

SPORT FISHERIES OF NORTHERN COOK INLET



Sam Ivey

Alaska Department of Fish and Game

Division of Sport Fish

Palmer

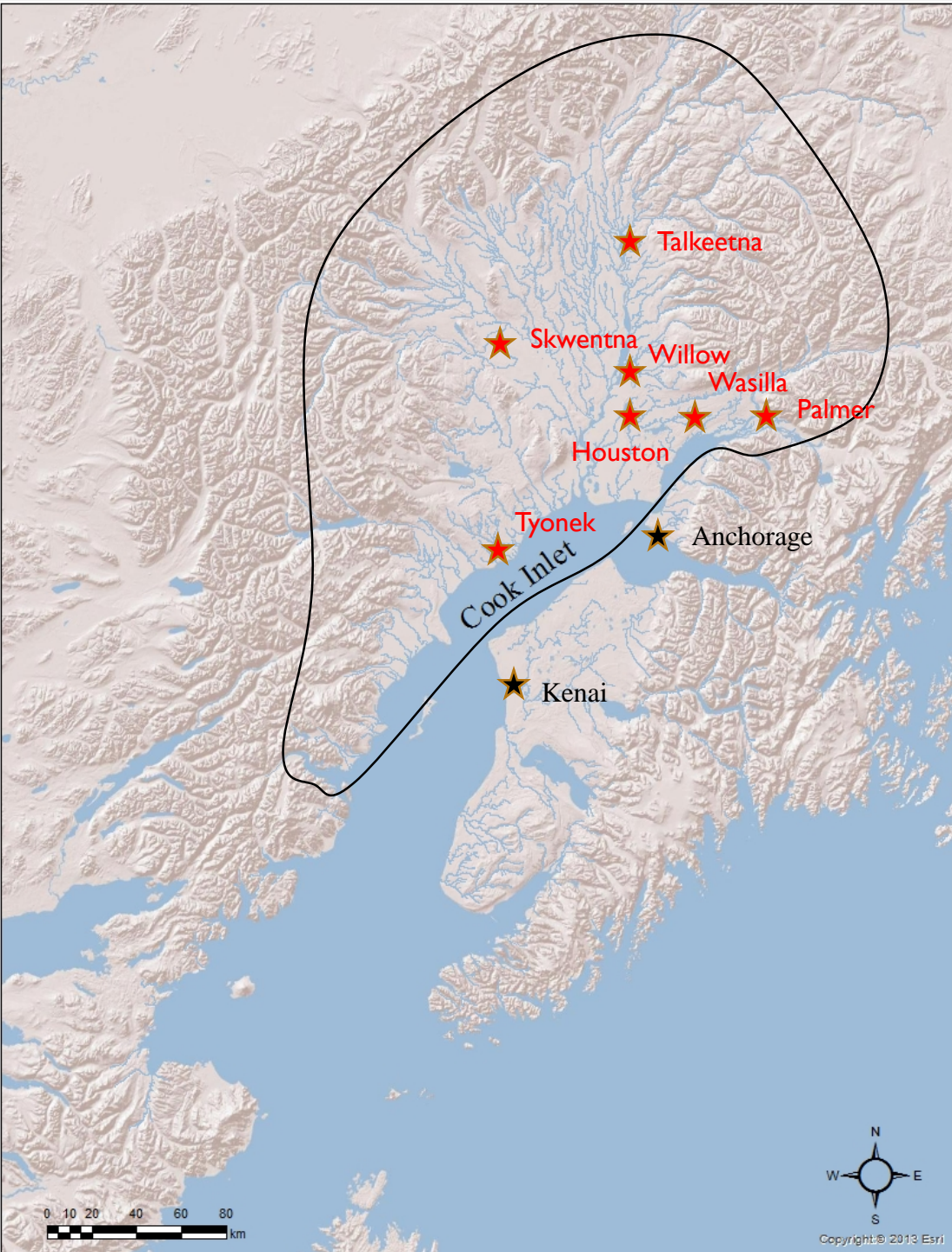


Oral Report

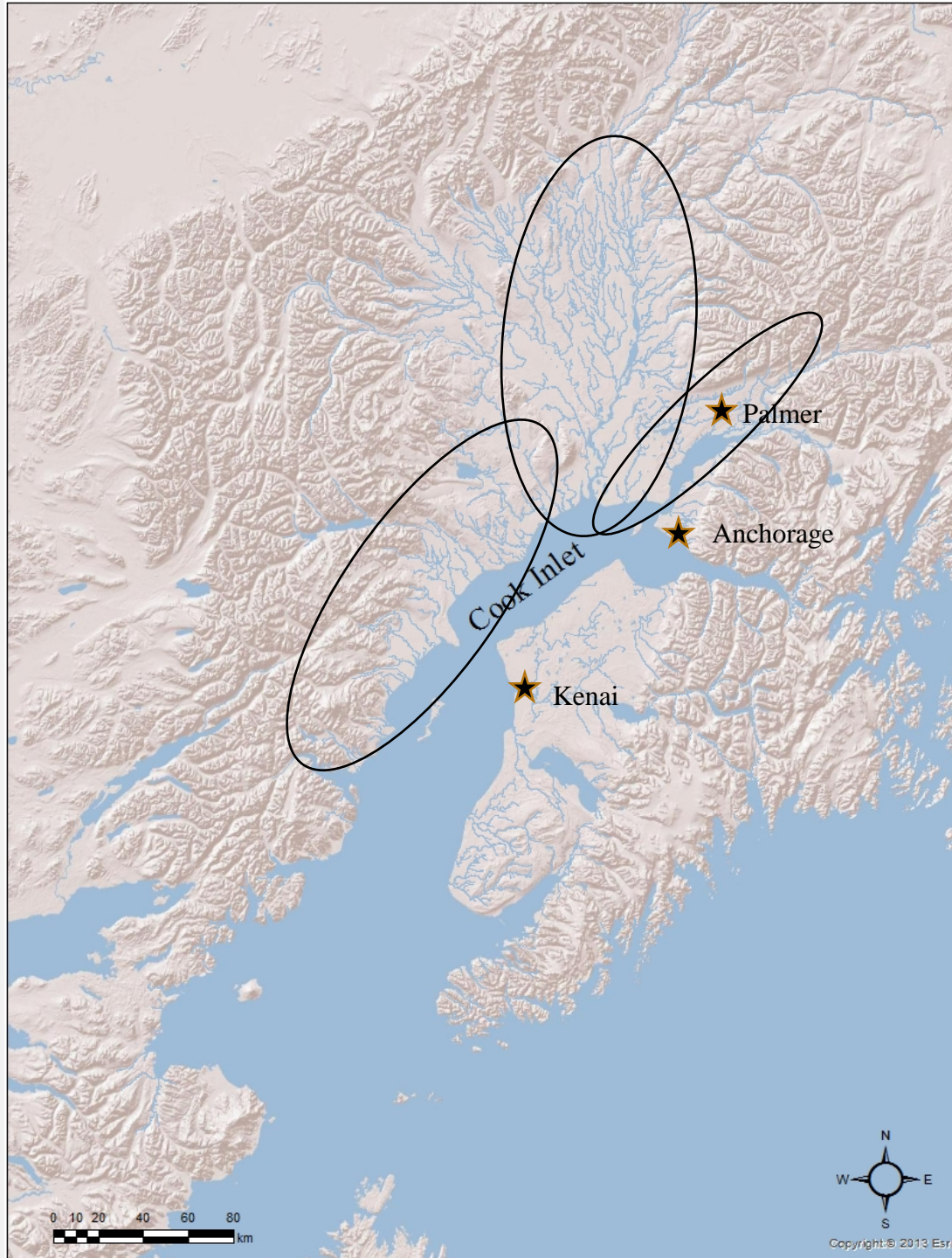
RC 4

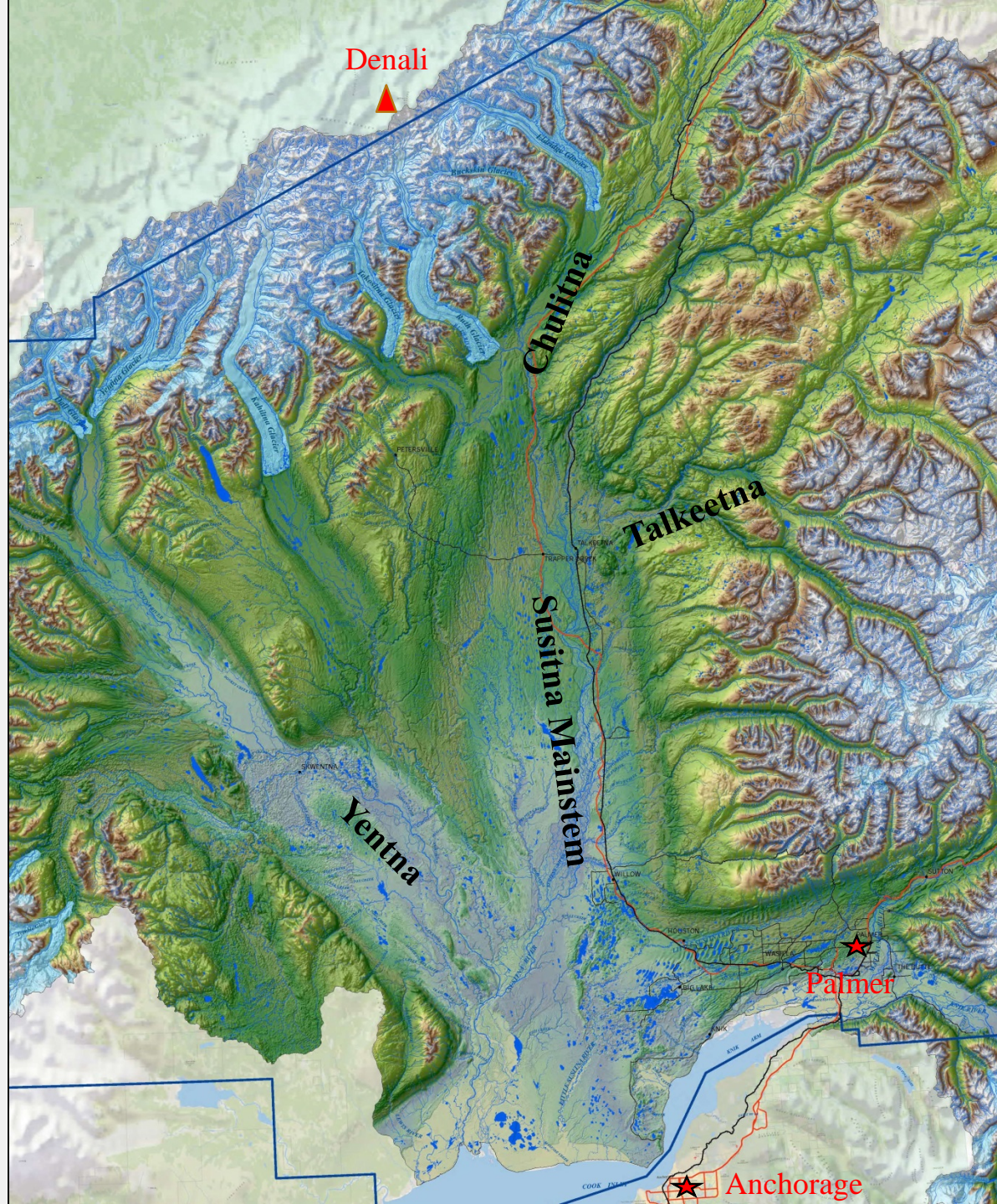
TAB 11

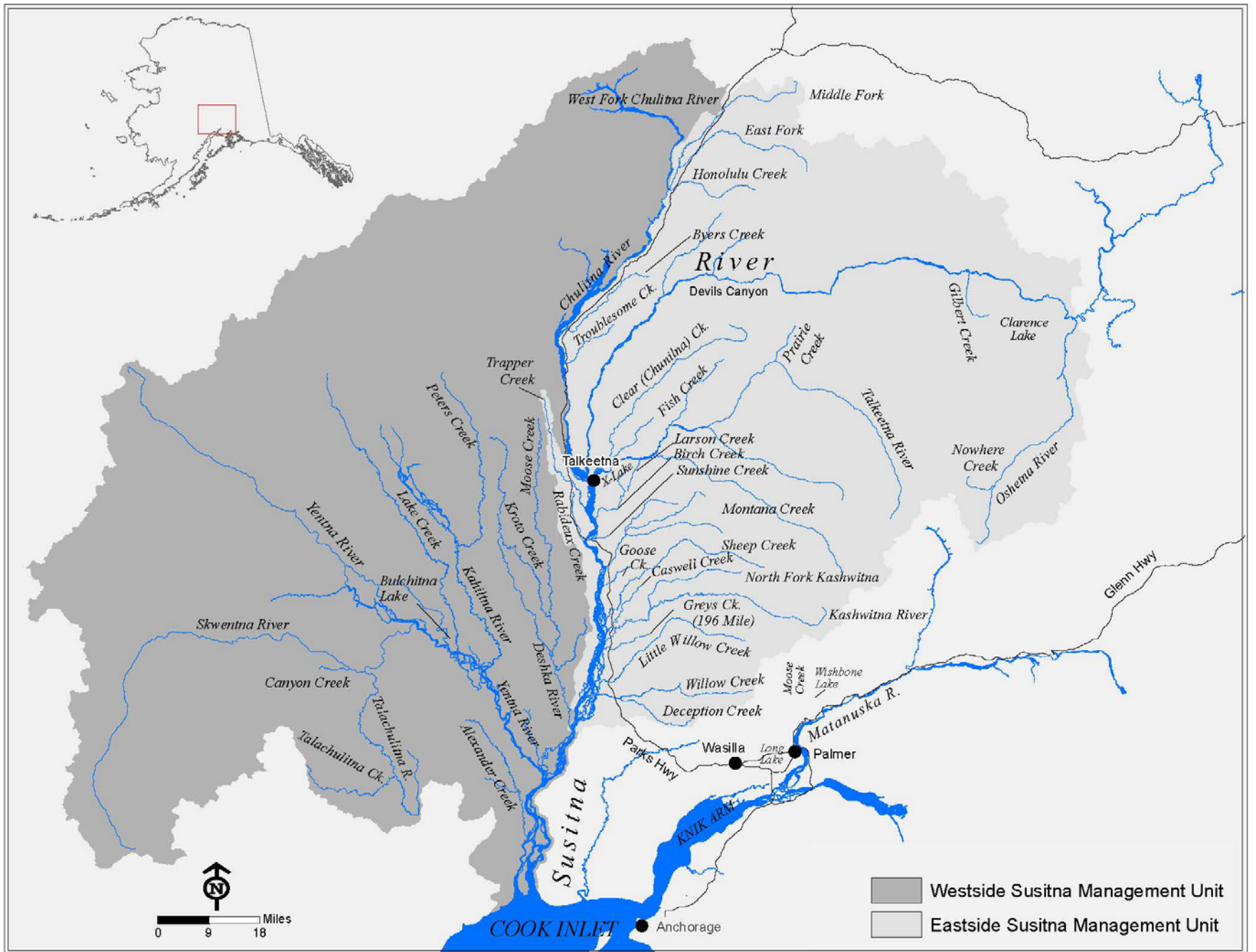
Northern Cook Inlet (NCI)



Susitna Drainage
West Cook Inlet
Knik Arm







West Fork Chulitna River

Middle Fork

East Fork

Honolulu Creek

Chulitna River

Byers Creek

Devils Canyon

River

Troublesome Ck.

Clear (Chumilna) Ck.

Fish Creek

Prairie Creek

Gilbert Creek

Clarence Lake

Trapper Creek

Peeters Creek

Moose Creek

Kroat Creek

Talkeetna Lake

Rabhear Creek

Larson Creek

Birch Creek

Sunshine Creek

Montana Creek

Talkeetna River

Nowhere Creek

Oshima River

Yena River

Lake Creek

Bulchitna Lake

Kalhitna River

Deafna River

Yena River

Skwentna River

Canyon Creek

Talachulitna R.

Talachulitna Ck.

Alexander Creek

Susitna

Goose Ck.

Caswell Creek

Sheep Creek

North Fork Kashwitna

Greys Ck. (196 Mile)

Kashwitna River

Little Willow Creek

Willow Creek

Deception Creek

Moose Creek

Wishbone Lake

Matanuska R.

Parks Hwy

Wasilla

Long Lake

Palmer

Glenn Hwy

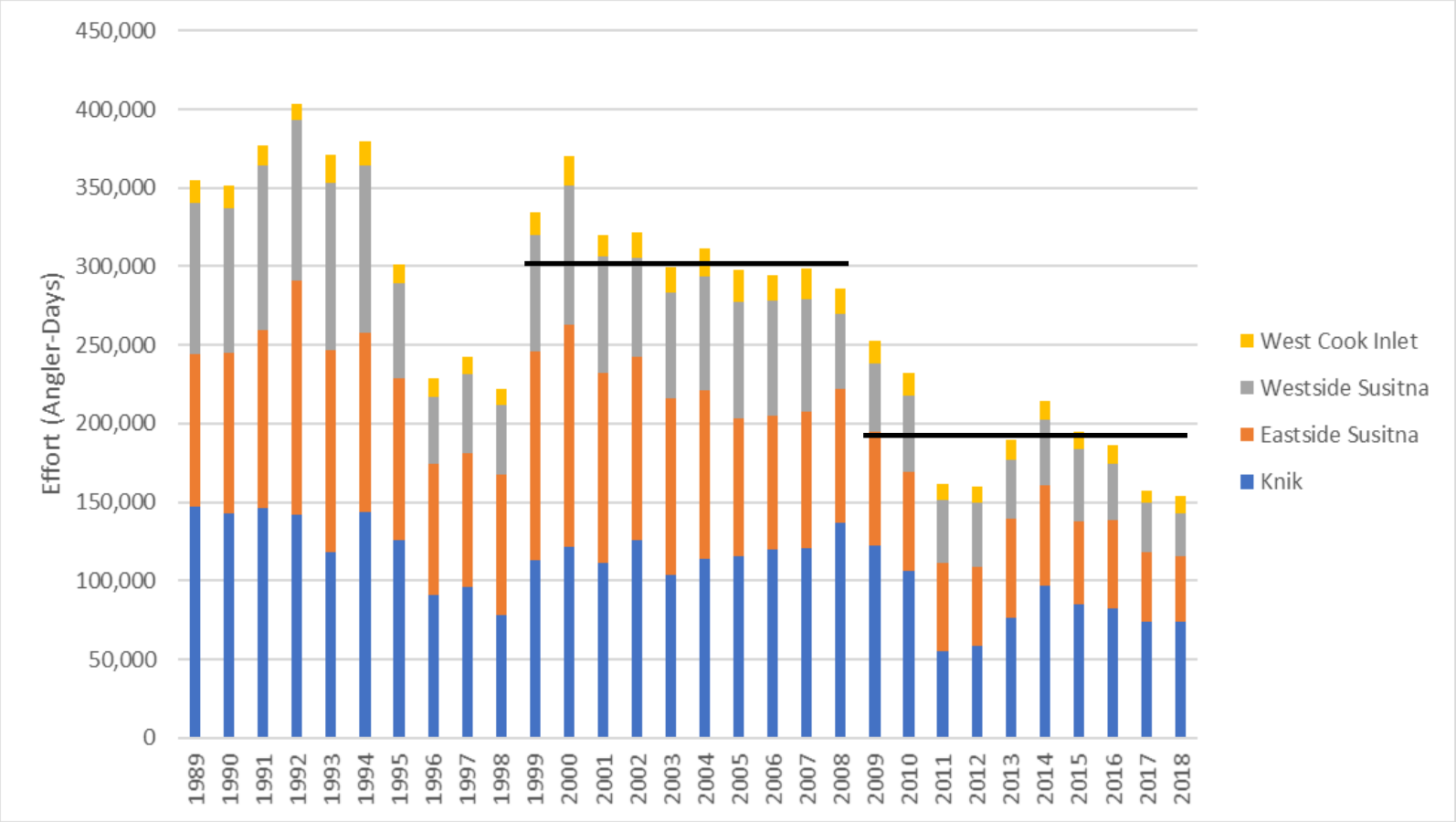
COOK INLET

● Anchorage

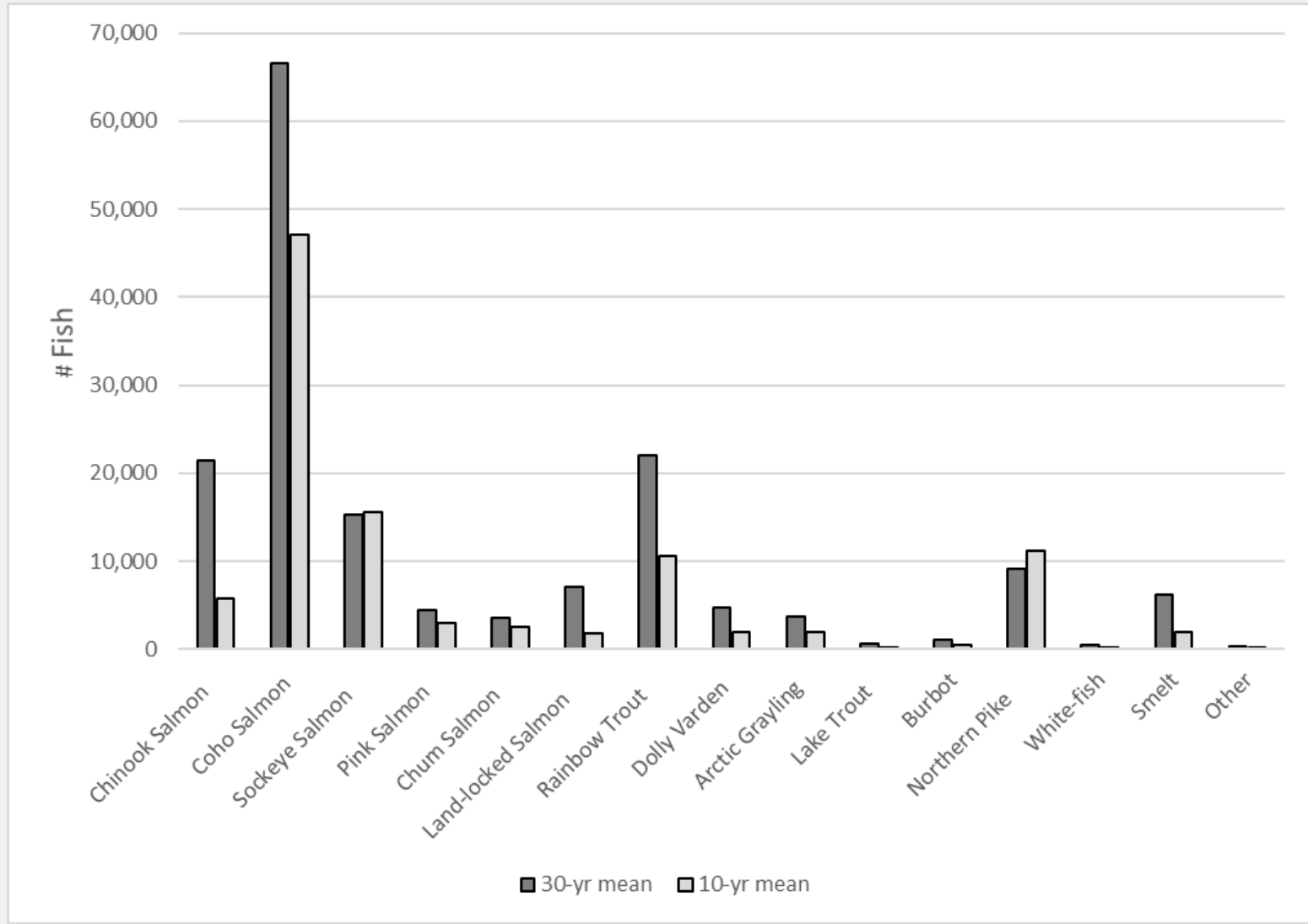
Westside Susitna Management Unit
 Eastside Susitna Management Unit

0 9 18 Miles

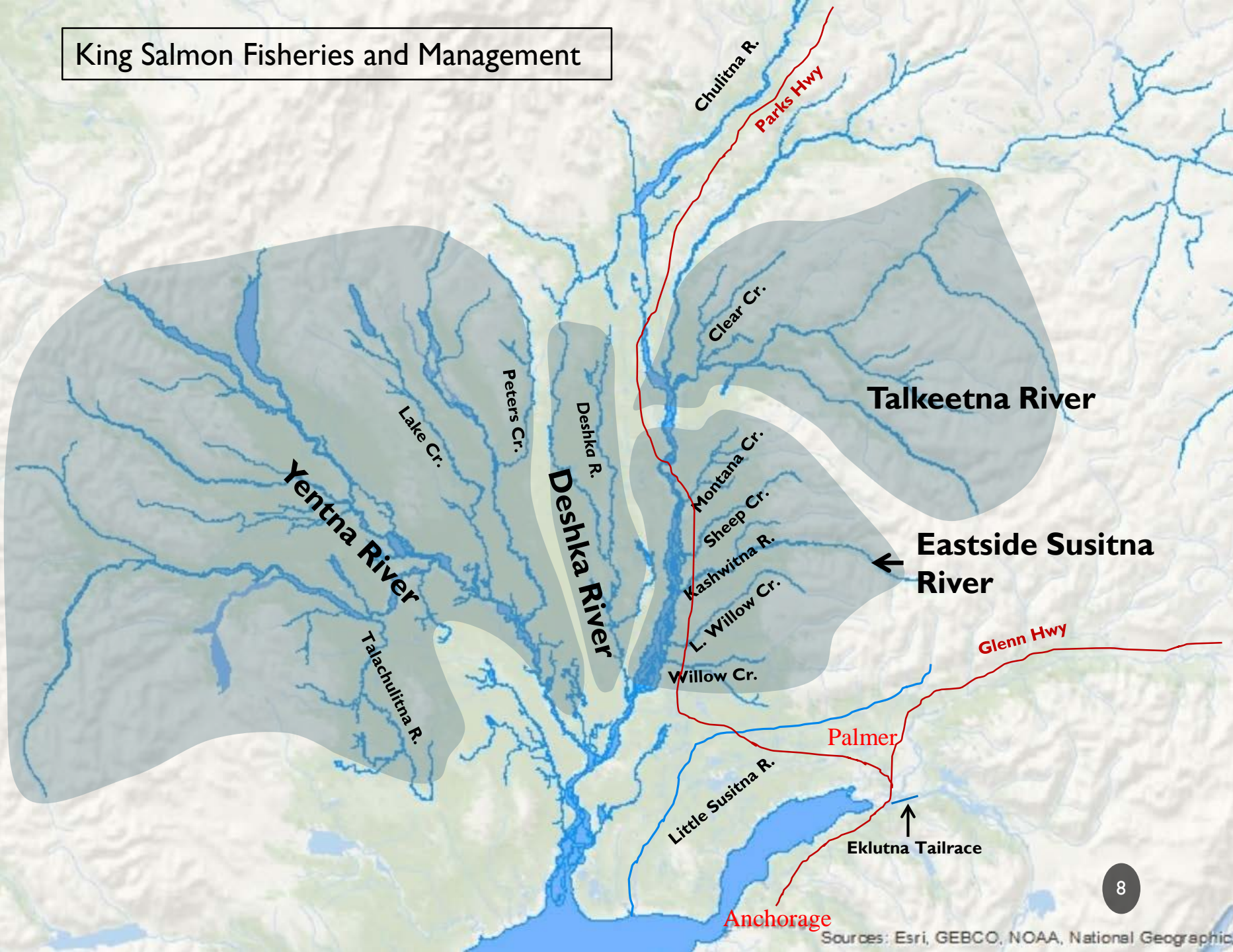
NCI Fishing Effort



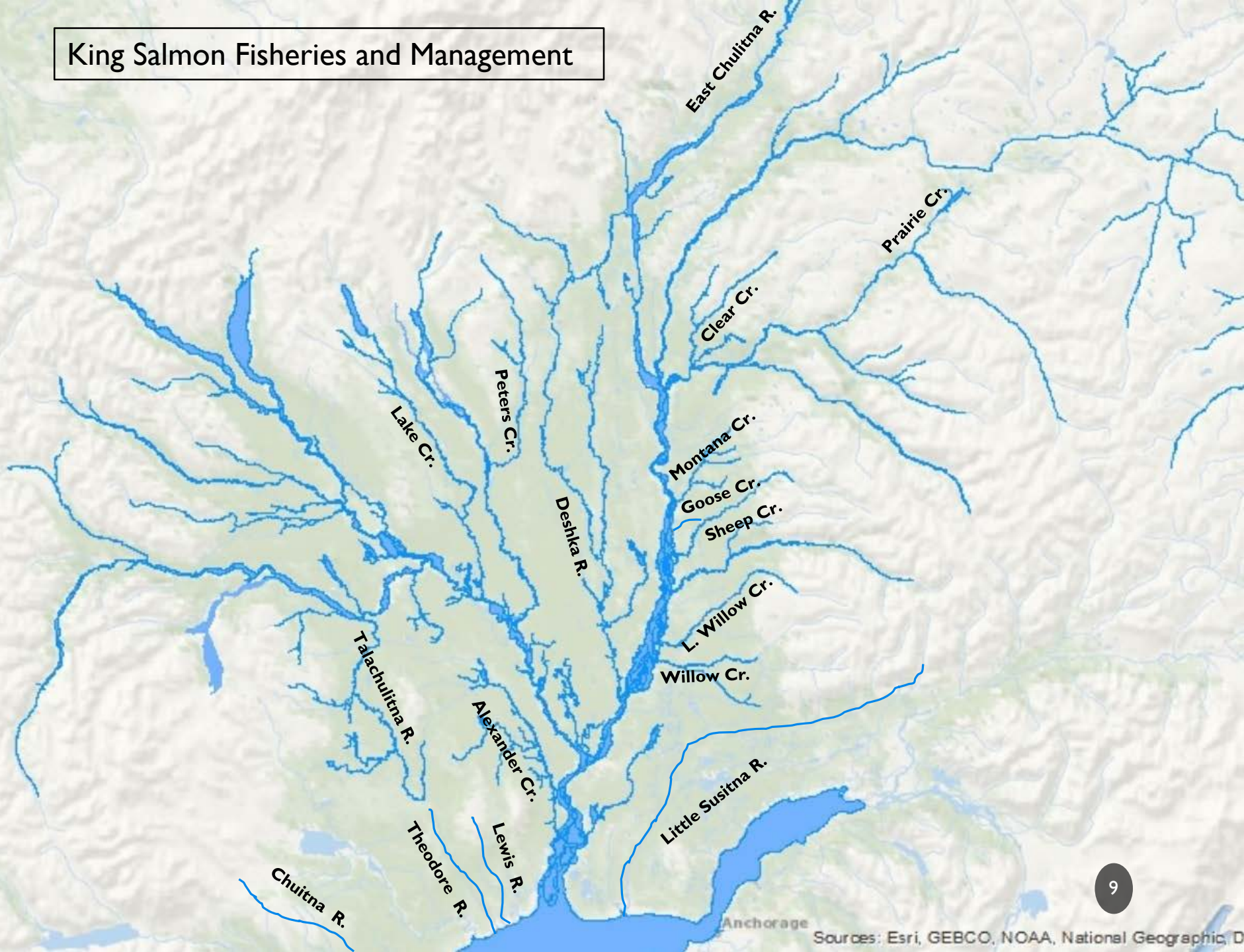
Northern Cook Inlet sport harvest by species



King Salmon Fisheries and Management



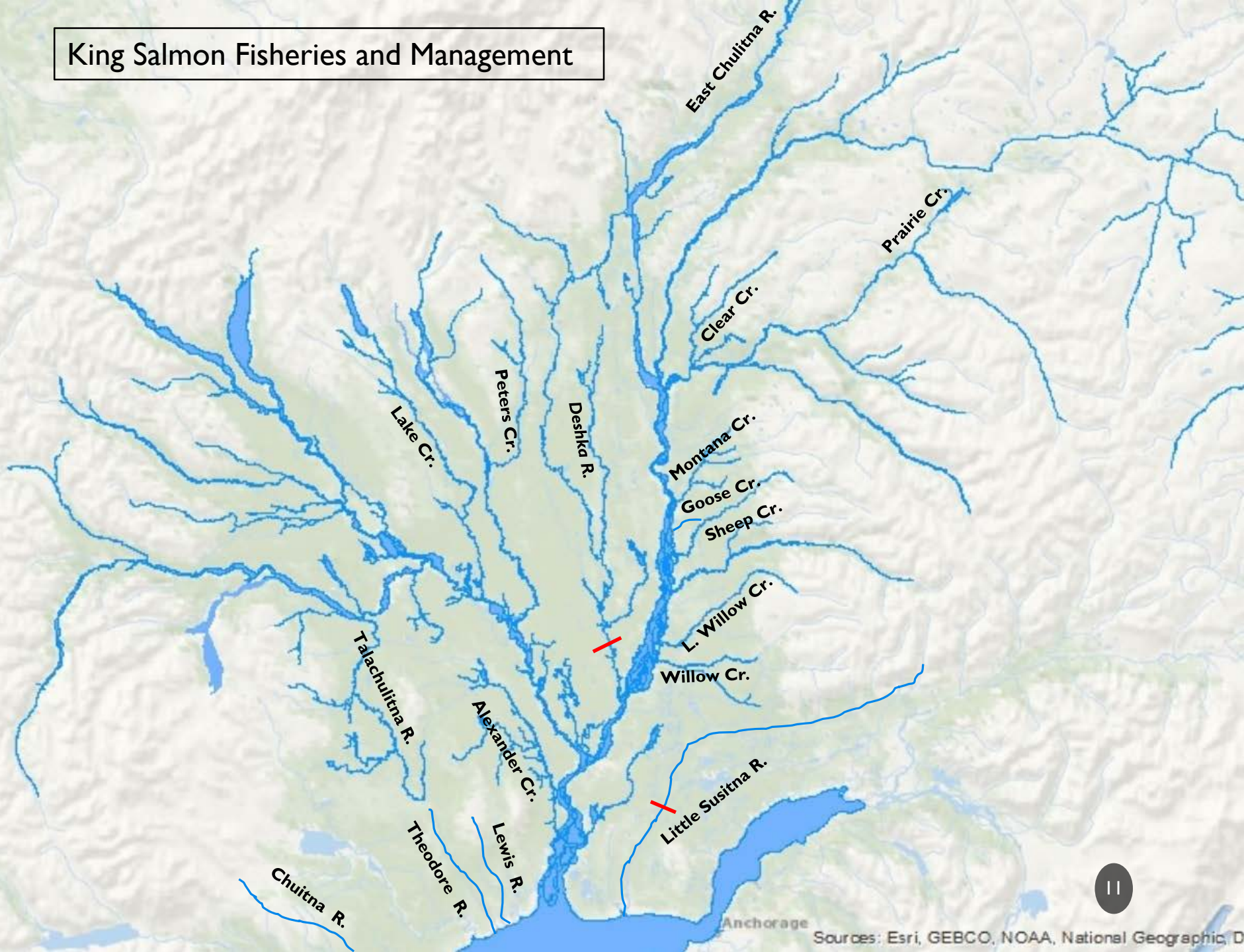
King Salmon Fisheries and Management



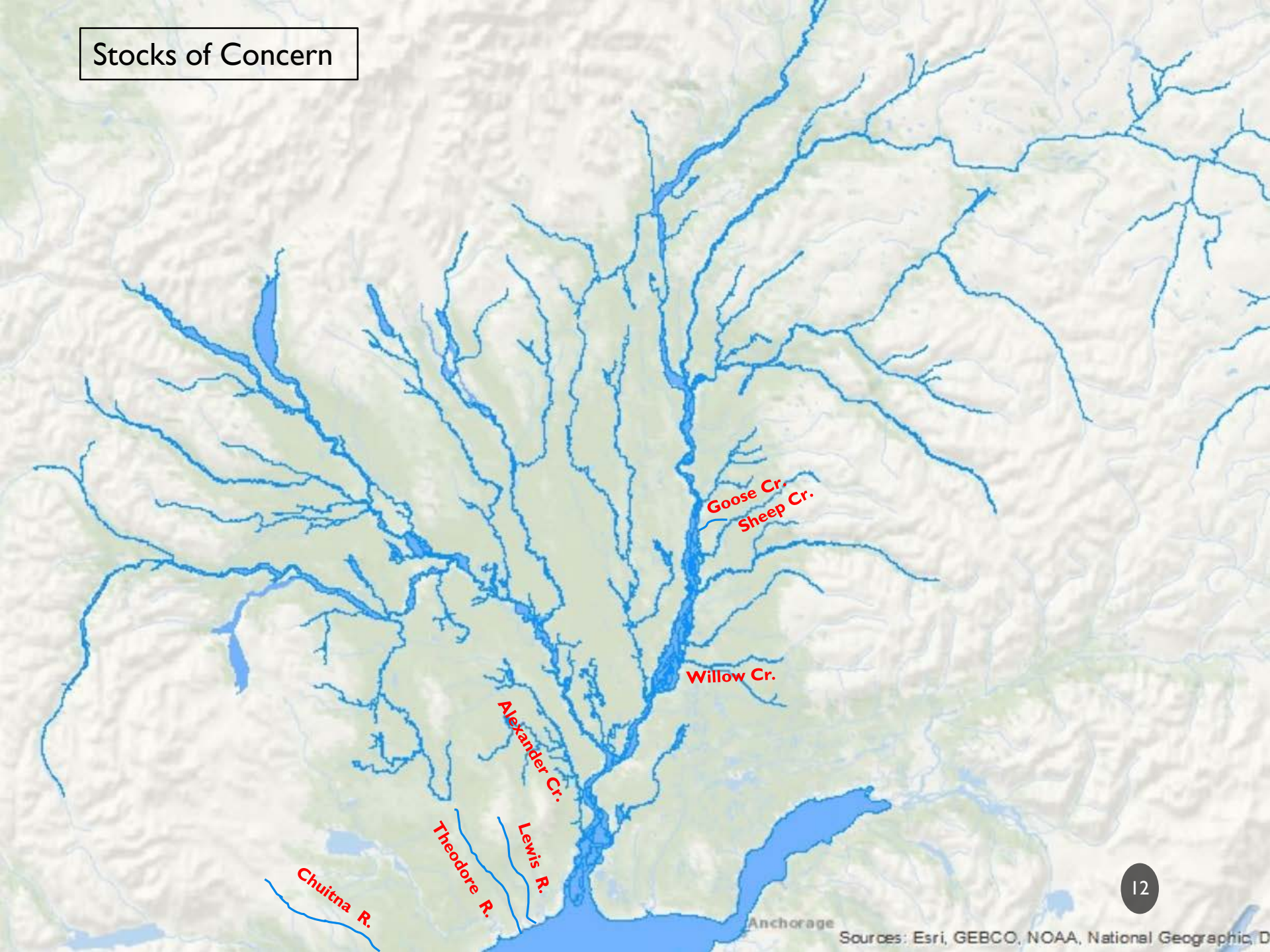
Counting king salmon by helicopter...



King Salmon Fisheries and Management



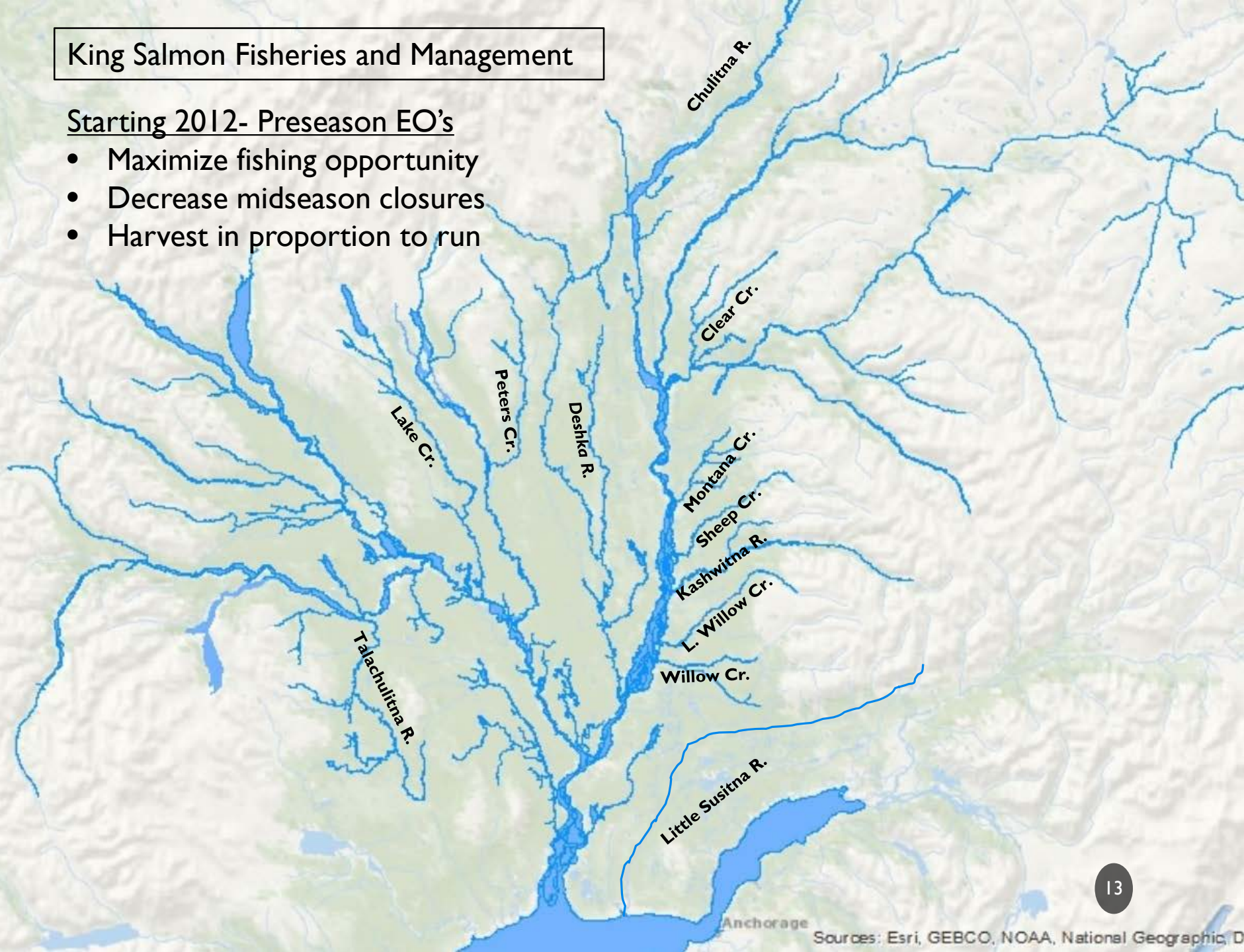
Stocks of Concern



King Salmon Fisheries and Management

Starting 2012- Preseason EO's

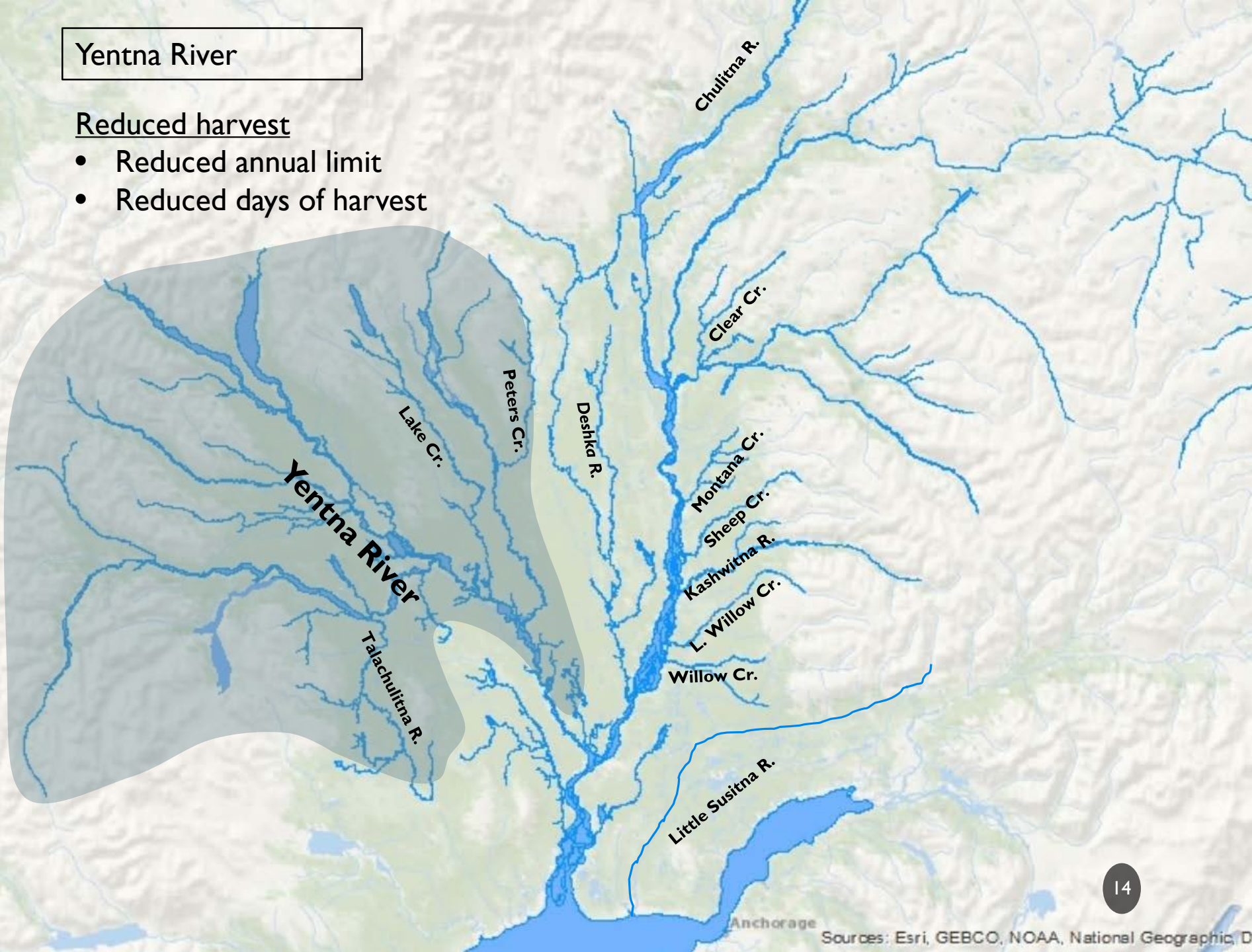
- Maximize fishing opportunity
- Decrease midseason closures
- Harvest in proportion to run



Yentna River

Reduced harvest

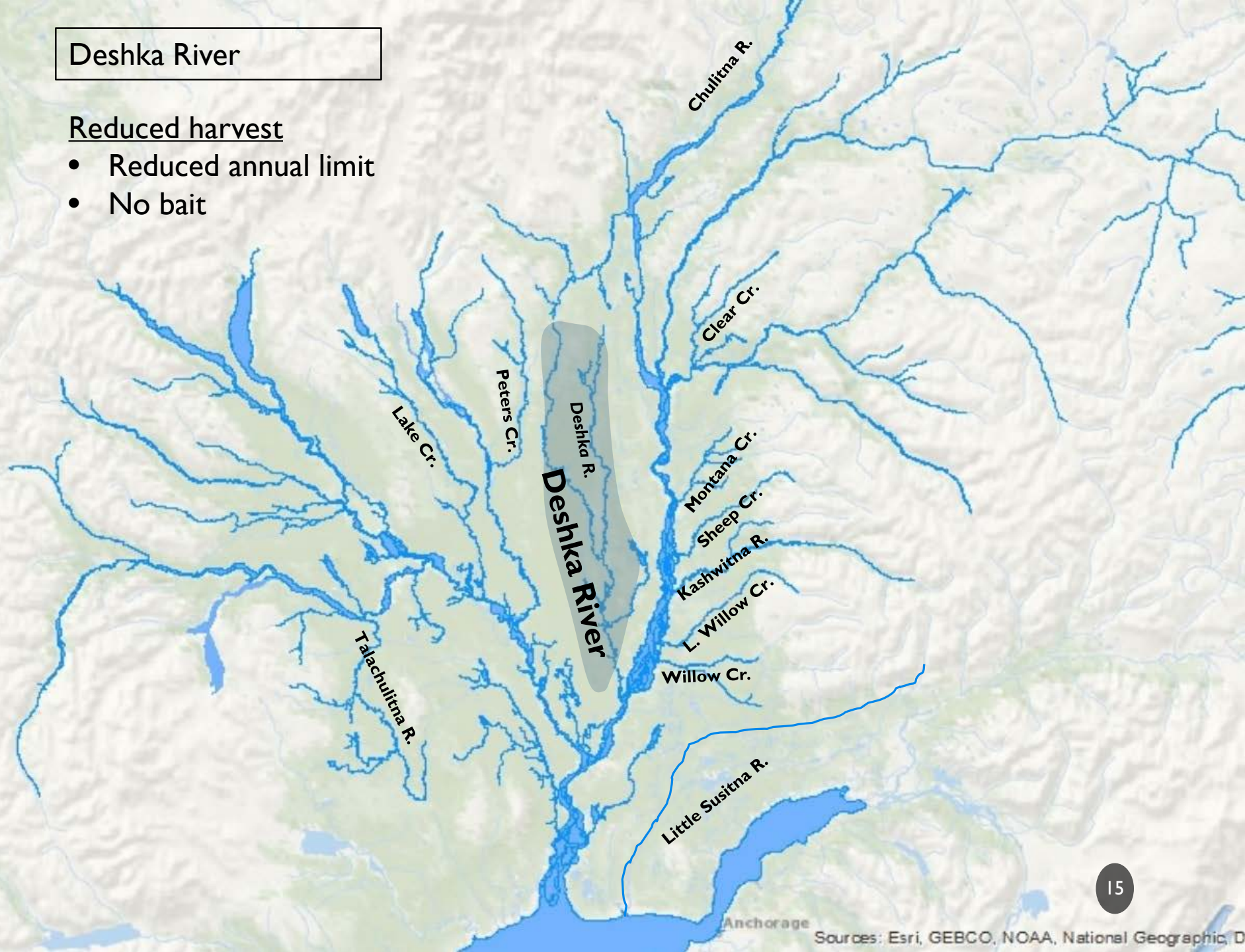
- Reduced annual limit
- Reduced days of harvest



Deshka River

Reduced harvest

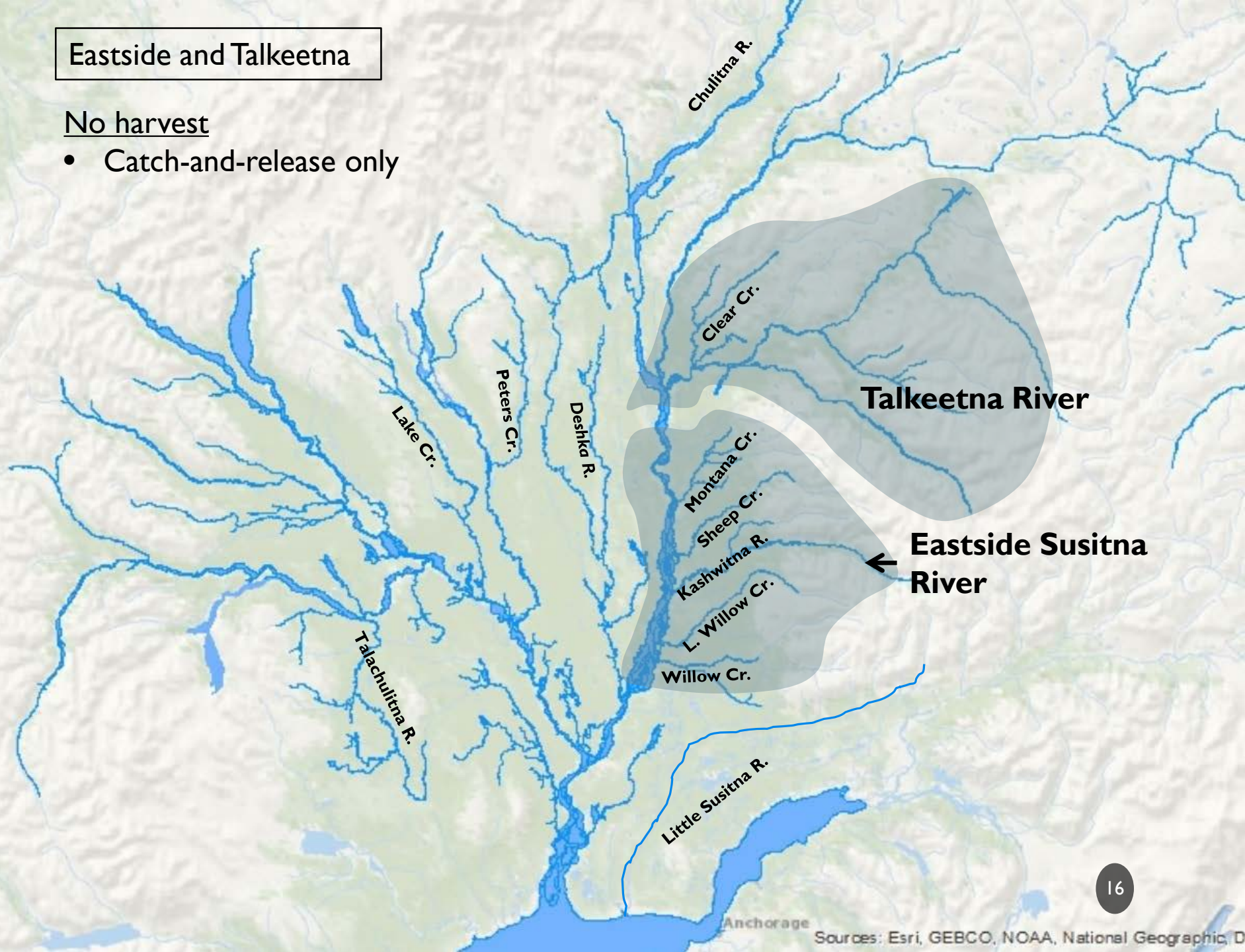
- Reduced annual limit
- No bait



Eastside and Talkeetna

No harvest

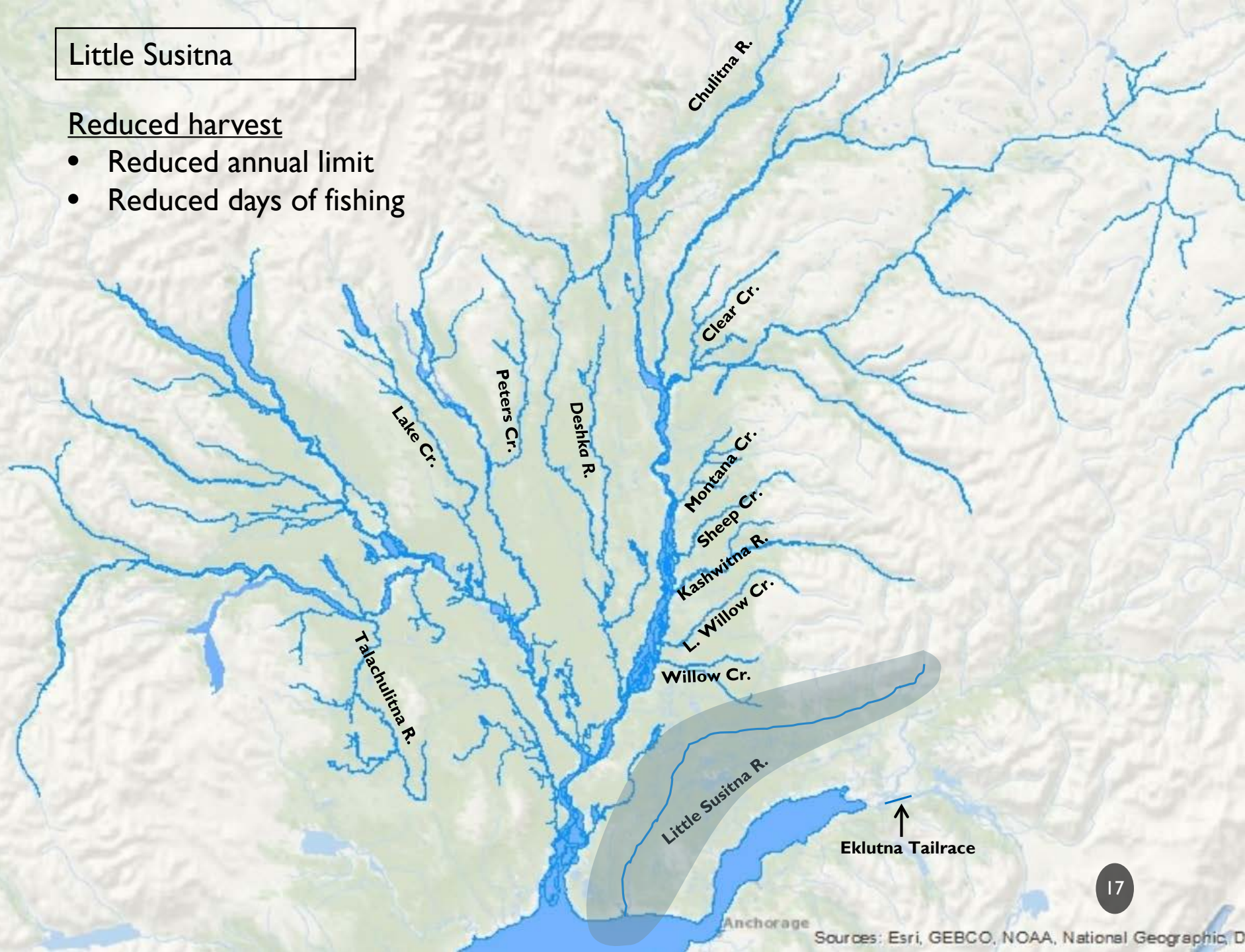
- Catch-and-release only



Little Susitna

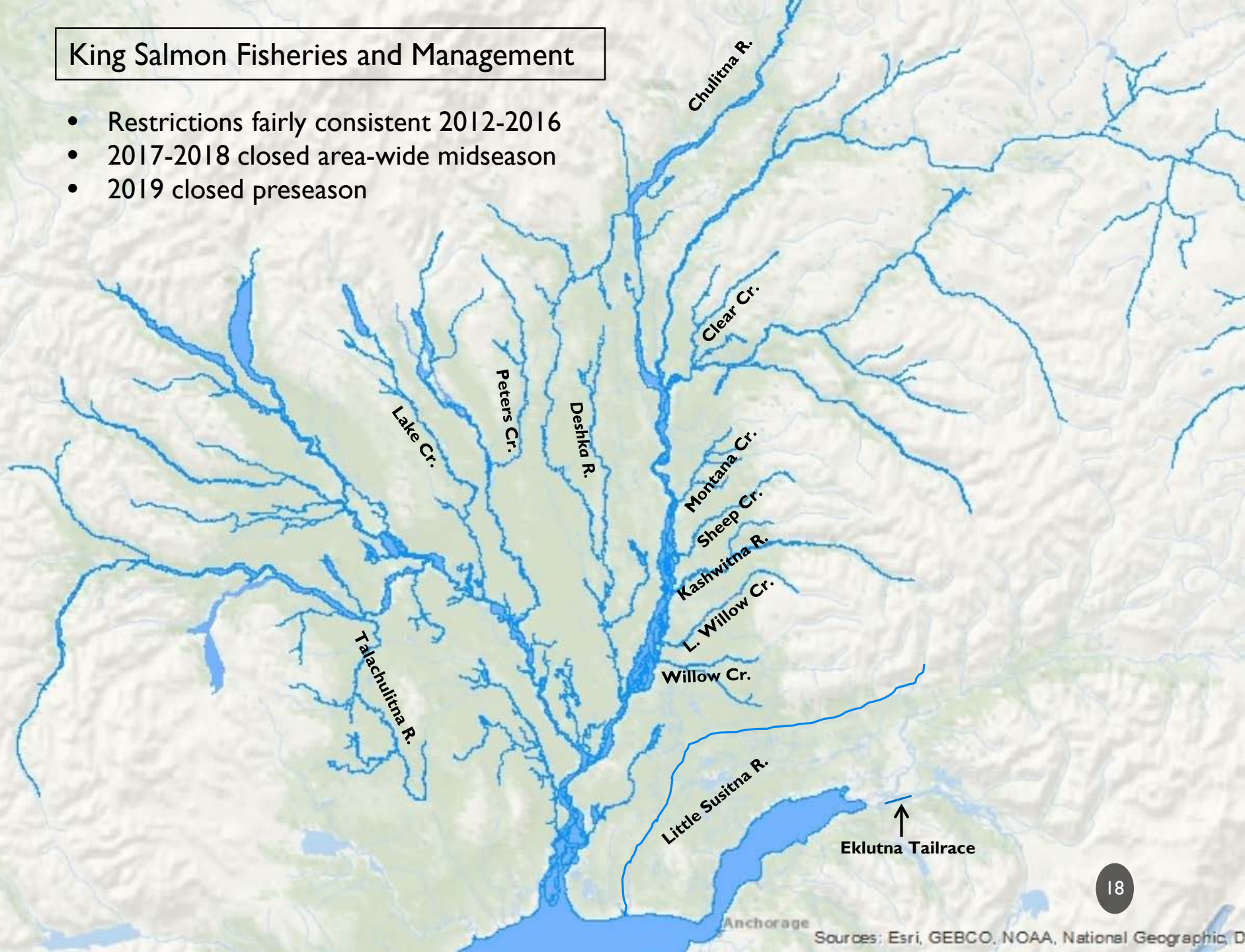
Reduced harvest

- Reduced annual limit
- Reduced days of fishing



King Salmon Fisheries and Management

- Restrictions fairly consistent 2012-2016
- 2017-2018 closed area-wide midseason
- 2019 closed preseason



Sport Fish King Salmon Emergency Orders, 2012 - 2019

Little Susitna

	<u>Preseason EOs</u>	<u>Inseason EOs</u>
2012	annual 2; single hook only; harvest Fri - Mon (4 days)	closed June 15
2013	annual 2; single hook only; harvest Sat - Mon (3 days)	none
2014	same as 2013	reinstated 7 days/wk July 4
2015	same as 2013	reinstated 7 days/wk June 19; restored to regulation June 27; liberalized adding bait July 3
2016	annual 2; single hook only; harvest Fri - Mon (4 days)	restored to regulation June 27; liberalized adding bait July 6
2017	annual 2 only	closed July 1
2018	annual 2; single hook only; harvest Fri - Mon (4 days)	restricted to C & R June 15; closed June 22
2019	closed	restored to regulation June 26

Deshka River

	<u>Preseason EOs</u>	<u>Inseason EOs</u>
2012	annual 2	closed June 25
2013	annual 2; single hook artificial only	reinstated bait June 29
2014	same as 2013	reinstated bait June 14
2015	same as 2013	reinstated bait June 13; restored to regulation June 27
2016	annual 2	restored to regulation June 11
2017	none	closed to bait June 23; closed July 4
2018	C & R only; single hook artificial only	closed June 22
2019	closed	

Eastside Susitna area (units 2, 3, 5, 6)

	<u>Preseason EOs</u>	<u>Inseason EOs</u>
2012	annual 2; single hook only; harvest through second Monday, then C&R only on weekends	closed June 25
2013	C & R only; single hook only	none
2014	same as 2013	none
2015	same as 2013	none
2016	same as 2013	none
2017	same as 2013	closed July 4
2018	closed	none
2019	closed	none

Yentna River

	<u>Preseason EOs</u>	<u>Inseason EOs</u>
2012	annual 2	closed June 25
2013	annual 2; single hook only; harvest Fri - Mon (4 days)	none
2014	same as 2013	none
2015	same as 2013	none
2016	same as 2013	none
2017	same as 2013	closed July 4
2018	C & R only; single hook only	closed June 22
2019	closed	

Talachulitna River

	<u>Preseason EOs</u>	<u>Inseason EOs</u>
2012	annual 2	closed June 25
2013	C & R only; single hook only	none
2014	same as 2013	none
2015	same as 2013	none
2016	same as 2013	none
2017	annual 2; single hook only; harvest Fri - Mon (4 days)	closed July 4
2018	C & R only; single hook only	closed June 22
2019	closed	

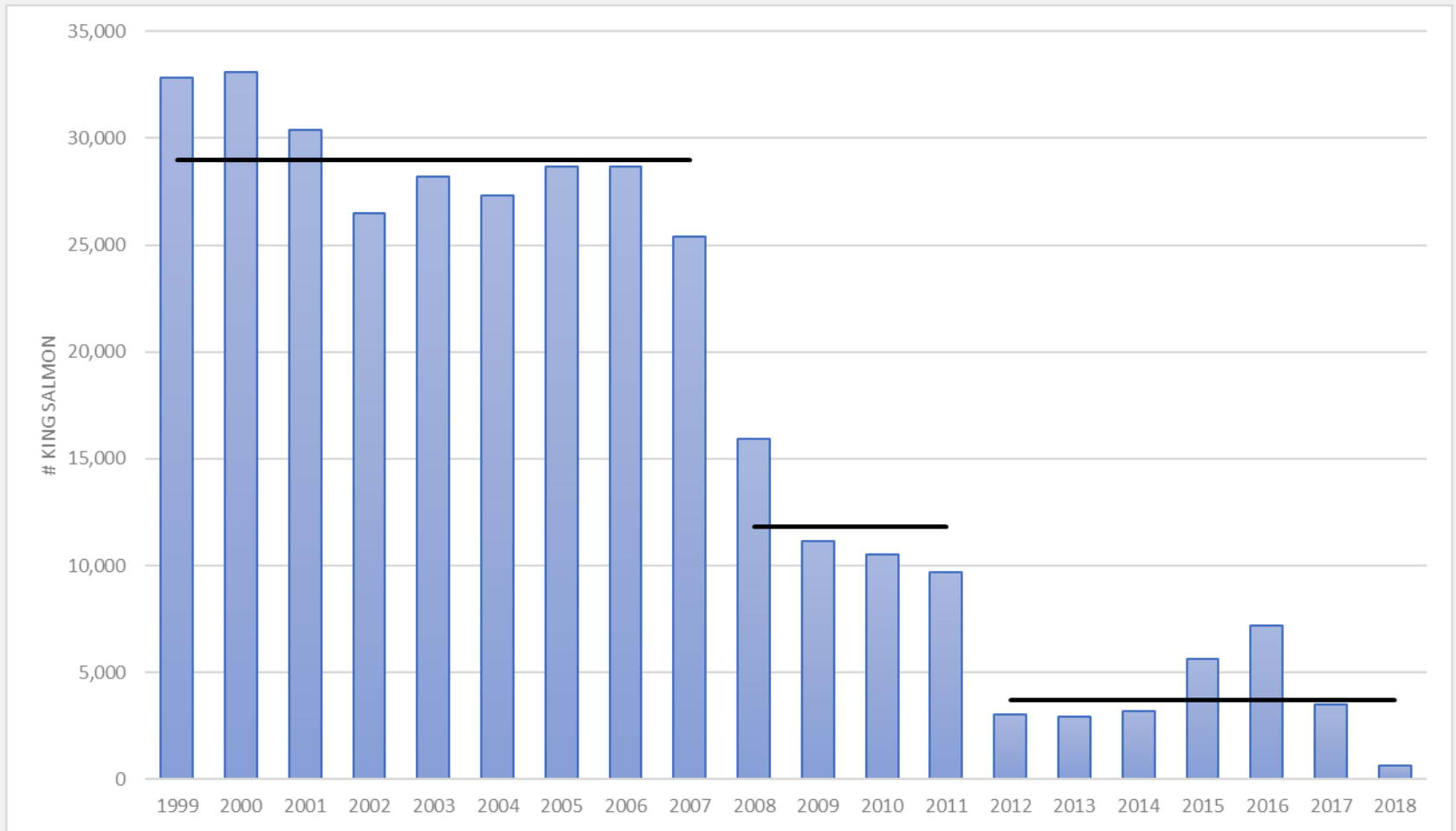
History of achieving king salmon escapement goals in NCI

System	Goal Range		Escapement															
	Lower	Upper	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
			Beginning of downturn						Beginning conservative management									
<i>Knik Arm</i>																		
Little Susitna River (weir)	2,300	3,900												2,531	NC	3,666		
Little Susitna River	900	1,800	1,855	1,731	1,297	1,028	589	887	1,154	1,651	1,759	1,507	1,622	1,192	530	NC		
<i>Eastside Susitna</i>																		
Willow Creek	1,600	2,800	2,193	1,373	1,255	1,133	1,173	1,061	756	1,752	1,335	2,046	1,814	1,329	411	897		
Little Willow Creek	450	1,800	816	1,103	NC	776	468	713	494	858	684	788	675	840	280	631		
Sheep Creek	600	1,200	580	400	NC	500	NC	350	363	NC	262	NC	NC	NC	334	NC		
Montana Creek	1,100	3,100	1,850	1,936	1,357	1,460	755	494	416	1,304	953	1,416	692	603	473	789		
Clear (Chunilna) Creek	950	3,400	1,520	3,310	1,795	1,205	903	512	1,177	1,471	1,390	1,205	NC	780	940	1,511		
Prairie Creek	3,100	9,200	3,570	5,036	3,039	3,500	3,022	2,038	1,185	3,304	2,812	3,209	1,853	1,930	1,194	2,371		
Chulitna River	1,800	5,100	2,862	5,166	2,514	2,093	1,052	1,875	667	1,262	1,011	3,137	1,151	NC	1,125	2,765		
<i>Westside Susitna</i>																		
Deshka River (weir)	13,000	28,000	31,150	18,714	7,533	11,967	18,594	19,026	14,010	18,531	16,335	24,316	22,774	11,383	8,549	9,711		
Peters Creek	1,000	2,600	1,114	1,225	NC	1,283	NC	1,103	459	1,643	1,443	1,514	1,122	307	NC	1,209		
Lake Creek	2,500	7,100	5,300	4,081	2,004	1,394	1,617	2,563	2,366	3,655	3,506	4,686	3,588	1,601	1,767	2,692		
Talachulitna River	2,200	5,000	6,152	3,871	2,964	2,608	1,499	1,368	847	2,285	2,256	2,582	4,295	1,087	1,483	3,225		
<i>Closed in regulation</i>																		
Alexander Creek	2,100	6,000	885	480	150	275	177	343	181	588	911	1,117	754	170	296	1,297		
Goose Creek	250	650	306	105	117	65	76	80	57	62	232	NC	NC	148	90	NC		
Lewis River	250	800	341	0 ^a	120	111	56	92	107	61	61	5 ^a	0 ^a	0 ^a	0 ^a	0 ^a		
Theodore River	500	1,700	958	486	345	352	202	327	179	476	312	426	68	21	18	201		
Chuitna River	1,200	2,900	1,911	1,180	586	1,040	735	719	502	1,690	1,398	1,965	1,372	235	939	2,115		

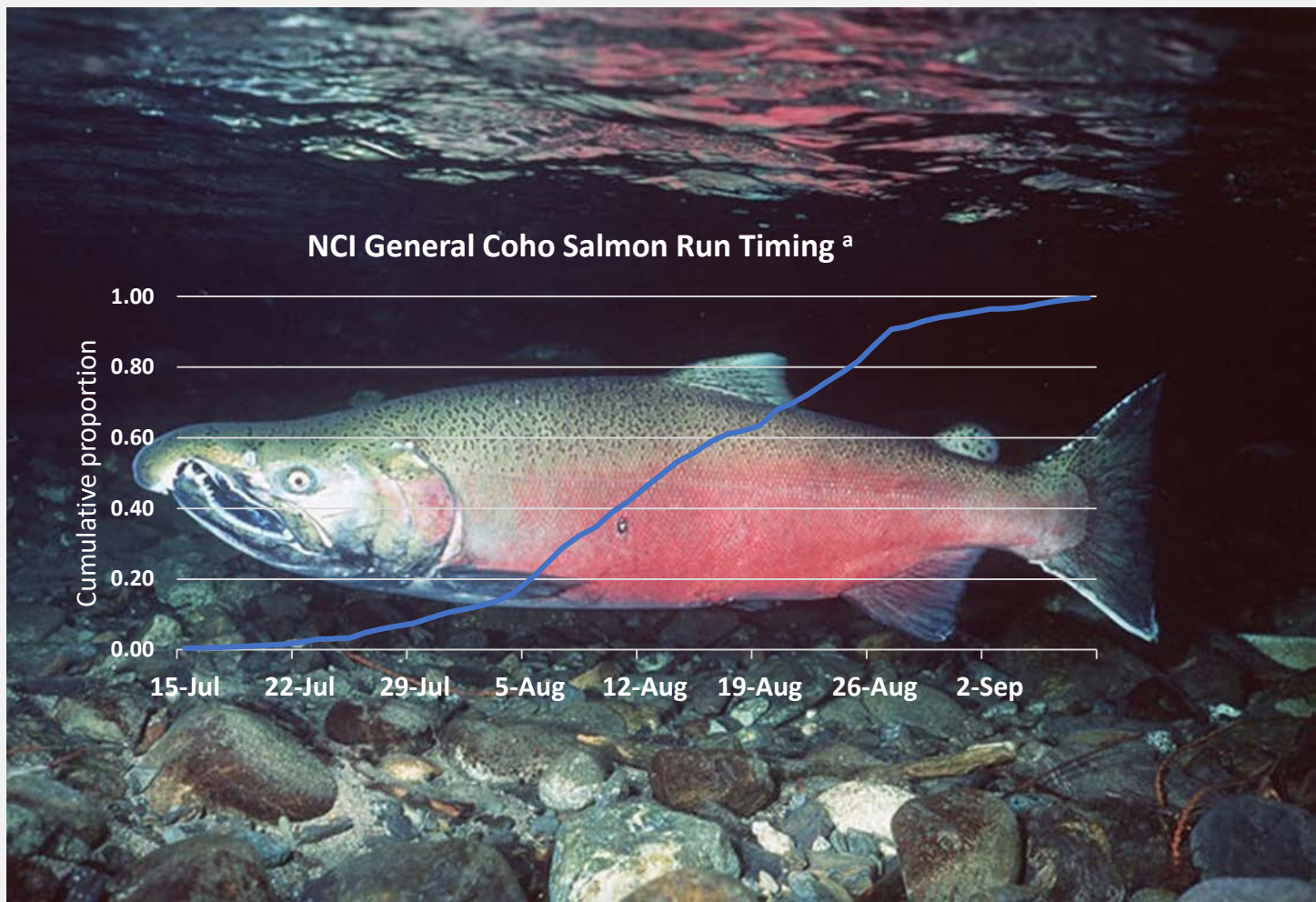
means missed goal.

^a Lewis River diverged into muskeg 1/2 mi. below bridge; intermittant connection with Cook Inlet.

NCI king salmon sport harvest



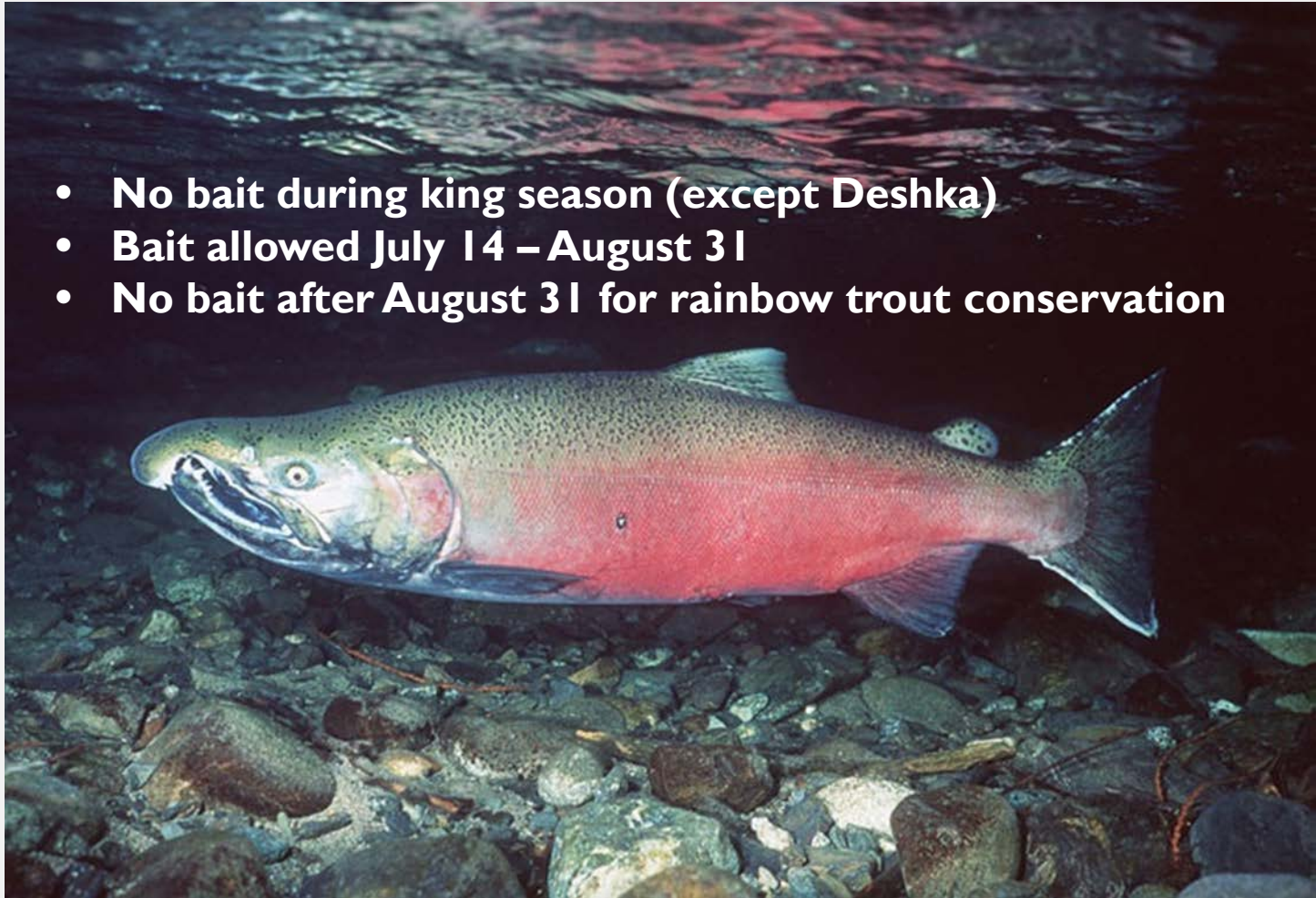
NCI Coho Salmon Sport Fisheries



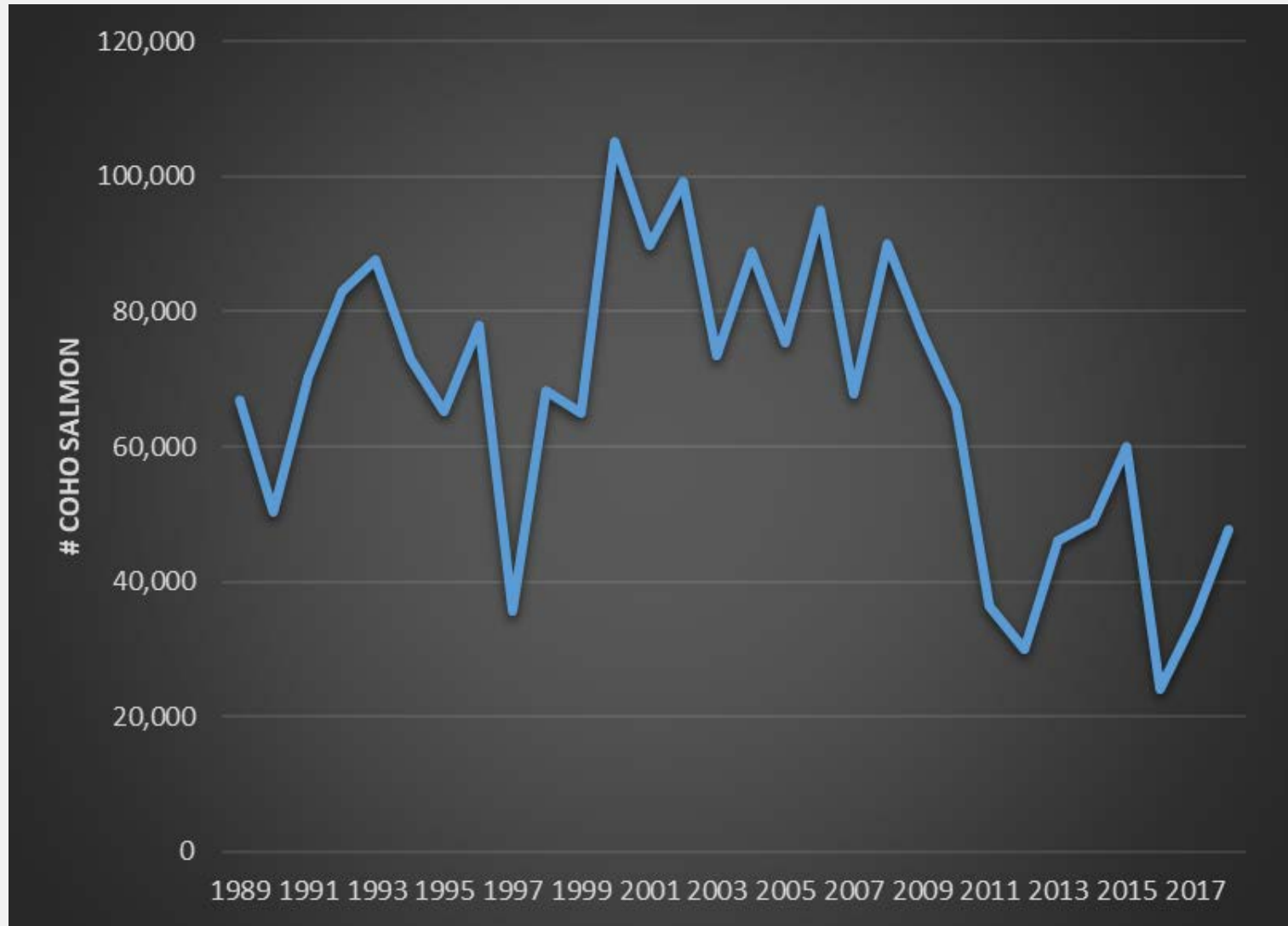
^a based on Little Susitna coho salmon

NCI Coho Salmon Sport Fisheries

- **No bait during king season (except Deshka)**
- **Bait allowed July 14 – August 31**
- **No bait after August 31 for rainbow trout conservation**



NCI coho salmon sport harvest, 1989-2018.



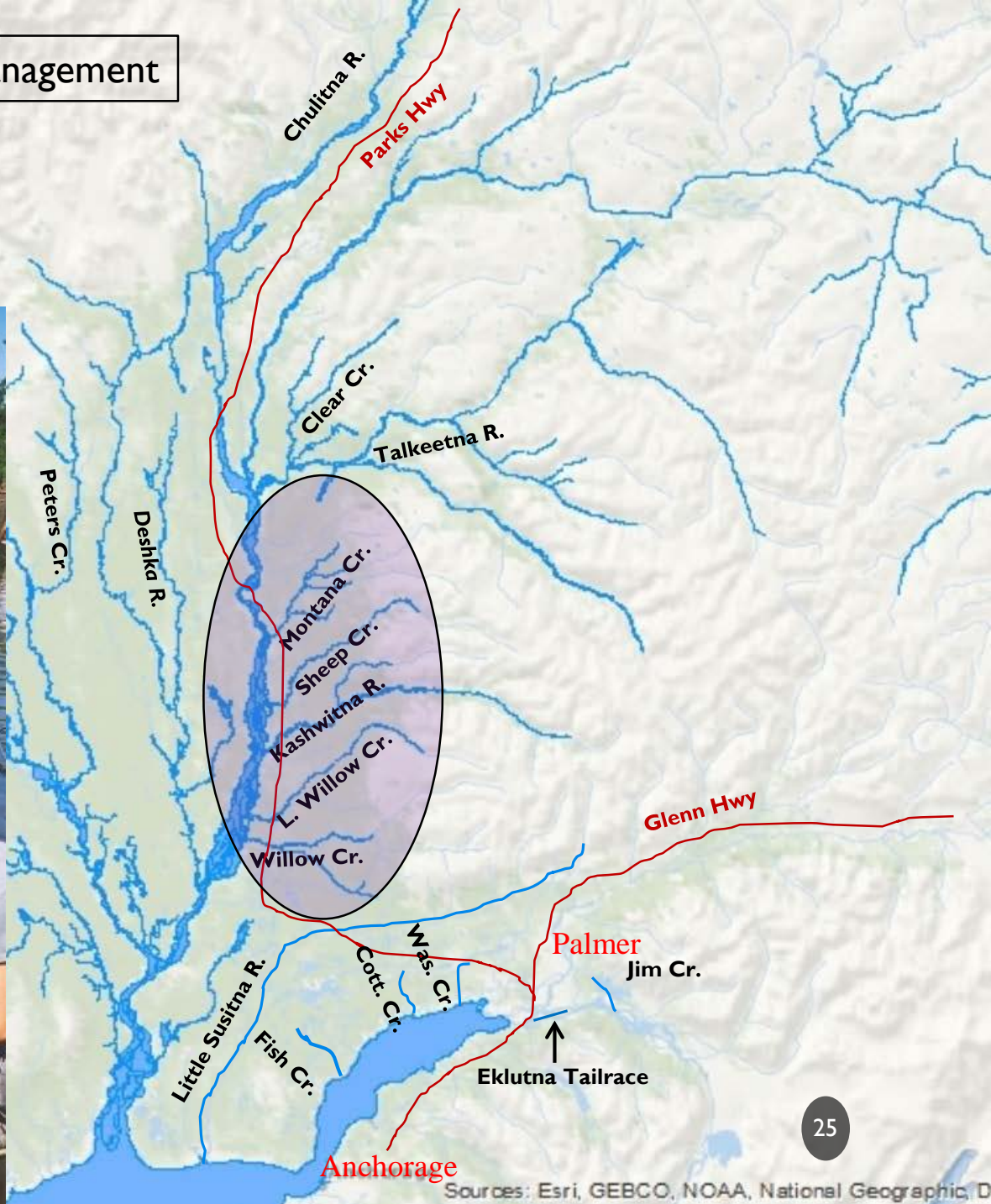
Coho Salmon Fisheries and Management

Unit 2 Parks Hwy:

7 days per week;

2 per day and in possession;

Bait allowed July 14-Aug 31



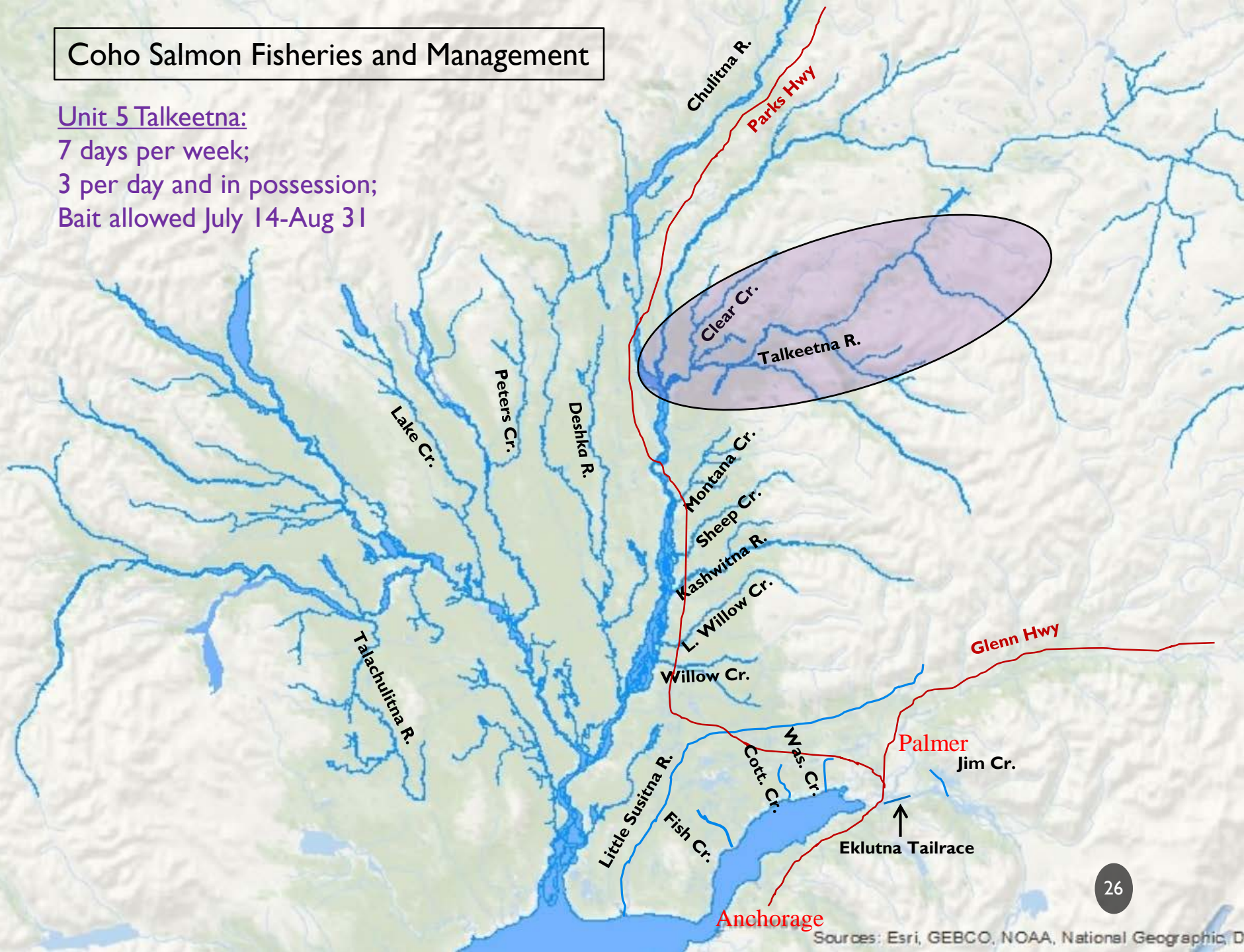
Coho Salmon Fisheries and Management

Unit 5 Talkeetna:

7 days per week;

3 per day and in possession;

Bait allowed July 14-Aug 31



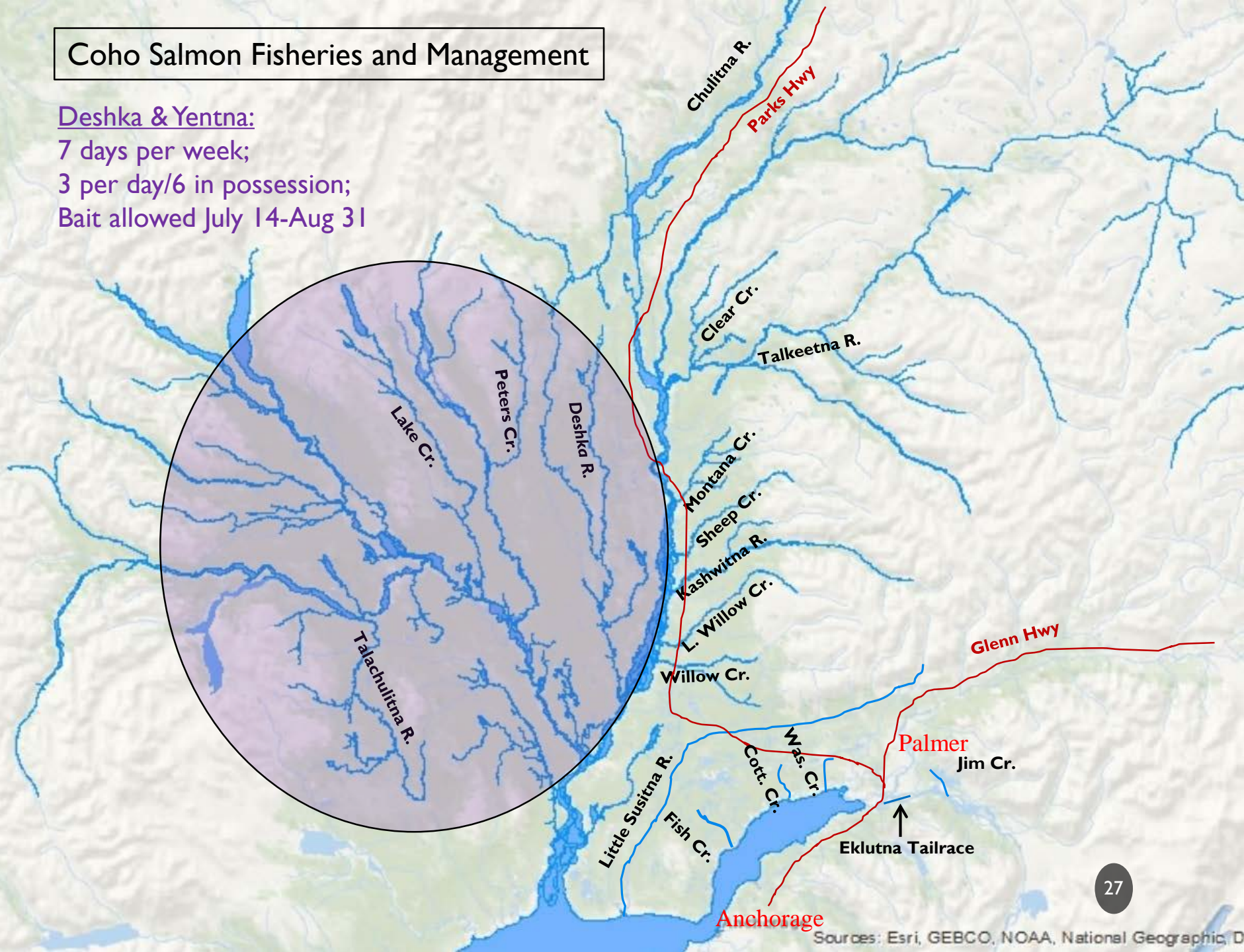
Coho Salmon Fisheries and Management

Deshka & Yentna:

7 days per week;

3 per day/6 in possession;

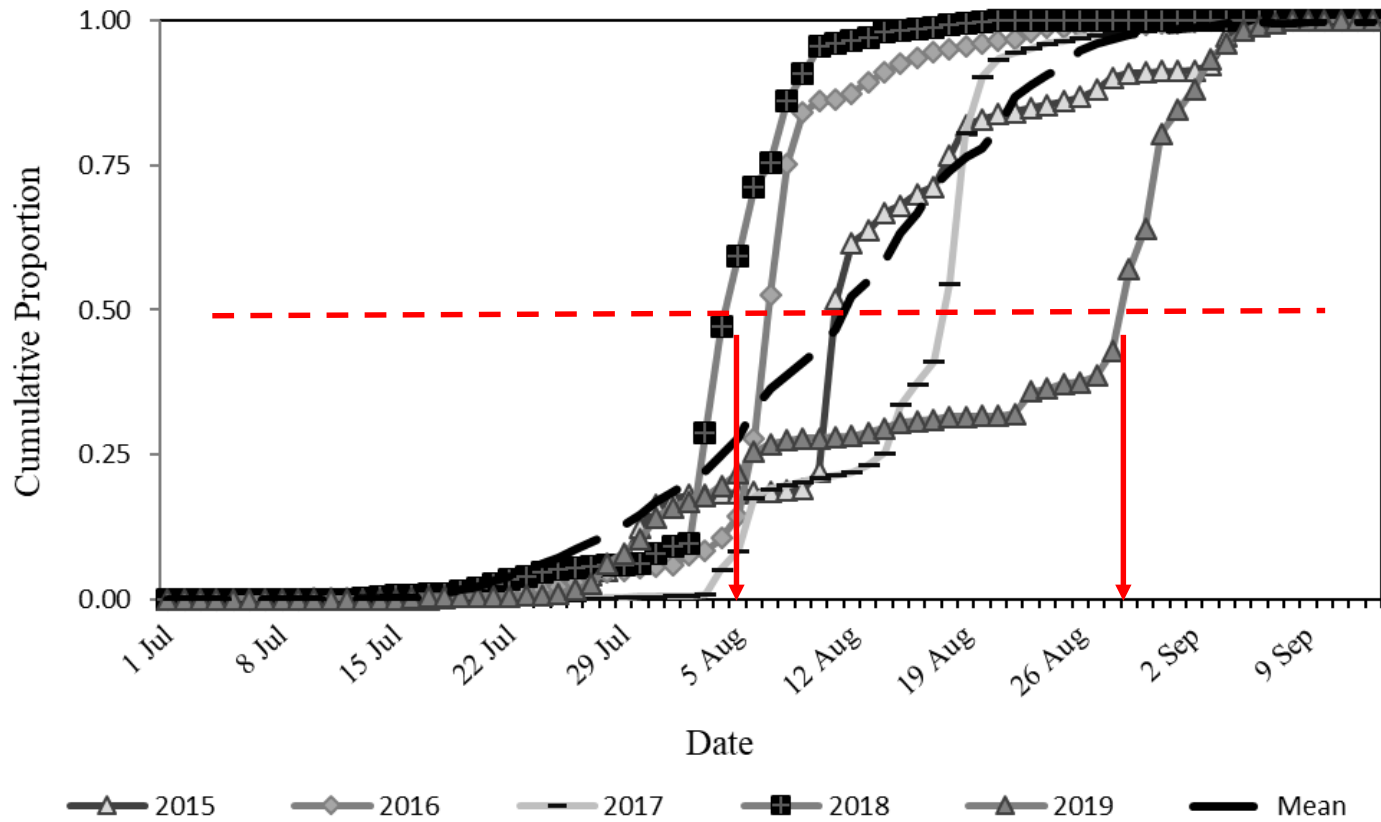
Bait allowed July 14-Aug 31



Deshka River Weir



Deshka Coho Salmon Run Timing

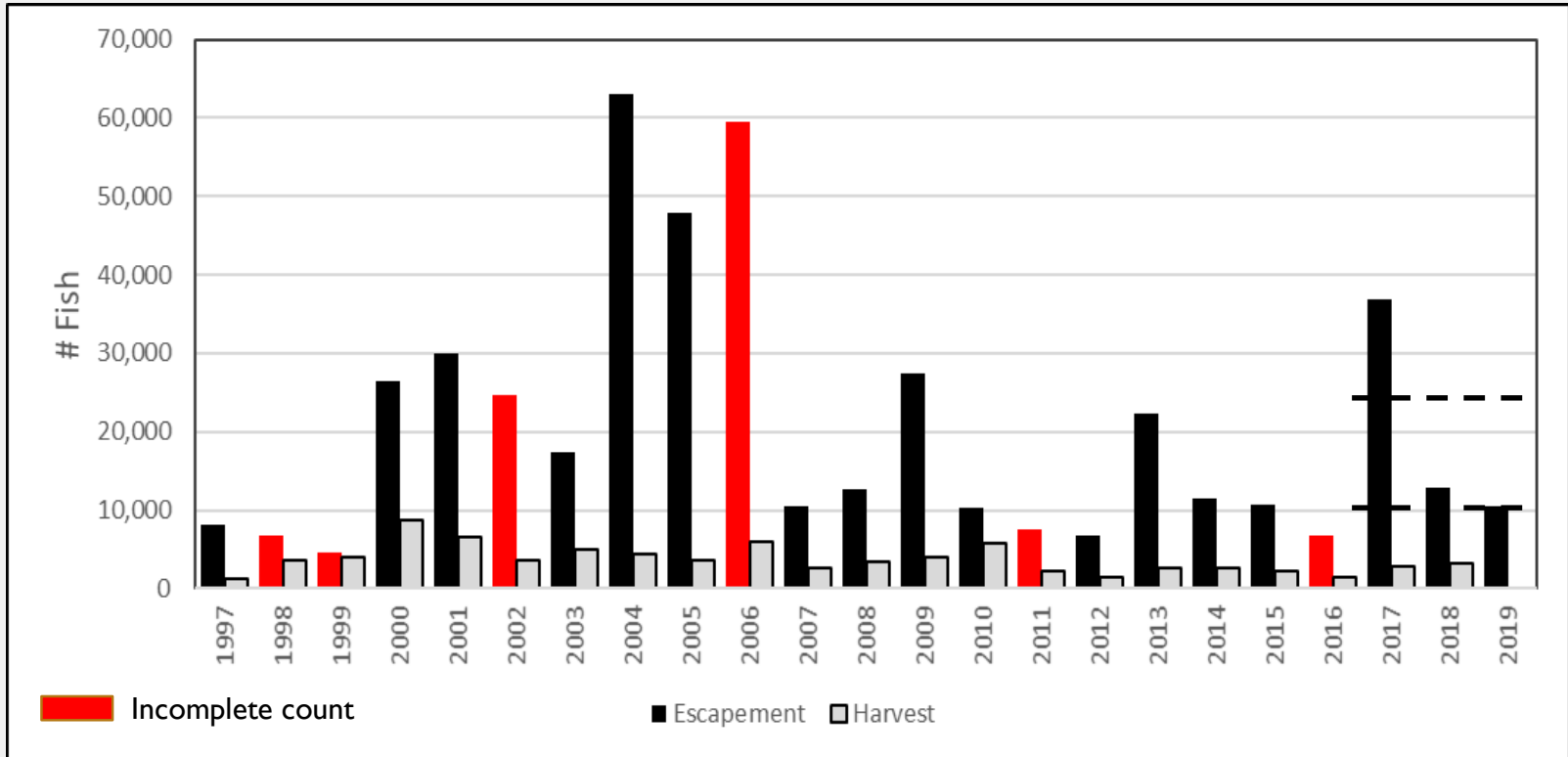




2017-2018:

- Susitna drainage bag limits liberalized inseason based on Deshka weir counts.

Deshka River Coho Salmon Harvest and Escapement.



Dotted line = escapement goal range

GSI Estimates of Deshka Coho Harvest Rates in Sport and Commercial Fisheries.

	Escapement	Commercial harvest ^a	Sport harvest	Total run	Commercial harvest rate	Sport harvest rate	Total harvest rate
Deshka River							
2013	22,341	11,543	2,658	36,542	32%	7%	39%
2014	11,578	3,163	2,598	17,339	18%	15%	33%
2015	10,775	4,049	2,221	17,045	24%	13%	37%

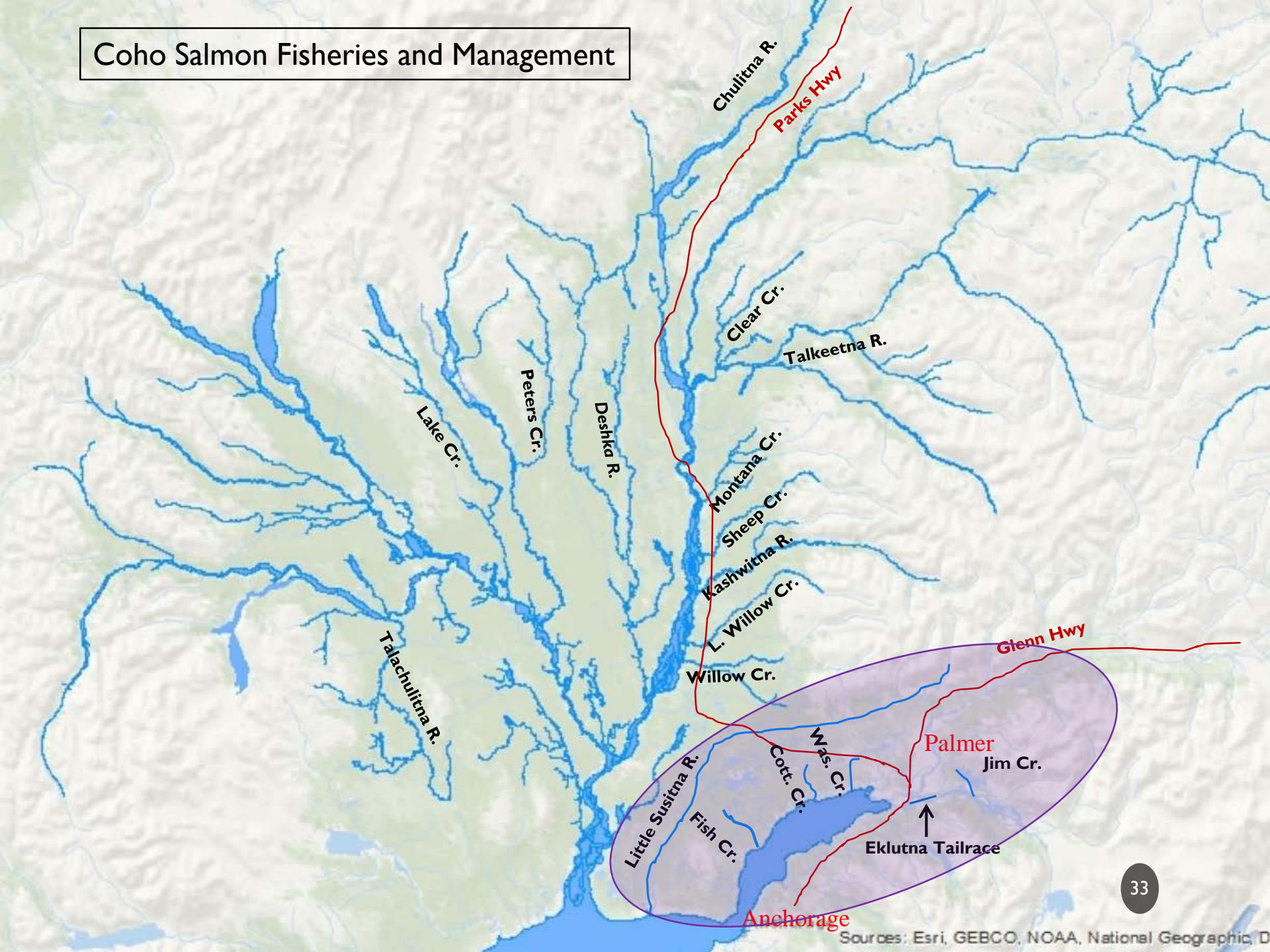
^a Marine harvest estimated by updated mixed stock analysis using current genetic baseline.

GSI Estimates of Susitna Coho Salmon Harvest Rates in Sport and Commercial Fisheries.

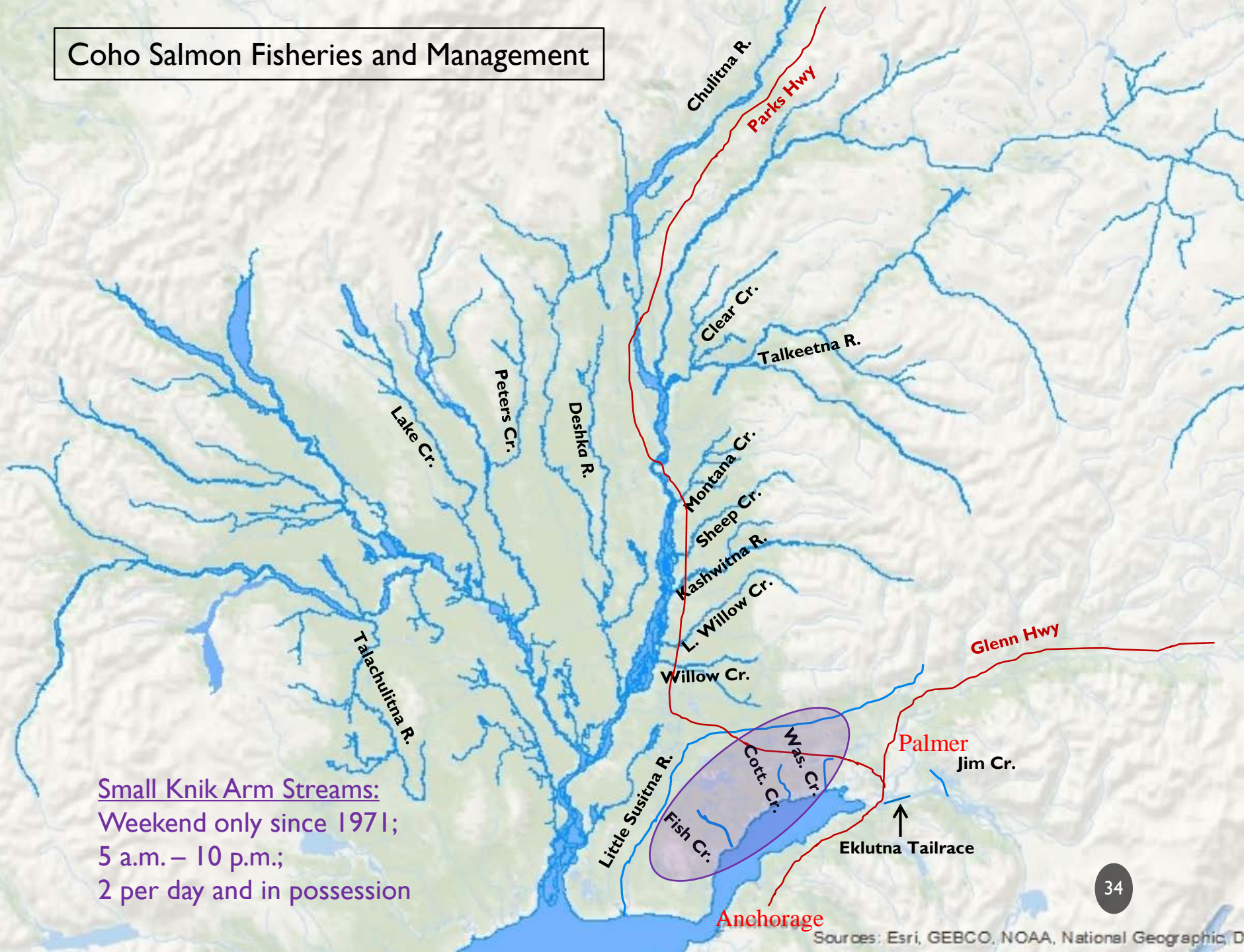
	Commercial harvest ^a	Mainstem abundance	Mainstem inriver	Sport harvest	Commercial harvest rate	Sport harvest rate	Total harvest rate
Mainstem Susitna							
2013	54,462	130,026	184,488	15,647	30%	8%	38%
2014	24,604	84,879	109,483	15,120	22%	14%	36%
2015	30,259	152,500	182,759	17,900	17%	10%	26%
Yentna River							
2013			NA				
2014	19,629	73,819	93,448	9,899	21%	11%	32%
2015	38,224	110,321	148,545	10,928	26%	7%	33%

^a Marine harvest estimated by updated mixed stock analysis using current genetic baseline.

Coho Salmon Fisheries and Management



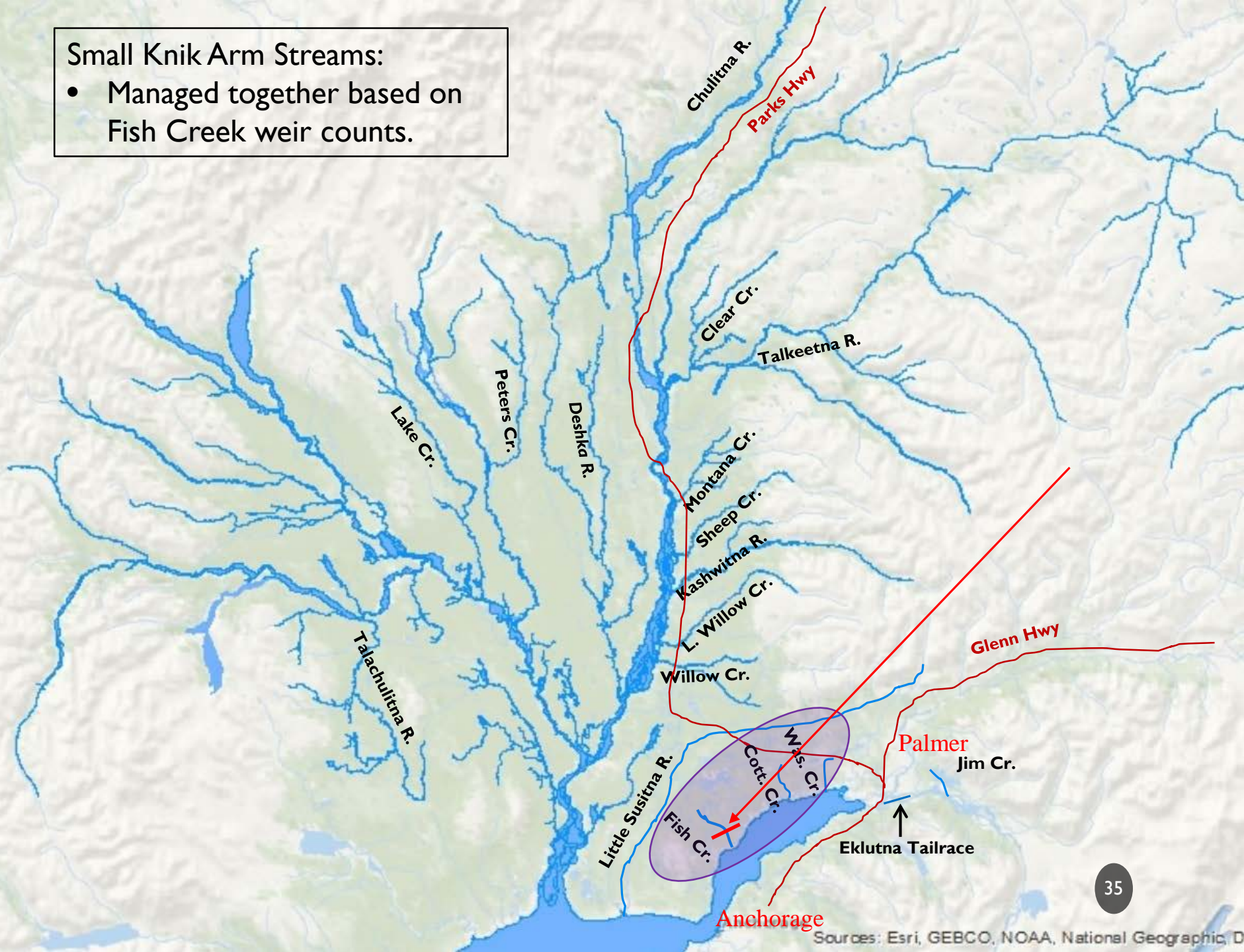
Coho Salmon Fisheries and Management



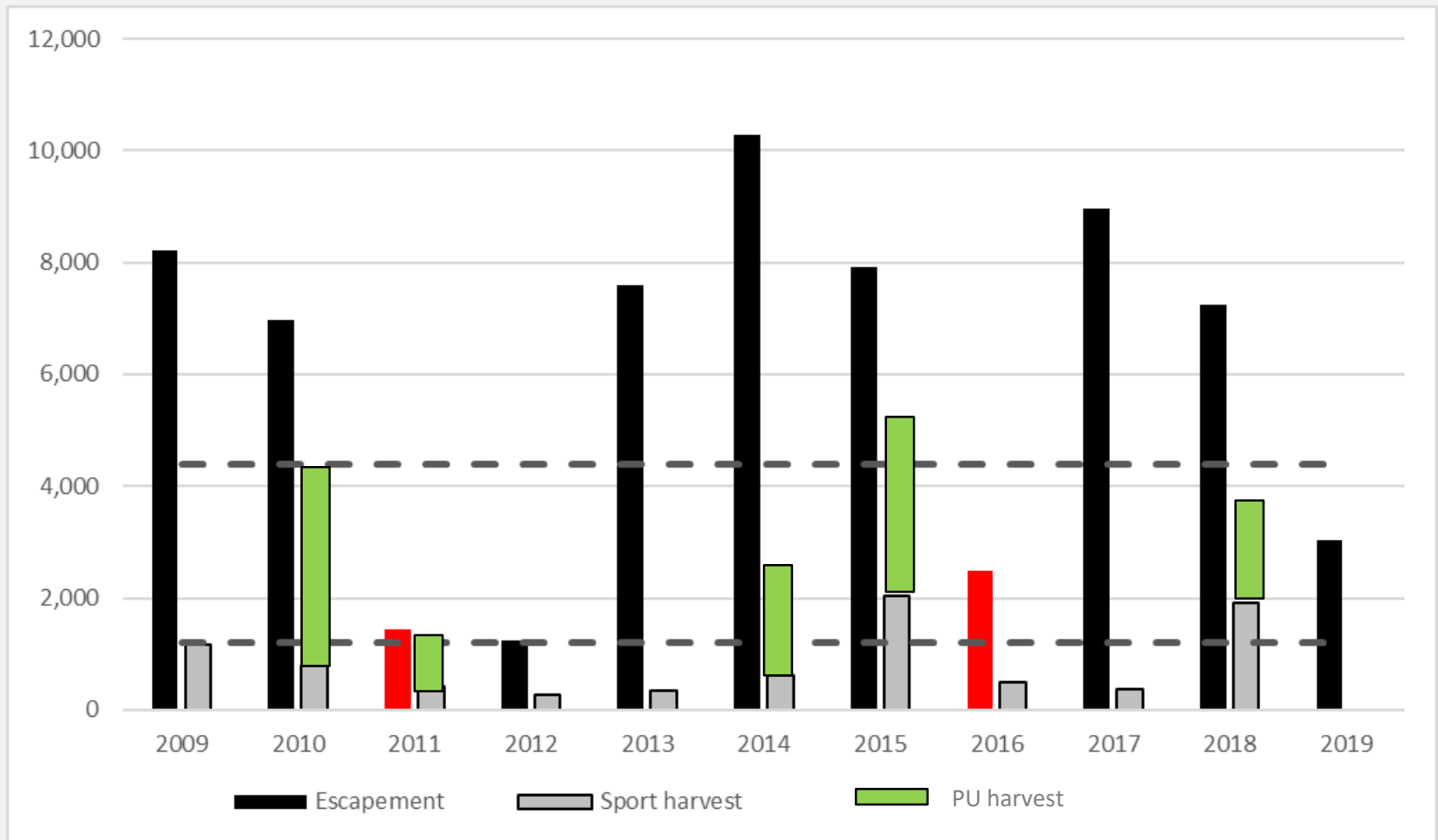
Small Knik Arm Streams:
Weekend only since 1971;
5 a.m. – 10 p.m.;
2 per day and in possession

Small Knik Arm Streams:

- Managed together based on Fish Creek weir counts.



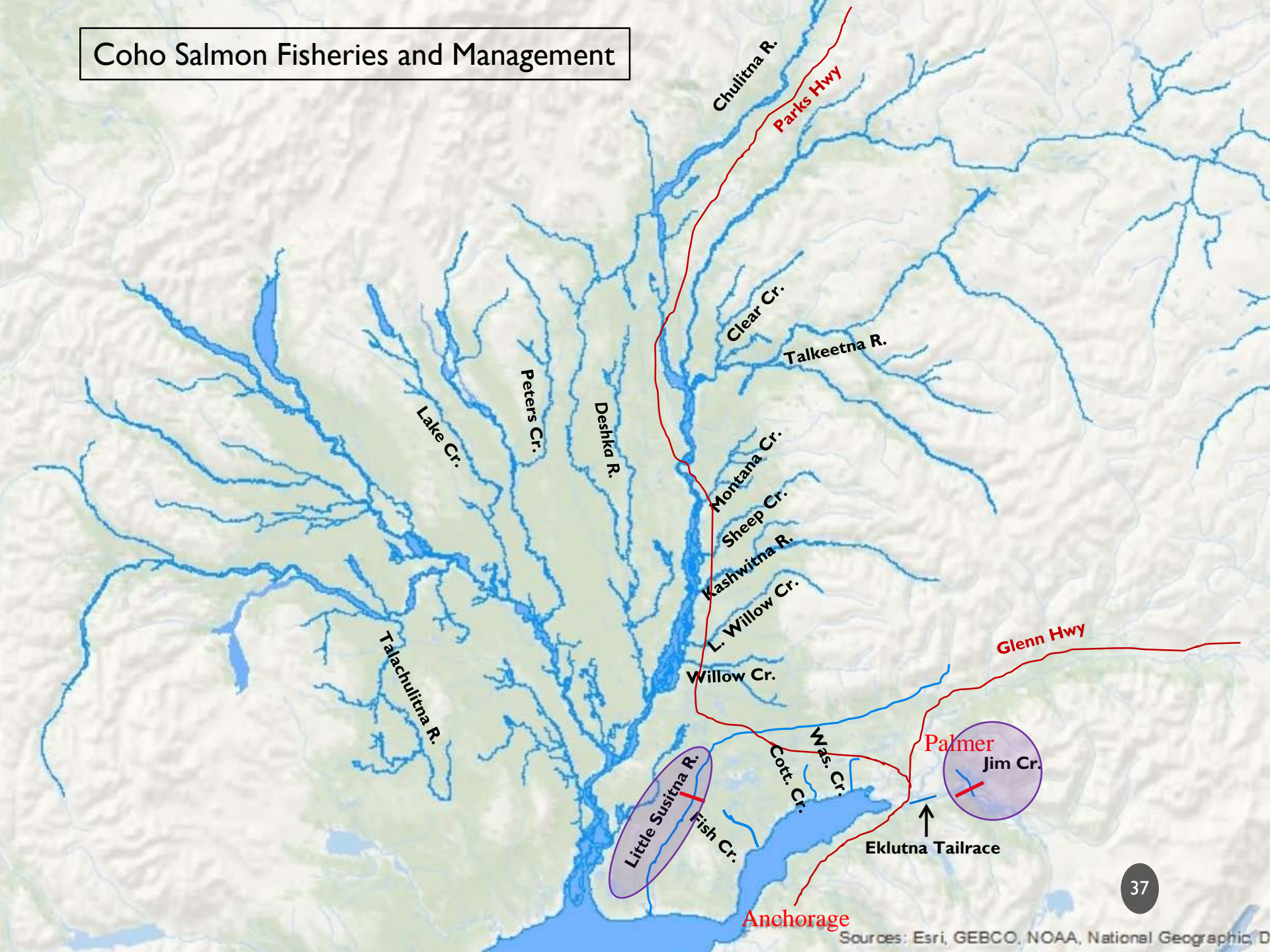
Fish Creek coho salmon escapement and harvest



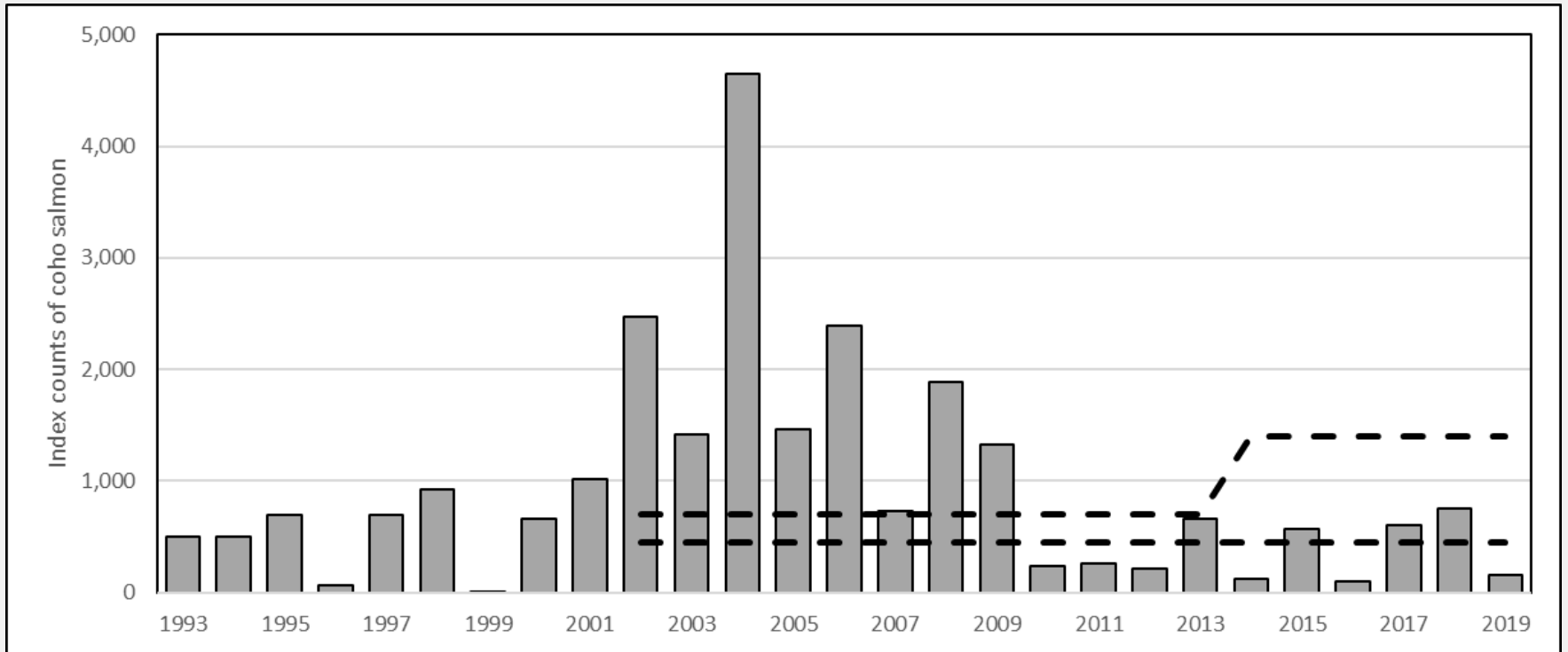
Dotted line = escapement goal range

Red bar = Incomplete count

Coho Salmon Fisheries and Management

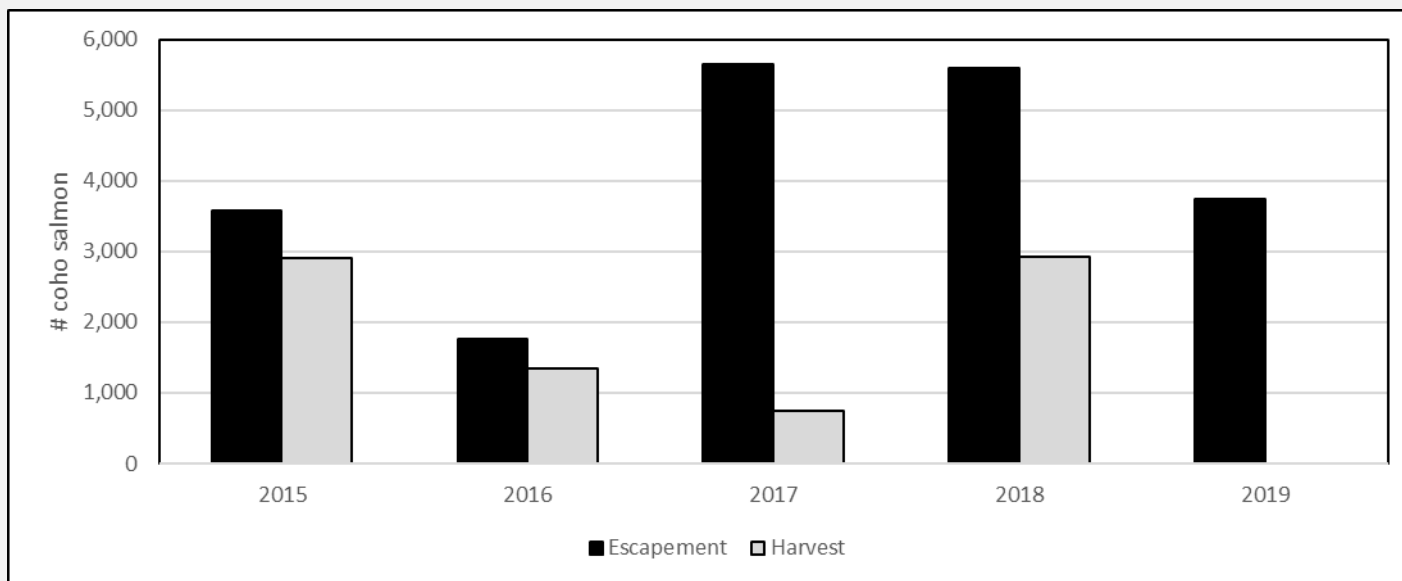


McRoberts Creek Foot Survey Index Counts of Coho Salmon, 1993-2019.



Dotted line = escapement goal range

Jim Creek Coho Salmon Weir Counts and Sport Harvest

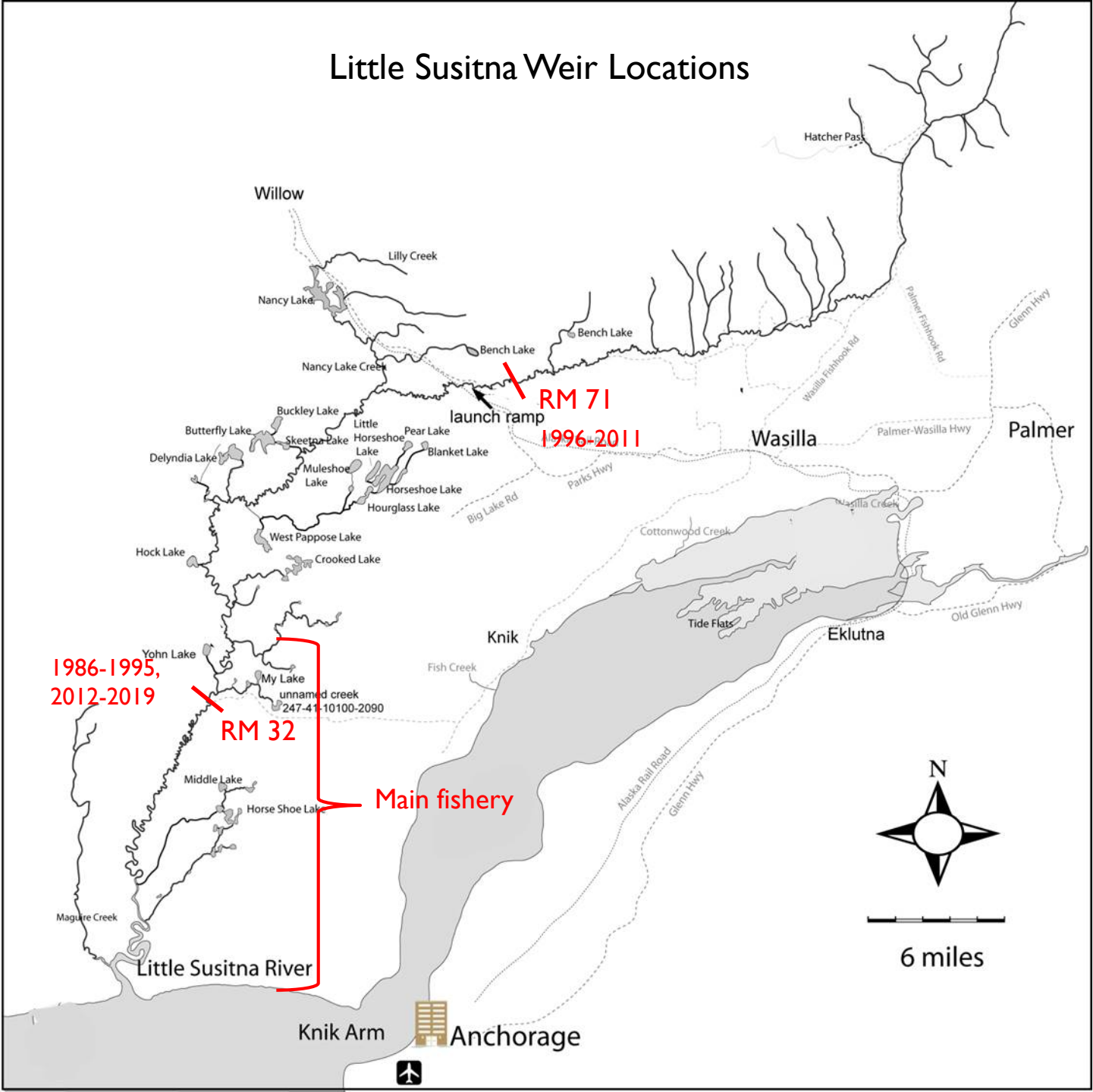


GSI Estimates of Jim Creek Coho Harvest Rates in Sport and Commercial Fisheries.

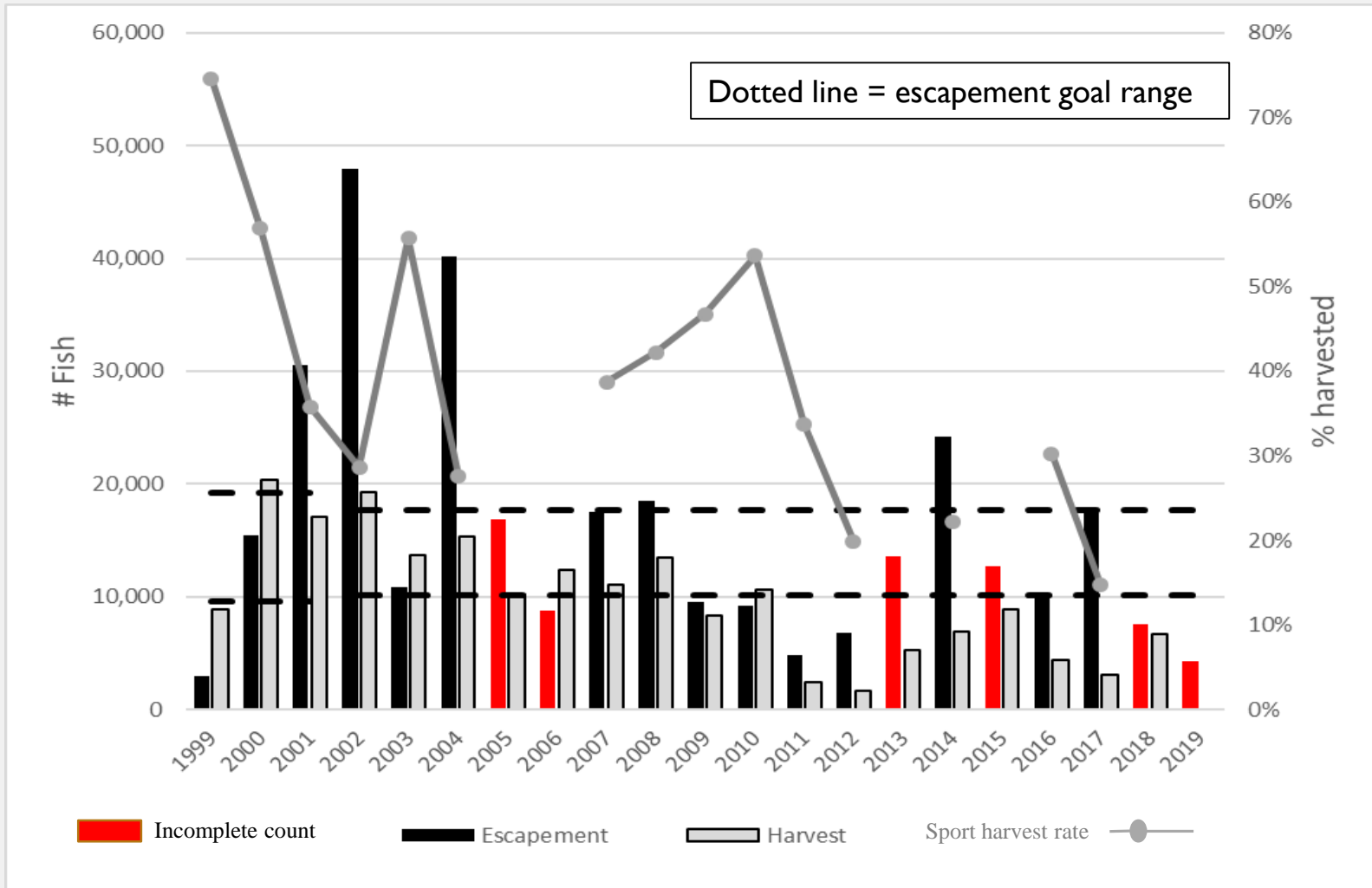
	Escapement	Commercial harvest ^a	Sport harvest	Total run	Commercial harvest rate	Sport harvest rate	Total harvest rate
2015	3,572	3,318	2,910	9,800	34%	30%	64%
2016	1,764	1,446	1,343	4,553	32%	29%	61%

^a Marine harvest estimated by updated mixed stock analysis using current genetic baseline.

Little Susitna Weir Locations



Little Susitna Coho Salmon Escapement, Harvest, and Sport harvest Rate



Sport fishery restricted or closed:

- 2011, 2012, 2016, 2019

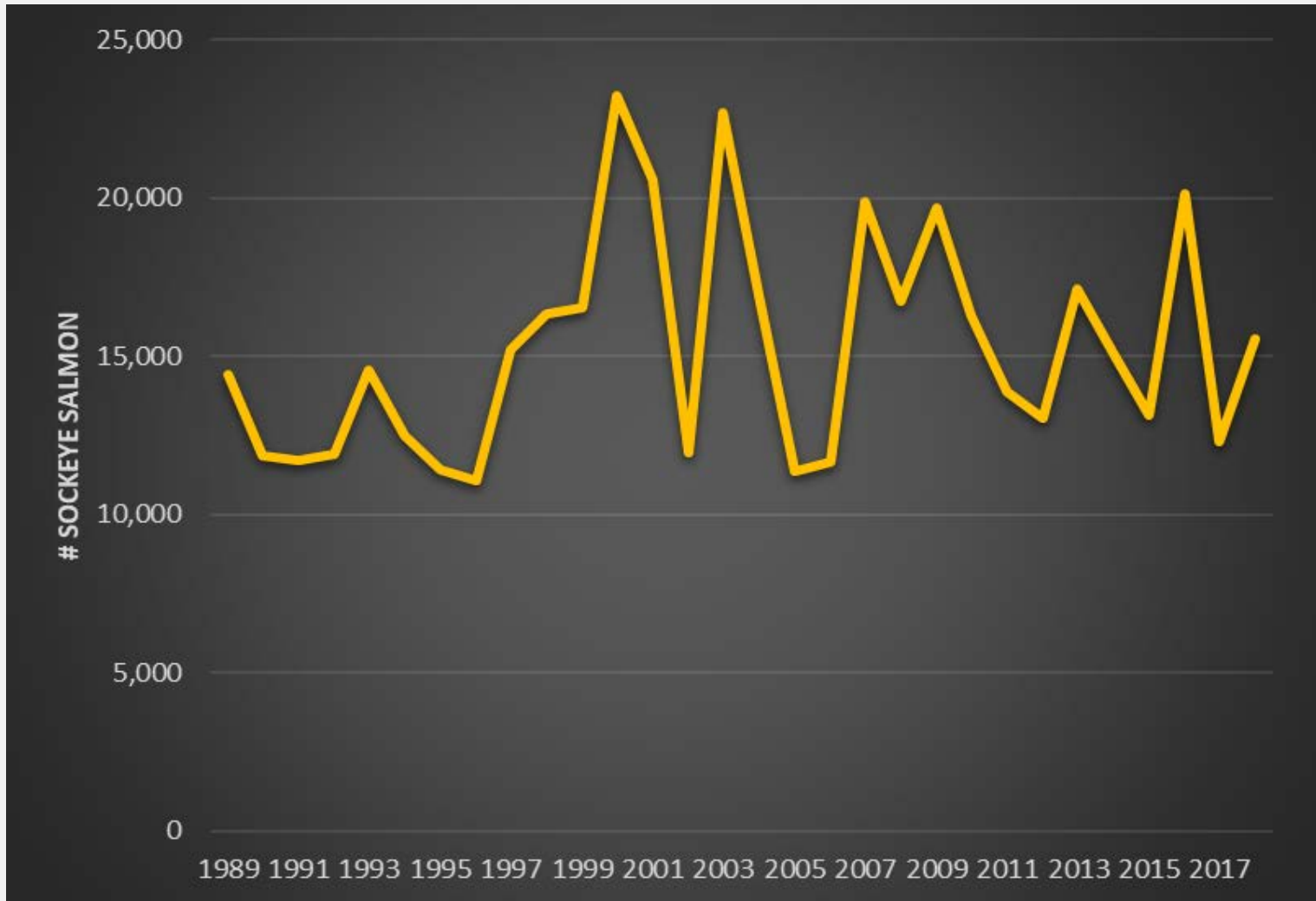
Sport fishery liberalized:

- 2014, 2015, 2017, 2018

NCI Sockeye Salmon Sport Fisheries



NCI sockeye salmon sport harvest, 1989-2018.



Fish Creek Personal Use Dipnet Fishery (Knik Arm)

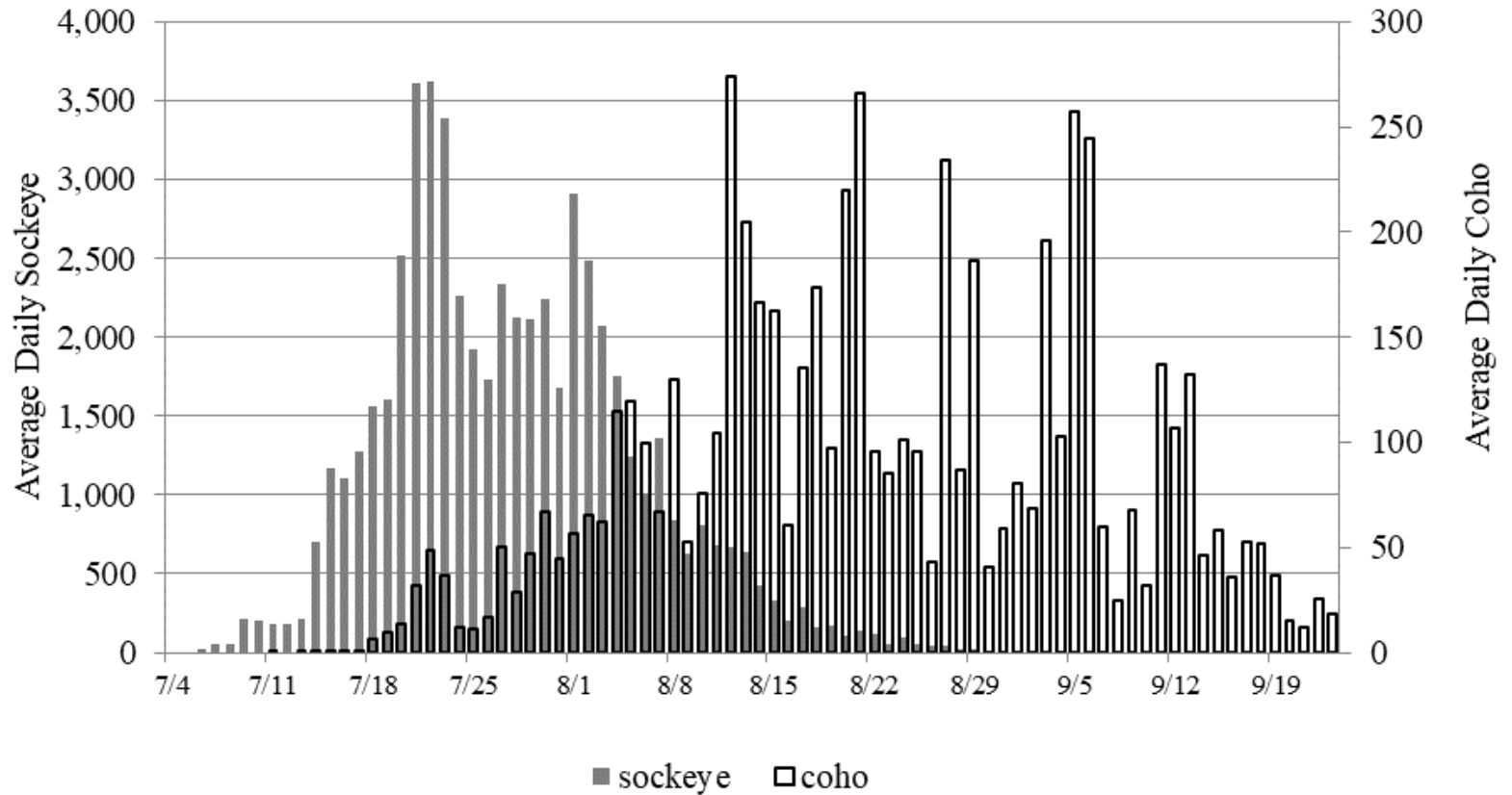
PU fishery targets sockeye:

- opened by EO if projected escapement >35,000 sockeye July 15-July 31

Sport fishery targets coho:

- youth only- first weekend August
- all ages- starts second weekend August

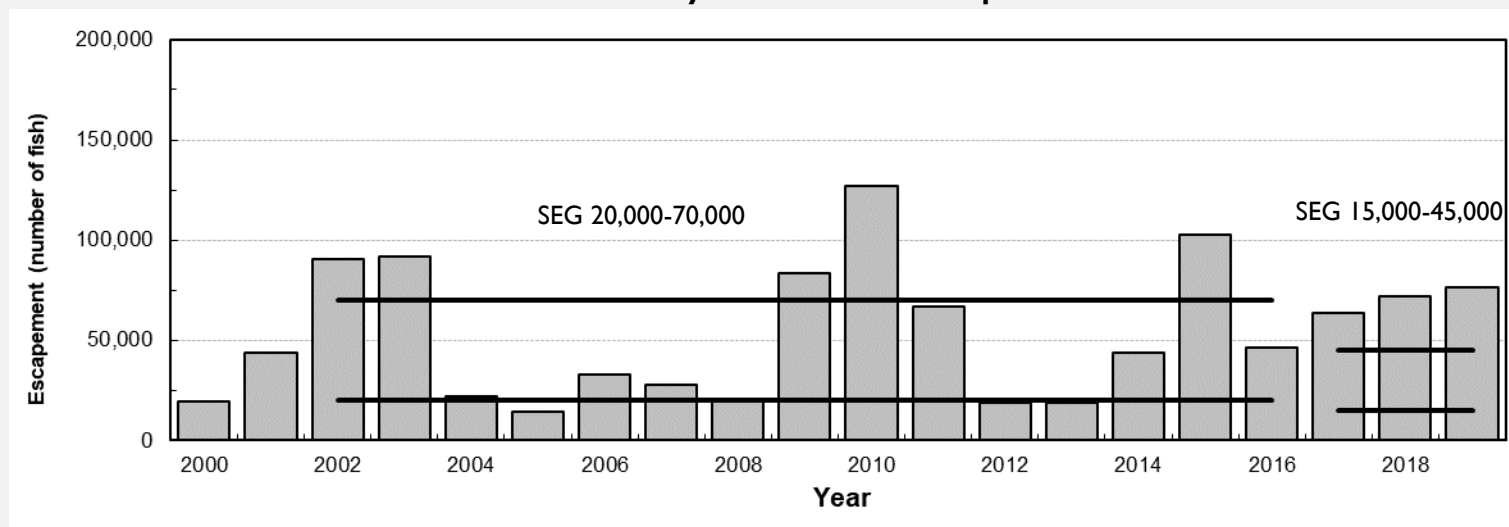
Fish Creek sockeye and coho salmon run timing



Fish Creek PU Salmon Harvest

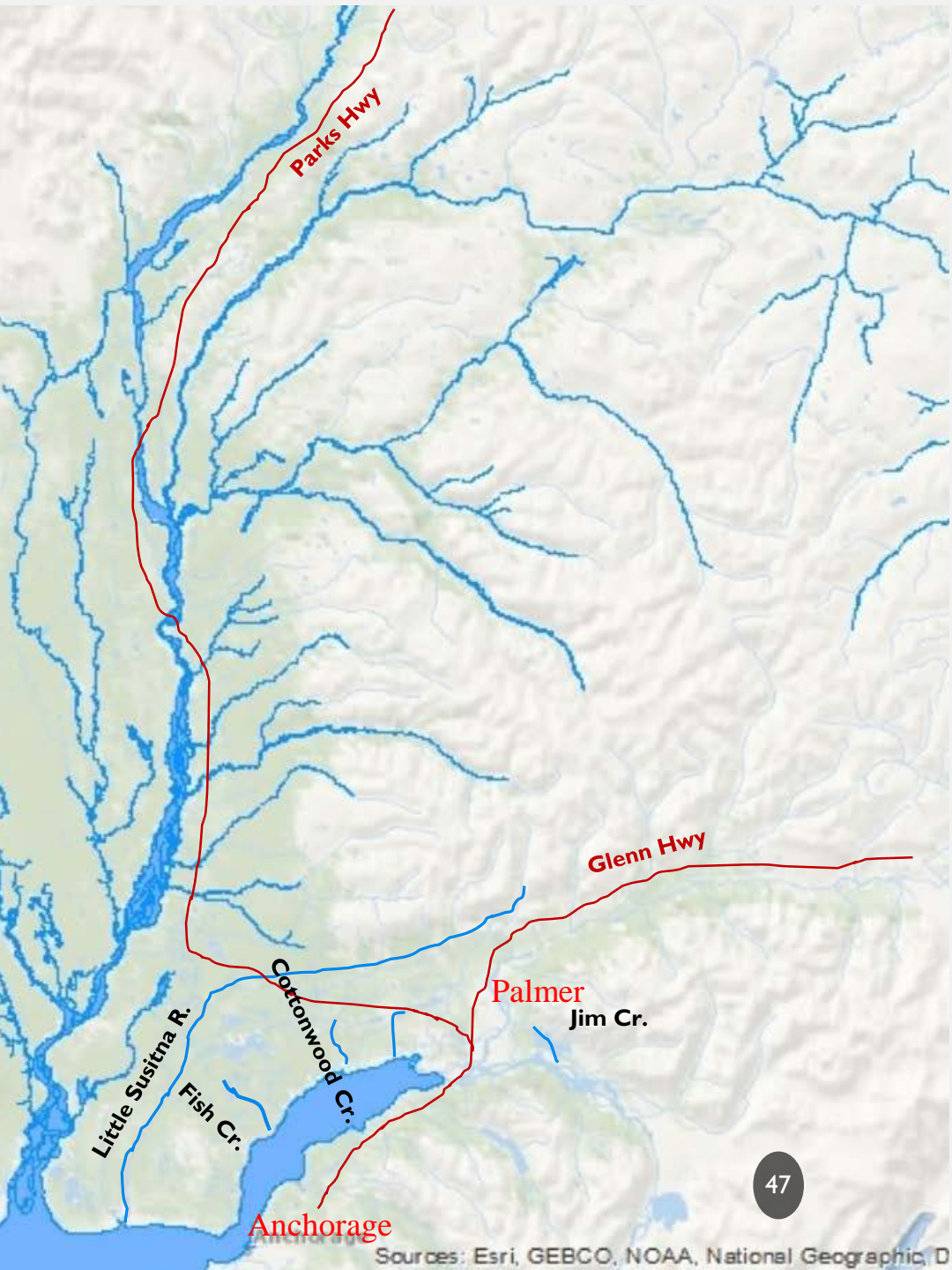
Year	Harvest (dip net)						Escapement	
	Sockeye	Coho	Chum	Pink	Chinook	Total	Sockeye	SEG
2009	9,898 ^a	53	33	66	10	10,060	83,480	20,000-70,000
2010	23,705 ^b	3,576	290	1,721	12	29,303	126,836	20,000-70,000
2011	5,236 ^c	905	72	155	2	6,370	66,678	20,000-70,000
2012	No fishery						18,823	20,000-70,000
2013	No fishery						18,912	20,000-70,000
2014	5,829 ^d	1,895	227	4,218	0	12,169	43,915	20,000-70,000
2015	19,260 ^e	3,321	329	1,329	0	24,239	102,367	20,000-70,000
2016	No fishery						46,202	20,000-70,000
2017	4,894 ^f	281	54	273	1	5,503	63,882	15,000-45,000
2018	18,659 ^g	1,779	208	880	5	21,531	72,157	15,000-45,000
Average	12,497	1,687	173	1,235	4	15,596	64,325	

Fish Creek Sockeye Salmon Escapement



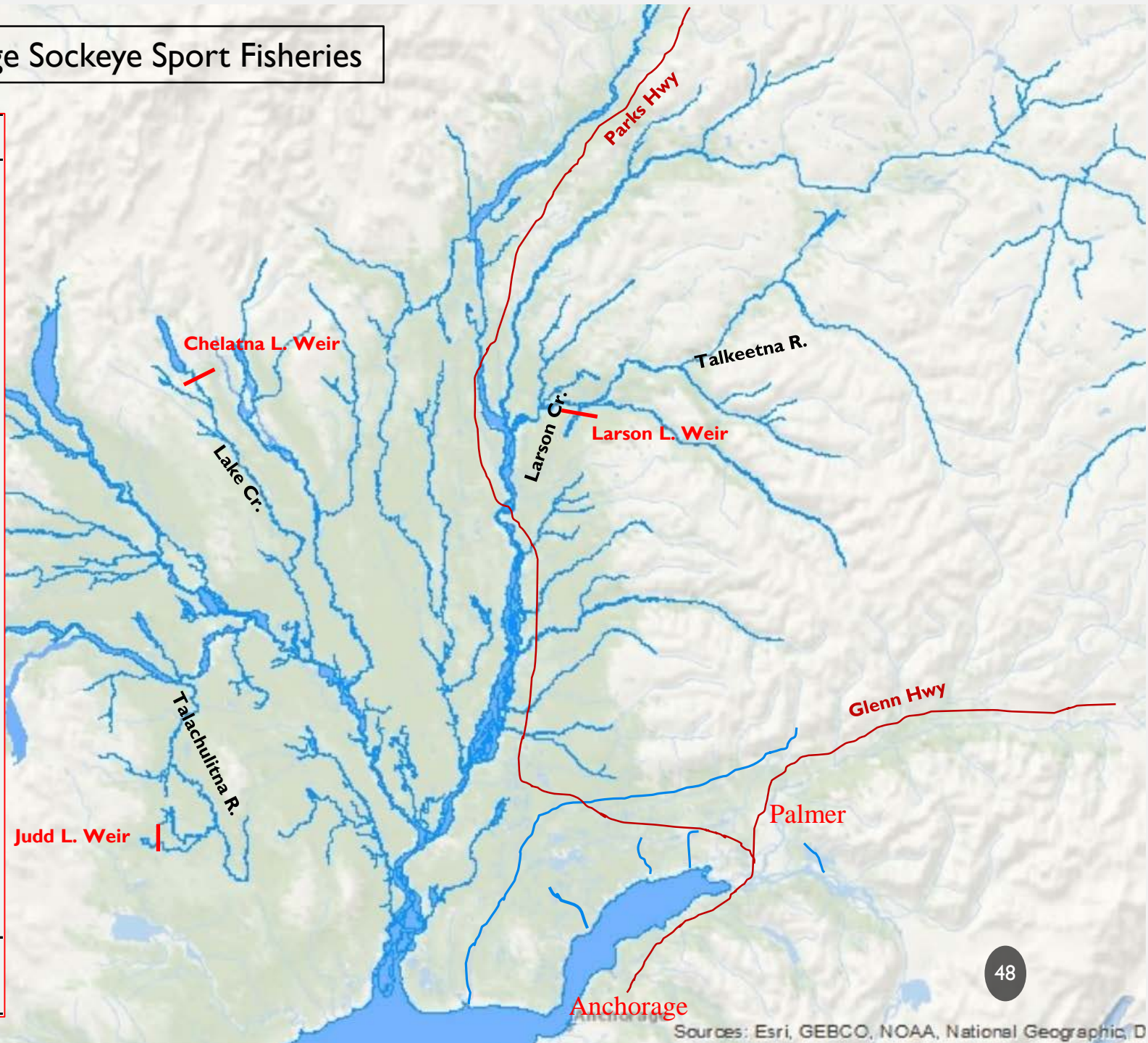
Knik Arm Sockeye Sport Fisheries

- Average harvest 400
 - Fish Creek
 - Little Susitna
 - Cottonwood Creek
- Average harvest 1,500 Jim Creek

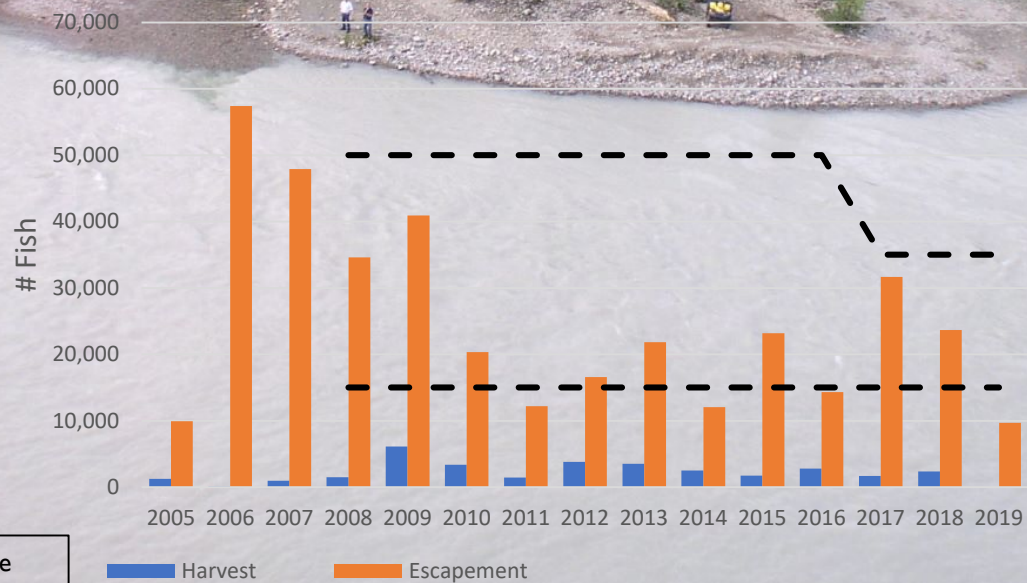


Susitna Drainage Sockeye Sport Fisheries

Year	Susitna
1989	4,834
1990	4,615
1991	5,980
1992	6,384
1993	6,298
1994	5,362
1995	5,788
1996	3,790
1997	8,960
1998	8,322
1999	9,887
2000	11,455
2001	13,087
2002	5,308
2003	11,394
2004	6,465
2005	3,896
2006	2,038
2007	4,647
2008	4,403
2009	9,682
2010	5,449
2011	5,872
2012	5,395
2013	9,360
2014	6,084
2015	5,411
2016	10,451
2017	5,092
2018	6,790
89-98 average	6,033
99-08 average	7,258
09-18 average	6,959



Larson Creek



Dotted line = escapement goal range

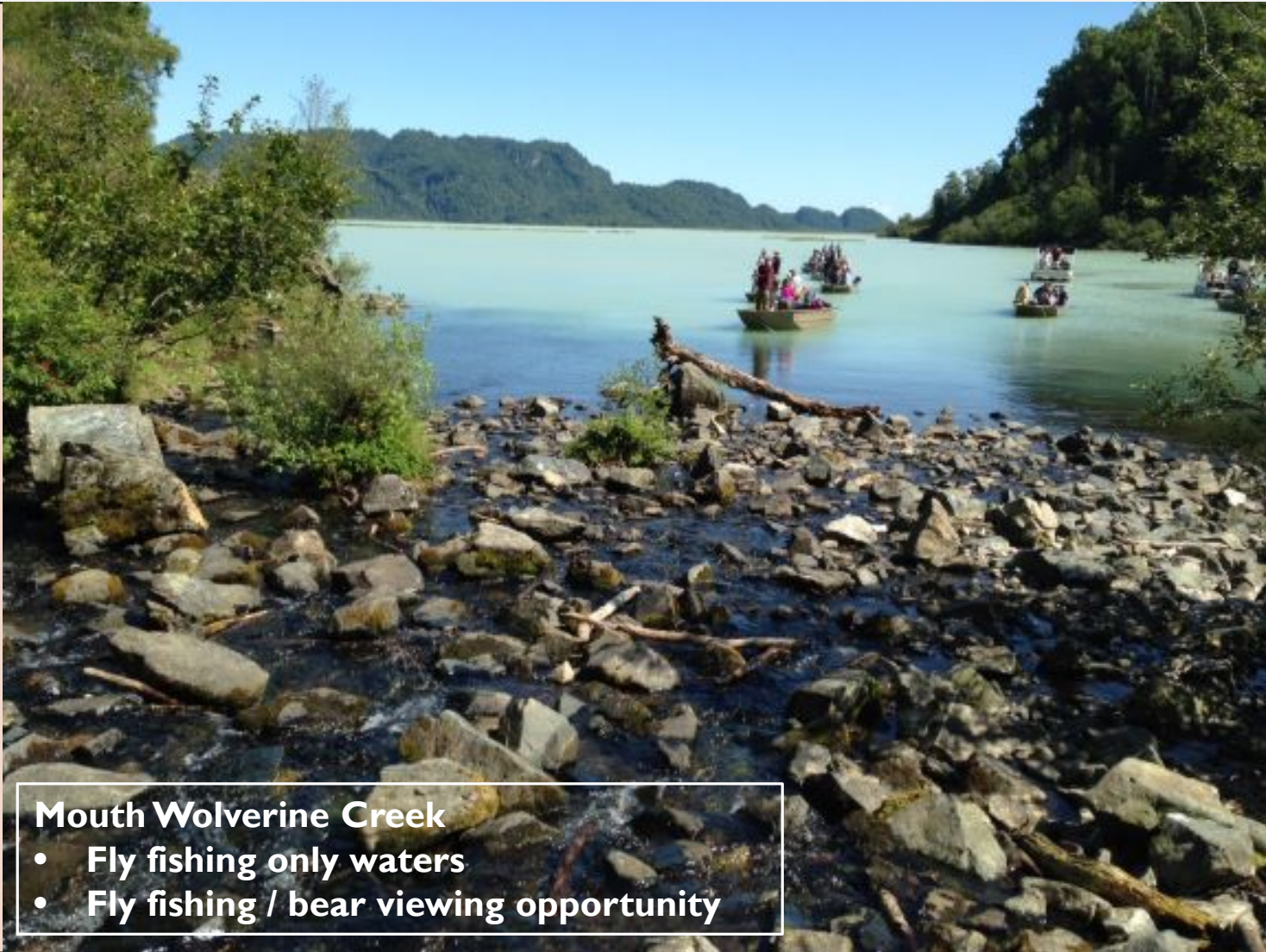
Harvest

Escapement

West Cook Inlet Sockeye Salmon Fisheries

Year	Kustatan River	Big River Lakes	Susitna R.- N. Foreland	South of N. Foreland	Other	Total
1999	186	1,783	76	464	481	2,990
2000	210	3,047	210	677	100	4,244
2001	293	1,011	201	1,030	634	3,169
2002	232	664	24	160	939	2,019
2003	397	3,642	94	372	354	4,859
2004	89	2,793	294	23	124	3,323
2005	95	3,401	121	139	269	4,025
2006	95	3,980	306	458	154	4,993
2007	102	7,058	252	568	237	8,217
2008	429	4,436	238	393	156	5,652
2009	157	3746	120	238	0	4,261
2010	176	3,666	57	1,247	106	5,252
2011	0	3,966	307	156	17	4,446
2012	0	4,474	144	80	268	4,966
2013	228	4,025	162	569	19	5,003
2014	232	4,939	0	1,709	69	6,949
2015	123	3,893	231	1,278	0	5,525
2016	153	3,681	1,304	811	299	6,248
2017	179	4,498	207	321	756	5,961
2018	0	3,558	403	1,015	937	5,913
99-08 mean	213	3,182	182	428	345	4,349
09-18 mean	125	4,045	294	742	247	5,452

Big River Lakes

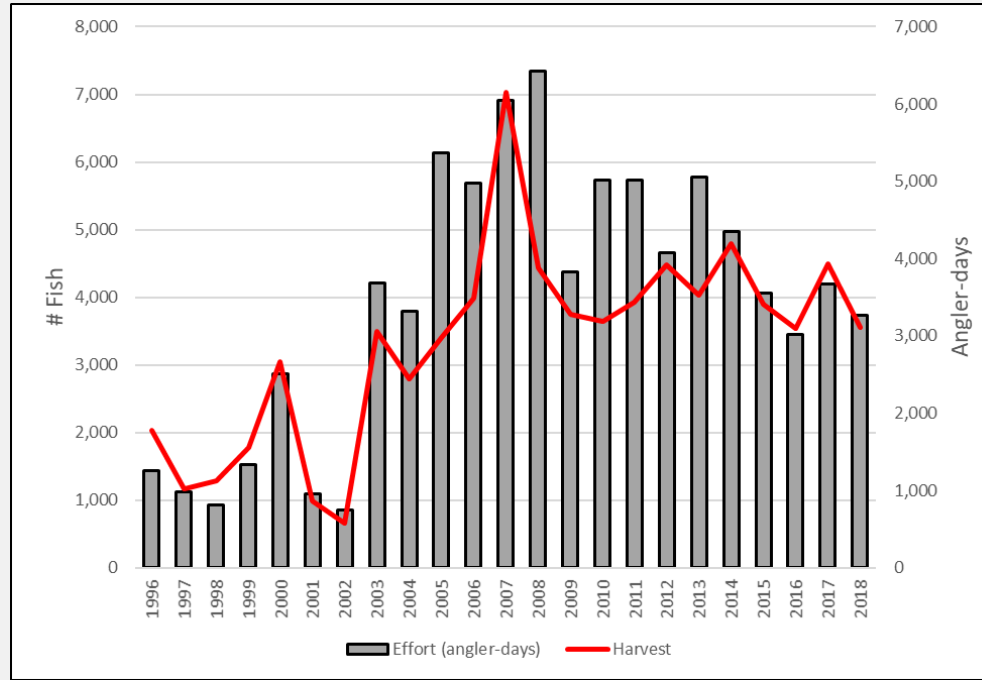


Mouth Wolverine Creek

- **Fly fishing only waters**
- **Fly fishing / bear viewing opportunity**

Big River Lakes Sockeye Fishery

Harvest and Effort



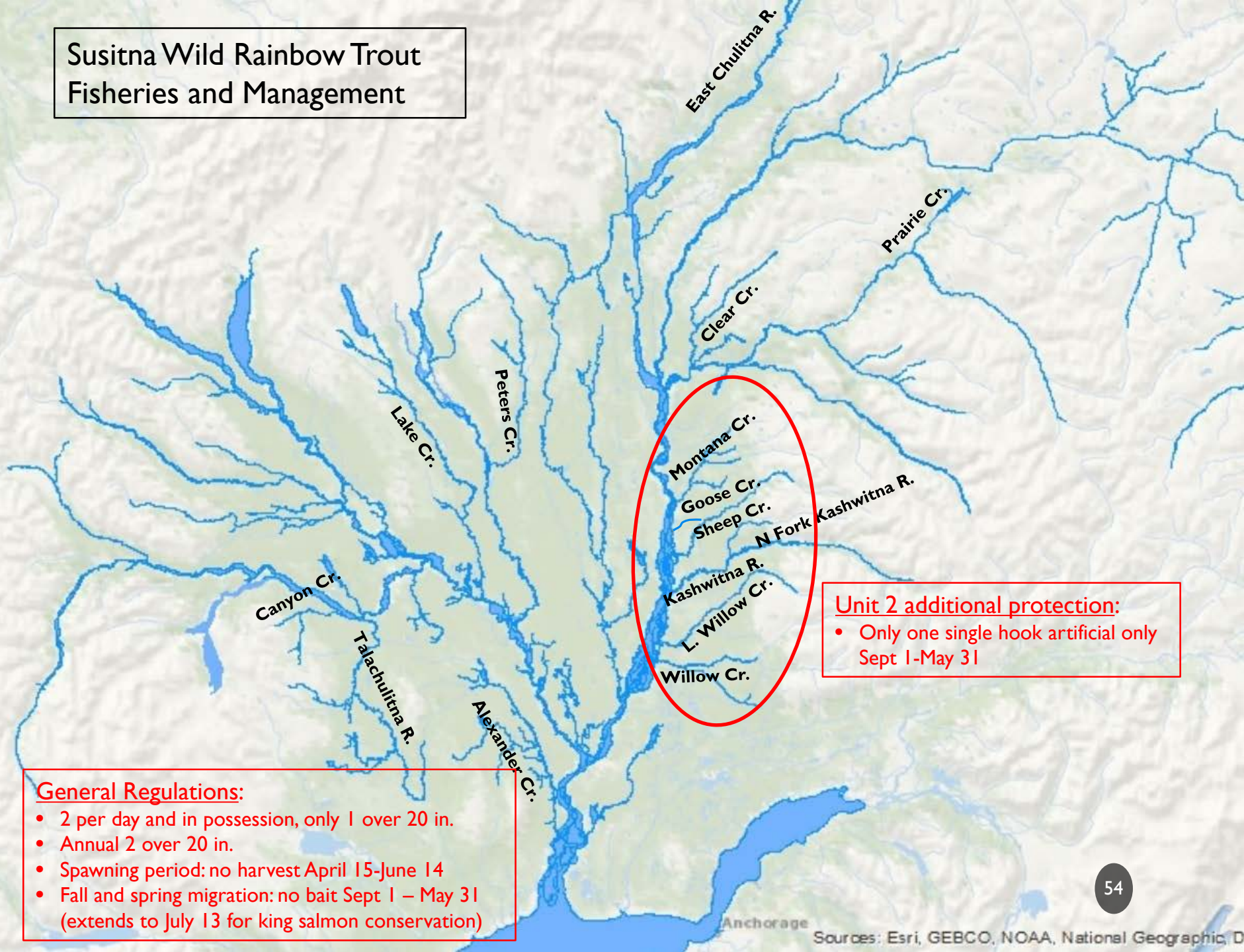
Guided Harvest and Effort

	Wolverine Big River			Guides	Trips	Client-days
	Creek	Lakes	Total			
2006	5,241	2,444	7,685	43	912	3,490
2007	7,346	4,673	12,019	44	956	3,624
2008	4,475	4,006	8,481	51	1,351	5,327
2009	2,625	4,389	7,014	40	822	3,094
2010	3,481	2,112	5,593	35	674	2,620
2011	3,094	3,481	6,575	32	749	2,838
2012	4,461	3,984	8,445	42	705	2,707
2013	2,963	3,873	6,836	37	821	3,179
2014	5,114	5,768	10,882	38	754	2,935
2015	2,730	4,956	7,686	40	778	3,018
2016	2,200	4,700	6,900	28	749	2,781
Mean	3,975	4,035	8,011	39	843	3,238

Rainbow Trout Sport Fisheries



Susitna Wild Rainbow Trout Fisheries and Management



Unit 2 additional protection:

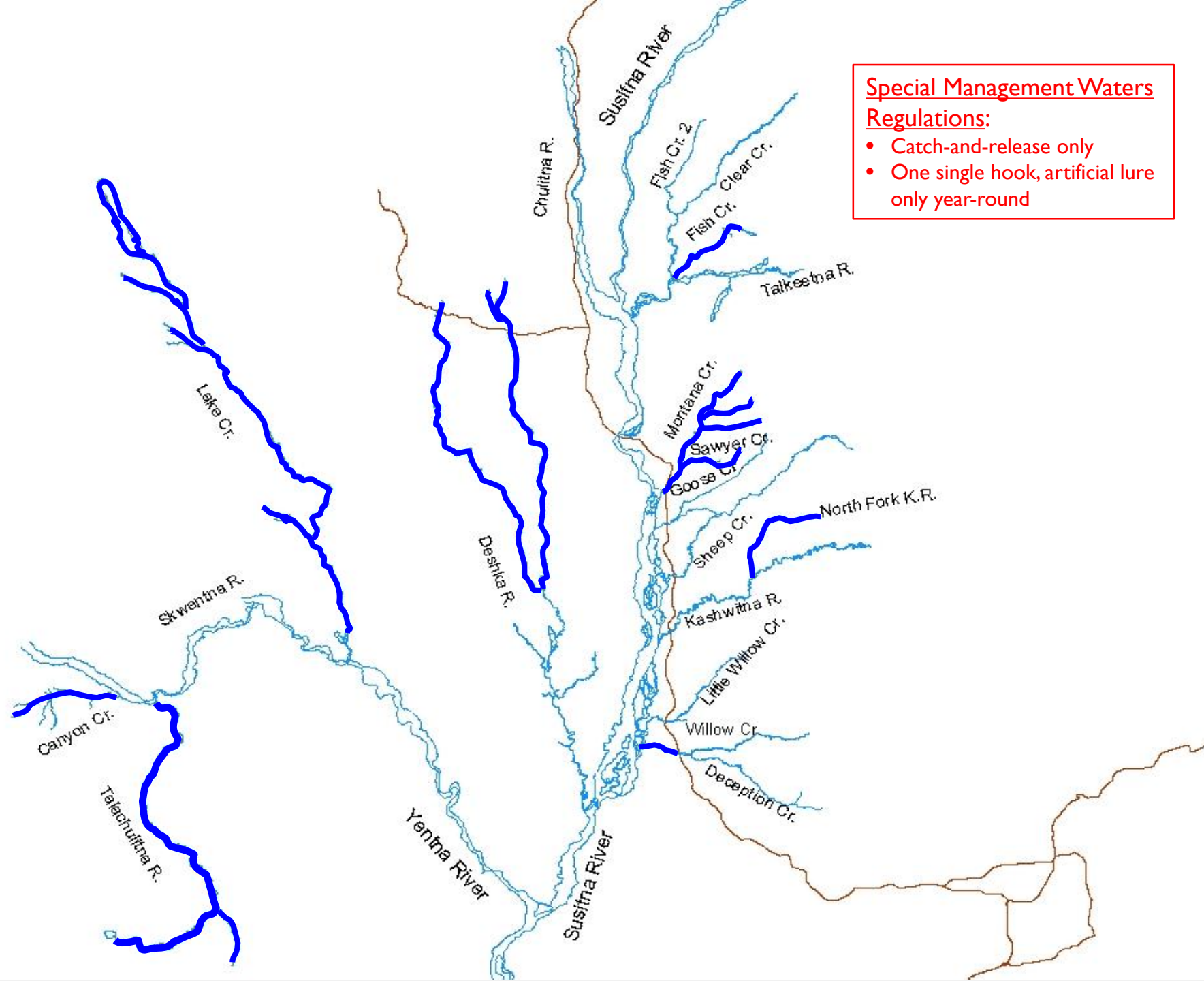
- Only one single hook artificial only Sept 1-May 31

General Regulations:

- 2 per day and in possession, only 1 over 20 in.
- Annual 2 over 20 in.
- Spawning period: no harvest April 15-June 14
- Fall and spring migration: no bait Sept 1 – May 31 (extends to July 13 for king salmon conservation)

Special Management Waters Regulations:

- Catch-and-release only
- One single hook, artificial lure only year-round



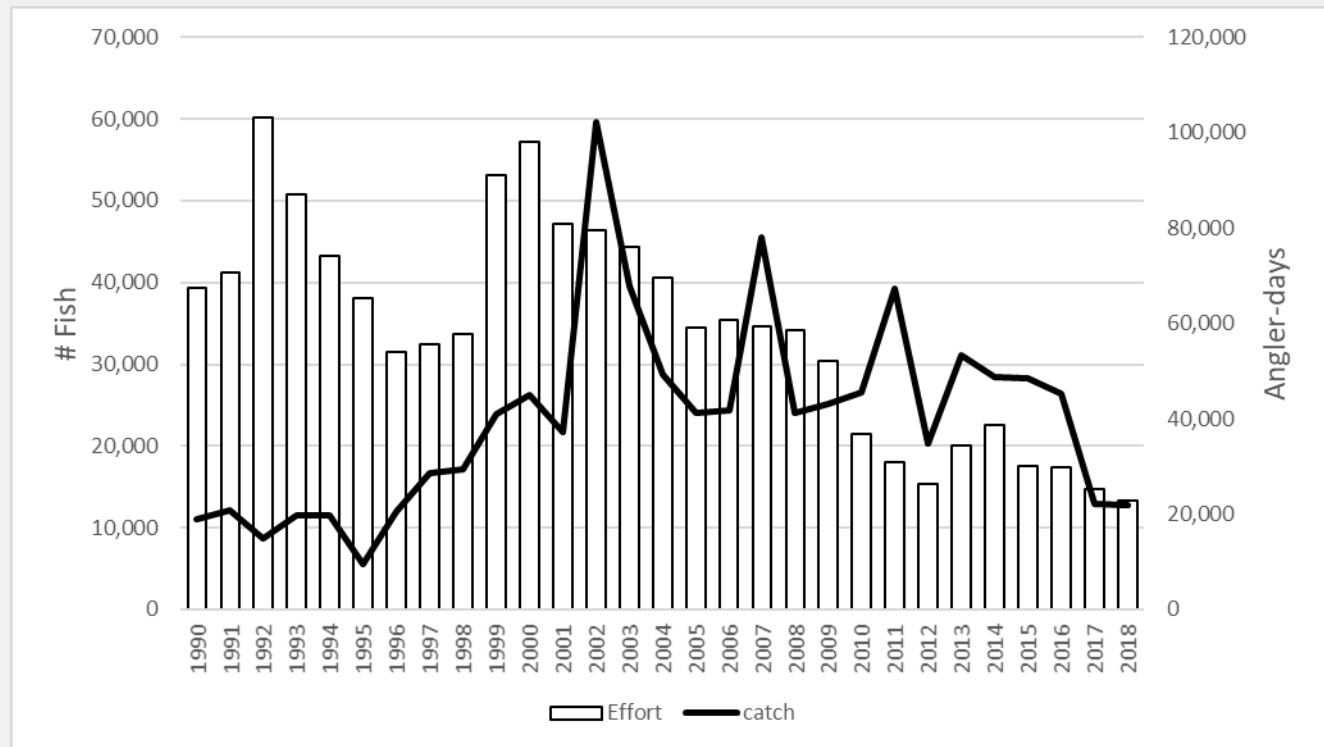
Rainbow trout catch and harvest in select major fisheries of Westside Susitna designated in whole or in part special management waters for rainbow trout

	Talachulitna		Lake Creek		Deshka		Other		Total Catch
	catch	harvest	catch	harvest	catch	harvest	catch	harvest	
1999	11,072	0	15,310	640	5,323	561	6,159	665	21,298
2000	5,209	0	12,156	567	6,146	205	5,887	454	18,756
2001	7,027	0	7,739	183	8,300	270	5,726	306	16,345
2002	6,283	0	11,622	445	4,464	417	7,376	347	16,433
2003	9,721	0	22,460	561	5,868	368	2,278	496	28,824
2004	9,000	0	22,130	587	5,868	938	5,971	104	28,102
2005	17,060	0	21,197	209	3,161	60	5,157	70	24,428
2006	2,883	0	28,013	159	9,635	523	3,487	345	37,993
2007	11,846	0	11,405	236	3,905	185	4,822	169	15,479
2008	2,249	0	10,267	153	2,070	419	3,477	172	12,509
2009	6,331	0	10,217	27	3,093	562	7,814	276	13,586
2010	5,242	0	10,011	154	1,334	122	4,198	158	11,503
2011	8,647	0	23,420	143	2,156	0	4,844	325	25,901
2012	7,109	0	12,321	76	556	61	4,708	31	12,908
2013	5,433	0	9,015	174	731	103	4,999	191	9,937
2014	11,032	0	23,717	568	1,951	29	4,077	275	25,943
2015	12,798	0	13,955	200	624	166	10,917	128	14,707
2016	3,914	0	10,052	175	924	32	4,516	211	11,187
2017	737	0	2,525	40	710	0	3,568	322	3,557
2018	1,646	0	4,102	35	1,814	26	1,629	293	6,209
2009-2013									
mean	6,552	0	12,997	115	1,574	170	5,313	196	14,767
2014-2018									
mean	6,025	0	10,870	204	1,205	51	4,941	246	12,321

Susitna Rainbow Trout Total Catch and Harvest

	catch	harvest
1999	57,602	8,461
2000	54,889	7,565
2001	46,677	7,027
2002	92,494	9,084
2003	81,345	4,379
2004	69,642	8,207
2005	56,909	5,768
2006	74,929	4,715
2007	78,811	5,883
2008	47,186	5,317
2009	49,336	8,793
2010	47,993	5,431
2011	80,006	5,634
2012	39,534	5,085
2013	51,971	5,839
2014	59,306	5,674
2015	63,138	11,628
2016	47,561	5,260
2017	24,542	3,843
2018	20,190	1,756
<hr/>		
2009-2013		
mean	53,768	6,156
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2014-2018		
mean	42,947	5,632

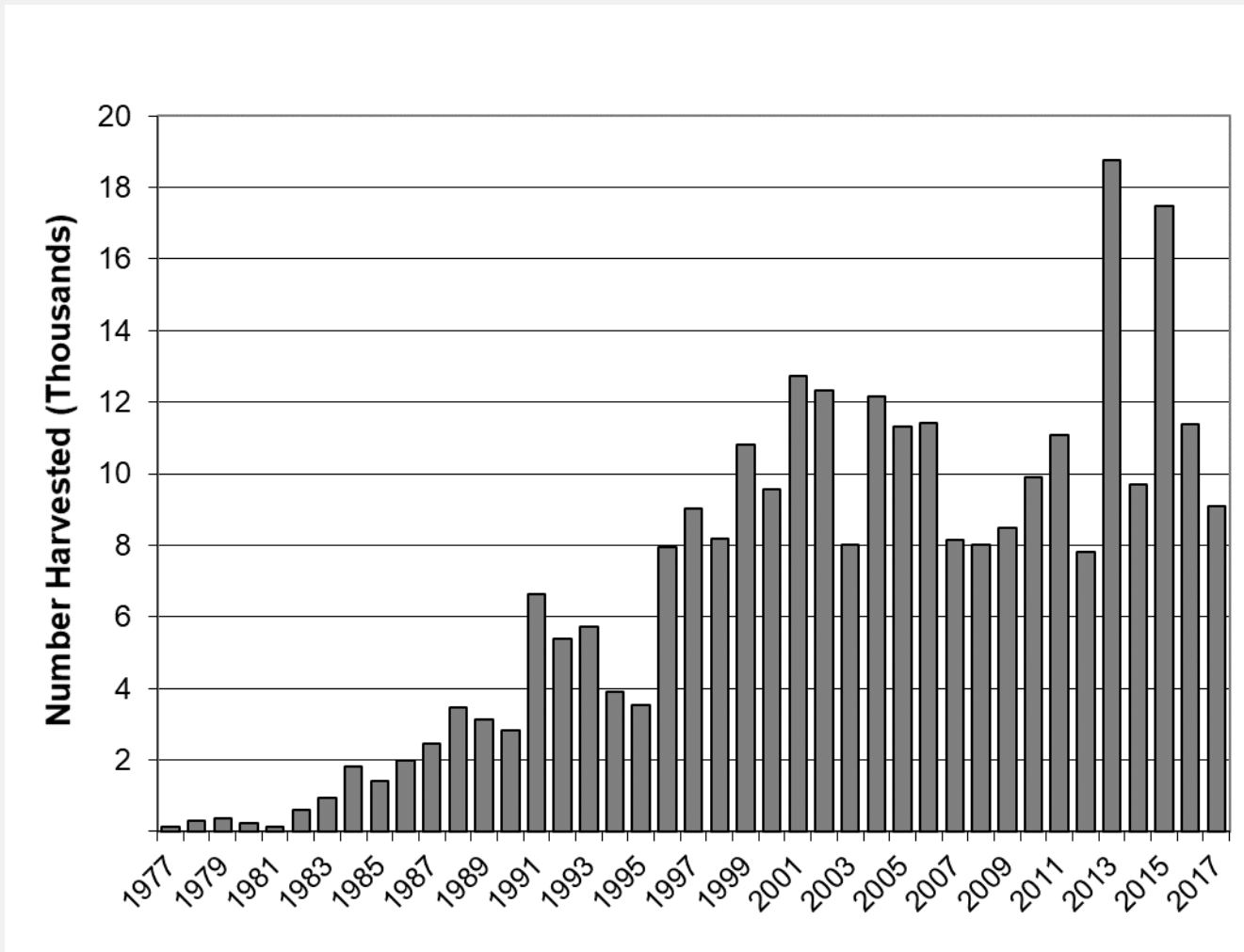
Unit 2 Susitna Rainbow Trout Catch and Effort



Northern Pike Sport Fisheries



NCI Northern Pike Harvest





BOF Past Actions:

- 1996- no bag limit; 5 lines allowed in select lakes containing nearly only pike
- 1998- bow and arrow and spearing allowed
- 2002, 2008, 2011- additional 5-line lakes identified
- 2011- Prohibit release live pike in Susitna drainage and West Cook Inlet.

Questions?

