

# **Salmon Stock Status and Escapement Goals in Southeast and Yakutat**

**Alaska Board of Fisheries  
February 23–March 3, 2015  
Sitka**



**Oral Report:  
RC 3 – Tab 7**

**Written Report:  
RC 3 – Tab 1**

# ***Presentation Objectives***

- Introduce escapement goal policies
- Current escapement goals
- Stock status
- Recommendations for escapement goal revisions

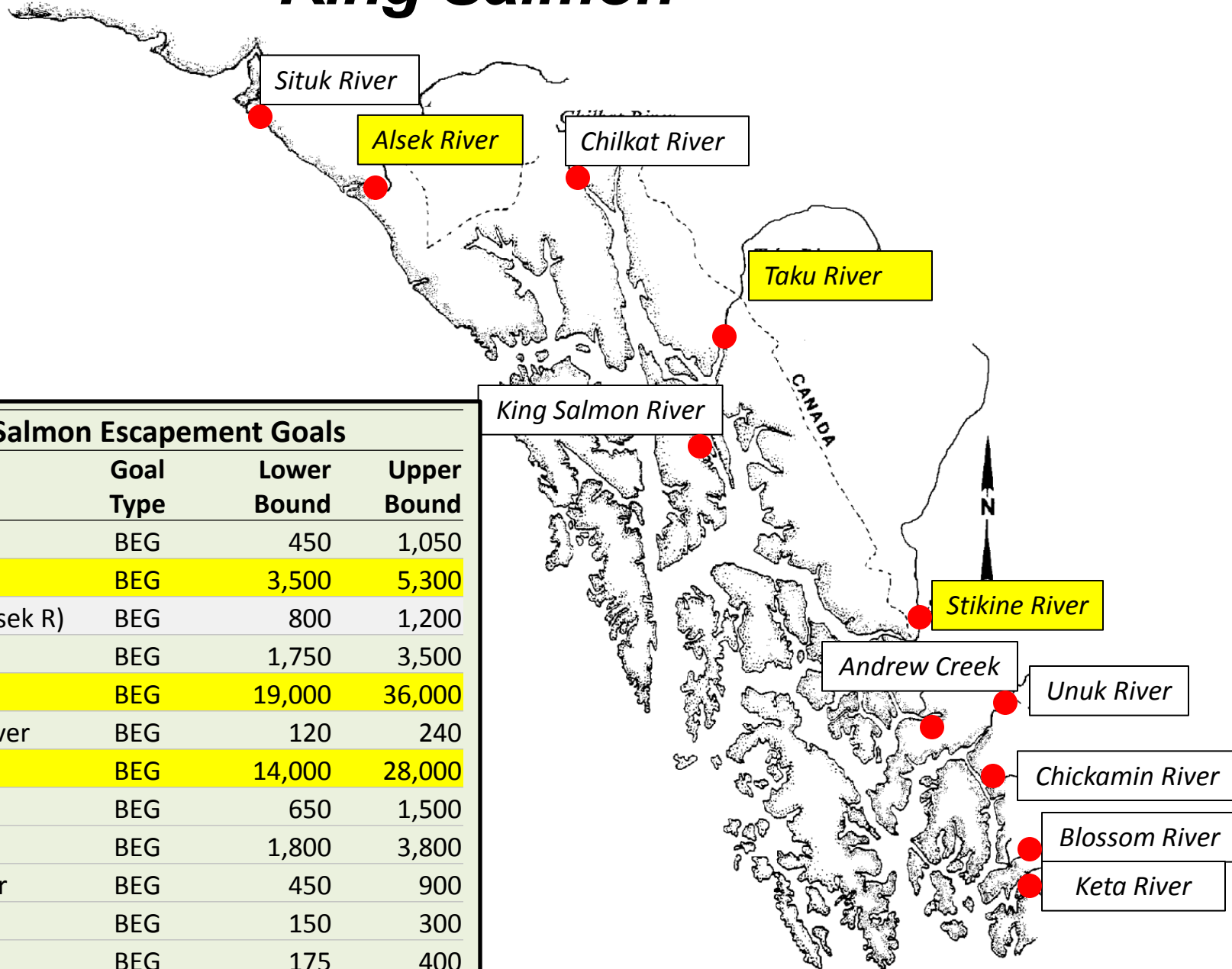


# ***Escapement Goal Policies***



- ***Policy for the Management of Sustainable Salmon Fisheries (SSFP; 5 AAC 39.222)***
- ***Policy for Statewide Salmon Escapement Goals (5 AAC 39.223)***
- **Reviewed potential stocks of concern as defined in the Policy for the Management of Sustainable Salmon Fisheries (5 AAC 39.222)**
- **Adopted to ensure salmon stocks are conserved, managed, and developed using the sustained yield principle**
- **Transboundary Rivers (U.S./CDN Management):**
  - **Management under the auspices of the Pacific Salmon Treaty**
  - **Escapement goals undergo stringent review by the PSC CTC, TTC, and TBR Panel, Canada Science Advice Pacific, and ADF&G**

# King Salmon



## King Salmon Escapement Goals

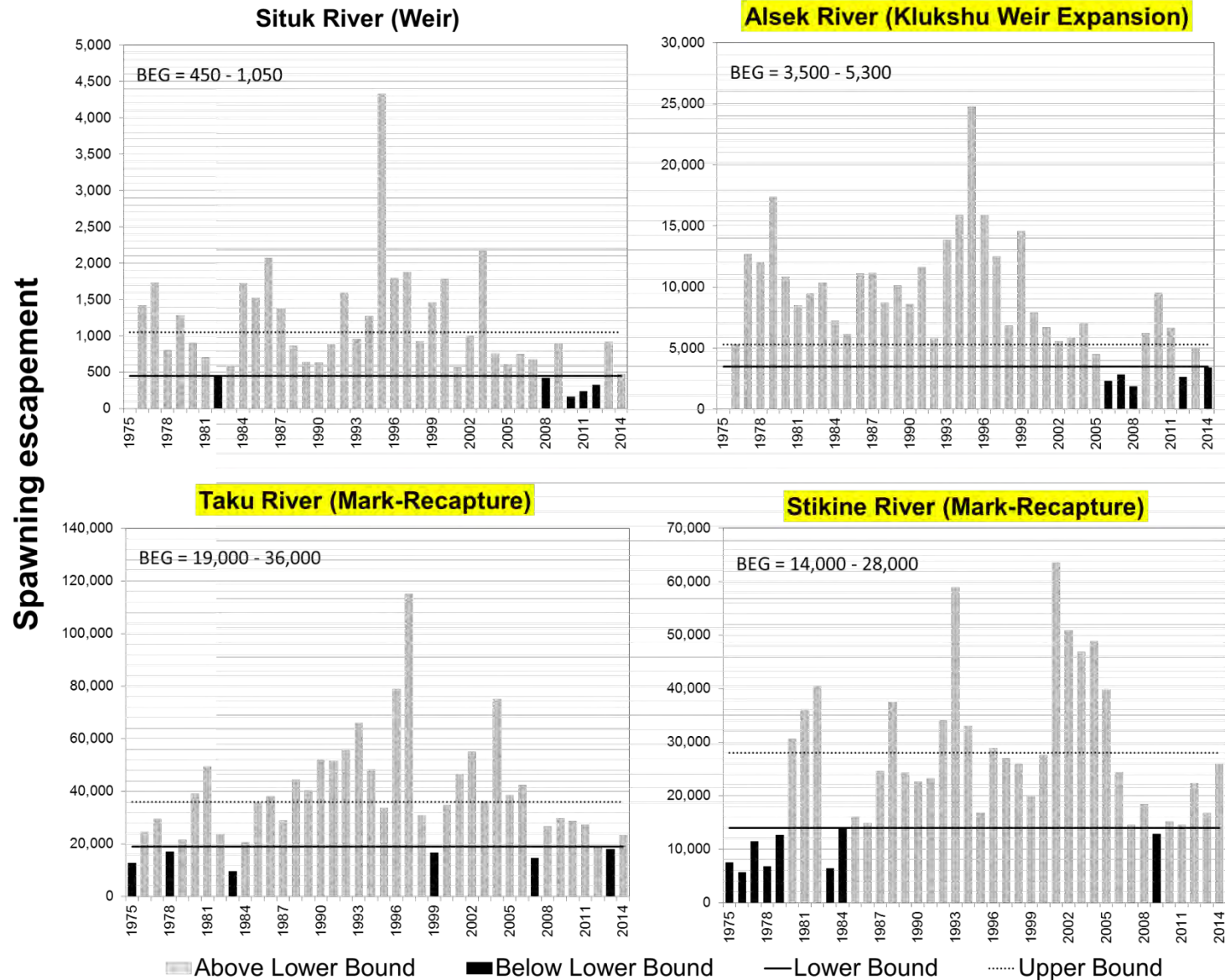
System	Goal Type	Lower Bound	Upper Bound
Situk River	BEG	450	1,050
Alsek River	BEG	3,500	5,300
Klukshu (Alsek R)	BEG	800	1,200
Chilkat River	BEG	1,750	3,500
Taku River	BEG	19,000	36,000
King Salmon River	BEG	120	240
Stikine River	BEG	14,000	28,000
Andrew Creek	BEG	650	1,500
Unuk River	BEG	1,800	3,800
Chickamin River	BEG	450	900
Blossom River	BEG	150	300
Keta River	BEG	175	400

# *King Salmon – Stock Status*

- **Abundance-Based Management**
  - Around 80–90% of the region’s wild stock production is monitored annually
- **Sound Basis for Escapement Goals**
  - Escapements have been above the lower bound of the escapement goal for most stocks
- **Stock status is judged to be good**
  - Exploitation rates on wild stocks are sustainable

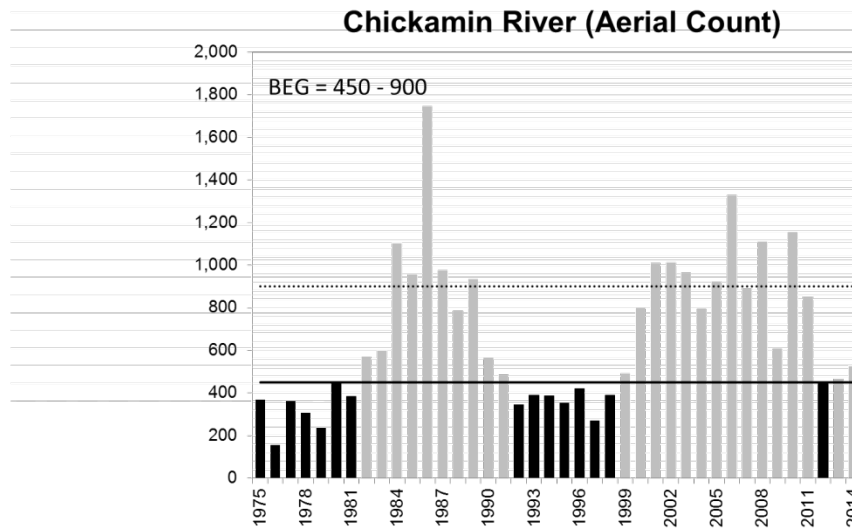
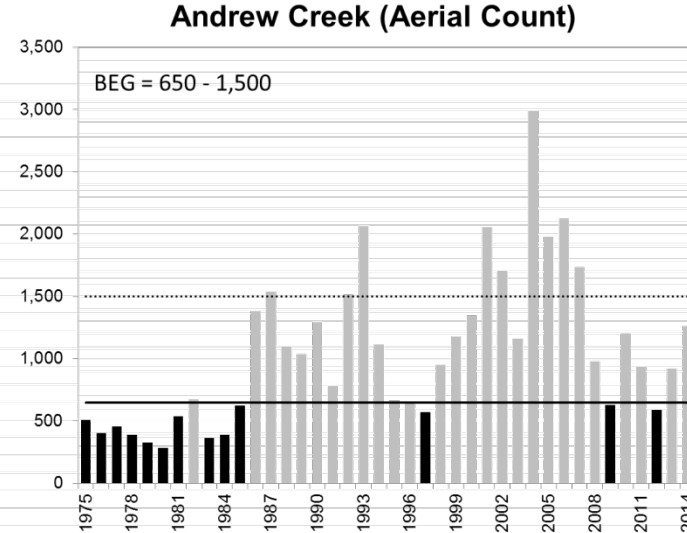
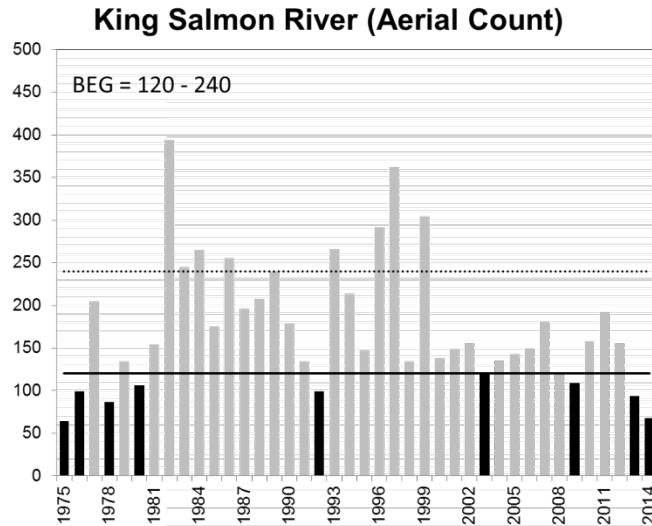


# King Salmon – Outside Rearing



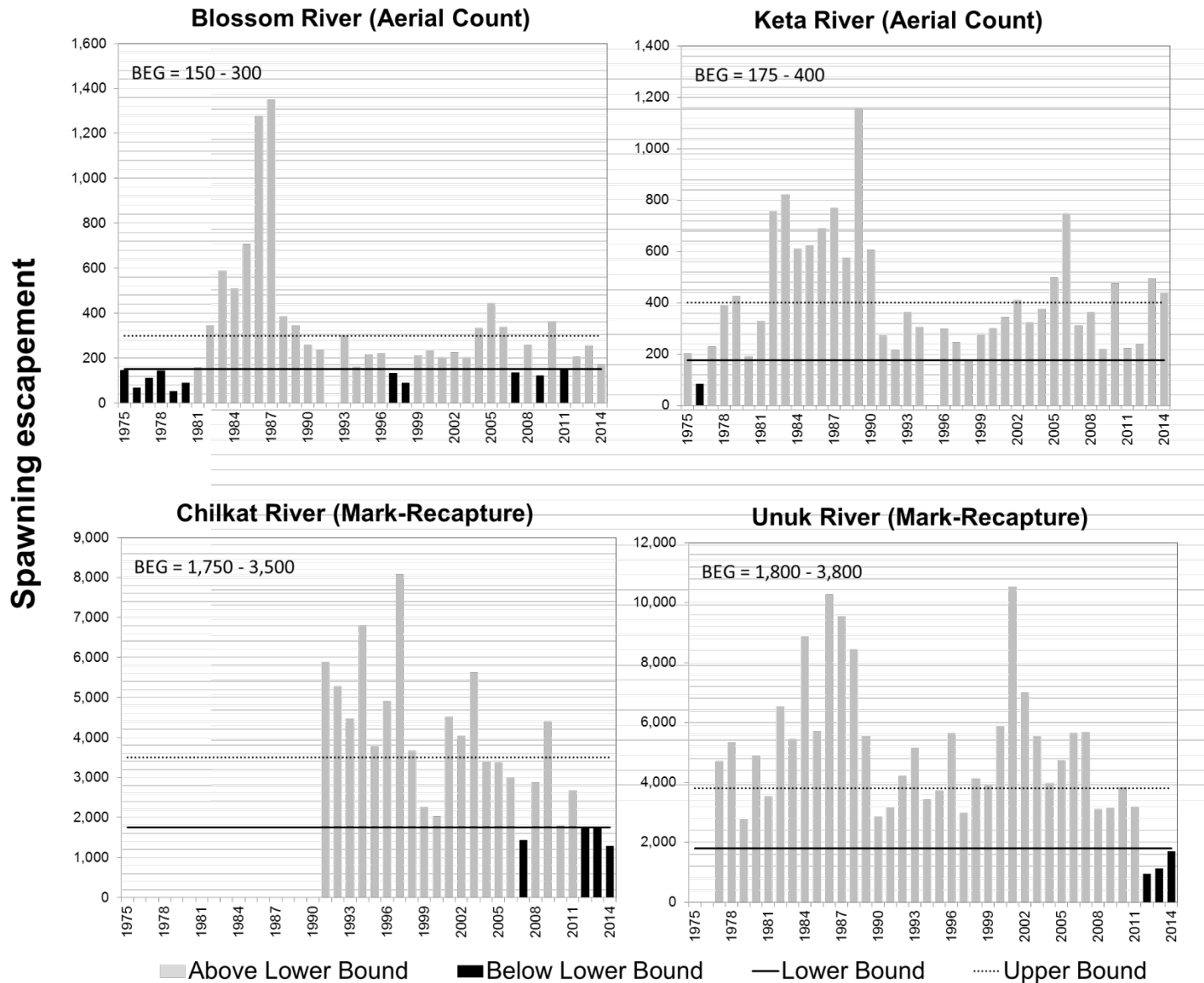
# King Salmon – Inside Rearing

Spawning escapement



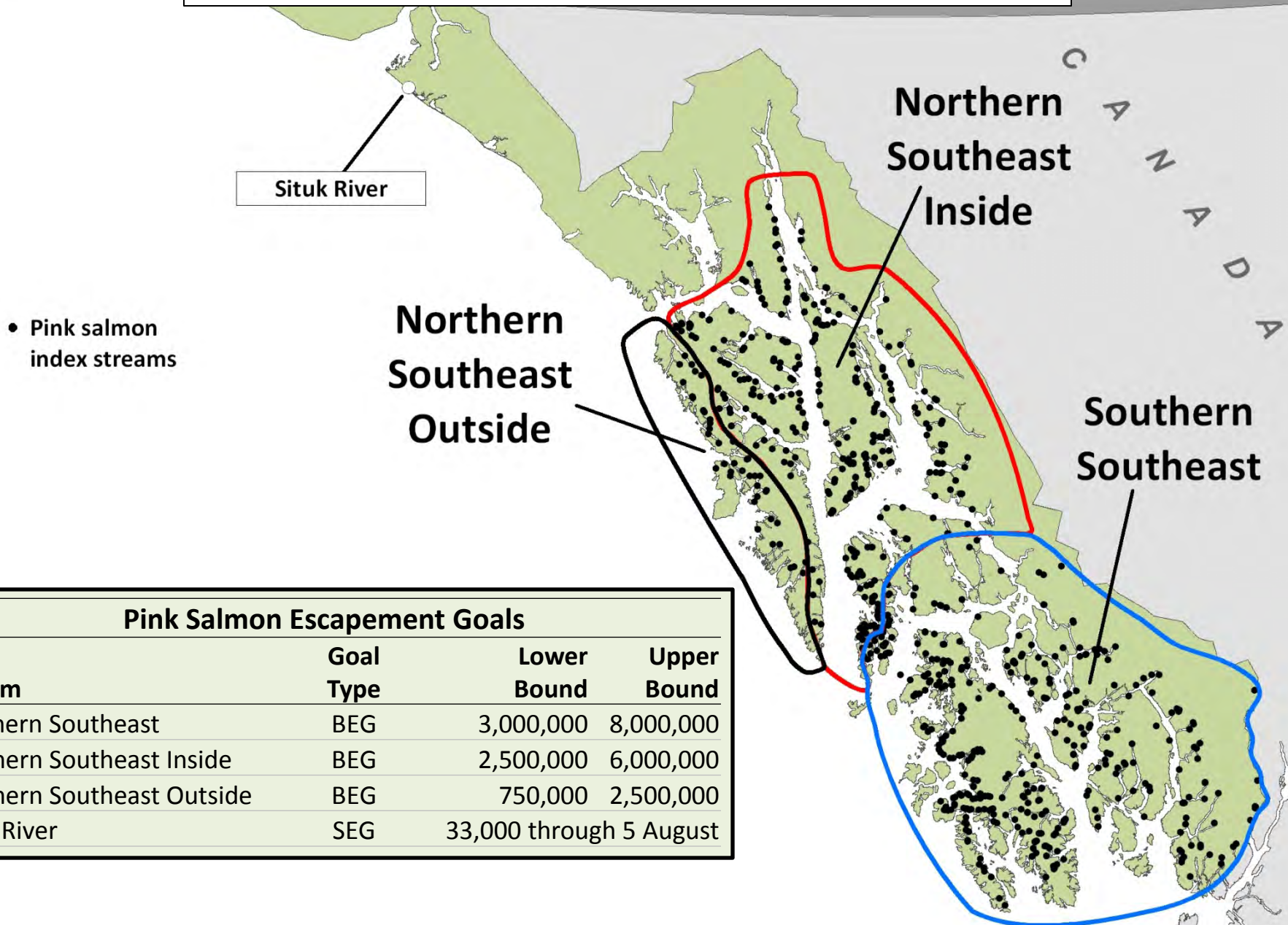
Above Lower Bound   
  Below Lower Bound   
  Lower Bound   
  Upper Bound

# King Salmon – Inside Rearing





# Pink Salmon

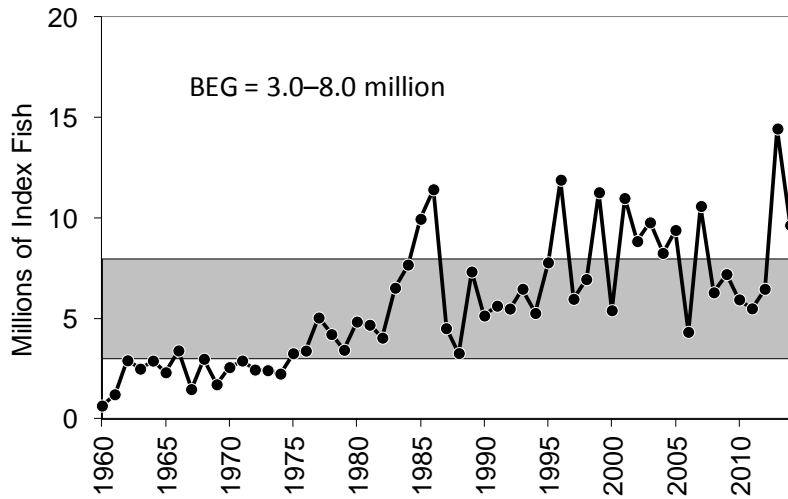


**Pink Salmon Escapement Goals**

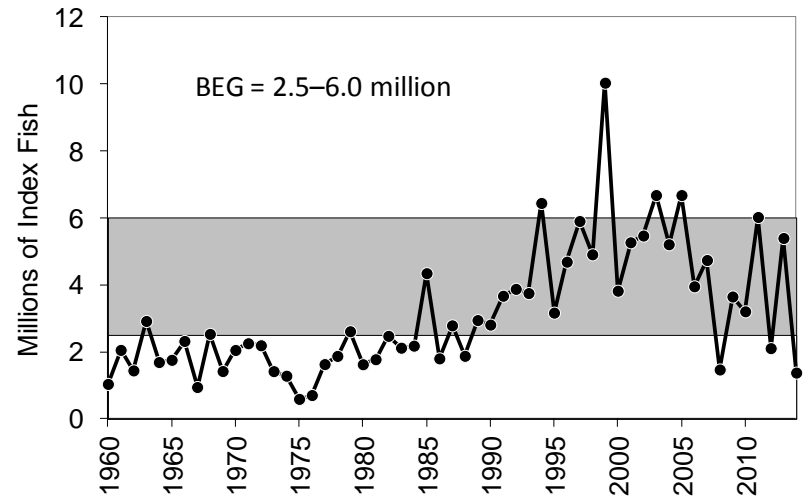
System	Goal Type	Lower Bound	Upper Bound
Southern Southeast	BEG	3,000,000	8,000,000
Northern Southeast Inside	BEG	2,500,000	6,000,000
Northern Southeast Outside	BEG	750,000	2,500,000
Situk River	SEG	33,000 through 5 August	

# Pink Salmon

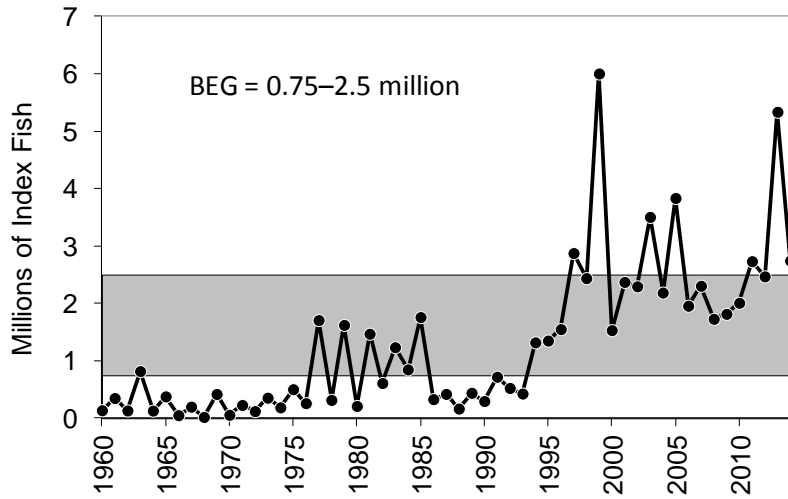
**Southern Southeast (Aerial Survey)**



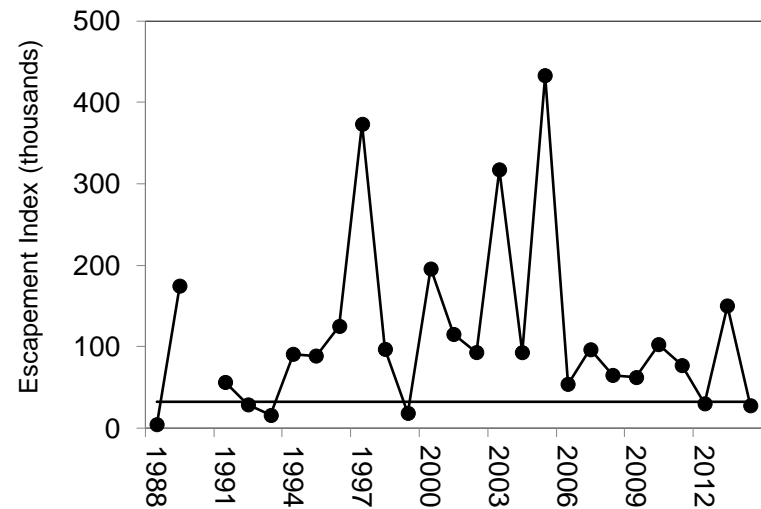
**Northern Southeast Inside (Aerial Survey)**



**Northern Southeast Outside (Aerial Survey)**

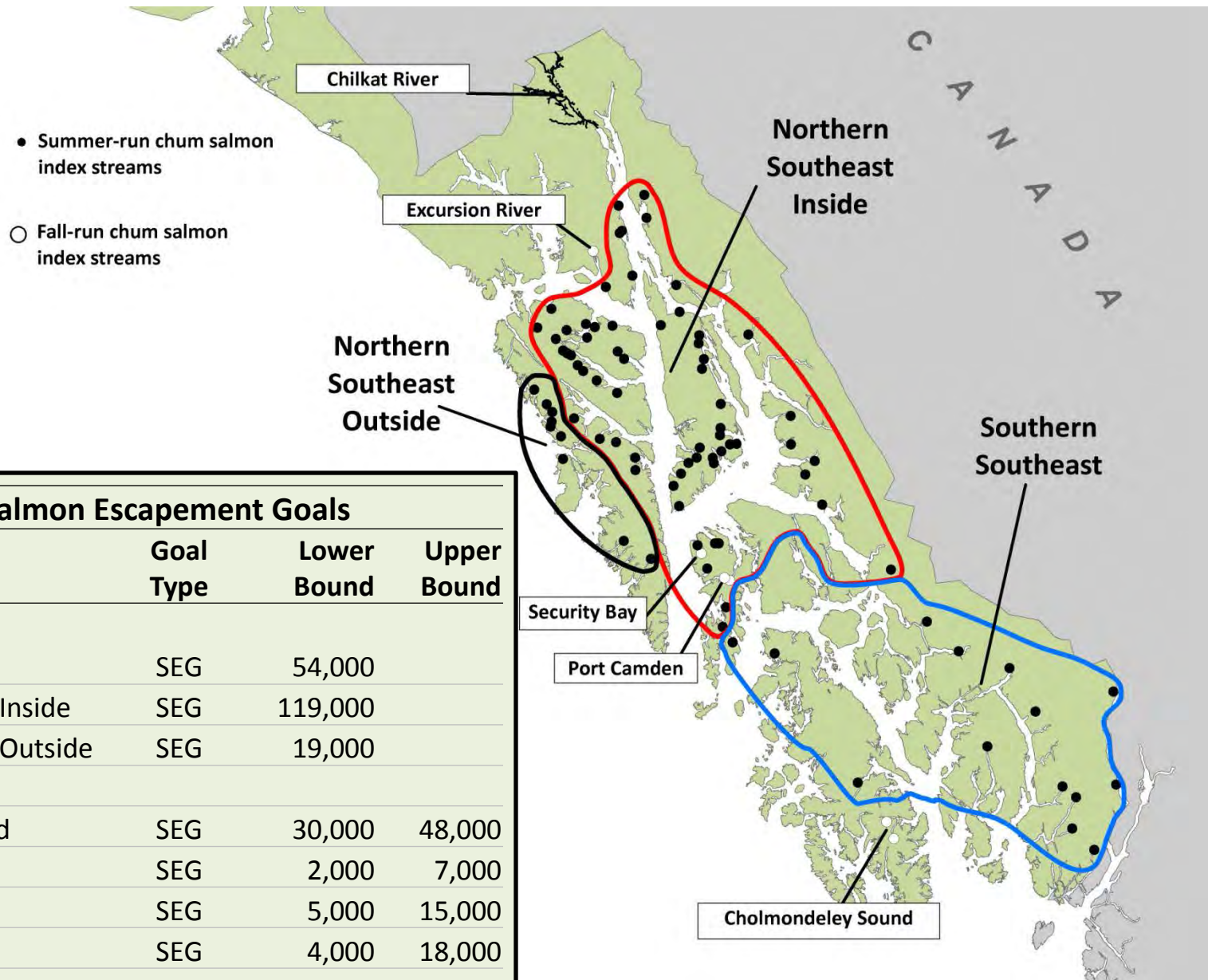


**Situk River (Weir Count Index)**





# Chum Salmon

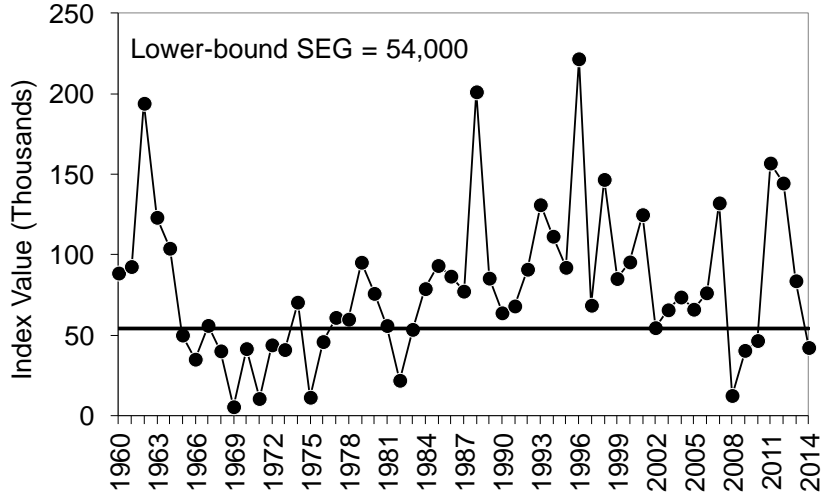


## Chum Salmon Escapement Goals

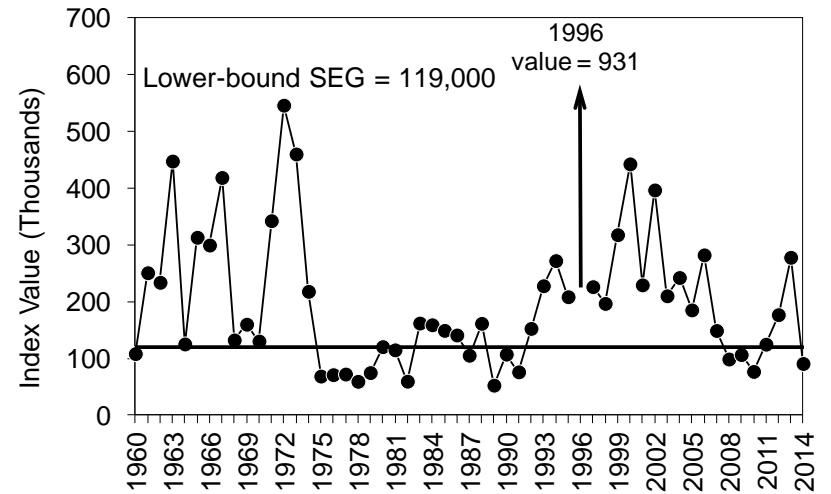
System	Goal Type	Lower Bound	Upper Bound
<b>Summer-run:</b>			
Southern Southeast	SEG	54,000	
Northern Southeast Inside	SEG	119,000	
Northern Southeast Outside	SEG	19,000	
<b>Fall-run:</b>			
Cholmondeley Sound	SEG	30,000	48,000
Port Camden	SEG	2,000	7,000
Security Bay	SEG	5,000	15,000
Excursion River	SEG	4,000	18,000
Chilkat River	SEG	75,000	170,000

# Summer Chum Salmon

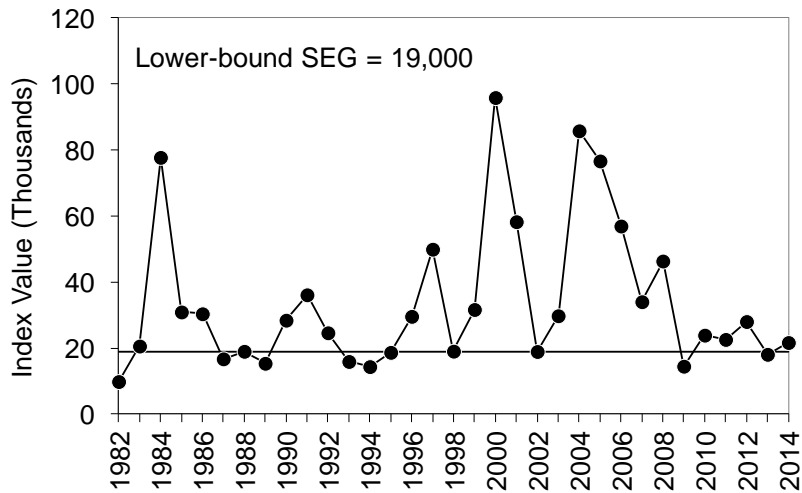
Southern Southeast (Index Survey)



Northern Southeast Inside (Index Survey)



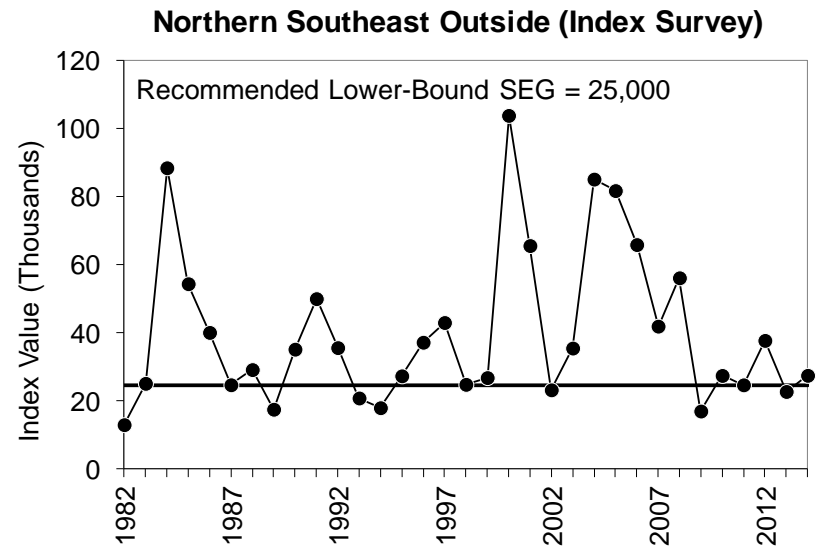
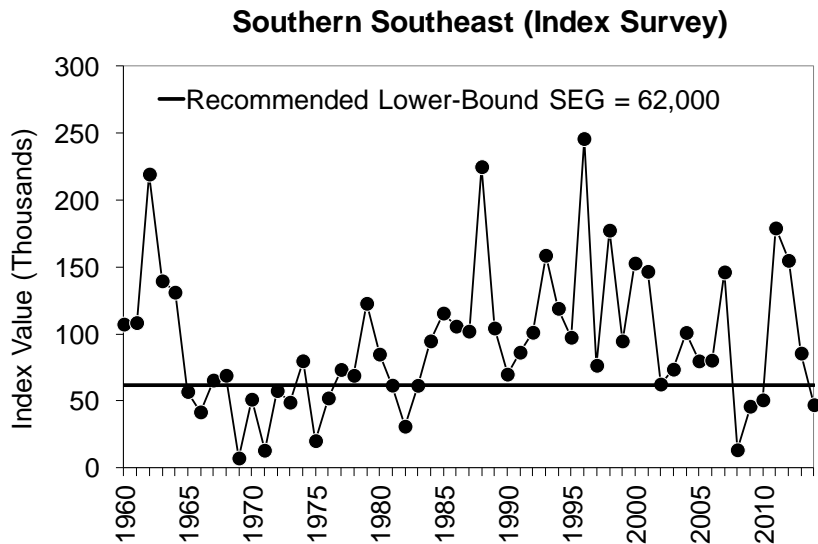
Northern Southeast Outside (Index Survey)



# Chum Salmon – *Recommended Goal Revisions*

## Summer Chum

- Incorporated additional index streams in the Southern Southeast and Northern Southeast Outside Subregions
- Recommended new lower bound SEGs:
  - Southern Southeast: 62,000 index
  - Northern Southeast Outside: 25,000 index



# Fall Chum Salmon

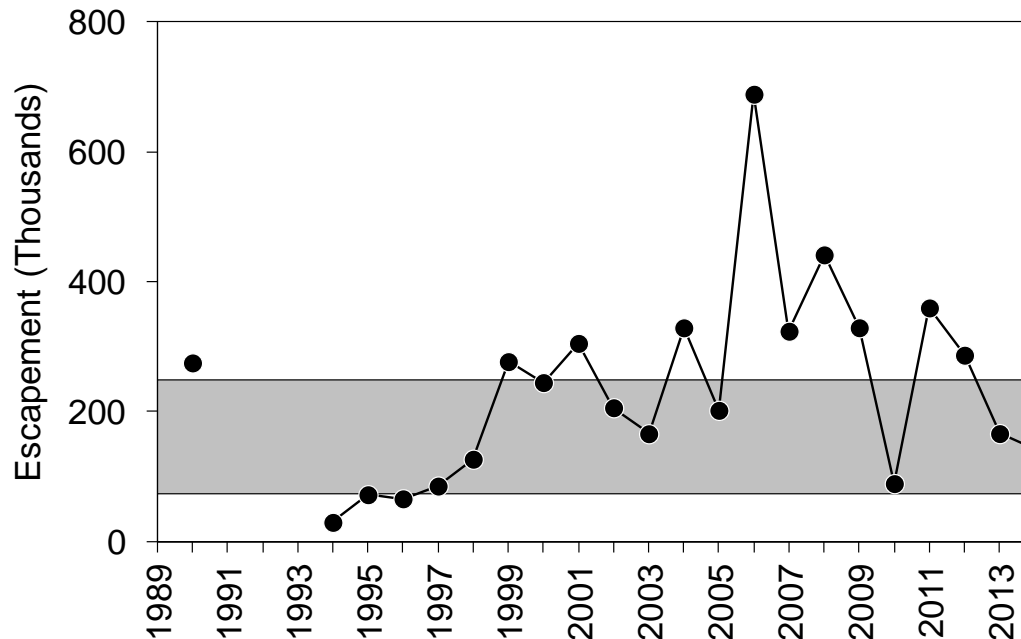
Stock Enumeration Method	Cholmondeley Sound	Port Camden	Security Bay	Excursion River	Chilkat River
Run-type	Peak Index	Peak Index	Peak Index	Peak Index	Estimated Escapement
No. Streams	Fall	Fall	Fall	Fall	Fall
	2	2	1	1	1
2004	60	3	13	5	329
2005	15	2	3	1	202
2006	54	2	15	2	689
2007	18	1	5	6	323
2008	50	1	12	8	441
2009	39	2	5	1	329
2010	76	5	7	6	89
2011	93	2	5	3	360
2012	54	4	10	2	287
2013	13	2	3	8	166
2014	48	4	6	11	142
<b>Goal Range:</b>					
Lower Bound	30	2	5	4	75
Upper Bound	48	7	15	18	170

# Chum Salmon – *Recommended Goal Revision*

## Chilkat River Fall Chum

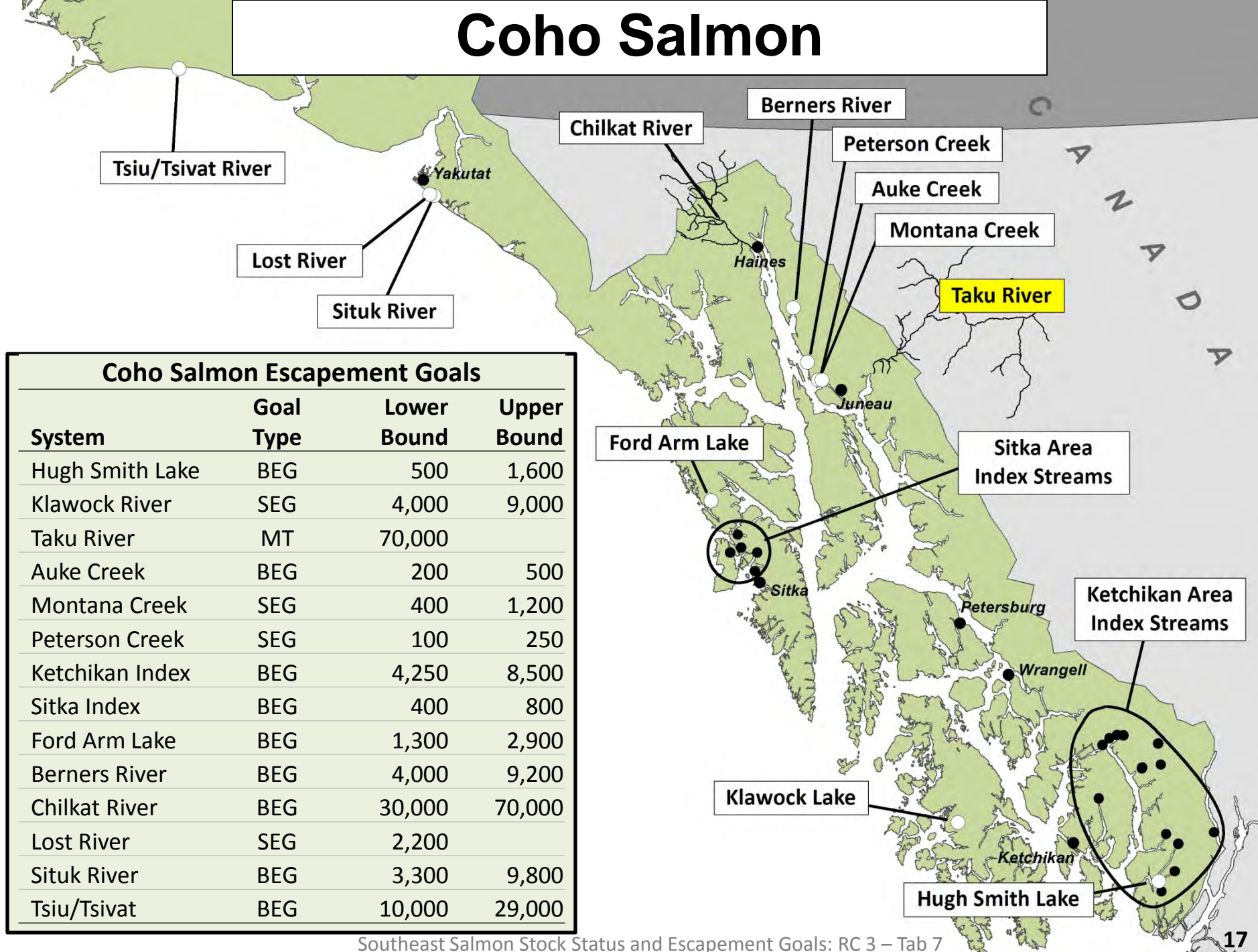
- Stock-recruit analysis with 5 years of additional data (15 Total)
- Current SEG range: 75,000–170,000
- Recommended new SEG range: 75,000–250,000

### Chilkat River Fall Chum Salmon

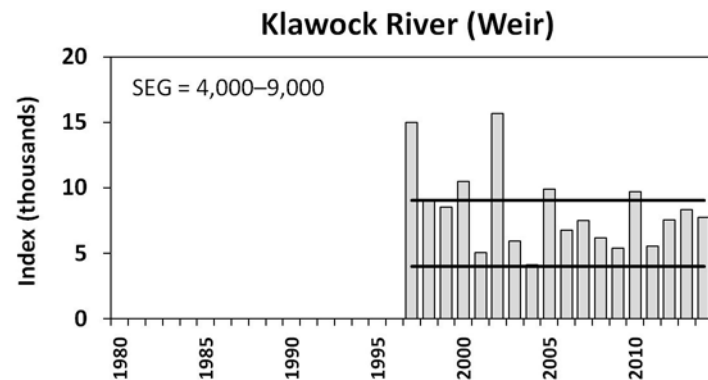
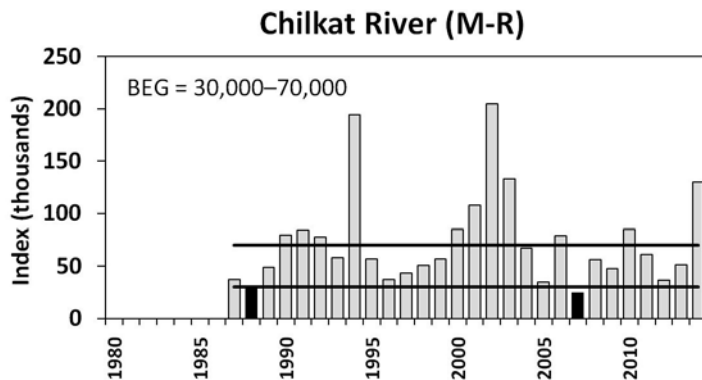
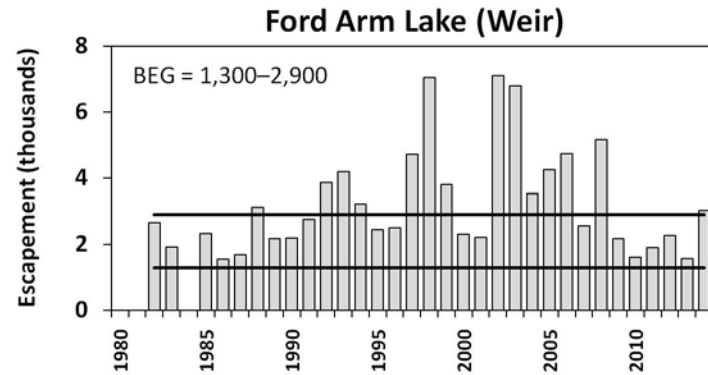
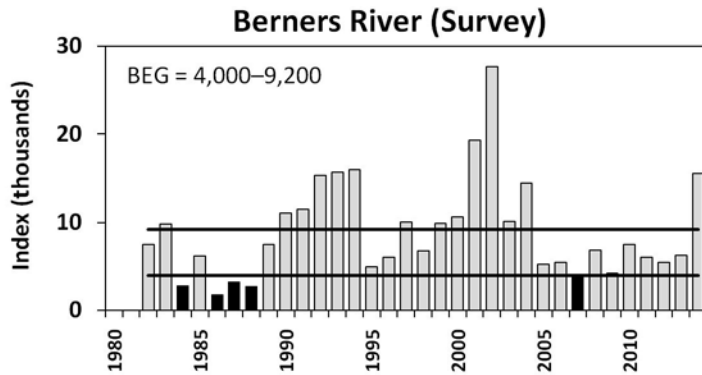
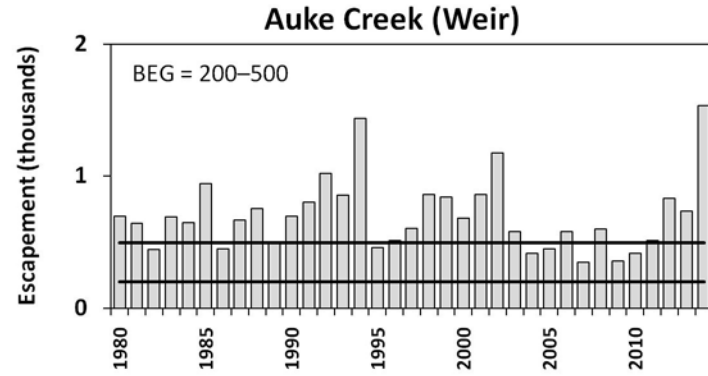
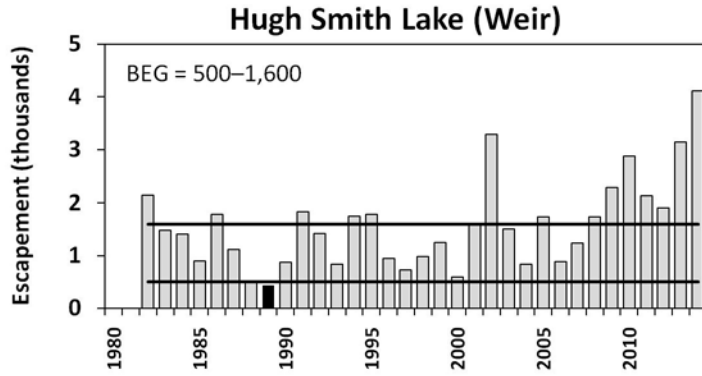




# Coho Salmon



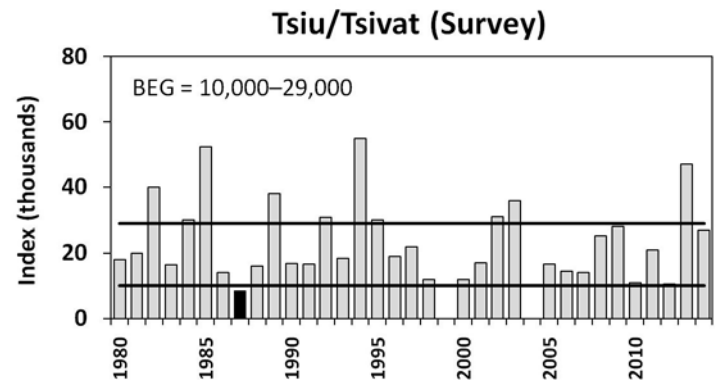
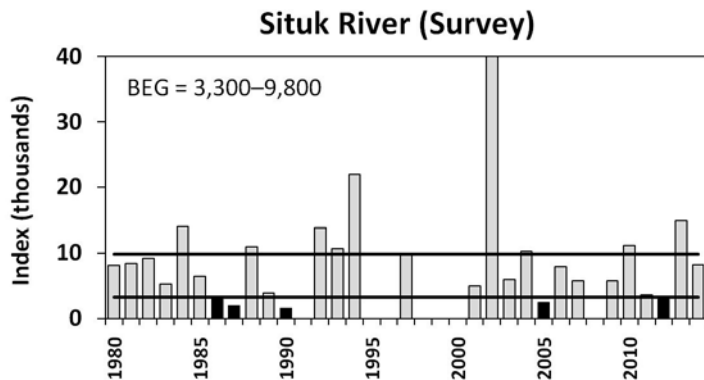
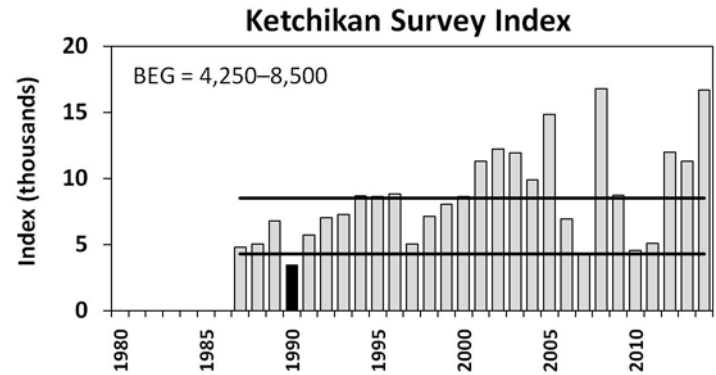
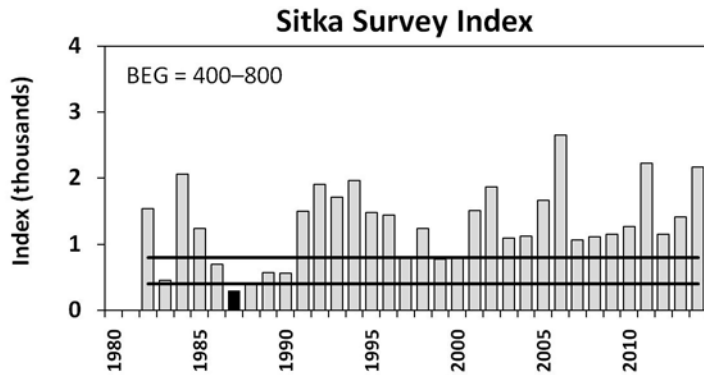
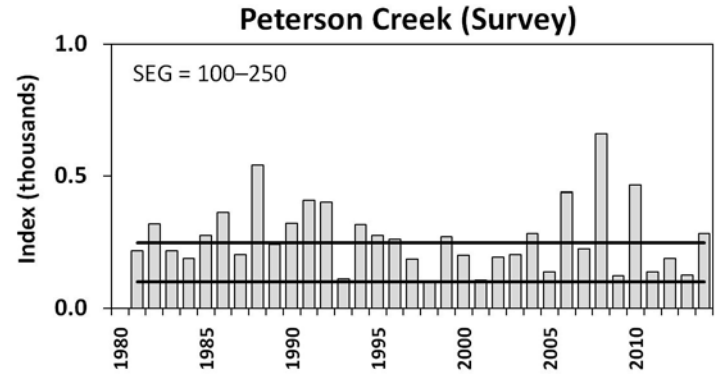
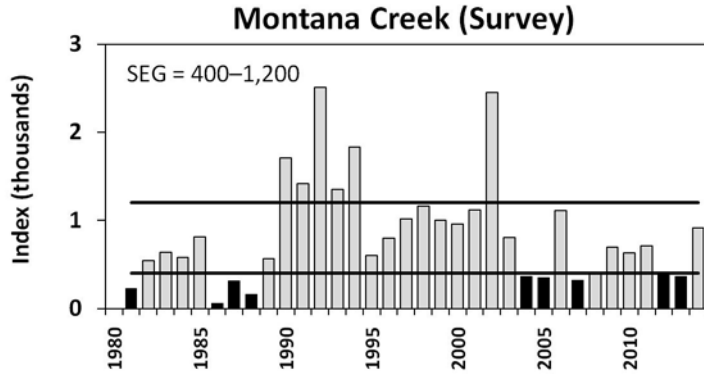
# Coho Salmon - 1



■ Above Goal

■ Below Goal

# Coho Salmon - 2



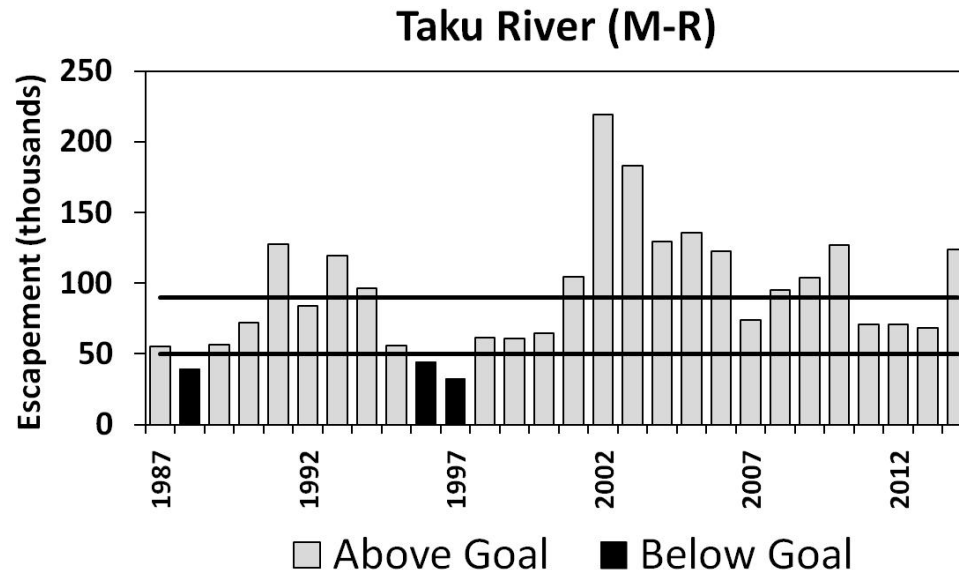
■ Above Goal

■ Below Goal

# Coho Salmon – *Recommended Goal Revision*

## Taku River

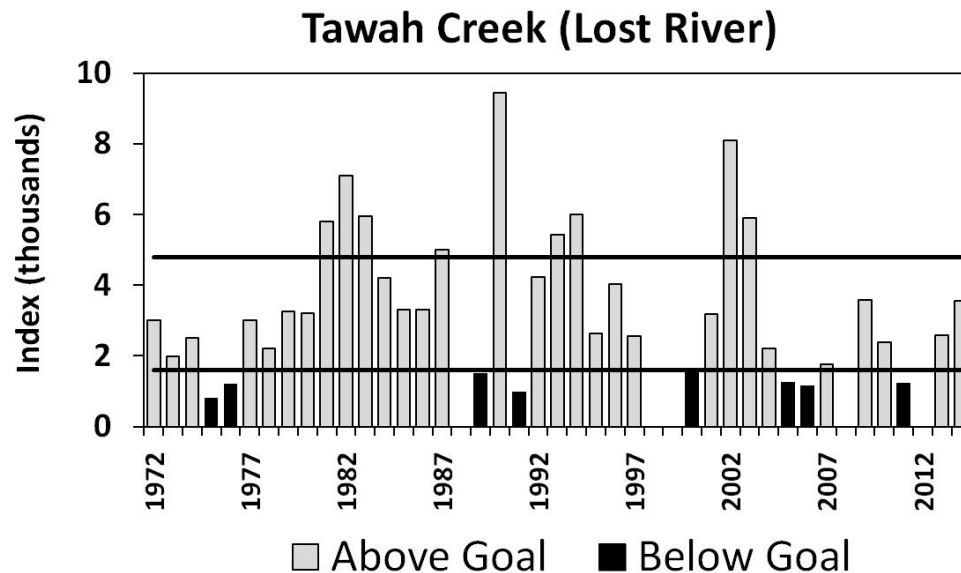
- Managed under the auspices of the Pacific Salmon Treaty
- Current Management Threshold: 70,000
- Total run reconstruction; 22 complete brood years; updated statistical modeling techniques
- Recommended new BEG range: 50,000–90,000



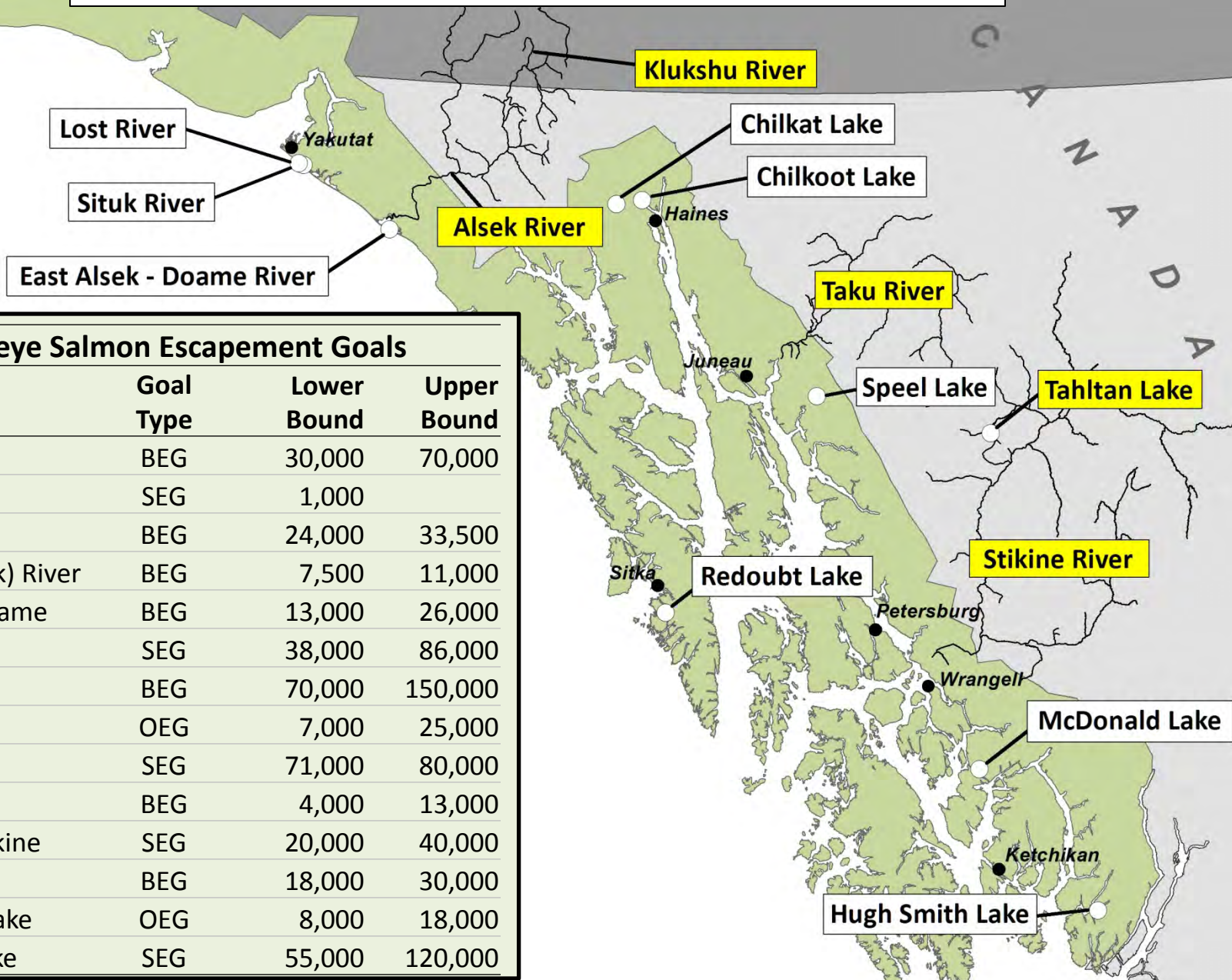
# Coho Salmon – *Recommended Goal Revision*

## Lost River

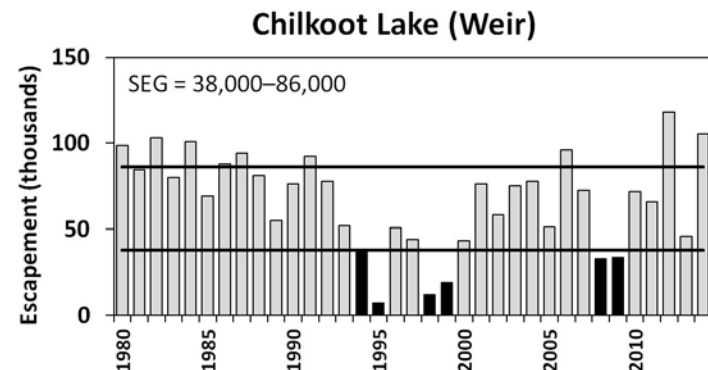
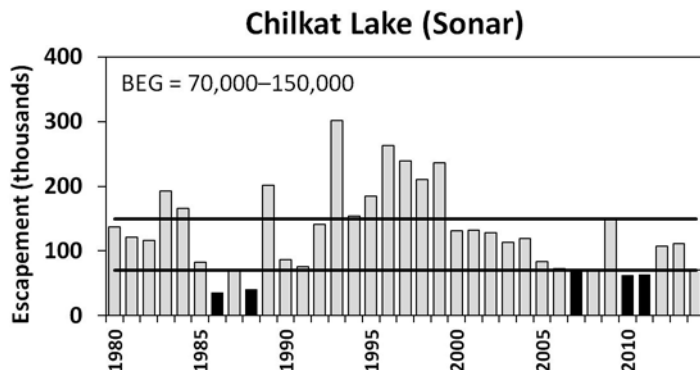
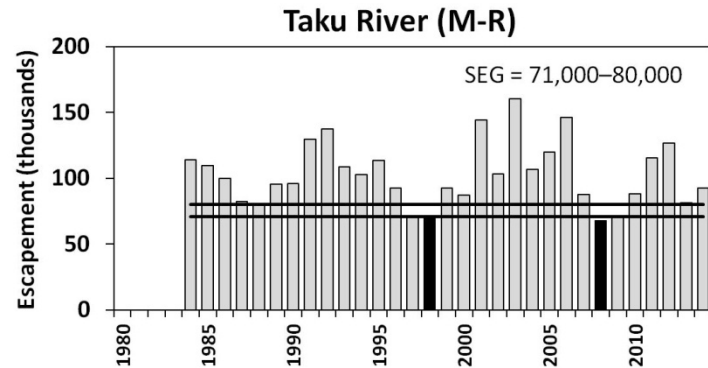
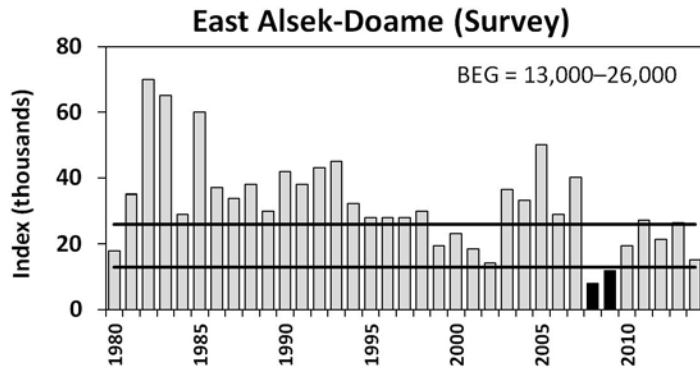
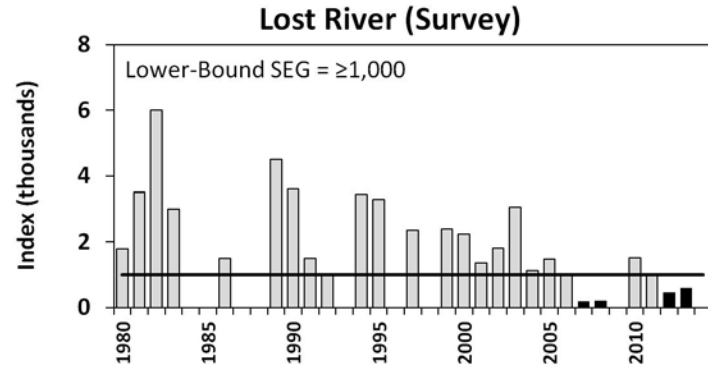
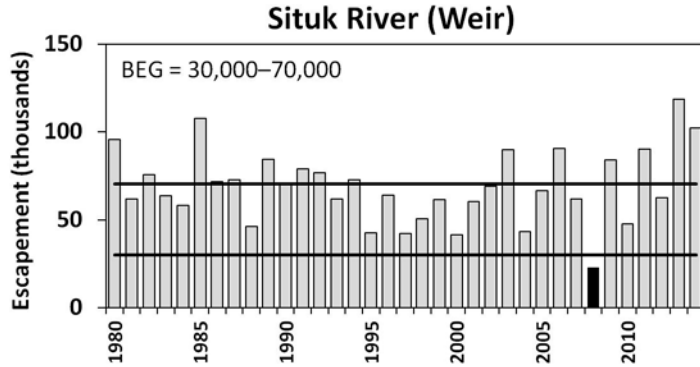
- Current Lower-Bound SEG: 2,200
- Standardized historical survey counts
- Recommended new SEG range: 1,600–4,800
- Recommended changing name to Tawah Creek (Lost River)



# Sockeye Salmon



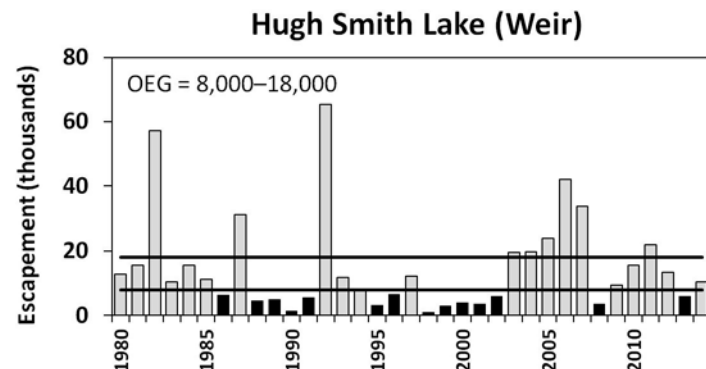
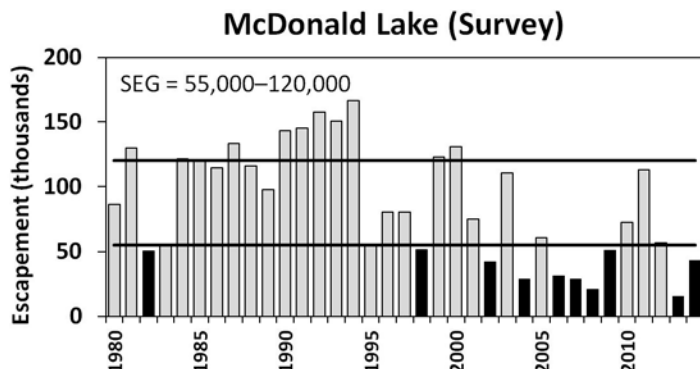
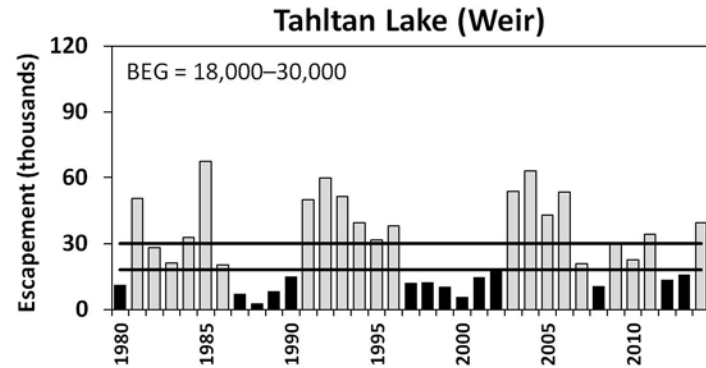
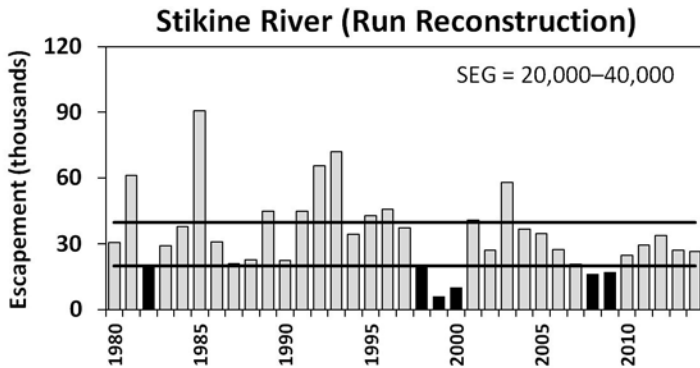
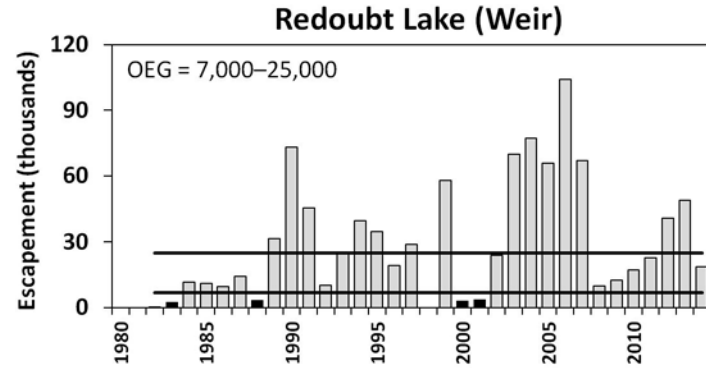
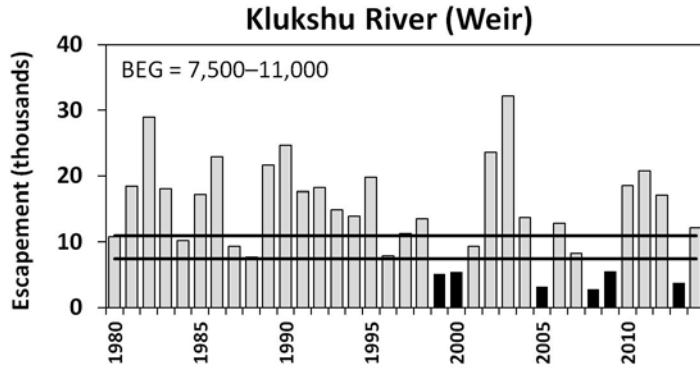
# Sockeye Salmon - 1



■ Above Goal

■ Below Goal

# Sockeye Salmon - 2



■ Above Goal

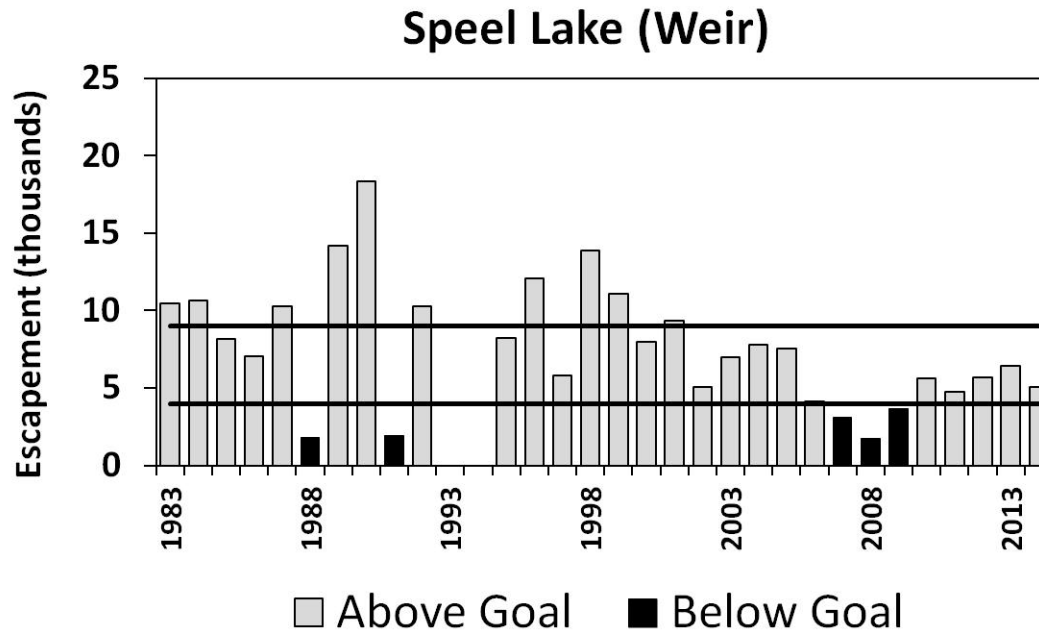
■ Below Goal



# Sockeye Salmon – *Recommended Goal Revision*

## Speel Lake:

- Current BEG: 4,000–13,000
- Reconstructed historical escapements; 10 additional years of data; updated statistical and modeling techniques
- Recommended new SEG range: 4,000–9,000



# Review Summary

## Recommended revisions to 6 of 52 salmon escapement goals:

- **Chum Salmon**

- **Southern Southeast summer chum: Lower-bound SEG 62,000**
- **Northern Southeast Outside summer chum: Lower-bound SEG 25,000**
- **Chilkat River fall chum: SEG 75,000–250,000**

- **Coho Salmon**

- **Taku River: BEG 50,000–90,000**
- **Lost River: SEG 1,600–4,800 in Tawah Creek (Lost River)**

- **Sockeye Salmon**

- **Speel Lake: SEG 4,000–9,000**

