

Salmon Stock Status and Escapement Goals in Southeast and Yakutat

**Alaska Board of Fisheries
January 28–February 9, 2025
Ketchikan**

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**Oral Report:
RC 3 – Tab 23**

**Written Report:
RC 3 – Tab 4**

Presentation Outline

- Escapement goal policies and definitions
- For each species:
 - Current escapement goals
 - Stock status
 - Escapement goal changes



Escapement Goal Policies



- ***Policy for the Management of Sustainable Salmon Fisheries (SSFP; 5 AAC 39.222)***
 - Reviewed potential stocks of concern as defined in the SSFP

- ***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**

Escapement Goal Policies

Transboundary Rivers (U.S./CAN Management):

- **Management under the auspices of the Pacific Salmon Treaty**
- **Bilateral review by the PSC technical committees and panels including staff from ADF&G and DFO**
- **Additional review by the Canadian Science Advisory Secretariat**



Escapement Goal Policies - Definitions

Biological Escapement Goal (BEG) Sustainable Escapement Goal (SEG)

The escapement that provides the greatest potential for maximum sustained yield (MSY).

- *Expressed as a range based on factors such as salmon stock productivity and data uncertainty.*

SEAK: King, coho, sockeye, pink

A level of escapement, indicated by an index, estimate or value, that provides sustained yield over a 5 to 10 year period and used in situations where a BEG cannot be managed for or developed.

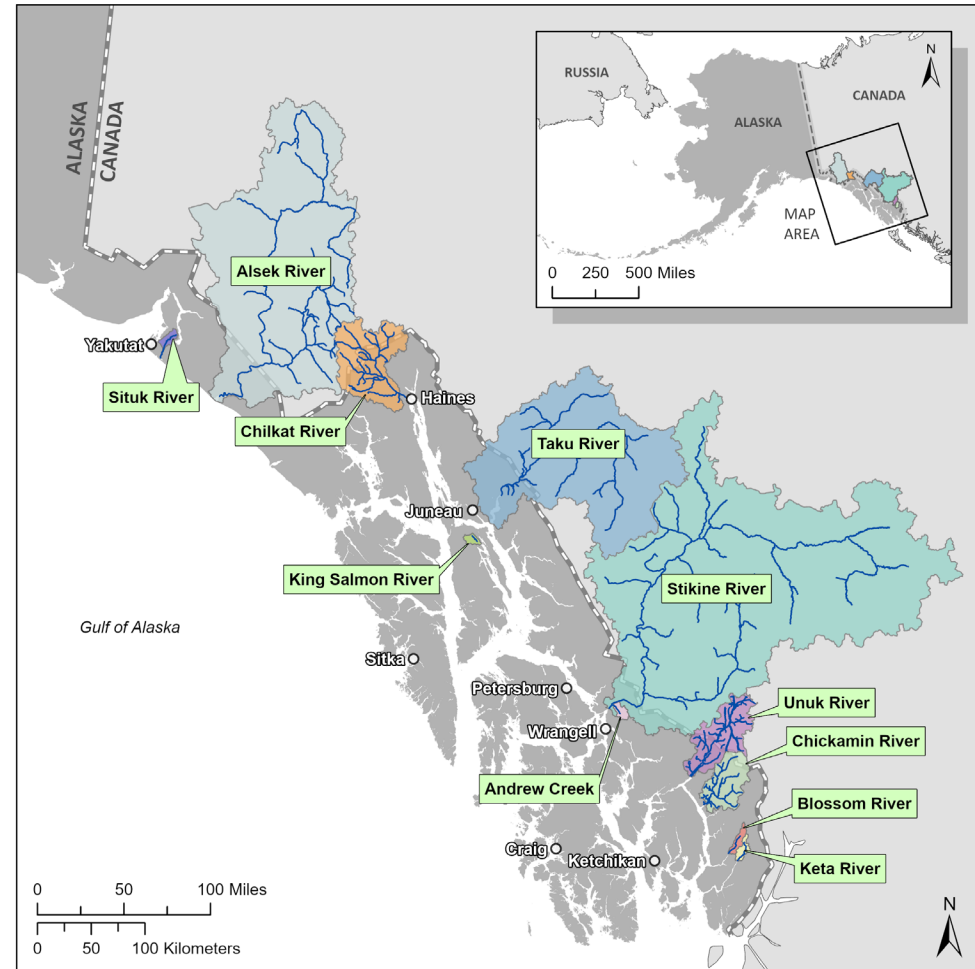
- *Will take into account data uncertainty and be stated as either a 'SEG range' or 'lower bound SEG'.*

SEAK: coho, sockeye, chum

Escapement Goals – King Salmon

King Salmon Biological Escapement Goals

Stock	Lower Bound	Upper Bound
Situk	450	1,050
Alsek	3,500	5,300
Chilkat	1,750	3,500
Taku	19,000	36,000
King Salmon	120	240
Stikine	14,000	28,000
Andrew	650	1,500
Unuk	1,800	3,800
Chickamin	2,150	4,300
Blossom	500	1,400
Keta	550	1,300



Abundance-Based Management

- The majority (80%+) of the region's known wild stock production is monitored annually

King Salmon Stocks

Outside Rearing:
~ Maturing in GOA

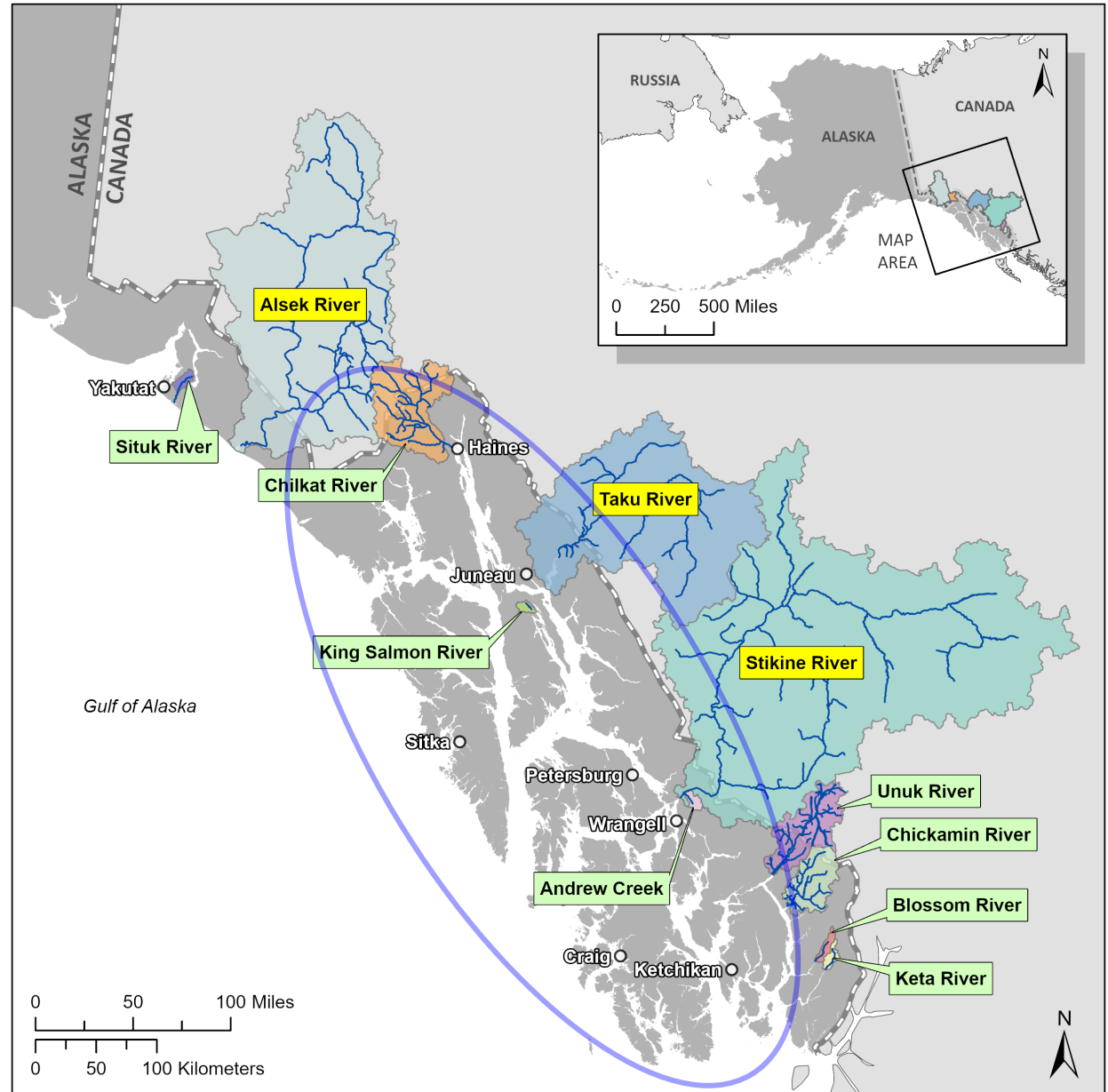
Full Indicator Stocks:

- Stock Assessment
- Data rich

Transboundary River Stocks:

- International co-management

Inside Rearing:
~ Maturing in SEAK



King Salmon – Stock Status

Escapement Goal Performance

- King salmon runs met or exceeded the lower bound of the BEG 51% of the time over the last 10 years (2014-2023)



Stocks of Concern

Designated in 2022

Chilkat River

Taku River

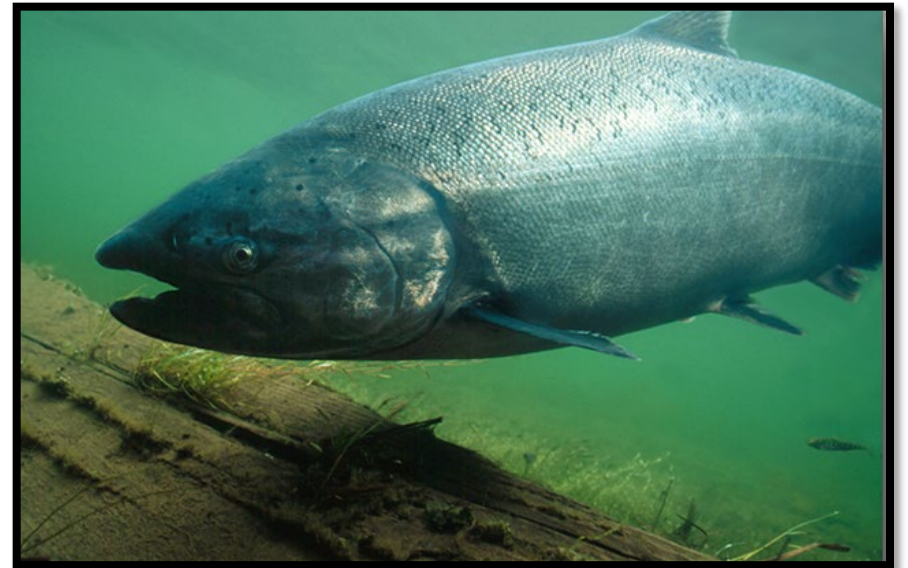
King Salmon River

Stikine River

Andrew Creek

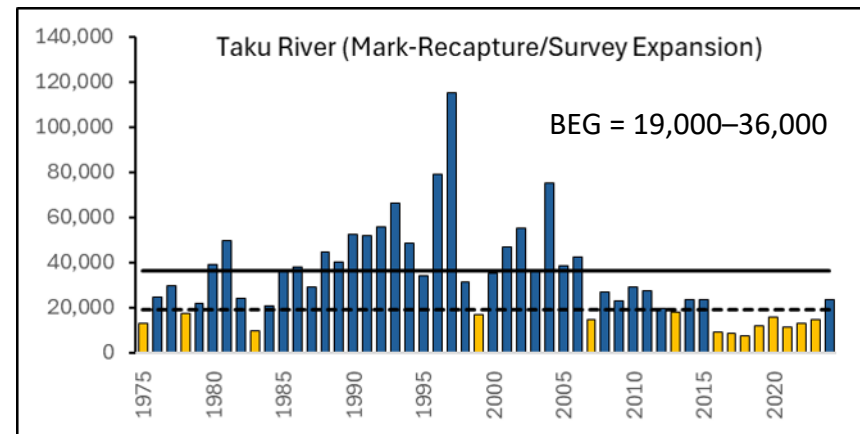
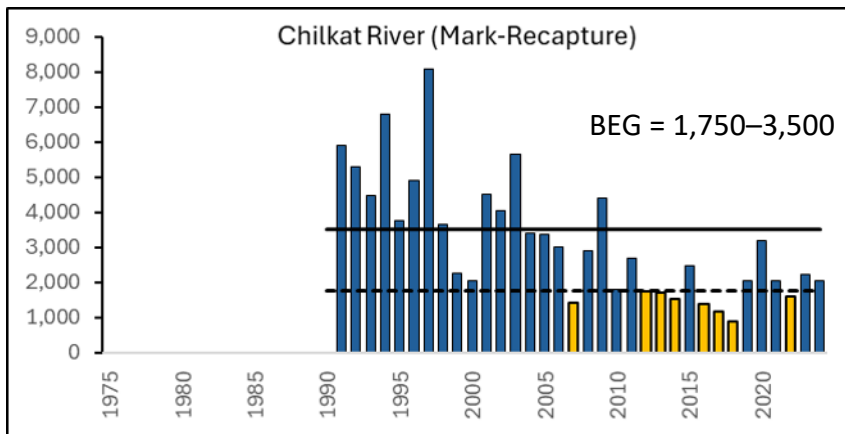
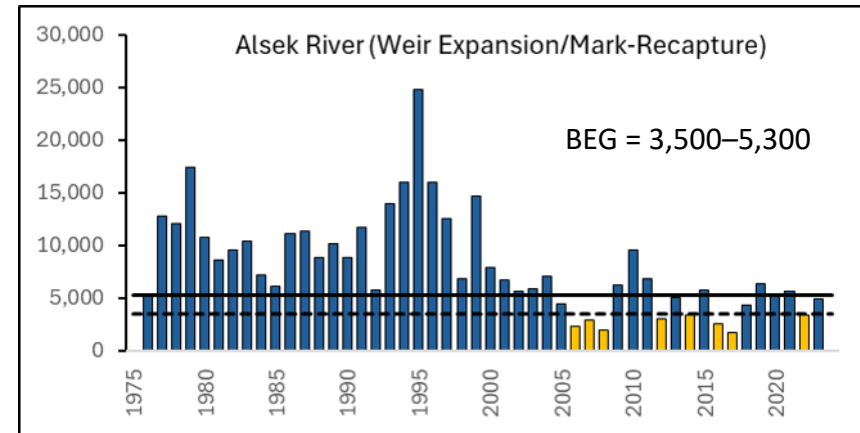
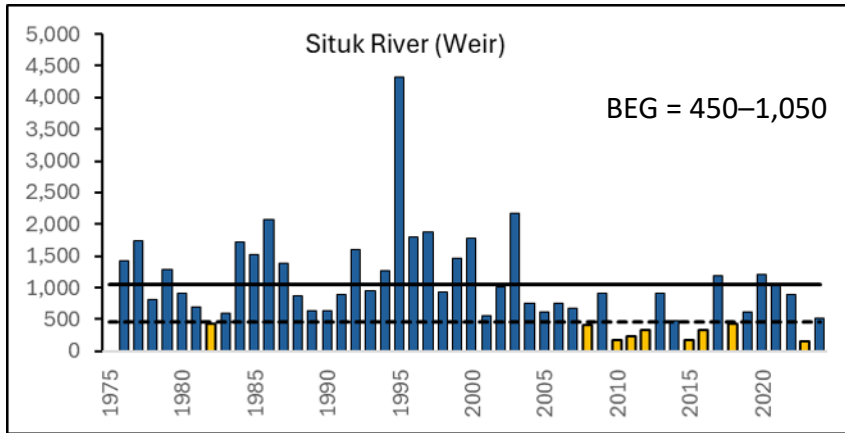
Chickamin River

Unuk River



King Salmon Escapement - 1

Spawning Escapement

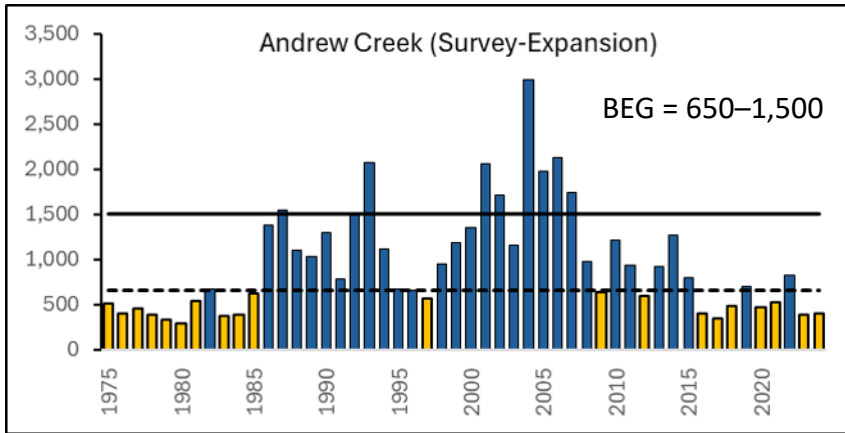
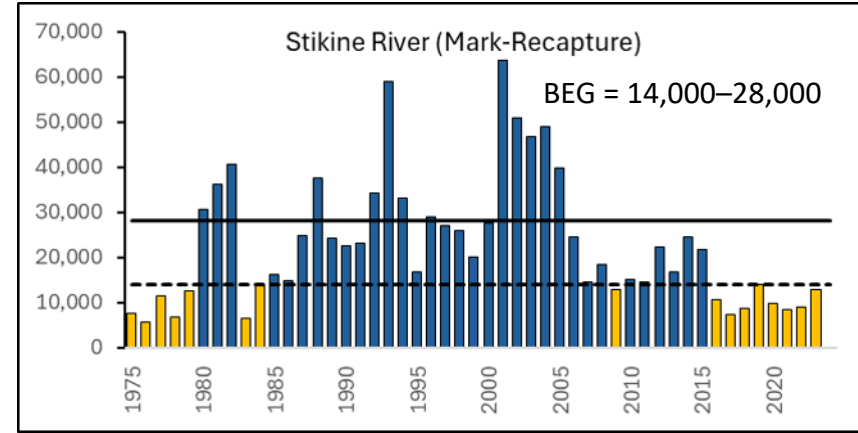
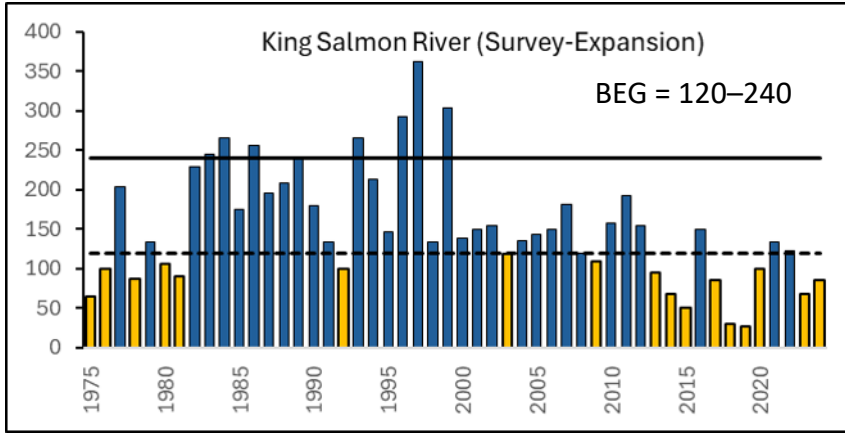


Achieved Goal

Below Goal

King Salmon Escapement - 2

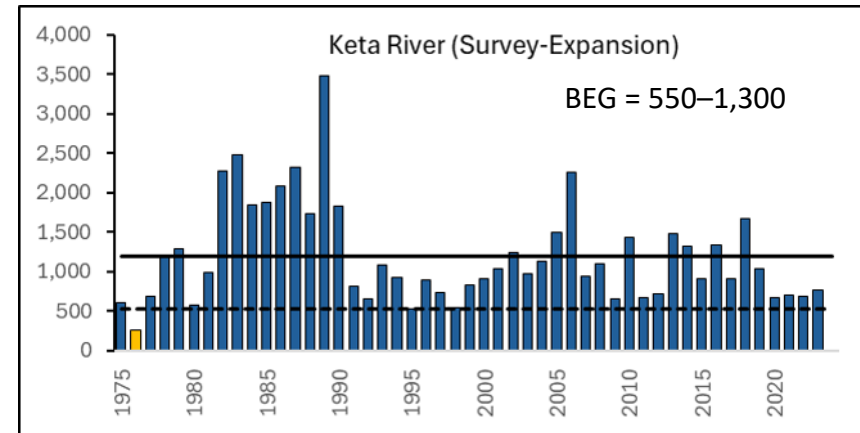
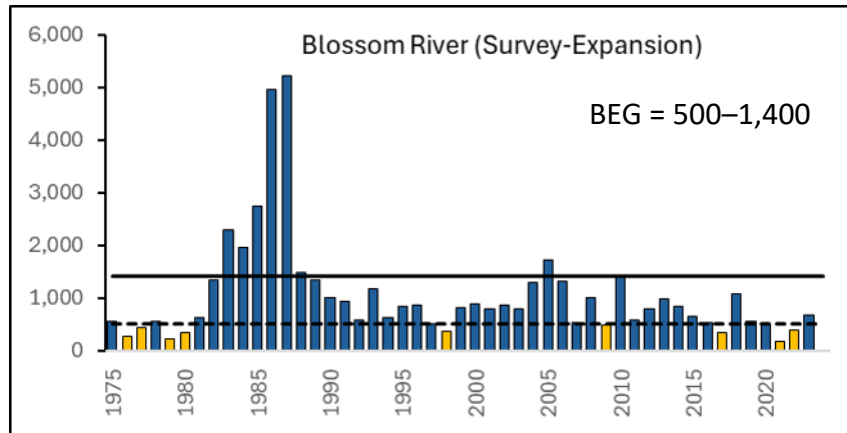
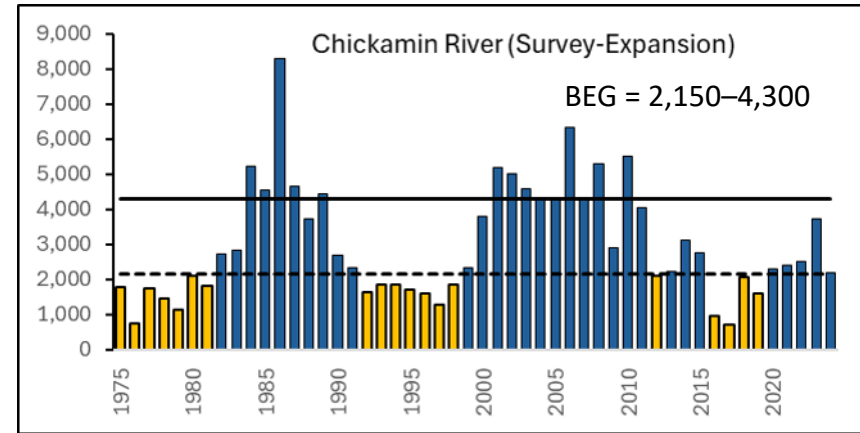
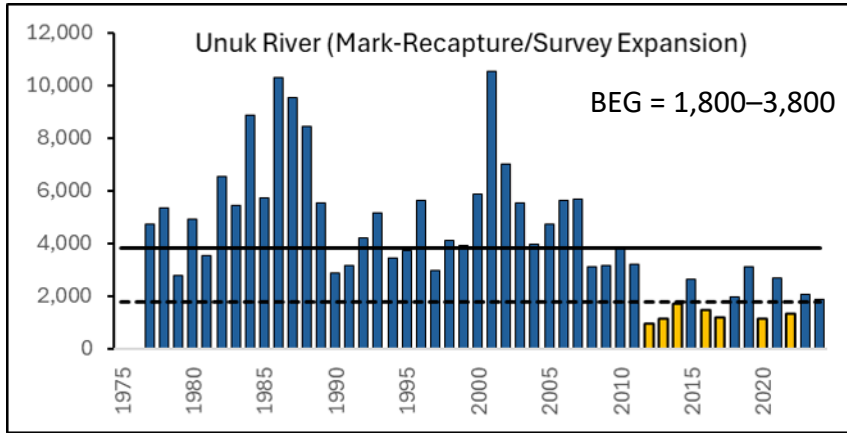
Spawning Escapement



Achieved Goal
 Below Goal

King Salmon Escapement - 3

Spawning Escapement

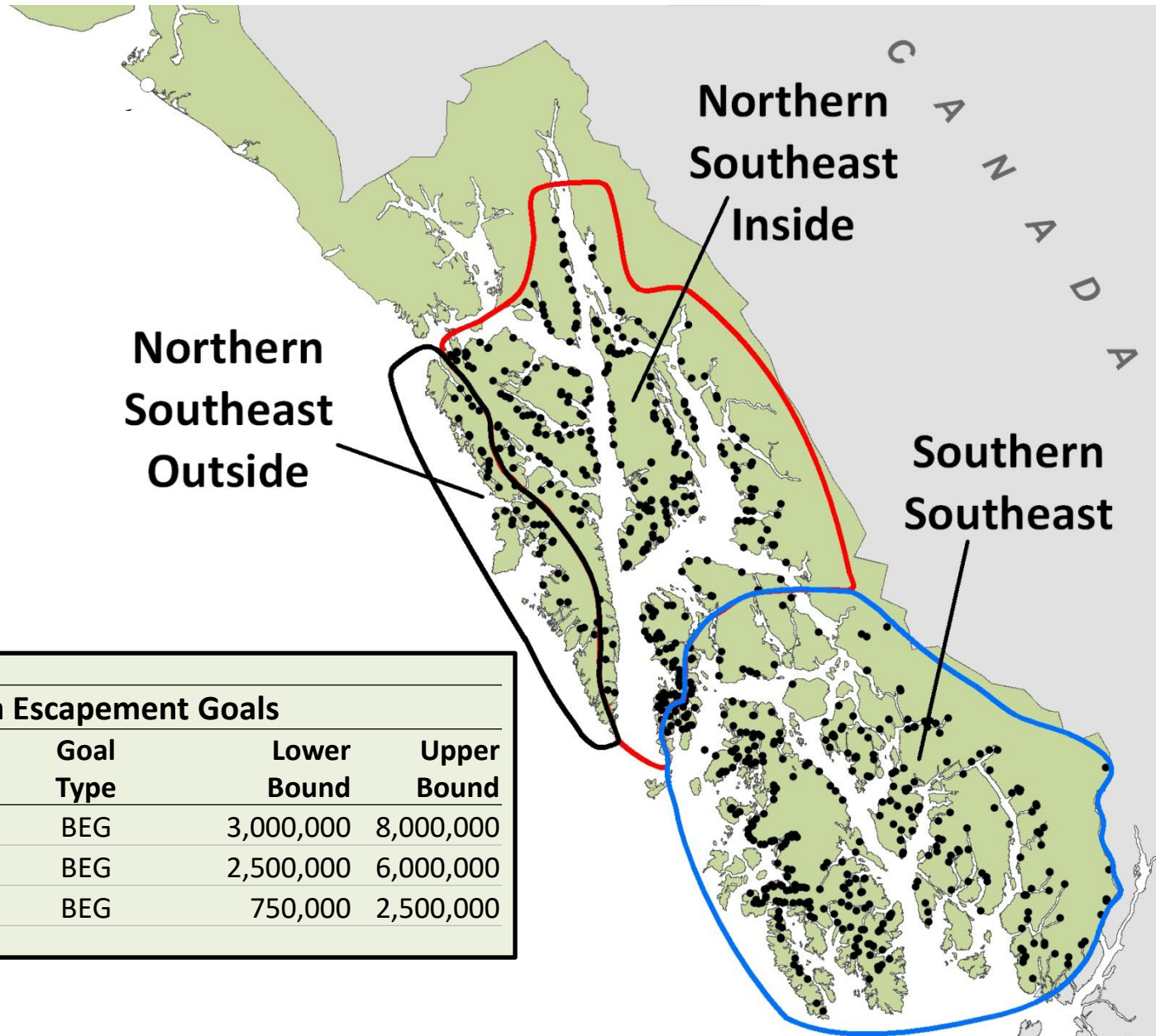


Achieved Goal



Below Goal

Pink Salmon Escapement Goals

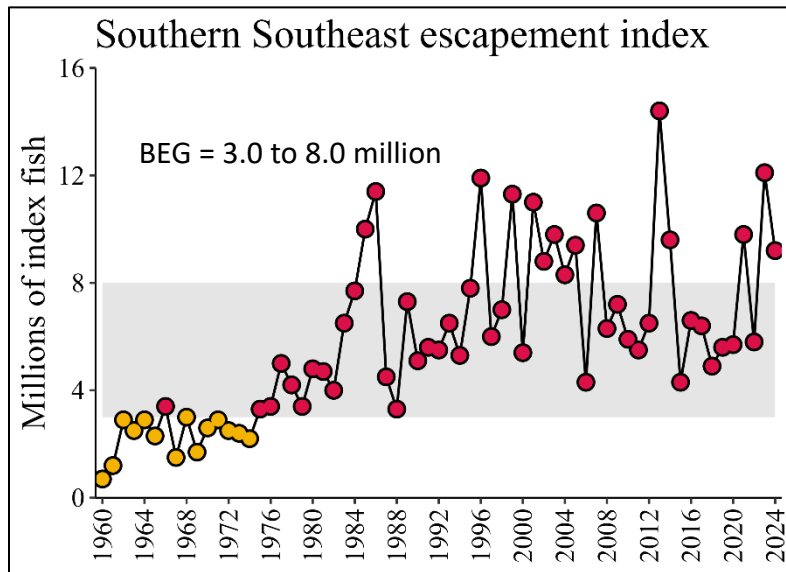
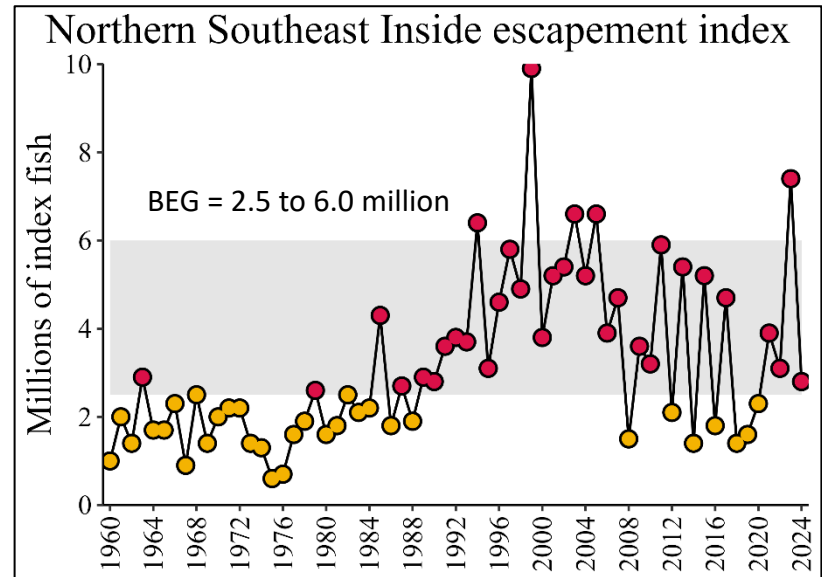
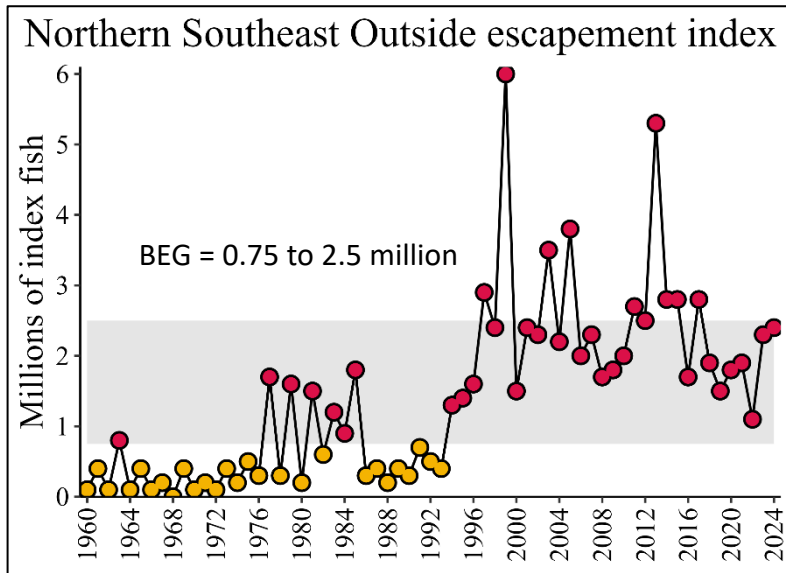


- Pink salmon index streams

Pink Salmon Escapement Goals

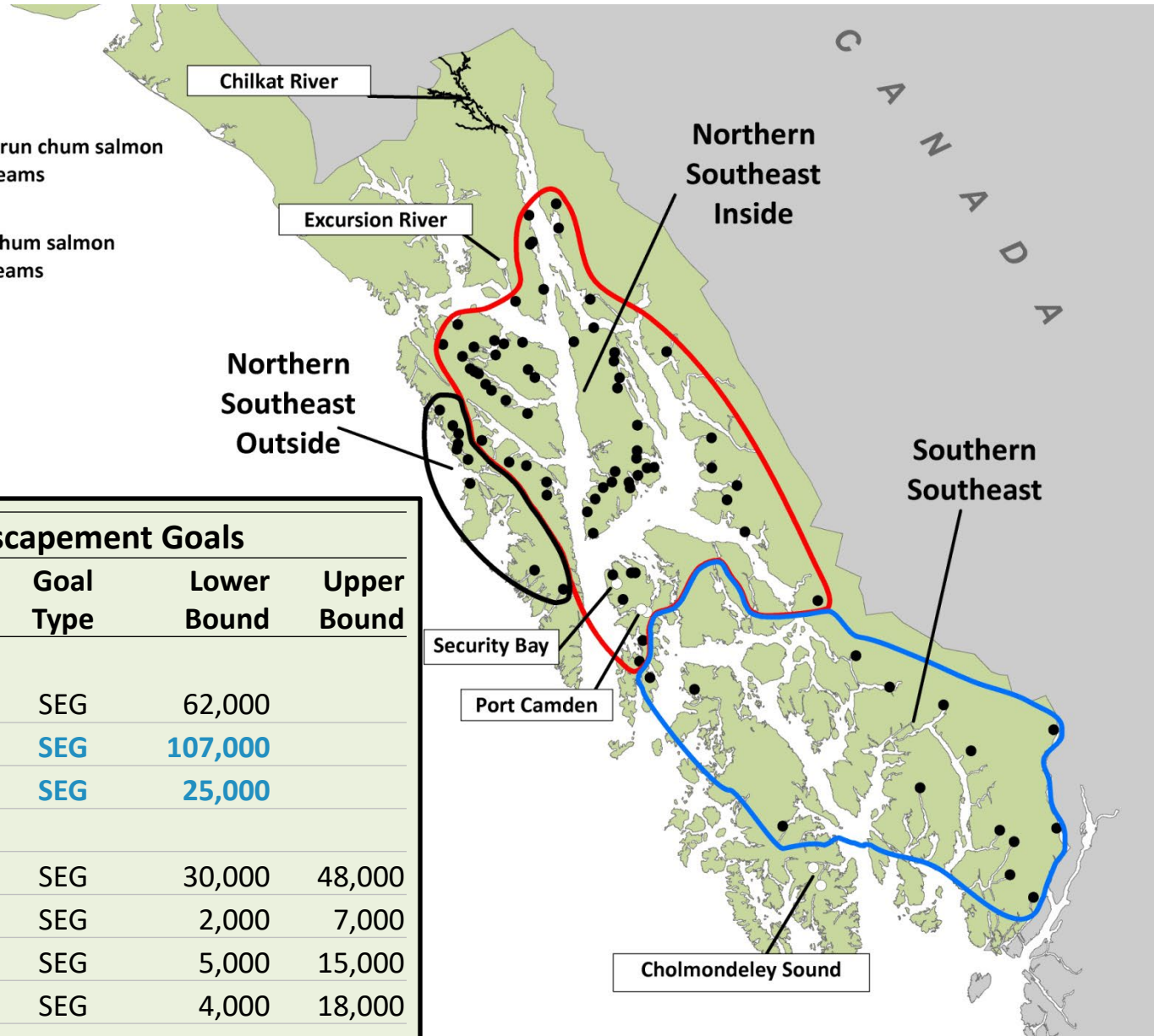
System	Goal Type	Lower Bound	Upper Bound
Southern Southeast	BEG	3,000,000	8,000,000
Northern Southeast Inside	BEG	2,500,000	6,000,000
Northern Southeast Outside	BEG	750,000	2,500,000

Pink Salmon Escapement Trends



Chum Salmon Escapement Goals

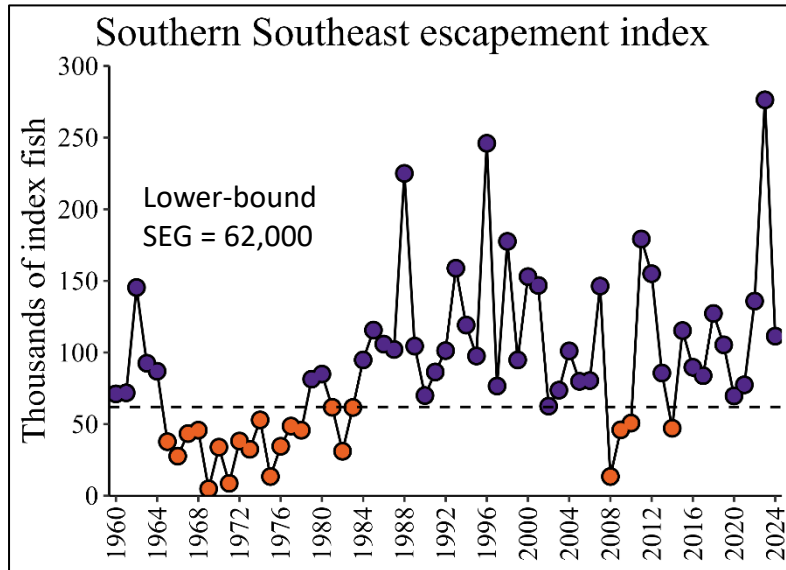
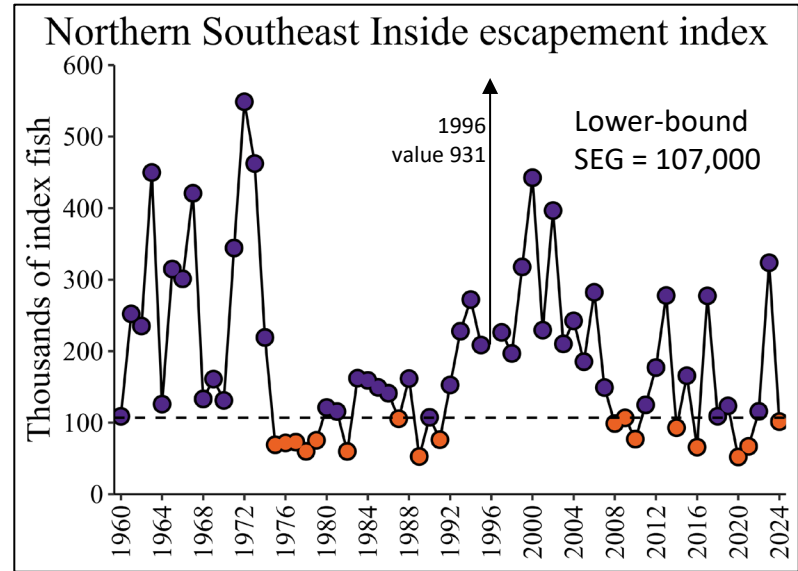
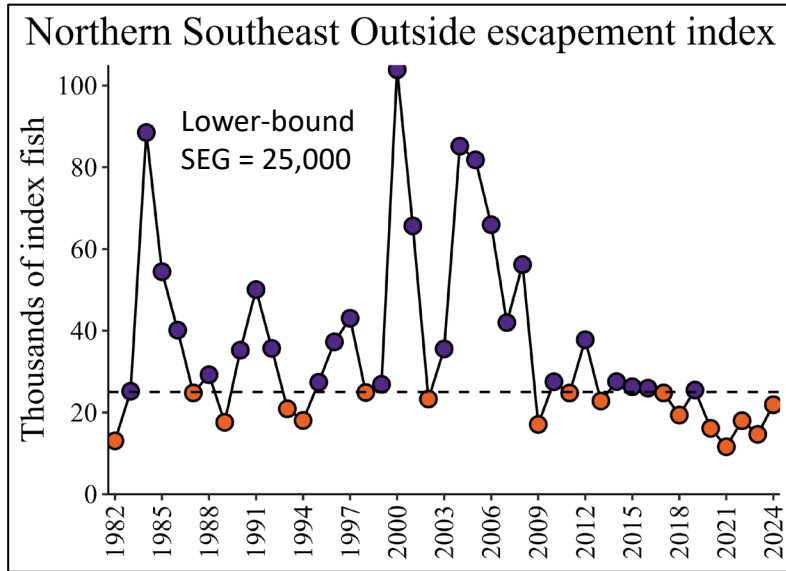
- Summer-run chum salmon index streams
- Fall-run chum salmon index streams



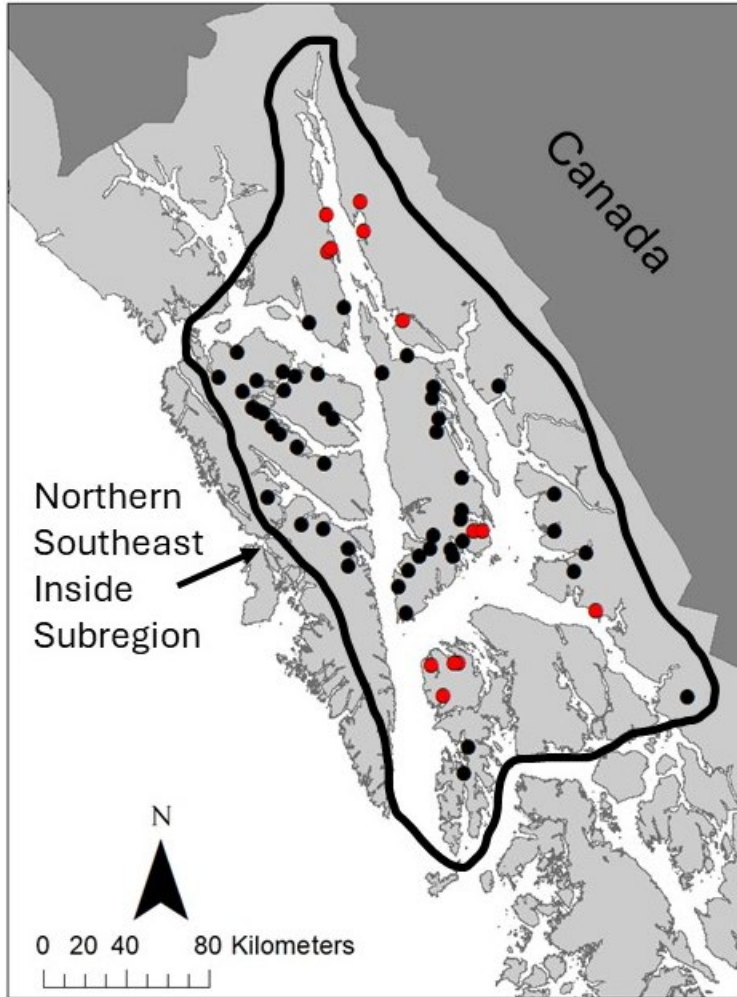
Chum Salmon Escapement Goals

System	Goal Type	Lower Bound	Upper Bound
Summer-run:			
Southern Southeast	SEG	62,000	
Northern Southeast Inside	SEG	107,000	
Northern Southeast Outside	SEG	25,000	
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	250,000

Summer Chum Salmon Escapement Trends

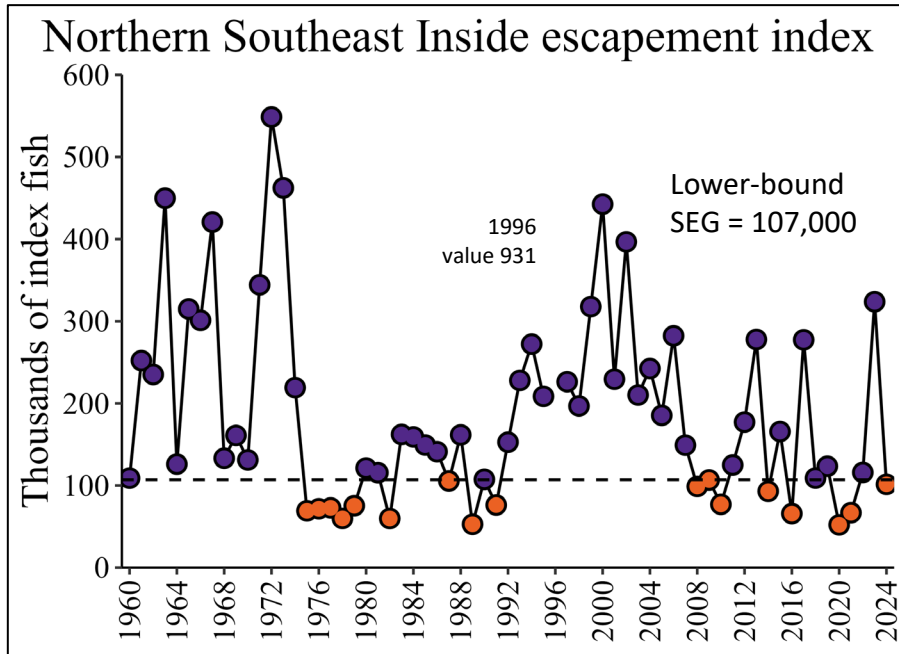


Revision #1: Northern Southeast Inside Subregion summer chum salmon

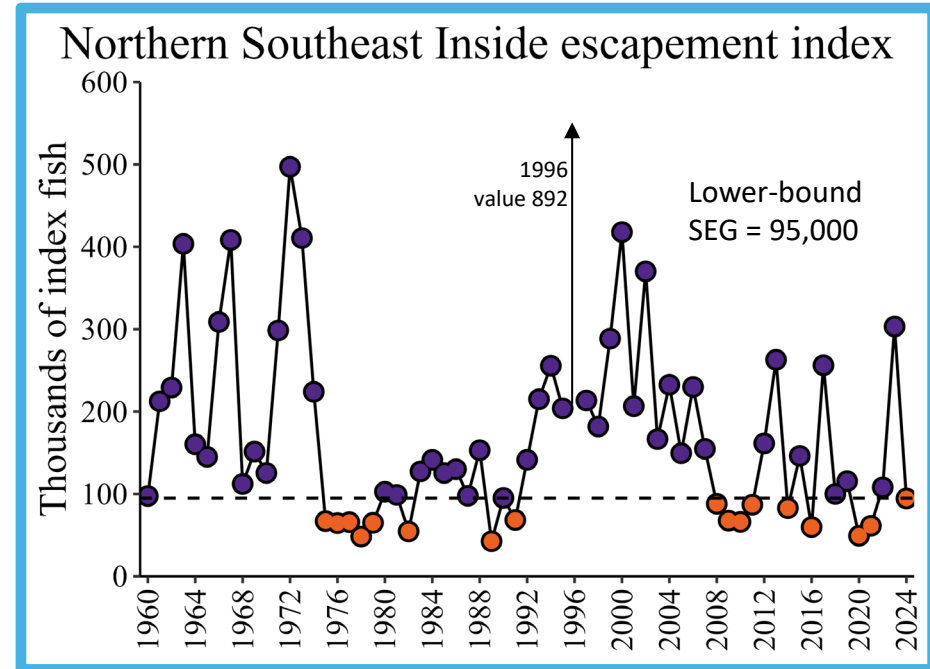


- Managed as a stock aggregate. The 63 index streams are representative of the aggregate.
- Assessment based on peak aerial and foot survey counts. Counting chum salmon can be very difficult due to masking by pink salmon.
- Escapement index is the sum of the peak counts at all index streams. Current lower bound sustainable escapement goal of 107,000 fish.
- Worked with managers to eliminate 13 index streams where chum salmon counts difficult to obtain due to visibility issues, or where hatchery stray proportions very high.

Revision #1: Northern Southeast Inside Subregion summer chum salmon



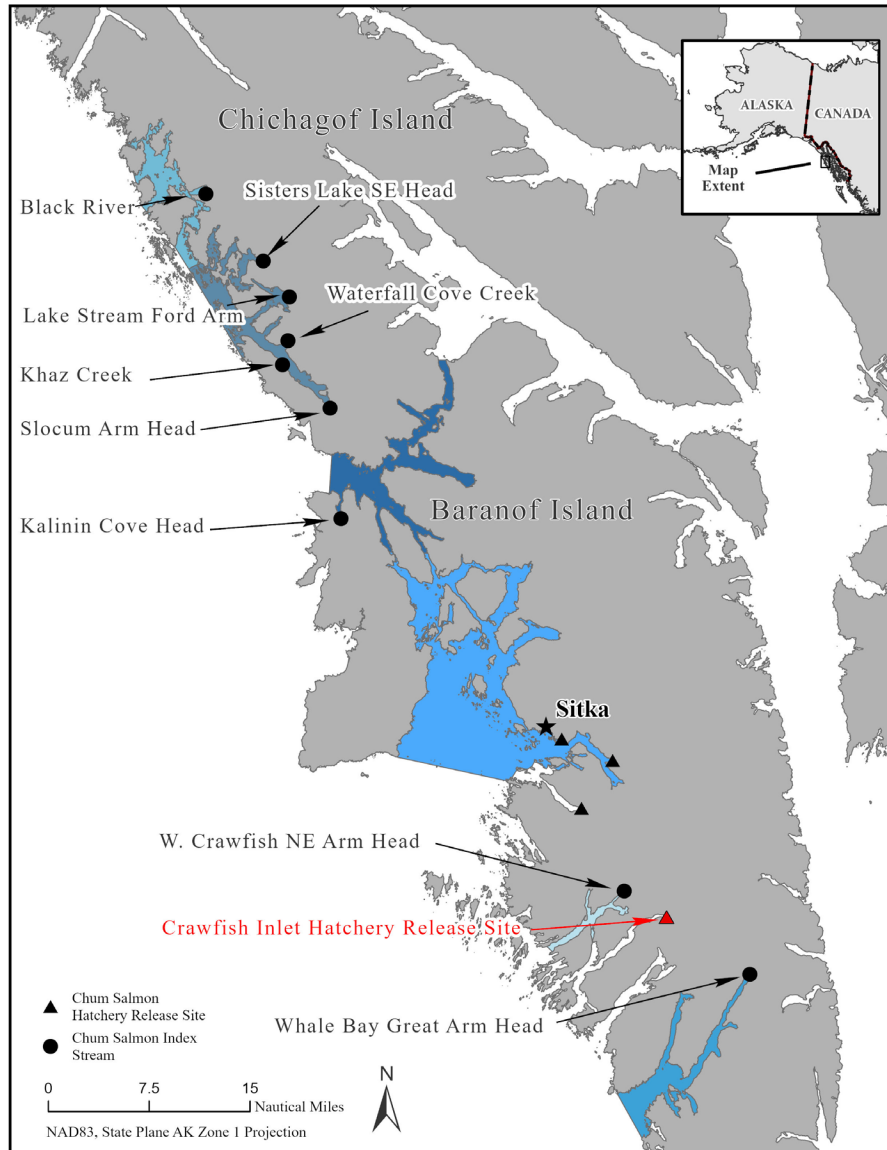
Current escapement index and lower bound SEG



Revised escapement index and lower bound SEG

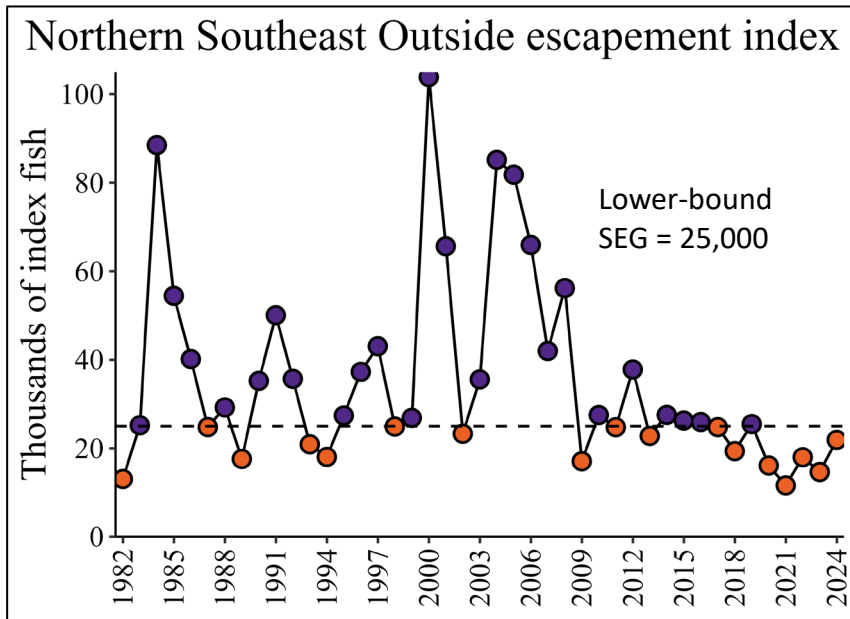
- Removed 13 index streams that had various limitations; recalculated SEG based on remaining 50 index streams.
- **Revised the current lower bound sustainable escapement goal with a lower bound sustainable escapement goal of 95,000**

Revision #2: Northern Southeast Outside Subregion summer chum salmon

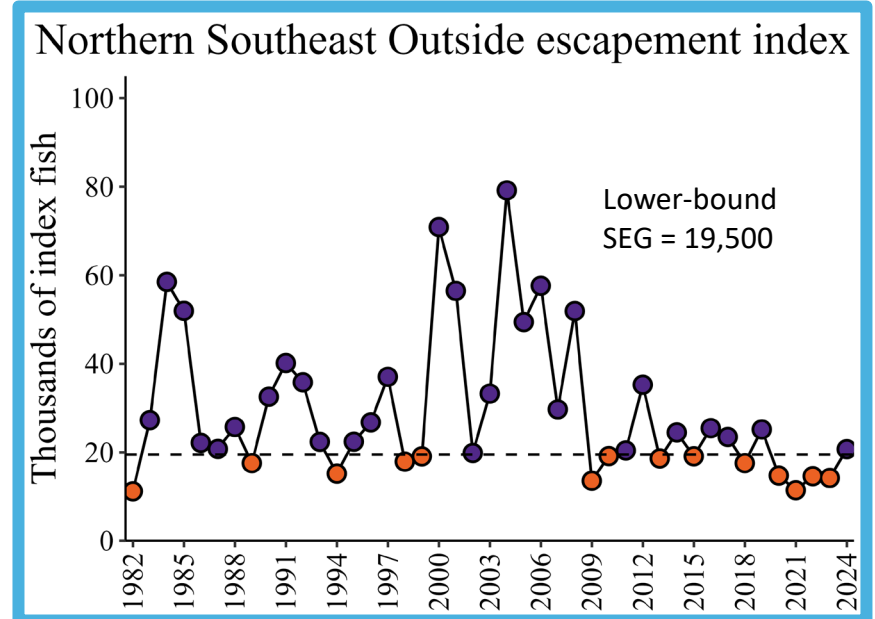


- Managed as a stock aggregate. Index streams are representative of the aggregate.
- Assessment based on peak aerial and foot survey counts to 9 streams.
- Escapement index is the sum of the peak counts at all index streams. Current lower bound sustainable escapement goal of 25,000 fish.
- New hatchery chum release site in Crawfish Inlet resulted in a high proportion and number of hatchery fish in and around the West Crawfish NE Arm Head index stream since 2018.

Revision #2: Northern Southeast Outside Subregion summer chum salmon



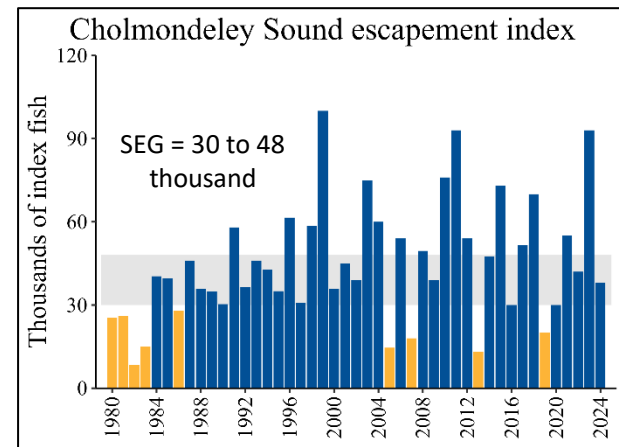
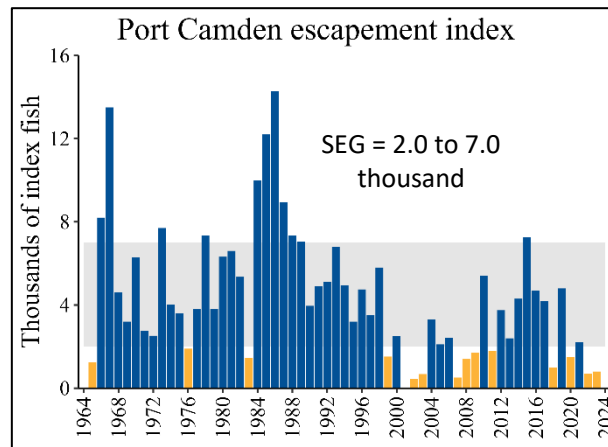
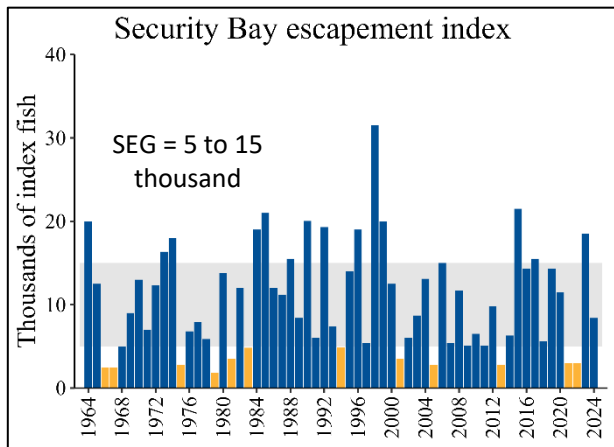
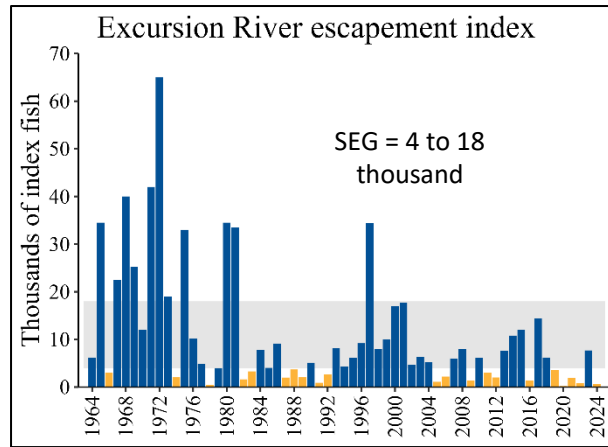
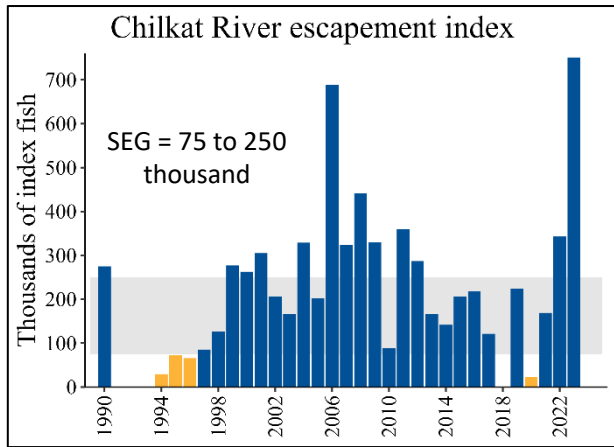
Current escapement index and lower bound SEG



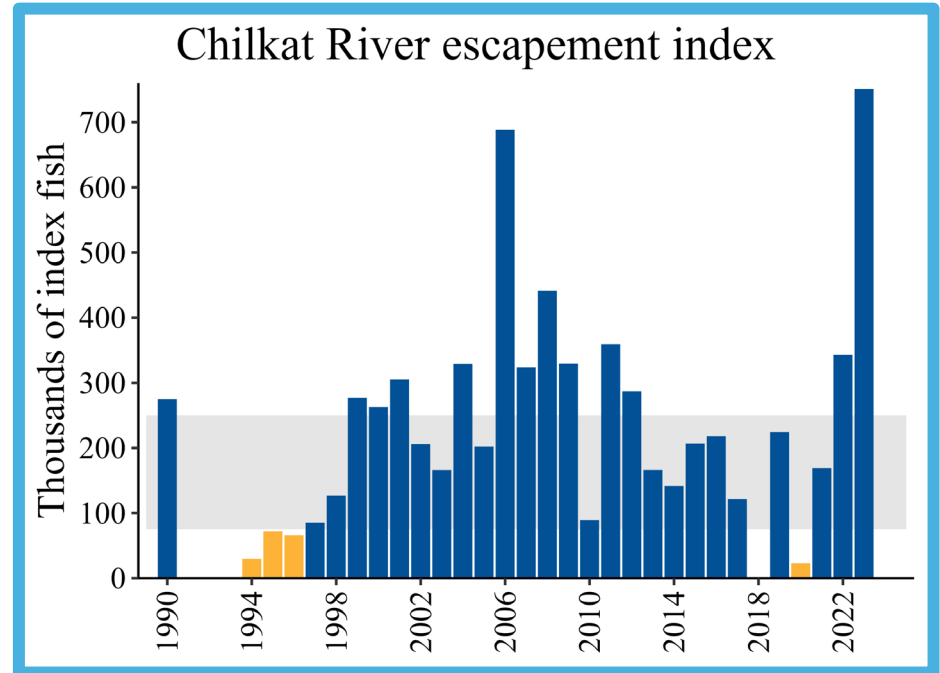
Revised escapement index and lower bound SEG

- Removed 1 index stream (West Crawfish NE Arm Head); recalculated SEG based on remaining 8 index streams.
- **Revise the current lower bound sustainable escapement goal with a lower bound sustainable escapement goal of 19,500.**

Fall Chum Salmon Escapement Trends

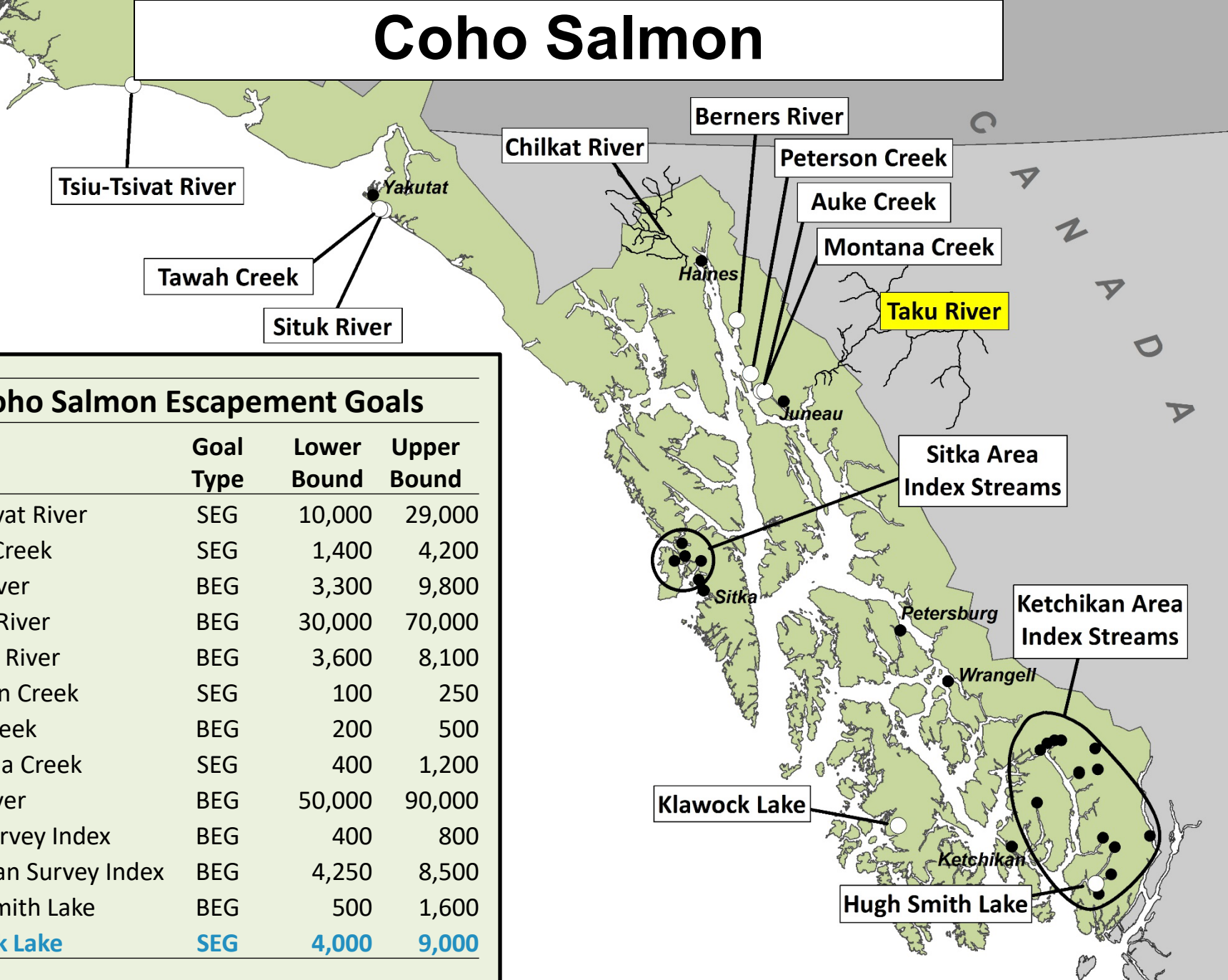


Revision #3: Chilkat River fall chum salmon



- Largest fall-run chum salmon stock in the region.
- Escapement estimated through expanded fish wheel counts, but estimates considered unreliable. Fish wheel project eliminated in 2024.
- **Finding: Eliminate the sustainable escapement goal.**

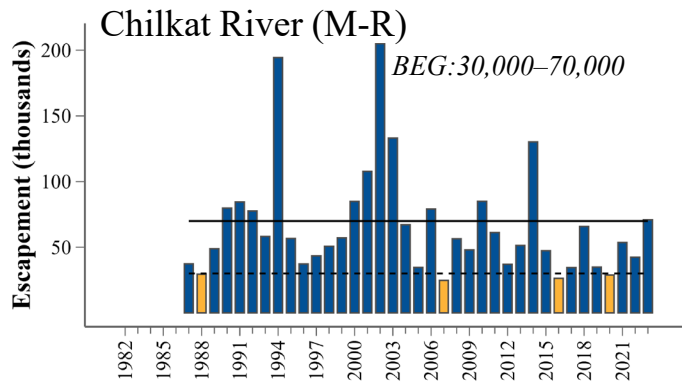
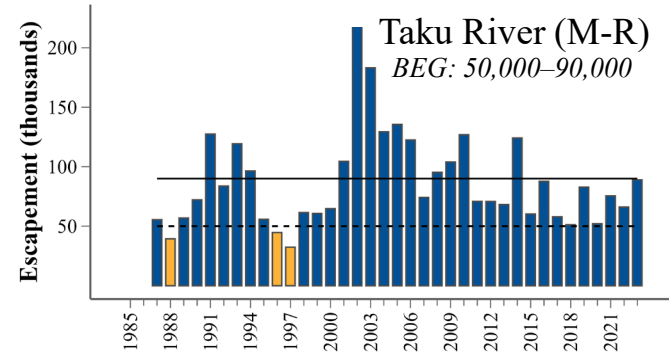
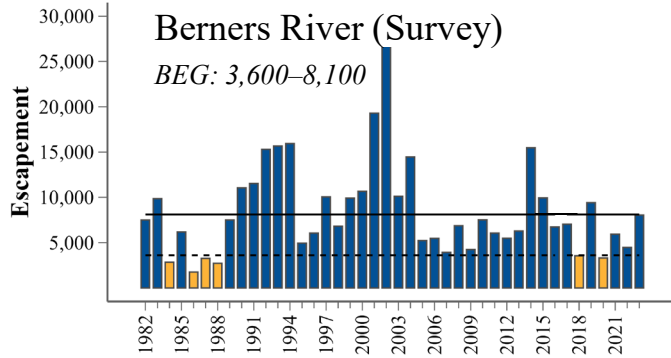
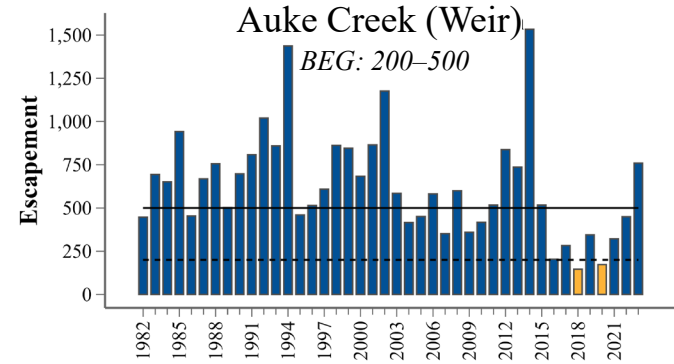
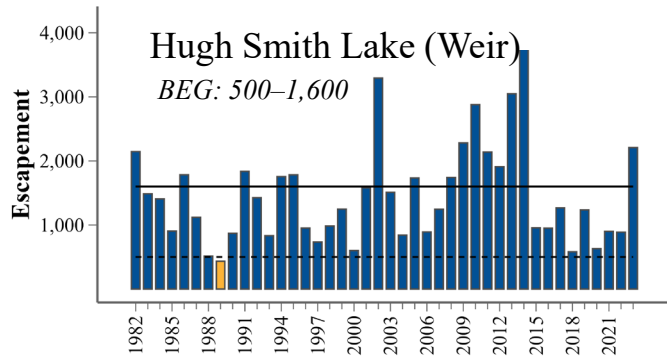
Coho Salmon



Coho Salmon Escapement Goals

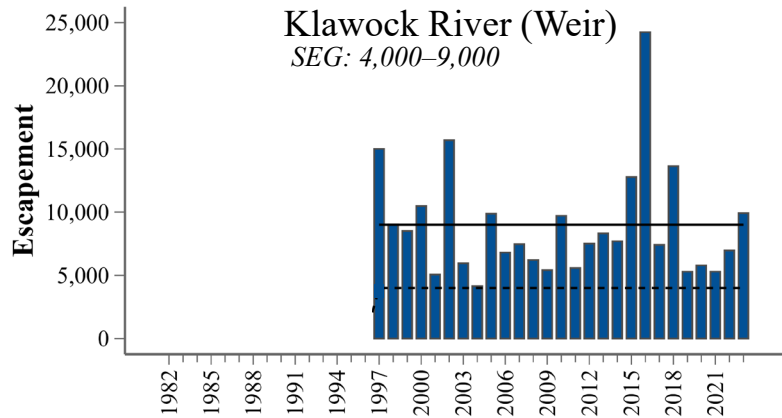
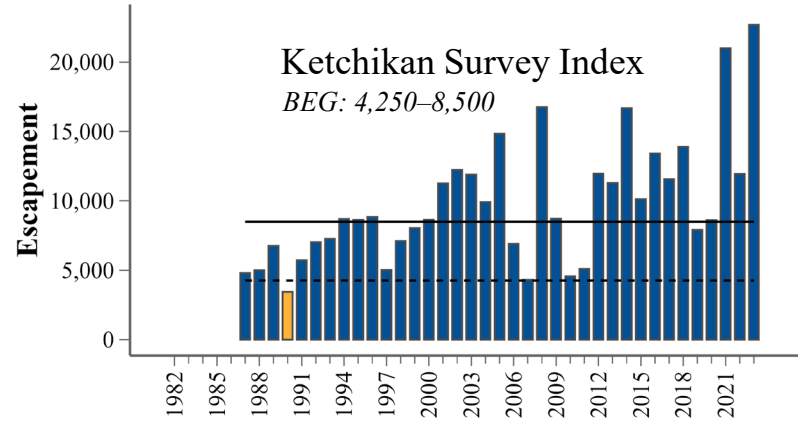
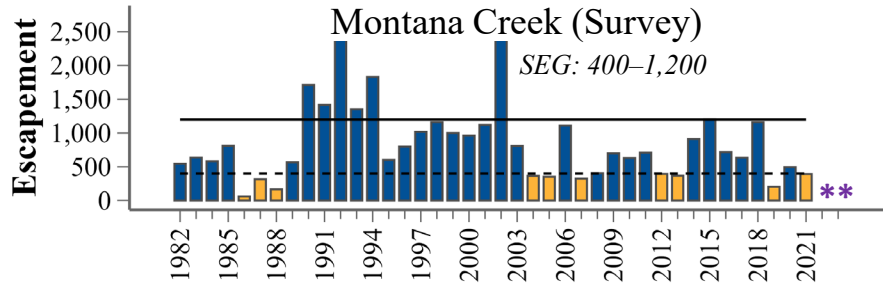
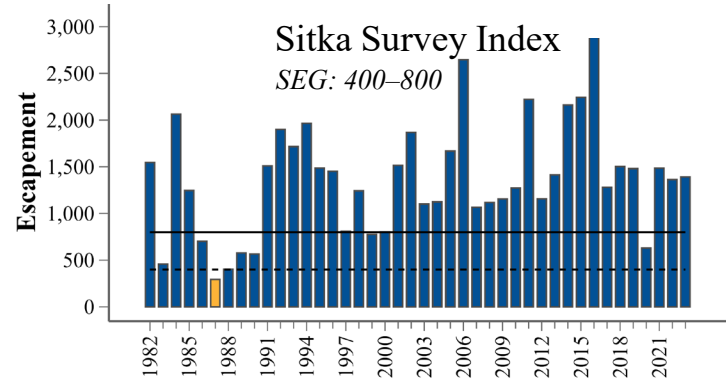
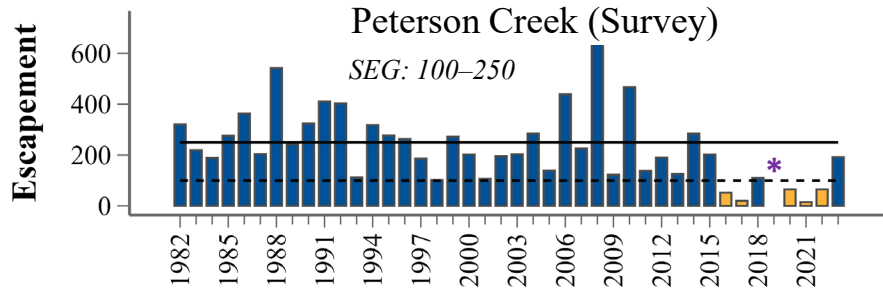
System	Goal Type	Lower Bound	Upper Bound
Tsiu-Tsivat River	SEG	10,000	29,000
Tawah Creek	SEG	1,400	4,200
Situk River	BEG	3,300	9,800
Chilkat River	BEG	30,000	70,000
Berners River	BEG	3,600	8,100
Peterson Creek	SEG	100	250
Auke Creek	BEG	200	500
Montana Creek	SEG	400	1,200
Taku River	BEG	50,000	90,000
Sitka Survey Index	BEG	400	800
Ketchikan Survey Index	BEG	4,250	8,500
Hugh Smith Lake	BEG	500	1,600
Klawock Lake	SEG	4,000	9,000

Coho Salmon – CWT Indicator Stocks



■ Escapement goal met or exceeded — Escapement goal upper bound
■ Escapement less than goal - - - Escapement goal lower bound

Coho Salmon – SE Stocks

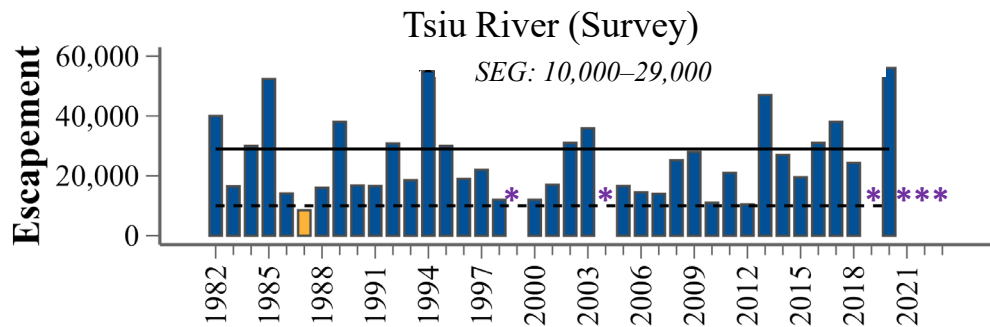
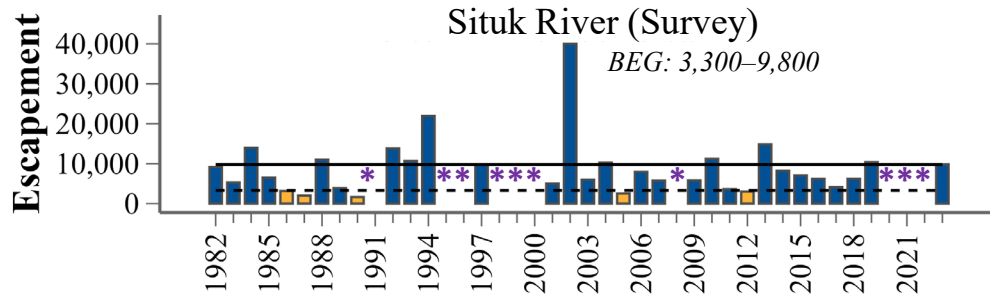
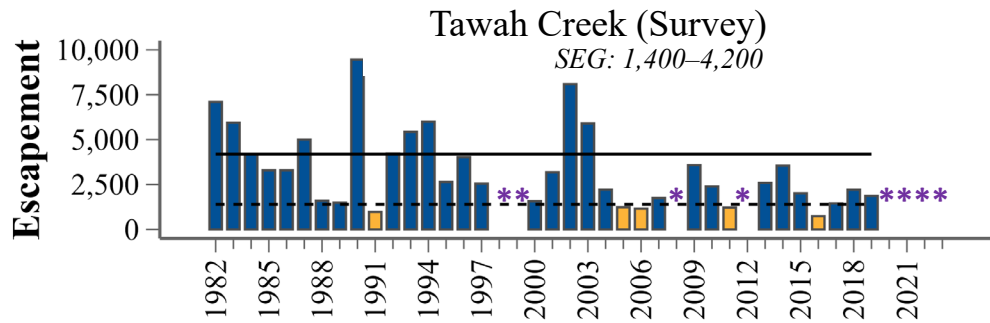


* = No survey /
No data

■ Escapement goal met or exceeded
■ Escapement less than goal
 — Escapement goal upper bound
 - - - Escapement goal lower bound



Coho Salmon – Yakutat Stocks



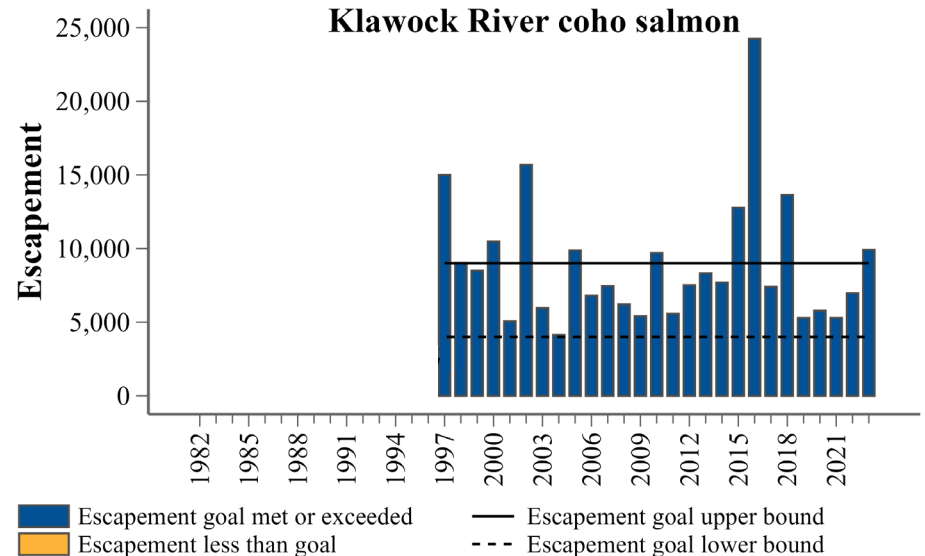
■ Escapement goal met or exceeded — Escapement goal upper bound
■ Escapement less than goal - - - Escapement goal lower bound

* = No survey / No data

REGIONAL COHO SUMMARY

- Coho runs met or exceeded goals 88% of time over the past decade.
- No stocks of concern.

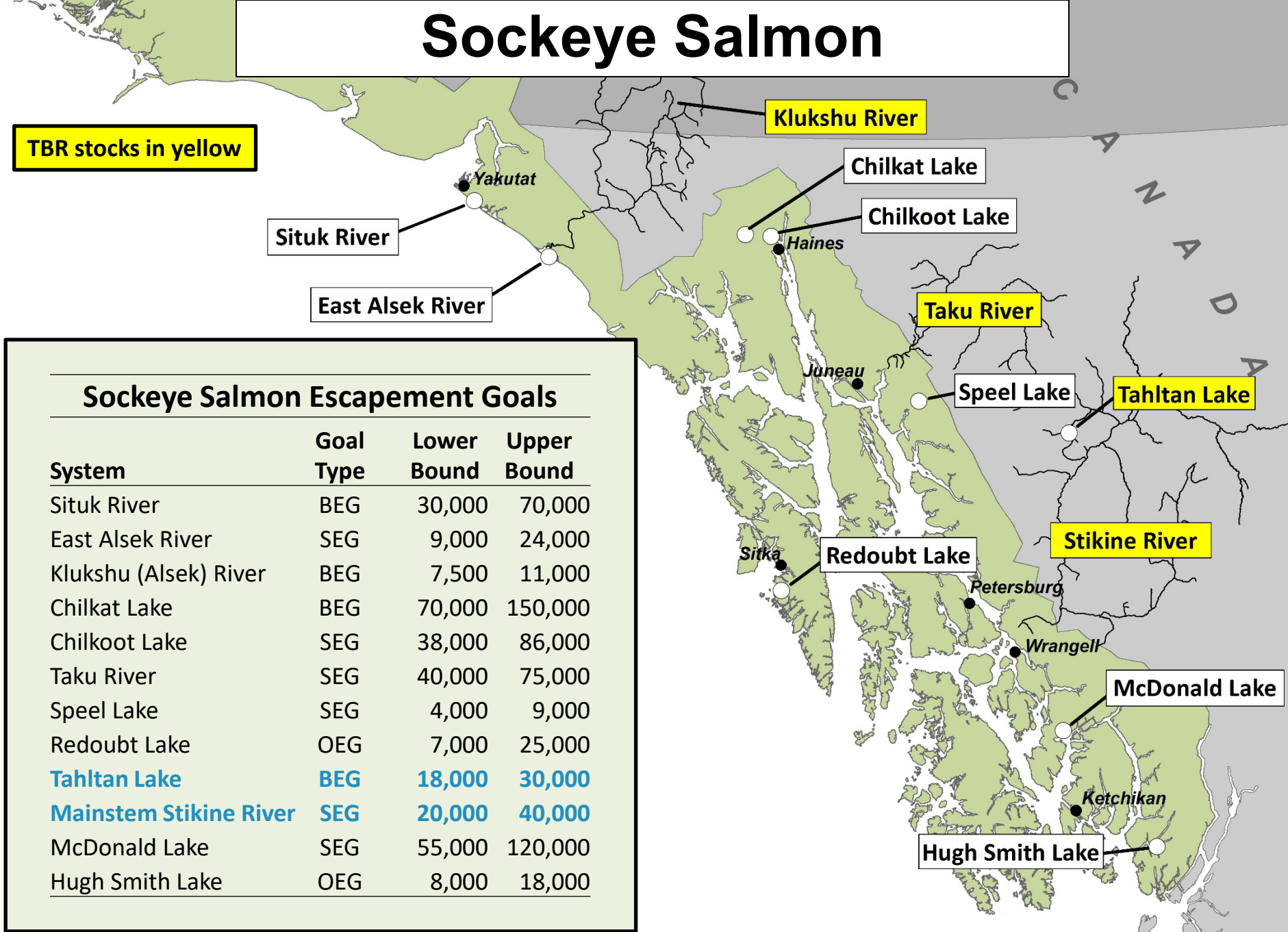
EG Finding: Klawock River coho salmon



- Klawock hatchery is located on the river and has released coho salmon since 1980.
- The “escapement” passed upstream of the weir is almost entirely hatchery fish.
- The current escapement schedule will remain in place.
- **Finding: Eliminate the sustainable escapement goal.**

Sockeye Salmon

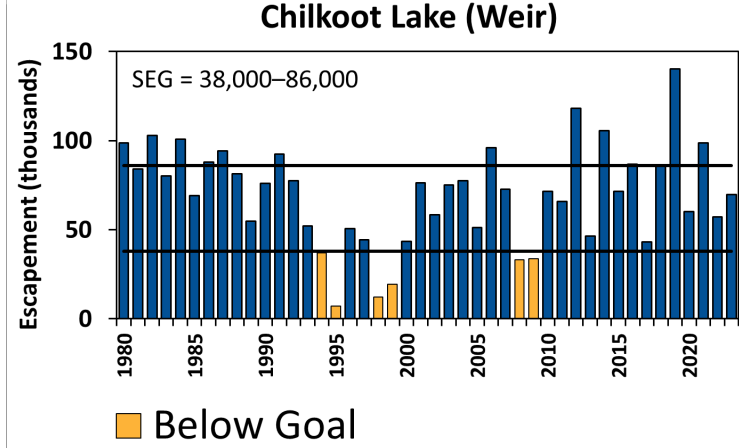
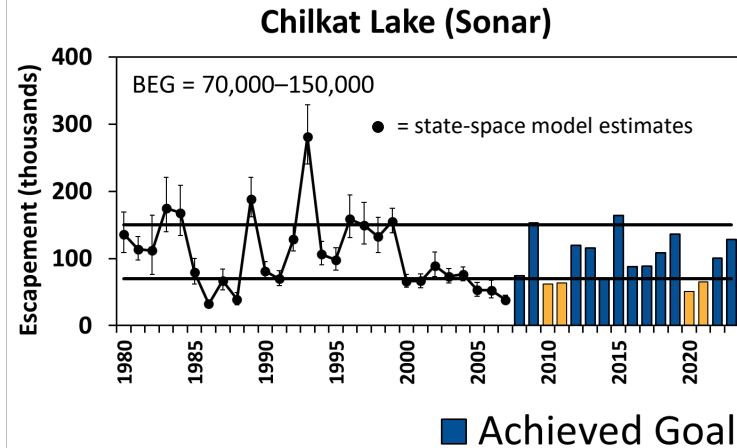
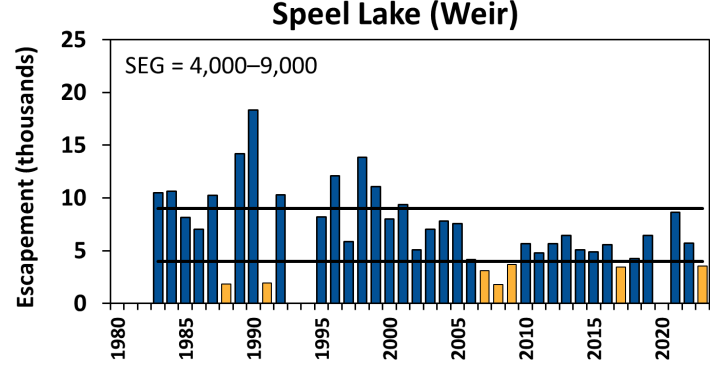
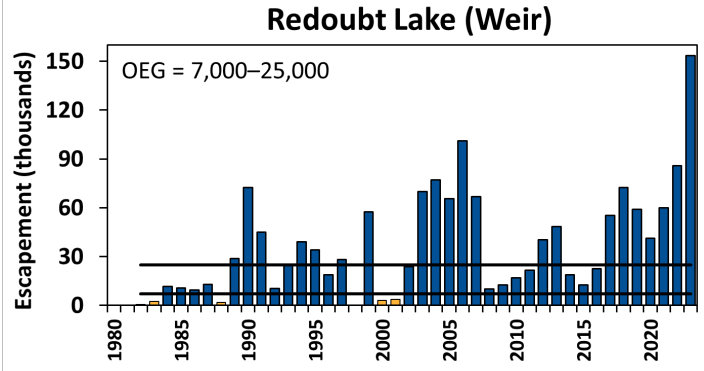
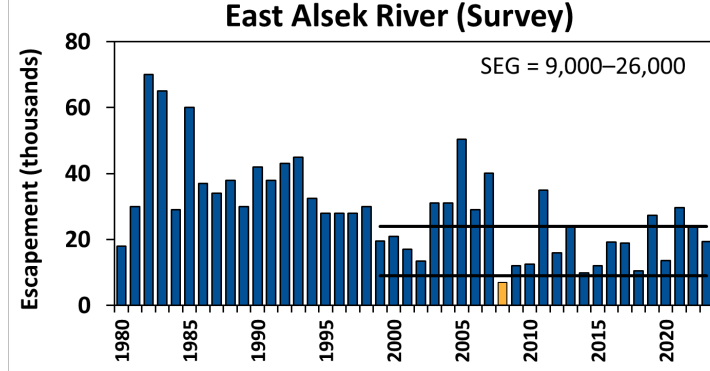
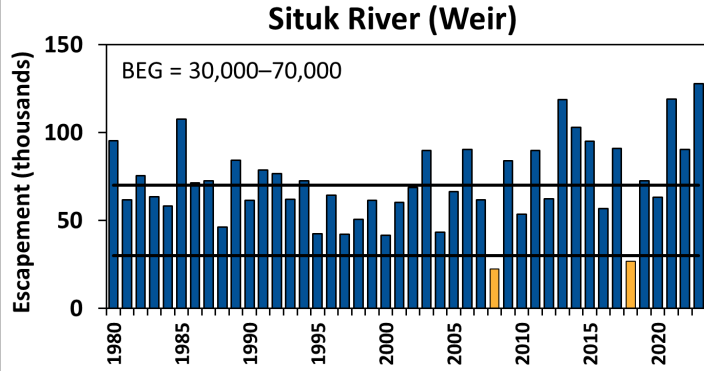
TBR stocks in yellow



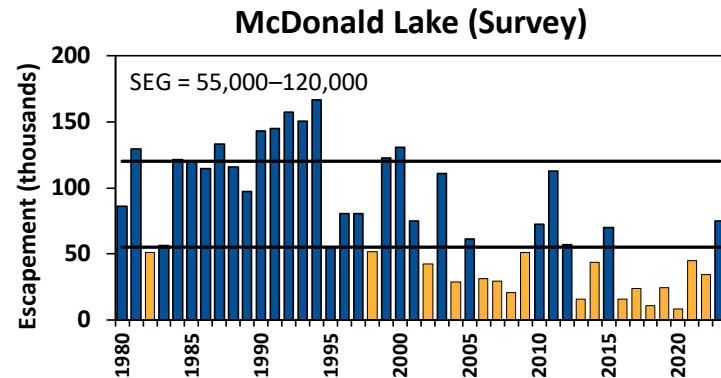
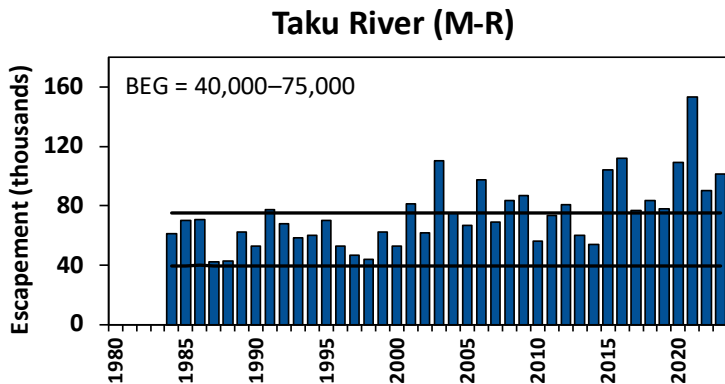
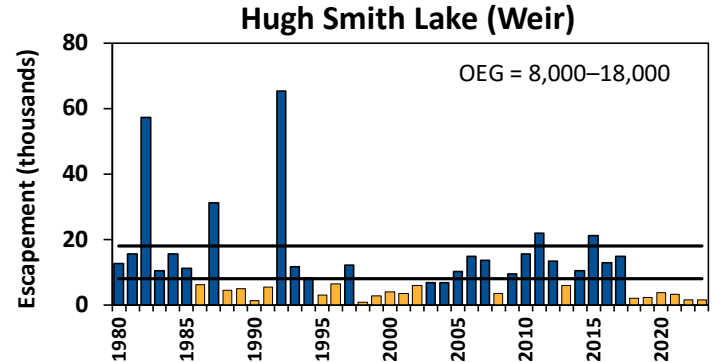
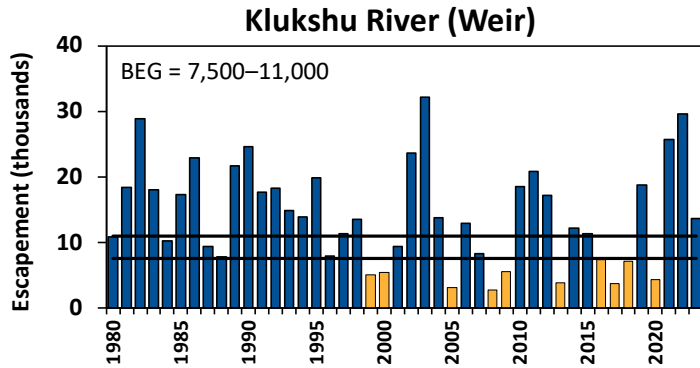
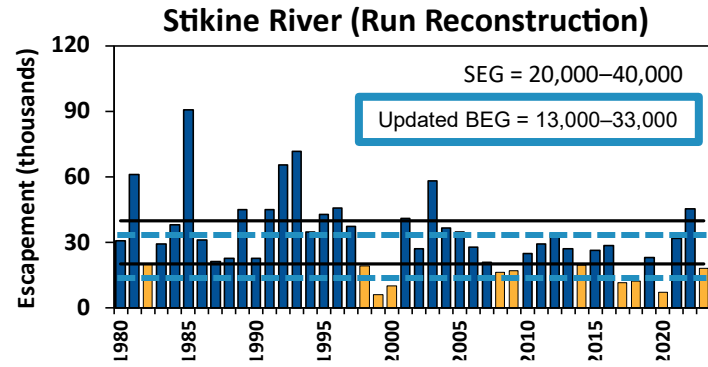
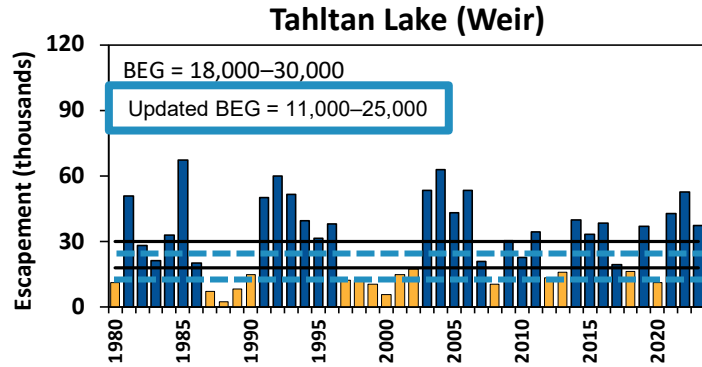
Sockeye Salmon Escapement Goals

System	Goal Type	Lower Bound	Upper Bound
Situk River	BEG	30,000	70,000
East Alsek River	SEG	9,000	24,000
Klukshu (Alsek) River	BEG	7,500	11,000
Chilkat Lake	BEG	70,000	150,000
Chilkoot Lake	SEG	38,000	86,000
Taku River	SEG	40,000	75,000
Speel Lake	SEG	4,000	9,000
Redoubt Lake	OEG	7,000	25,000
Tahltan Lake	BEG	18,000	30,000
Mainstem Stikine River	SEG	20,000	40,000
McDonald Lake	SEG	55,000	120,000
Hugh Smith Lake	OEG	8,000	18,000

Sockeye Salmon - 1

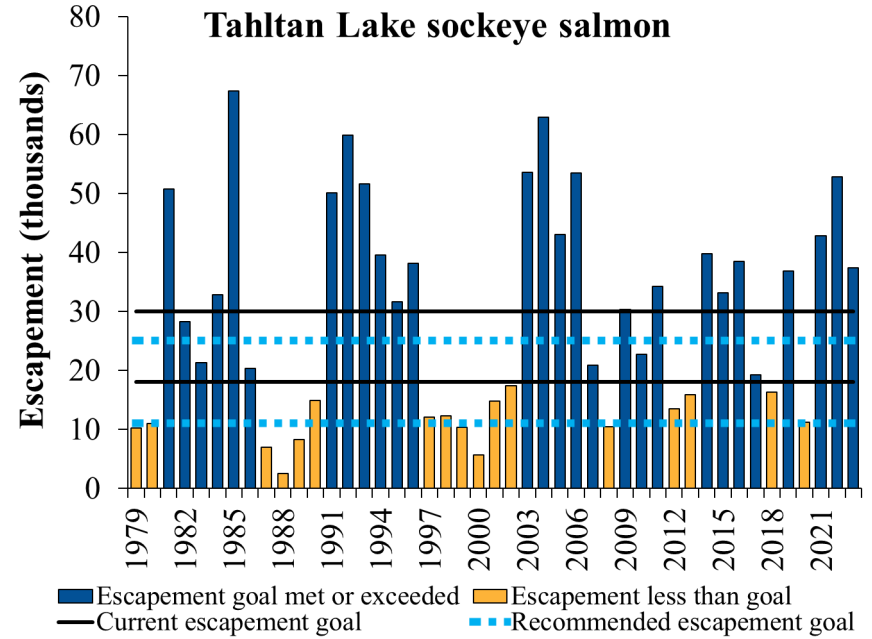


Sockeye Salmon - 2



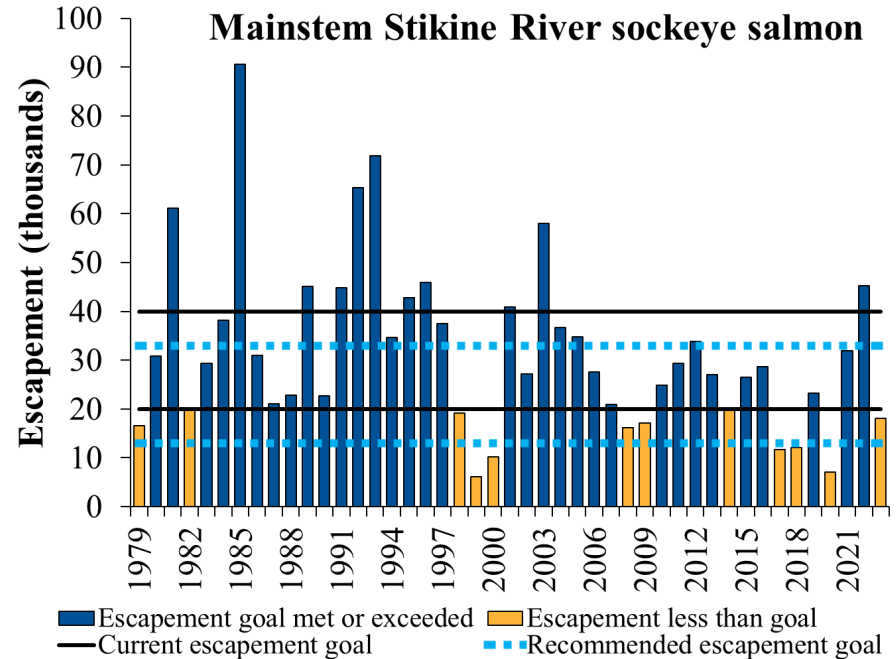
■ Achieved Goal ■ Below Goal

EG Finding: Tahltan Lake sockeye salmon



- Tributary to the Stikine River but distinct stock
- Bilateral Stikine Working Group conducted review of assessment data and escapement goal.
- Escapement goal analysis and findings reviewed by ADF&G, Fisheries and Oceans Canada (DFO), Tahltan First Nation, Canadian Science Advisory Secretariat, TTC, TBR Panel.
- Previous BEG: 18,000–30,000 fish
- **Finding: Revise BEG to 11,000–25,000; adopted prior to the 2023 fishing season.**

EG Finding: Stikine Mainstem sockeye salmon



- Bilateral Stikine Working Group conducted review of assessment data and escapement goal.
- Escapement goal analysis and findings reviewed by ADF&G, DFO, Tahltan First Nation, CSAS, TTC, TBR Panel.
- Previous BEG: 20,000–40,000 fish
- **Finding: Revise BEG to 13,000–33,000; adopted prior to the 2023 fishing season.**

Sockeye Salmon – Summary

REGIONAL SOCKEYE SUMMARY

- Sockeye runs met or exceeded goals 75% of time over past decade.
- 2 current stocks of concern
 - This cycle: 1 status quo, 1 stock delisted, 1 listed
- Revisions to the escapement goals of 2 stocks



Summary of Escapement Goal Changes

Revisions to 6 of 47 escapement goals:

- Northern Southeast Outside chum salmon: **Revise LB SEG to 19,500 fish**
 - Northern Southeast Inside chum salmon: **Revise LB SEG to 95,000 fish**
 - Chilkat River chum salmon: **Eliminate SEG**
 - Klawock River coho salmon: **Eliminate SEG**
 - Tahltan Lake sockeye salmon: **Revise BEG to 11,000–25,000 fish**
 - Stikine River mainstem sockeye salmon: **Revise BEG to 13,000–33,000 fish**
- **41 escapement goals remain status quo.**

