

# *Oral Report to the Alaska Board of Fisheries*

## Review of Salmon Escapement Goals in the Prince William Sound Management Area, ~~2020~~ 2021



By

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RC 3

Oral Report:

Tab 7

Written Reports:

Tab 1 & 2



## *Presentation Objectives*

- Introduce escapement goal policies
- Explain review process
- Review existing escapement goals
- Describe general methods
- Highlight the key points

# *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

## *Two Important Terms Defined in the SSFP:*

- 1) Biological Escapement Goal (BEG):
  - a) Escapement that provides the greatest potential for maximum sustained yield – expressed as a range based on productivity and data uncertainty
- 2) Sustainable Escapement Goal (SEG):
  - b) Escapement that is known to provide for sustained yield over a 5 to 10 year period – accounts for data uncertainty
- 3) BEGs = ranges; SEGs = range or lower bound

## *Approach and Process for Review Team*

- Three-year interval, review available information for stocks
- Determine appropriate goal type, methods, and analysis
- Perform analysis, assess goal range, review by team
- Develop report for directors of divisions of Commercial Fisheries and Sport Fish
- Report presented to BOF; Post-meeting memo signed by directors

# **Existing PWSMA Salmon Escapement Goals**

## **King Salmon: 1 stock**

Copper River

## **Chum Salmon: 5 stocks**

Coghill, Eastern, Northern, Northwestern, Southeastern districts

## **Coho Salmon: 2 stocks**

Bering River, Copper River Delta

**Pink Salmon: 16 stocks** (even- and odd-year brood lines) Coghill, Eastern, Eshamy, Montague, Northern/Unakwik, Northwestern, Southeastern, Southwestern

## **Sockeye Salmon: 5 stocks**

Upper Copper River, Copper River Delta, Bering River, and Coghill Lake, and Eshamy Lake

# King Salmon – Copper River

Current LB SEG: 24,000

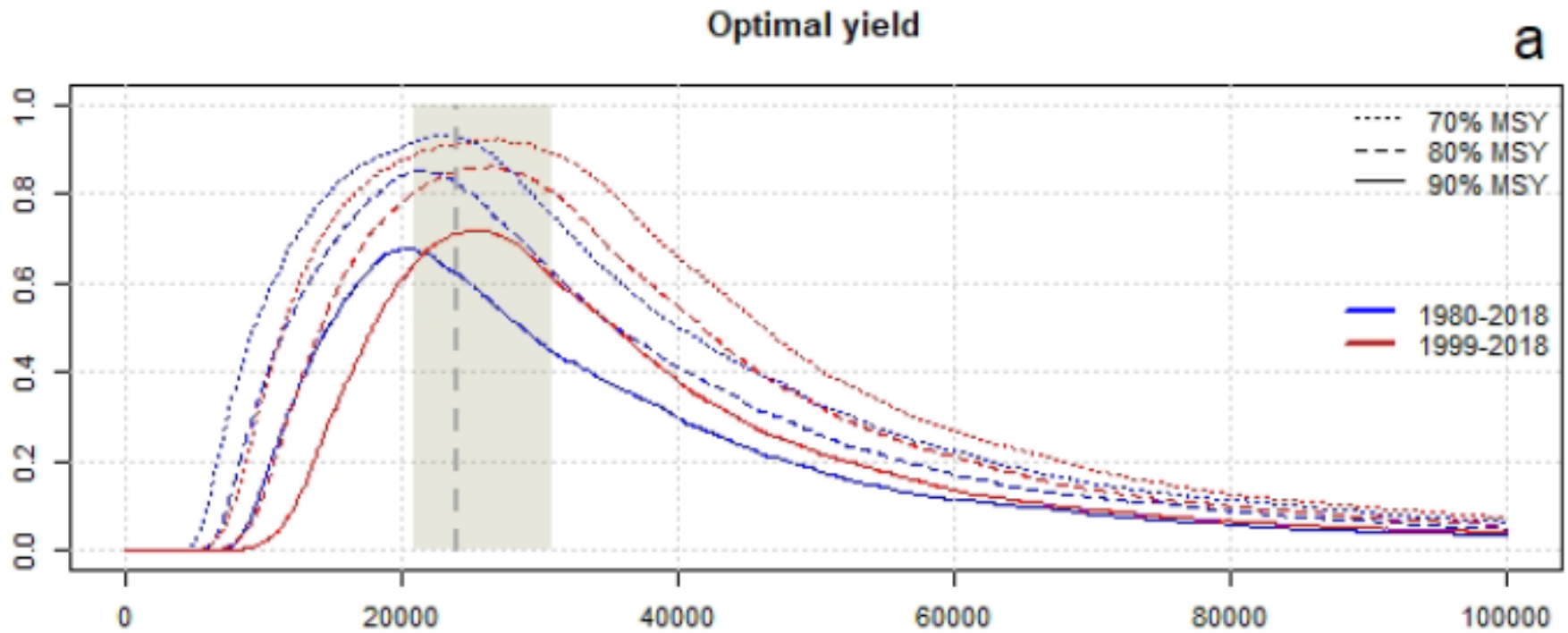
Recommended SEG: 21,000 - 31,000



# King Salmon – Copper River

Current LB SEG: 24,000

Recommended SEG: 21,000 - 31,000





# Chum Salmon- No Changes Recommended

## Eastern District

Current LB SEG: > **79,000**

## Northern District

Current LB SEG: > **28,000**

## Coghill District

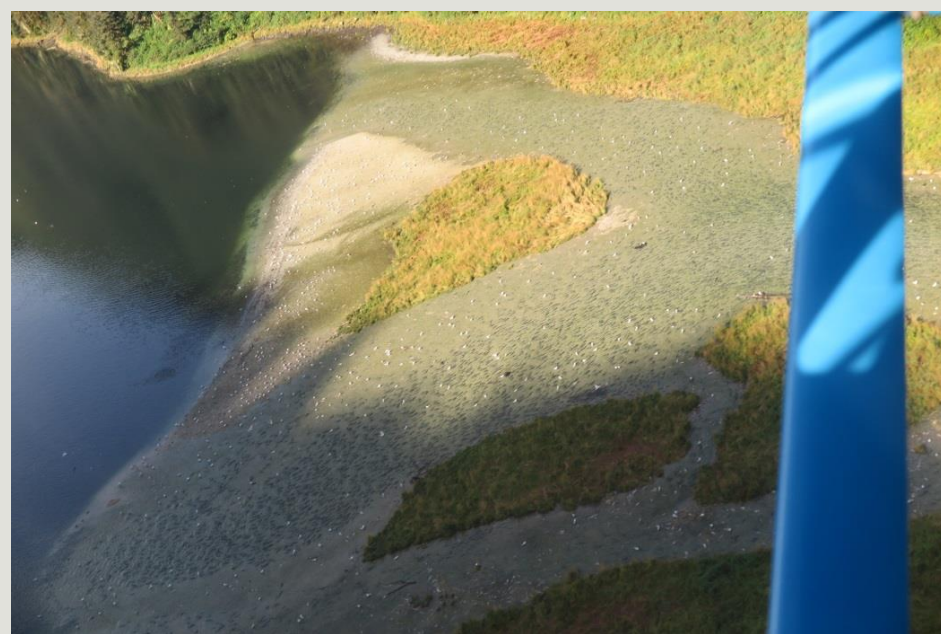
Current LB SEG: > **10,000**

## Northwestern District

Current LB SEG: > **7,000**

## Southeastern District

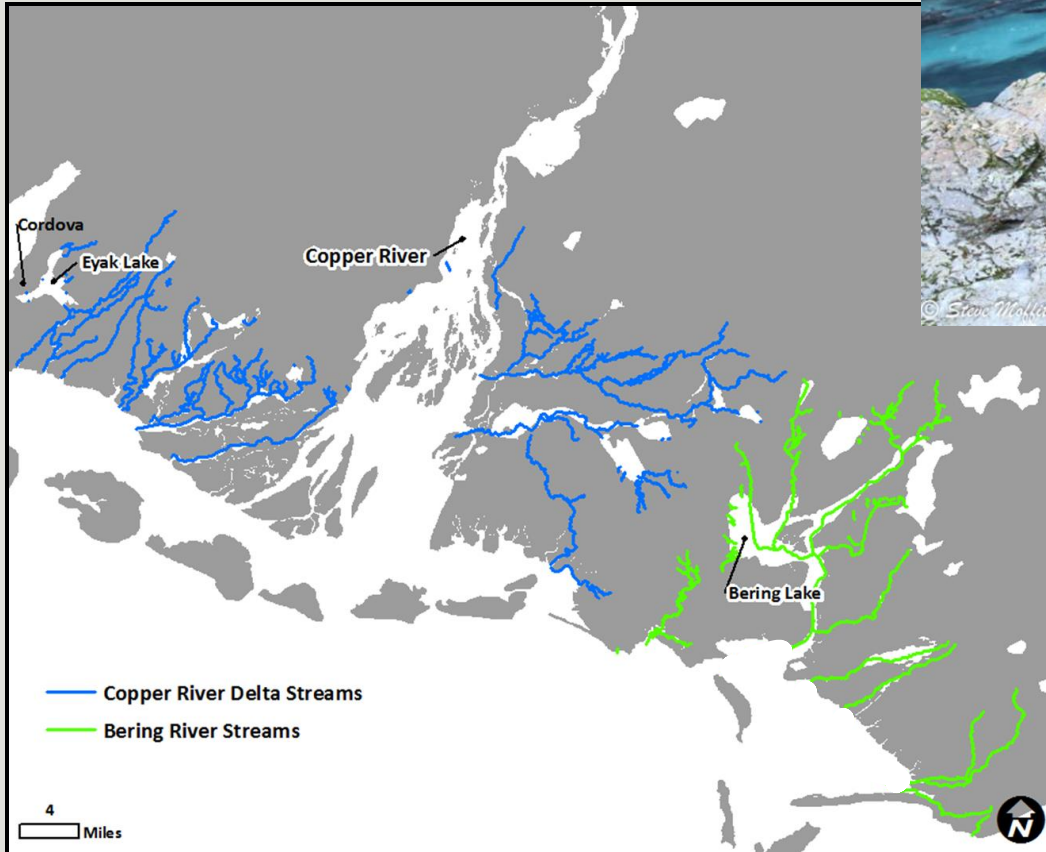
Current LB SEG: > **11,000**



# Coho Salmon – Copper River Delta

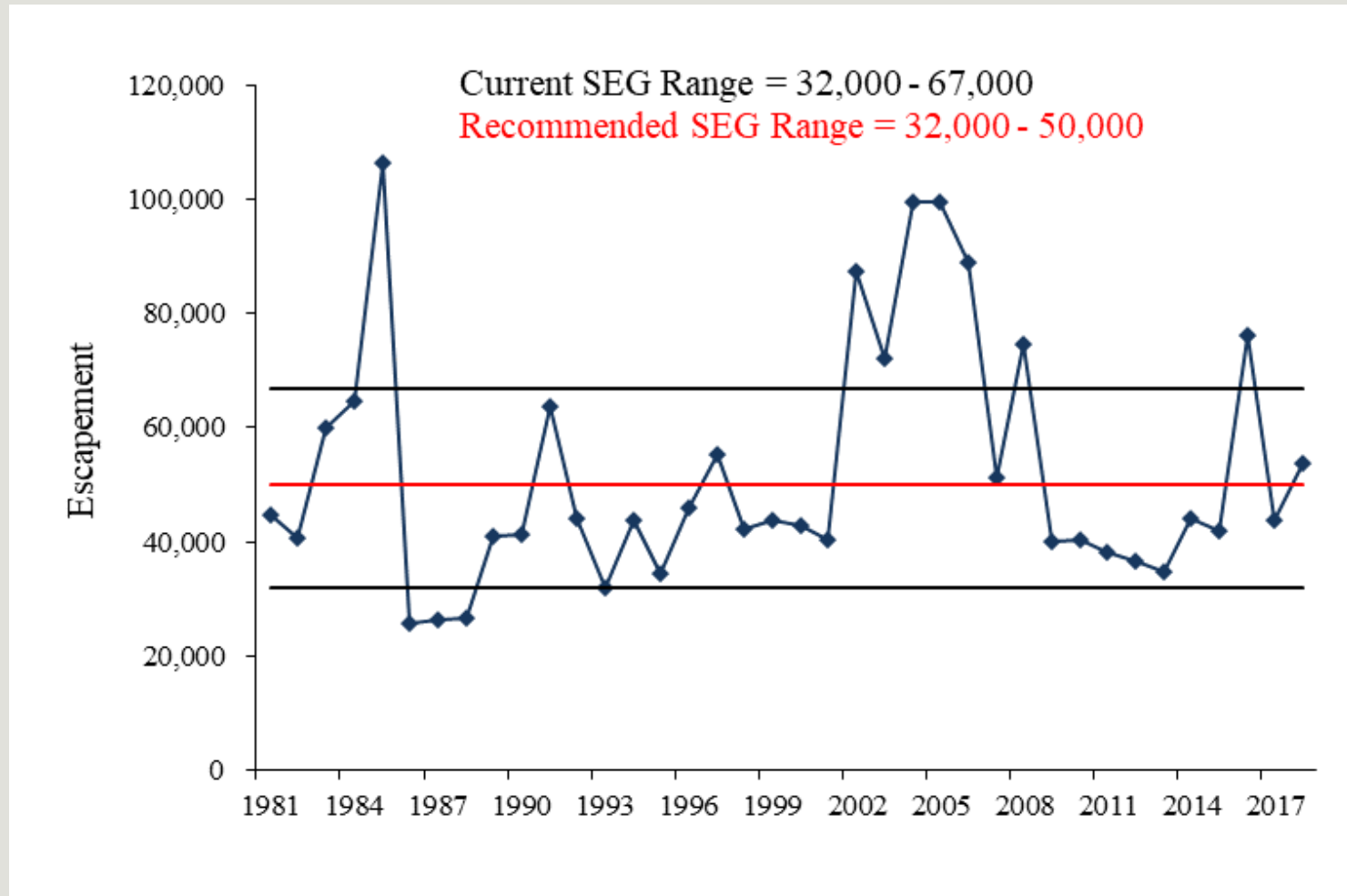
**Current SEG: 32,000 – 67,000**

**Recommended SEG: 32,000 – 50,000**



## Coho Salmon – Copper River Delta

- Low contrast (4.1), harvest rate > 40%, high measurement error (aerial surveys)



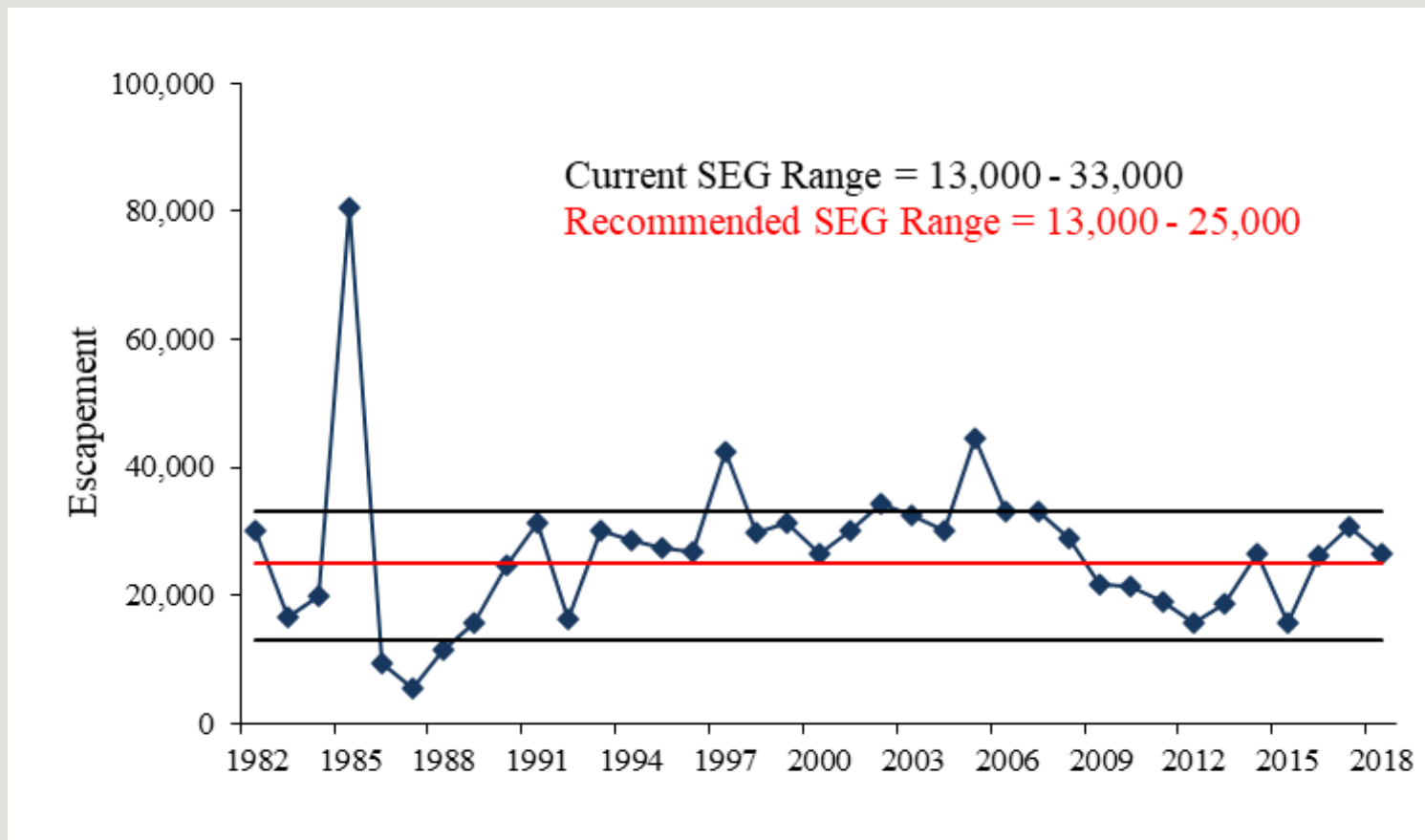
## Coho Salmon –

### Bering River District

**Current SEG: 13,000 – 33,000**

**Recommended SEG: 13,000 – 25,000**

- High contrast (14.4,) harvest rate > 40%, high measurement error (aerial surveys)



## Pink Salmon: Even-year Broodline - No Changes Recommended

### Eastern District

Current SEG: **203,000 – 328,000**

### Northern/Unakwik districts

Current SEG: **96,000 – 127,000**

### Coghill District

Current SEG: **37,000 – 110,000**

### Northwestern District

Current SEG: **52,000 – 93,000**

### Eshamy District

Current SEG : **1,000 – 4,000**

### Southwestern District

Current SEG : **62,000 – 105,000**

### Montague District

Current SEG : **36,000 – 72,000**

### Southeastern District

Current SEG : **88,000 – 153,000**

## Pink Salmon: Odd-year Broodline - No Changes Recommended

### Eastern District

Current SEG: **346,000 – 863,000**

### Northern/Unakwik districts

Current SEG: **111,000 – 208,000**

### Coghill District

Current SEG: **54,000 – 233,000**

### Northwestern District

Current SEG: **64,000 – 144,000**

### Eshamy District

Current SEG: **5,000 – 31,000**

### Southwestern District

Current SEG: **112,000 – 231,000**

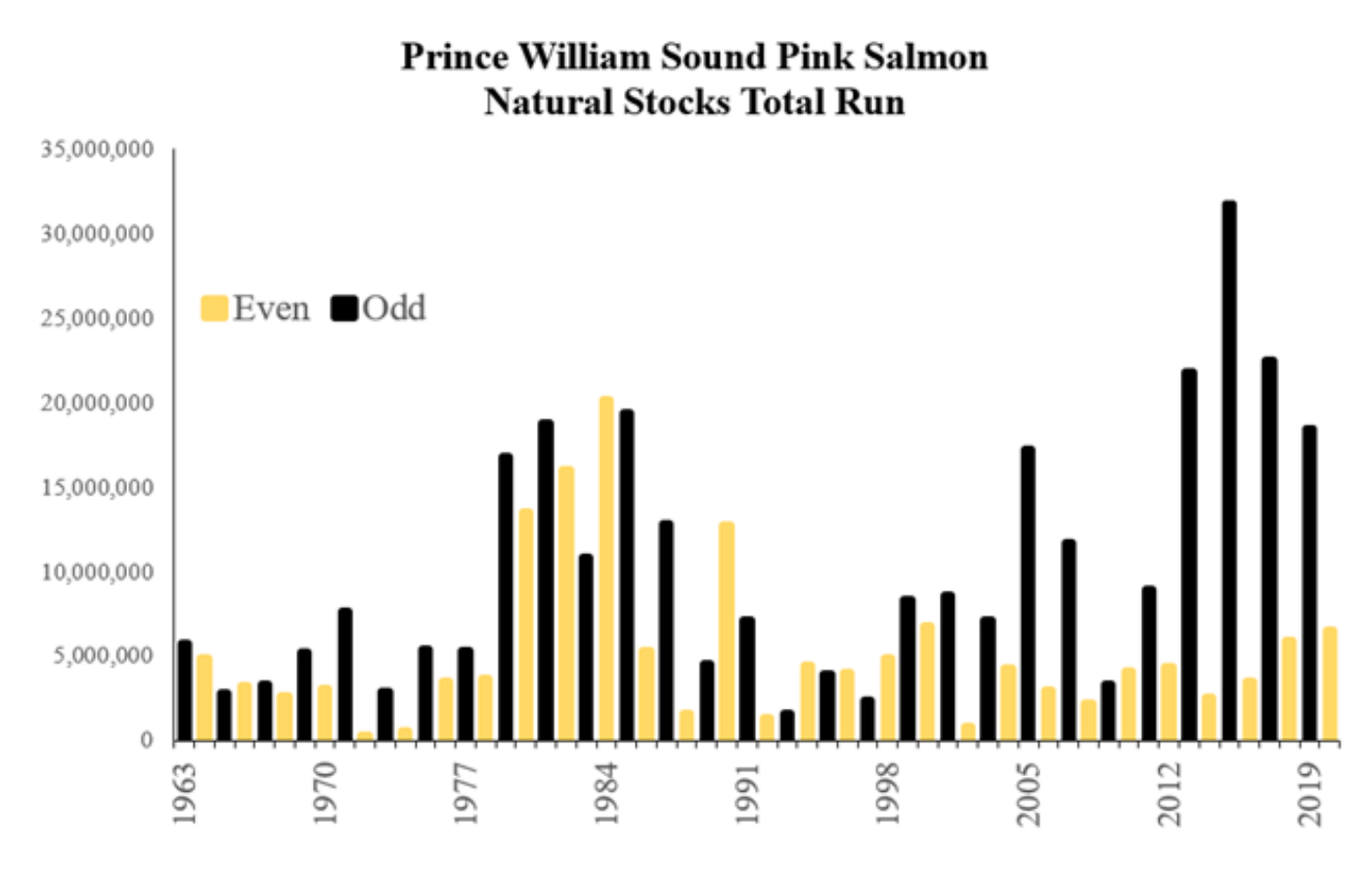
### Montague District

Current SEG: **143,000 – 330,000**

### Southeastern District

Current SEG: **286,000 – 515,000**

# Pink Salmon - No Changes Recommended



## Sockeye Salmon –

Upper Copper River - No Changes Recommended

SEG: 360,000 – 750,000

Copper River Delta - No Changes Recommended

SEG: 55,000 – 130,000



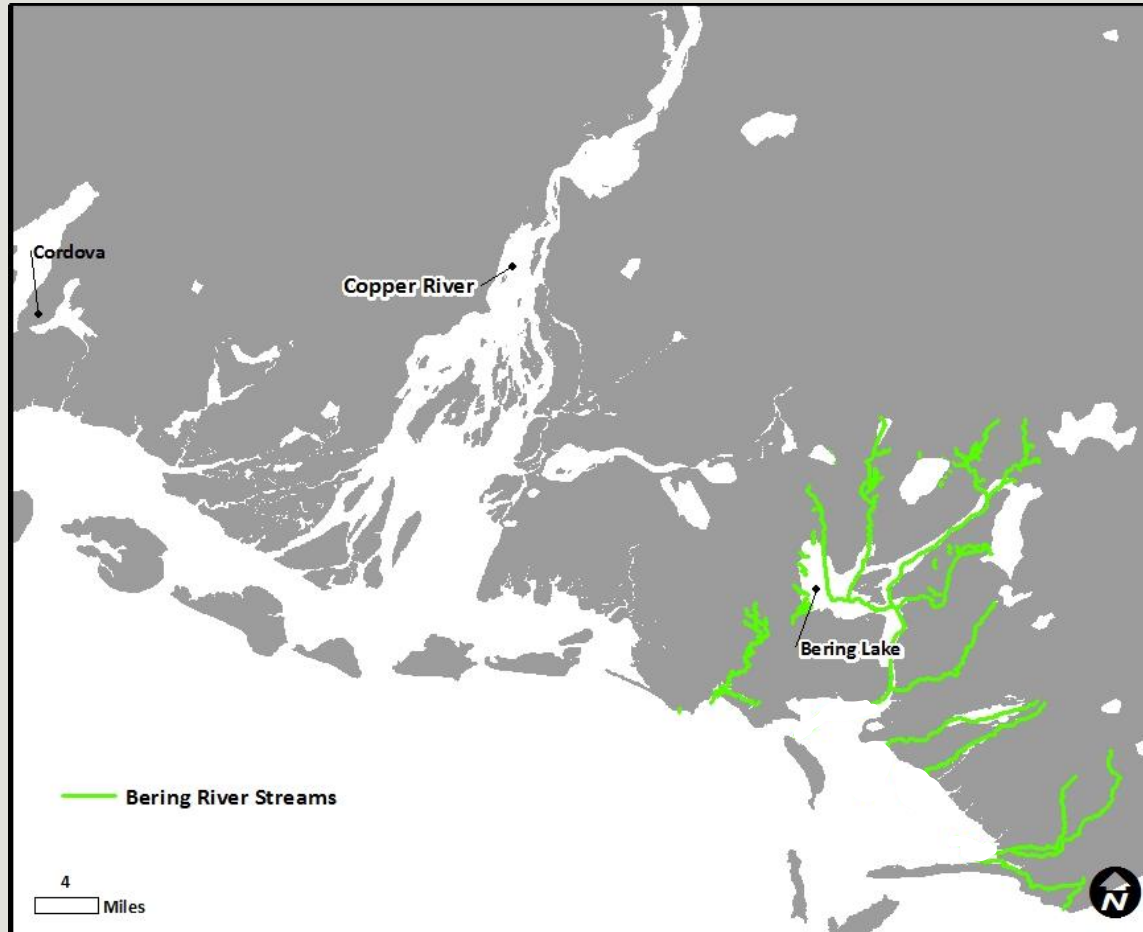
# Sockeye Salmon –

## Bering River District

Current SEG: 15,000 – 33,000

**Recommended SEG: 15,000 –24,000**

- High contrast (12.8), moderate, harvest rate (.27), high measurement error (aerial surveys)







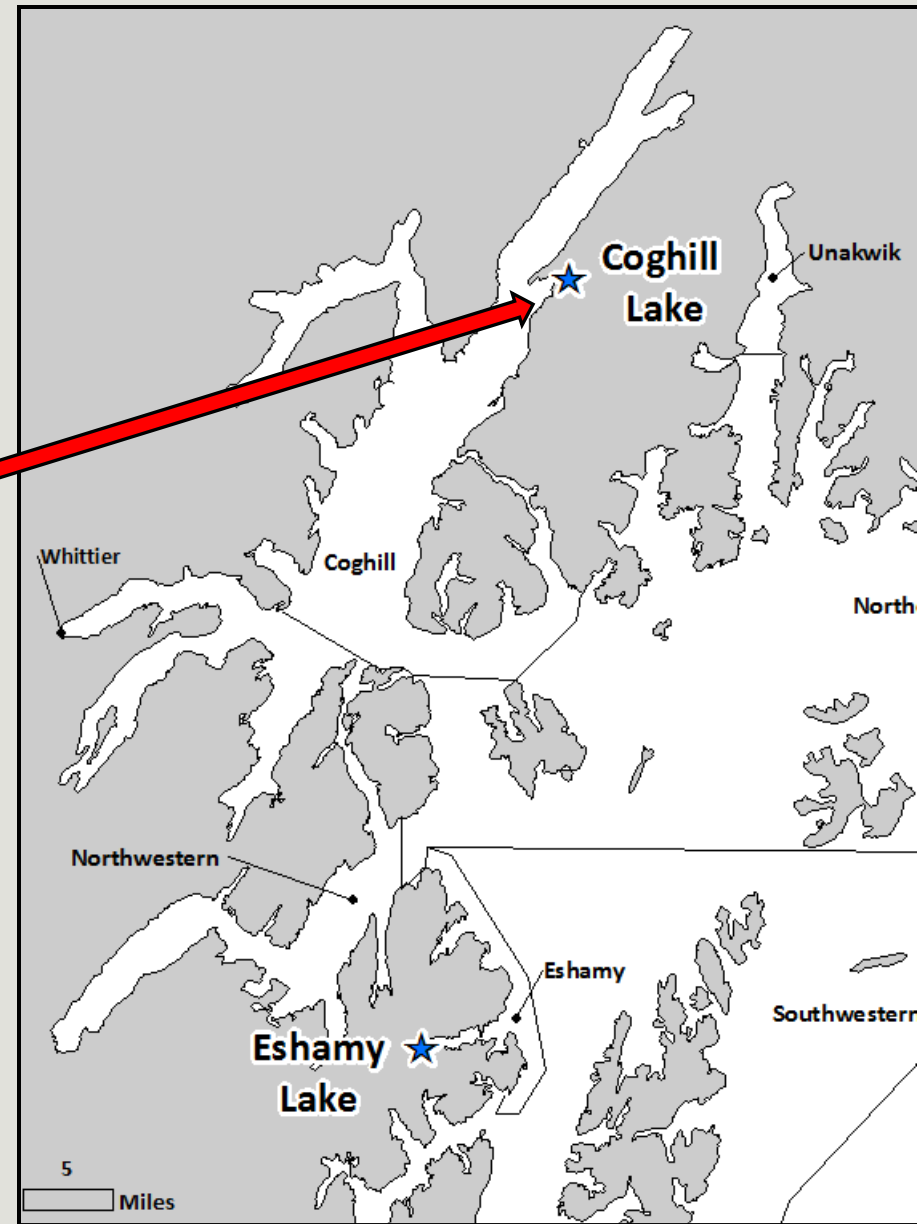
**Sockeye Salmon –**  
**Eshamy Lake - No Changes Recommended**  
**BEG: 13,000 – 28,000**

# Sockeye Salmon –

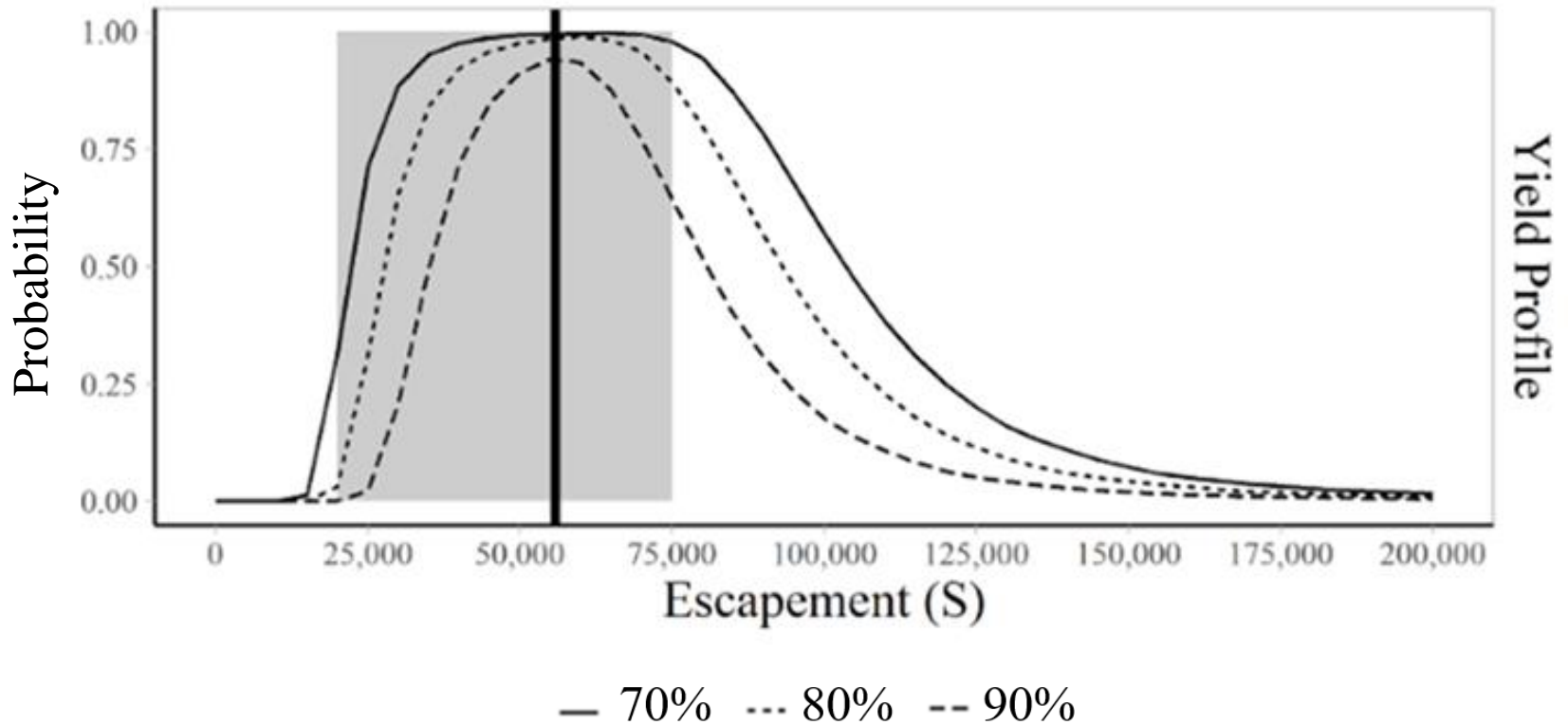
## Coghill Lake

Current SEG: 20,000 – 60,000

Recommended SEG: 20,000 – 75,000



## Coghill Sockeye Optimum Yield Profile



# Summary of Escapement Goals with Recommended Changes:

- King Salmon - Copper River  
Current LB SEG: 24,000  
Recommended SEG: **21,000 - 31,000**
- Coho Salmon - Copper River Delta  
Current SEG: 32,000 – 67,000  
Recommended SEG: 32,000 – **50,000**
- Coho Salmon - Bering River District  
Current SEG: 13,000 – 33,000  
Recommended SEG: 13,000 – **25,000**
- Sockeye Salmon – Bering River District  
Current SEG: 15,000 – 33,000  
Recommended SEG: 15,000 – **24,000**
- Sockeye Salmon – Coghill Lake  
Current SEG: 20,000 – 60,000  
Recommended SEG: 20,000 – **75,000**



# Questions?