

Oral Report to the Alaska Board of Fisheries 2017

Review of Salmon Escapement Goals in the Kodiak Management Area



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January 2017

Oral Report: RC 3, Tab 1
Written Report: RC 3 Tab 8

Presentation Objectives

- **Policies that direct the escapement goal review**
- **Describe team formation and approach**
- **Identify goals and methods**
- **Present recommendations**



Policy and Escapement Goal Definitions

This review was based on:

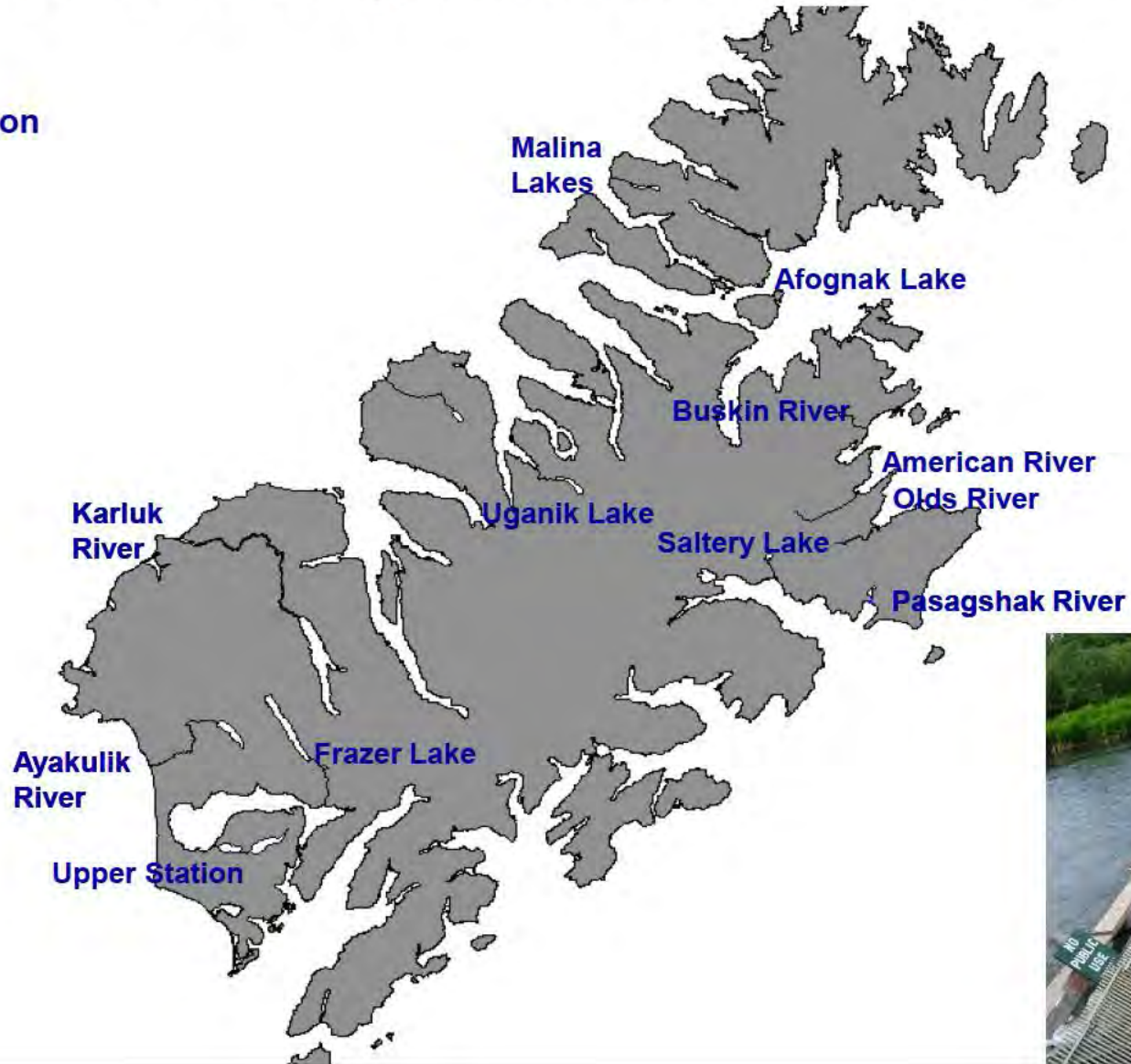
- *Policy for the Management of Sustainable Salmon Fisheries (SSFP; 5 AAC 39.222)*
- *Policy for Statewide Salmon Escapement Goals (EGP: 5 AAC 39.223)*
- **Two important terms defined in the SSFP are:**
 - Biological Escapement Goal (BEG)**
 - Sustainable Escapement Goal (SEG)**

Approach and Process for Review Team

- **Three-year interval**
- **Review available data for stocks**
- **Determine appropriate goal type and methods**
- **Perform analysis, assess goal range, review by team**
- **Develop draft recommendations for directors of divisions of Commercial Fisheries and Sport Fish**

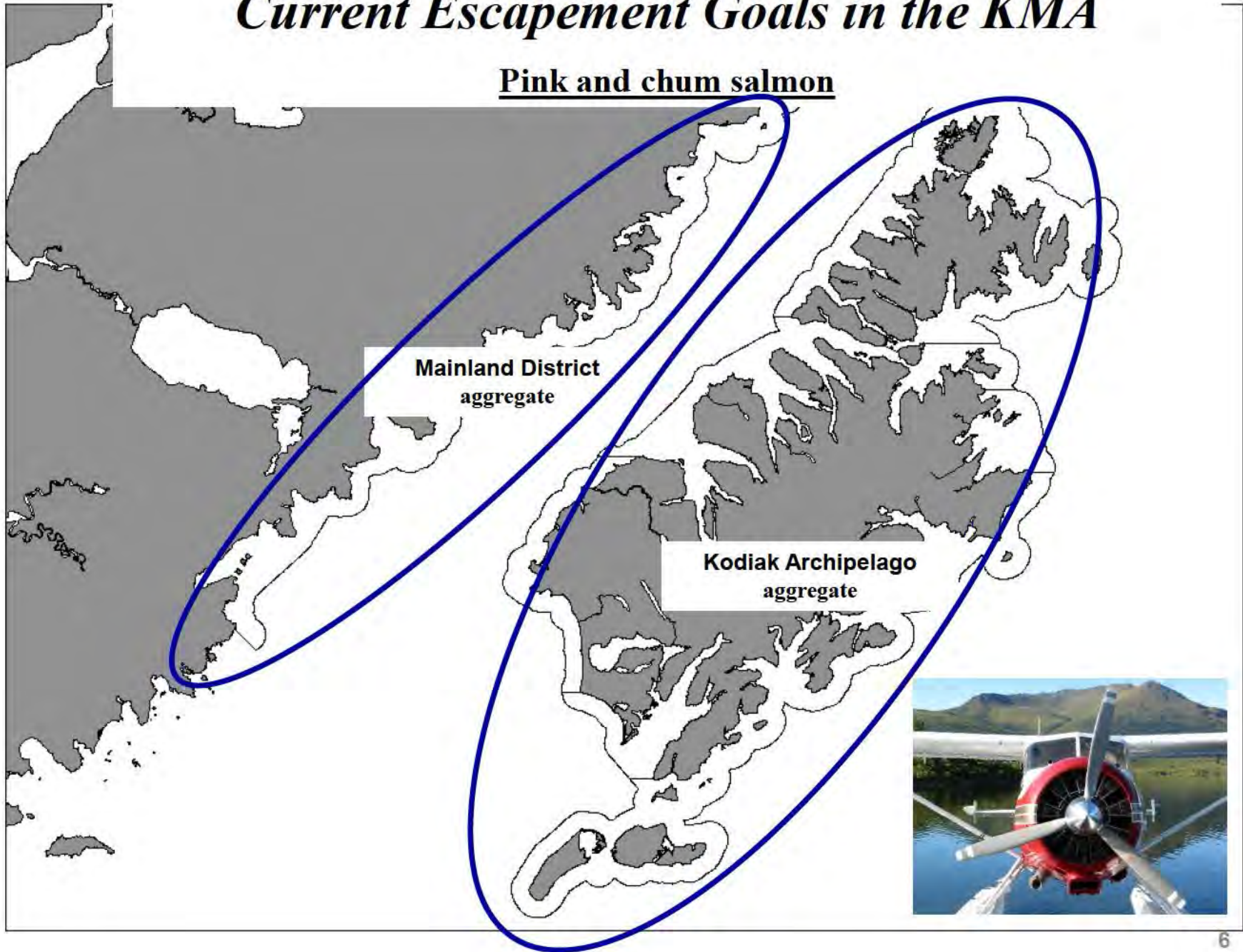
Current Escapement Goals in the KMA

~~Coblesalmon~~



Current Escapement Goals in the KMA

Pink and chum salmon



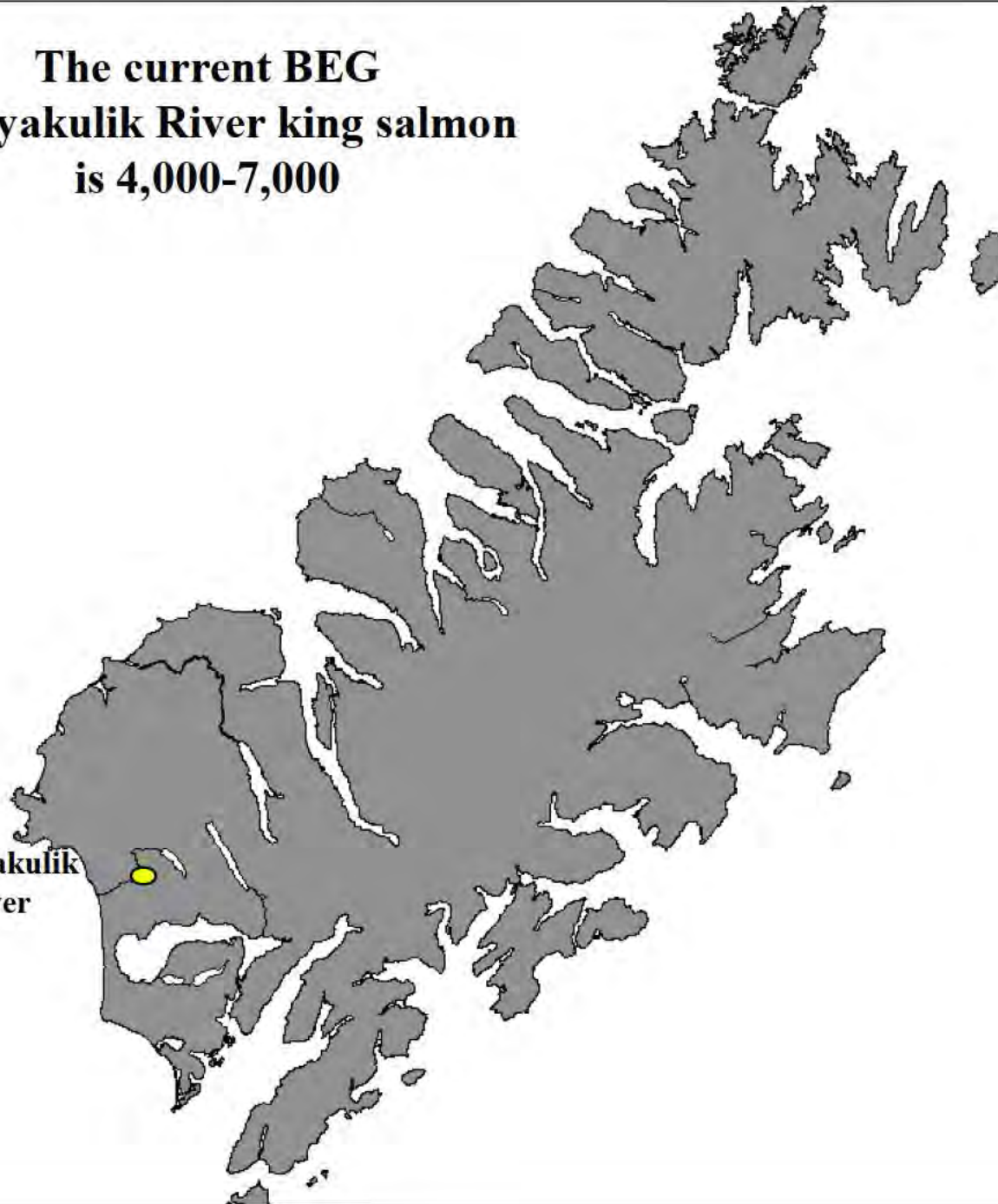
Team Recommendations

- **No change to 18 goals**
- **Change 4 goals**
- **Eliminate 2 goals**



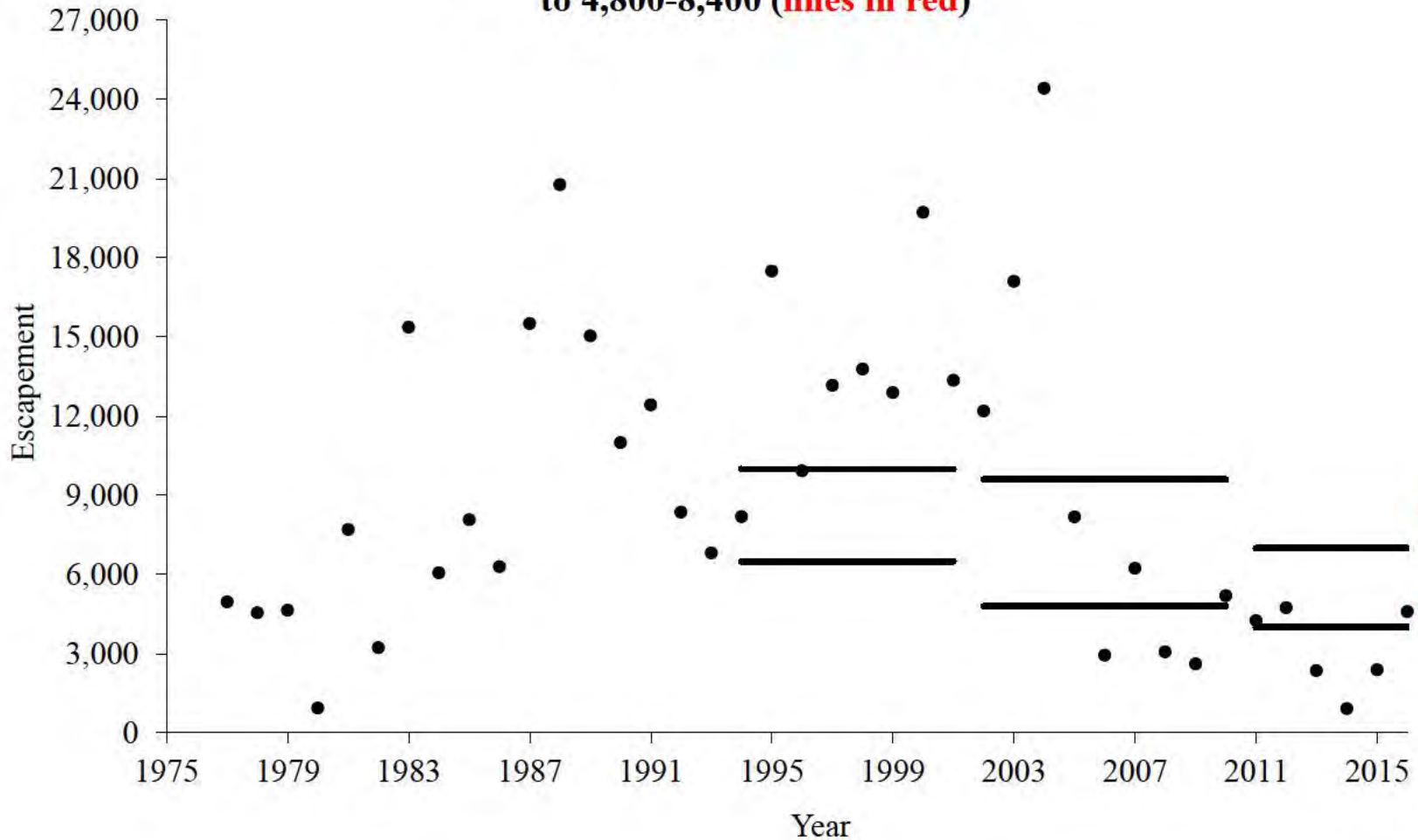
**The current BEG
for Ayakulik River king salmon
is 4,000-7,000**

**Ayakulik
River**



Escapement of Ayakulik River king salmon is down in recent years. Despite restrictions, escapement was below the BEG in 2013-2015, but achieved in 2016

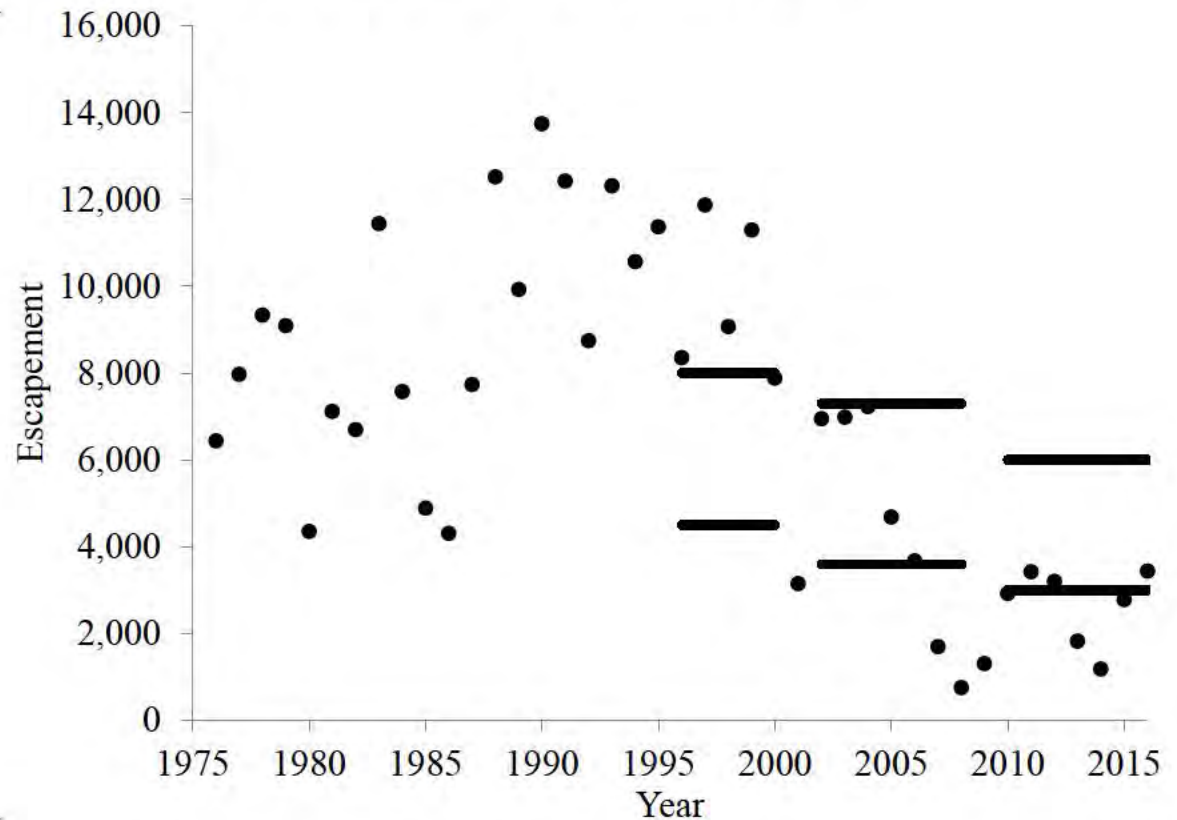
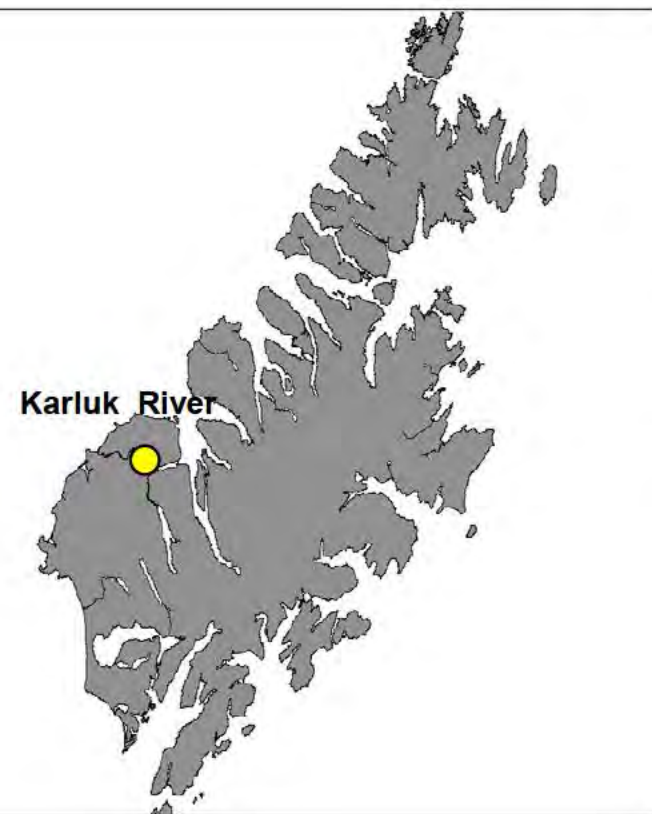
Recommend raising the Ayakulik River king salmon BEG from 4,000-7,000
to 4,800-8,400 (lines in red)



Karluk River king salmon were designated a stock of concern in 2011.

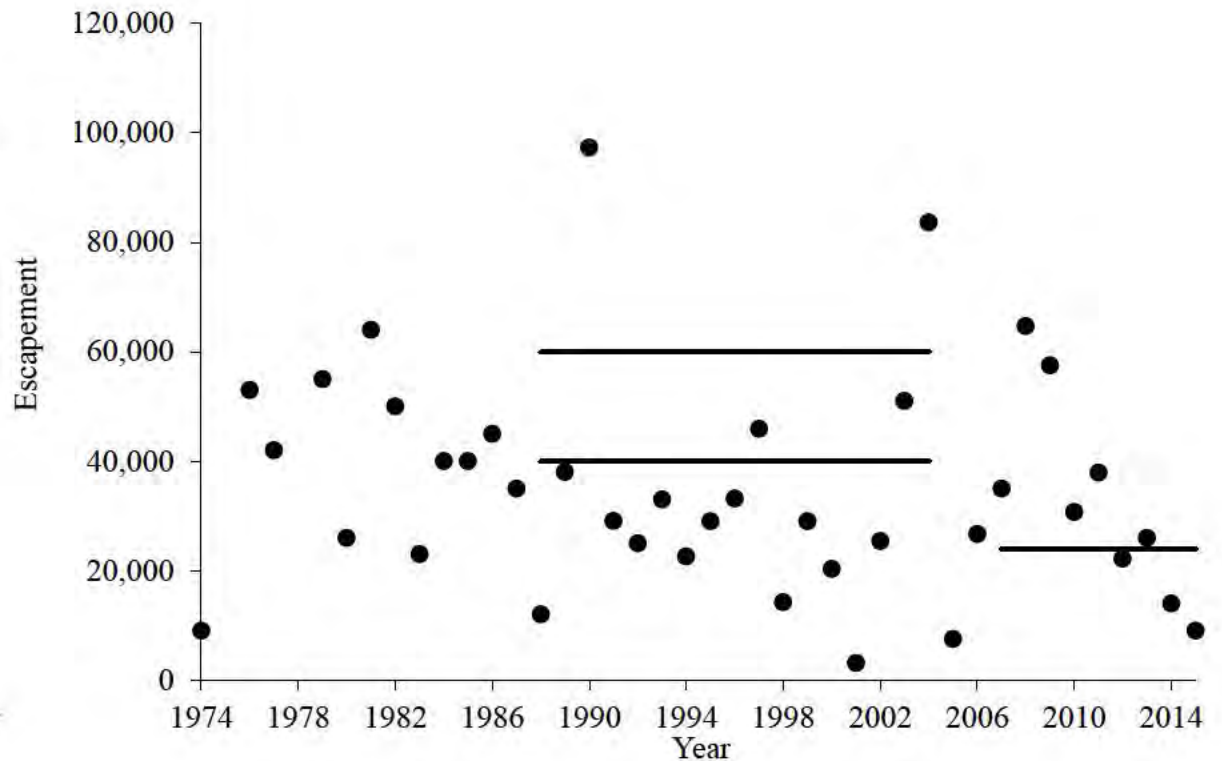
In the last 10 years, the escapement goal has only been achieved in 2011, 2012, and 2016.

The committee reviewed and is recommending no change to the Karluk River king salmon BEG of 3,000-6,000



Uganik Lake sockeye salmon

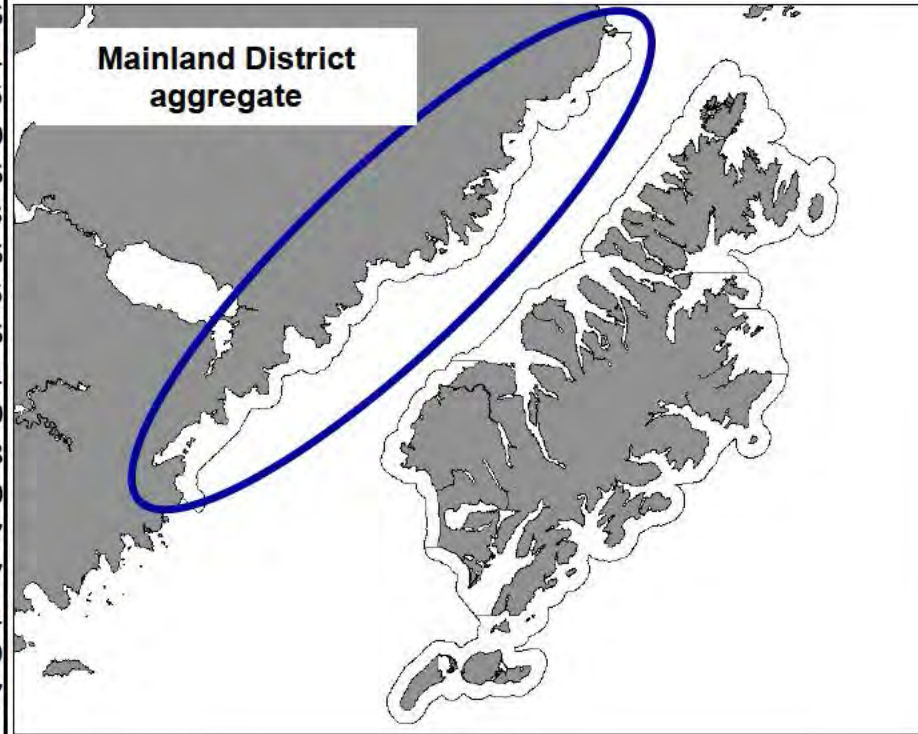
Recommend elimination of the sockeye salmon lower-bound SEG



Mainland District aggregate chum salmon

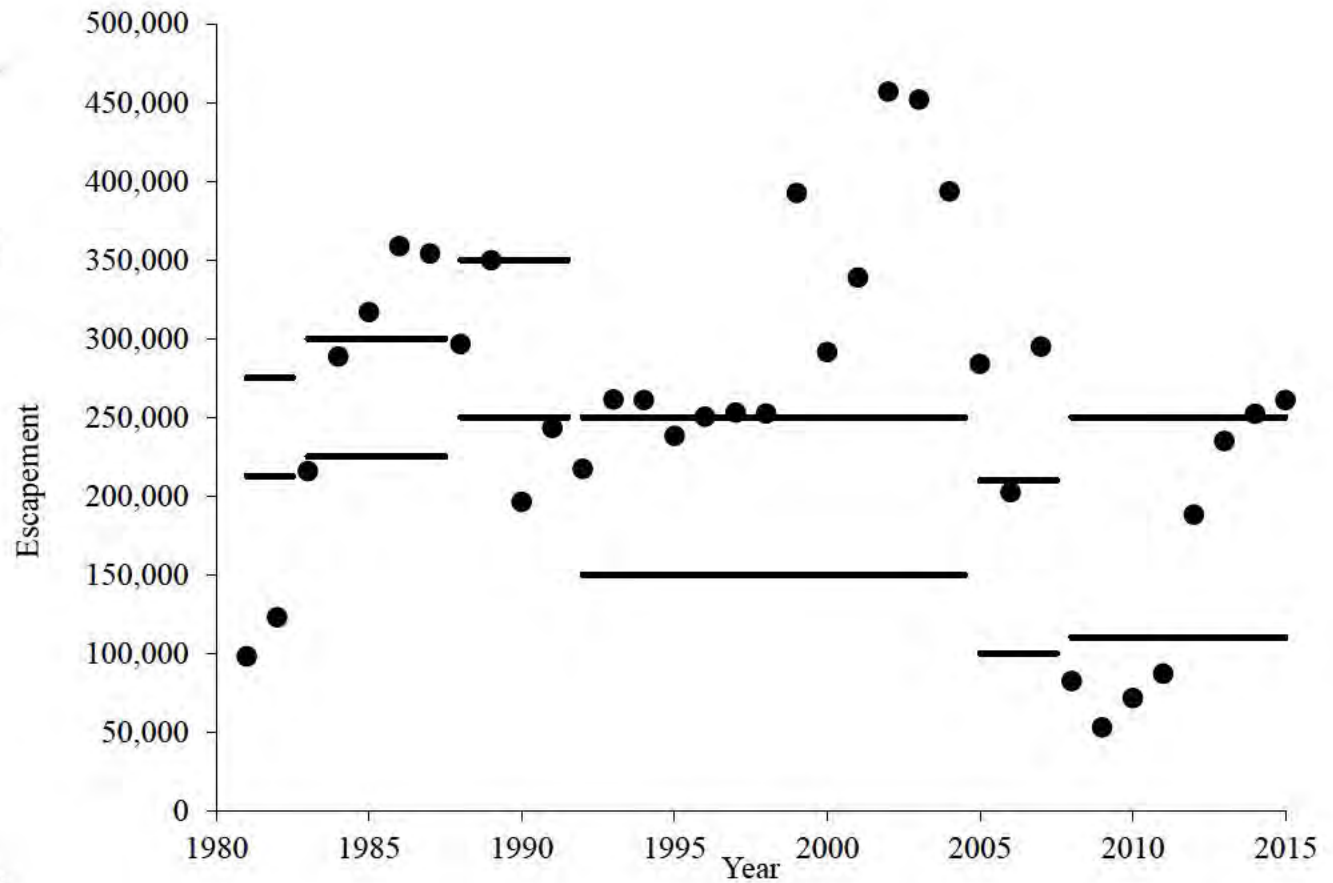
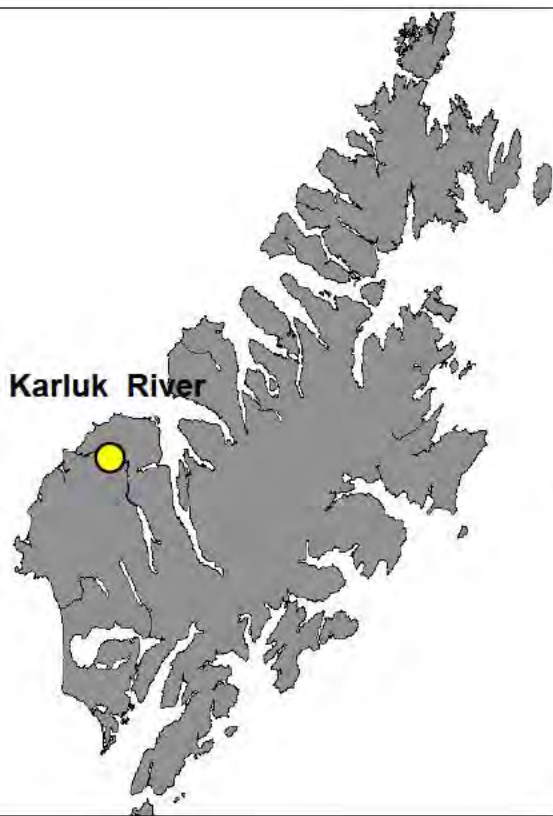
Recommend elimination of the Mainland District aggregate SEG

Year	Mainland Aggregate	Number of Streams Surveyed	Year	Mainland Aggregate	Number of Streams Surveyed
1967	19,250	6	1992	213,100	19
1968	7,000	4	1993	51,790	11
1969	22,200	8	1994	169,100	19
1970	61,500	9	1995	127,900	21
1971	53,710	21	1996	158,850	20
1972	38,800	15	1997	80,300	11
1973	89,650	25	1998	103,050	16
1974	15,300	7	1999	168,700	21
1975	31,720	10	2000	367,650	25
1976	125,910	23	2001	196,100	20
1977	392,590	41	2002	120,975	16
1978	119,870	23	2003	73,800	23
1979	181,510	31	2004	241,645	16
1980	367,250	28	2005	22,500	5
1981	238,860	35	2006	346,140	26
1982	603,148	39	2007	82,600	21
1983	240,610	37	2008	72,000	20
1984	246,450	30	2009	91,106	28
1985	263,100	23	2010	124,500	30
1986	245,175	25	2011	128,700	27
1987	225,600	30	2012	127,850	27
1988	185,800	6	2013	112,700	31
1989	350,400	23	2014	107,431	29
1990	207,200	15	2015	133,200	17
1991	334,100	21			



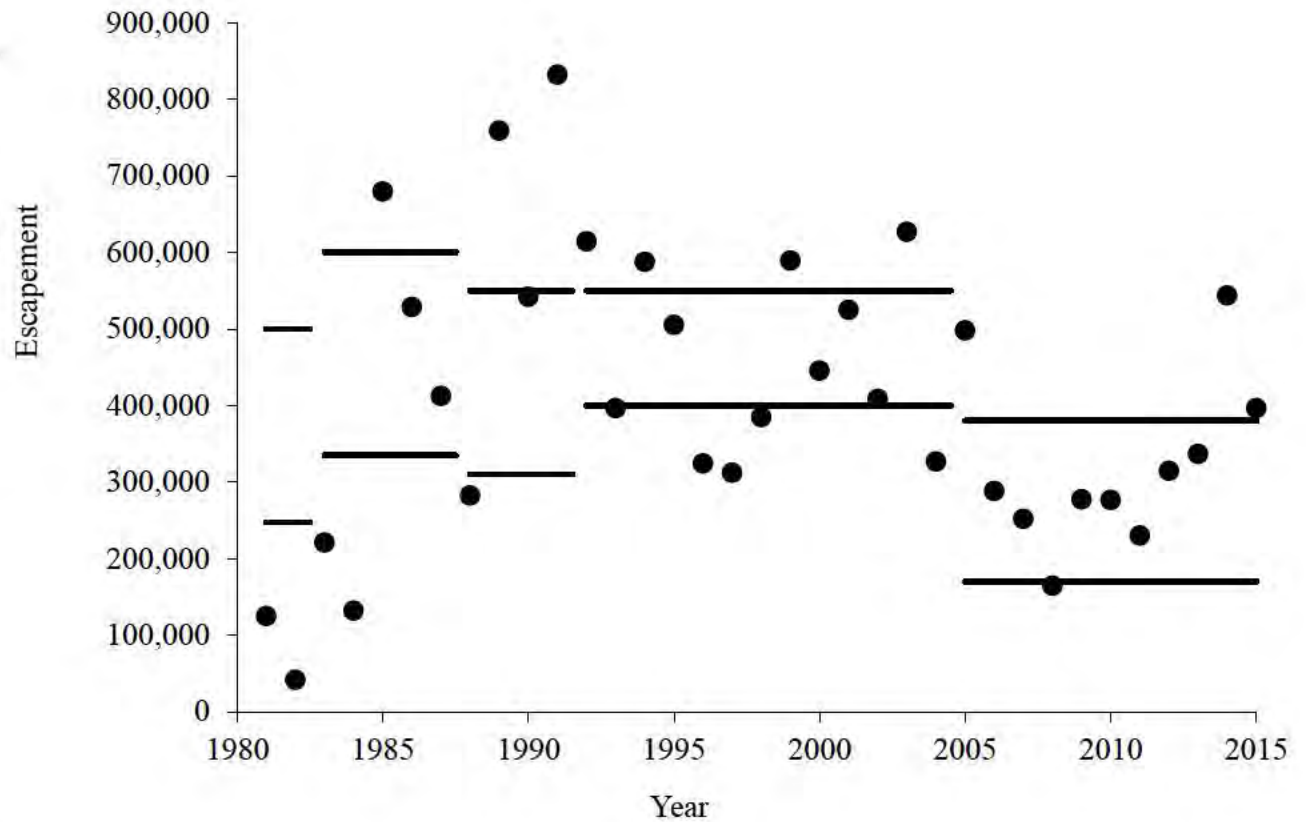
Karluk River early-run sockeye salmon

Current BEG: 110,000-250,000



Karluk River late-run sockeye salmon

Current BEG: 170,000-380,000



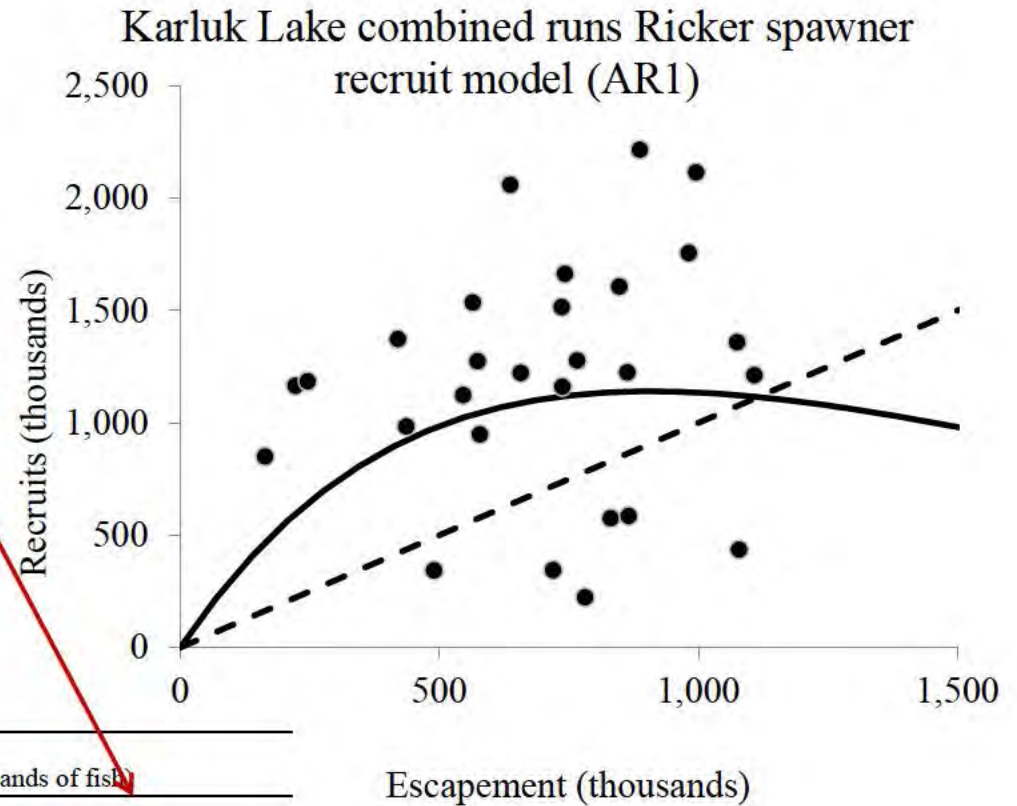
Karluk River combined runs sockeye salmon

Individual Model Results

	S_{MSY} (in thousands of fish)	Ratio
Karluk early-run	168	0.363
Karluk late-run	294	0.637

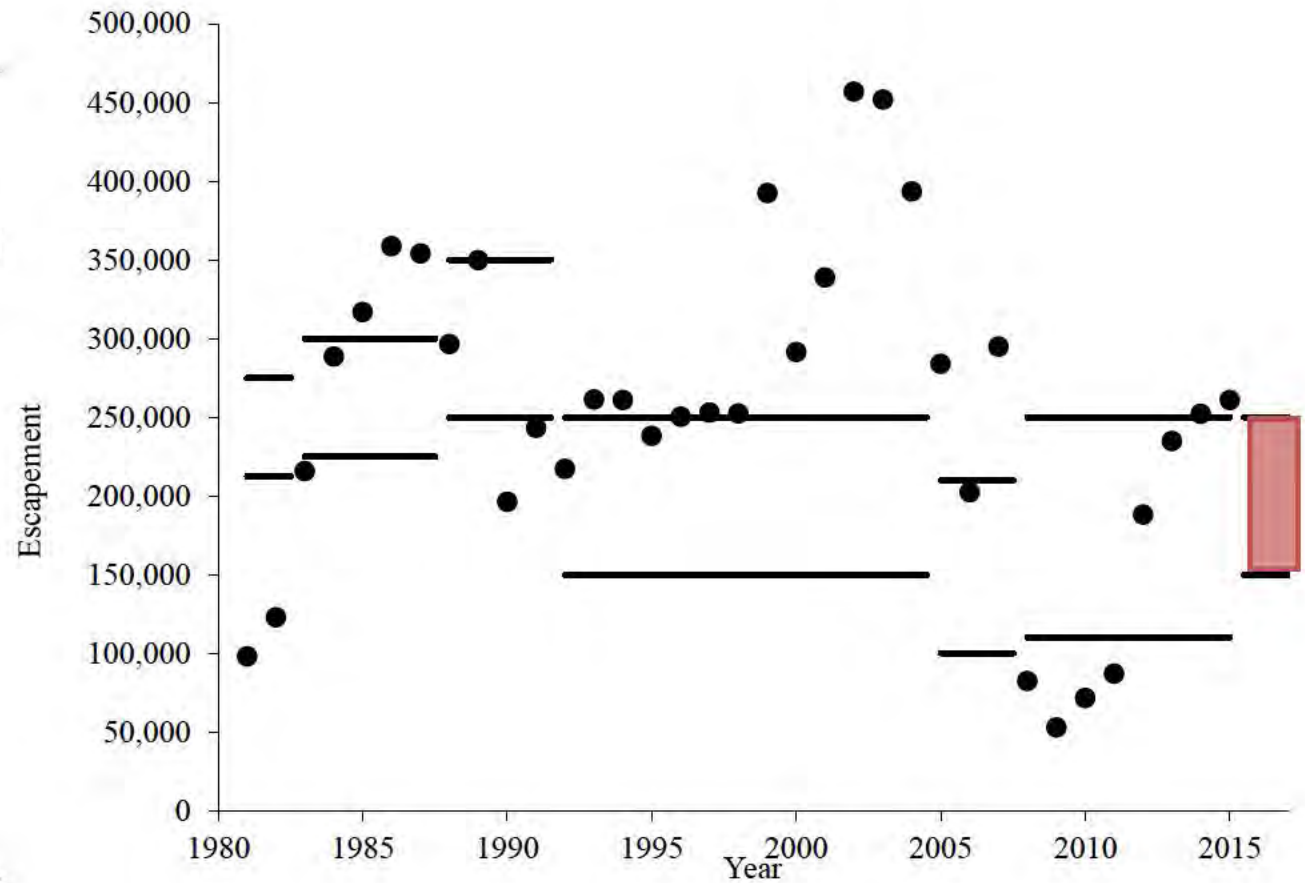
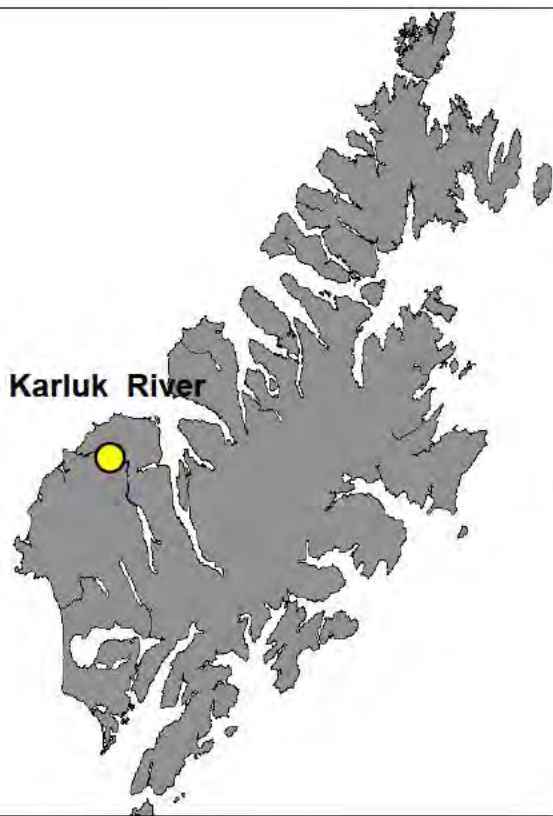
Combined Model Results (in thousands of fish)

	S_{MSY}	90% LCI	90% UCI
Karluk combined	520	340	730
Karluk early-run		150	250
Karluk late-run		200	450



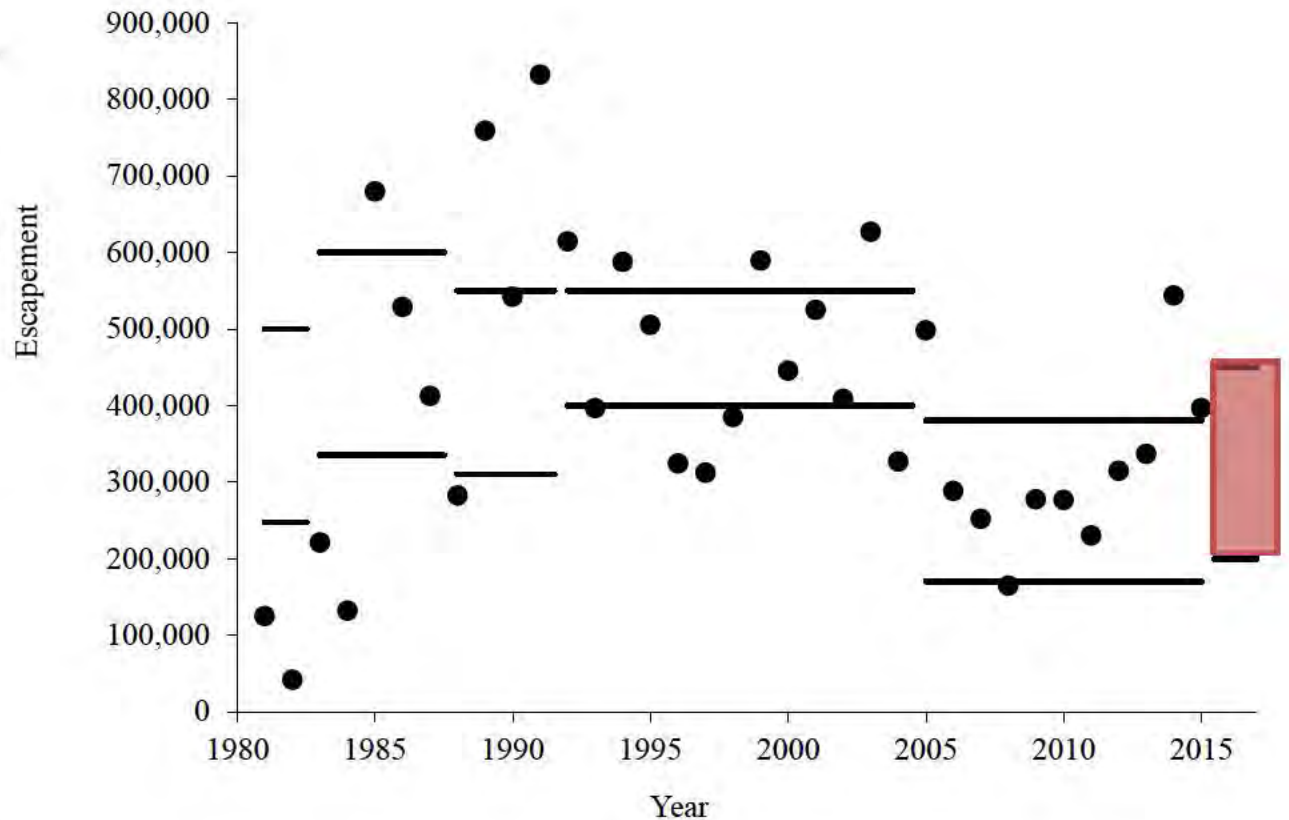
Karluk River early-run sockeye salmon

Recommended BEG: 150,000-250,000



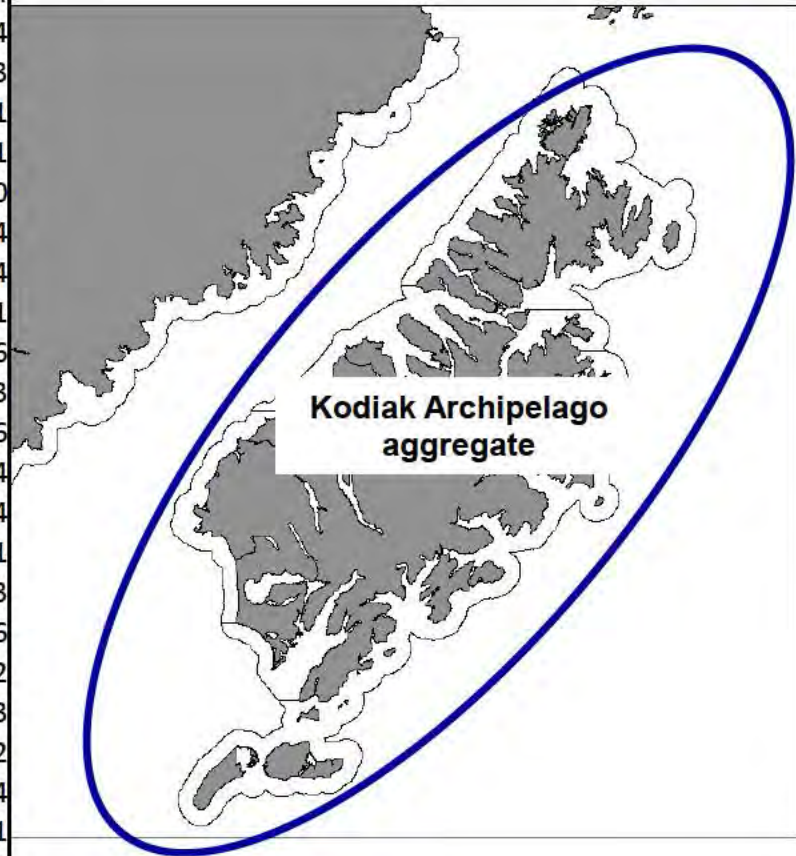
Karluk River late-run sockeye salmon

Recommended BEG: 200,000-450,000



Kodiak Archipelago aggregate chum salmon

Year	Kodiak Archipelago Aggregate	Number of Systems Surveyed	Year	Kodiak Archipelago Aggregate	Number of Systems Surveyed
1967	106,884	18	1992	253,646	54
1968	124,400	17	1993	152,787	44
1969	57,230	43	1994	174,935	53
1970	26,350	22	1995	230,848	41
1971	170,557	26	1996	150,103	41
1972	283,645	67	1997	129,685	40
1973	203,663	55	1998	120,377	34
1974	81,960	28	1999	266,264	54
1975	149,839	42	2000	284,040	41
1976	134,258	32	2001	192,068	36
1977	368,943	59	2002	211,080	43
1978	321,498	52	2003	217,525	36
1979	410,851	75	2004	127,755	24
1980	417,718	57	2005	141,850	24
1981	498,790	77	2006	419,000	41
1982	563,010	59	2007	166,060	43
1983	560,838	90	2008	83,040	36
1984	368,177	63	2009	177,490	52
1985	292,180	64	2010	160,290	43
1986	369,217	48	2011	192,400	42
1987	154,643	49	2012	159,825	44
1988	337,856	34	2013	294,499	41
1989	722,702	74	2014	138,489	47
1990	237,568	51	2015	304,376	48
1991	532,522	50			



Kodiak Archipelago aggregate chum salmon

**Recommend revising the lower-bound SEG
from 151,000 to 101,000**



- **Reduced number of index systems to 17 (red) from ~200 (blue)**
- **New streams represent about 72% of the total escapement previously included**

Review Summary

- **King salmon:**
 - Change Ayakulik River BEG**
- **Pink salmon: No Change**
- **Chum salmon:**
 - Eliminate Mainland aggregate lower-bound SEG**
 - Change Archipelago aggregate lower-bound SEG**
- **Sockeye salmon:**
 - Eliminate Uganik Lake lower-bound SEG**
 - Change Karluk River early-run and late-run BEGs**
- **Coho salmon: No change**

Thank You

Questions

