

Salmon Stock Status and Escapement Goals in Southeast and Yakutat

**Alaska Board of Fisheries
February 24–March 4, 2012
Ketchikan**



**Oral Report:
RC 3 – Tab 2**

**Written Reports:
Tabs 10–14**

Presentation Objectives

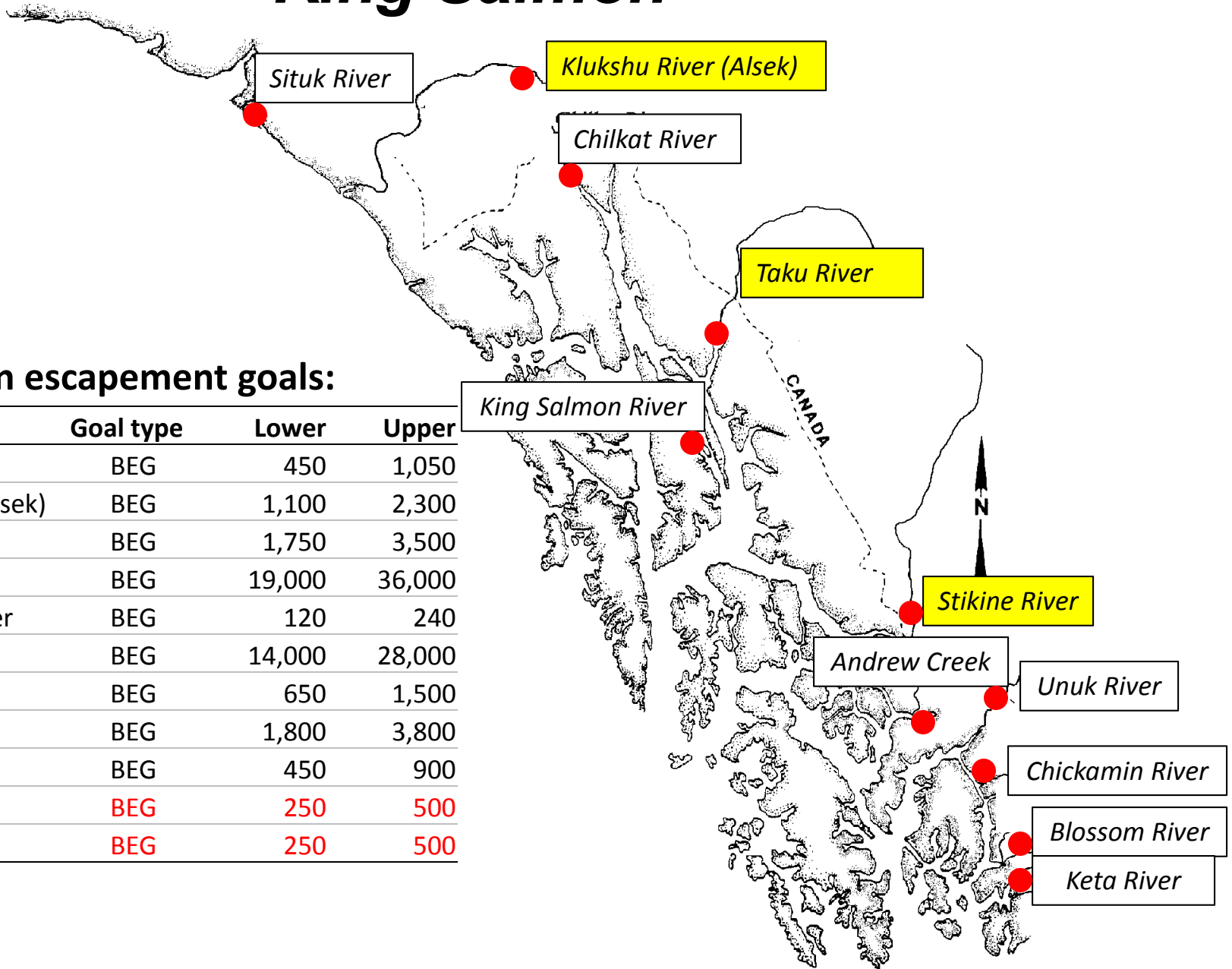
- Introduce escapement goal policies
- Current escapement goals
- Escapement goal recommendations
- Stock status

Escapement Goal Policies



- *Policy for the Management of Sustainable Salmon Fisheries (SSFP; 5 AAC 39.222)*
- *Policy for Statewide Salmon Escapement Goals (5 AAC 39.223)*
- Adopted to ensure salmon stocks are conserved, managed, and developed using the sustained yield principle

King Salmon



King salmon escapement goals:

System	Goal type	Lower	Upper
Situk River	BEG	450	1,050
Klukshu River (Alek)	BEG	1,100	2,300
Chilkat River	BEG	1,750	3,500
Taku River	BEG	19,000	36,000
King Salmon River	BEG	120	240
Stikine River	BEG	14,000	28,000
Andrew Creek	BEG	650	1,500
Unuk River	BEG	1,800	3,800
Chickamin River	BEG	450	900
Blossom River	BEG	250	500
Keta River	BEG	250	500

King Salmon – Program Overview

- Inriver Field Programs
 - Escapement estimated in 11 systems annually using weirs, mark-recapture studies, and observer counts
 - Age, sex, size and coded wire tag sampling programs
 - Coded wire tag studies on 4 wild stocks
- Catch Sampling and Harvest Enumeration Programs
- Genetic and Coded Wire Tag Stock ID Programs

King Salmon – Program Overview

- **Transboundary Rivers (3 stocks)**
 - Alek, Taku, Stikine Rivers
 - Management under the auspices of the Pacific Salmon Treaty
 - Escapement goals undergo stringent review by the CTC, TTC, CSAP (Canada Science Advice Pacific), and the department

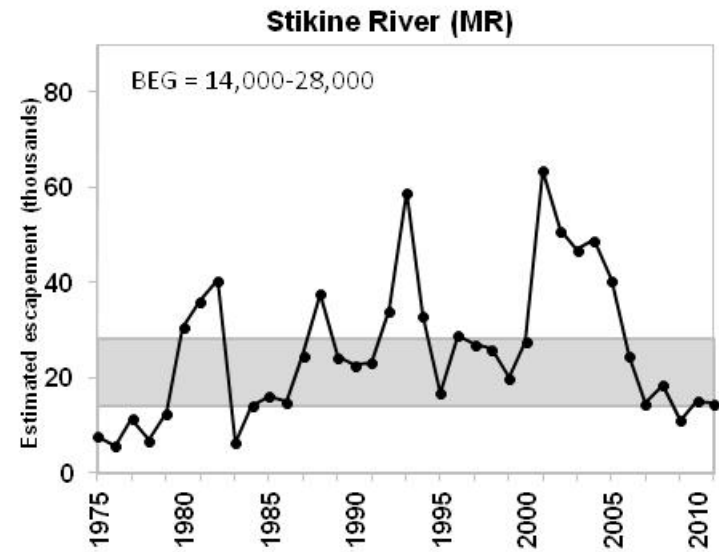
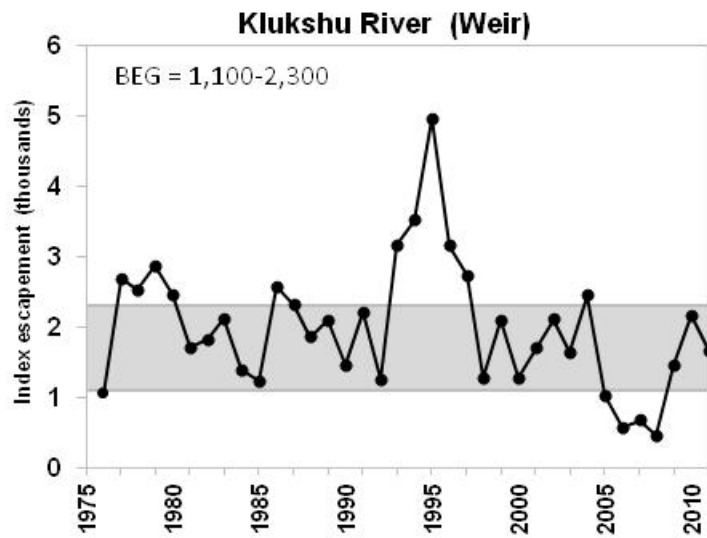
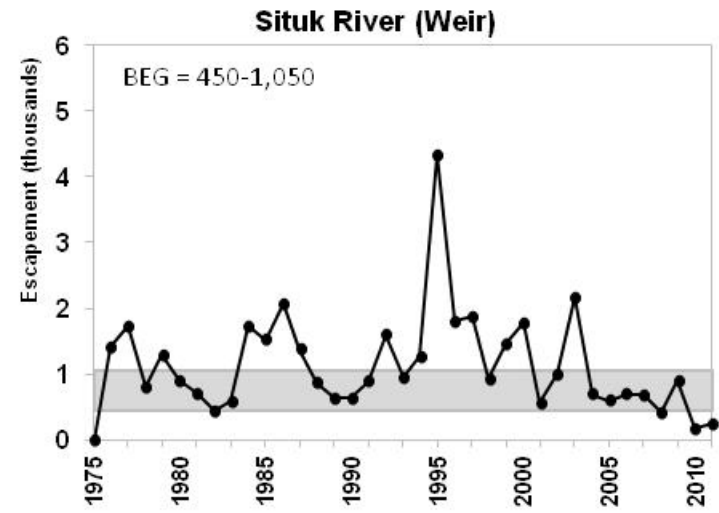
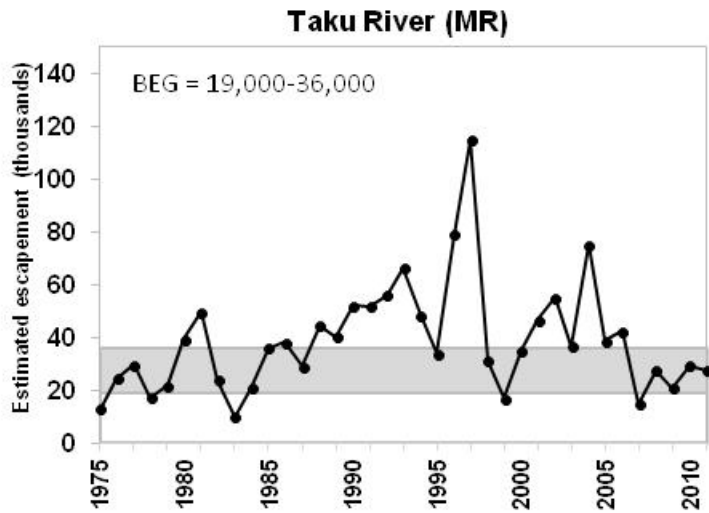
- **Nontransboundary Rivers (8 stocks)**
 - Northern Southeast Alaska
(Situk, Chilkat, King Salmon Rivers and Andrew Creek)
 - Southern Southeast Alaska
(Unuk, Chickamin, Blossom, Keta Rivers)
 - Escapement goals undergo stringent review by the CTC and the department

King Salmon – Stock Status

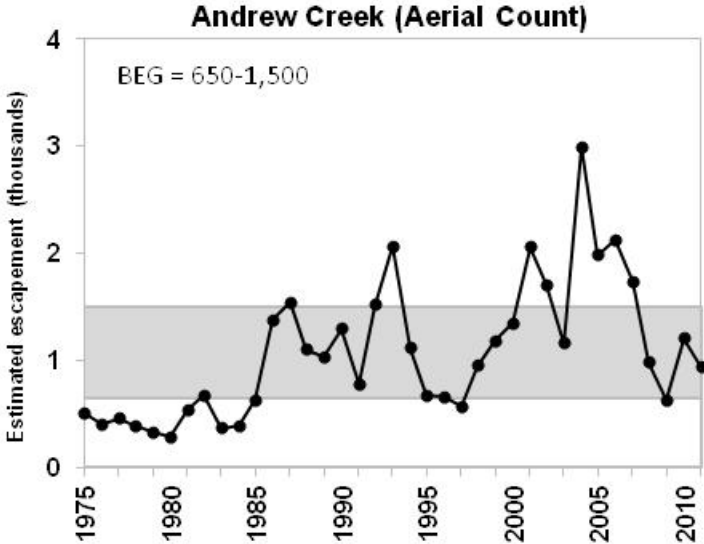
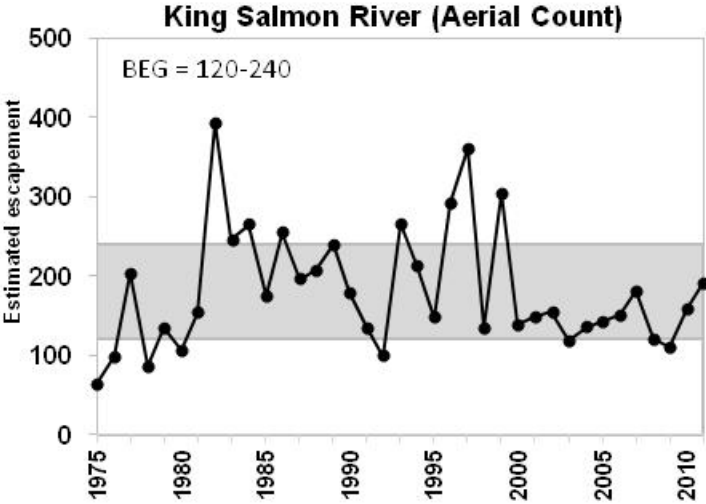
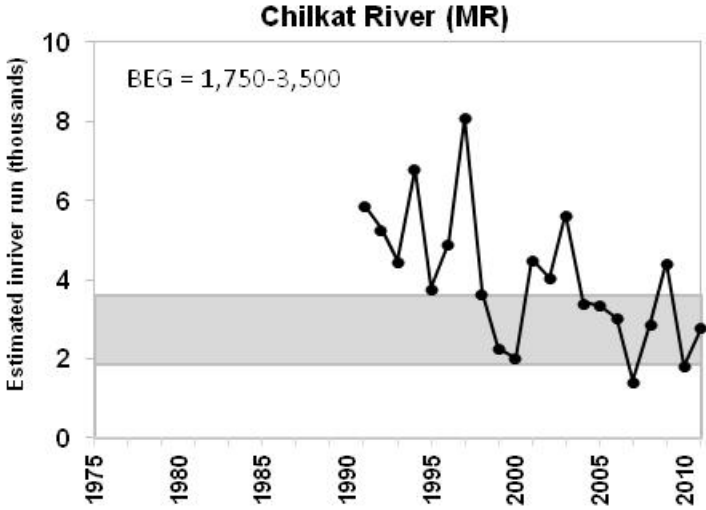
- Abundance-Based Management
 - 80-90% of SEAK wild production is monitored annually
- Sound Basis for Escapement Goals
 - Escapements have been within or above goals for *most* SEAK stocks
- Stock status is judged to be good
 - Exploitation rates on SEAK wild stocks are sustainable
- No stocks of concern



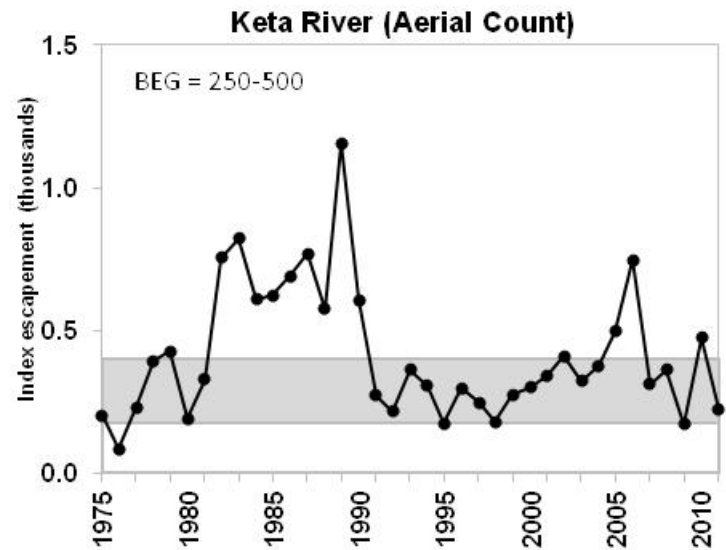
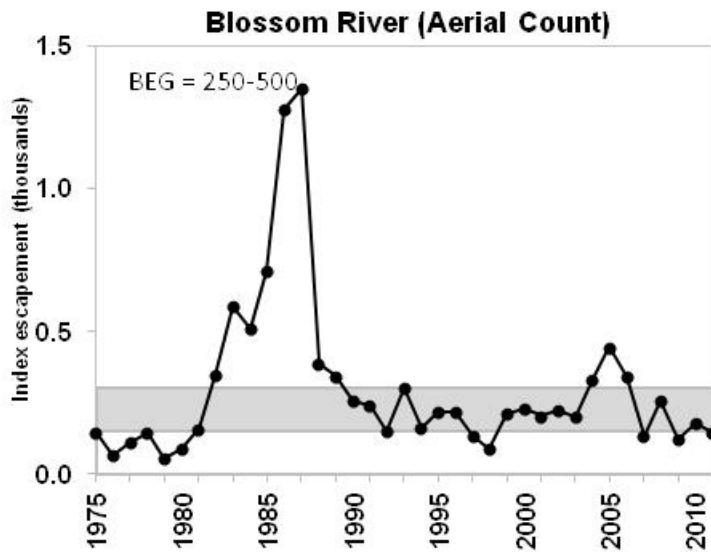
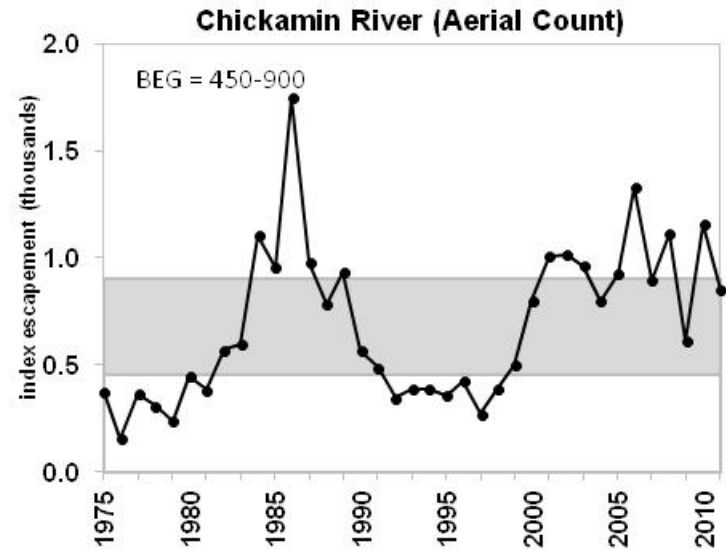
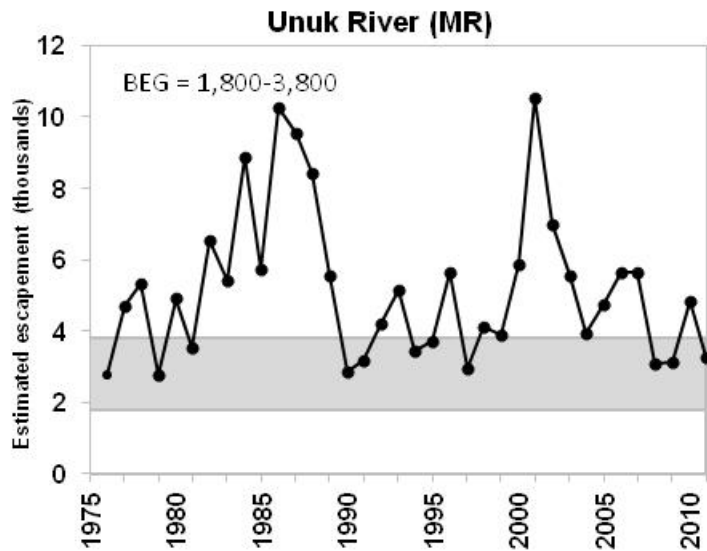
King Salmon



King Salmon



King Salmon



King Salmon – Recommended Changes

- Blossom River (aerial count)

Current BEG:

250 to 500

Recommended New BEG:

150 to 300

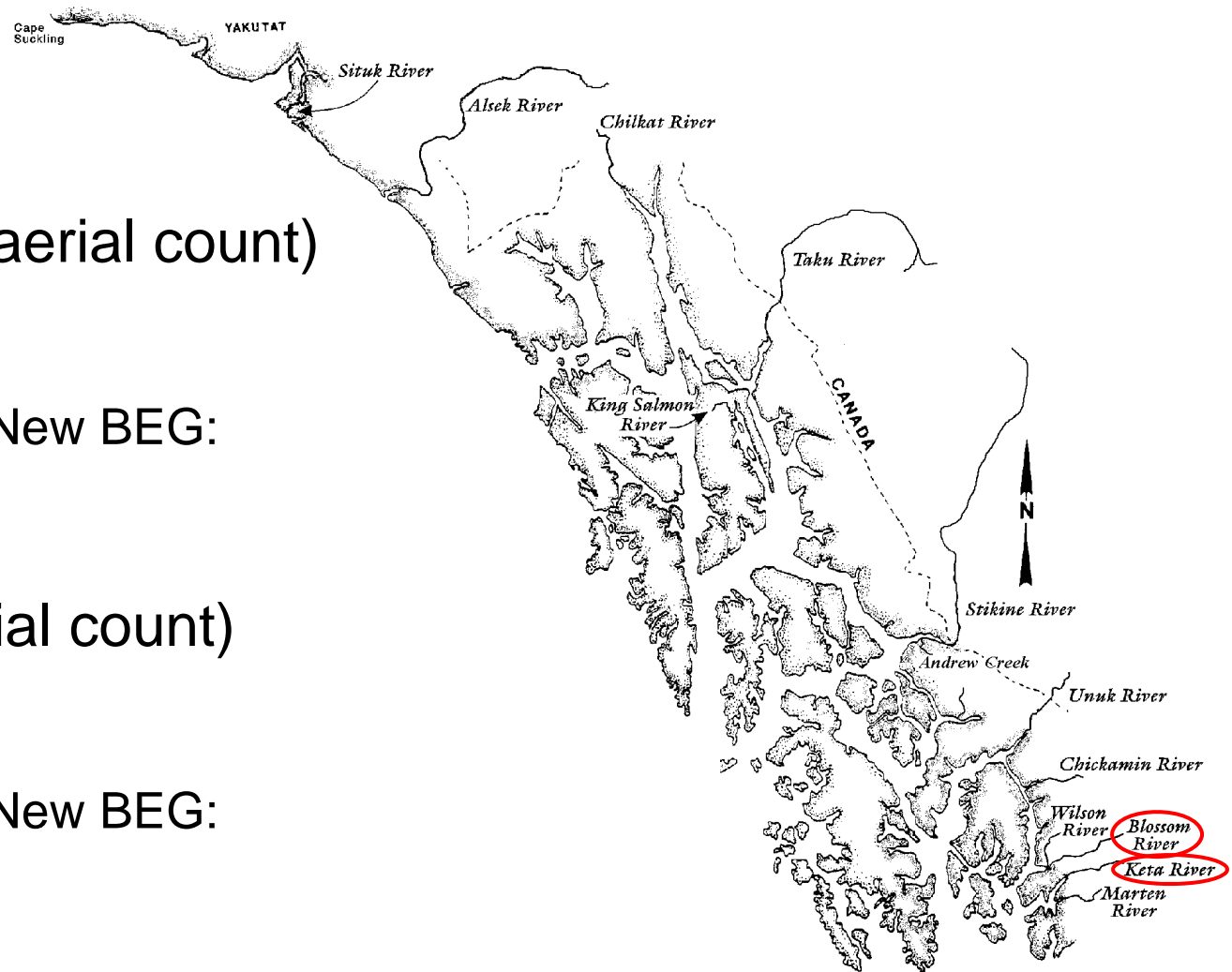
- Keta River (aerial count)

Current BEG:

250 to 500

Recommended New BEG:

175 to 400

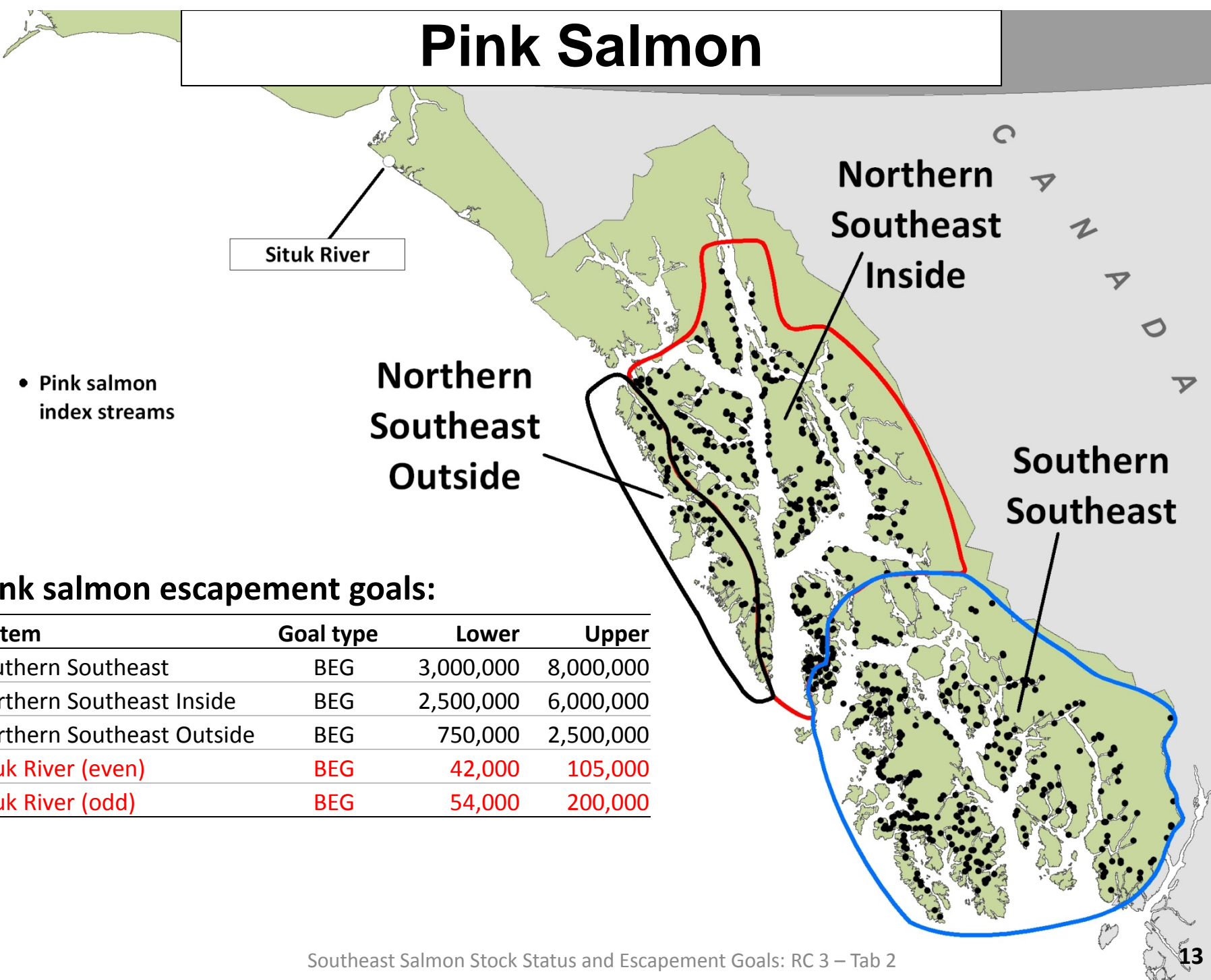


Goal Revision and Review

- Blossom and Keta goals were last revised in 1997
- Decade of more information and improved data
- Updated statistical and modeling techniques
- Rigorous review by department staff and the Chinook Technical Committee



Pink Salmon

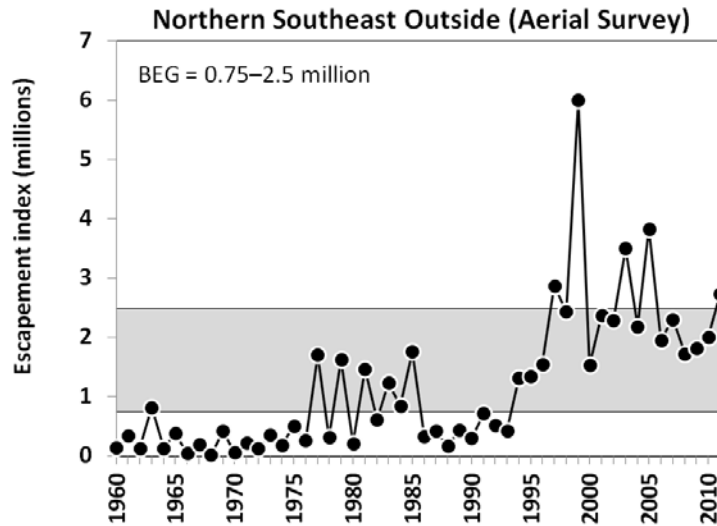
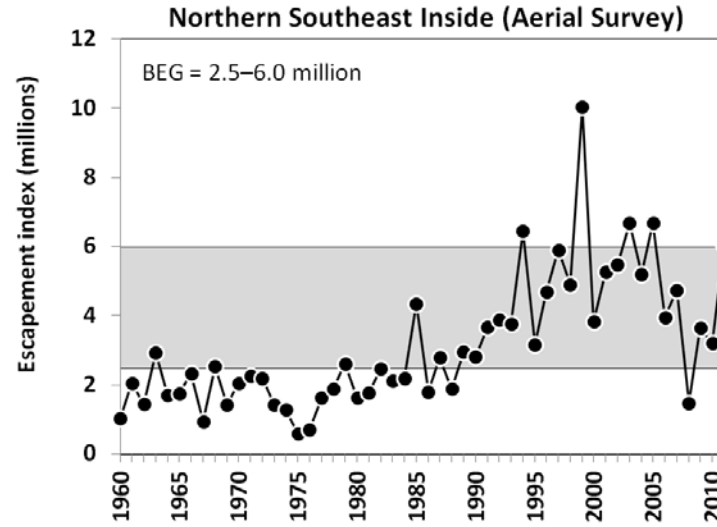
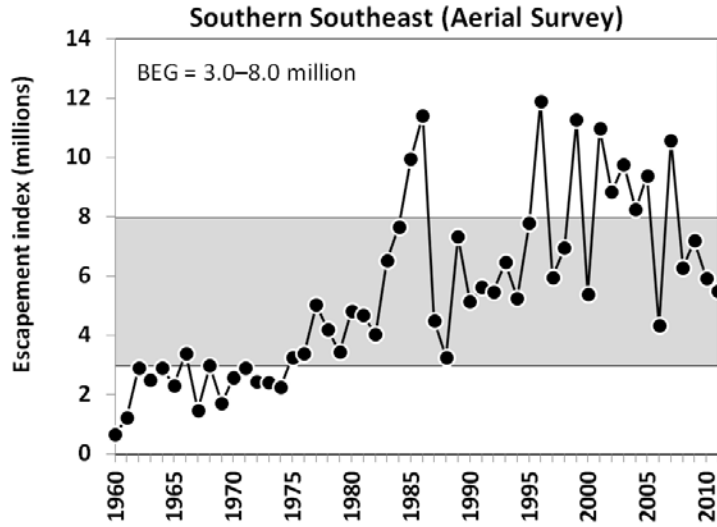


- Pink salmon index streams

Pink salmon escapement goals:

System	Goal type	Lower	Upper
Southern Southeast	BEG	3,000,000	8,000,000
Northern Southeast Inside	BEG	2,500,000	6,000,000
Northern Southeast Outside	BEG	750,000	2,500,000
Situk River (even)	BEG	42,000	105,000
Situk River (odd)	BEG	54,000	200,000

Pink Salmon

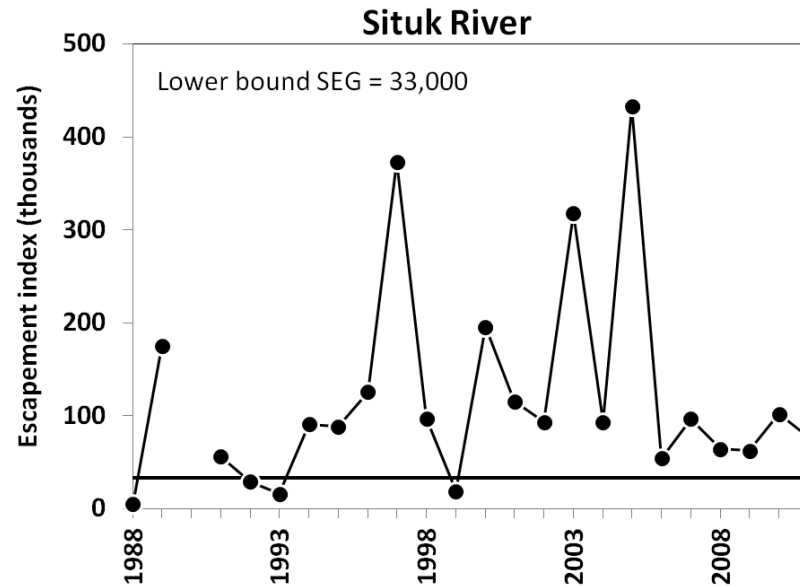


Pink Salmon – *Recommended Goal Changes*

Situk River

- Current BEGs for odd-year and even-year runs.
- BEGs based on total weir count or peak survey counts.
- Total escapement estimates no longer available.
- Non-targeted stock – harvest rate very low.

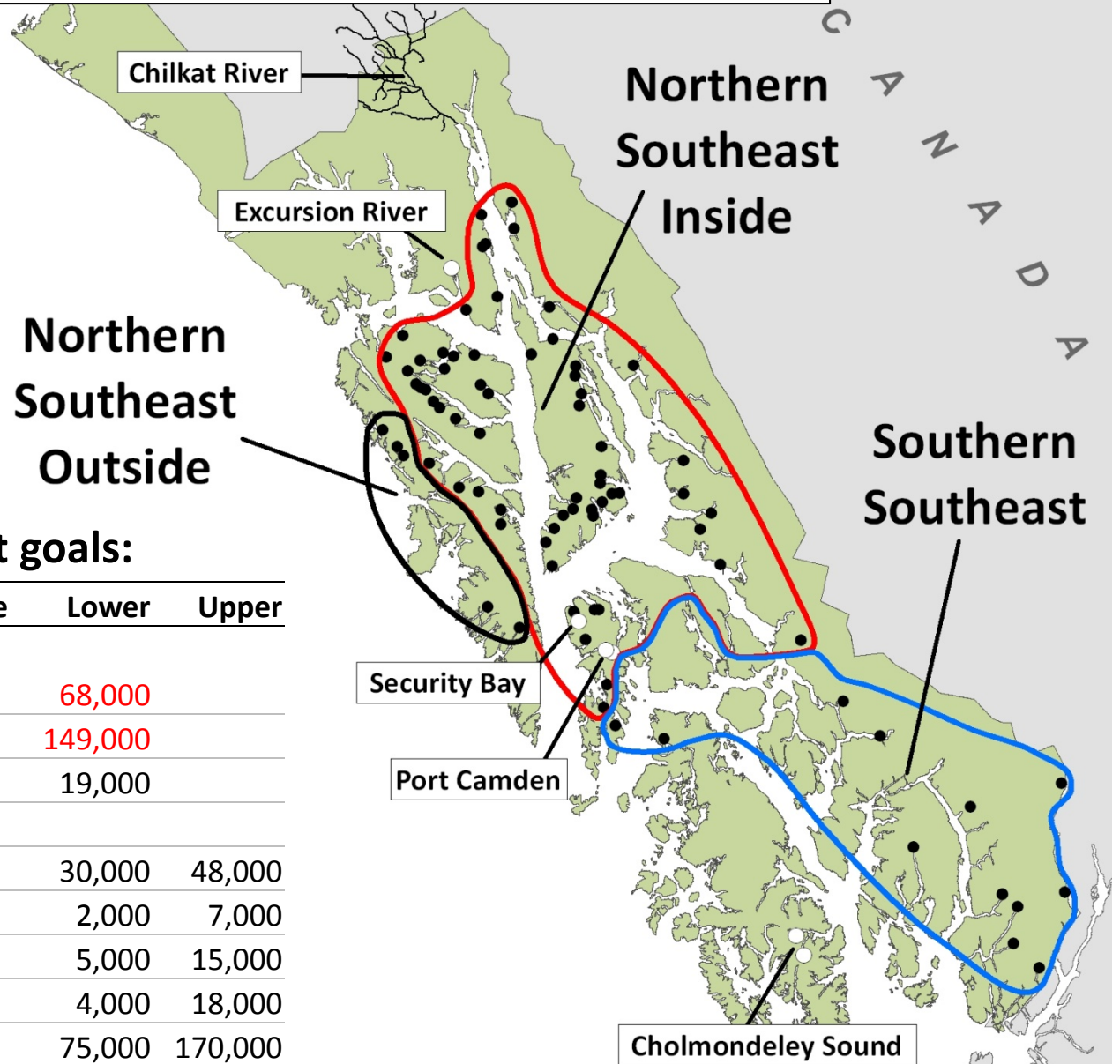
- **Recommend new lower bound SEG: 33,000 weir index.**



Chum Salmon

- Summer-run chum salmon index streams

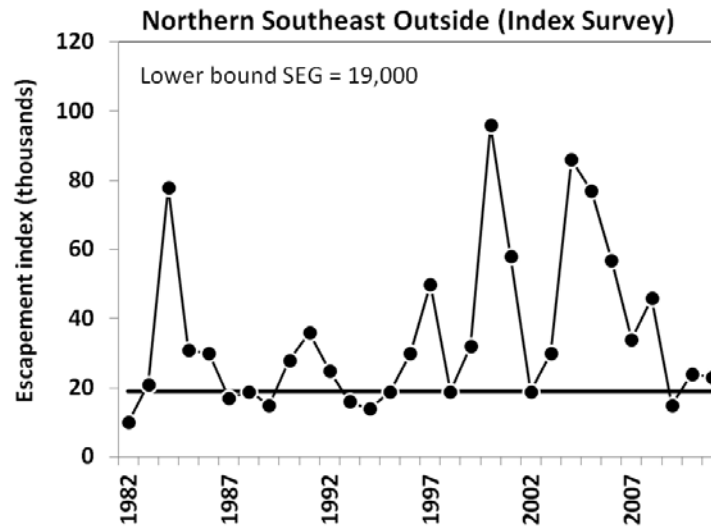
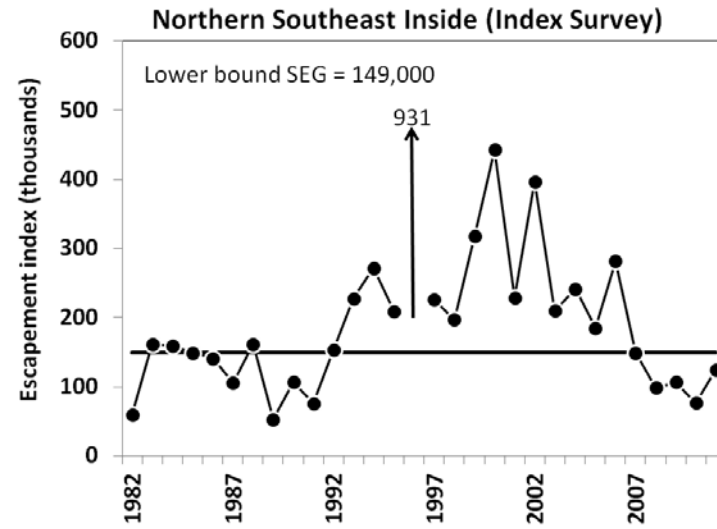
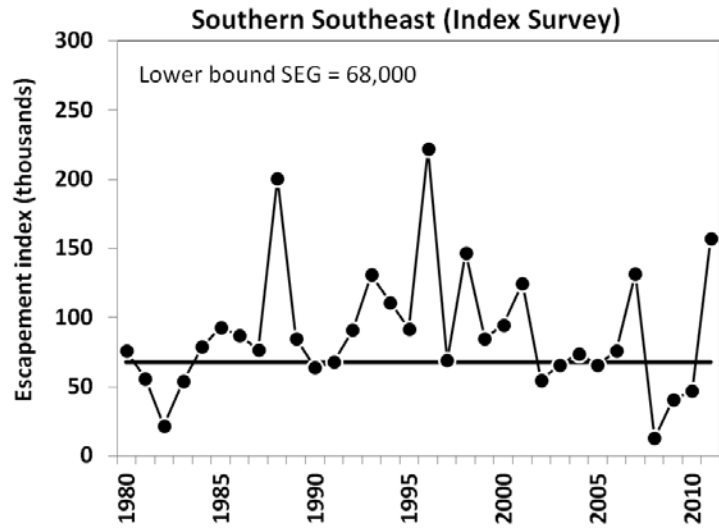
- Fall-run chum salmon index streams



Chum salmon escapement goals:

System	Goal type	Lower	Upper
Summer-run:			
Southern Southeast	SEG	68,000	
Northern Southeast Inside	SEG	149,000	
Northern Southeast Outside	SEG	19,000	
Fall-run:			
Cholmondeley Sound	SEG	30,000	48,000
Port Camden	SEG	2,000	7,000
Security Bay	SEG	5,000	15,000
Excursion River	SEG	4,000	18,000
Chilkat River	SEG	75,000	170,000

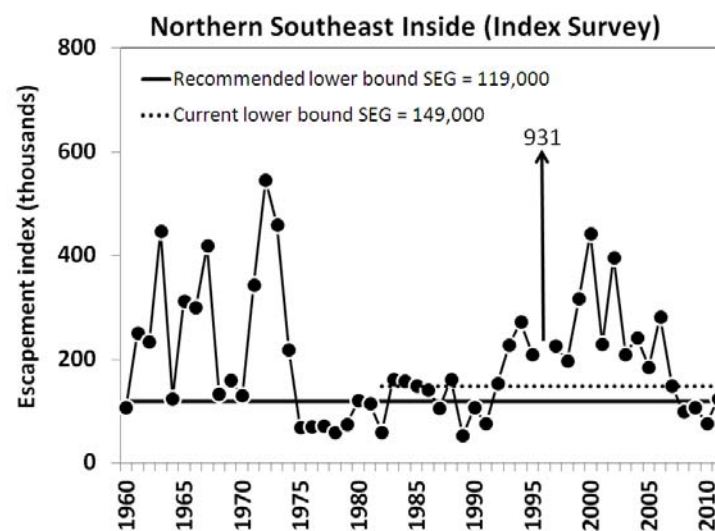
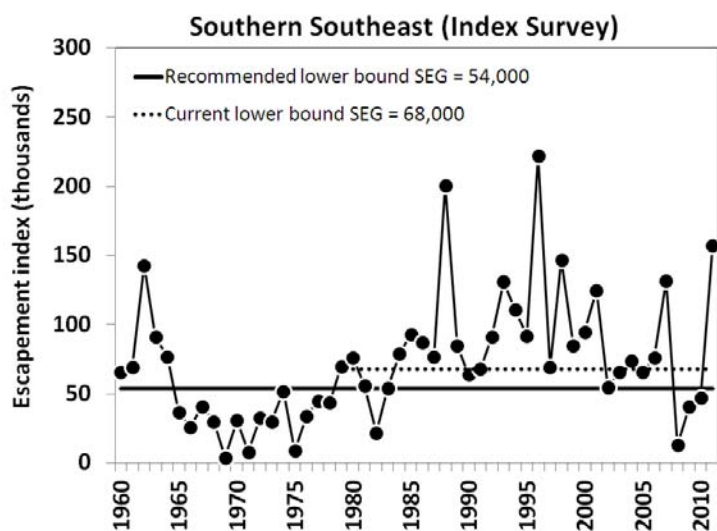
Summer Chum Salmon



Chum Salmon – *Recommended Goal Changes*

Summer Chum:

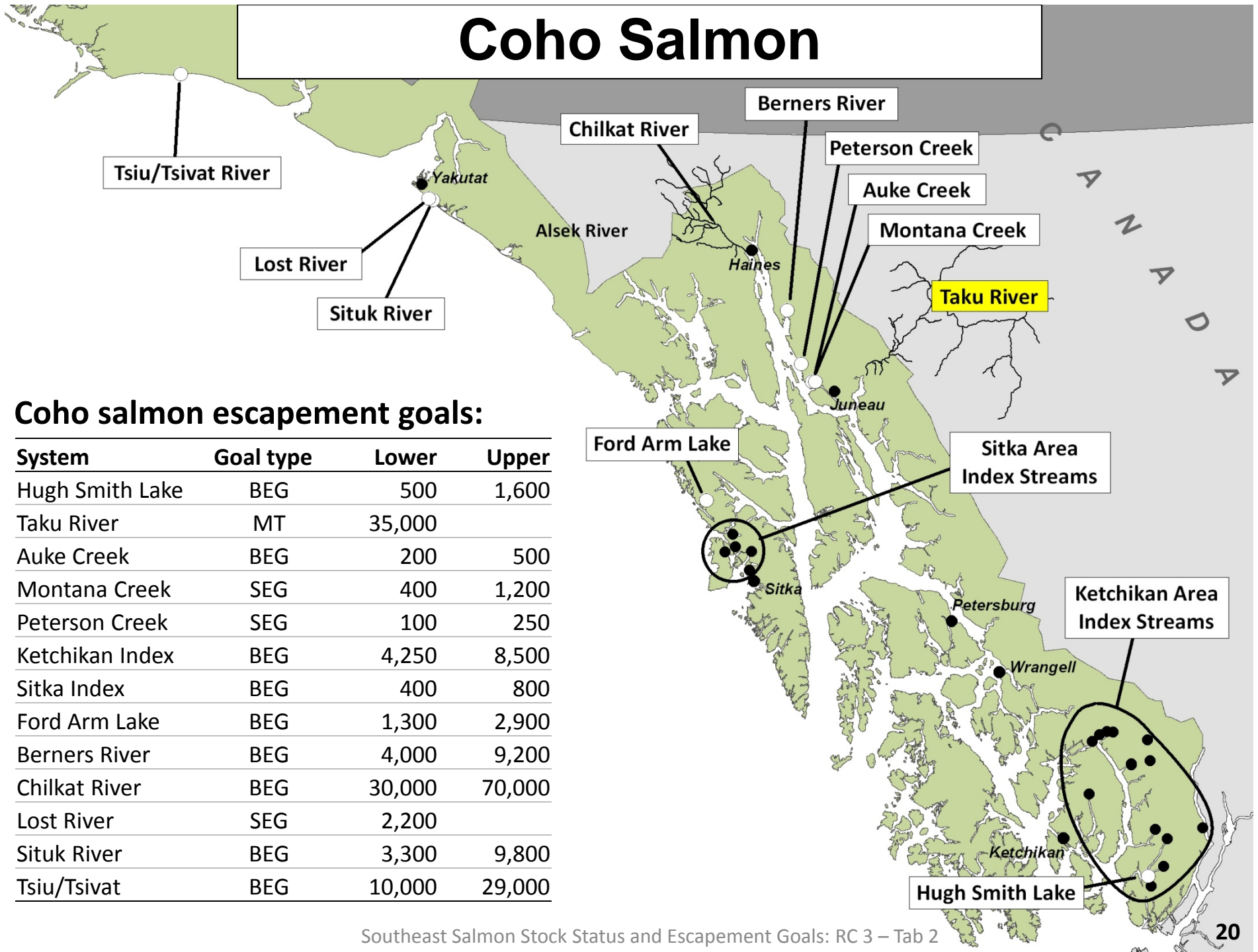
- Incorporated two decades of additional data.
- Recommend new lower bound SEGs:
 - Southern Southeast: 54,000 index.
 - Northern Southeast Inside: 119,000 index.



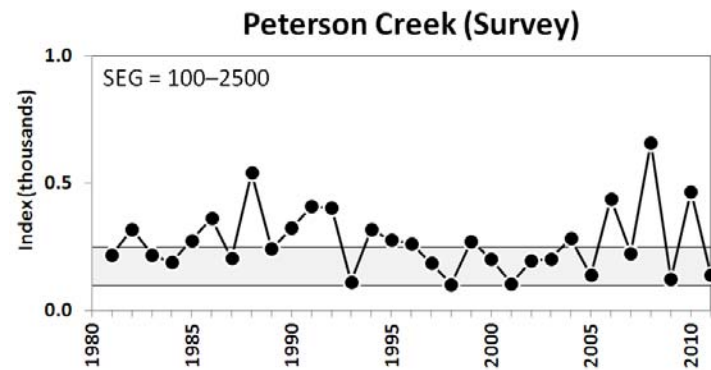
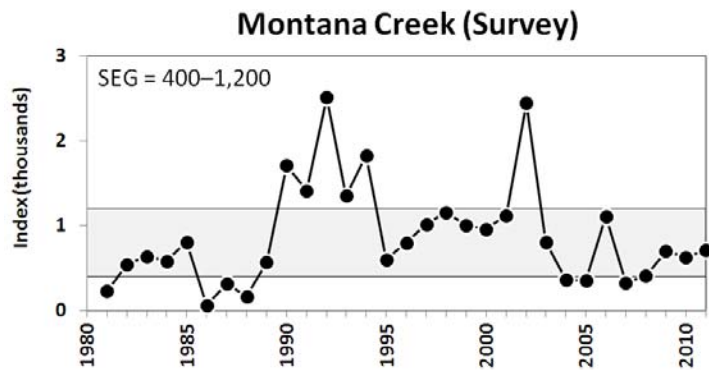
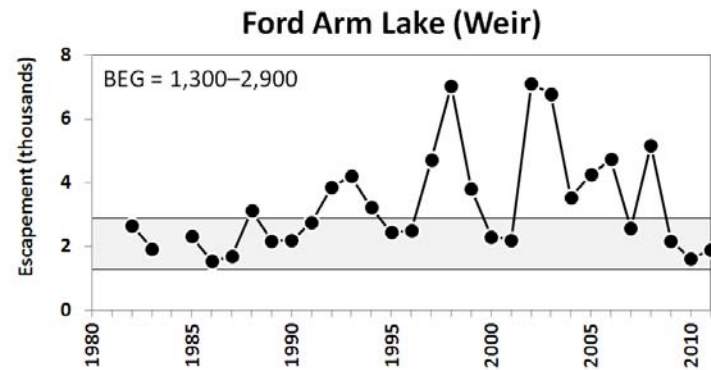
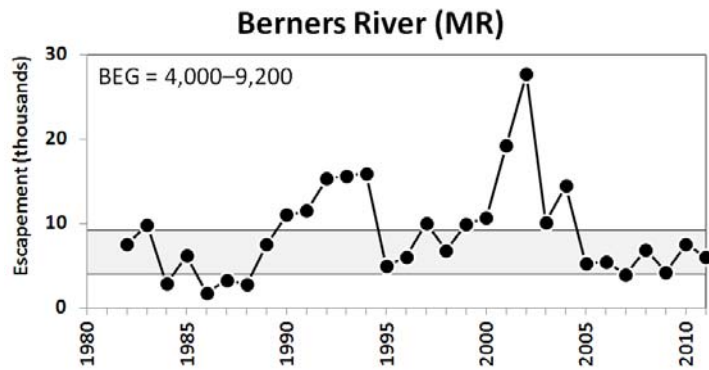
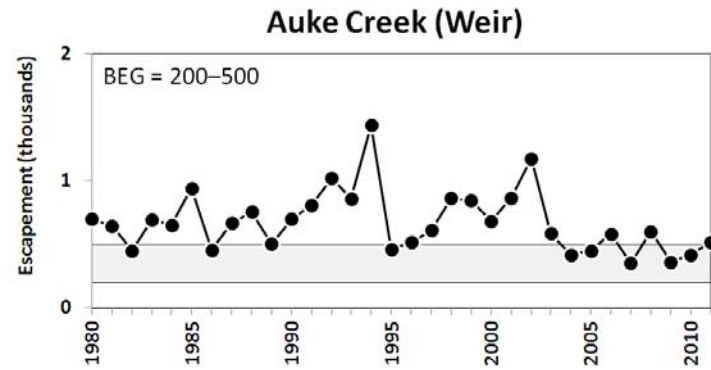
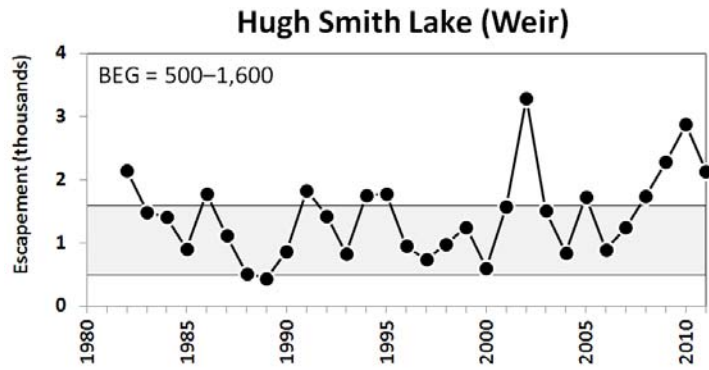
Fall Chum Salmon

Stock Enumeration Method	Cholmondeley Sound	Port Camden	Security Bay	Excursion River	Chilkat River
Run-type	Peak Index	Peak Index	Peak Index	Peak Index	Estimated Escapement
No. Streams	Fall	Fall	Fall	Fall	Fall
	2	2	1	1	1
2001	45		4	18	312
2002	39	0	6	5	206
2003	75	1	9	6	166
2004	60	3	13	5	310
2005	15	2	3	1	202
2006	54	2	15	2	704
2007	18	1	5	6	331
2008	50	1	12	8	451
2009	39	2	5	1	337
2010	76	5	7	6	91
2011	93	2	5	3	368
<u>Goal Range:</u>					
Lower Bound	30	2	5	4	75
Upper Bound	48	7	15	18	170

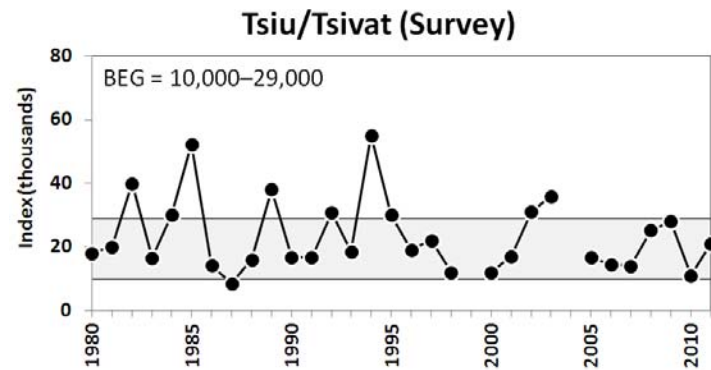
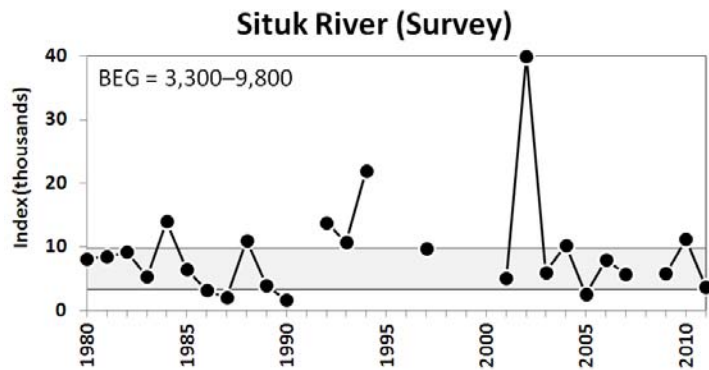
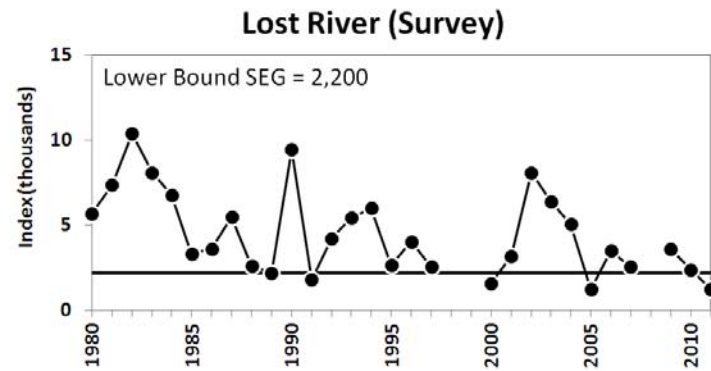
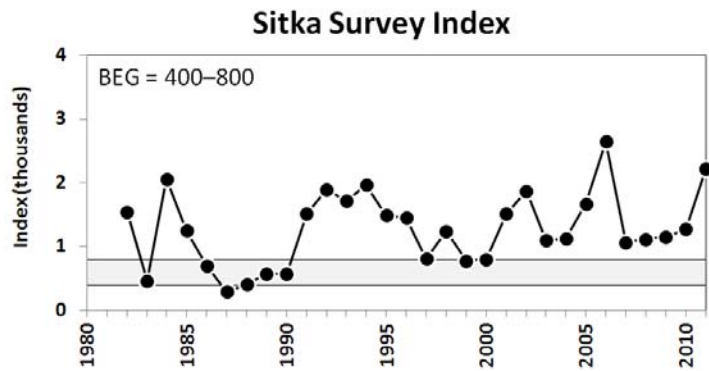
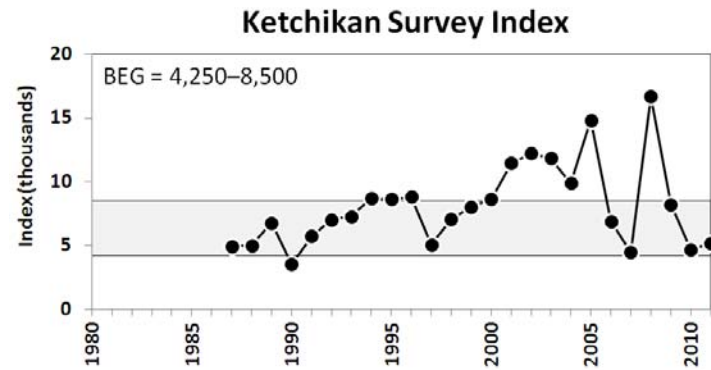
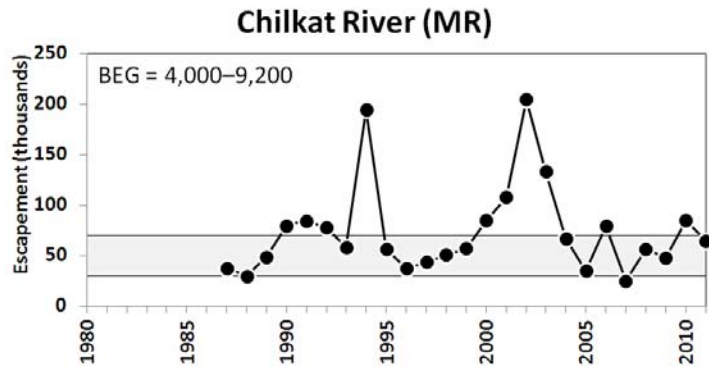
Coho Salmon



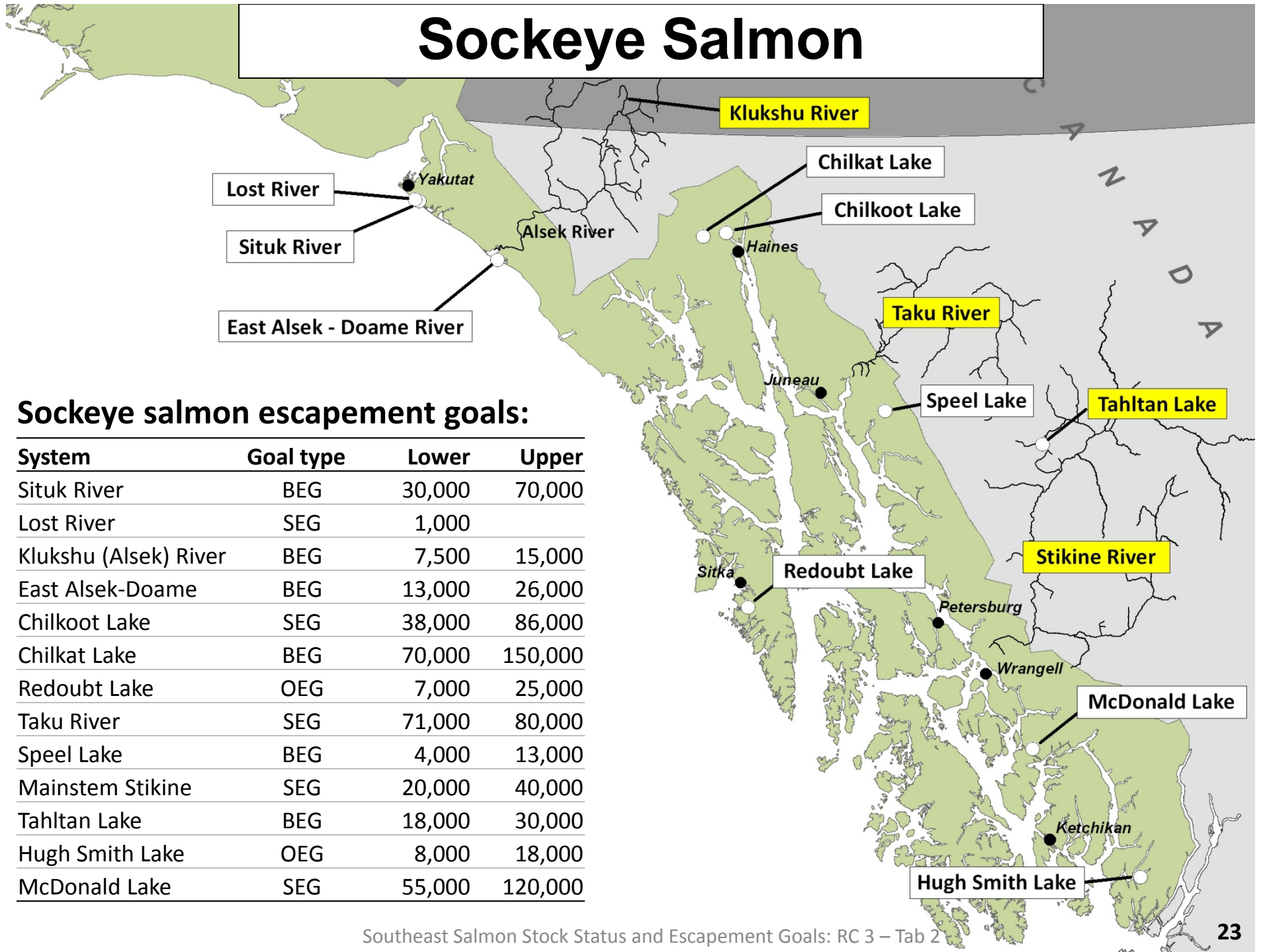
Coho Salmon - 1



Coho Salmon - 2



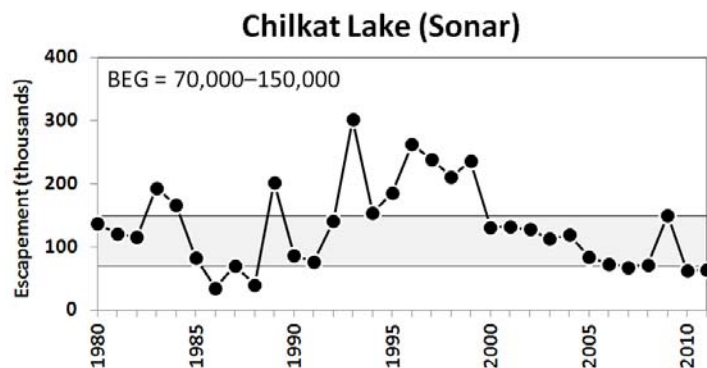
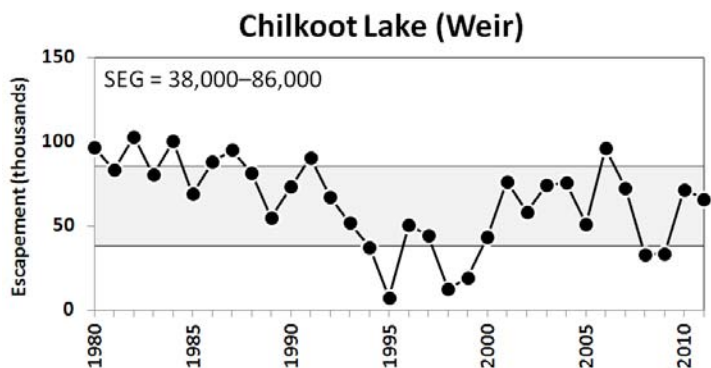
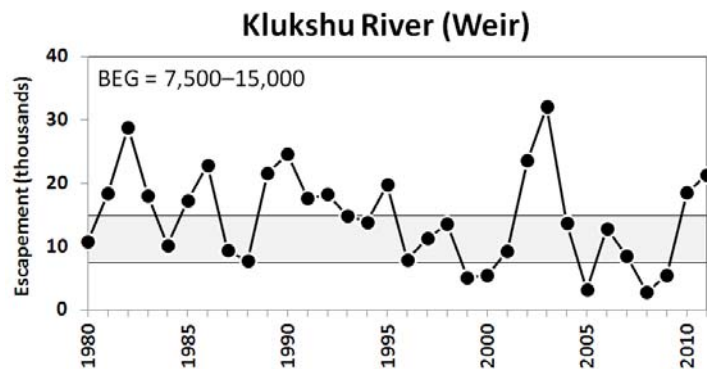
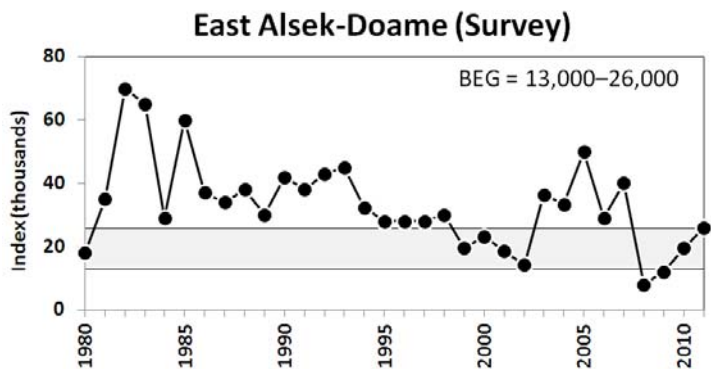
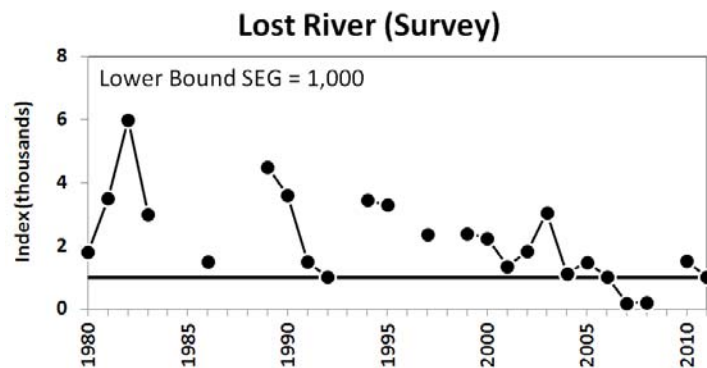
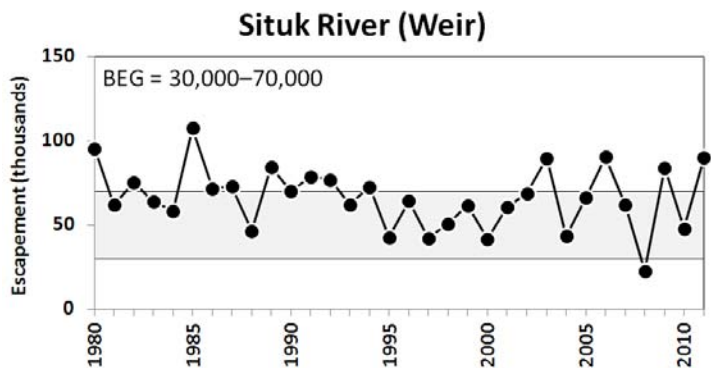
Sockeye Salmon



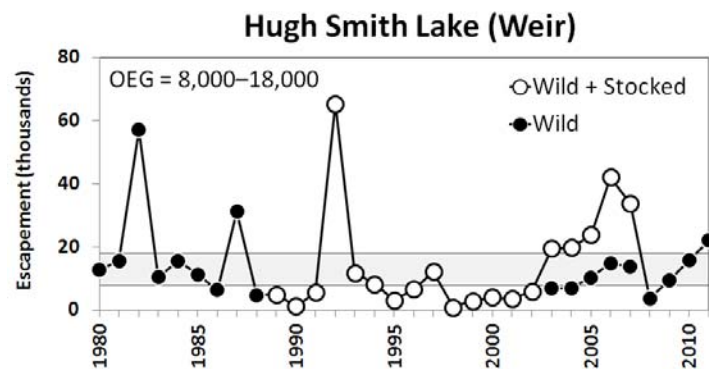
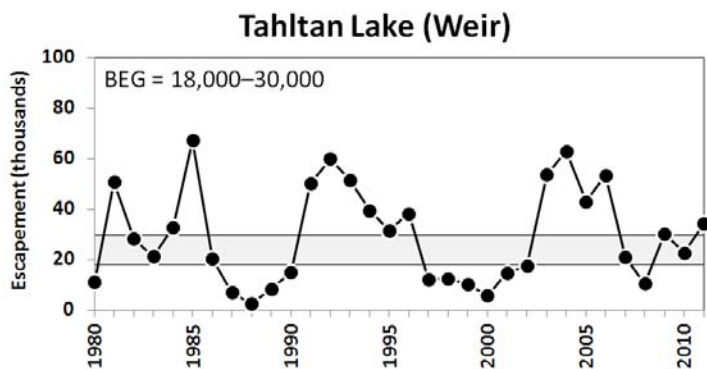
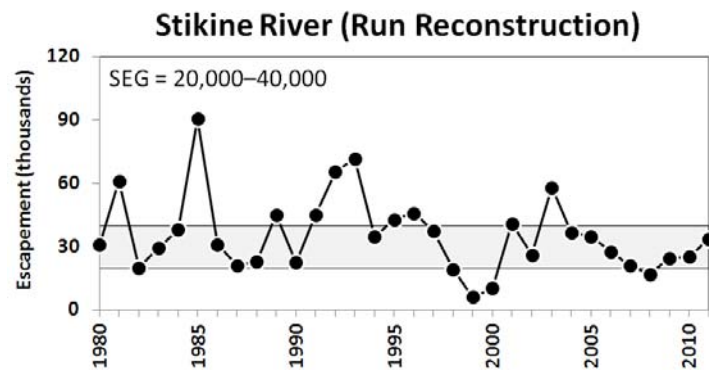
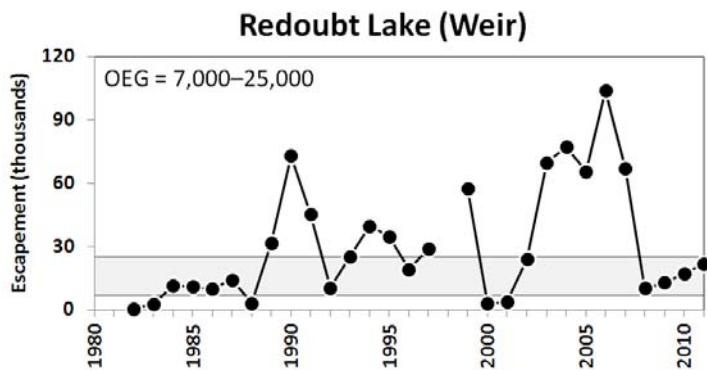
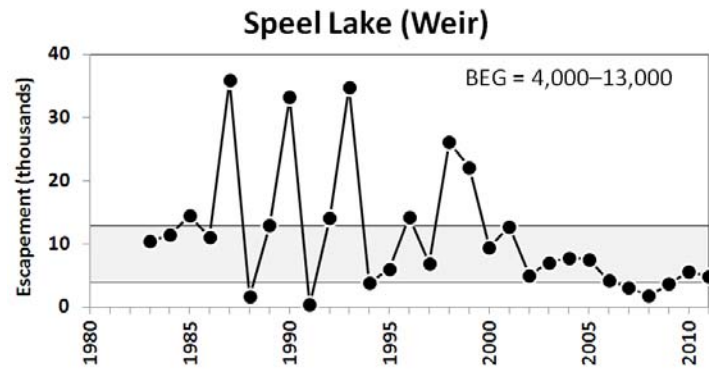
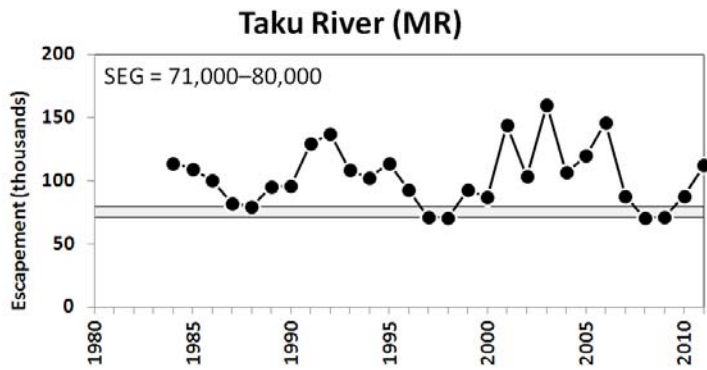
Sockeye salmon escapement goals:

System	Goal type	Lower	Upper
Situk River	BEG	30,000	70,000
Lost River	SEG	1,000	
Klukshu (Alsek) River	BEG	7,500	15,000
East Alsek-Doame	BEG	13,000	26,000
Chilkoot Lake	SEG	38,000	86,000
Chilkat Lake	BEG	70,000	150,000
Redoubt Lake	OEG	7,000	25,000
Taku River	SEG	71,000	80,000
Speel Lake	BEG	4,000	13,000
Mainstem Stikine	SEG	20,000	40,000
Tahltan Lake	BEG	18,000	30,000
Hugh Smith Lake	OEG	8,000	18,000
McDonald Lake	SEG	55,000	120,000

Sockeye Salmon - 1

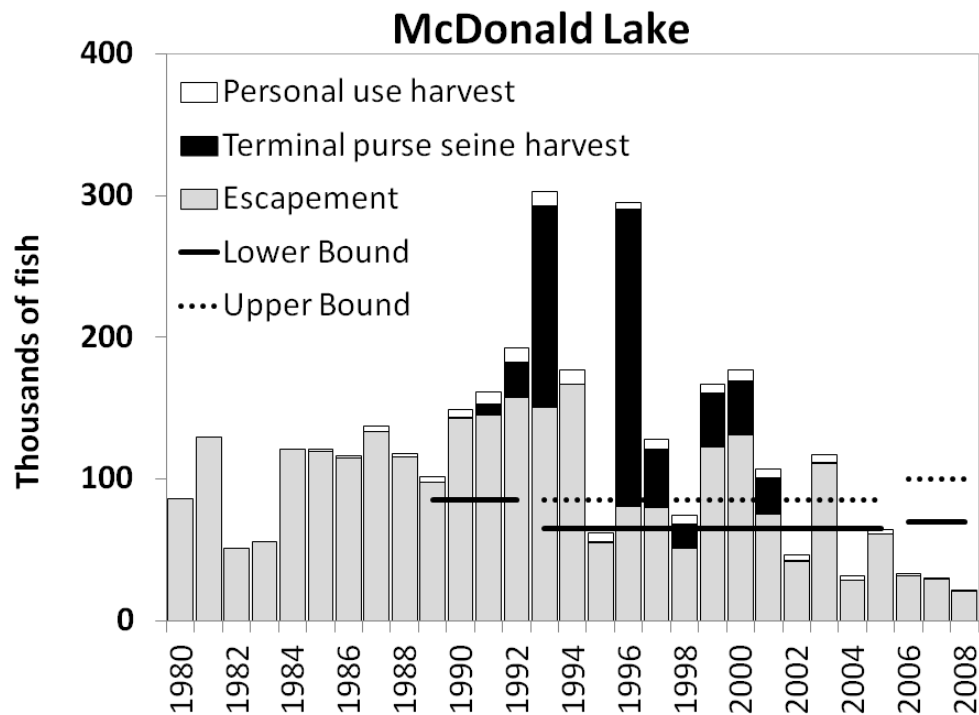


Sockeye Salmon - 2

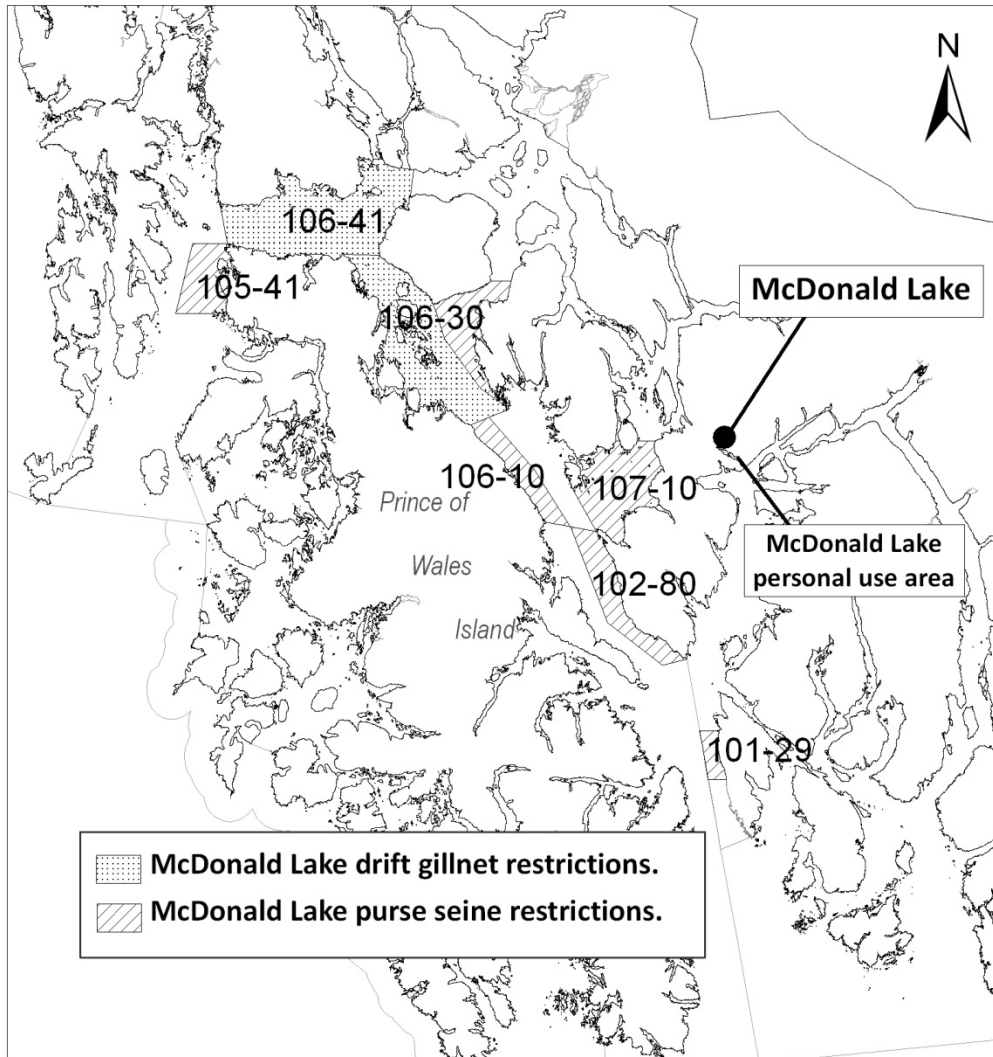


Stocks of Concern

- Reviewed potential stocks of concern as defined in the *Policy for the Management of Sustainable Salmon Fisheries* (5 AAC 39.222).
- McDonald Lake sockeye salmon identified as *Stock of Management Concern* in 2009.



McDonald Lake Action Plan



Commercial Fishery Restrictions

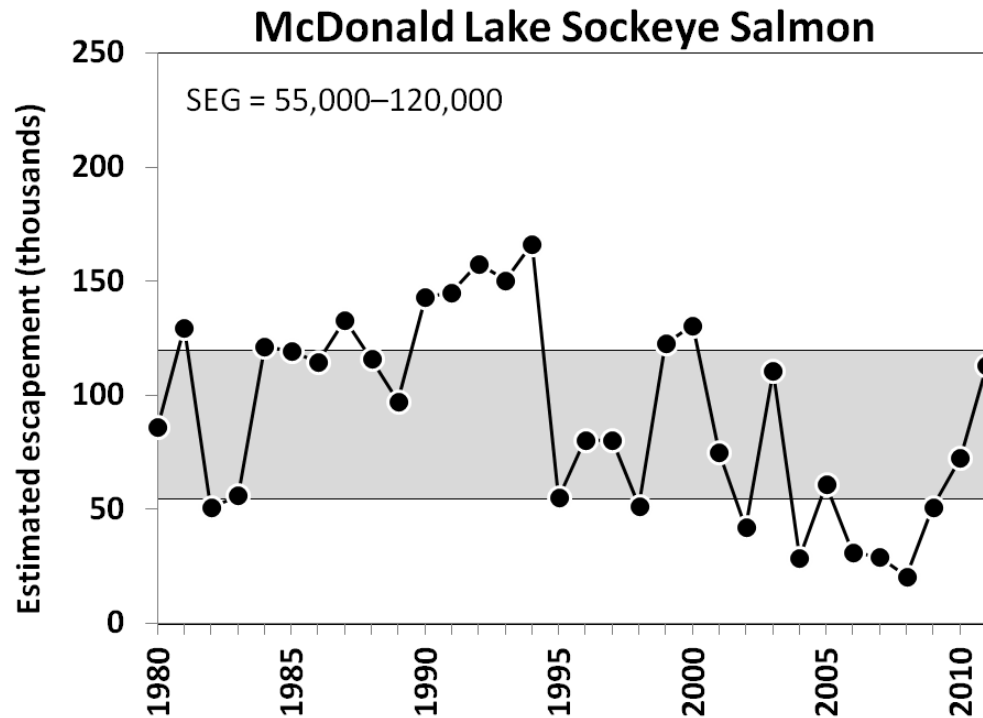
- Carried out from 2007 to 2011.
- 3-week period mid-July-early August in mixed stock fisheries.
- Time restrictions in gillnet fisheries.
- Area restrictions in seine fisheries.
- Management actions well timed.

Personal Use Fishery

- Bag limits reduced.

Stocks of Concern

- McDonald Lake sockeye salmon escapements have improved substantially over last 3 years.
 - Recommended removing stock of concern designation.
- No other salmon runs recommended as candidate stocks of concern.



Review Summary

No changes to 44 goals

- King salmon: 9 goals
- Sockeye salmon: 13 goals
- Coho Salmon: 13 goals
- Pink Salmon: 3 goals
- Chum Salmon: 6 goals

Recommended goal changes

- Blossom River king: BEG 150–300
- Keta River king: BEG 175–400
- Situk River pink: Lower-bound SEG 33,000 for odd-even years combined
- Southern Southeast summer chum: Lower-bound SEG 54,000
- Northern Southeast Inside summer chum: Lower-bound SEG 119,000

Stocks of Concern:

- Recommended removing *stock of concern* designation and Action Plan for McDonald Lake sockeye salmon.
- No other salmon stocks met the definition of stocks of concern.