State of Alaska
Department of Fish and Game
Division of Sport Fish

Nomination Form
Anadromous Waters Catalog

Region: SCN

USGS Quad(s): listed

Anadromous Waters Catalog Number of Waterway: listed

Name of Waterway: listed

☐ USGS Name ☐ Local Name

☐ Addition ☐ Deletion ☐ Correction ☑ Backup Information

For Office Use

Nomination # 08-132	Fisheries Scientist — Date
Revision Year: 2009	Habitat Operations Manager — Date
Revision to: Atlas ____ Catalog ____ Both ____	AWC Project Biologist — Date 5/19/08
Revision Code: F-1	Cartographer — Date

OBSERVATION INFORMATION

Species	Date(s) Observed	Spawning	Rearing	Present	Anadromous
Chinook salmon				X	☑
Chum salmon				X	☑
Sockeye salmon				X	☑
Coho salmon				X	☑
					☐

IMPORTANT: Provide all supporting documentation that this water body is important for the spawning, rearing or migration of anadromous fish, including: number of fish and life stages observed; sampling methods, sampling duration and area sampled; copies of field notes; etc. Attach a copy of a map showing location of mouth and observed upper extent of each species, as well as other information such as: specific stream reaches observed as spawning or rearing habitat; locations, types, and heights of any barriers; etc.

Comments: ADF&G Fishery Manuscript No. 07-06 "Review of Escapement Goals in Upper Cook Inlet, 2007" documents the presence of a number of anadromous fish species in several water bodies.

Name of Observer (please print): J Johnson

Signature:

Date: 5/19/08

Agency:

Address: 333 Raspberry Rd Anchorage AK 99518

This certifies that in my best professional judgment and belief the above information is evidence that this waterbody should be included in or deleted from the Anadromous Waters Catalog.

Signature of Area Biologist: _____ Date: _____

Name of Area Biologist (please print):

Revision 05/08

From ADFG Fishery Manuscript No. 07-06 Review of Salmon Escapement Goals in Upper Cook Inlet, 2007.

Quad	STREAM_COD	NAME	AWC specstr	escape rpt species
KENAI C-4	244-30-10010	Kenai River	CHp,COp,Ks,Ps,Sp,DVp,LPp,Wp,OUp	Chinook & sockeye salmon
SEWARD B-8	244-30-10010-2158	Russian River	COp,Kp,Sp,DVp	Sockeye salmon
KENAI B-4	244-30-10050	Kasilof River	COp,Ks,Ps,Sm,DVp,PCp,SHp	Sockeye salmon
KENAI B-4	244-30-10050-2024	Crooked Creek	COs,Ks,Pp,DVp,PCp,SHp	Chinook salmon
ILIAMNA D-1	245-10-10030	Chinitna River	CHp,Sp	not cited in report
ILIAMNA D-1	245-10-10030-2007	Clearwater Creek	CHp	Chum salmon
KENAI A-7	245-30-10010	Crescent River	CHp,COp,Kp,Pp,Sp,DVp	Sockeye salmon
KENAI B-6	246-20-10020	Packers Creek	COs,Sp,DVp	not cited in report
KENAI B-6	246-20-10020-0010	Packers Creek Lake	COp,Ss,DVp	Sockeye salmon
TYONEK A-4	247-20-10010	Chuitna River	CHs,COpr,Kp,Ps,Sp,DVp	Chinook salmon
TYONEK A-3	247-30-10070	Lewis River	COr,Ksr,Pp	Chinook salmon
TYONEK A-3	247-30-10080	Theodore River	CHp,COr,Ksr,Pp	Chinook salmon
TYONEK B-1	247-41-10100	Little Susitna River	CHp,COp,Kp,Pp,Sp	Chinook & coho salmon
TYONEK B-2	247-41-10200	Susitna River	CHp,COp,Kp,Pp,Sp,DVp,Wp	not cited in report
TYONEK B-2	247-41-10200-2015	Alexander Creek	COr,Kp,Pp,Sp	Chinook salmon
TYONEK D-3	247-41-10200-2015-3040	Clear Creek	COp,Kp	Chinook salmon
TYONEK B-2	247-41-10200-2020	Fish Creek	COp,Kp,Pp,Sp	Sockeye salmon
TYONEK C-2	247-41-10200-2053	Yentna River	CHp,COpr,Kpr,Pp,Sr	Sockeye salmon
TYONEK D-3	247-41-10200-2053-3150	Kahiltna River	CHp,COp,Kpr,Pp,Sp	not cited in report
TALKEETNA A-2	247-41-10200-2053-3150-4060	Peters Creek	CHp,COr,Ksr,Pp,Sp	Chinook salmon
TYONEK D-3	247-41-10200-2053-3170	Lake Creek	CHs,COr,Ksr,Pp,Spr	Chinook salmon
TYONEK D-4	247-41-10200-2053-3205	Skwentna River	CHp,COp,Kp,Pp,Sp	not cited in report
TYONEK D-4	247-41-10200-2053-3205-4053	Talachulitna River	CHp,COp,Kp,Pp,Sp	Chinook salmon
TYONEK C-1	247-41-10200-2081	Deshka River / Kroto Creek	CHp,COpr,Kpr,Pp,Spr,Wp	Chinook salmon
TYONEK D-1	247-41-10200-2120	Willow Creek	CHs,COsr,Ksr,Ps	Chinook salmon
TYONEK D-1	247-41-10200-2130	Little Willow Creek	CHp,COsr,Ksr,Ps	Chinook salmon
TYONEK D-1	247-41-10200-2200	Sheep Creek	CHs,COp,Ksr,Ps	Chinook salmon
TALKEETNA A-1	247-41-10200-2230	Goose Creek	CHs,COsr,Ksr,Ps	Chinook salmon
TALKEETNA A-1	247-41-10200-2250	Montana Creek	CHs,COr,Ksr,Ps	Chinook salmon
TALKEETNA B-1	247-41-10200-2370	Talkeetna River	CHp,COp,Kp,Pp,Sp	not cited in report
TALKEETNA MTS C-5	247-41-10200-2370-3301	Prairie Creek	CHp,COsr,Ksr,Sp	Chinook salmon
TALKEETNA B-1	247-41-10200-2381	Chulitna River	CHs,COp,Kp,Pp,Sp	Chinook salmon
ANCHORAGE C-6	247-50-10200-2081	Jim Creek	COs,Sp	Coho salmon
ANCHORAGE A-8	247-60-10340	Campbell Creek	COpr,Ksr,Pp,Sp,DVp	Chinook salmon

Fishery Manuscript No. 07-06

Review of Salmon Escapement Goals in Upper Cook Inlet, Alaska, 2007

by

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and

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November 2007

Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries

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ABSTRACT

In January 2007, a salmon escapement goal review committee, composed of Alaska Department of Fish and Game staff from the Division of Commercial Fisheries and Division of Sport Fish, was formed to review Pacific salmon *Oncorhynchus* spp. escapement goals for the major river systems in Upper Cook Inlet, Alaska. Escapement goals were evaluated for 22 Chinook salmon, 1 chum salmon, 3 coho salmon, and 8 sockeye salmon stocks. The committee did not recommend a change to any existing goals, however, the committee recommended re-instating the sustainable escapement goals (SEG) of 50–700 for Campbell Creek Chinook salmon and 15,000–30,000 for Packers Creek sockeye salmon. In addition, the committee recommended removing the SEG for South Fork Eagle River Chinook salmon and Campbell Creek coho salmon.

Key words: Upper Cook Inlet, escapement goal, biological escapement goal, BEG, sustainable escapement goal, SEG, sockeye salmon, *Oncorhynchus nerka,* Chinook salmon, *O. tshawytscha*, coho salmon, *O. kisutch*, chum salmon, *O. keta*, Alaska Board of Fisheries.

INTRODUCTION

Upper Cook Inlet (UCI), Alaska, supports all five species of Pacific salmon *Oncorhynchus*. The Alaska Department of Fish and Game (ADF&G; department) reviews the escapement goals for UCI salmon stocks on a schedule that corresponds to the Alaska Board of Fisheries (BOF) 3-year cycle for considering area regulatory proposals. This report describes the UCI salmon escapement goals that were reviewed in 2007 and presents information from the subsequent 3 years in the context of these goals. UCI escapement goals were thoroughly reviewed during the previous 2004–2005 BOF cycle (Clark et al. 2007; Hasbrouck and Edmundson 2007). Due to the thoroughness of the previous analyses, this review re-analyzed only those goals with recent (2004–2006) data that substantially changed findings from the 2004 review.

Escapement goals were reviewed based on the Policy for the Management of Sustainable Salmon Fisheries (SSFP; 5 AAC 39.222) and the Policy for Statewide Salmon Escapement Goals (EGP; 5 AAC 39.223). The Alaska Board of Fisheries adopted these policies into regulation during winter 2000–2001 to ensure that the state's salmon stocks are conserved, managed, and developed using the sustained yield principle. Two important terms defined in the SSFP were:

"Biological Escapement Goal" or "(BEG)" means the escapement that provides the greatest potential for maximum sustained yield; BEG will be the primary management objective for the escapement unless an optimal escapement or inriver run goal has been adopted; BEG will be developed from the best available biological information, and should be scientifically defensible on the basis of available biological information; BEG will be determined by the department and will be expressed as a range based on factors such as salmon stock productivity and data uncertainty; the department will seek to maintain evenly distributed salmon escapements within the bounds of a BEG;" and

"Sustainable Escapement Goal" or "(SEG)" means a level of escapement, indicated by an index or an escapement estimate, that is known to provide for sustained yield over a 5 to 10 year period, used in situations where a BEG cannot be estimated due to the absence of a stock specific catch estimate; the SEG is the primary management objective for the escapement, unless an optimal escapement or inriver run goal has been adopted by the board, and will be developed from the best available biological information; the SEG will be determined by the department and will be stated as a range that takes into account data uncertainty; the department will seek to maintain escapements within the bounds of the SEG.

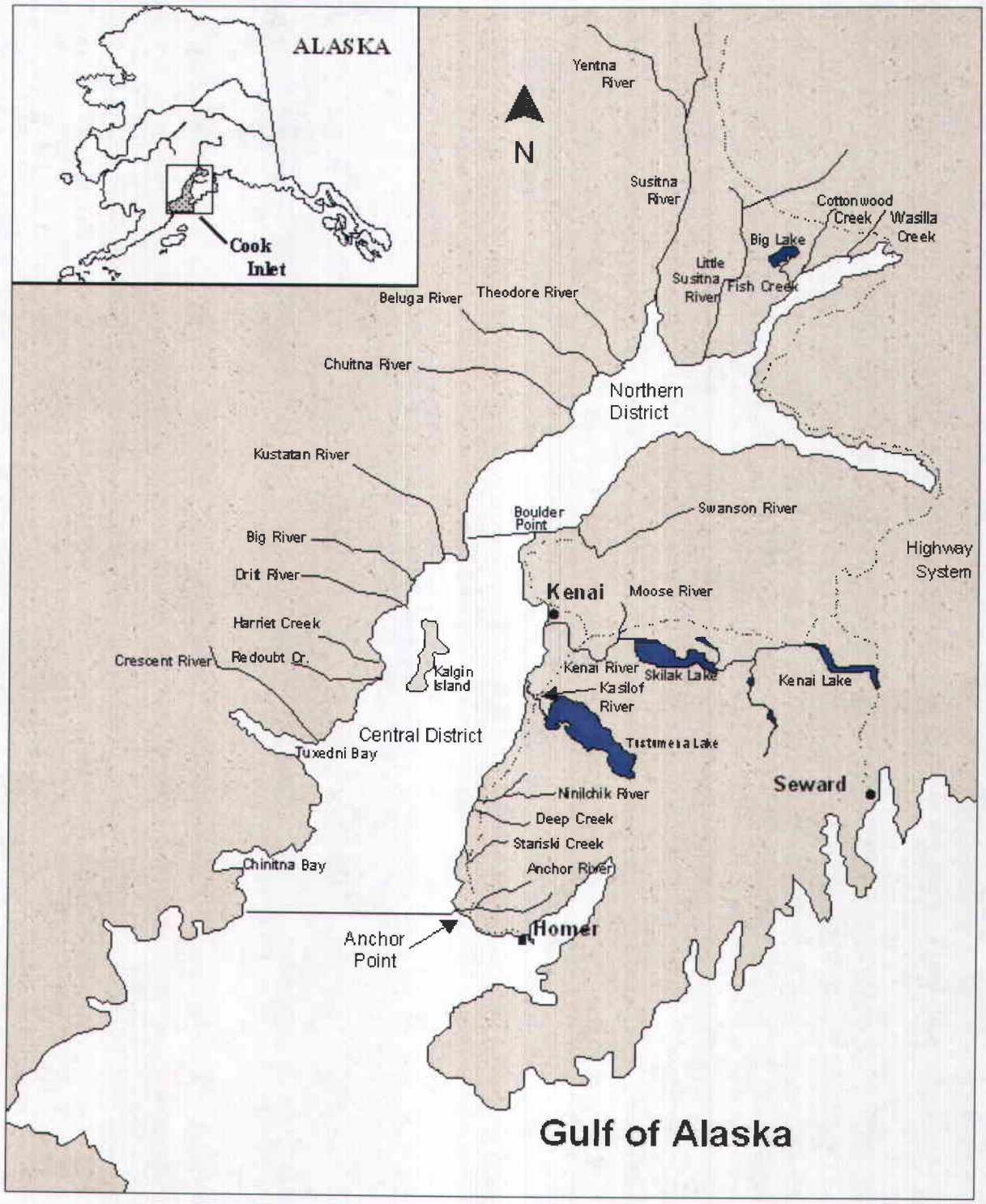

Figure 1.–Map of Upper Cook Inlet showing locations of the Northern and Central Districts and the primary salmon spawning drainages.

Table 2.–Current escapement goals, escapements observed from 2004 through 2007, and escapement goal recommendations in 2007 for Chinook, chum, coho, and sockeye salmon stocks of Upper Cook Inlet, Alaska.

System	Escapement Data [a]	Escapement Goal Type (BEG, SEG)	Escapement Goal Range	Escapements [b] 2004	2005	2006	Recommendation [c]
Chinook Salmon							
Alexander Creek	SAS	SEG	2,100–6,000	2,215	2,140	885	NC
Campbell Creek	SFS	SEG	50–700	964	1,097	1,052	Re-instated previous SEG
Chuitna River	SAS	SEG	1,200–2,900	2,938	1,307	1,911	NC
Chulitna River	SAS	SEG	1,800–5,100	2,162	2,838	2,862	NC
Clear (Chunilna) Creek	SAS	SEG	950–3,400	3,417	1,924	1,520	NC
Crooked Creek [d]	Weir	SEG	650–1,700	2,196	1,903	1,516	NC
Deshka River	Weir	BEG	13,000–28,000	57,934 [e]	37,725	31,150	NC
Eagle River-S. Fork	SFS	SEG	50–350	47	32 [f]	13 [f]	Drop goal
Goose Creek	SAS	SEG	250–650	417	468	306	NC
Kenai River - Early Run	Sonar	BEG	4,000–9,000	11,855	16,387	18,560 [g]	NC
Kenai River - Late Run	Sonar	BEG	17,800–35,700	40,198	26,046	24,843 [g]	NC
Lake Creek	SAS	SEG	2,500–7,100	7,598	6,345	5,300	NC
Lewis River	SAS	SEG	250–800	1,000	441	341	NC
Little Susitna River	SAS	SEG	900–1,800	1,694	2,095	1,855	NC
Little Willow Creek	SAS	SEG	450–1,800	2,227	1,784	816	NC
Montana Creek	SAS	SEG	1,100–3,100	2,117	2,600	1,850	NC
Peters Creek	SAS	SEG	1,000–2,600	3,757	1,508	1,114	NC
Prairie Creek	SAS	SEG	3,100–9,200	5,570	3,862	3,570	NC
Sheep Creek	SAS	SEG	600–1,200	285	760	580	NC
Talachulitna River	SAS	SEG	2,200–5,000	8,352	4,406	6,152	NC
Theodore River	SAS	SEG	500–1,700	491	478	958	NC
Willow Creek [d]	SAS	SEG	1,600–2,800	2,840	2,411	2,193	NC
Chum Salmon							
Clearwater Creek	PAS	SEG	3,800–8,400	3,900	530	500	NC

-continued-

Table 2.–Page 2 of 2.

System	Escapement Data [a]	Escapement Goal Type (BEG, SEG)	Escapement Goal Range	Escapements [b] 2004	2005	2006	Recommendation [c]
Coho Salmon							
Campbell Creek	SFS	SEG	100–500	713	1,130	542	Drop goal
Jim Creek [h]	SFS	SEG	450–700	4,652	1,464	2,389	NC
Little Susitna River	Weir	SEG	10,100–17,700	40,199	16,839	8,786 [i]	NC
Pink Salmon							
No stocks with an escapement goal							
Sockeye Salmon							
Crescent River	Sonar	BEG	30,000–70,000	103,000	125,000	92,000	NC
Fish Creek (Knik) [j]	Weir	SEG	20,000–70,000	20,465	12,051	26,712	NC
Kasilof River	Sonar	BEG	150,000–250,000	575,000	346,000	366,000	NC
Kenai River	Sonar	SEG	500,000–800,000	1,120,000	1,113,000	1,270,000 [k]	NC
Packers Creek	Weir	SEG	15,000–30,000	NS	25,516	NS	Re-instated previous SEG
Russian River - Early Run	Weir	SEG	14,000–37,000	56,582	52,903	80,524	NC
Russian River - Late Run	Weir	SEG	30,000–110,000	110,244	54,808	84,432	NC
Yentna River	Sonar	SEG	90,000–160,000	71,281	36,921	92,045	NC

[a] SAS = Single Aerial Survey, PAS = Peak Aerial Survey, SFS = Single Foot Survey.

[b] NS = No Survey. Fish required to meet broodstock needs, in addition to meeting escapement goal, include 250 Chinook salmon at Crooked Creek and Deception Creek; 500 Chinook salmon at Ship Creek; 150 coho salmon at Jim Creek; 1,000 coho salmon at Ship Creek; 10,000 sockeye salmon at the Kasilof River; and 5,000 sockeye salmon at Fish Creek.

[c] NC = No Change.

[d] Escapement of naturally produced fish only.

[e] Weir count. Historic harvest upstream of weir = 1,005 Chinook salmon during 2000–2003.

[f] Poor survey count due to timing, weather, or poor visibility.

[g] Actual estimates of escapement not available until fall 2008 pending results from the Statewide Harvest Survey.

[h] Foot survey of McRoberts Creek only, upon which the SEG is based.

[i] Incomplete weir count due to flooding.

[j] The goal represents total spawner abundance minus sockeye salmon taken for broodstock.

[k] Used preliminary estimate of sport harvest upstream of sonar.