986 to 1992, before returns of hatchery fish (Appendix B3). Campbell Creek historically supported annual coho salmon runs greater than observed in the early 1990s. The reduction of Campbell Creek coho salmon runs were likely a result of urbanization and development along the creek which reduced the number and size of wetlands and associated rearing habitat, an influx of pollutants and silt from storm drain runoffs, and poaching.

The current coho salmon run is the result of an annual release of 75,000 smolt raised at Elmendorf Hatchery that supports an average harvest (1996-2005) of 1,260 coho and escapements (1996-2005) averaging 2,180 coho salmon. Campbell Creek was opened to coho salmon fishing in 1993 for the first time since 1971 (Appendix A3). A map of lower Campbell Creek and areas open to coho salmon sport fishing can be found in Figure 11. The limits on Campbell Creek for coho salmon, 16 inches or greater in length are 3 per day, 3 in possession. Limits for coho salmon less than 16 inches in length are 10 per day, 10 in possession.

The Campbell Creek greenbelt includes a major segment of the MOA bike trail system and provides excellent public access to the creek from the confluence of North and South Forks downstream to Campbell Lake. This bike trail access and proximity to neighborhoods makes the Campbell Creek fisheries a popular summer pastime for area youth.

Stocking Program

Hatchery-produced coho salmon runs in Campbell Creek provide a unique opportunity for sport anglers to participate in quality fisheries in an urban setting. The annual stocking of 150,000 coho smolt of Little Susitna River origin was initiated in 1992 to increase coho salmon runs to Campbell Creek. This stocking is part of the urban coho salmon project aimed at increasing coho salmon angling opportunities in the AMA. The number of coho smolt stocked annually was reduced to 75,000 in 1996. The Campbell Creek coho salmon objectives stated in the

Statewide Stocking Plan (Loopstra 2007) are to produce a return of 3,500 adult returning coho salmon to Campbell Creek while maintaining the historic level of natural coho salmon spawning, and to generate 7,500 angler-days of annual sport-fishing opportunity directed at stocked coho salmon in Campbell Creek. Adding the average escapement 2,720 (Appendix B3) and the estimated harvest of 1,290 (Table 9) for the five year period from 2001-2005 gives a conservative estimated annual return of 4,010 adult coho salmon to Campbell Creek. A summary of the stocking program can be found in the following reports: Bartlett and Conrad 1988; Bartlett and Vincent-Lang 1989; Bartlett and Sonnichsen 1990; Bartlett and Bingham 1991, 1993; Bartlett 1992, 1994, 1996 a-b.

Historical Catch, Harvest and Effort

Campbell Creek was closed to all salmon fishing prior to 1993 when it was opened to fishing for coho salmon. A biological escapement goal of 200 fish was set for Campbell Creek coho salmon (it was changed to an SEG of 100-500 wild coho salmon in 2001), and a weir was operated on Campbell Creek from 1993 to 1994 to count returning adult salmon. An escapement of 2,300 fish was observed during 1993 weir operations and 3,050 were counted in 1994 (Appendix B3). Catch was estimated at 6,890 coho salmon and harvest was estimated at 3,940 the first year of the fishery (Table 9). Catch estimates decreased to about 1,880 coho salmon in 1999 and 2000, but began increasing in 2001. The recent five year (2001-2005) estimates for the Campbell Creek coho salmon fishery are 3,330 fish caught with a harvest of 1,290.

Fishery Performance and Escapement in 2005 and 2006

The sport catch and harvest of coho salmon in Campbell Creek in 2005 were 4,550 caught and 1,990 harvested. This falls within the upper part of the range for recent Campbell Creek coho fishery performance. ADF&G stream surveys conducted on Campbell Creek estimated 1,130 adult coho salmon in the stream for escapement in 2005 and 540 in 2006. There is currently an SEG of 100-500 wild coho salmon for Campbell Creek. ADF&G coded wire tag (CWT) studies indicated wild stocks consistently contributed about 20% of the total return (Bosch and Evans 2006). That 20% estimate means the SEG was met in 2005 with 225 wild coho salmon in the return.

SWHS estimates for 2006 fishery performance will not be available until fall 2007. Anecdotal information and observations of fishery performance inseason suggest the 2006 catch and harvest estimates of Campbell Creek coho salmon will be low. Although early fishery performance in the AMA and throughout Southcentral suggested a strong coho salmon return in 2006, exceptionally heavy rains in mid-late August resulted in high water and flooding in area creeks. These poor conditions were certain to reduce angler effort and success, but likely contributed to high escapements for area streams.

Fishery Management and Objectives

The Campbell Creek coho salmon fishery was established to provide additional angler opportunities in Anchorage by producing a return of 3,500 adult coho salmon to Campbell Creek while maintaining historic levels of natural coho spawning; and generate 7,500 angler-days of annual sport fishing opportunity directed at stocked coho salmon in Campbell Creek. The fishery will be managed to maintain historic escapement levels with an SEG range of 100-500 wild coho, and provide continued natural production and viewing opportunities. In 2005, the fishery generated an estimated 6,930 angler-days. This estimate is likely low due to the large

number of anglers under 16 years of age that utilize this fishery. The SWHS estimates are based on household mail-in surveys sent to anglers who purchased sport fishing licenses and young anglers are likely underrepresented. The return is estimated conservatively at 3,120 adult coho salmon in 2005.

BIRD CREEK COHO SALMON FISHERY

Fishery Description

Little historic information is available for Bird Creek coho salmon. The first foot surveys were conducted in 1986 with three coho salmon observed. Foot surveys from 1990 through 1992 indicated escapements ranging from 10 to 100 coho salmon (Appendix B4). The well-developed access, proximity to Anchorage, and lack of natural coho salmon production made Bird Creek an ideal candidate for enhancement. The annual stocking of 150,000 coho smolt of Little Susitna River origin was initiated in 1992 to increase the number of coho salmon for sport anglers. Those smolt released in 1992 returned as adults to the Bird Creek fishery in 1993. Due to reductions in ADF&G hatchery production, the current stocking level of Bird Creek coho salmon is 100,000 (Loopstra 2007) This stocking is part of the urban coho salmon project aimed at increasing coho salmon angling opportunities in the AMA.

Bird Creek is open to sport fishing from department markers approximately 500 yards upstream of the Seward Highway Bridge downstream to the mouth of the creek. A marker approximately 400 yards upstream of the Seward Highway Bridge marks public/private property boundary. The open area was expanded in 1993 by approximately 100 yards as a result of a pending land exchange between ADNR, MOA, and private landowners. To date, this land exchange has not occurred. Once the land swap is completed, the marker will be moved upstream. Bird Creek, upstream of this reach, is closed to all salmon fishing. The area open to sport fishing in Bird Creek is the intertidal reach, and coho salmon are harvested from late July through mid-September. The remainder of the drainage is closed year-round to salmon fishing. The limits on Bird Creek for salmon (other than Chinook salmon) 16 inches or greater in length are 3 per day, 3 in possession. All three may be coho salmon. Limits for salmon (other than Chinook salmon) less than 16 inches in length are 10 per day, 10 in possession.

In 2005 construction of the new parking and access project was completed. The enhanced coho salmon fishery had grown in popularity since the initial return in 1993 and quickly outgrew existing facilities for anglers. This project provided off-road parking for over 125 vehicles and developed camping, safe access for anglers and spectators, and sanitation facilities.

Stocking Program

Stocking of coho salmon smolt was initiated at Bird Creek in 1992 to increase the number of coho salmon for sport anglers because natural production is very low. Because Bird Creek historically produced few coho salmon, there are no genetic concerns with stocking, no attempts were made to collect wild Bird Creek coho salmon for brood stock, and Little Susitna River coho salmon brood stock are used for stocking. Initially, 150,000 fish were stocked annually. Due to hatchery surplus nearly 300,000 coho salmon smolt were released in 1997. Reductions in ADF&G hatchery production resulted in the current stocking level of Bird Creek coho salmon of 100,000 fish. Coho salmon smolt releases were suspended from 2001-2003 while the Bird Creek parking area was under construction. A summary of the stocking program can be found in the

following reports: Bartlett and Conrad 1988; Bartlett and Vincent-Lang 1989; Bartlett and Sonnichsen 1990; Bartlett and Bingham 1991, 1993; Bartlett 1992, 1994, 1996 a-b.

Historical Catch, Harvest and Effort

The first returns from hatchery stockings in 1993 resulted in a catch of 7,800 and harvest of 6,200 coho salmon (Table 9). The fishery grew to a peak catch of 33,550 and a harvest of 22,410 in 1998. Fishery performance is linked closely to the number of hatchery-reared smolt released. Nearly 300,000 coho salmon smolt were released in 1997 (Appendix C3) resulting in high catch rates the following year. The fishery continued to do well until 2002, when the catch dropped to 1,500 coho salmon of which 1,050 were harvested. This decline in fishery performance was due to Bird Creek not being stocked in 2001. Construction of the new parking area north of Bird Creek was scheduled to begin in 2002, and in order to conduct a safe and orderly fishery, Bird Creek was not stocked in 2001-2003. The loss of the stocking program for those three years correspond to poor fishery performance from 2002-2004 (Table 9).

Fishery Performance and Escapement in 2005 and 2006

The sport catch and harvest of coho salmon in Bird Creek rebounded in 2005 as a result of hatchery fish returning from 2004 releases. The catch in 2005 was 5,330 coho salmon with 3,280 of those harvested (Table 9). Those levels fall within the range of previous enhanced fishery performance estimates and show the expected rebound of this popular fishery when stocking was resumed. Based on ADF&G stream surveys, Bird Creek coho salmon escapements in 2005 were 620 salmon and 440 in 2006. Due largely to the reliance of this fishery on hatchery enhancement, the previous five year (2000-2004) escapement estimates ranged from 4 to 1,550 adult coho salmon (Appendix B4) so it is difficult to use escapement as a meaningful index.

Although harvest estimates for 2006 are not yet available, observations during the coho salmon sport fishery indicate that fishery performance was good until mid-August. High water and poor fishing conditions that affected most Southcentral coho fisheries impacted Bird Creek effort and success. Several brown bears were seen at Bird Creek in 2006 resulting in some bear-angler interactions. ADF&G reacted by coordinating with other agencies and ADNR (the landowner below the markers) to post signs warning the public of the presence of bears and educating anglers on how to fish safely and responsibly when bears could be present.

Fishery Management and Objectives

The Bird Creek coho salmon fishery was established to provide additional angler opportunities in the AMA; specifically, to produce a return of 5,000 adult coho salmon to Bird Creek, and generate 7,500 angler-days of annual sport fishing opportunity directed at stocked coho salmon in Bird Creek. The 10-year average (1996-2005) annual effort expended at Bird Creek is 10,900 angler-days, with an estimate of 8,370 for 2005 (Table 3). The limited information available for natural coho salmon production in Bird Creek suggests that few coho salmon spawn in the system, therefore no escapement goal has been established for Bird Creek. The sport fishery is managed to fully utilize returns from hatchery stockings.

TURNAGAIN ARM COHO SALMON FISHERIES

Fishery Description

Upper Turnagain Arm (south of Bird Creek) is unique in that it supports diverse sport and personal use activities in close proximity to Anchorage, primarily targeting eulachon, Dolly

Varden, and coho salmon. Some fisheries are accessible by highway while others are limited to jet boat access. Angler activities on these streams range from low to high use. Turnagain Arm produces the largest wild stock coho salmon runs in the Anchorage Management Area with coho salmon returning to several streams from late July through mid-September. In some systems fresh fish are available into October.

The Twentymile River drainage supports the largest and most popular recreational coho salmon fishery in Turnagain Arm. The upper reaches of Twentymile, Glacier River, and Carmen River are closed by regulation to all salmon fishing after July 14. In the Placer River drainage, Skookum and Lower Explorer creeks, sport fishing effort is minimal at this time. Spawning areas in Lower Explorer and Skookum creeks are closed by regulation. Coho salmon are also harvested in California, Glacier, Ingram, Peterson, and Placer creeks and several Portage Valley streams. Angler participation and harvest of wild stocks have increased in many Turnagain Arm systems in recent years and should be monitored to insure sustainability.

In waters of Turnagain Arm open for fishing for coho salmon (please refer to the current Southcentral sport fishing regulation book) the limits for salmon (other than Chinook salmon) 16 inches or greater in length are 3 per day, 3 in possession. Only 2 may be coho salmon. Limits for salmon (other than Chinook salmon) less than 16 inches in length are 10 per day, 10 in possession.

Stocking Program

Ingram Creek supports a small natural coho salmon run. In the mid-1980s, a channel connecting the large pond between the Placer River overflow channel and Ingram Creek was excavated, and a water control structure installed. ADF&G and USFS, Glacier Ranger District in Girdwood, stocked this pond with 72,000-160,000 coho salmon fingerlings (reared at Crooked Creek Hatchery) annually between 1985-1990 in an effort to create a coho salmon sport fishery. The stocked coho salmon fingerlings reared and overwintered in the pond and emigrated the following spring as smolt into Turnagain Arm. Although outmigrant weirs operated by the USFS found that the growth and survival of the fingerlings to the smolt stage were good, adult returns were very low. DOT constructed several pull-outs along Seward Highway in anticipation of a fishery that did not develop. The Ingram Creek coho salmon fingerling stocking program was canceled in 1991. Despite the failure of this stocking program, Ingram Creek appears to be an ideal candidate for hatchery enhancement. Obstacles to establishing this fishery are the lack hatchery space available for the rearing of additional coho smolt, and finding an appropriate local brood stock. If additional hatchery production is possible when the new ADF&G hatchery is built, Department staff should continue to work with USFS in examining the possibility of a stocking program in Turnagain Arm. A summary of the stocking program can be found in the following reports: Bartlett and Conrad 1988; Bartlett and Vincent-Lang 1989; Bartlett and Sonnichsen 1990; Bartlett and Bingham 1991, 1993; Bartlett 1992, 1994, 1996 a-b.

Historical Catch, Harvest and Effort

The coho salmon fishery in the Twentymile River has remained fairly steady with a 10-year average (1996-2005) catch of 3,580 coho salmon and a harvest of 2,250 (Table 9). The fishery peaked with two strong years in 2000 and 2001 with estimated catches of over 5,000 and harvests of around 3,000 coho salmon (Table 9). The fishery performance remained strong through 2004. Other Turnagain Arm fisheries are too small to be accurately reported in the SWHS and are included in "Other Freshwater" in Table 9. Department aerial surveys of selected

Turnagain Arm streams began in 1994 to index escapements of these systems (Appendix B5). Due to small coho runs and conditions that are often less than optimal for aerial surveys, there is a large range in the yearly escapement estimates.

Fishery Performance and Escapement in 2005 and 2006

The sport catch of coho salmon in the Twentymile River in 2005 was 1,630 with 1,330 of those salmon harvested (Table 9). That is well below the previous five year (2000-2004) average of 4,590 coho salmon caught and 2,730 harvested. Other Turnagain Arm fisheries are too small to be accurately reported in the SWHS and are included in “Other Freshwater” in Table 9. Coho salmon fishery performance in “Other Freshwater” systems was also relatively poor in 2005. Performance in nearby stocked coho fisheries at Bird and Campbell creeks was strong suggesting there may have been poor natural overwinter survival, or that the newly reopened Bird Creek fishery with its more liberal bag limits attracted Turnagain Arm coho anglers in 2005. Although harvest estimates for 2006 are not yet available, observations during the coho salmon sport fishery indicate that fishery performance was good until mid-August. After that, high water and poor fishing conditions affected most Southcentral coho fisheries and likely reduced Turnagain Arm effort and success.

Fishery Management and Objectives

The management objective for Turnagain Arm coho salmon fisheries is to provide angler opportunities while ensuring adequate spawning escapement. No escapement goals have been set for these systems.

OTHER COHO SALMON FISHERIES

Fishery Description

Several other AMA streams support small runs of coho salmon. Rabbit and Sixmile creeks are closed to all sport fishing for salmon, while portions of Peters, Glacier, California, and Portage creeks and Eagle and Eklutna rivers are open to salmon fishing. Harvests from these streams are low, and escapement surveys are not conducted. It is recommend that surveys of these area streams be conducted as time and budget allow to determine coho salmon distribution and relative abundance, evaluate the capability of these streams to support sport fishing, and identify potential sites for future stocking efforts.

Chester Creek supports a native Dolly Varden population and is stocked annually with sterile rainbow trout catchables. An effort has begun to revitalize fish passage to Chester Creek and Division of Sport Fish staff have attended community council and public meetings discussing these issues. Currently fish passage is through a tunnel that goes from Cook Inlet, under the railroad embankment, into Westchester Lagoon, and finally Chester Creek. Designs are being considered to replace the current fish pass tunnel with a hardened channel leading to a culvert under the railroad tracks and into a small wetland area before fish pass into Westchester Lagoon. If completed, these enhancements will likely increase the number of salmon instream. At this time, there is no public support to stock salmon into Chester Creek

Stocking Program

Other than Ship, Bird, and Campbell creeks, there are currently no plans to stock other area streams with coho salmon. A summary of the stocking program can be found in the following

reports: Bartlett and Conrad 1988; Bartlett and Vincent-Lang 1989; Bartlett and Sonnichsen 1990; Bartlett and Bingham 1991, 1993; Bartlett 1992, 1994, 1996 a-b.

Historical Catch, Harvest and Effort

Portions of Peters, Glacier, California, and Portage creeks and Eagle and Eklutna rivers are open to salmon fishing. Harvests from these streams are low, and escapement surveys are not conducted.

Fishery Management and Objectives

The management objective and goal for wild stocks of coho salmon in systems considered too small to support a harvestable surplus is to maintain historical escapement levels, continue natural production, and provide viewing opportunities. Angler opportunity should be provided in those streams with a harvestable surplus. Escapement goals have not been set for these streams.

PINK SALMON FISHERIES

AREA-WIDE OVERVIEW

Area-wide Historical Catch, Harvest and Effort

Pink salmon return annually to AMA streams in July and August, although the largest runs occur in even-numbered years. The 10-year average (1996-2005) is 14,890 pink salmon caught with a harvest of 1,630 (Table 10, Figure 12). Pink salmon fisheries have the second highest annual catch (estimated coho salmon catch from 1996-2005 averages over 36,440 salmon) and share the distinction of most often released fish (88% of pink salmon and 90% of chum salmon were released from 1996-2005) in AMA fisheries (Table 5). Bird Creek supports the largest pink salmon sport fishery in the AMA with an average (1996-2005) 9,090 pink salmon caught and 1,000 harvested (Table 10). Other area streams with significant pink salmon harvests include Ship Creek and Twentymile River. Reported harvests from California, Fish, Glacier, Indian, Ingram, Peters creeks, and Eagle, Eklutna, and Placer rivers are included in "Other Freshwater" on Table 10. Rabbit and Sixmile creeks are closed to all salmon fishing and Campbell Creek is closed to pink salmon fishing.

BIRD CREEK PINK SALMON FISHERY

Fishery Description

Bird Creek flows into Turnagain Arm approximately 25 miles south of Anchorage and supports the primary AMA pink salmon sport fishery. Improvements in parking areas and access trails have increased Bird Creek's popularity as a fishing destination for both local and nonresident anglers. Pink salmon return to Bird Creek in July and early August each year. Historically, the number of returns during even-numbered years was significantly higher than the number of returns during odd-numbered years. These differences in relative abundance significantly influenced annual angler effort and pink salmon harvest levels in Bird Creek. Although the pink salmon stocks in Bird Creek are wild, beginning in 1992 ADF&G began releasing hatchery-reared coho salmon smolt making Bird Creek even more popular with most anglers. Bird Creek is open to sport fishing from department markers located approximately 500 yards upstream of the Seward Highway Bridge downstream to the mouth of the creek. The open area was expanded in 1993 by approximately 100 yards as a result of a pending land exchange between

ADNR, MOA, and private landowners. To date, this land exchange has not occurred. Bird Creek upstream of this reach is closed to all salmon fishing.

In those waters of Bird Creek open to fishing for salmon, the limits for salmon (other than Chinook salmon) 16 inches or longer is 3 per day, 3 in possession; all 3 may be coho salmon. The limit for salmon (other than Chinook salmon) under 16 inches is 10 per day, 10 in possession.

Stocking Program

Pink salmon have not been stocked in Bird Creek. A summary of the stocking program can be found in the following reports: Bartlett and Conrad 1988; Bartlett and Vincent-Lang 1989; Bartlett and Sonnichsen 1990; Bartlett and Bingham 1991, 1993; Bartlett 1992, 1994, 1996 a-b.

Historical Catch, Harvest and Effort

The ten year (1996-2005) average catch and harvest of pink salmon on Bird Creek is 9,090 caught and 1,000 harvested (Table 10). This is significantly lower than catches in the 1990s and 2000 when catch estimates ran as high as 20,060 pink salmon. Angler effort in Bird creek dropped from 13,660 angler-days in 2001 to 5, 540 in 2002 (Table 3). This decrease is likely due to the break in the coho stocking program while the new parking area and facilities were under construction indicating effort on Bird Creek is largely linked to the coho fishery.

Fishery Performance and Escapement in 2005 and 2006

The sport catch and harvest of pink salmon in Bird Creek in 2005 was 8,620 caught and 430 harvested which represented the highest fishery performance since 2000 (Table 10). The escapement count for 2005 was 450 pink salmon (Appendix B4). Although harvest estimates for 2006 are not yet available, observations during the pink salmon sport fishery suggest fishery performance was fair to good.

Fishery Management and Objectives

The Bird Creek pink salmon fishery is managed to allow angler opportunity on a harvestable surplus of salmon while assuring sustained yield.

OTHER PINK SALMON FISHERIES

Fishery Description

Most AMA streams support annual pink salmon runs but run size is often small and doesn't support a recreational harvest. Other area streams with reported pink salmon harvests include California, Campbell, Fish, Glacier, Indian, Ingram, Peters, and Ship creeks, and Eagle, Eklutna, Placer, and Twentymile rivers. Rabbit and Sixmile creeks are closed to all salmon fishing and Campbell Creek is closed to pink salmon fishing. Military personnel from Elmendorf have operated a weir on Sixmile Creek since 1988 (Appendix B6).

In those waters of the AMA open to fishing for salmon, the limits for salmon (other than Chinook salmon) 16 inches or longer is 3 per day, 3 in possession; only two of which may be coho salmon (see regulations for exceptions). The limit for salmon (other than Chinook salmon) under 16 inches is 10 per day, 10 in possession

Stocking Program

Pink salmon have not been stocked in to AMA streams. A summary of the stocking program can be found in the following reports: Bartlett and Conrad 1988; Bartlett and Vincent-Lang 1989; Bartlett and Sonnichsen 1990; Bartlett and Bingham 1991, 1993; Bartlett 1992, 1994, 1996 a-b.

Historical Catch, Harvest and Effort

Bird, Ship and Twentymile creeks provide the only pink salmon fishery of any significance in the AMA. Other pink salmon fisheries are included in “Other Freshwater” on Table 10. Fishery performance for all area pink salmon fisheries appears to have dropped after 2000 and has remained fairly steady for the last five years (Table 10, Figure 12).

Fishery Performance in 2005 and 2006

The sport catch and harvest of pink salmon in “Other Freshwater” Anchorage creeks in 2005 was 1,100 caught and less than 100 harvested which represented the poorest fishery performance since 1999 (Table 10). Although harvest estimates for 2006 are not yet available, observations during the pink salmon sport fishery suggest fishery performance was fair to good.

Fishery Management and Objectives

The AMA pink salmon fisheries are managed to allow angler opportunity on a harvestable surplus of salmon while assuring sustained yield.

OTHER FISHERIES

SOCKEYE SALMON

The primary AMA streams that support sockeye salmon runs are Sixmile Creek and Twentymile River. The most significant fisheries are reported in “Other Freshwater” streams (likely Portage Valley streams) and from saltwater. Other AMA streams that support sockeye salmon runs include Ship, Campbell, and Portage Valley streams. The 2005 AMA estimated sockeye salmon sport catch was 1,000 fish of which 550 were harvested (Table 11, Figure 13). The previous 5-year average (2000-2004) is 1,390 sockeye salmon caught and 600 harvested.

In Campbell Creek, most sockeye salmon spawn in North Fork and are thought to utilize beaver ponds for rearing. Campbell Creek has no natural lake system accessible to salmon, only the man-made lake near the creek mouth. Foot survey counts are used to estimate Campbell Creek sockeye salmon escapement. The average escapement from 1997 to 2006 is 700 fish. The 2002-2003 escapements had historic high escapement levels of sockeye in the North Fork of Campbell Creek (Appendix B3). Campbell Lake was drained in the winter of 2006-2007 to winterkill aquatic vegetation along the shoreline. Since it is unknown to what degree sockeye salmon utilize the lake for overwinter rearing, escapements will need to be closely monitored. Campbell Creek is closed to sockeye salmon sport fishing.

Elmendorf Air Force Base personnel have operated a weir in Sixmile Creek since 1988 (Appendix B6). In 1998, this weir was moved upstream near the lake outlet. Annual counts of returning sockeye salmon from 1996-2007 have averaged 2,080 fish. While Sixmile Creek is presently closed to sport fishing, fishing is allowed in the intertidal area below the high tide mark near the creek mouth and in Sixmile and Upper Sixmile lakes. The intertidal site, marked with a steel cable across the stream and department markers, is growing in popularity and contributes most of the area saltwater harvest. This fishery is likely even larger as some of the sockeye

salmon reported in “saltwater fisheries” are probably harvested at the mouth of Sixmile Creek (Table 11).

Carmen Lake and its inlet tributaries are the primary sockeye salmon spawning areas in the Twentymile River drainage, mainstem spawning has been documented (Stratton et al. 1994). Sockeye salmon returning to Placer River spawn in Luebner Lake. Sockeye returning to Portage Creek primarily spawn in the artificially created channel in Williwaw Creek where a viewing platform and information kiosk were installed and are maintained by USFS.

In those freshwaters of the AMA open to fishing for salmon, the limits for salmon (other than Chinook salmon) 16 inches or longer is 3 per day, 3 in possession; only two of which may be coho salmon (see regulations for exceptions). The limit for salmon (other than Chinook salmon) under 16 inches is 10 per day, 10 in possession. In saltwater, the limits for salmon, (other than Chinook salmon) are 6 per day, 6 in possession. Only 3 per day, 3 in possession may be coho salmon.

CHUM SALMON

Chum salmon do not return in significant numbers to AMA streams. Anglers targeting pink and coho salmon harvest most of the chum salmon. The 2005 AMA estimated chum salmon sport catch was 2,380 fish of which 230 were harvested (Table 12, Figure 14). The majority of the catch (1,550) and harvest (120) were from Bird Creek. Chum salmon are also harvested in California, Fish, Glacier, Indian, Peters, and Ship creeks, and Eagle, Eklutna, Placer, and Twentymile rivers. While chum salmon harvests remain relatively low, catches hit a peak of 6,540 in 2002 and have tapered back off since then. Chum salmon are counted during Chinook salmon escapement surveys although no directed chum salmon counts are conducted by department staff (Appendices B1-B4, B6-B7). ADF&G does not currently monitor chum salmon escapements.

In those freshwaters of the AMA open to fishing for salmon, the limits for salmon (other than Chinook salmon) 16 inches or longer is 3 per day, 3 in possession; only two of which may be coho salmon (see regulations for exceptions). The limit for salmon (other than Chinook salmon) under 16 inches is 10 per day, 10 in possession. In saltwater, the limits for salmon, (other than Chinook salmon) are 6 per day, 6 in possession. Only 3 per day, 3 in possession may be coho salmon.

STEELHEAD TROUT

Although steelhead trout are not indigenous to the AMA, there has been public interest in developing a steelhead run in one or more area streams. In 1956, 50,000 eyed steelhead trout eggs from Kodiak were placed in egg trays and planted in Campbell Creek. There was no reported harvest from this release. In 1985 and 1986, steelhead smolt of Anchor River origin, hatched and reared at Elmendorf Hatchery, were stocked in Campbell Creek in an effort to establish an AMA steelhead trout run (Appendix C6). A weir was operated at the Campbell Lake outlet in 1986 and 1987 during August and September. No steelhead trout were observed in 1986 and only three steelhead trout were captured during 1987. The stocking program was discontinued in 1987 due to the poor return.

RAINBOW TROUT

Two AMA streams, Campbell and Chester creeks, are stocked with sterile (3N) rainbow trout. Rainbow trout were first stocked in Campbell Creek in 1983 and are released annually between

Lake Otis Parkway and the confluence of North and South Forks. Stocking of Chester Creek began in 1971. Stocking details for 1987-2006 can be found in Appendix C5.

At the fall 1986 meetings, BOF created a trophy rainbow trout area in the upper reaches of Campbell Creek (Appendix A3). Both the North and South Forks were restricted to single hook, artificial lure fishing only, and the retention of rainbow trout was prohibited. The North and South Forks of Campbell Creek are currently managed as trophy areas for rainbow trout and reports of 24-inch rainbow trout caught above the Campbell Airstrip Road have been recorded. Limits for rainbow trout in stocked waters (Figure 7) of the AMA are 5 per day, 5 in possession, only 1 fish 20 inches or more in length. In other waters open to rainbow trout sport fishing limits are 2 per day, 2 in possession, only 1 of which may be 20 inches or more in length. Rainbow trout 20 inches or more in length must be immediately recorded on the back of the sport fishing license, and the Cook Inlet seasonal limit for rainbow trout 20 inches or more in length is 2.

For 2005, SWHS estimates a catch of 55,870 rainbow trout from AMA streams and lakes (Table 13, Figure 15) and a harvest of 13,880 fish. Nearly all of this catch (52,070) and harvest (13,310) were taken from area lakes. The most productive area streams for rainbow trout are Ship and Campbell creeks. Rainbow trout harvests from Campbell Creek (1996-2005) averaged a catch of 4,140 rainbow trout and a harvest of 320 fish. Those catch estimates are driven by an exceedingly high catch estimate of nearly 15,000 in 2001 (Table 13). Ship Creek estimates for that same ten-year period (1996-2005) are 860 rainbow trout caught and 30 harvested.

Although Ship Creek is not stocked with rainbow trout, it is assumed that the rainbow trout found in this reach are hatchery escapees. The number of fish in this naturalized population is unknown but assumed to be small. These rainbow trout likely spend most of the year in closed waters, either in the hatchery settling pond or upstream of Reeve Boulevard. These rainbow trout move out of the pond into Ship Creek in late February to spawn. By late-April, they migrate back into closed waters. Conditions in this area are optimal for rainbow trout and fish over 30 inches in length have been observed.

ARCTIC CHAR/DOLLY VARDEN

Several area streams and lakes support small populations of resident Dolly Varden. The 2005 estimated catch was 9,980 of which 1,360 were harvested (Table 14, Figure 16). This level of catch and harvest is within the range from the previous 10 years (1996-2005). On average, Campbell Creek has supported the largest catch estimates for the 10-year period (1996-2005) with 3,840 Dolly Varden caught and 210 harvested. Dolly Varden have been reported in Bird, Campbell, Ingram, and Ship creeks, and Placer and Twentymile rivers.

Beginning in 2002 ADF&G began stocking Arctic char into seven area lakes (Appendix C1). While these char were active in cold water temperatures and added to the stocked lakes program, they did not do well in warmer waters and high mortalities were reported in shallow area lakes in the summer of 2003. In response, ADF&G evaluated the stocking program and currently stocks hatchery reared char in to two area lakes- Sand Lake and Campbell Point Lake.

ADF&G Daily bag and possession limits for Arctic Char/Dolly Varden in stocked waters is 5 per day, 5 in possession. In all other waters the limit is 5 per day, 5 in possession, only 1 may be 12 inches or longer.

ARCTIC GRAYLING

Arctic grayling are not known to naturally occur in the AMA, however, grayling are occasionally reported harvested in Eagle River and a few other non-stocked waters. Catch is typically relatively small with a record catch of 4,620 Arctic grayling was estimated in 2002 of which 750 were harvested (Table 15, Figure 17). That represents the highest catch of grayling reported in the AMA and the highest harvest since 1988. The vast majority of these grayling were from stocked lakes (Appendix C4). The 2005 catch estimate is 630 grayling caught and 170 harvested. Limits for Arctic grayling in the AMA are 2 per day, 2 in possession in flowing waters; and 5 per day, 5 in possession in stocked lakes.

NORTHERN PIKE

Northern pike do not occur naturally in AMA waters but have been illegally introduced into AMA lakes. Department staff began getting reports of pike and sampled two canals in Sand Lake with gillnets and spears in May 1996 and 1997. In addition to Sand Lake, pike have been confirmed in Cheney Lake, Campbell Creek, Otter Lake, Sand Lake, Taku-Campbell Lake, and Lower Fire Lake. The presence of pike in area lakes has affected stocking programs as numbers of rainbow and grayling released into “pike lakes” have been greatly reduced or eliminated. If the department is unable to curb the spread of pike to other Anchorage waters, it will result in further reductions to the stocking program and a loss of opportunity for local anglers.

In response to the pike problem and broader statewide issues with other invasive species, ADF&G has developed an Invasive Species Policy. This document is available through ADF&G offices or online at <http://www.adfg.state.ak.us/special/invasive/invasive.php> and outlines department policy on strategies that will be used to combat invasive species. In addition to reducing or eliminating stocking programs in affected Anchorage lakes, in 2003 area staff revived the spring netting and trapping project to target adult pike as they move into the shallows to spawn. ADF&G staff have netted Lower Fire, Cheney and Sand Lakes; and natural resources staff at EAFB have been netting pike in Otter Lake with plans to net Gwen, Clunie, Thompson and Walden lakes. Informing the public on the effects of illegally stocking pike and encouraging harvest in area lakes has been the department’s most effective tool. Estimated pike catch and harvest by recreational anglers peaked in 2000 with a harvest of 1,270 pike and declined to a harvest of 610 pike in 2005 (Table 16, Figure 18). ADF&G is coordinating with the Municipality of Anchorage to lower the water level in Cheney Lake the winter of 2007-08. A drain in the bottom of the lake should allow the water level to be lowered to about 3-4 feet. At that level, ice should freeze the remaining lake solid and winterkill any fish (which sampling indicates is almost entirely pike). The lake will be netted in the spring as the ice goes out and will refill naturally. If successful, ADF&H can stock rainbow trout in Cheney Lake in the spring of 2008. Media coverage, presentations by staff to sportsman’s groups and shows, a pike video describing pike fishing techniques (archery, spear, ice-fishing, etc.), and a series of Public Service Announcements have all helped educate and inform the public on the invasive pike problem in the AMA and how they can help. There are no daily bag, possession, or size limits on AMA northern pike.

EULACHON

Turnagain Arm supports a large eulachon (hooligan or candlefish) personal use dip net fishery. By regulation, this fishery is limited to Alaska residents only, and a valid sport fishing license must be in possession. Dipnetting is allowed in salt water from January 1 through May 31, and

in fresh water from January 1 through June 15. The primary fishing sites are in Twentymile River and from rocky beaches along the north side of Turnagain Arm. The fishery occurs from mid-May through June 15. Eulachon have also been reported harvested in Bird Creek, Placer River, and Portage Valley streams. Experienced dippers maintain that a 25-foot tide as measured in Anchorage is the minimum required to bring water, and eulachon, into the east end of Turnagain Arm. The extreme tides and muddy substrate in Turnagain Arm limit the number of sites available to anglers. The reported 2005 harvest was only 8,890 eulachon (Table 17, Figure 19), all of which were reported taken out of Turnagain Arm (most likely at the mouth of Twentymile River). The 2005 harvest was the lowest estimated by the SWHS and was significantly below the previous ten year (1995-2004) harvest of 34,460.

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TABLES AND FIGURES

Table 1.-Number of angler-days expended in the Anchorage Management Area compared to Southcentral and statewide, 1986-2005.

Year	Statewide	Southcentral	Anchorage		
	Effort	Effort	Effort	% of Statewide	% of Southcentral
1986	2,071,412	1,518,712	103,672	5%	7%
1987	2,152,886	1,556,050	115,652	5%	7%
1988	2,311,291	1,679,939	115,999	5%	7%
1989	2,264,079	1,583,547	108,593	5%	7%
1990	2,453,284	1,745,110	126,722	5%	7%
1991	2,456,328	1,782,055	118,517	5%	7%
1992	2,540,374	1,889,930	142,830	6%	8%
1993	2,559,408	1,867,233	144,823	6%	8%
1994	2,719,911	1,966,985	142,277	5%	7%
1995	2,787,670	1,985,539	176,401	6%	9%
1996	2,006,528	1,434,943	126,325	6%	9%
1997	2,079,514	1,400,983	139,549	7%	10%
1998	1,856,976	1,258,782	125,513	7%	10%
1999	2,499,152	1,659,966	146,789	6%	9%
2000	2,627,805	1,844,824	167,499	6%	9%
2001	2,261,941	1,560,562	135,359	6%	9%
2002	2,259,091	1,569,513	111,694	5%	7%
2003	2,219,398	1,535,501	104,004	5%	7%
2004	2,473,961	1,709,671	101,943	4%	6%
2005	2,463,929	1,712,610	98,371	4%	6%

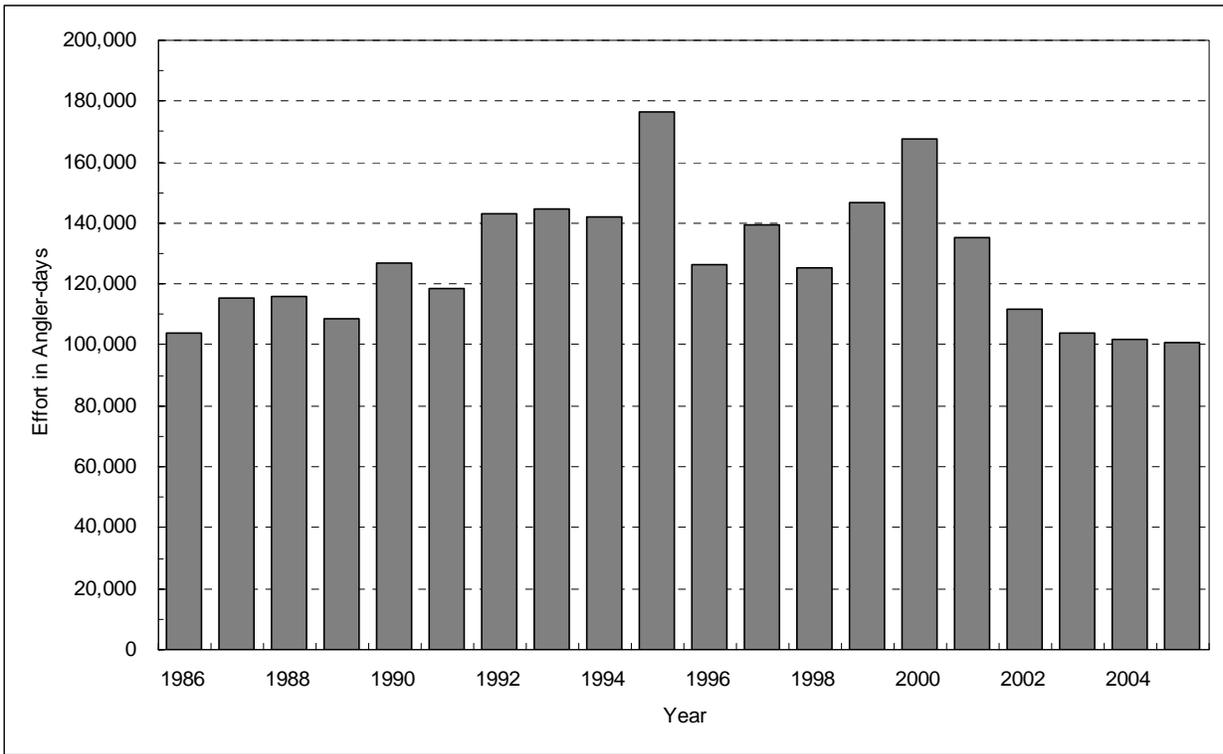


Figure 2.-Angler effort in Anchorage Management Area fisheries, 1986-2005.

Table 2.-Components of Anchorage Management Area sport fishing effort, 1986-2005.

Year	Saltwater		Lake		Stream		Anchorage Total Effort
	Effort	Percent	Effort	Percent	Effort	Percent	
1986	1,721	2%	70,517	68%	31,434	30%	103,672
1987	1,587	1%	84,444	73%	29,621	26%	115,652
1988	1,190	1%	75,314	65%	39,495	34%	115,999
1989	1,163	1%	74,118	68%	33,312	31%	108,593
1990	2,186	2%	85,715	68%	38,821	31%	126,722
1991	2,828	2%	66,596	56%	49,093	41%	118,517
1992	3,271	2%	71,194	50%	68,365	48%	142,830
1993	5,413	4%	64,997	45%	74,413	51%	144,823
1994	3,602	3%	65,115	46%	73,560	52%	142,277
1995	4,726	3%	79,198	45%	92,477	52%	176,401
1996	870	1%	54,699	43%	70,756	56%	126,325
1997	1,449	1%	64,331	46%	73,769	53%	139,549
1998	2,921	2%	43,905	35%	78,687	63%	125,513
1999	2,916	2%	66,312	45%	77,561	53%	146,789
2000	2,197	1%	69,607	42%	95,695	57%	167,499
2001	2,277	2%	47,384	35%	85,698	63%	135,359
2002	3,493	3%	40,201	36%	68,000	61%	111,694
2003	3,243	3%	40,552	39%	60,209	58%	104,004
2004	1,251	1%	47,539	47%	53,153	52%	101,943
2005	2,670	3%	36,833	36%	61,538	61%	101,041

Table 3.-Angler effort in Anchorage Management Area streams, 1986-2005.

Year	Ship Creek		Bird Creek		Campbell Creek		Twentymile R.		Eagle River		Other		Total Stream Effort
	Effort	Percent	Effort	Percent	Effort	Percent	Effort	Percent	Effort	Percent	Effort	Percent	
1986	4,618	15%	12,507	40%	2,217	7%	6,452	21%	2,645	8%	2,475	8%	31,434
1987	11,989	40%	5,614	19%	1,485	5%	5,505	19%	1,684	6%	2,837	10%	29,621
1988	14,115	36%	9,532	24%	4,729	12%	4,820	12%	1,273	3%	3,850	10%	39,495
1989	16,424	49%	5,844	18%	1,942	6%	4,043	12%	2,017	6%	2,062	6%	33,312
1990	15,112	39%	9,138	24%	3,983	10%	4,537	12%	2,002	5%	3,176	8%	38,821
1991	29,768	61%	7,551	15%	1,977	4%	4,178	9%	1,106	2%	3,776	8%	49,093
1992	40,513	59%	11,352	17%	1,515	2%	4,257	6%	4,908	7%	4,561	7%	68,365
1993	40,815	55%	12,852	17%	9,073	12%	3,480	5%	3,396	5%	3,466	5%	74,413
1994	40,727	55%	12,357	17%	8,036	11%	4,772	6%	2,937	4%	4,731	6%	73,560
1995	51,087	55%	15,947	17%	10,457	11%	4,758	5%	4,922	5%	5,306	6%	92,477
1996	42,454	60%	12,003	17%	5,225	7%	3,823	5%	3,499	5%	3,752	5%	70,756
1997	47,826	65%	12,136	16%	5,897	8%	3,170	4%	2,059	3%	2,681	4%	73,769
1998	44,670	57%	20,797	26%	4,834	6%	2,805	4%	1,023	1%	4,558	6%	78,687
1999	52,294	67%	13,033	17%	4,446	6%	3,370	4%	2,096	3%	2,322	3%	77,561
2000	62,101	65%	17,550	18%	3,918	4%	3,620	4%	1,998	2%	6,508	7%	95,695
2001	56,402	66%	13,662	16%	6,222	7%	4,161	5%	1,214	1%	3,506	4%	85,698
2002	46,955	69%	5,540	8%	4,561	7%	2,869	4%	1,538	2%	6,537	10%	68,000
2003	40,380	67%	3,691	6%	4,937	8%	3,418	6%	1,382	2%	6,401	11%	60,209
2004	35,524	67%	2,239	4%	5,674	11%	3,826	7%	1,289	2%	4,601	9%	53,153
2005	39,610	64%	8,365	14%	6,933	11%	2,554	4%	1,130	2%	2,946	5%	61,538
1996-2005													
Avg.	46,822	64%	10,902	15%	5,265	8%	3,362	5%	1,723	3%	4,381	6%	72,507

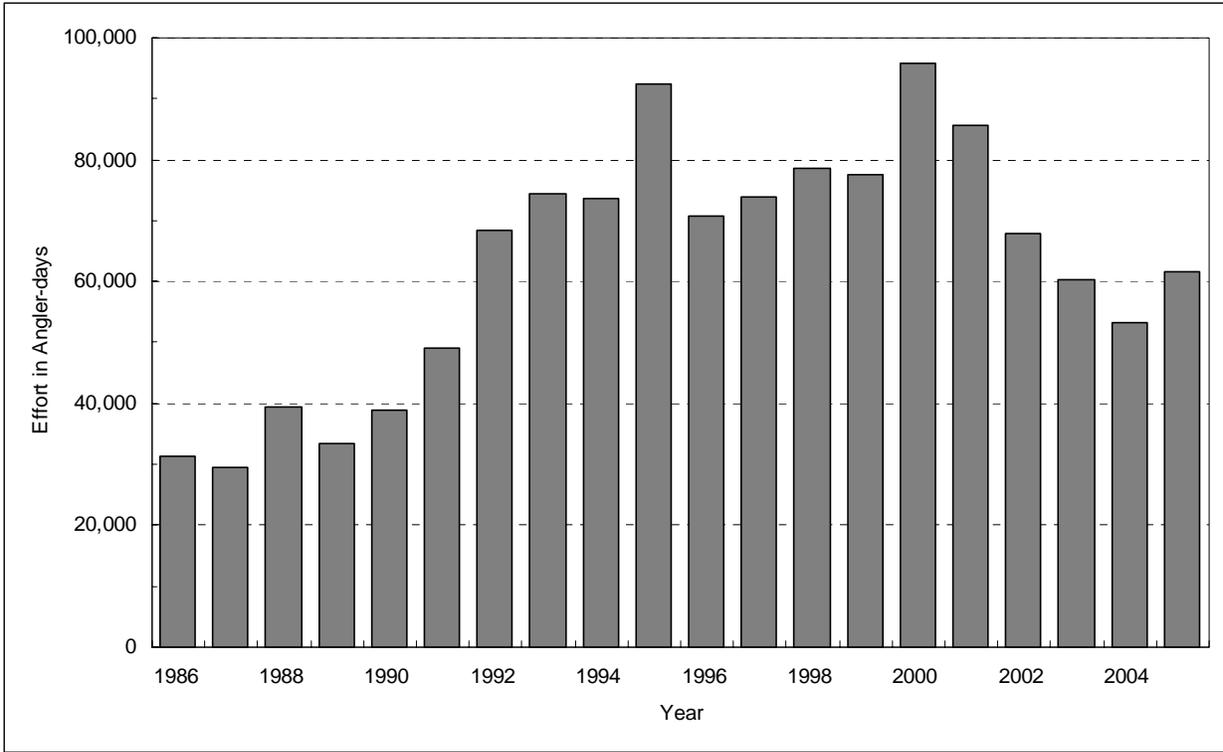


Figure 3.-Angler effort in Anchorage Management Area streams, 1986-2005.

Table 4.-Angler effort in Anchorage Management Area lakes, 1986-2005.

Year	Otter Lake		Jewel Lake		Sixmile Lake		Cheney Lake		Clunie Lake		Mirror Lake		Other Lakes		Lakes
	Effort	%	Effort	%	Effort	%	Effort	%	Effort	%	Effort	%	Effort	%	Total Effort
1986	9,036	13%	4,587	7%	12,278	17%	1,468	2%	5,076	7%	2,920	4%	35,152	50%	70,517
1987	13,275	16%	4,908	6%	12,677	15%	5,089	6%	6,574	8%	5,505	7%	36,416	43%	84,444
1988	5,402	7%	7,785	10%	8,822	12%	6,676	9%	7,185	10%	4,002	5%	35,442	47%	75,314
1989	7,570	10%	9,099	12%	5,046	7%	7,523	10%	5,384	7%	3,255	4%	36,241	49%	74,118
1990	9,542	11%	10,235	12%	6,539	8%	6,326	7%	6,592	8%	5,740	7%	40,741	48%	85,715
1991	8,076	12%	7,294	11%	4,446	7%	4,189	6%	4,379	7%	4,993	7%	33,219	50%	66,596
1992	6,423	9%	8,290	12%	6,765	10%	6,594	9%	4,108	6%	5,249	7%	33,765	47%	71,194
1993	7,619	12%	7,412	11%	5,295	8%	5,013	8%	4,980	8%	4,007	6%	30,671	47%	64,997
1994	9,365	14%	5,339	8%	5,675	9%	7,032	11%	5,169	8%	5,294	8%	27,241	42%	65,115
1995	7,993	10%	8,222	10%	4,114	5%	6,225	8%	6,585	8%	6,346	8%	39,713	50%	79,198
1996	7,035	13%	4,343	8%	3,923	7%	4,789	9%	4,465	8%	4,292	8%	25,852	47%	54,699
1997	6,265	10%	6,283	10%	4,659	7%	5,280	8%	4,636	7%	4,378	7%	32,830	51%	64,331
1998	4,005	9%	5,373	12%	2,867	7%	2,703	6%	2,921	7%	3,874	9%	22,162	50%	43,905
1999	4,090	6%	7,814	12%	5,928	9%	3,933	6%	4,843	7%	3,843	6%	35,861	54%	66,312
2000	5,048	7%	6,173	9%	5,101	7%	3,935	6%	5,850	8%	4,052	6%	39,448	57%	69,607
2001	3,293	7%	5,755	12%	3,248	7%	1,630	3%	4,550	10%	6,989	15%	21,919	46%	47,384
2002	2,577	6%	6,632	16%	1,072	3%	1,616	4%	1,130	3%	5,384	13%	21,790	54%	40,201
2003	3,670	9%	5,531	14%	1,683	4%	1,104	3%	2,268	6%	2,987	7%	23,309	57%	40,552
2004	2,983	6%	7,956	17%	1,323	3%	317	1%	6,289	13%	4,103	9%	24,568	52%	47,539
2005	1,510	4%	6,321	17%	1,979	5%	915	2%	2,037	6%	3,927	11%	20,144	55%	36,833
1996-2005															
Avg.	4,048	8%	6,218	13%	3,178	6%	2,622	5%	3,899	7%	4,383	9%	26,788	52%	51,136

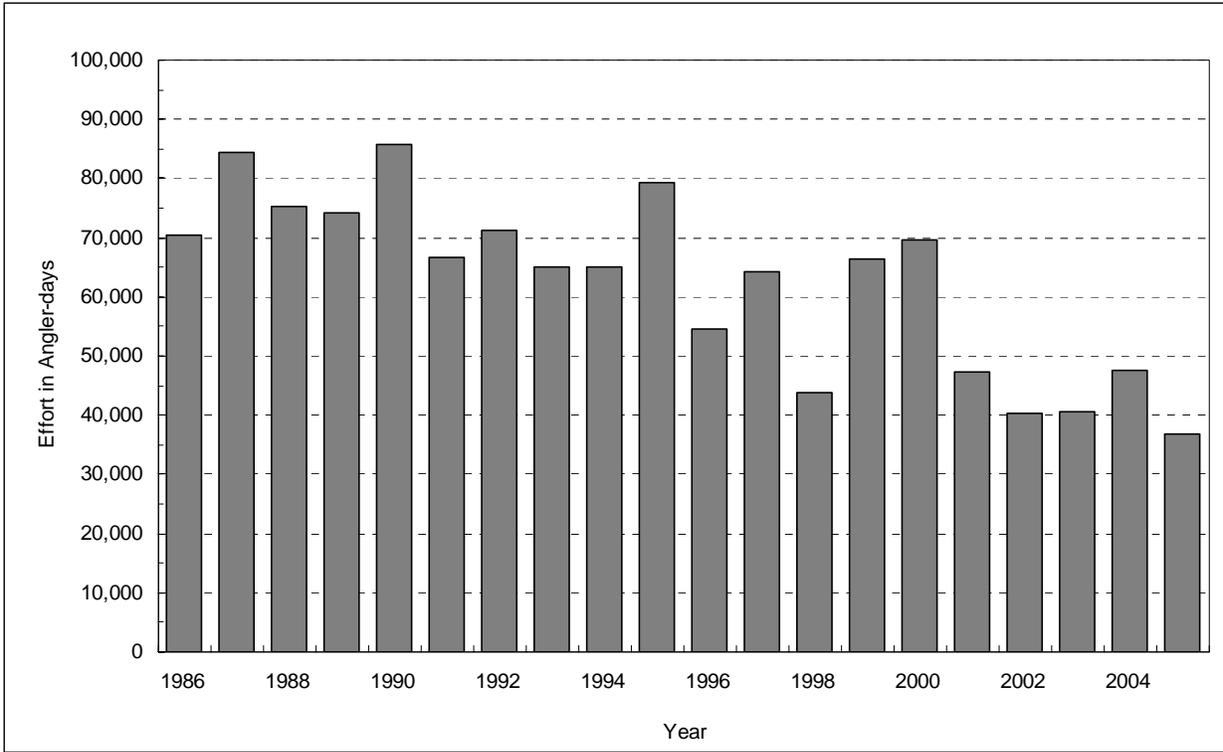


Figure 4.-Angler effort in Anchorage Management Area lakes, 1986-2005.

Table 5.-Anchorage Management Area sport catch (1990-2005) and sport harvest (1986-2005) of anadromous salmon.

Year	Chinook			Sockeye			Coho			Pink			Chum			Total	
	Catch	Harvest	% Release	Catch	Harvest	% Release	Catch	Harvest	% Release	Catch	Harvest	% Release	Catch	Harvest	% Release	Catch	Harvest
1986		33			609			3,458			11,664			960			16,724
1987		485			1,507			3,096			2,282			579			7,949
1988		663			472			6,730			5,330			691			13,886
1989		950			564			4,940			1,631			1,015			9,100
1990	1,192	457	62%	624	254	59%	3,967	2,488	37%	13,362	4,932	63%	1,530	315	79%	20,675	8,446
1991	1,996	1,169	41%	933	749	20%	5,926	4,393	26%	5,623	1,986	65%	1,281	360	72%	15,759	8,657
1992	4,308	2,448	43%	3,395	1,315	61%	9,665	5,698	41%	27,287	8,901	67%	1,664	297	82%	46,319	18,659
1993	7,824	3,041	61%	6,052	3,085	49%	23,462	16,387	30%	11,124	2,767	75%	1,359	383	72%	49,821	25,663
1994	5,504	2,708	51%	4,276	1,594	63%	22,542	13,948	38%	8,480	1,979	77%	1,546	174	89%	42,348	20,403
1995	7,869	4,054	48%	1,524	381	75%	22,323	13,267	41%	18,802	3,099	84%	2,989	439	85%	53,507	21,240
1996	11,187	4,456	60%	2,349	884	62%	27,726	17,795	36%	19,189	2,862	85%	4,522	607	87%	64,973	26,604
1997	9,799	4,616	53%	2,445	1,023	58%	30,192	20,578	32%	5,120	843	84%	1,588	248	84%	49,144	27,308
1998	6,022	2,156	64%	2,100	1,271	39%	64,522	42,219	35%	28,138	3,205	89%	5,154	513	90%	105,936	49,364
1999	15,118	5,462	64%	1,507	542	64%	17,834	12,266	31%	5,462	721	87%	2,304	129	94%	42,225	19,120
2000	11,848	4,752	60%	1,182	537	55%	46,888	28,191	40%	38,236	3,123	92%	3,936	340	91%	102,090	36,943
2001	11,843	4,452	62%	2,292	894	61%	63,865	40,693	36%	12,988	783	94%	4,631	470	90%	95,619	47,292
2002	7,070	2,421	66%	694	330	52%	41,219	26,260	36%	11,651	1,168	90%	6,540	472	93%	67,174	30,651
2003	9,480	3,678	61%	1,791	943	47%	20,762	13,375	36%	9,461	1,600	83%	4,121	313	92%	45,615	19,909
2004	7,713	3,160	59%	1,012	286	72%	25,474	13,447	47%	7,897	1,272	84%	2,185	306	86%	44,281	18,471
2005	9,202	4,329	53%	997	551	45%	25,937	15,063	42%	10,739	677	94%	2,376	234	90%	49,251	20,854
1996-2005 Avg.	9,928	3,948	60%	1,637	726	56%	36,442	22,989	37%	14,888	1,625	88%	3,736	363	90%	66,631	29,652

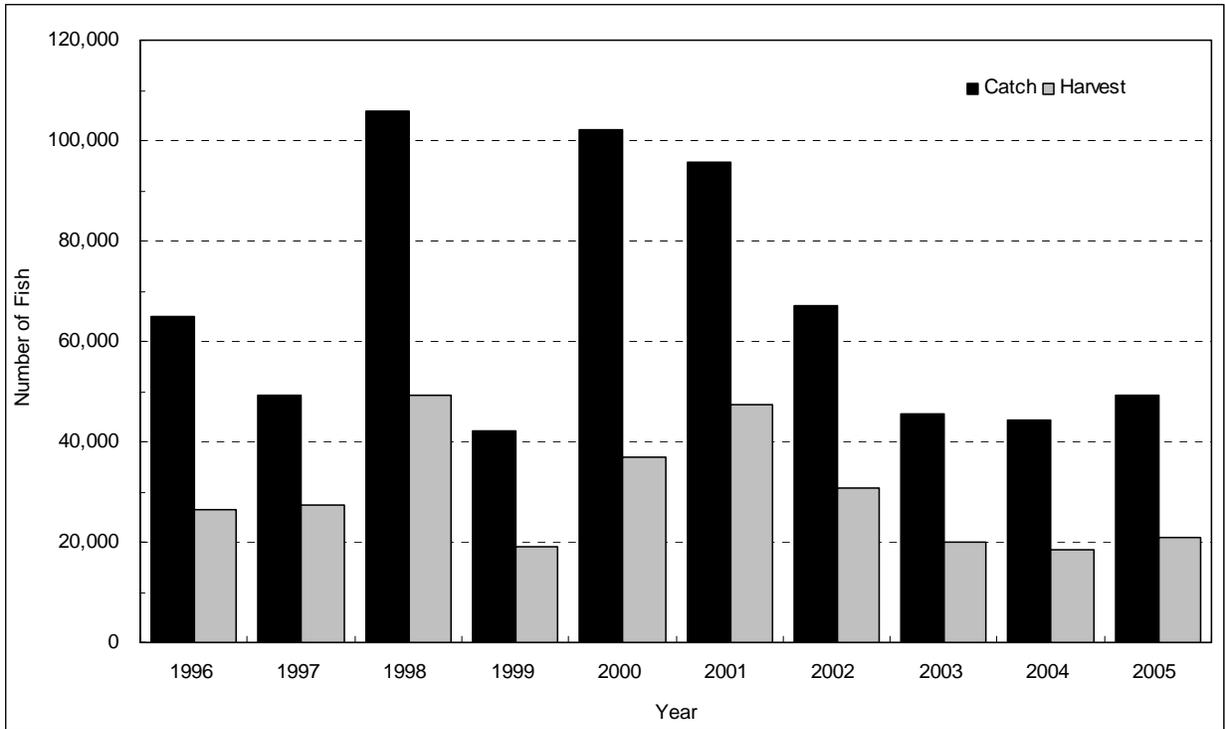


Figure 5.-Anchorage Management Area sport catch and harvest of anadromous salmon, 1996-2005.

Table 6.-Anchorage Management Area sport catch (1990-2005) and harvest (1986-2005) of freshwater species, and 1986-2005 personal use eulachon harvest.

Year	Landlocked Salmon			Dolly Varden/Arctic Char			Rainbow Trout			Arctic Grayling			Northern Pike			Lake Trout			Eulachon
	Catch	Harv. ^a	% Rel. ^b	Catch	Harv. ^a	% Rel. ^a	Catch	Harv. ^a	% Rel. ^a	Catch	Harv. ^a	% Rel. ^a	Catch	Harv. ^a	% Rel. ^a	Catch	Harv. ^a	% Rel. ^a	Harv. ^a
1986		749			2,563			39,864			168								123,954
1987		2,263			2,101			35,259			18								131,584
1988		4,364			3,745			59,864			1,001								139,508
1989		14,483			2,705			53,197			66								103,881
1990	27,767	6,775	76%	9,246	2,257	76%	169,250	58,435	65%	1,449	576	60%							133,027
1991	15,578	10,817	31%	5,127	2,558	50%	122,646	49,303	60%	1,550	238	85%							69,257
1992	28,990	13,985	52%	7,048	3,351	52%	109,208	33,317	69%	3,554	413	88%							42,964
1993	36,072	17,489	52%	7,661	1,793	77%	107,465	29,112	73%	1,362	233	83%							29,865
1994	28,648	13,280	54%	8,729	2,500	71%	100,373	23,631	76%	2,283	634	72%							49,279
1995	17,554	6,034	66%	6,652	1,633	75%	126,866	32,874	74%	573	89	84%							34,058
1996	32,682	13,280	59%	7,703	1,994	74%	139,058	36,148	74%	2,214	293	87%	893	183	80%				21,212
1997	21,490	8,913	59%	5,886	1,590	73%	171,325	37,245	78%	4,555	68	99%	433	220	49%				39,071
1998	25,313	12,601	50%	9,397	1,895	80%	93,443	19,761	79%	1,582	59	96%	551	337	39%				33,637
1999	17,372	7,854	55%	4,799	2,047	57%	163,010	28,776	82%	1,467	158	89%	726	243	67%	5,226	921	82%	44,597
2000	36,723	6,952	81%	14,687	1,416	90%	161,811	35,587	78%	122	10	92%	1,685	1,274	24%	1,335	198	85%	13,488
2001	25,157	9,638	62%	17,258	901	95%	109,620	21,311	81%	510	62	88%	4,848	1,166	76%	650	173	73%	35,909
2002	17,915	6,093	66%	6,786	1,402	79%	91,744	22,478	75%	4,623	747	84%	2,151	1,190	45%	199	199	0%	57,079
2003	9,952	3,460	65%	10,804	2,085	81%	62,219	18,522	70%	2,332	221	91%	2,363	1,078	54%	1,797	779	57%	35,841
2004	16,790	8,468	50%	11,585	4,252	63%	81,121	23,276	71%	363	90	75%	1,473	663	55%	593	0	100%	9,987
2005	16,900	4,850	71%	9,977	1,358	86%	55,868	13,876	75%	630	166	74%	1,413	611	57%	688	64	91%	8,885
1996-2005 Avg.	22,029	8,211	62%	9,888	1,894	78%	112,922	25,698	76%	1,840	187	87%	1,654	697	55%	1,498	333	70%	29,971

^a Harvest.

^b Release.

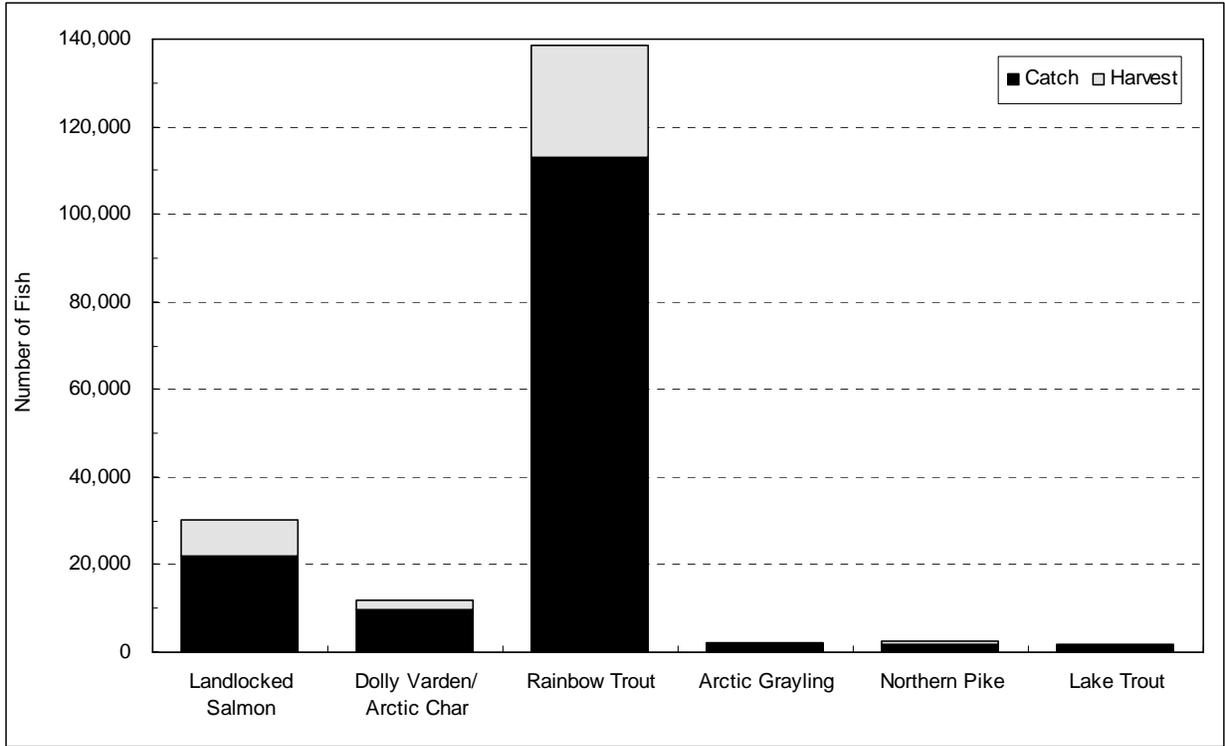


Figure 6.-Anchorage area sport catch and harvest of freshwater species, 1996-2005 average.

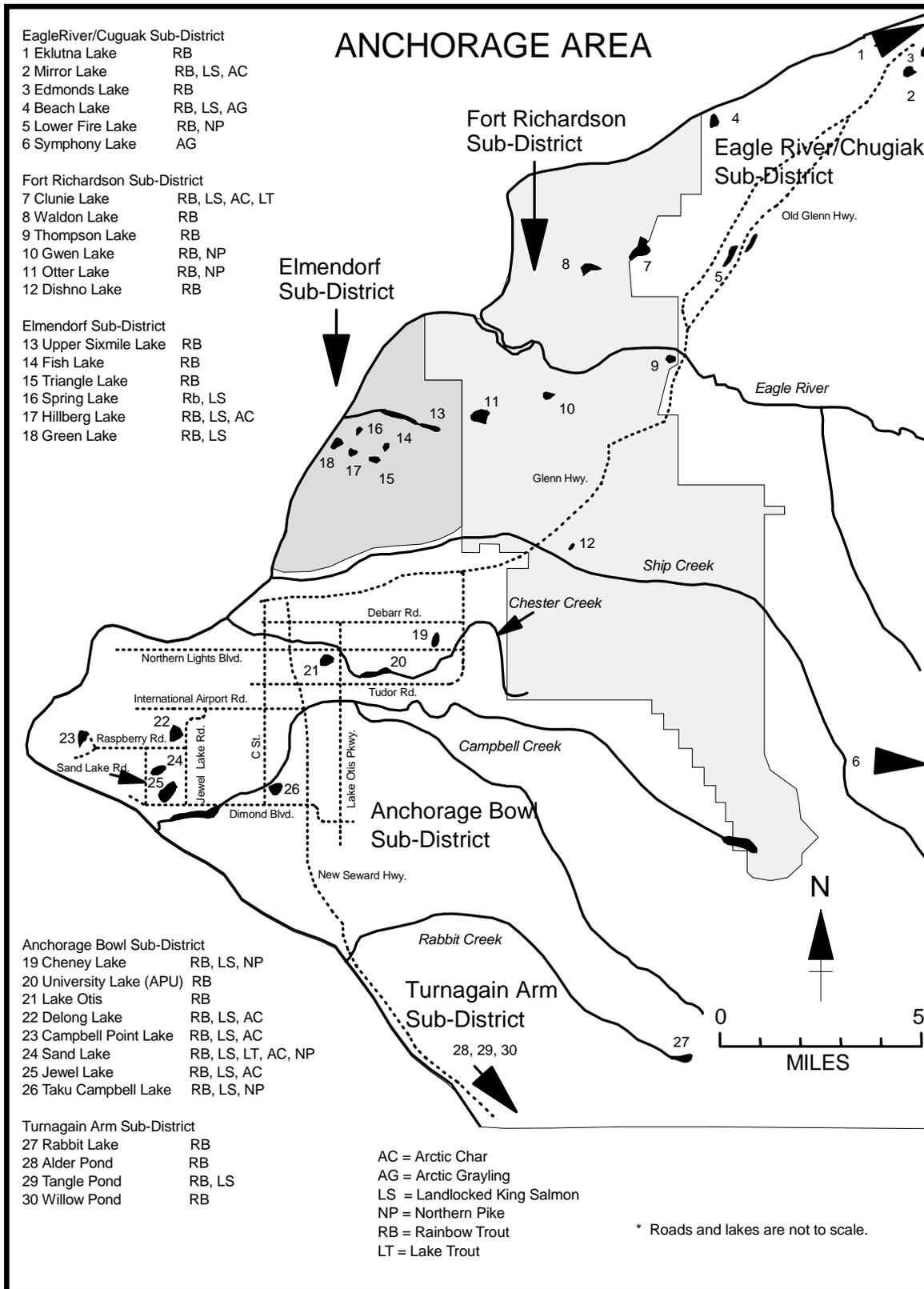


Figure 7.-Map of stocked lakes in the Anchorage Management Area.

Table 7.-Anchorage Management Area sport catch (1990-2005) and harvest (1986-2005) from lakes by species.

Year	Rainbow Trout		Landlocked Salmon		Arctic Grayling		Arctic Char		Northern Pike		Lake Trout		Lake Total	
	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest
1986		37,339		749		0		168						38,256
1987		34,549		2,263		0		36						36,848
1988		57,372		4,364		819		108						62,663
1989		52,071		14,483		66		731						67,351
1990	160,005	56,277	27,767	6,775	889	527	2,291	643					190,952	64,222
1991	119,668	48,818	15,578	10,817	1,480	188	1,596	798					138,322	60,621
1992	107,324	32,708	28,990	13,985	3,554	413	2,345	1,615					142,213	48,721
1993	103,477	28,621	36,072	17,489	1,362	233	1,974	867					142,885	47,210
1994	96,657	23,108	28,648	13,280	2,224	585	1,499	933					129,028	37,906
1995	123,142	31,922	17,554	6,034	511	62	1,754	761					142,961	38,779
1996	134,690	34,986	32,682	13,280	2,103	182	2,698	1,010	893	183			173,066	49,641
1997	167,746	36,625	21,490	8,913	4,555	68	1,736	559	433	220			195,960	46,385
1998	84,886	18,975	25,313	12,601	1,077	59	2,961	988	551	337			114,788	32,960
1999	158,680	27,874	17,372	7,854	1,351	158	1,362	1,092	726	243	5,226	921	184,717	38,142
2000	153,431	35,203	36,723	6,952	122	10	4,949	604	1,685	1,274	1,290	198	198,200	44,241
2001	91,521	20,610	25,157	9,638	412	43	947	290	4,822	1,140	650	173	123,509	31,894
2002	86,742	21,999	18,352	6,093	4,463	747	2,135	355	2,151	1,190	199	199	114,042	30,583
2003	53,203	17,782	9,614	3,206	2,192	221	2,851	1,205	2,351	1,066	1,797	779	72,008	24,259
2004	77,479	22,998	16,790	8,468	363	90	5,391	3,476	1,473	663	593	0	102,089	35,695
2005	55,868	13,876	16,900	4,850	630	166	9,977	1,358	1,413	611	688	64	85,476	20,925
1996-2005														
Avg.	106,425	25,093	22,039	8,186	1,727	174	3,501	1,094	1,650	693	1,492	333	136,386	35,473

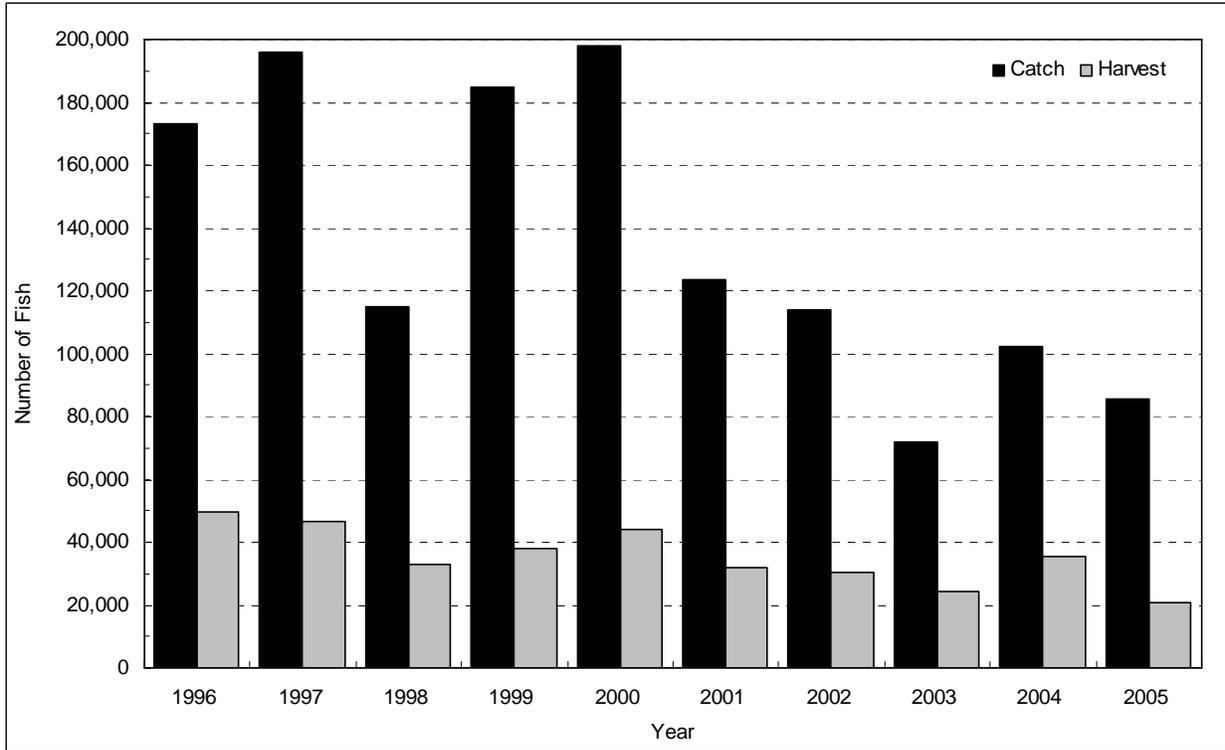


Figure 8.-Anchorage Management Area sport catch and harvest (1996-2005) from lakes for all species.

Table 8.-Anchorage Management Area anadromous Chinook salmon sport catch (1990-2006) and harvest (1986-2005).

Year	Ship Creek		Eagle River		Salt Water		Other		Area Total	
	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest
1986		0		0		11		22		33
1987		437		0		19		29		485
1988		587		0		0		76		663
1989		792		28		22		108		950
1990	946	445	0	0	89	12	157	0	1,192	457
1991	1,607	1,127	6	6	30	30	353	6	1,996	1,169
1992	4,019	2,282	109	48	125	109	55	9	4,308	2,448
1993	7,104	2,872	88	47	172	71	460	51	7,824	3,041
1994	4,950	2,445	128	59	330	204	96	0	5,504	2,708
1995	6,769	3,583	296	194	438	277	366	0	7,869	4,054
1996	9,354	3,774	586	309	21	0	1,226	373	11,187	4,456
1997	9,045	4,456	306	140	30	20	418	0	9,799	4,616
1998	5,382	2,099	64	19	121	38	455	0	6,022	2,156
1999	14,275	5,204	48	22	201	167	594	69	15,118	5,462
2000	11,090	4,593	132	109	60	20	566	30	11,848	4,752
2001	10,656	4,286	132	58	262	108	793	0	11,843	4,452
2002	5,967	2,287	162	34	164	94	777	6	7,070	2,421
2003	8,667	3,588	76	25	78	52	659	13	9,480	3,678
2004	6,840	2,790	51	24	104	58	718	288	7,713	3,160
2005	7,578	4,081	25	25	183	108	1,416	115	9,202	4,329
1996-2005										
Avg.	8,885	3,716	158	77	122	67	762	89	9,928	3,948

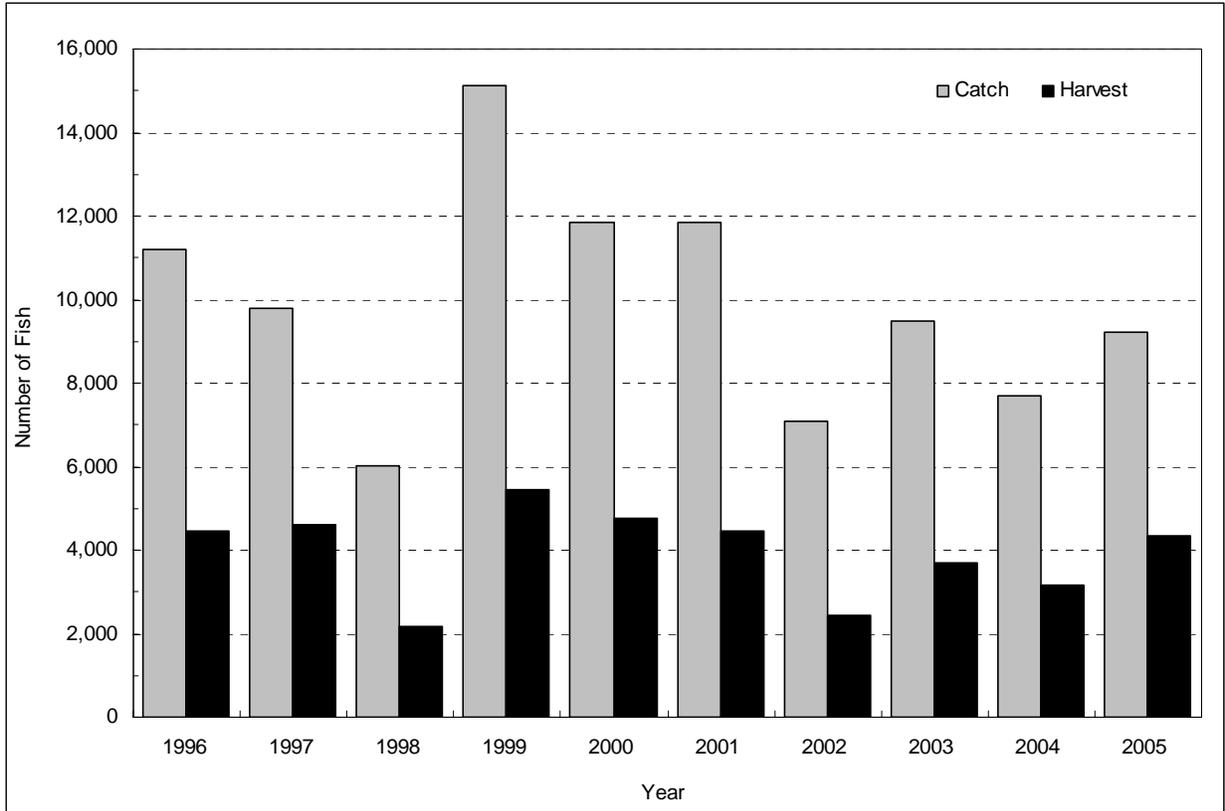


Figure 9.-Anchorage Management Area anadromous Chinook salmon sport catch and harvest (1996-2005).

Table 9.-Anchorage Management Area anadromous coho salmon sport catch (1990-2005) and harvest (1986-2005).

Year	Ship Creek		Bird Creek		Campbell Creek		Twentymile River		Other Freshwater		Saltwater		Area Total	
	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest
1986		89		994		0		1,765		475		135		3,458
1987		779		761		0		1,050		434		72		3,096
1988		2,128		1,710		0		2,055		837		0		6,730
1989		1,467		899		28		1,715		749		82		4,940
1990	1,220	818	811	535	0	0	1,283	787	543	269	110	79	3,967	2,488
1991	1,384	1,168	1,372	1,099	89	25	2,032	1,308	915	659	134	134	5,926	4,393
1992	3,142	1,911	1,279	785	24	8	2,559	1,684	2,500	1,182	161	128	9,665	5,698
1993	3,876	2,579	7,799	6,195	6,894	3,942	2,636	1,986	1,920	1,462	337	223	23,462	16,387
1994	4,239	3,011	7,169	5,425	4,725	1,256	3,882	2,846	2,057	1,058	470	352	22,542	13,948
1995	5,482	3,222	5,639	4,121	4,910	1,947	3,729	2,347	2,287	1,363	276	267	22,323	13,267
1996	7,710	5,369	9,675	6,934	3,474	1,458	3,767	2,597	2,775	1,199	325	238	27,726	17,795
1997	13,448	9,413	9,097	6,771	3,006	1,651	2,664	1,332	1,498	1,168	479	243	30,192	20,578
1998	21,733	14,049	33,546	22,406	2,624	1,167	3,354	2,541	1,998	1,196	1,267	860	64,522	42,219
1999	7,064	4,649	6,284	4,611	1,880	1,341	1,457	1,051	979	456	170	158	17,834	12,266
2000	20,890	11,858	15,799	10,741	1,873	555	5,025	3,094	2,710	1,655	591	288	46,888	28,191
2001	39,615	26,419	11,563	8,449	2,748	813	5,724	2,742	3,483	1,807	732	463	63,865	40,693
2002	24,699	16,751	1,504	1,053	2,998	1,144	4,101	2,672	6,905	4,053	1,012	587	41,219	26,260
2003	8,831	6,094	1,117	776	2,873	1,457	3,039	2,116	4,035	2,491	867	441	20,762	13,375
2004	10,543	6,110	1,064	611	3,468	1,056	5,048	3,012	5,015	2,515	336	143	25,474	13,447
2005	10,922	6,830	5,331	3,281	4,552	1,989	1,632	1,334	3,027	1,156	473	473	25,937	15,063
1996-2005														
Avg.	16,546	10,754	9,498	6,563	2,950	1,263	3,581	2,249	3,243	1,770	625	389	36,442	22,989

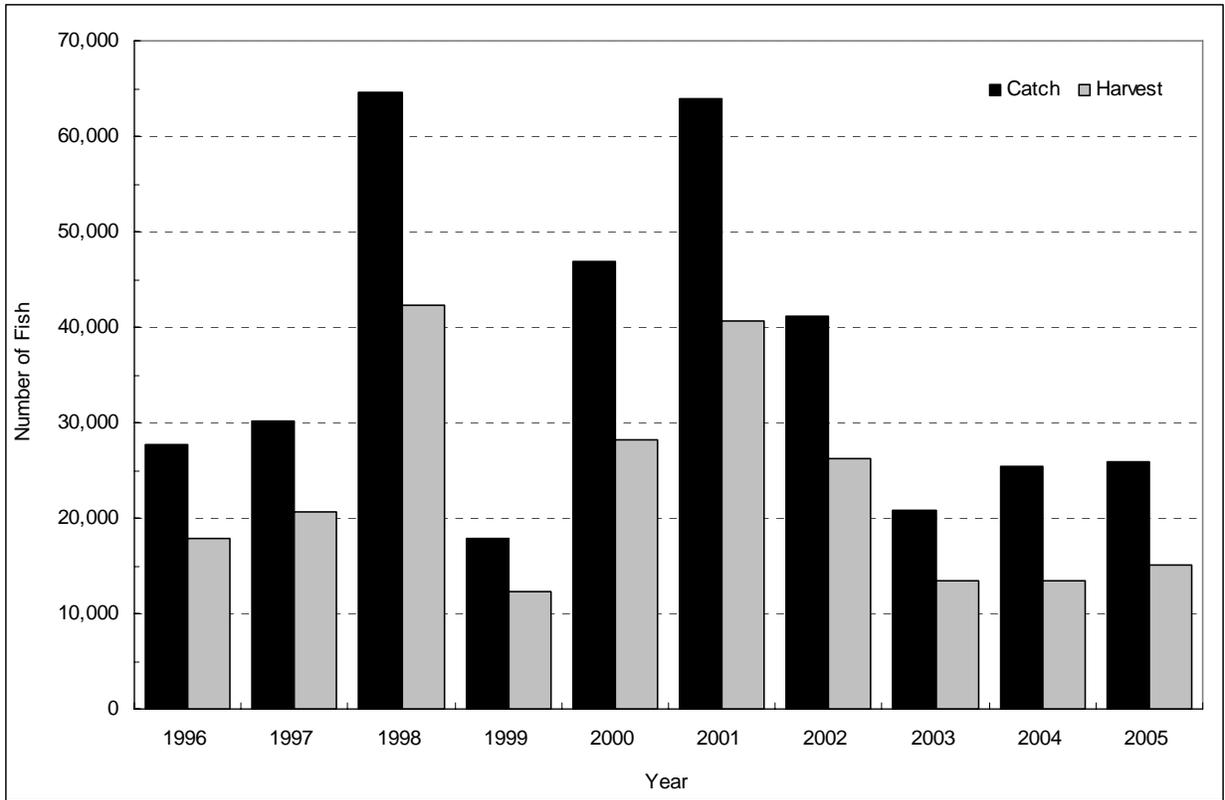


Figure 10.-Anchorage Management Area anadromous coho salmon sport catch and harvest (1996-2005).

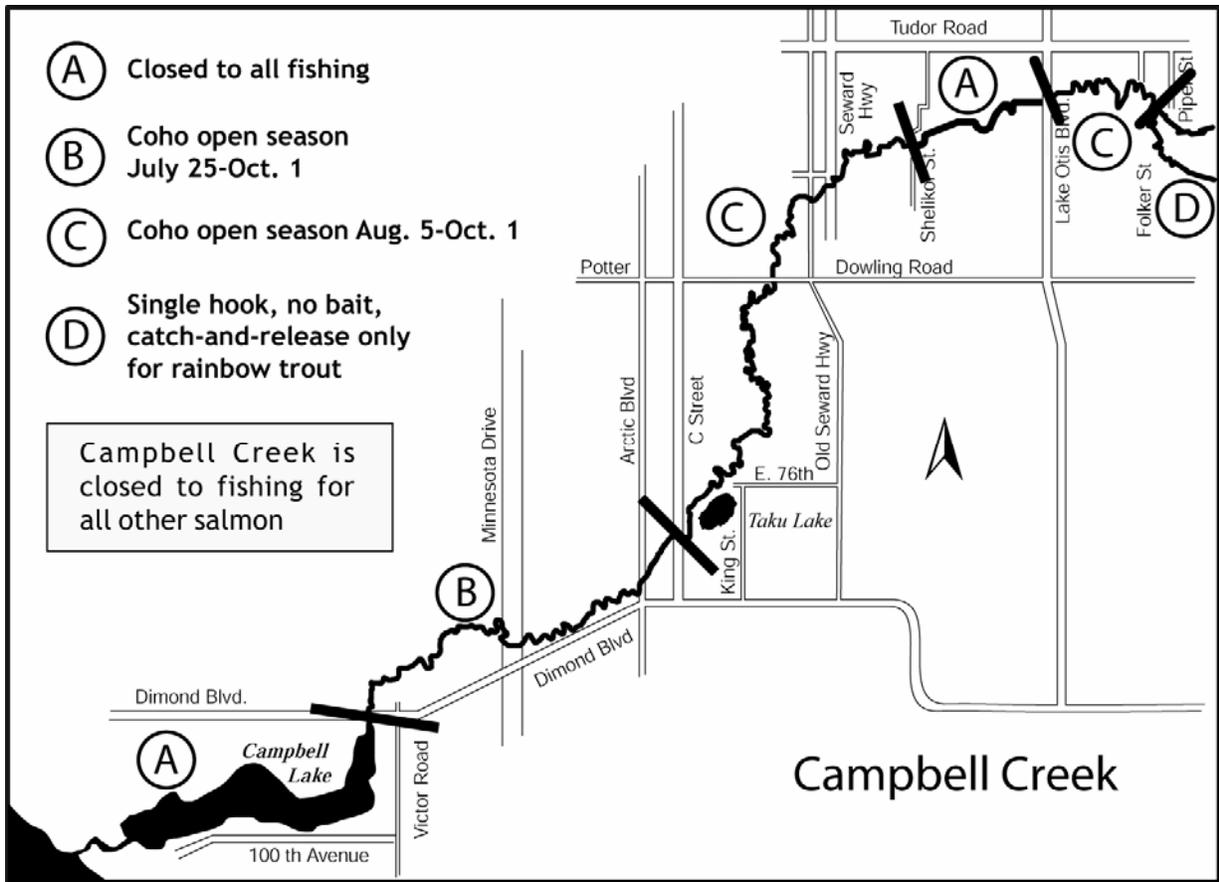


Figure 11.-Map of the lower Campbell Creek drainage and area open to coho salmon sport fishing.

Table 10.-Anchorage Management Area pink salmon sport catch (1990-2002) and harvest (1986-2005).

Year	Bird Creek		Ship Creek		Twentymile R.		Other Freshwater		Saltwater		Area Total	
	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest
1986		9,159		849		491		976		189		11,664
1987		1,684		145		145		308		0		2,282
1988		3,256		564		218		1,292		0		5,330
1989		1,155		291		17		151		17		1,631
1990	9,327	3,815	686	81	500	81	2,338	815	511	140	13,362	4,932
1991	3,953	1,513	742	353	585	46	269	65	74	9	5,623	1,986
1992	16,845	5,899	5,881	1,346	870	73	2,546	1,126	1145	457	27,287	8,901
1993	6,206	1,745	747	163	173	0	2,186	556	1812	303	11,124	2,767
1994	3,460	1,101	1,185	119	762	9	2,630	528	443	222	8,480	1,979
1995	15,201	2,593	1,851	267	494	19	1,151	183	105	37	18,802	3,099
1996	14,218	2,419	1,258	214	1,464	91	1,789	79	460	59	19,189	2,862
1997	3,038	535	1,484	80	72	32	398	187	128	9	5,120	843
1998	18,595	1,941	5,152	454	301	34	2,436	523	1654	253	28,138	3,205
1999	3,913	507	789	80	80	0	495	94	185	40	5,462	721
2000	20,055	1,335	6,841	853	297	10	10,080	577	963	348	38,236	3,123
2001	7,662	333	2,815	190	234	23	1,956	173	321	64	12,988	783
2002	5,931	758	2,724	155	709	29	2,234	219	53	7	11,651	1,168
2003	6,152	1,033	1,055	291	109	0	1,148	126	997	150	9,461	1,600
2004	2,677	751	1,668	61	163	16	2,505	363	884	81	7,897	1,272
2005	8,624	433	839	108	93	46	1,098	66	85	24	10,739	677
1996-2005												
Avg.	9,087	1,005	2,463	249	352	28	2,414	241	573	104	14,888	1,625

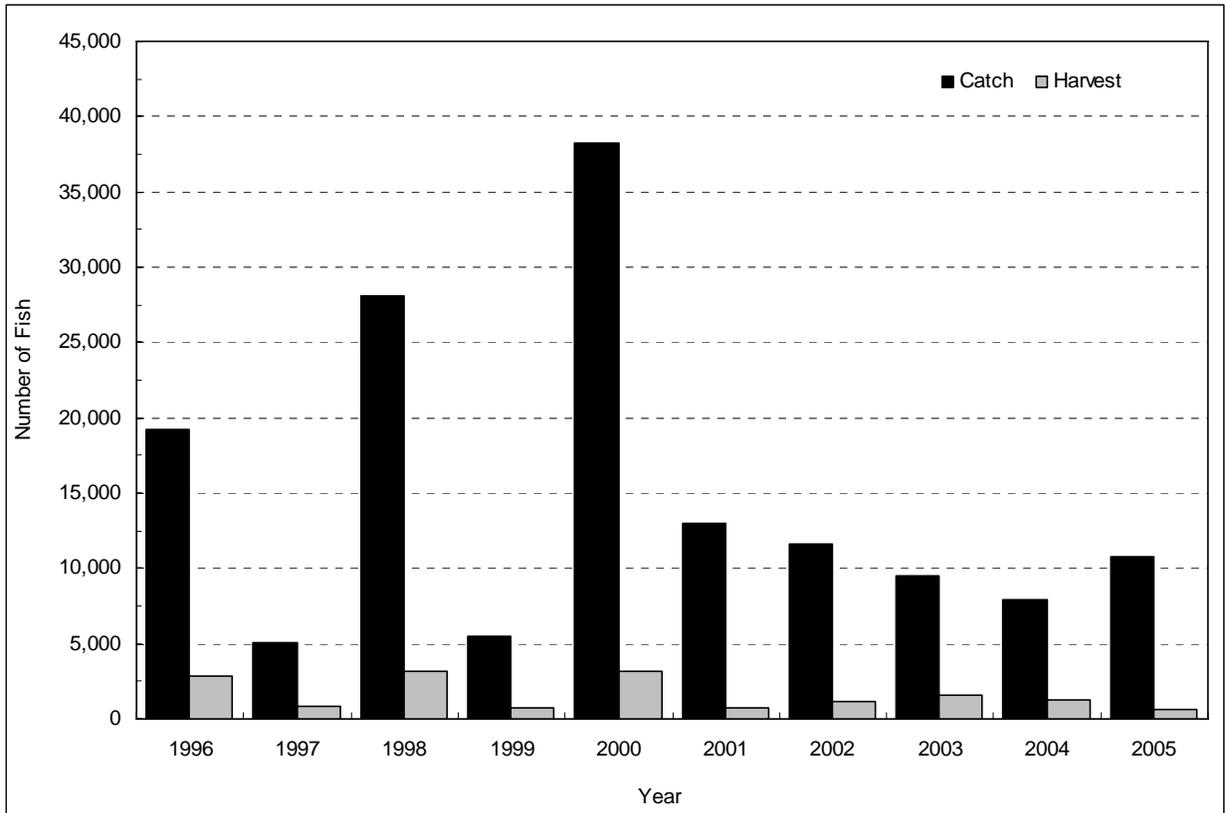


Figure 12.-Anchorage Management Area pink salmon sport catch and harvest (1996-2005).

Table 11.-Anchorage Management Area sockeye salmon sport catch (1990-2005) and harvest (1986-2005).

Year	Bird Creek		Twentymile R.		Other Freshwater		Saltwater		Area Total	
	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest
1986		190		346		73		0		609
1987		163		435		909		0		1,507
1988		236		200		36		0		472
1989		128		145		231		60		564
1990	233	97	49	19	244	89	98	49	624	254
1991	87	78	401	331	201	166	244	174	933	749
1992	353	173	296	214	1,808	386	938	542	3,395	1,315
1993	157	109	164	125	1,584	1,002	4,147	1,849	6,052	3,085
1994	479	130	596	299	2,559	874	642	291	4,276	1,594
1995	501	95	422	89	569	187	32	10	1,524	381
1996	467	184	233	26	1,464	540	185	134	2,349	884
1997	220	98	70	10	2,045	865	110	50	2,445	1,023
1998	574	448	84	61	847	399	595	363	2,100	1,271
1999	78	56	42	10	605	228	782	248	1,507	542
2000	678	446	42	0	403	53	59	38	1,182	537
2001	316	263	176	97	970	263	830	271	2,292	894
2002	0	0	288	95	315	158	91	77	694	330
2003	0	0	84	36	1,361	608	346	299	1,791	943
2004	0	0	291	88	393	88	328	110	1,012	286
2005	0	0	139	106	413	0	445	445	997	551
1996-2005										
Avg.	233	150	145	53	882	320	377	204	1,637	726

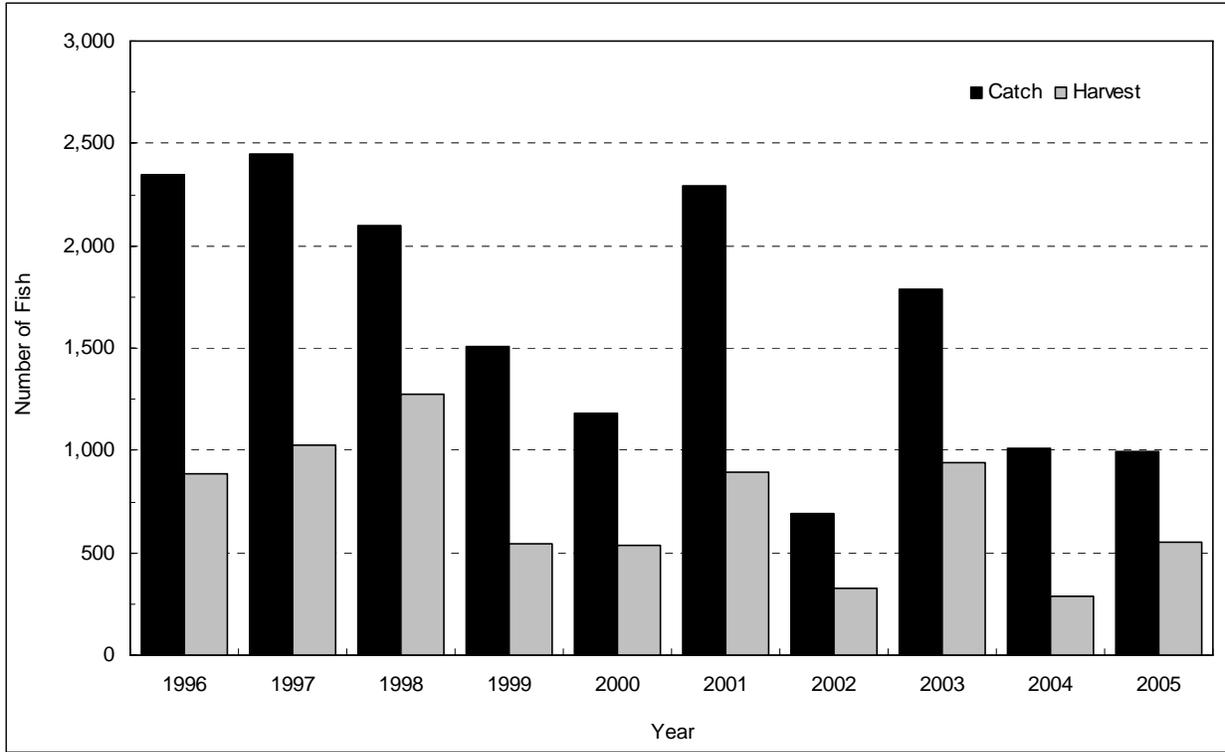


Figure 13.-Anchorage Management Area sockeye salmon sport catch and harvest (1996-2005).

Table 12.-Anchorage Management Area chum salmon sport catch (1990-2005) and harvest (1986-2005).

Year	Bird Creek		Ship Creek		Twentymile R.		Other Freshwater		Saltwater		Area Total	
	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest
1986		681		89		112		56		22		960
1987		290		54		181		54		0		579
1988		364		182		91		54		0		691
1989		613		44		44		296		18		1,015
1990	442	136	238	11	352	102	464	55	34	11	1,530	315
1991	304	120	160	16	633	120	168	88	16	16	1,281	360
1992	478	129	243	61	562	38	350	61	31	8	1,664	297
1993	1,013	283	129	28	65	9	119	55	33	8	1,359	383
1994	744	102	334	22	153	7	227	36	88	7	1,546	174
1995	1,694	296	626	95	467	18	180	30	22	0	2,989	439
1996	2,416	232	497	155	384	33	926	187	299	0	4,522	607
1997	1,014	209	229	24	87	0	113	15	145	0	1,588	248
1998	3,628	236	508	93	342	17	474	111	202	56	5,154	513
1999	1,156	99	354	16	81	14	244	0	469	0	2,304	129
2000	2,549	158	853	73	48	0	389	73	97	36	3,936	340
2001	1,489	87	1,347	218	357	35	1,270	130	168	0	4,631	470
2002	3,056	406	807	66	1,400	0	1,238	0	39	0	6,540	472
2003	1,857	155	1,014	67	357	25	349	66	544	0	4,121	313
2004	1,233	117	516	44	103	70	305	75	28	0	2,185	306
2005	1,548	116	338	100	0	0	420	18	70	0	2,376	234
1996-2005												
Avg.	1,995	182	646	86	316	19	573	68	206	9	3,736	363

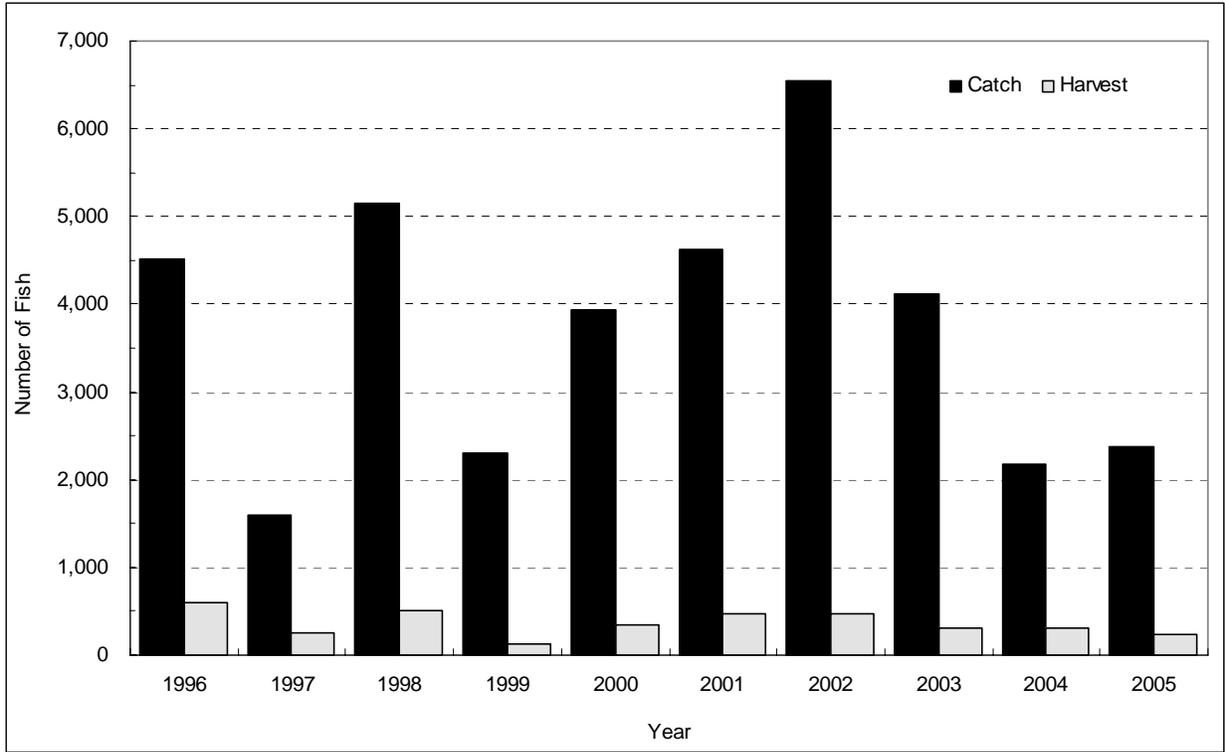


Figure 14.-Anchorage Management Area chum salmon sport catch and harvest (1996-2005).

Table 13.-Anchorage Management Area streams rainbow trout sport catch (1990-2002) and harvest (1986-2005).

Year	Campbell Creek		Ship Creek		Other Creeks		Stream Total		Lakes Total		Area Total	
	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest
1986		815		1,307		403		2,525		37,339		39,864
1987		408		39		263		710		34,549		35,259
1988		1,637		200		655		2,492		57,372		59,864
1989		732		9		385		1,126		52,071		53,197
1990	5,801	1,697	132	0	3,312	461	9,245	2,158	160,005	56,277	169,250	58,435
1991	2,417	199	162	62	399	224	2,978	485	119,668	48,818	122,646	49,303
1992	982	277	87	47	815	285	1,884	609	107,324	32,708	109,208	33,317
1993	1,673	267	146	47	2,169	177	3,988	491	103,477	28,621	107,465	29,112
1994	1,809	271	38	14	1,869	238	3,716	523	96,657	23,108	100,373	23,631
1995	2,416	300	242	99	1,066	553	3,724	952	123,142	31,922	126,866	32,874
1996	2,622	531	229	53	1,517	578	4,368	1,162	134,690	34,986	139,058	36,148
1997	2,988	215	84	84	507	221	3,579	520	167,746	36,625	171,325	37,145
1998	3,603	272	144	0	4,810	514	8,557	786	84,886	18,975	93,443	19,761
1999	2,874	711	94	47	1,362	144	4,330	902	158,680	27,874	163,010	28,776
2000	4,766	216	1,106	85	1,891	61	8,380	384	153,431	35,203	161,811	35,587
2001	14,952	369	1,094	0	2,053	332	18,099	701	91,521	20,610	109,620	21,311
2002	2,950	418	1,245	0	807	61	5,002	479	86,742	21,999	91,744	22,478
2003	3,177	257	2,359	0	3,480	483	9,016	740	53,203	17,782	62,219	18,522
2004	2,032	117	937	0	673	161	3,642	278	77,479	22,998	81,121	23,276
2005	1,455	99	1,312	0	1,034	463	3,801	562	52,067	13,314	55,868	13,876
1996-2005												
Avg.	4,142	321	860	27	1,813	302	6,877	651	106,045	25,037	112,922	25,688

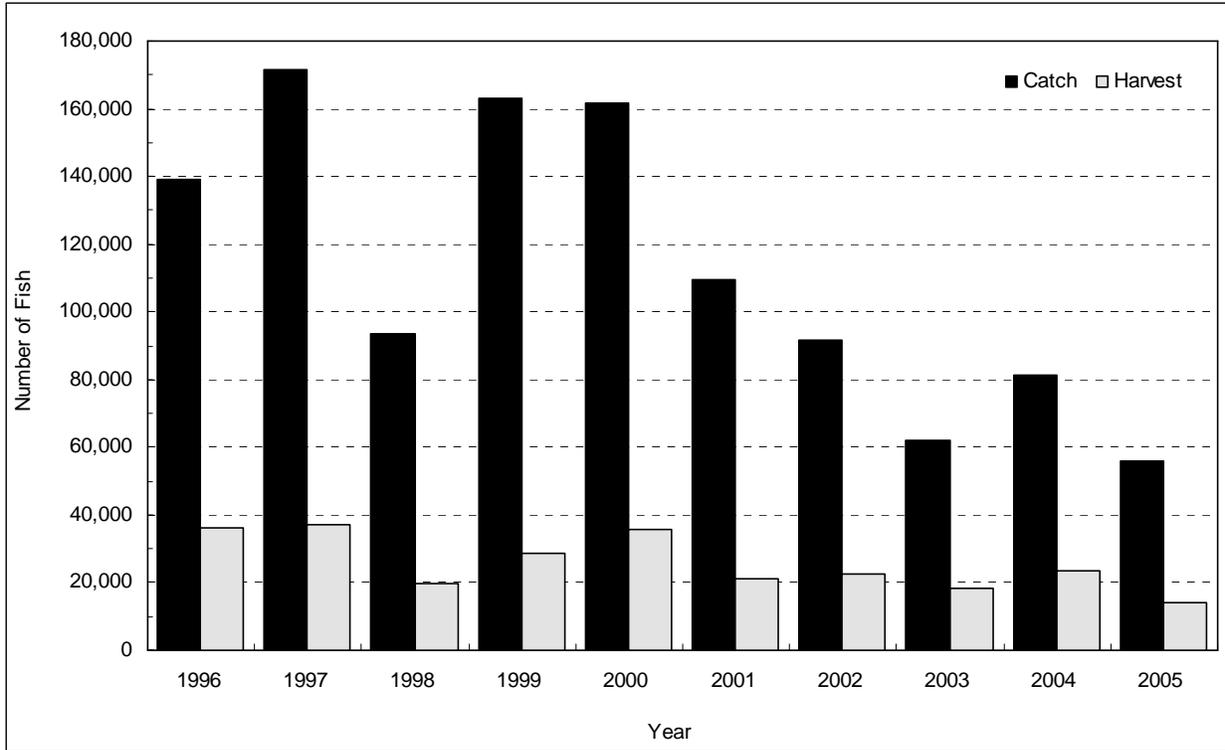


Figure 15.-Anchorage Management Area rainbow trout sport catch and harvest (1996-2005).

Table 14.-Anchorage Management Area streams Dolly Varden sport catch (1990-2005) and harvest (1986-2005).

Year	Eagle River		Campbell Creek		Ship Creek		Bird Creek		Twentymile R.		Other Streams		Stream Total		Lake Total		Area Total	
	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest
1986		983		302		145		134		458		373		2,395		168	0	2,563
1987		543		181		163		109		254		815		2,065		36	0	2,101
1988		637		1,564		146		127		327		763		3,564		108	0	3,672
1989		732		291		75		188		300		388		1,974		731	0	2,705
1990	2,192	330	1,516	445	297	82	165	33	1,038	396	1,731	312	6,939	1,598	2,291	643	9,230	2,241
1991	788	584	788	107	428	350	19	10	837	185	632	505	3,492	1,741	1,596	798	5,088	2,539
1992	1,704	573	246	49	303	33	213	147	803	311	1,000	443	4,269	1,556	2,345	1,615	6,614	3,171
1993	2,091	492	1,382	195	427	58	302	28	644	78	796	65	5,642	916	1,974	867	7,616	1,783
1994	1,302	521	1,975	283	568	161	662	108	637	99	2,059	395	7,203	1,567	1,499	933	8,702	2,500
1995	1,261	426	1,267	87	528	98	378	86	783	153	534	22	4,751	872	1,754	761	6,505	1,633
1996	1,497	389	1,832	85	170	73	85	12	583	194	777	170	4,944	923	2,698	1,010	7,642	1,933
1997	804	378	938	0	256	32	162	14	1,154	243	836	364	4,150	1,031	1,736	559	5,886	1,590
1998	303	160	3,633	226	134	17	243	34	607	169	1,392	212	6,312	818	2,961	988	9,273	1,806
1999	814	97	1,693	626	44	22	90	0	190	99	331	89	3,162	933	1,362	1,092	4,524	2,025
2000	1,275	409	5,161	83	184	0	137	0	935	154	1,536	118	9,228	764	4,949	604	14,177	1,368
2001	87	0	12,76	238	648	33	22	0	2,027	189	767	151	16,311	611	947	290	17,258	901
2002	507	190	2,339	369	589	0	17	0	482	0	1,116	424	5,050	983	2,135	355	7,185	1,338
2003	820	0	2,568	228	536	10	70	50	702	153	3,257	439	7,953	880	2,851	1,205	10,804	2,085
2004	777	281	3,386	200	912	13	27	13	271	27	754	175	6,127	709	5,391	3,476	11,518	4,185
2005	953	0	4,116	35	584	0	39	13	260	81	391	142	6,343	271	3,634	1,087	9,977	1,358
1996-2005 Avg.	784	190	3,843	209	406	20	89	14	721	131	1,116	228	6,958	792	2,866	1,067	9,824	1,859

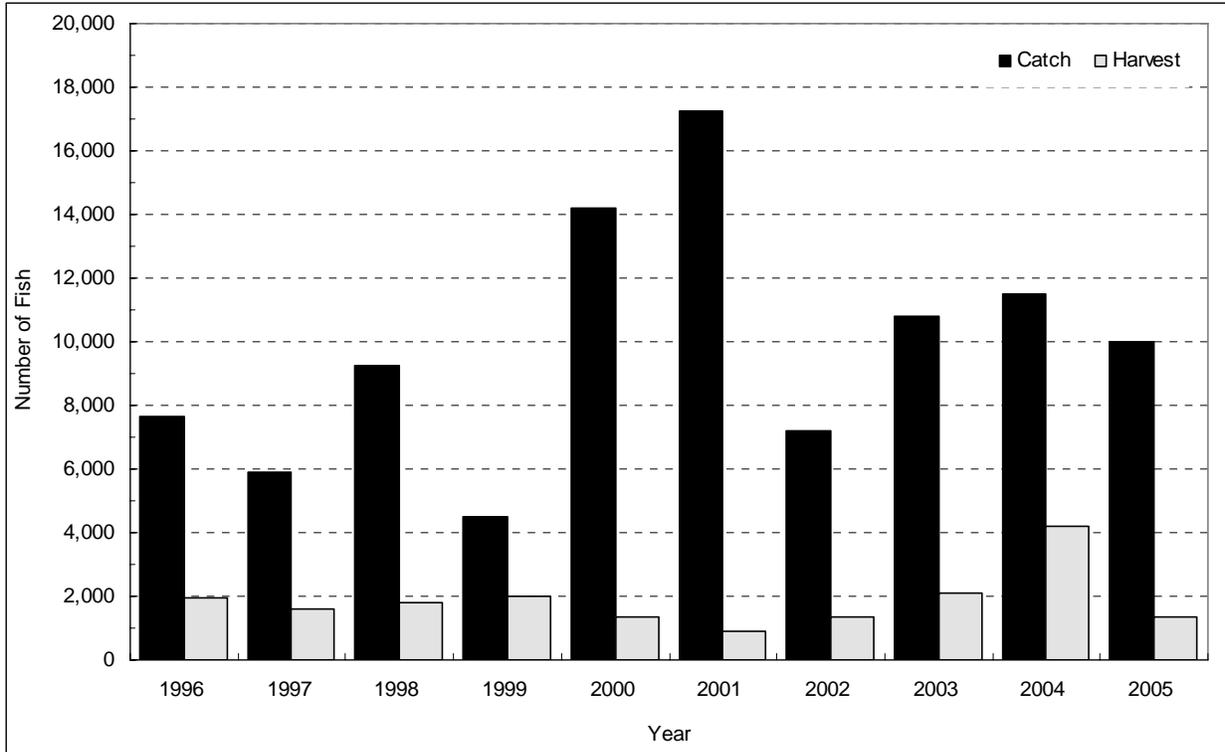


Figure 16.-Anchorage Management Area Dolly Varden sport catch and harvest (1996-2005).

Table 15.-Anchorage Management Area Arctic grayling sport catch (1990-2005) and harvest (1986-2005).

Year	Lakes		Streams		Area Total	
	Catch	Harvest	Catch	Harvest	Catch	Harvest
1986		0		168		168
1987		0		18		18
1988		819		182		1,001
1989		66		0		66
1990	889	527	560	49	1,449	576
1991	1,480	188	70	50	1,550	238
1992	3,554	413	0	0	3,554	413
1993	1,362	233	0	0	1,362	233
1994	2,224	585	59	49	2,283	634
1995	511	62	62	27	573	89
1996	2,103	182	111	111	2,214	293
1997	4,555	68	0	0	4,555	68
1998	1,077	59	505	0	1,582	59
1999	1,351	158	116	0	1,467	158
2000	105	10	17	0	122	10
2001	412	43	98	19	510	62
2002	4,463	747	160	0	4,623	747
2003	2,192	189	140	32	2,332	221
2004	363	90	0	0	363	90
2005	281	102	351	64	632	166
1996-2005 Avg.	1,690	165	150	23	1,840	187

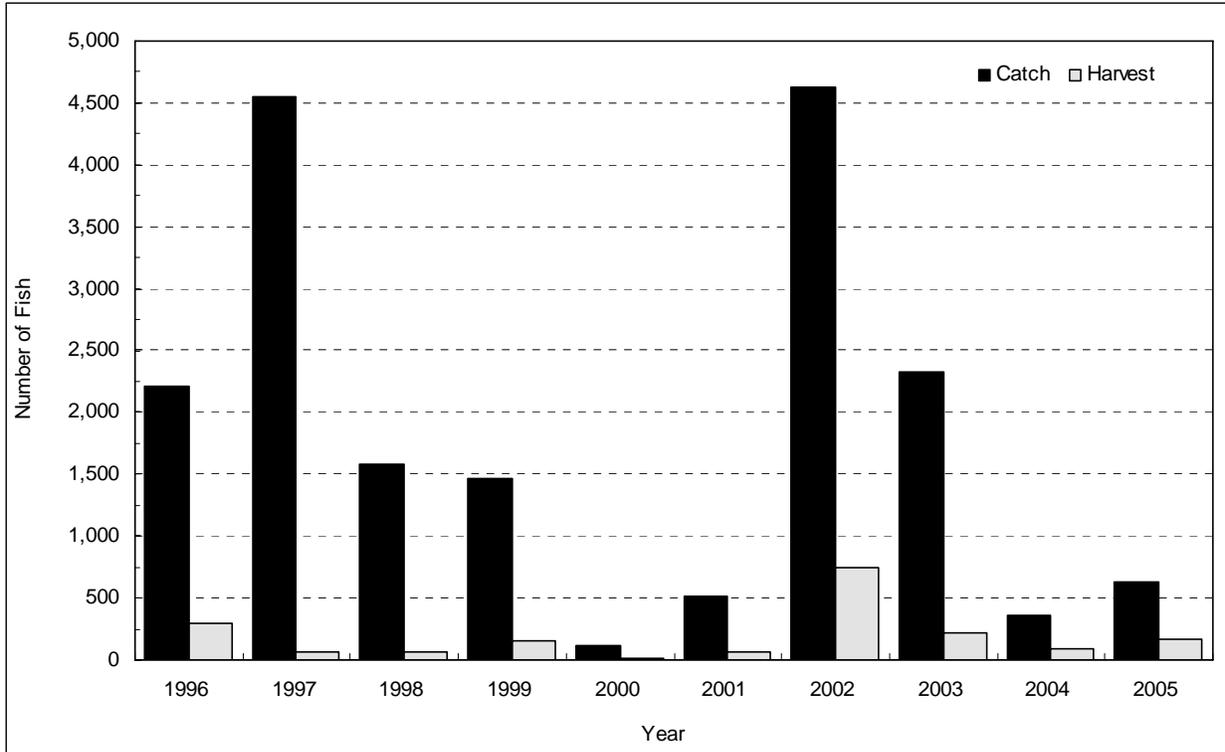


Figure 17.-Anchorage Management Area Arctic grayling sport catch and harvest (1996-2005).

Table 16.-Anchorage Management Area northern pike catch and harvest, 1996-2005.

Year ^a	Lower Fire Lake		Sand Lake		Cheney Lake		Other Lake/Streams		Area Total	
	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest	Catch	Harvest
1996	796	129	86	43			11	11	893	183
1997	385	206	48	14			0	0	433	220
1998	511	303	40	34			0	0	551	337
1999	566	196	113	19			47	28	726	243
2000	1,209	853	352	297	38	38	86	86	1,685	1,274
2001	3,917	749	285	78	375	258	271	81	4,848	1,166
2002	1,331	783	149	58	508	186	163	163	2,151	1,190
2003	1,988	812	61	61	121	85	193	120	2,363	1,078
2004	976	241	270	195	^b	^b	227	227	1,473	663
2005	597	220	486	191	318	200	12	0	1,413	611
1996-2005 Avg.	1,228	449	189	99	272	153	101	72	1,654	697

^a Prior to 1996, the Statewide Harvest Survey reported northern pike in the "other" fish category.

^b Reported with "Other Lake/Streams".

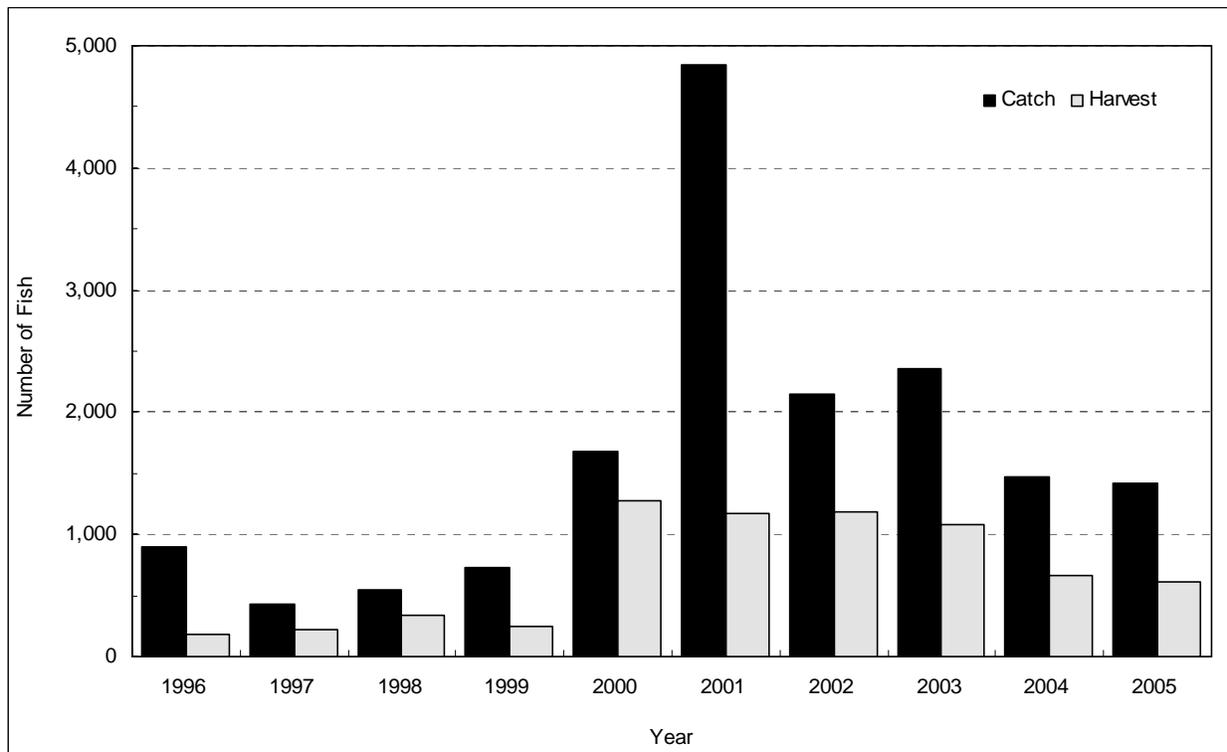


Figure 18.-Anchorage Management Area northern pike harvest 1996-2005.

Table 17.-Anchorage Management Area personal use eulachon harvest, 1986-2005.

Year	Saltwater	Freshwater			Area
	Total	Twentymile R.	Other	Total	Total
1986	22,980	100,974	0	100,974	123,954
1987	26,932	101,574	3,078	104,652	131,584
1988	35,952	103,556	0	103,556	139,508
1989	13,923	88,411	1,547	89,958	103,881
1990	7,663	125,100	264	125,364	133,027
1991	4,229	63,365	1,663	65,028	69,257
1992	7,290	35,674	0	35,674	42,964
1993	5,479	24,386	0	24,386	29,865
1994	4,562	44,037	680	44,717	49,279
1995	1,449	31,342	1,267	32,609	34,058
1996	1,163	20,049	0	20,049	21,212
1997	12,306	26,765	0	26,765	39,071
1998	6,725	26,912	0	26,912	33,637
1999	14,926	29,346	325	29,671	44,597
2000	7,625	5,556	307	5,863	13,488
2001	12,584	22,763	562	23,325	35,909
2002	51,077	25,180	542	25,722	76,799
2003	29,769	0	6,072	6,072	35,841
2004	9,919	0	68	68	9,987
2005	8,885	0	0	0	8,885
1996-2005 Avg.	15,498	15,657	788	16,445	31,943

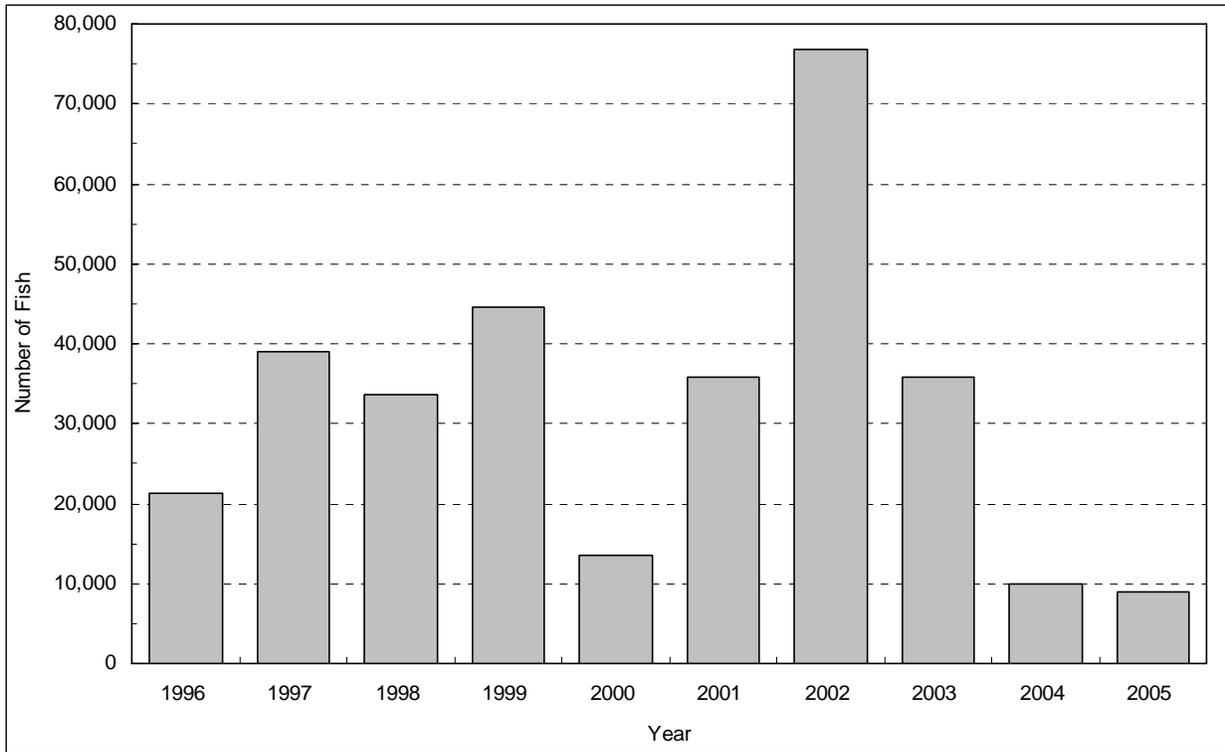


Figure 19.-Anchorage Management Area personal use eulachon harvest (1996-2005).

APPENDIX A. REGULATION SUMMARIES

Appendix A1.-Sport fishing regulations for Ship Creek, 1957-2005.

Year	Sport Fishing Regulations – Ship Creek
1957-1959	Closed to sport fishing from 4/01-5/27. Bag limit of 10 trout daily or in possession, only two 20 inches or more in length. No salmon fishing regulations.
1960	Closed to all sport fishing.
1961-1962	Closed to salmon fishing. Closed to sport fishing from 4/01-5/27. Bag limit 10 trout daily or in possession, only two 20 inches or more in length. Anglers allowed up to 20 resident fish if excess were Dolly Varden.
1963	Closed to sport fishing from 4/01-5/25.
1964-1965	Closed to sport fishing from 4/01 through third Friday in May. Open to salmon fishing (except Chinook) downstream of a marker 300 feet below Chugach Power Plant Dam. Bag limit was three chum, sockeye, or pink with an additional three coho salmon allowed.
1966-1967	Legal gear defined as a single-hook-only with gap between point and shank of ½ inch or less.
1968	Closed to all fishing from 1/01-8/31. Anglers allowed three salmon. Closed to Chinook fishing.
1969	From 9/01-12/31 anglers allowed three salmon. Removed excess Dolly Varden from resident fish bag limit.
1970	Closed to all fishing from 1/01-8/31 except for a Chinook opening from 7/04-7/19. Bag limit of one Chinook salmon per day and two per season. From 9/01-12/31, anglers allowed three salmon.
1971-1972	Closed to all fishing from 1/01-8/31 except for Chinook salmon openings on 6/10-6/11 and 6/17-6/18. A Chinook salmon punch card was required and bag limit was one Chinook per day and two per season. From 9/01-12/31, anglers were allowed three salmon.
1973-1981	Closed to all fishing from 1/01-8/17. Closed to Chinook salmon fishing. From 8/18-12/31, anglers were allowed three salmon. Legal gear was single-hook-only with a gap between point and shank of ½ inch or less.
1982-1984	Same as 1973-1981. In addition, rainbow trout daily bag limit was reduced to five fish, only one 20 inches or more in length.
1985-1986	Closed to all fishing from 1/01-7/31. Single-hook-only restriction lifted. Anglers were allowed three salmon other than Chinook from 8/01-12/31.
1987-1990	The area opened to salmon fishing was downstream of a marker located 100 feet below the Chugach Power Plant Dam. In addition, the creek was open to all fishing (including Chinook) on Tuesdays and Wednesdays for 5 consecutive weeks commencing the second Tuesday in June. Chinook salmon bag and possession limits were one and two with no seasonal limit.
1991-1992	Chinook salmon fishing was allowed from 1/01-7/13, daily bag and possession limits were one and two, and no seasonal limit. Fishing for other salmon was allowed year-round with bag and possession limits of three and three. In addition, fishing for Dolly Varden, rainbow trout, and other species was allowed year-round.
1993	A seasonal limit of five Chinook salmon in Cook Inlet waters was added.

-continued-

Appendix A1.-Page 2 of 2.

Year	Sport Fishing Regulations – Ship Creek
1997	The possession limit for Chinook salmon was reduced to one and a regulation went into effect that prohibited anglers from continuing to sport fish in waters open to Chinook salmon fishing after harvesting a Chinook salmon.
1999	Chinook bag and possession limit is one per day and in possession, and anglers may not fish in Ship Creek the remainder of the day after you harvest Chinook salmon 20 inches or longer. Salmon other than Chinook salmon, 16 inches or longer in length bag/possession limit is three, all three can be coho salmon. Reeve Blvd upstream to 300 ft upstream of Elmendorf Dam is closed to all fishing.
2001	Bag and possession limit for Chinook salmon less than 20 inches in length, and other salmon less than 16 inches in length is ten. Fish is open all year for these small salmon. In waters open to fishing for Chinook salmon 20 inches or more in length, fishing is not allowed between 11:00 pm and 6:00 am from May 15 through July 13.
	Statewide regulation defines the bag and possession limit for Chinook salmon in fresh waters open to Chinook salmon less than 20 inches in length (jack salmon) is 10 per day/10 in possession.
2005	Closed waters to fishing for salmon less than 20 inches in length in waters closed to fishing for salmon 20 inches or more

Appendix A2.-Sport fishing regulations for Eagle River, 1957-2005.

Year	Sport Fishing Regulations – Eagle River
1957-1959	Closed to sport fishing from 4/01-5/27. Bag limit was 10 trout daily or in possession, only two 20 inches or more in length. No salmon regulations.
1960	Closed to salmon fishing upstream of 1/4 mile above Glenn Highway bridge. Bag limits were 10 salmon or trout daily, three could be salmon greater than 16 inches in length, and two could be Chinook salmon.
1961-1962	Anglers were allowed up to 20 resident fish if the excess were Dolly Varden.
1963	Closed season was from 4/01-5/25. Closed to salmon fishing upstream of 1/4 mile above Glenn Highway bridge. Bag limit was six coho salmon; three pink, chum or red salmon; one Chinook salmon. Resident fish bag limits were 10 trout daily, only two over 20 inches. Anglers were allowed up to 20 resident fish if the excess were Dolly Varden.
1964-1967	Closed season was from 4/01 through third Friday in May.
1968	No closed season. Bag limit was three salmon 16 inches or greater in length. Closed to Chinook salmon fishing.
1969-1981	Dolly Varden in bag limit was removed in 1969.
1982-1986	Rainbow trout bag limit was reduced to five per day, only one 20 inches or greater in length in 1982. Bag limits were 10 for other resident fish.
1987-1991	South Fork Eagle River below the falls was closed to all fishing from 6/01-8/14.
1993-1996	Regulations restricted Chinook salmon fishing to a 30-day period commencing the Saturday before Memorial Day. Fishing was restricted to that portion of Eagle River upstream of Bailey Bridge on Fort Richardson to a department marker located approximately adjacent to Mile 7.4 of Eagle River Road. The area located approximately 100 yards on either side of the confluence of South Fork Eagle River was closed to fishing from 6/01-8/14. North Fork Eagle River upstream from a department marker located near its confluence with Eagle River was closed to all fishing during the Chinook salmon season. Passes were required to fish on Fort Richardson.
1999-2001	In areas open for fishing Chinook salmon less than 20 inches in length and other salmon 16 inches in length or less are open all year. Bag and possession limit for these small salmon is 10. Statewide regulation defines the bag and possession limit for Chinook salmon in fresh waters open to Chinook salmon less than 20 inches in length (jack salmon) is 10 per day/10 in possession
2005	Closed waters to fishing for salmon less than 20 inches in length in waters closed to fishing for salmon 20 inches or more

Appendix A3.-Sport fishing regulations for Campbell Creek, 1957-2005.

Year	Sport Fishing Regulations – Campbell Creek
1957-1959	Closed to sport fishing from 4/01-5/27. Bag limit was 10 trout daily or in possession, only two 20 inches or more in length. No salmon fishing regulations.
1960	Creek was open to salmon fishing, except Chinook salmon, from 8/22-9/23. Bag limits were 10 salmon or trout daily, only three could be salmon greater than 16 inches in length and only two trout over 20 inches in length.
1961-1962	Anglers were allowed up to 20 resident fish if excess were Dolly Varden.
1963	Closed to sport fishing 4/01-5/25. Bag limit was six coho salmon; three pink, chum or red salmon. Resident fish bag limits were 10, only two over 20 inches..
1964-1967	Closed to sport fishing from 4/01 through the third Friday in May. Open to salmon fishing (except Chinook salmon) from 8/01-9/30. Closed to salmon fishing above Seward Highway. Bag limit was six coho, and three chum, sockeye, or pink salmon.
1968	Open to salmon fishing (except Chinook salmon) from 8/01-9/30. Closed to salmon fishing above Seward Highway. Bag limit was three salmon 16 inches or greater in length. No closed season for resident fish.
1969-1970	Excess Dolly Varden removed from bag limit in 1969.
1971-1981	Closed to fishing above Seward Highway and closed to salmon fishing throughout the drainage.
1982-1984	Rainbow trout bag limit was reduced to five per day, only one 20 inches or greater in length in 1982.
1985	Closed to all fishing above the Forks, and closed to salmon fishing below the Forks.
1986	Entire drainage open to fishing but closed to salmon fishing.
1987-1992	Only unbaited, artificial lures could be used upstream of the Forks, and rainbow trout could not be kept.
1993-1994	Open to coho salmon fishing from 7/25-10/15, with fishing limited to that portion of Campbell Creek upstream from Dimond Boulevard to a department marker located in the vicinity of Folker Street. Bag and possession limits for coho salmon were three and three. Fishing for all other salmon was closed. Campbell Lake closed to all fishing in 1993.
1996-1998	That portion of Campbell Creek that flows through Wickersham subdivision between Lake Otis Parkway and Shelikof Street was closed to all sport fishing year-round. Coho salmon fishing was allowed from 7/25-10/01 from Dimond Boulevard upstream to C Street. Coho salmon fishing was allowed from 8/05-10/01 upstream of C Street to markers near Piper Street except for the Wickersham closed area.
1999-2001	Regulations same as those established BOF during 1996-1998.
2005	Closed waters to fishing for salmon less than 20 inches in length in waters closed to fishing for salmon 20 inches or more. Created a Youth Only fishery on Campbell Creek for Chinook salmon

APPENDIX B. ESCAPEMENT COUNTS

Appendix B1.-Salmon escapement counts, Ship Creek, 1987-2006.

Year	Chinook			Coho			Sockeye Escapement	Pink Escapement	Chum Escapement
	Brood	Escapement	Total	Brood	Escapement	Total			
1987	52	1,030	1,082						
1988 ^a	60								
1989	77	238 ^b	315						
1990	100	761 ^b	861		71	71			5
1991	108	318 ^b	426		412	412			6
1992	131	134 ^b	265		55	55	2		
1993	132	706 ^b	838		338	338	2	22	
1994	164	247 ^c	411		654	654	13	631	89
1995	235	505 ^c	740		858	858	5	890	92
1996	171	503 ^c	674		1,013	1,013	13	244	26
1997	108	447 ^c	555		1,205	1,205	0	14	9
1998	103	360 ^c	463		1,090	1,090	2	578	19
1999	328	899 ^c	1,227	434	474	908	19	360	320
2000	341	801 ^c	1,142	277	538	815	11	5,024	46
2001	257	1,032 ^b	1,289	633	760	1,393	0	525	143
2002	408	1,475 ^b	1,883	665	4,313 ^c	4,978	9	405	0
2003	283	1,665 ^b	1,948	216	199	415	0	2	7
2004	348	1,675 ^b	2,023	484	1,275 ^b	1,759	0	0	0
2005	322	1,485 ^b	1,807	594	466	1,060	0	0	0
2006	280	1,431 ^b	1,711	613	1,446	2,059	0	54	50

^a Does not include fish collected for hatchery brood stock.

^b No count conducted.

^c Fish trap counts.

^d Estimates from foot surveys.

Appendix B2.-Salmon escapement counts, Eagle River, 1987-2006.

Year	Chinook ^a	Coho ^a	Sockeye ^a	Pink ^a	Chum ^a
1987-1988 ^b					
1989	37				
1990	326	2			1
1991	513	3			
1992	336				
1993	378				
1994	440				
1995	447	9			
1996	141 ^c				
1997	412				
1998	163 ^d				
1999	224				
2000 ^b	^d				
2001	77 ^d			19	
2002	27 ^d				
2003	167 ^d				
2004	157 ^e				
2005	122 ^e				
2006	88 ^e				
2002-2006					
Avg.	112				

Notes: Surveys timed for Chinook only.

^a Estimates from foot surveys.

^b No count conducted.

^c Survey conducted after spawning occurred.

^d High water and poor visibility.

Appendix B3.-Salmon escapement counts, Campbell Creek drainage, 1987-2006.

Year	Chinook ^a	Coho ^a	Sockeye ^a	Pink ^a	Chum ^a
1987	571	132	545		
1988 ^c					
1989	218		51		
1990	458	126	317		2
1991	590	282	844		
1992	931	157	575		
1993	937	2,312 ^b	493	13 ^b	3 ^b
1994	1,076	3,054 ^b	756	6 ^b	15 ^b
1995	734	1,423	460		
1996	369	1,612	349		
1997	1,119	1,007	294		
1998	761	2,968	646		
1999	1,035	537	435		
2000	591	3,196	109		
2001	717	2,377 ^d	163		
2002	744	7,574	1,473		
2003	745	1,799	1,857		
2004	964	713	776		
2005	1,097	1,130	654		
2006	1,052	542	589	3	1
1997-2006					
Avg.	883	2,184	700		

Notes: Surveys designed for Chinook, sockeye, and coho.

^a Unless otherwise noted, estimates from foot surveys.

^b Weir count.

^c No surveys conducted.

^d Only South Fork and Main Stem from Forks to Folker Street counted.

Appendix B4.-Salmon escapement counts, Bird Creek, 1987-2006.

Year	Chinook ^a	Coho ^a	Sockeye ^a	Pink ^a	Chum ^a
1987-1988 ^b					
1989	70			615	184
1990	109	9		^c	^c
1991	156	50		^c	
1992	142	101		^c	
1993	72	593			60
1994	289	277		401	30
1995	145	139	2	4,491	9
1996	212	169		987	214
1997	231	603		8	18
1998	131	1,446		7	5
1999	497	279		1,255	75
2000	117	703		1,873	12
2001	88	1,554	7	2,828	228
2002	48	66		1,341	633
2003	140	4	8	2,925	242
2004	307	376	4	1,902	234
2005	29	619	0	450	1
2006	^b	442			
1997-2006 Avg.	164	437	4	1,468	139

Notes: Surveys timed for Chinook and coho.

^a Unless otherwise noted, estimates from foot surveys

^b No count conducted.

^c Observed but not counted.

Appendix B5.-Aerial survey coho salmon escapement estimates, Turnagain Arm drainages, 1994-2006.

Drainage	1994	1995	1996	1996	1997	1998	1999	2000	2001 ^c	2002	2003	2004	2005	2006
<u>Twentymile River</u>														
Ahjo Creek	75	65	0	0	0	60	0	0	NS	6	12	34	6	10
NE Fork	75	210	275	0	140	260	110	975	NS	110	238		168	141
Mainstem	780	560	940	0	770	2,500	470	1,920	NS	77	NC	5,070	121	212
Beaver Pond	NC ^a	120	30	0	90	80	260	110	NS	NS	0			42
Glacier River	50	0	NC ^a	NC ^a	NC ^a	40	NC ^a	NC ^a	NS	208	12		49	0
Upper Carmen River	0	0	0	0	NC ^a	14	NC ^a	0	NS	25	20		2	
South Fork Carmen River	6	0	0	0	NC ^a	0	NC ^a	0	NS	50	0	754	149	532
Total	986	955	1,245	0	1,000	2,954	840	3,005		476	282	5,858	495	937
<u>Portage Creek</u>														
Mainstem	NC ^a	NS	NC ^a	0		10	25							
Upper Railroad Slough	0	210	120	0	NC ^b	540	NC ^c	50	NS	NS	0	453	80	280
Lower Railroad Slough	0	40	60	0	75	330	NC ^c	180	NS	150	10		10	
Placer Creek	0	57	10	0	5	NC ^d	0	0	NS	107	16	159	48	NC ^e
Total	0	307	190	0	80	870	0	230		257	26	612	148	305
<u>Placer River</u>														
Sloughs and Mainstem	55	90	45	0	110	370	70	280	NS	2,283	492	3,620	1,758	1,850
Skookum Creek	750	720	410	0	420	1,480	310	1,225	NS	1,820	200	2,170	720	1,620
Total	805	810	455	0	530	1,850	380	1,505		2,698	692	5,790	2,478	3,470

Notes: NS = No Survey; NC = No Count.

^a Glacial, no count possible.

^b Creek and slough dry, no water.

^c High winds, zero visibility.

^d Fog, no visibility.

^e Twentymile and Placer River drainages were not surveyed this year due to foul weather and early freeze-up.

Appendix B6.-Salmon escapement counts, Sixmile Creek, 1988-2006.

Year	Chinook ^a	Coho ^a	Sockeye ^a	Pink ^a	Chum ^a
1988			2,190	958	
1989			1,321	377	
1990			1,415	1,678	
1991			1,845	597	
1992		2	711	199	
1993		101	5,021	1,013	5
1994			1,407	243	
1995		14	4,462	2,116	18
1996		^b	2,549	884	^b
1997		10	2,158	457	
1998 ^c		1	1,777	1,309	
1999		^d	748 ^e	^d	^d
2000			2,186		
2001			4,005		
2002		120	2,800	1,900	
2003		34	2,964	1,340	3
2004		86	1,625	175	3
2005		31	1,353	1,362	4
2006		97	1,194	1,654	2
2002-2006 Avg.		74	1,987	1,286	3

^a Estimates a combination of weir counts and foot surveys.

^b A total of 51 coho and chum passed the weir but were not tallied by species.

^c Weir moved upstream of fish ladder near lake.

^d No count possible due to beaver dam located downstream of weir.

^e Count is low due to beaver dam obstructing upstream migration.

Appendix B7.-Salmon escapement estimates, Rabbit Creek drainage, 1987-2006.

Year	Chinook ^a	Coho ^a	Sockeye ^a	Pink ^a	Chum ^a
1987-1989	^b				
1990	10	10	5	400	5
1991	64		2		
1992	38			2	
1993-1996	^b				
1997	31				
1998	41	309		43	
1999-2000	^b				
2001	64	697	300 ^c	7	
2002	9	1,243	0	1,004	
2003	7	348	0	33	
2004	55	1,448	0	234	
2005	73	7	71	257	
2006	39	24	275	118	
2002-2006 Avg.	37	614	69	329	

Notes: Surveys timed for Chinook all years and coho in 1998 and 2001.

^a Estimates from foot surveys.

^b No count conducted.

^c Estimated from boardwalk at Potter Marsh.

APPENDIX C. HISTORICAL STOCKING TABLES

Appendix C1.-Arctic char stocking in the Anchorage Management Area, by year (1989-2006) and site.

Site	Year																	
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Campbell Pt Lake	500	1,000	2,000	0	0	1,250	0	0	1,000	852	0	1,027	0	2,094	1,796	2,096	1,928	2,904
Cheney Lake	0	0	0	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0
Clunie Lake	1,000	500	1,250	2,000	1,000	1,250	0	0	1,000	2,133	0	0	0	4,387	4,496	0	0	0
Delong Lake	0	0	0	0	0	0	0	0	0	0	0	0	0	14,820	4,400	0	0	0
Gwen Lake	500	500	1,250	1,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jewel Lake	0	0	0	0	0	0	0	0	0	0	0	0	0	4,000	4,035	0	0	0
Mirror Lake	500	500	1,250	1,000	1,000	2,500	2,402	0	2,000	3,908	0	2,012	0	4,845	6,117	0	0	0
Sand Lake	0	0	0	0	0	0	0	0	0	0	0	0	0	2,522	4,522	2,603	2,194	4,332
Tangle Pond	0	0	0	0	0	0	0	0	0	0	0	0	0	503	503	0	0	0
Thompson Lake	0	500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2,500	3,000	5,750	4,000	2,000	5,000	2,402	0	4,000	6,933	0	3,039	0	33,171	25,869	4,699	4,122	7,236

^a Unless otherwise noted, releases are of catchable-sized Arctic char.

Appendix C2.-Chinook salmon stocking in the Anchorage Management Area, by year (1990-2006) and site.

Site	Year																
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<u>Catchable Releases</u>																	
Beach Lake	3,104	3,076	3,037	3,168	6,346	8,115 ^a	2,989	2,000	7,123	2,744	10,709	4,139	3,838	4,040	4,078	3,925	0
Campbell Pt Lake	1,587	1,617	1,986	1,711	1,552	1,534	1,588	1,000	4,072	0	0	3,807	2,000	1,975	2,302	3,158	25,723
Cheney Lake	3,030	5,206	7,398	3,029	5,489	9,905	4,880	4,191	11,358	643	0	0	0	0	0	0	0
Clunie Lake	4,096	4,232	3,937	4,320	4,103	4,291	4,023	2,767	6,000	6,228	8,819	8,360	8,004	3,822	2,981	2,981	0
Delong Lake	5,051	5,068	7,626	5,066	7,432	10,146 ^b	5,020	4,032	12,537	4,045	5,348	5,966	6,207	6,055	5,931	5,982	26,277
Green Lake	0	1,007	1,043	1,051	989	1,562	1,558	1,586	4,032	5,644	2,149	998	1,086	1,190	1,261	1,100	0
Gwen Lake	2,090	0	2,004	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hillberg Lake	0	512	1,071	1,156	989	1,468	1,587	1,586	4,124	1,956	2,058	3,308	981	1,144	1,261	1,100	0
Jewel Lake	38,130	7,027	19,664	7,611	17,325	17,562 ^c	13,929	7,325	22,261	3,938	9,741	21,792	12,538	24,243	21,978	15,828	60,497
Mirror Lake	6,880	4,981	10,263	4,798	10,264	9,257	8,191	0	14,550	0	15,399	10,272	9,683	7,142	7,396	6,958	29,043
Otter Lake	5,014	7,314	15,106	5,400	6,954 ^d	8,528	6,776	5,500	0	7,672	0	0	0	0	0	0	0
Sand Lake	9,973	10,014	15,302	9,968	9,542	6,033	3,929	4,000	10,811	7,749	5,119	4,945	4,930	5,133	4,650	6,122	0
Spring Lake	0	516	0	505	990	1,012	998	1,000	2,000	5,867	1,031	0	0	0	0	0	0
Taku Campbell Lk	0	0	0	0	0	1,948	1,985	2,231	9,219	500	0	0	0	0	0	3,058	0
Tangle Pond	0	0	0	0	0	0	1,154	1,651	2,016	3,052	0	0	0	0	0	0	0
U Six Mile Lake	0	0	423	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	78,955	50,570	88,860	47,783	71,975	81,361	58,607	38,869	110,103	50,038	60,373	63,587	49,267	54,744	51,838	50,212	141,540
<u>Smolt Releases</u>																	
Eagle River	0	102,100	107,695	121,066	107,547	0	0	0	0	0	0	0	0	0	0	0	0
Ship Creek	102,523	211,268	176,380	217,557	199,830	229,799	228,000	325,891	204,741	197,168	265,582	254,924	290,501	329,416	320,226	358,029	176,055

^a 5,117 were 51g subcatchables.

^b 5,082 were 51g subcatchables.

^c 4,976 were 51g subcatchables.

^d 1,639 were 20g subcatchables.

Appendix C3.-Coho salmon stocking in the Anchorage Management Area, by year (1990-2006) and site.

Site	Year																
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<u>Catchable releases</u>																	
Cheney Lake	0	0	30,529	discont.													
Clunie Lake	0	0	0	17,600	0	0	0	0	0	0	0	0	53,790	discont.			
DeLong Lake	0	8,593	discont.														
Green Lake	0	0	0	10,180	discont.												
Hillberg Lake	0	6,112	0	8,000	discont.												
Ingram Creek	80,000	0	0	0	discont.												
Jewel Lake	102,000	8,593	163,533	discont.													
Spring Lake	0	4,000	0	8,000	discont.												
Triangle Lake	0	6,268	discont.														
Walden Lake	0	0	0	5,000	discont.												
Total	182,000	33,566	194,062	48,780	0	53,790											
<u>Smolt releases</u>																	
Bird Creek ^a	0	0	100,924	140,382	84,643	154,753	147,618	294,565	164,211	111,430	97,409	0	0	0	109,949	100,605	104,974
Campbell Creek	0	0	97,076	140,797	87,686	157,241	75,943	71,519	83,317	42,046	63,730	69,836	69,836	78,576	85,790	60,387	78,805
Ship Creek	64,006	57,800	67,178	54,764	75,799	158,981	227,914	232,066	232,765	165,388	260,070	233,563	212,639	234,716	241,006	251,446	252,775
Total	64,006	57,800	265,178	335,943	248,128	470,975	451,475	598,150	480,293	318,864	421,209	303,399	282,475	313,292	436,745	412,438	436,554

Notes: discont. = discontinued.

^a Bird Creek not stocked in 2001-2003 due to construction of the parking area just north of the creek.

Appendix C4.-Arctic grayling stocking in Anchorage Management Area, by year (1987-2006) and site.

Site	Year																
	1987	1989	1990	1991	1992	1993	1994	1995	1996	1999	2000	2001 ^b	2002 ^b	2003	2004	2005	2006
APU Lake	0	0	40,000 ^a	discont.													
Beach Lake	0	4,000	4,000	4,000	0	4,000	4,000	4,000	8,000	1,048		4,749	4,199	7,081 ^c	4,489	279	4,080
Lower Fire Lake	20,000	7,000	7,000	7,000	0	7,000	7,000	7,000	7,500	discont.							
Tangle Pond	0	0	0	0	0	2,000	2,000	discont.									
Walden Lake	0	4,000	4,000	0	0	0	4,000	discont.									
Willow Lake	28,600	3,300	31,500	14,300	14,300	discont.											
Symphony Lake	0	0	0	0	0	0	0	0	0	0		2,936	0	4,239	0	0	0

Notes: Unless otherwise noted, all releases are Arctic grayling fingerling; discont. = discontinued.

^a Emergent fry were stocked APU Lake in 1990

^b Catchable-sized grayling were stocked in 2001 and 2002

^c 2,375 were catchable-sized, and 4,706 were fingerling

Appendix C5.-Rainbow trout stocking in the Anchorage Management Area, by year (1987-2006) and site.

Site	Year																			
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005 ^c	2006
<u>Catchable Releases^a</u>																				
Alder Lake	0	0	0	0	0	0	8,491	5,118	5,747	5,081	2,592	4,002	1,434	2,072	1,906	2,019	2,455	2,295	1,098	507
Beach Lake	4,810	5,307	6,609	4,572	4,497	4,311	3,249	4,437	4,947	4,410	4,244	4,056	9,862	10,133	8,087	10,095	9,614	11,893	7,527	2,802
Campbell Creek	10,281	6,303	9,235	7,277	5,428	8,010	6,071	6,634	5,058	5,104	2,686	0	3,030	4,563	3,909	2,291	4,264	1,560	1,697	1,522
Campbell Pt Lake	5,067	4,995	4,998	5,175	5,194	5,017	3,299	5,099	6,022	5,039	2,906	2,172	0	5,452	5,047	2,561	2,456	5,829	1,442	837
Cheney Lake ^c	10,000	13,366	12,402	10,323	7,503	10,307	11,547	10,998	13,549	10,254	8,946	355	6,074	13,668	0	0	0	0	0	0
Chester Creek ^d	0	4,509	4,467	5,011	2,458	7,700	4,349	4,641	8,135	4,975	2,611	1,000	1,000	852	2,335	2,036	1,779	976	613	324
Clunie Lake	10,357	8,064	10,798	8,290	5,076	8,106	4,918	7,094	9,167	9,244	7,662		9,346	4,669	7,804	3,932	4,613	6,027	4,895	2,060
Dlong Lake	7,228	11,698	12,170	10,437	8,235	12,818	10,968	10,549	13,090	10,246	6,207	7,300	9,904	16,282	12,840	1,231	10,182	17,205	11,363	4,319
Dishno Lake	950	1,000	1,015	0	0	0	0	0	542	512	515	0	483	0	0	0	0	0	0	0
Eagle River	0	0	0	1,010	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Edmonds Lake	0	0	0	0	0	0	0	506	0	985	1,017	0	0	500	1,000	1,723	1,967	1,474	943	395
Elmendorf-Swan	0	0	0	0	0	0	0	0	0	0	136,388	0	0	0	0	0	0	0	0	0
Fish Lake	500	768	1,108	0	0	1,021	822	1,016	1,006	0	1,054	0	1,201	1,135	300	250	532	309	218	100
Green Lake	1,161	1,600	1,993	2,006	2,048	2,049	1,600	1,995	3,307	3,076	2,729	0	2,870	3,151	2,546	1,500	1,359	1,005	889	408
Gwen Lake	4,956	4,089	4,767	4,776	3,316	4,985	3,855	4,688	2,771	4,993	5,299	0	3,969	4,807	5,153	2,073	4,994	5,001	3,002	1,364
Hillberg Lake	1,199	1,414	1,510	1,500	1,557	1,500	1,200	1,502	3,116	3,393	3,054	2,984	0	4,802	1,645	1,532	1,889	1,840	1,744	676
Jewel Lake	9,996	13,493	20,534	14,297	12,950	18,671	17,282	13,627	16,239	11,086	10,189	6,974	16,344	15,546	23,862	14,057	17,344	20,160	12,656	4,999
Lake Otis	1,683	1,534	1,507	1,500	1,566	1,485	1,307	1,510	1,570	1,573	1,155	0	0	500	500	500	250	554	458	275
Lower Fire Lake	4,740	5,018	6,653	5,220	5,501	5,181	5,329	6,706	8,052	5,170	3,081	3,350	1,672	3,000	3,018	2,976	2,713	2,109	1,663	864
Mirror Lake	10,151	8,173	2,456	10,273	7,841	10,243	8,520	10,429	14,068	10,079	9,771	0	11,299	12,107	19,595	9,299	7,402	10,812	9,855	4,424
Otter Lake	10,059	13,262	13,130	11,150	10,532	11,730	6,139	13,403	12,010	9,304	12,767	106	4,901	10,923	10,159	5,418	7,342	3,738	3,618	1,827
Rabbit Lake	0	0	0	0	0	0	0	0	0	2,553	0	0	1,994	0	0	920	0	0	400	0
Sand Lake	5,404	7,101	9,821	7,211	5,225	11,413	6,684	7,273	7,380	6,069	3,646	0	1,466	4,096	6,201	3,074	2,105	4,983	2,680	2,098
Six Mile Lake	2,362	0	1,473	1,498	800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spring Lake	713	0	1,015	0	0	1,065	784	1,000	1,026	1,063	917	500	0	500	0	500	500	505	370	180
Taku Campbell Lake ^c	5,065	7,622	4,161	4,246	4,242	4,536	3,382	4,119	5,126	4,163	3,022	101	2,351	7,637	0	2,869	1,804	3,490	2,225	2,674
Tangle Pond	0	0	0	0	0	0	0	5,000	1,115	3,004	1,247	1,181	983	1,000	1,713	1,031	1,021	1,607	1,075	510
Thompson Lake	1,915	1,024	2,030	2,019	2,017	1,982	1,408	0	1,992	1,979	1,969	978	939	0	977	0	0	0	0	0
Triangle Lake	579	1,178	1,256	1,028	984	1,006	674	1,032	1,062	1,448	989		10,133	707		500	500	505	370	180
Upper Six Mile Lk.	0	400	0	0	696	1,510	1,272	1,529	3,096	3,110	3,000	0	4,103	5,066	2,256	2,001	2,241	1,898	1,210	480
Walden Lake	0	0	4,383	4,050	0	4,146	3,348	4,065	1,995	2,006	2,034	1,005	0	1,000	4,615	3,208	1,149	0	864	375
Willow Airstrip Pnd	0	0	0	0	0	0	0	0	0	985	0	0	0	1,497	1,938	2,200	1,866	1,671	1,281	616
Willow Lake	0	0	0	0	0	0	14,300	0	0	0	0	0	1,000	0	0	0	0	0	0	0
Total	109,176	121,918	139,491	122,869	97,666	138,792	130,798	133,970	151,188	213,390	241,697	158,437	106,358	135,665	127,406	79,796	92,341	107,446	74,156	34,818

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Site	Year																			
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005 ^e	2006 ^e
Subcatchable releases^b																				
Beach Lake	0	8,890	0	0	0	0	0	17,748	0	0	0	0	29,844	discontinued						
Campbell Pt Lake	0	0	0	0	0	0	0	0	0	0	0	0	0	discontinued						
Cheney Lake ^c	0	2,500	0	0	0	0	0	0	0	0	0	5,440	0	discontinued						
Chester Creek ^d	0	0	0	0	0	0	0	0	0	0	0	0	0	discontinued						
Clunie Lake	20,004	6,087	0	0	0	0	102,734	58,094	91,604	0	0	4,152	46,138	discontinued						
DeLong Lake	0	1,970	0	0	0	0	0	0	0	0	51,088	0	2,769	discontinued						
Dishno Lake	0	0	0	0	0	0	0	0	0	0	0	125	0	discontinued						
Eagle River	0	0	0	0	0	0	0	0	0	0	0	2,462	0	discontinued						
Edmonds Lake	0	0	0	0	0	0	0	0	0	0	0	1,195	0	discontinued						
Fish Lake	0	420	0	0	0	0	0	0	0	0	0	1,500	0	discontinued						
Green Lake	0	1,870	0	0	0	0	0	0	43,077	0	0	2,088	0	discontinued						
Gwen Lake	0	0	0	0	0	0	0	0	0	0	0	39,298	0	discontinued						
Hillberg Lake	0	1,120	0	0	0	0	0	0	0	0	0	2,984	0	discontinued						
Jewel Lake	0	2,620	0	0	0	0	0	0	0	0	53,919	7,060	6,772	discontinued						
Lake Otis	0	0	0	0	0	0	0	0	0	0	0	1,000	0	discontinued						
Lower Fire Lake	0	6,290	0	0	0	0	0	0	0	0	0	0	1,284	discontinued						
Mirror Lake	0	6,820	0	0	0	0	0	0	3,000	0	3,510	7,032	38,254	discontinued						
Otter Lake	0	20,082	6,562	55,976	0	93,723	148,418	81,815	53,884	0	0	6,888	55,921	discontinued						
Sand Lake	0	6,700	0	0	0	0	0	0	0	0	0	1,098	0	discontinued						
Six Mile Lake	0	4,140	0	0	0	0	0	0	0	0	0	0	0	discontinued						
Taku Campbell Lake ^c	0	0	0	0	0	0	0	0	0	0	0	1,797	0	discontinued						
Tangle Pond	0	0	0	0	0	0	0	0	0	80,375	0	0	0	discontinued						
Thompson Lake	0	0	0	0	0	0	0	0	0	0	0	0	0	discontinued						
Triangle Lake	0	0	0	0	0	0	0	0	0	0	0	1,000	10,133	discontinued						
Upper Six Mile Lake	0	0	0	0	0	0	0	0	0	0	0	2,234	0	discontinued						
Willow Lake	0	0	0	0	0	0	0	14,803	14,300	14,490	0	12,900	12,494	discontinued						
Total	20,004	69,509	6,562	55,976	0	93,723	251,152	172,460	205,865	94,865	108,517	100,253	203,609							

^a Catchable releases includes catchable and brood stock rainbow trout.

^b Subcatchable releases includes fry, smolt, subcatchable, and eyed eggs.

Appendix C6.-Other fish stocking in the Anchorage Management Area, by species, year and site.

Site	Year							
	1985	1986	1987	1988	1989	1999	2000	2001
<u>Pink Salmon</u>								
Ingram Creek	0	0	259,200	252,975	325,380	discontinued		
<u>Lake Trout</u>								
Clunie Lake	0	0	0	0	0	2,150	discontinued	
Sand Lake	0	0	0	0	0	2,022	discontinued	
<u>Steelhead Trout</u>								
Campbell Lake	35,196	44,873	discontinued					
Cheney Lake	0	0	4,054	discontinued				
Delong Lake	0	0	4,143	discontinued				
Gwen Lake	0	0	3,169	discontinued				
Jewel Lake	0	0	5,842	discontinued				
Sand Lake	0	0	6,000	discontinued				
<u>Salmon Hybrids</u>								
Campbell Lake	0	0	0	0	0	0	1,902	discontinued
Delong Lake	0	0	0	0	0	0	2,907	discontinued
Jewel Lake	0	0	0	0	0	0	1,930	discontinued