

# **Southeast Region Stock of Concern and Action Plan Review**



**Steve Heint and Ed Jones**

**Oral Report RC – 3, Tab – 20**

**Written Reports:**

**Chilkat and King Salmon River King Salmon Action Plan – RC 4**

**Unuk River King Salmon Action Plan – RC 5**

**McDonald Lake Sockeye Salmon Action Plan – RC 6**

**ADF&G Chinook Origins Memo – RC 7**

# Definition of Key Terms

**Stock of Concern:** Stock with a yield, management, or conservation concern.

**Management Concern:** Chronic inability, despite management measures, to meet escapement goals.

**Chronic Inability:** 4–5 year period.

**Action Plan:** Board and department develop goals and management actions to restore stocks to historical productivity.

# **Stock of Concern (SOC) Designation Process**

## What has happened:

- 1-Dept reviewed escapement goals.
- 2-Dept recommended SOC status.
- 3-Board reviewed and adopted SOC status.
- 4-Department drafted Action Plan.

## What will happen:

- 1-Board and department will review Action Plan.
- 2-Board may take regulatory action.
- 3-Action Plan will be finalized by the board and implemented by the department.

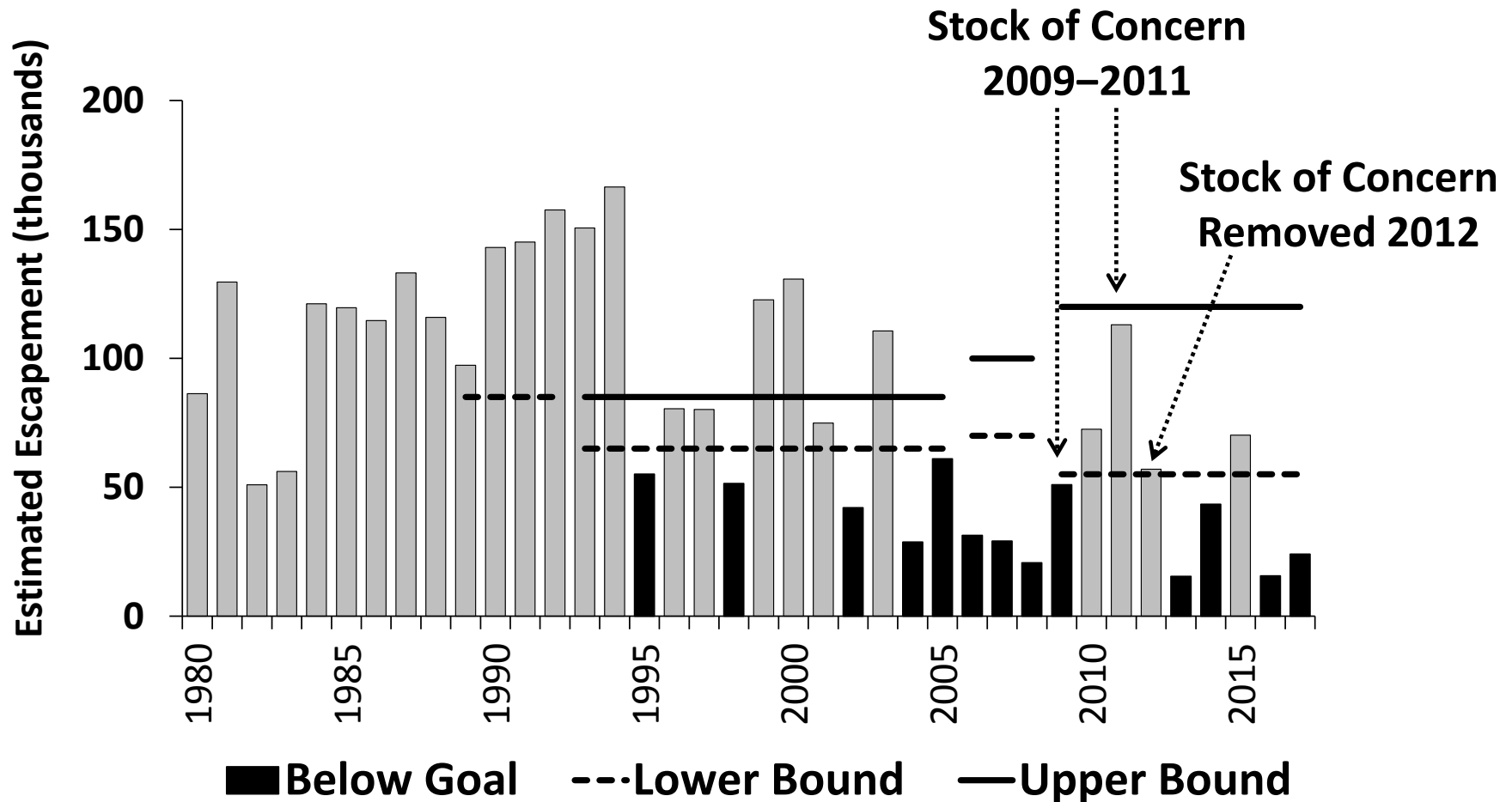


# **McDonald Lake Sockeye Salmon Stock Status and Action Plan, 2018**





# McDonald Lake Sockeye Salmon Escapement and Escapement Goals



# McDonald Lake Sockeye Salmon Abundance and Harvest

	2014	2015	2016	2017	Average
<b>Commercial Harvest</b>	<b>46,000</b> <b>50%</b>	<b>65,600</b> <b>48%</b>	<b>26,600</b> <b>62%</b>	<b>8,500</b> <b>26%</b>	<b>36,700</b> <b>46%</b>
<b>Personal Use Harvest</b>	<b>1,696</b> <b>2%</b>	<b>1,525</b> <b>1%</b>	<b>1,002</b> <b>2%</b>	<b>561</b> <b>2%</b>	<b>1,196</b> <b>2%</b>
<b>Sport Harvest</b>	<i>[ Not known—presumably very small ]</i>				
<b>Escapement</b>	<b>43,400</b> <b>48%</b>	<b>70,200</b> <b>51%</b>	<b>15,600</b> <b>36%</b>	<b>24,000</b> <b>72%</b>	<b>38,300</b> <b>52%</b>
<b>Total Run</b>	<b>91,100</b> <b>100%</b>	<b>137,300</b> <b>100%</b>	<b>43,200</b> <b>100%</b>	<b>33,100</b> <b>100%</b>	<b>76,200</b> <b>100%</b>



# Sockeye Salmon Abundance

Stikine  
River

McDonald Lake

Prince of  
Wales  
Island

Nass  
River

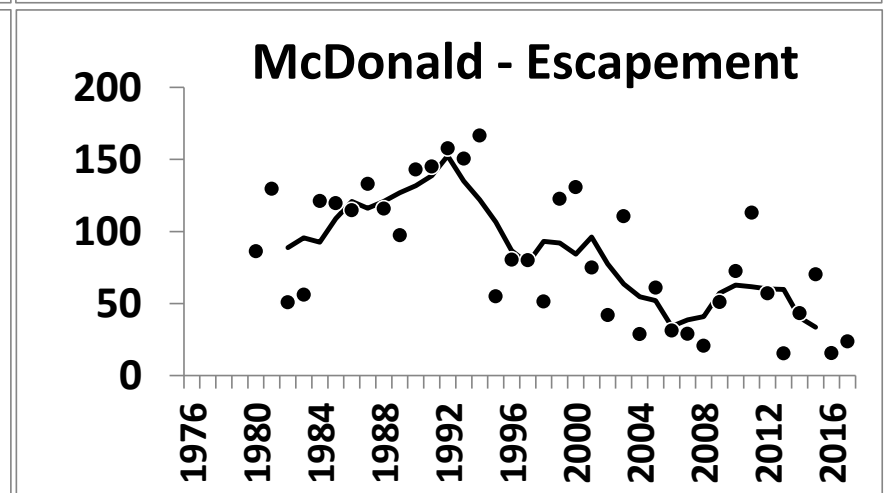
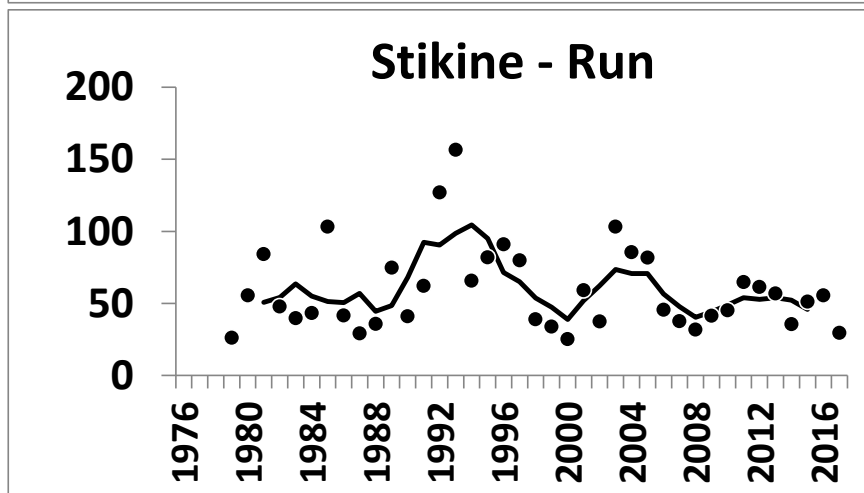
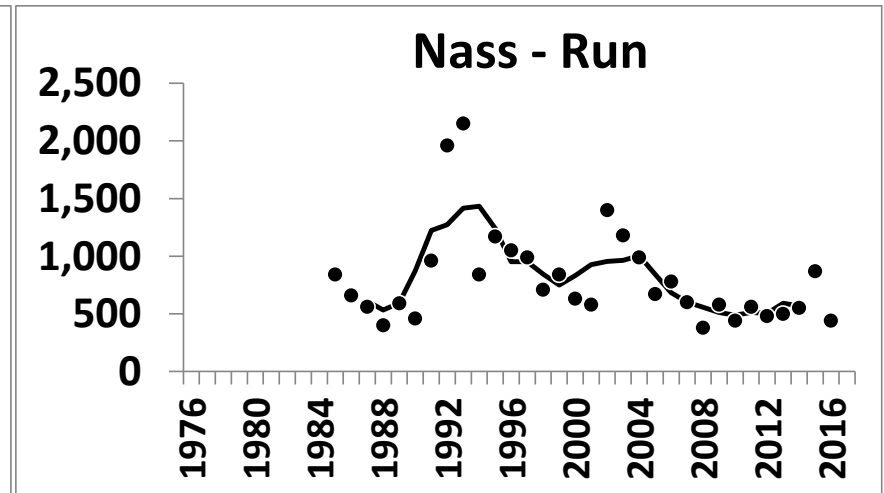
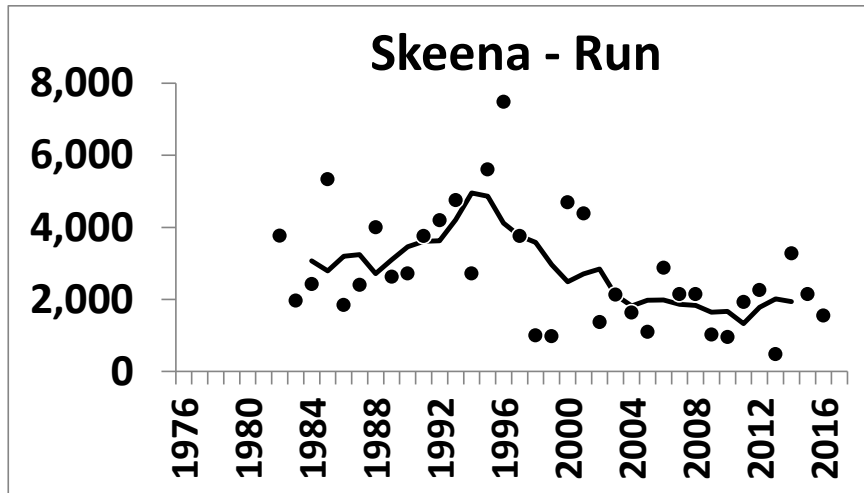
Skeena  
River

*Dixon Entrance*

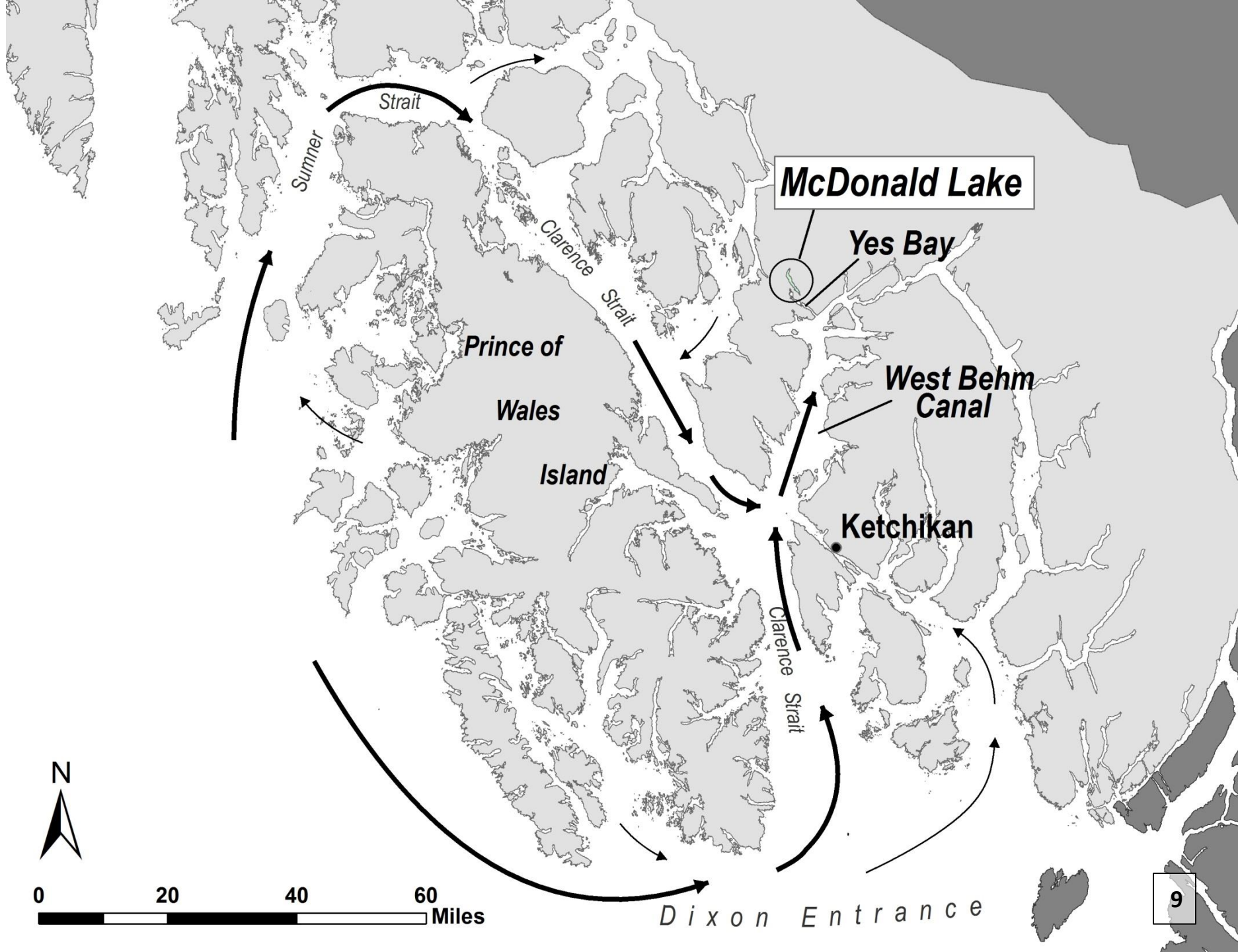


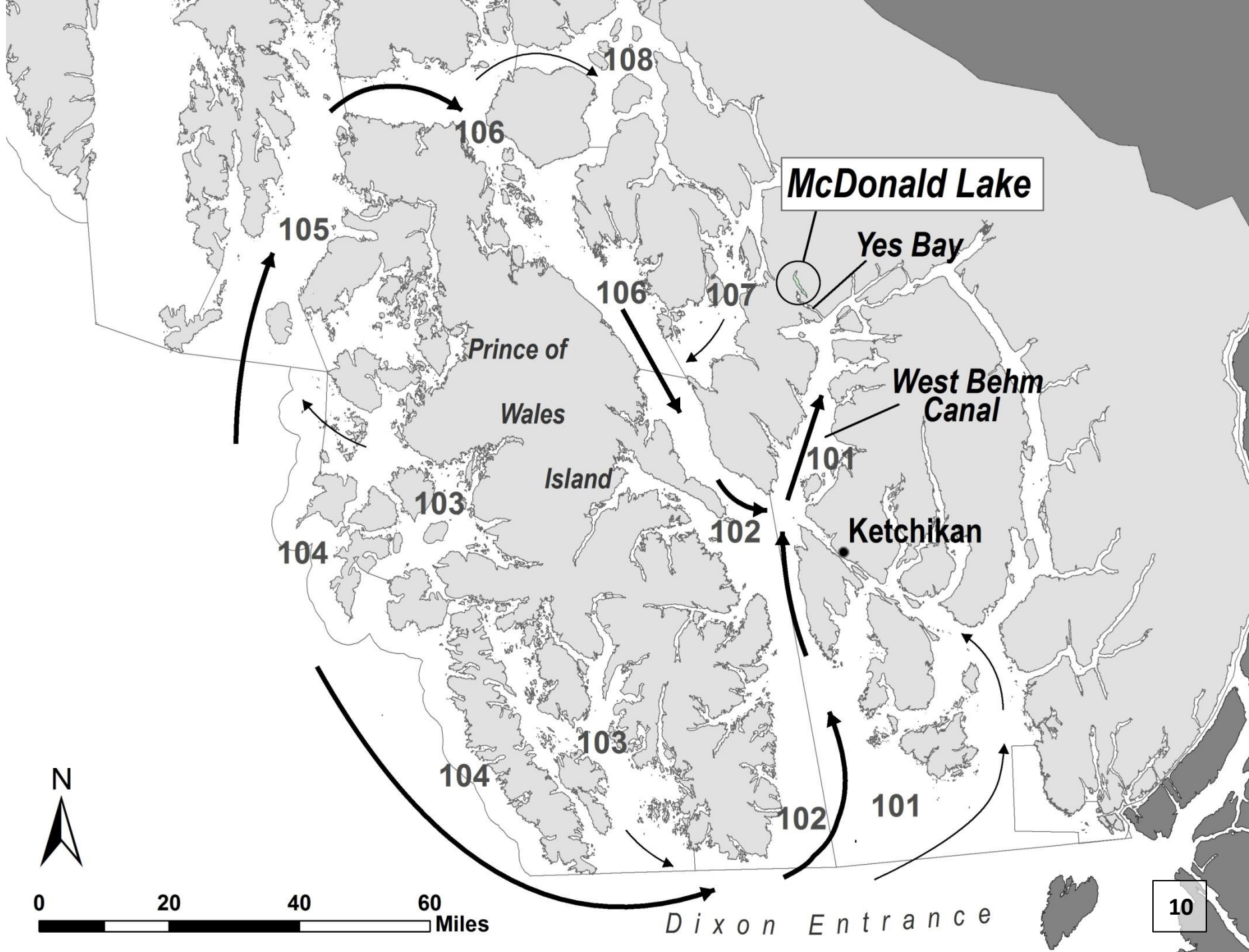
0 20 40 80 120 Miles

# Sockeye Salmon Abundance



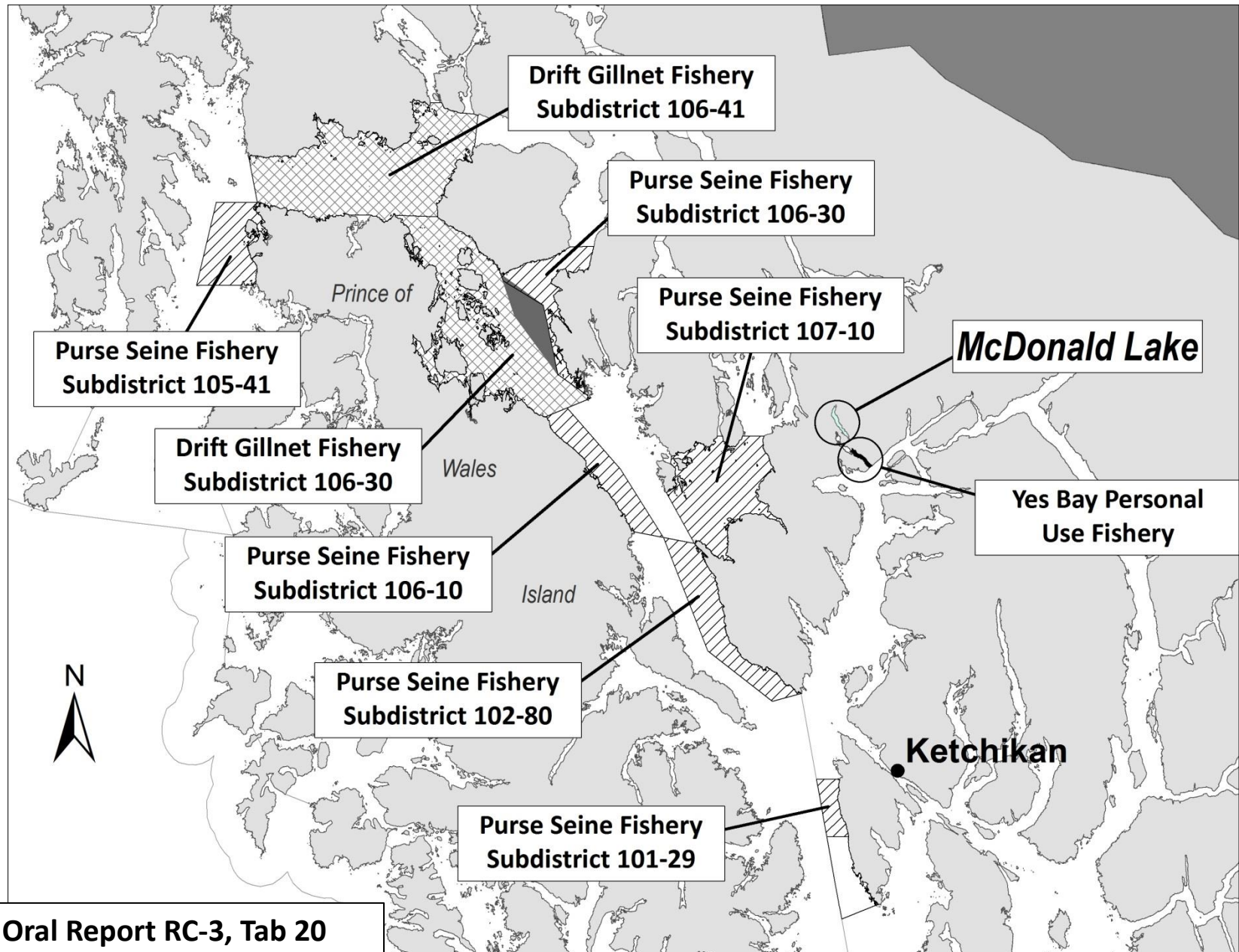








# 2009 McDonald Lake Action Plan Areas



# **McDonald Lake Action 1:**

**Objective: Reduce commercial harvest**

**Option A:** Status Quo. Use EO Authority to manage fisheries.

**Option B:** Implement 2009 Action Plan through EO Authority.

**Option C:** Implement modified 2009 Action Plan through EO Authority.

# **McDonald Lake Action 2:**

**Objective: Reduce personal use harvest**

**Option A:** Status Quo. Maintain annual harvest limit of 30 sockeye salmon per household.

**Option B:** Reduce annual harvest limit to 20 sockeye salmon per household.

# **Action 3: Sport Fisheries**

**Objective: Reduce sport harvest**

**Option A:** Status Quo. Use EO Authority to manage Sport Fishery.

**Option B:** Close sport fishery for sockeye salmon in McDonald Lake drainage and adjacent saltwater shores by regulation.



# Conditions for Delisting or Reducing Restrictions

1. **Recommend delisting** if escapement goal is met in 3 consecutive years—or 4 of 6 consecutive years.
2. **Management measures could be relaxed in specific areas** if updated information indicates areas where restrictions are no longer needed.
3. **Some management measures could be relaxed** if escapements are near or above upper bound of escapement goal range in 2 consecutive years.

# 2018 Alaska Board of Fisheries Regulatory Proposals

- **Proposal 153:** Repeal the District 1 pink salmon management plan.
- **Proposal 154:** Establish a management plan for pink salmon in lower Clarence Strait.
- **Proposal 169:** Open Section 6-D the second Sunday of June to commercial fishing for salmon with drift gillnet gear.

# King Salmon Stocks of Management Concern in Southeast Alaska

Alaska Board of Fisheries,  
Sitka, Alaska  
January 2018



Ed Jones

Chinook Salmon Research Coordinator

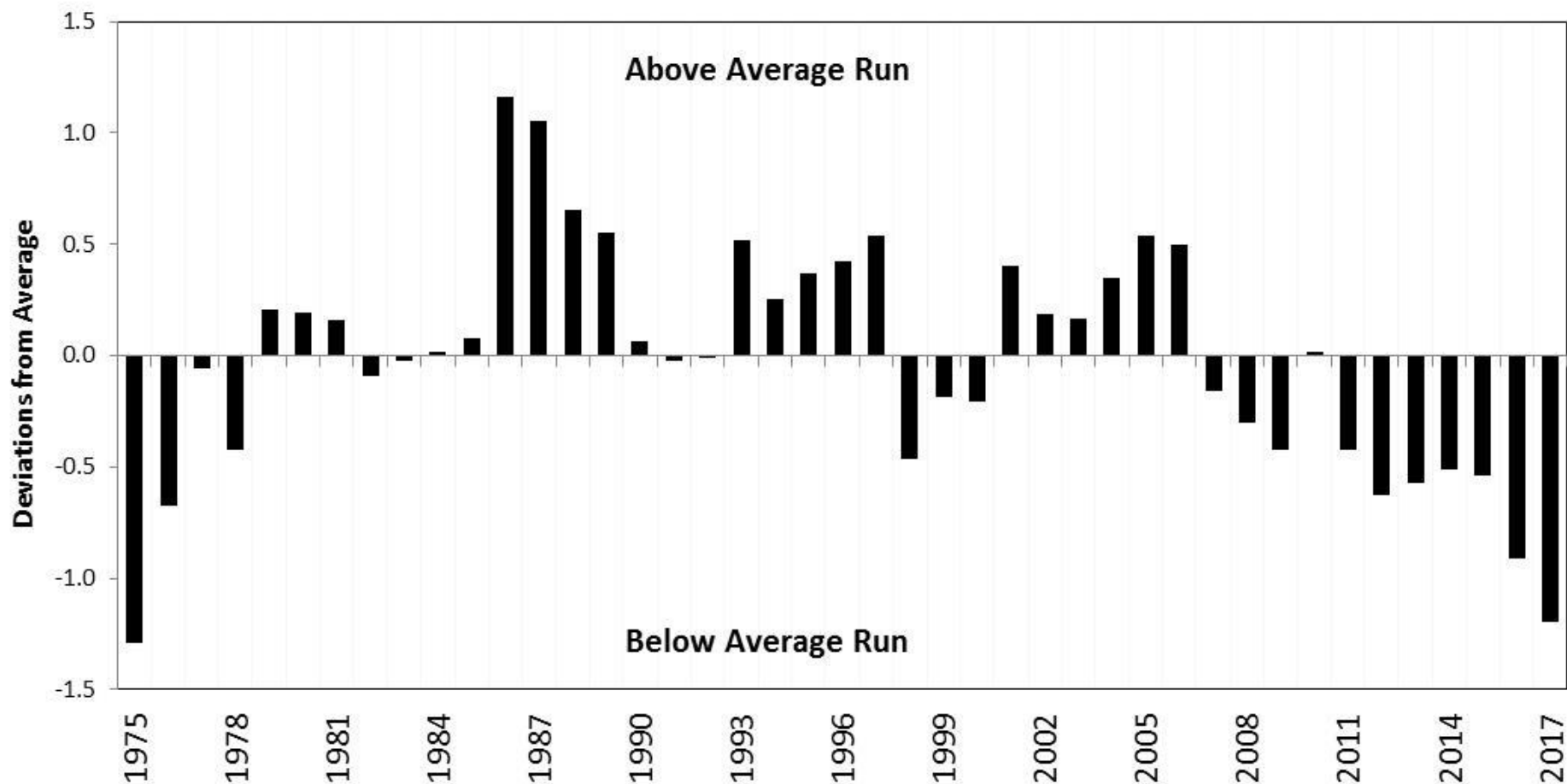
ADF&G, Juneau, AK

907-465-4417 [ed.jones@alaska.gov](mailto:ed.jones@alaska.gov)

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# Southeast King Salmon Escapements



**In Southeast Alaska, the poor production is at unprecedented low levels  
(11 indicator stocks in Southeast Alaska)**



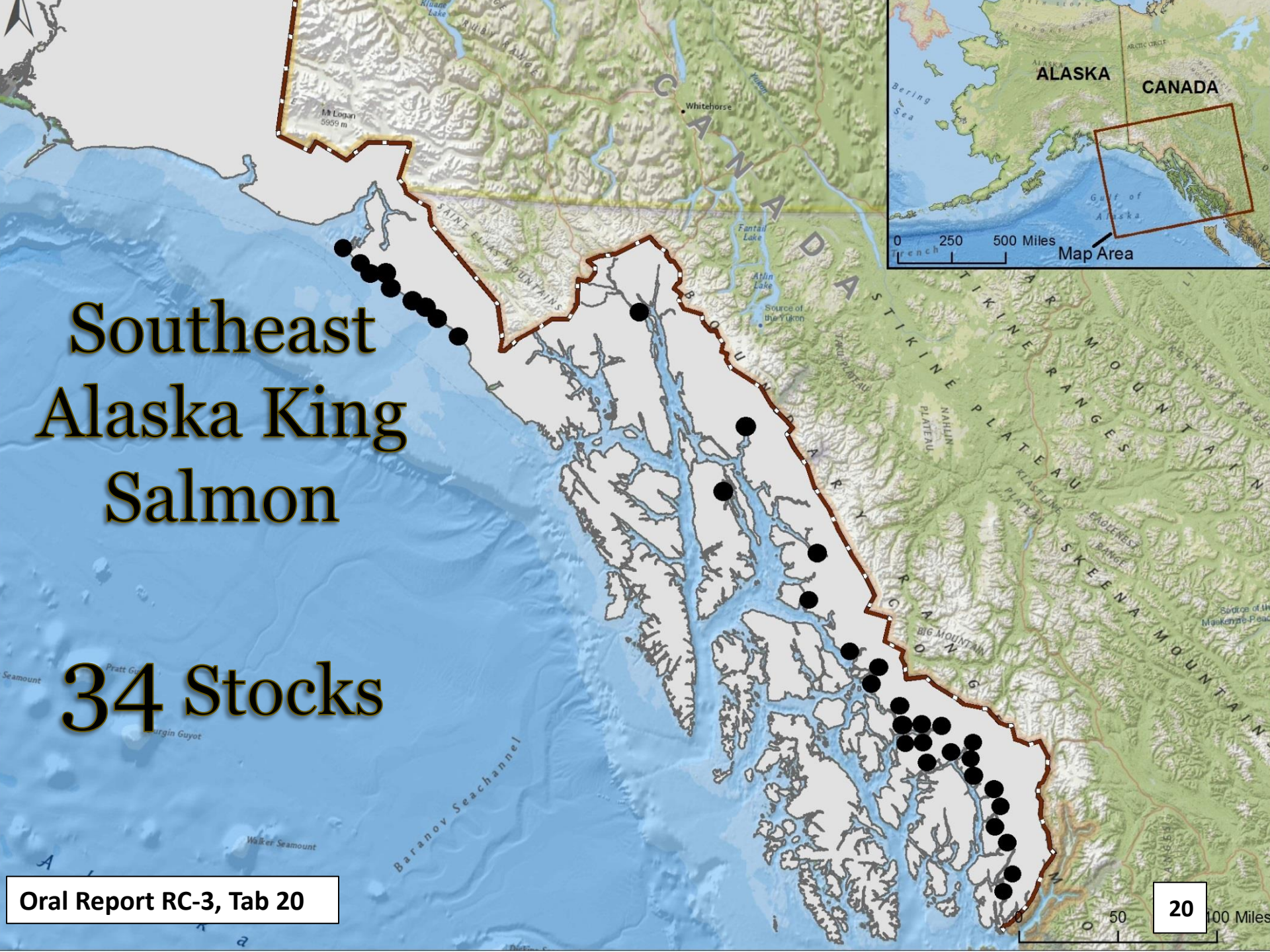
# Southeast Alaska King Salmon





# Southeast Alaska King Salmon

## 34 Stocks

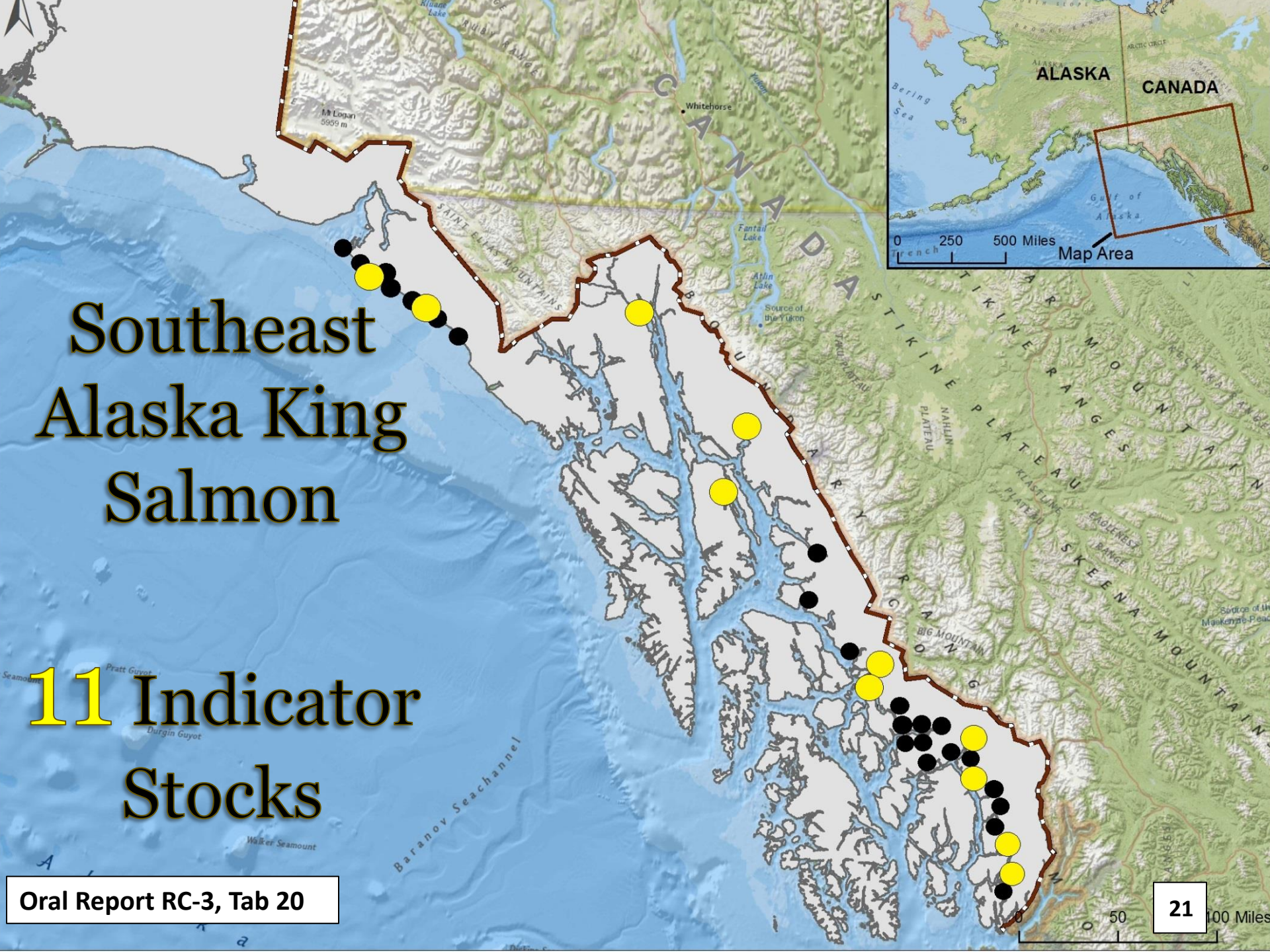




# Southeast Alaska King Salmon

## 11 Indicator Stocks

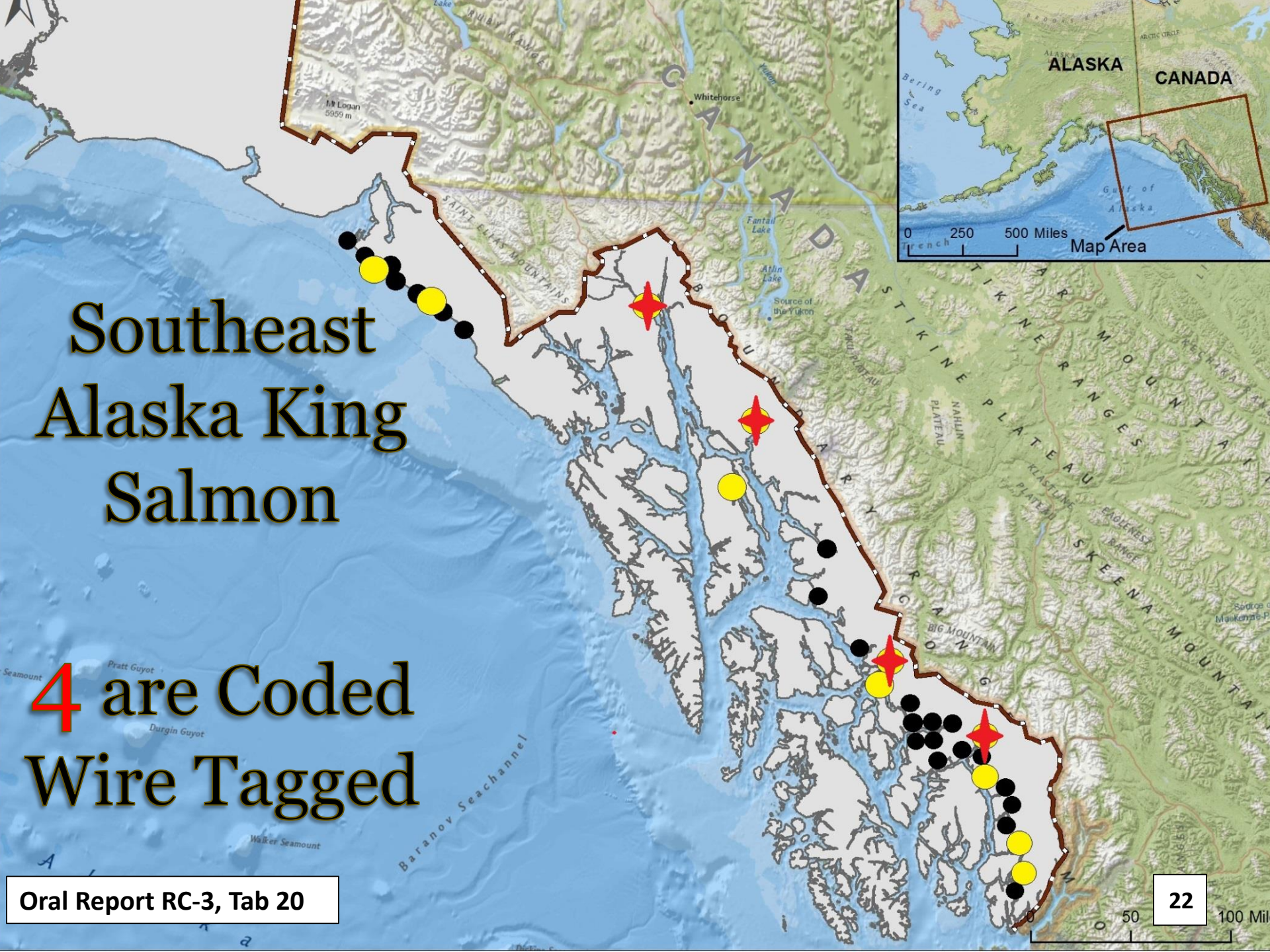
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# Southeast Alaska King Salmon

4 are Coded  
Wire Tagged





# Southeast King Salmon Facts

## Yearling fish

Essentially 2 year old fish when they leave the freshwater (i.e., gravel time as an egg and rearing time as a fry)



# **Southeast King Salmon Facts**

**Southeast stocks represent a mix of inside and outside rearing behaviors**

## **Outside Rearing**

- **Situk, Alsek, Taku and Stikine Rivers stocks**
- **Rear in the Gulf of Alaska and Bering Sea**
- **Available for harvest in Southeast as mature fish**

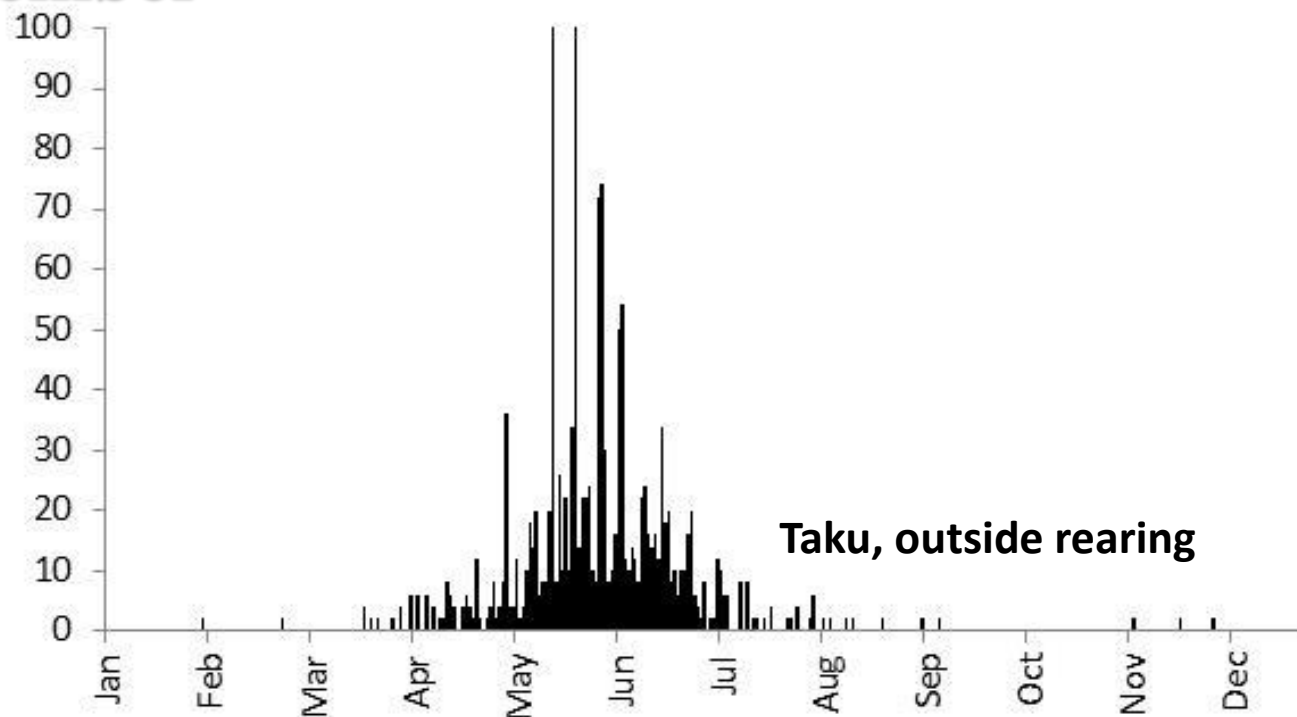
## **Inside Rearing**

- **Chilkat, King Salmon, Andrews, Unuk, Chickamin, Blossom and Keta Rivers stocks**
- **Rear in and around Southeast and also the GOA/Bering Sea**
- **Available for harvest in Southeast as both mature and immature fish**



# Southeast King Salmon Facts

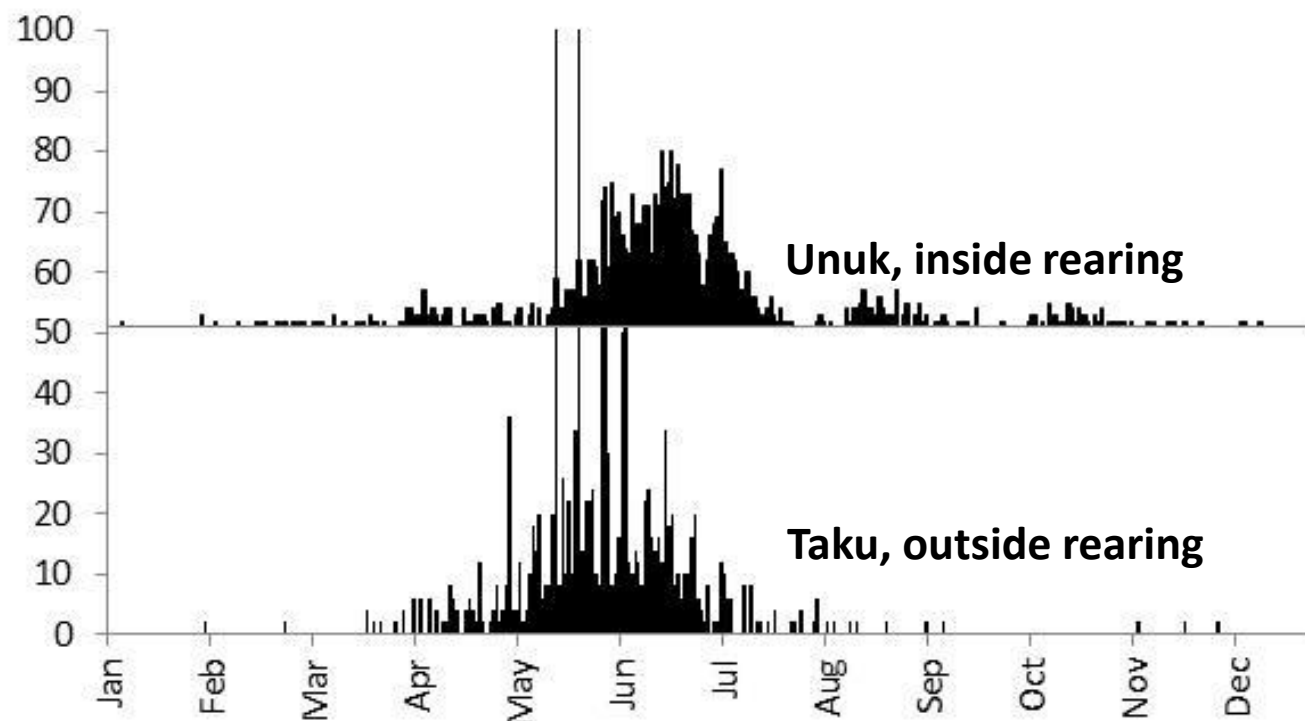
“Spring runs” as fish mature and enter rivers April through July and spawn from late July through early September



**Taku River coded wire tag recoveries in the Southeast Alaska marine fisheries (all known)**

# Southeast King Salmon Facts

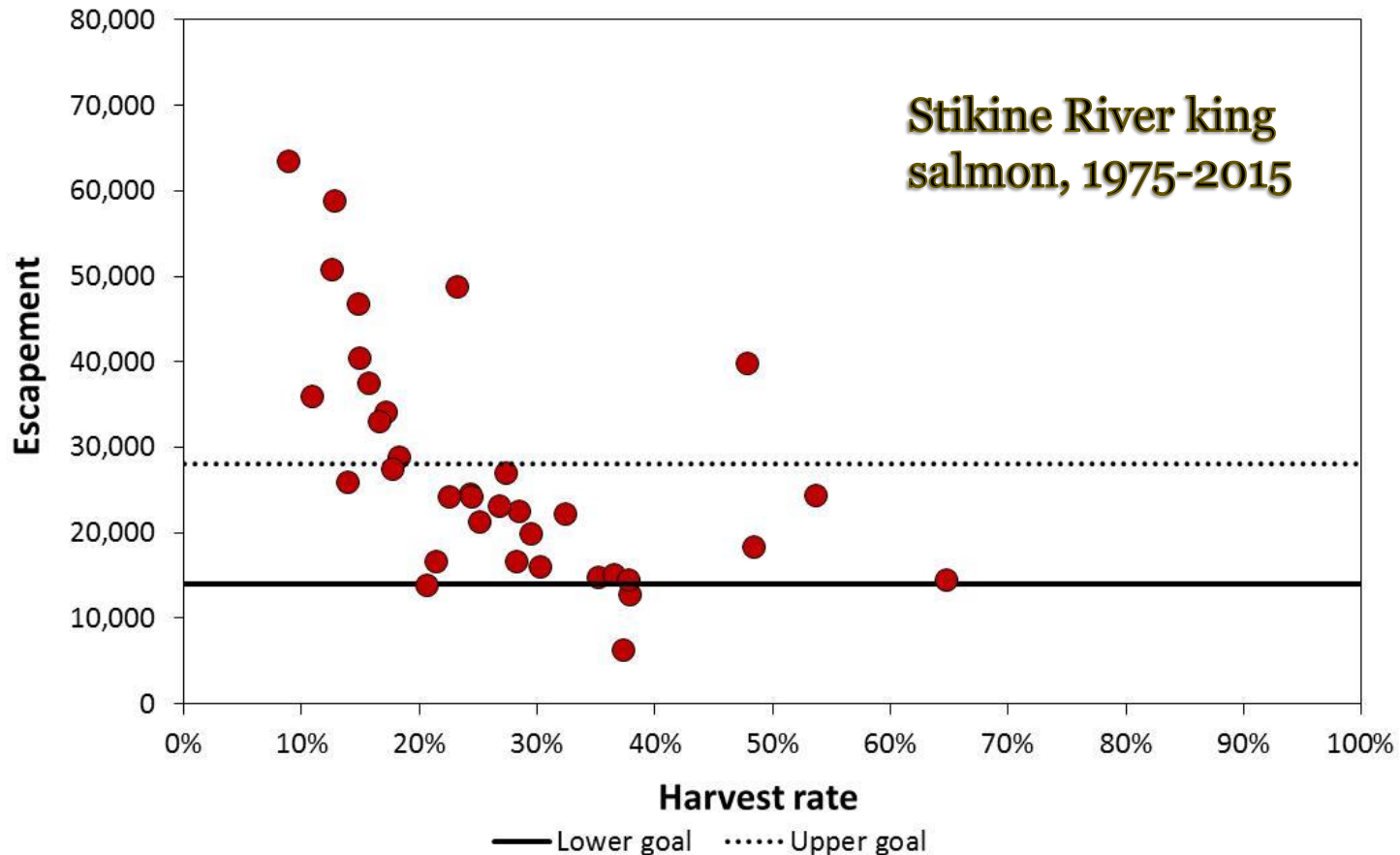
Inside versus outside rearing ...



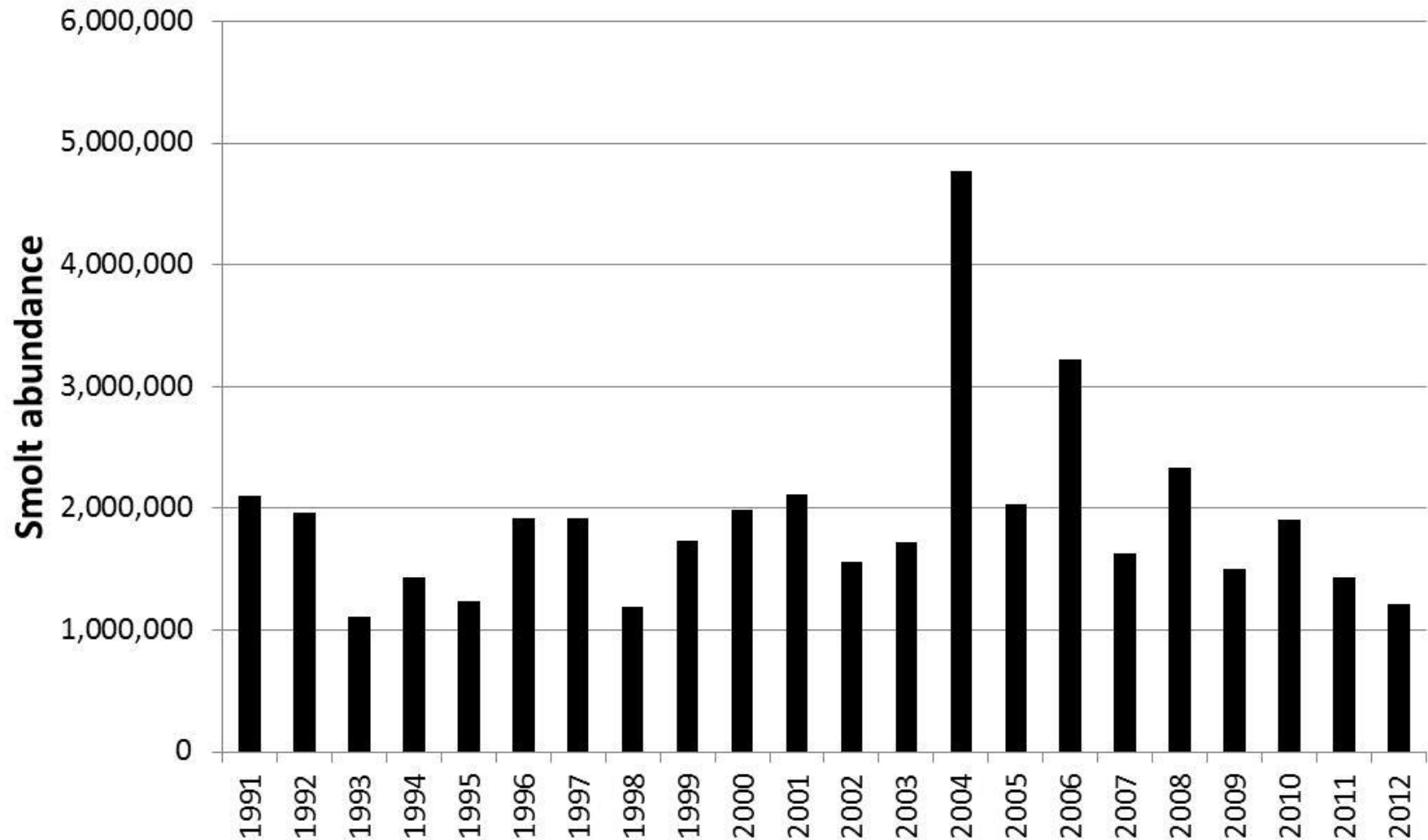
**Taku and Unuk Rivers coded wire tag recoveries in the Southeast Alaska marine fisheries (all known)**

# Southeast King Salmon Facts

In general, Southeast king salmon stocks have relatively low harvest rates



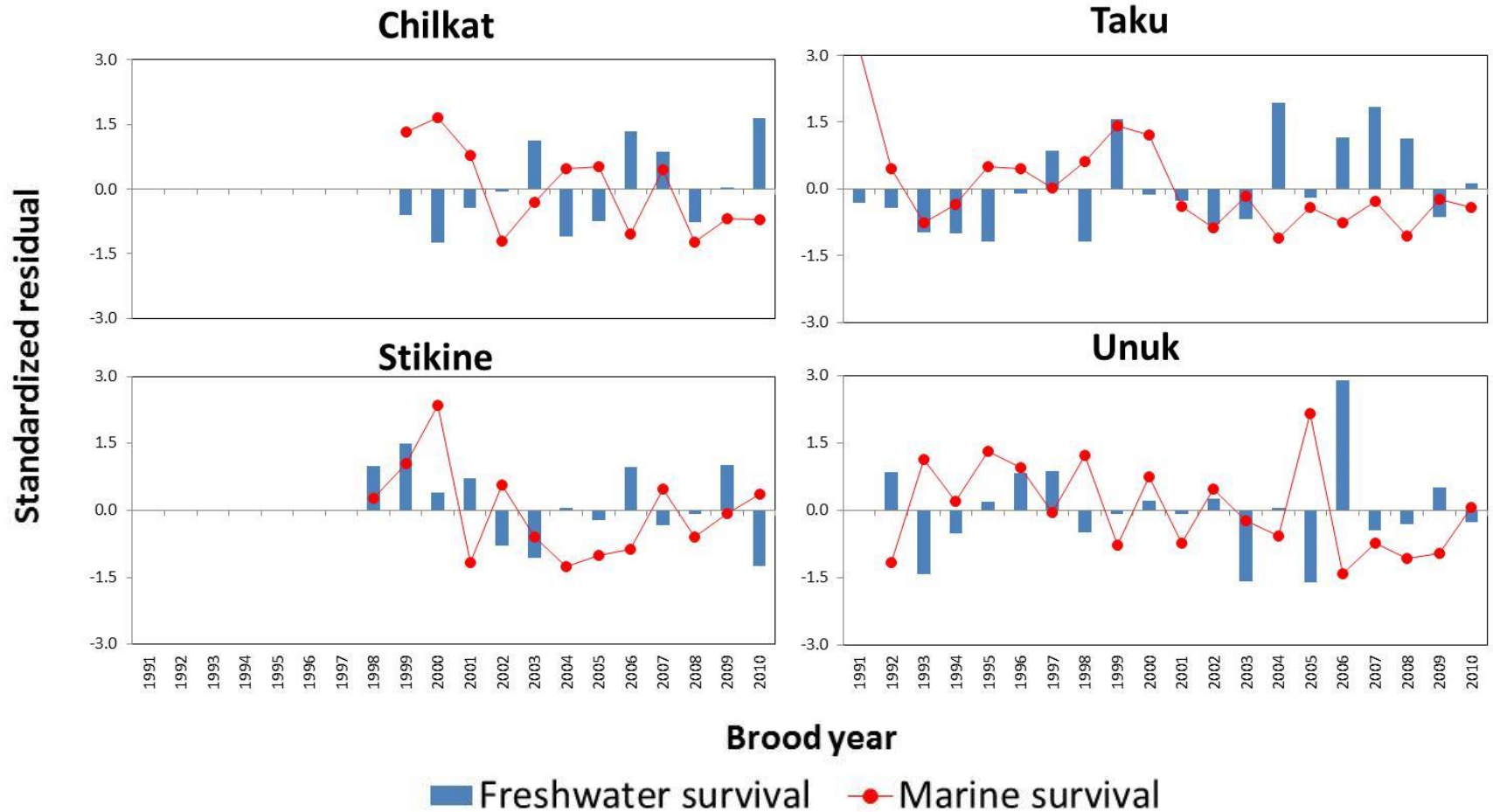
# Freshwater is not the Problem



**Taku River Smolt abundance, 1991 to 2012 brood years**



# Marine Survival is the Culprit



# Southeast King Salmon Escapements

Stock	2013	2014	2015	2016	2017	Escapement goal	
						Lower	Upper
Situk	912	475	174	329	1,187	450	1,050
Alsek	4,992	3,357	5,697	2,504	1,740	3,500	5,300
Chilkat	1,719	1,529	2,456	1,386	1,231	1,750	3,500
Taku	18,002	23,532	28,850	12,000	7,000	19,000	36,000
King Salmon	94	68	50	149	85	120	240
Andrew	920	1,261	796	402	349	650	1,500
Stikine	16,735	24,360	21,343	12,000	10,000	14,000	28,000
Unuk	1,135	1,691	2,623	1,502	1,203	1,800	3,800
Chickamin	2,223	2,499	2,693	964	722	2,150	4,275
Blossom	987	662	642	522	240	500	1,400
Keta	1,484	1,321	915	1,342	668	550	1,300
Number missed	4	4	2	9	9		
Percent missed	36%	36%	18%	82%	82%		

Escapements in 2016 and 2017 were the worst on record; dark cells indicate the escapement goal was not achieved

# Southeast King Salmon Escapements

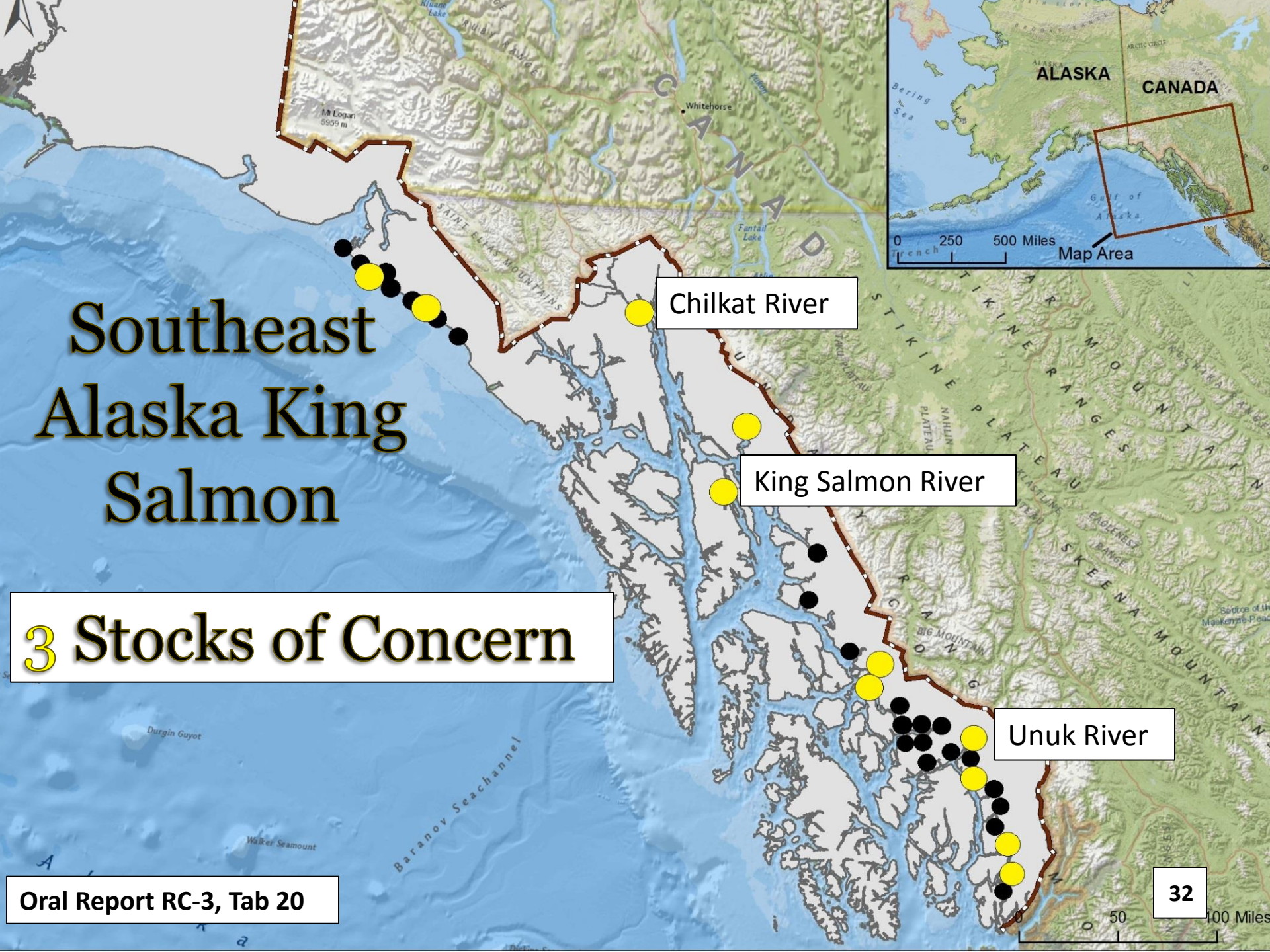
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Number missed	4	4	2	9	9			
Percent missed	36%	36%	18%	82%	82%			

The Chilkat, King Salmon and Unuk Rivers stocks did not achieve the escapement goal in 4 out of past 5 years

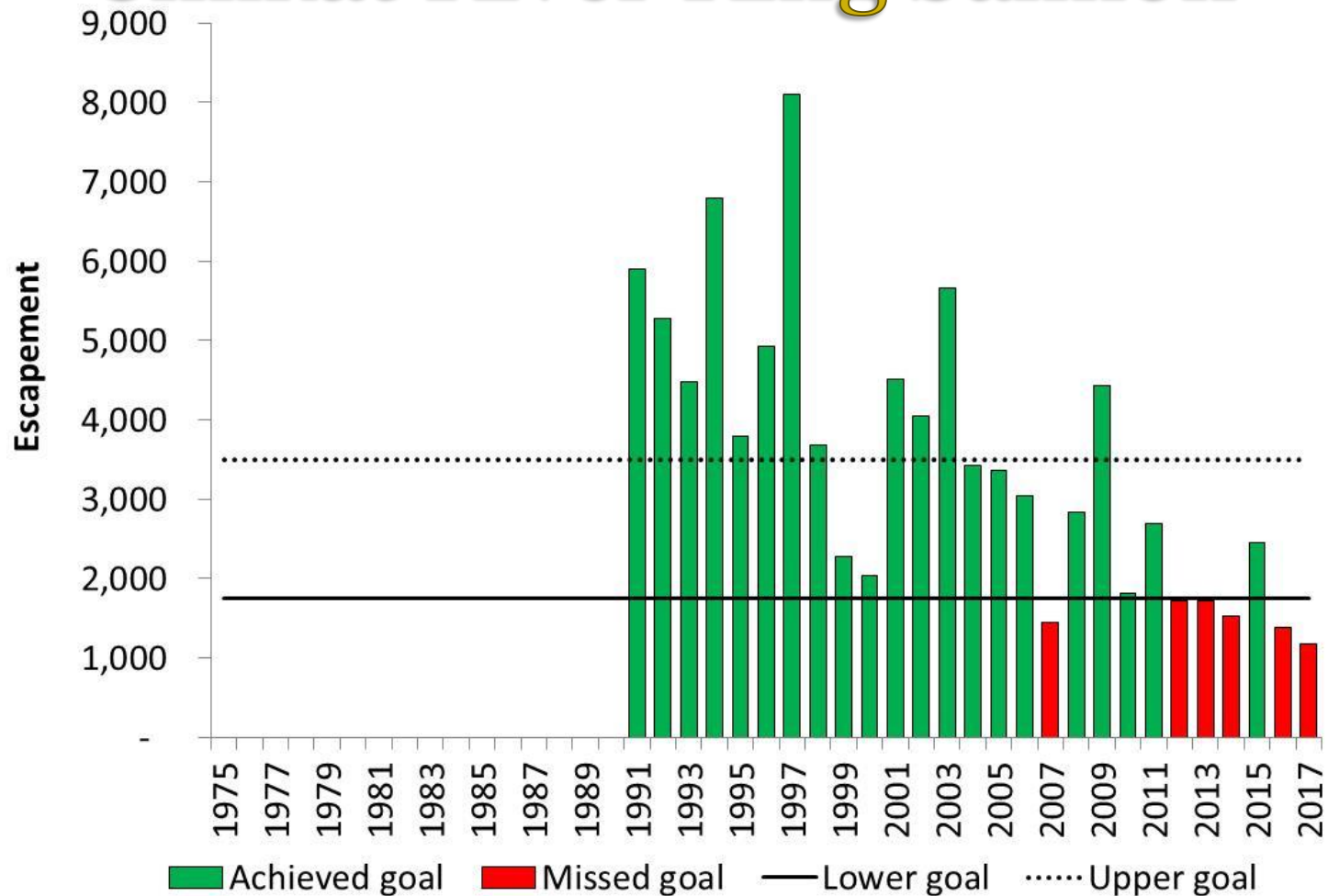


# Southeast Alaska King Salmon

3 Stocks of Concern



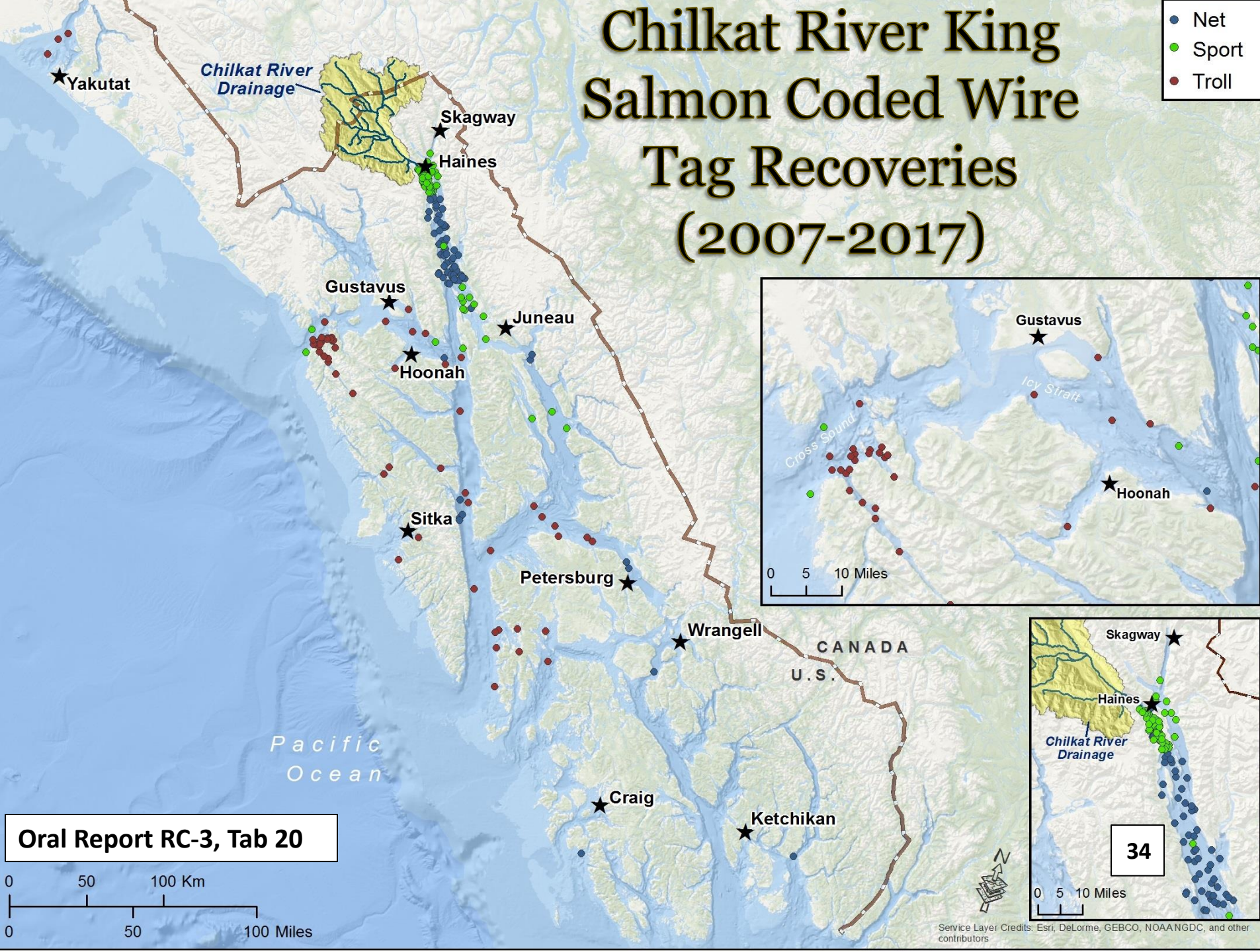
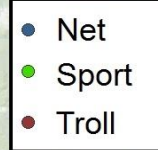
# Chilkat River King Salmon



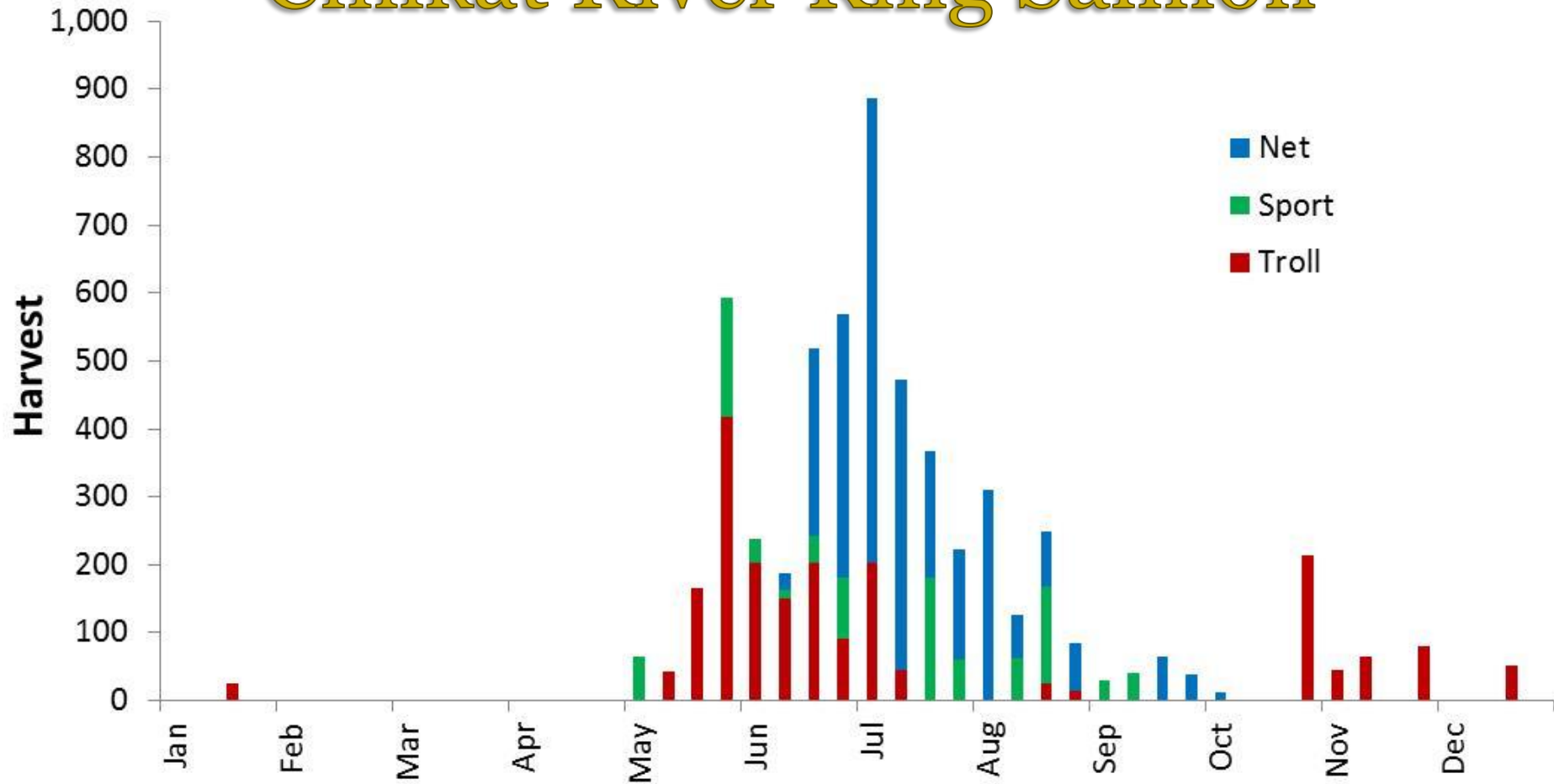
**The Chilkat River stock of king salmon did not achieve the escapement goal in 5 out of the recent 6 years**



# Chilkat River King Salmon Coded Wire Tag Recoveries (2007-2017)



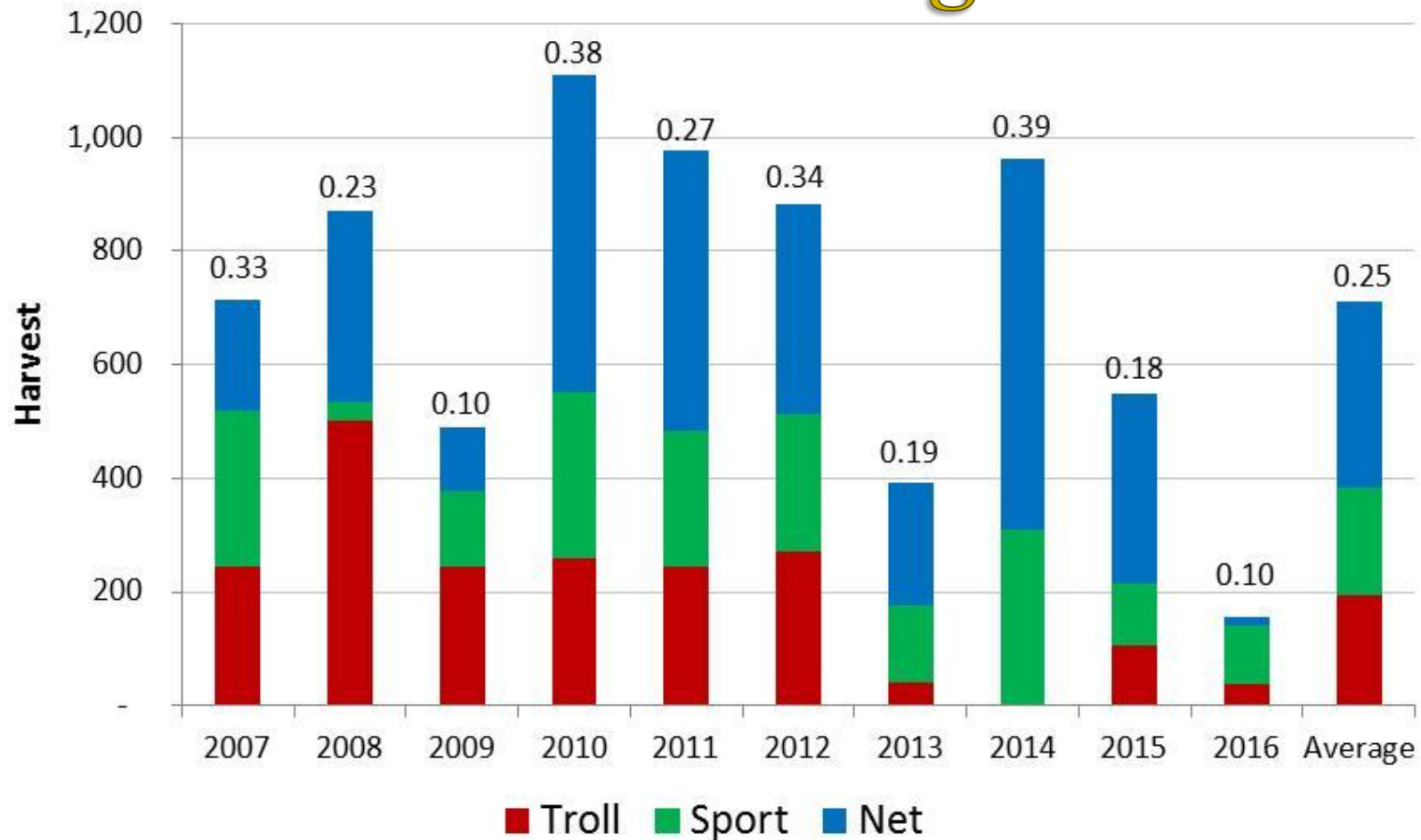
# Chilkat River King Salmon



**The cumulative harvest of the Chilkat River stock of king salmon in Southeast Alaska marine fisheries, 2007-2017**

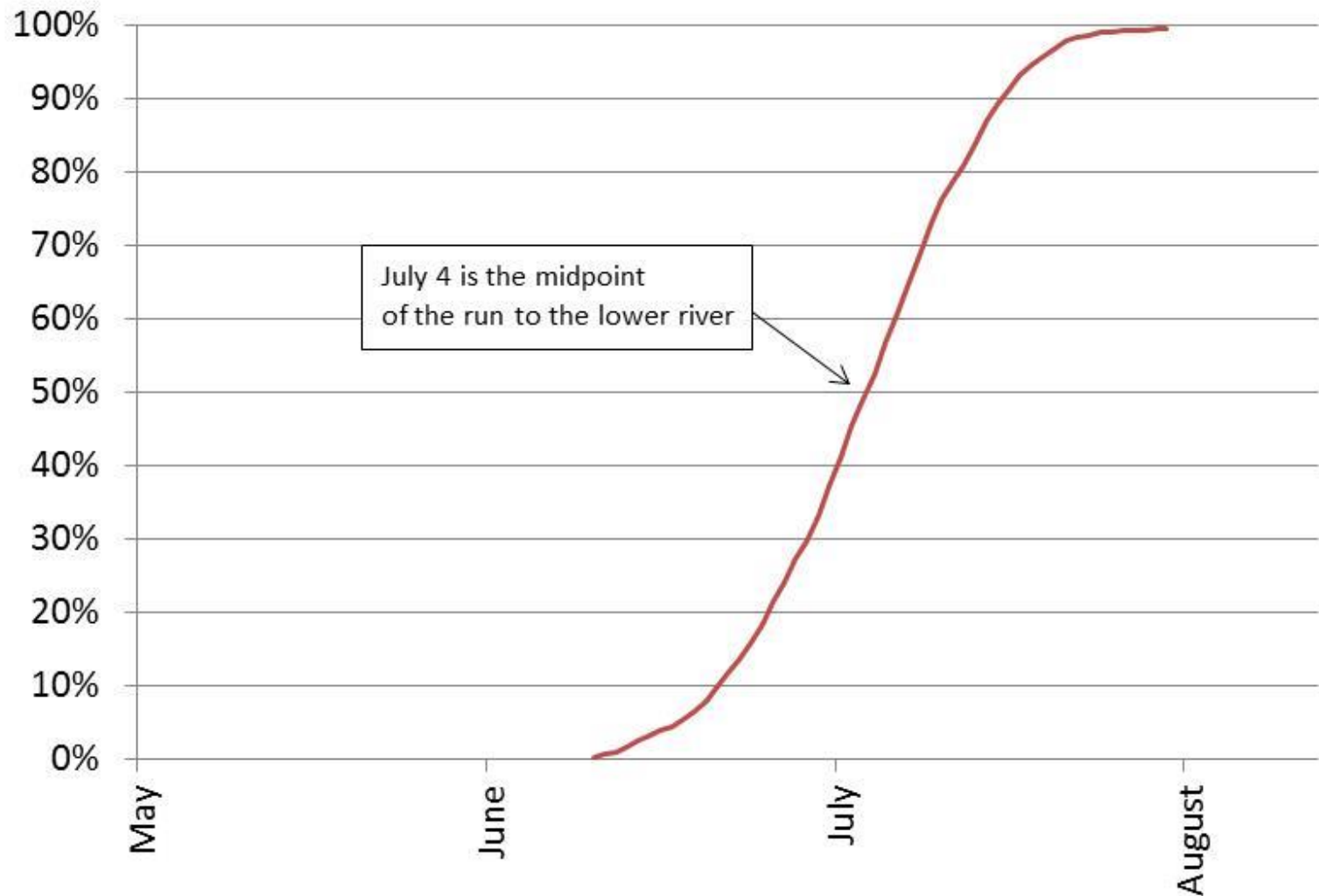


# Chilkat River King Salmon



On average, 25% (~700 fish) of the Chilkat River king salmon run is harvested each year split 6%, 7%, and 12% among the troll, sport and net fisheries, respectively

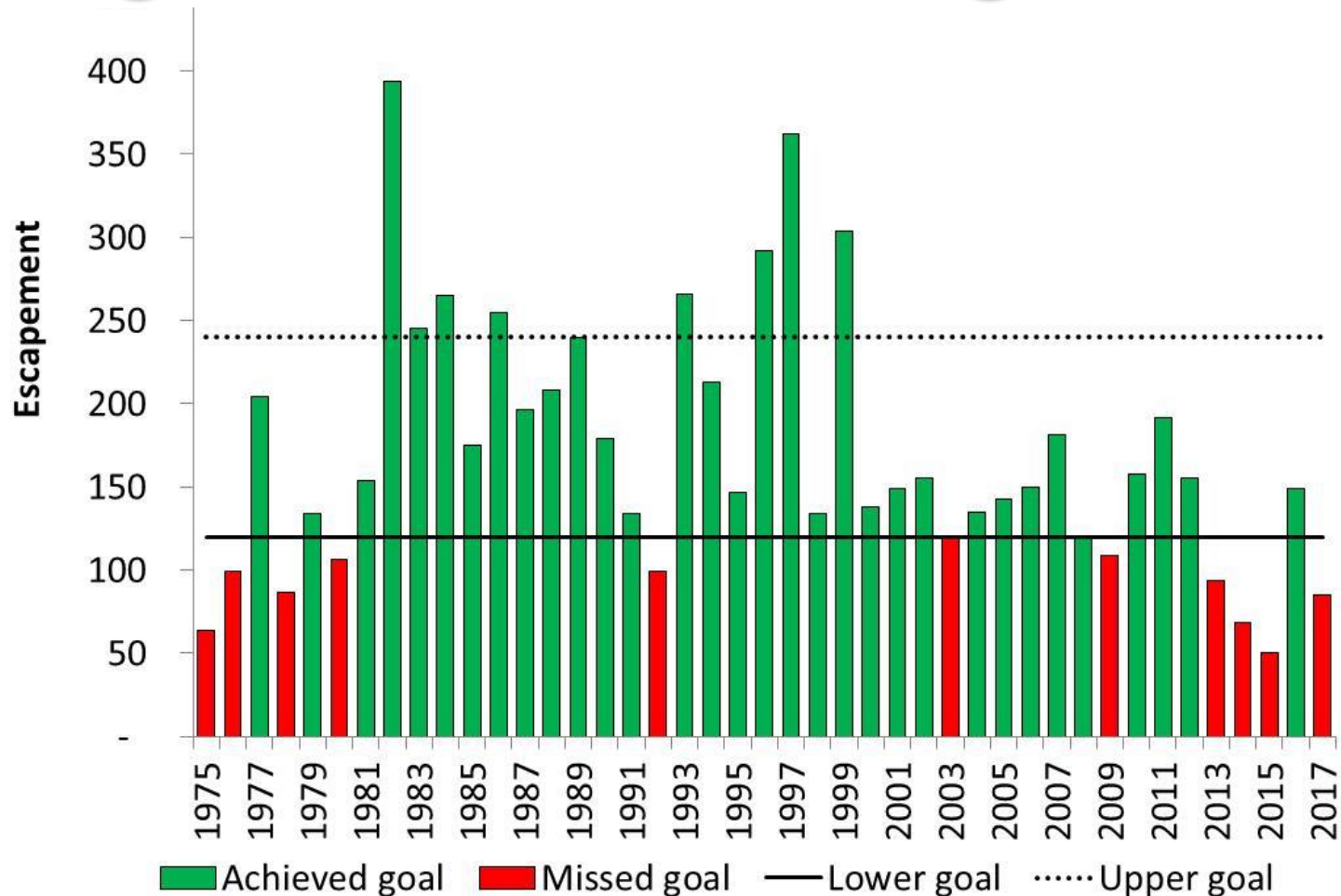
# Chilkat River King Salmon Run Timing



**On average, half of the run is inriver by July 4 and 95% by July 19**



# King Salmon River King Salmon



The King Salmon River stock of king salmon did not achieve the escapement goal in 4 out of the 5 recent years

# King Salmon River King Salmon

- Only island population of king salmon in Southeast



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# King Salmon River King Salmon

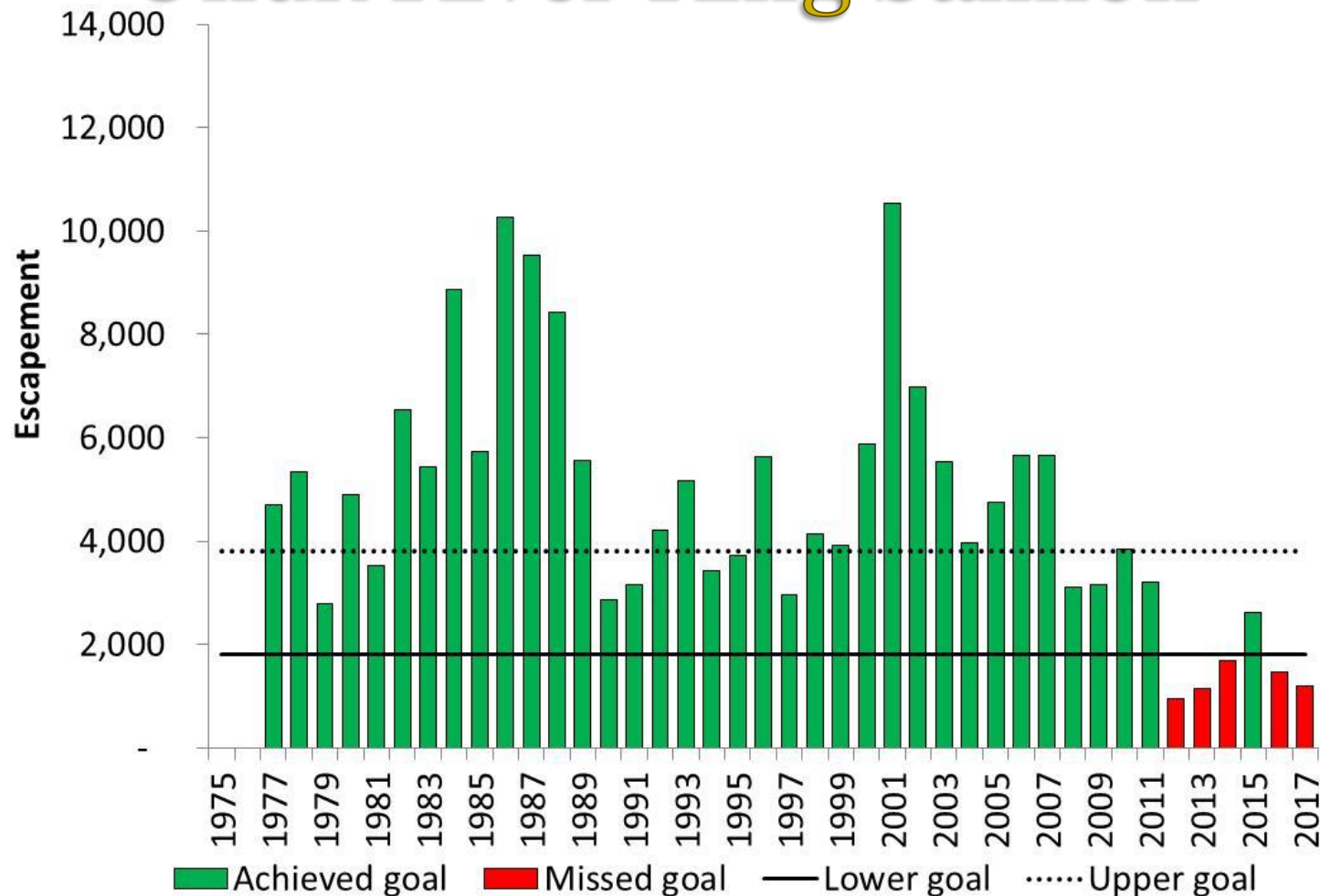
- Only island population of king salmon in Southeast
- Inside rearing and available for harvest in Southeast throughout the year
- Harvest is unknown since this stock is not coded wire tagged
- **Standardized observer counts occur annually between July 23 and August 1 with peak spawning on July 28, on average**

# King Salmon River King Salmon

- A weir was operated for 10 concurrent years to ground truth observer counts



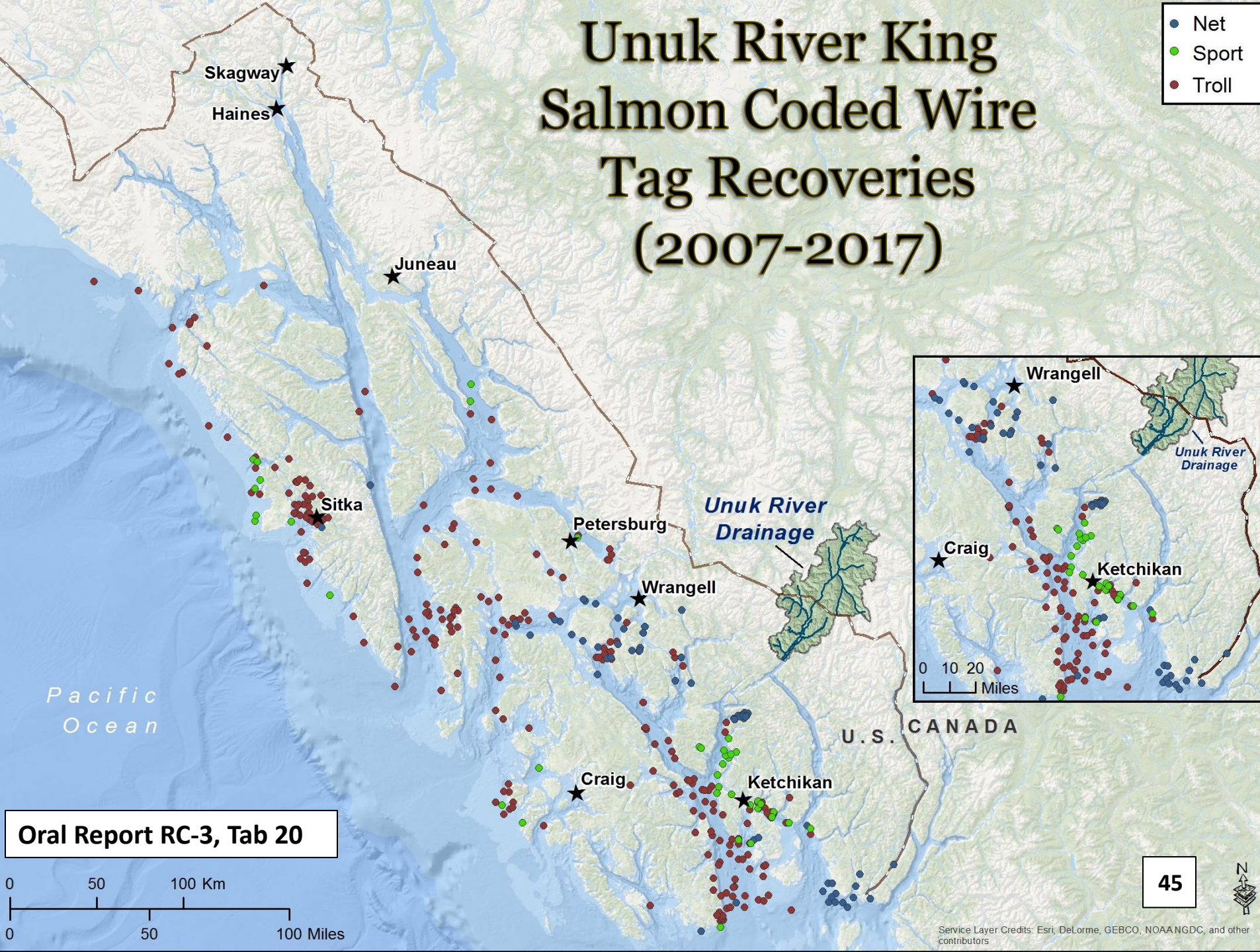
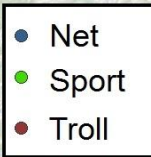
# Unuk River King Salmon



The Unuk River stock of king salmon did not achieve the escapement goal in 5 out of the recent 6 years

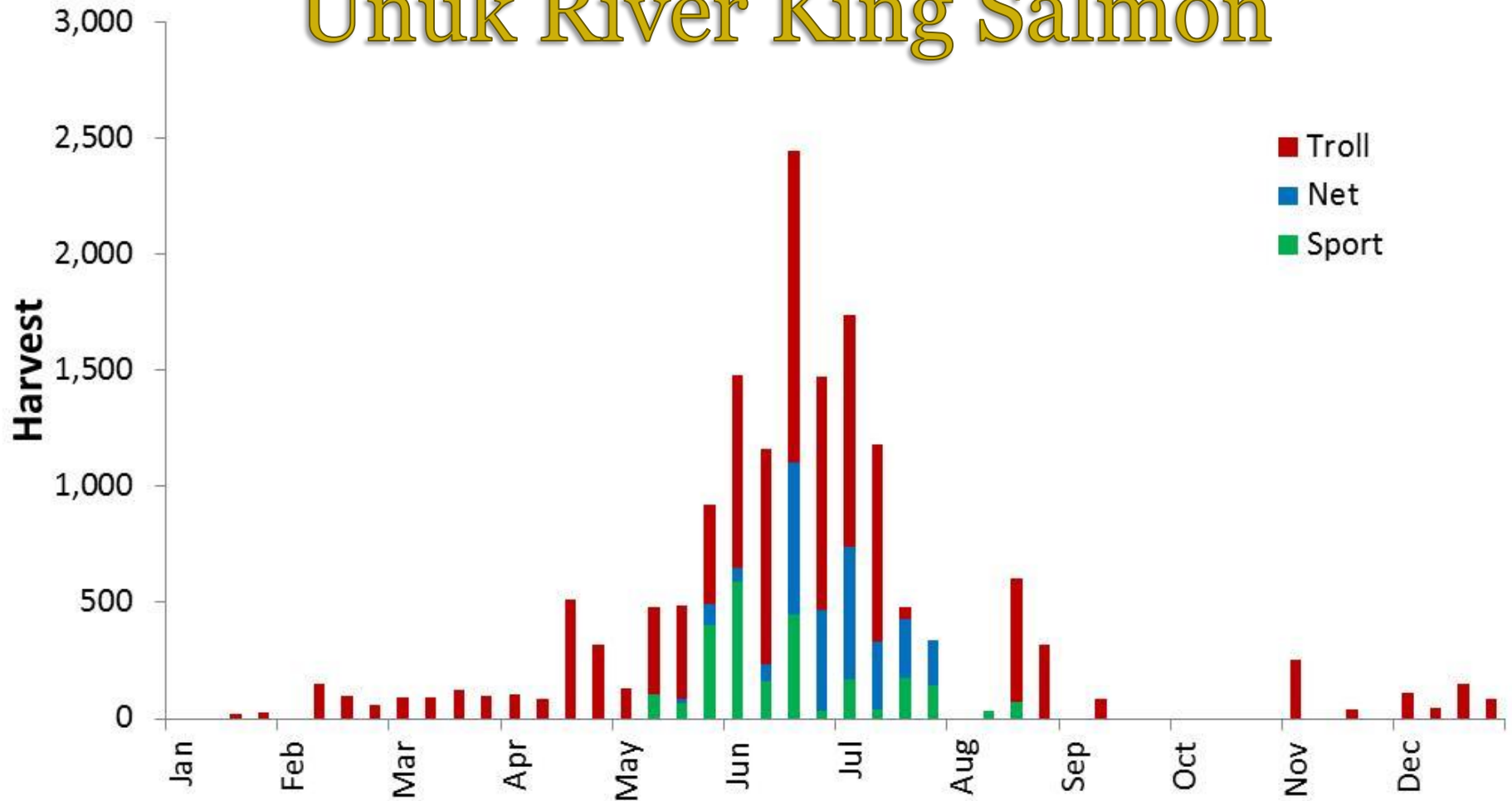


# Unuk River King Salmon Coded Wire Tag Recoveries (2007-2017)



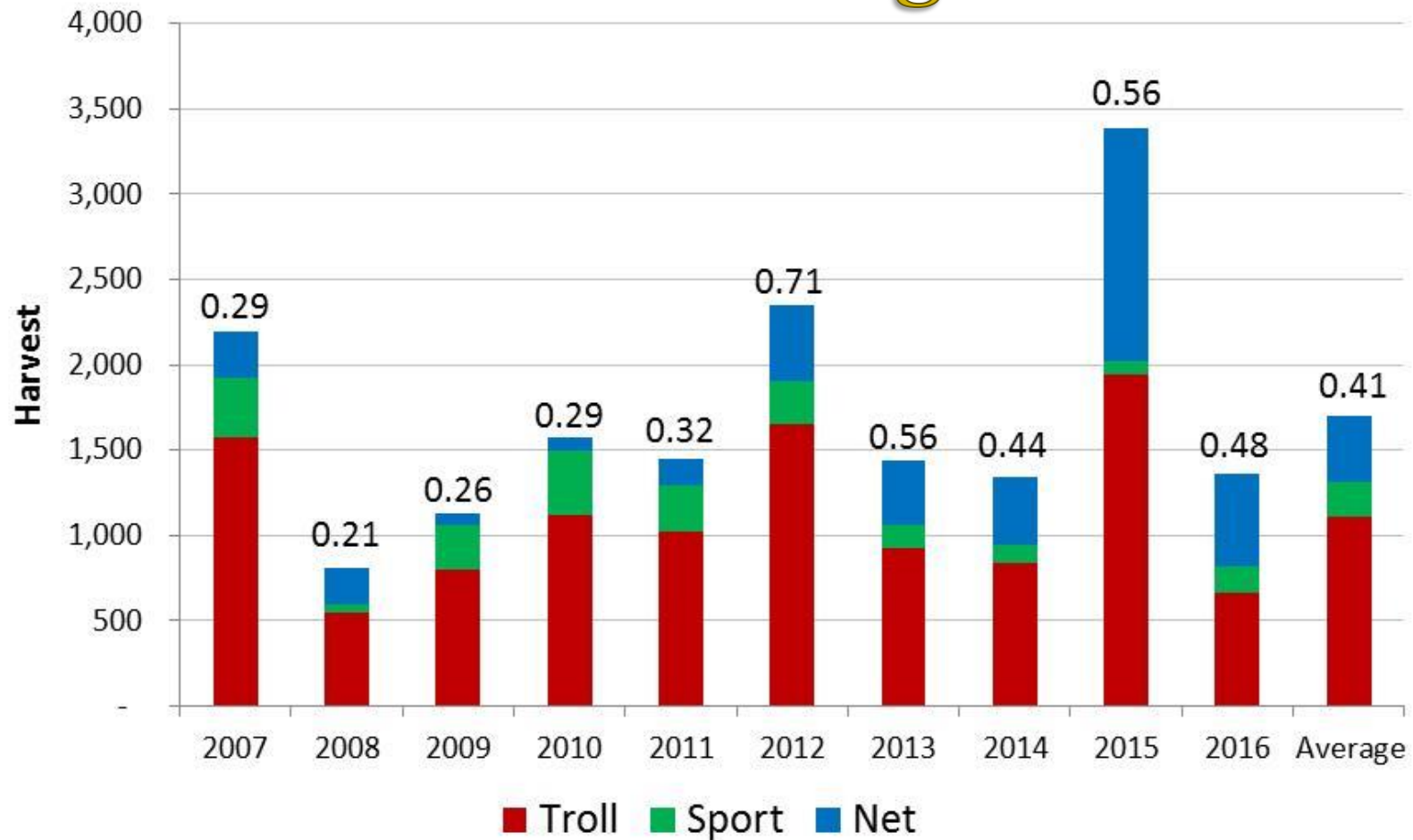


# Unuk River King Salmon



**The cumulative harvest of the Unuk River stock of king salmon in Southeast Alaska marine fisheries, 2007–2017**

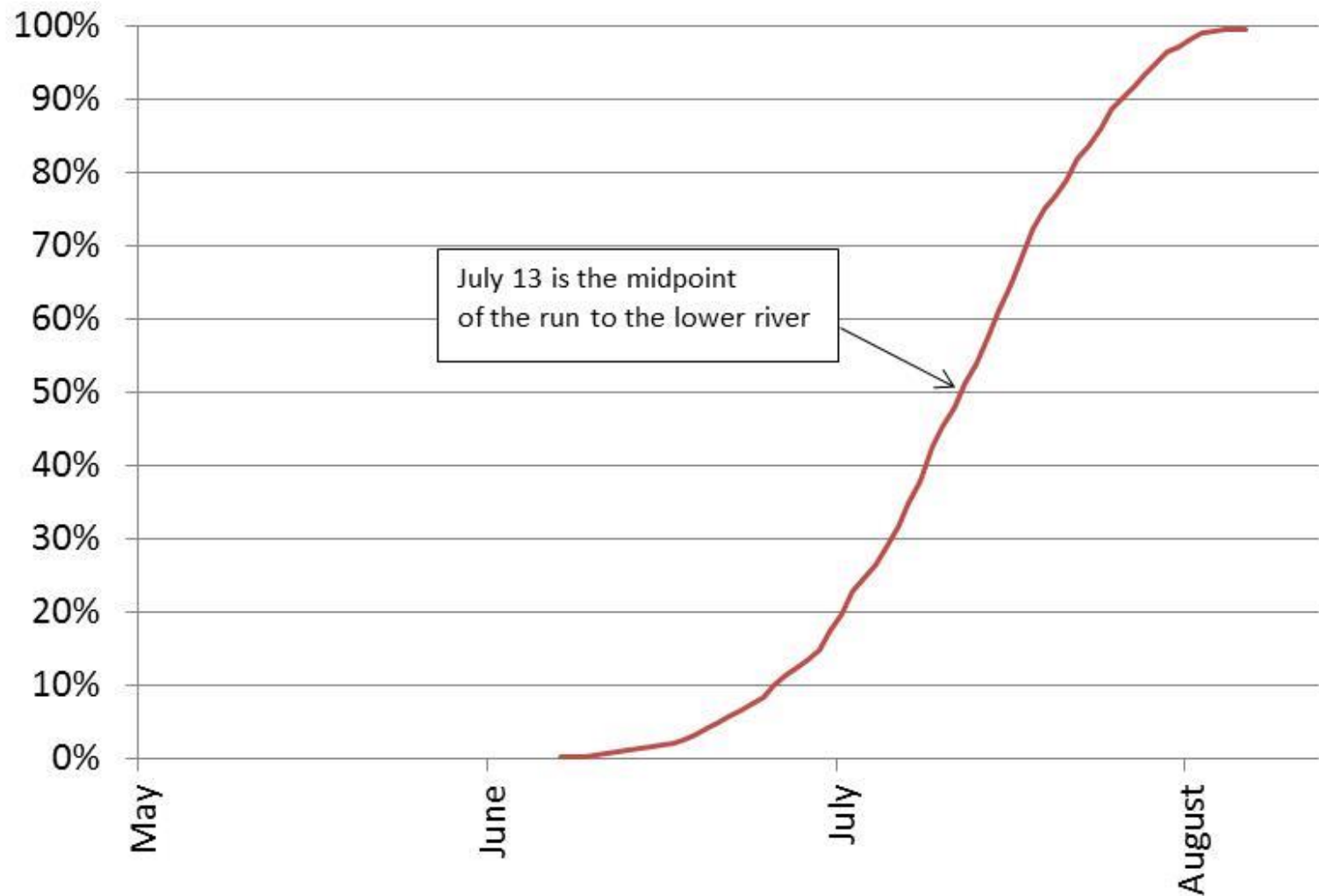
# Unuk River King Salmon



On average, 41% (~1,700 fish) of the Unuk River king salmon run is harvested each year split 26%, 5%, and 10% among the troll, sport and net fisheries, respectively



# Unuk River King Salmon Run Timing



**On average, 50% of the run is inriver by July 13 and 95% by July 30**

# Draft Action Plan Options

## ➤ Action Plan Goal

- To rebuild the Chilkat, King Salmon and Unuk Rivers king salmon runs back to levels that meet escapement goals in at least 3 out of 5 consecutive years from 2018 to 2022

# Draft Action Plan Options

## Action #1 Sport Fishery

### ➤ Chilkat and King Salmon Stocks of King Salmon

- Option A-Status quo (actions similar to those seen in 2017)
- Option B – In addition to Option A, reduce area open to king salmon fishing, time and bag limits
- Option C – In addition to Option B, further reduce time, area and bag limits

### ➤ Unuk Stock of King Salmon

- Option A – Status quo (actions similar to those seen in 2017)
- Option B – In addition to Option A, reduce area open to king salmon fishing, bag and size of terminal harvest area
- Option C – In addition to Option B, expand existing areas closed to salmon fishing, further reduce area, bag and size of the terminal harvest area



# Management Action Plan Options

## Action #2 Commercial Fishery

### ➤ Chilkat and King Salmon Stocks of King Salmon

- Option A – Status quo (actions similar to those seen in 2017)
- Option B – In addition to Option A, reduce hours within periods
- Option C – In addition to Option B, reduce the number of periods

### ➤ Unuk Stock of King Salmon

- Option A – Status quo (actions similar to those seen in 2017)
- Option B – In addition to Option A, combination of shaping and closures
- Option C – In addition to Option B, wide scale troll and terminal harvest area closures

# Management Action Plan Options

## Action #3 Subsistence Fishery

- Chilkat and King Salmon Stocks of King Salmon
  - Option A – Status quo (same actions as seen in 2017)
  - Option B – Reduce time and area
  - Option C – Complete closure

# Management Action Plan Options

## Action #3 Personal Use Fishery

### ➤ Unuk Stock of King Salmon

- Option A – Prohibit retention of king salmon in Yes Bay and the Unuk River.



# Conditions for Delisting or Reducing Restrictions

- Recommend delisting if escapement goal is met in 3 consecutive years — or 4 of 6 consecutive years

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- **Some management measures could be relaxed if escapements are near or above upper bound of escapement goal range in 2 consecutive years**



# 2018 Alaska Board of Fisheries Regulatory Proposals Affecting King Salmon Stocks of Concern

## ➤ Chilkat and King Salmon Rivers

- Proposal 130, 131, 132, 133, 134, 137, 138, 155, 156, 157, 158, 160, 166, 167, 168, 173, 175, 179, 180, 181, 182, 185, 192, 193 and 194

## ➤ Unuk River

- Proposal 133, 137, 139, 140, 141, 148, 151, 152, 160, 172, 174, 179, 180, 181, 182, and 185

# Things to Consider

- At this time, regional king salmon survivals are poor, abundance is at an all-time low, and stocks cannot support harvest rates traditionally seen

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- At this time, regional king salmon survivals are poor, abundance is at an all-time low, and stocks cannot support harvest rates traditionally seen
- **Management for one stock essentially affects all Southeast Alaska king salmon stocks**



# Management Obligations

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  - **Alaska Sustainable Salmon Fishery Policy** in regards to escapement goal management

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- At this time we are not attaining management obligations clearly described in the:
  - **Alaska Sustainable Salmon Fishery Policy** in regards to escapement goal management
  - **Pacific Salmon Treaty** when it comes to attaining escapement goals and staying within the all-gear harvest limit



# Other Things to Consider

- Peak spawning time for stocks is later as you move south

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- **Genetics information is useful for large groups of fish (e.g., Southeast or Transboundary stocks)**

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- **Coded wire tag information is useful for individual stocks**

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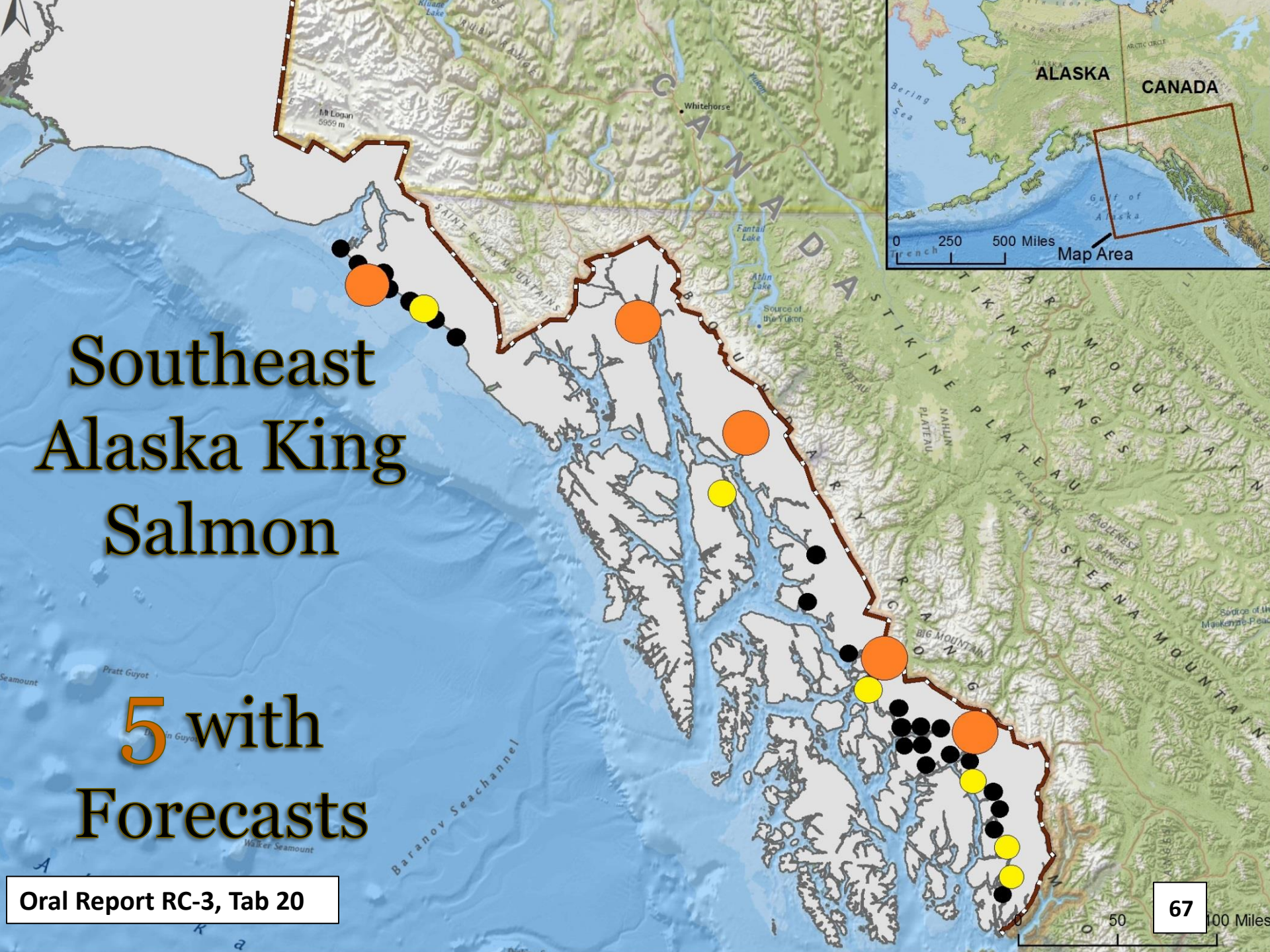
- Peak spawning time for stocks is later as you move south
- Genetics information is useful for large groups of fish (e.g., Southeast or Transboundary stocks)
- Coded wire tag information is useful for individual stocks
- **Forecasts for 2018 are poor**



# Southeast Alaska King Salmon

5 with  
Forecasts

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# Preliminary 2018 Forecasts

		Average	Escapement goal	
Stock	Forecast	Run	Lower	Upper
Situk	730	660	450	1,050
Chilkat	1,030	2,830	1,750	3,500
Taku	4,700	28,700	19,000	36,000
Stikine	6,900	24,550	14,000	28,000
Unuk	865	3,780	1,800	33,800

With the exception of the Situk River stock of king salmon, these are the worst forecasts on record and if accurate, even with no harvest, the escapement goal will be missed





# Questions?

