



COPPER RIVER DISTRICT SALMON FISHERIES

**Presented to the Alaska Board
of Fisheries**

by

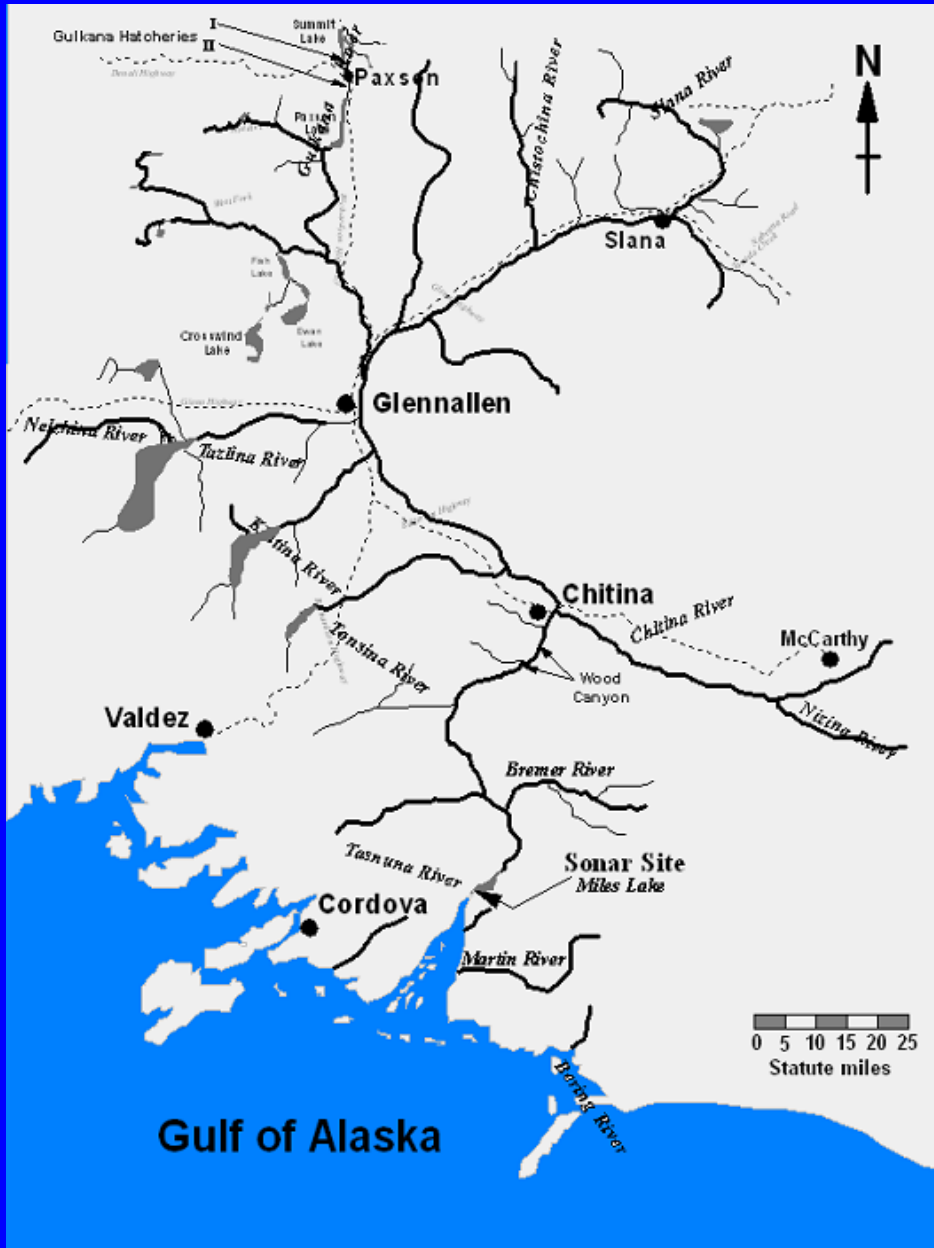
Glenn Hollowell, ADF&G



Presentation Overview

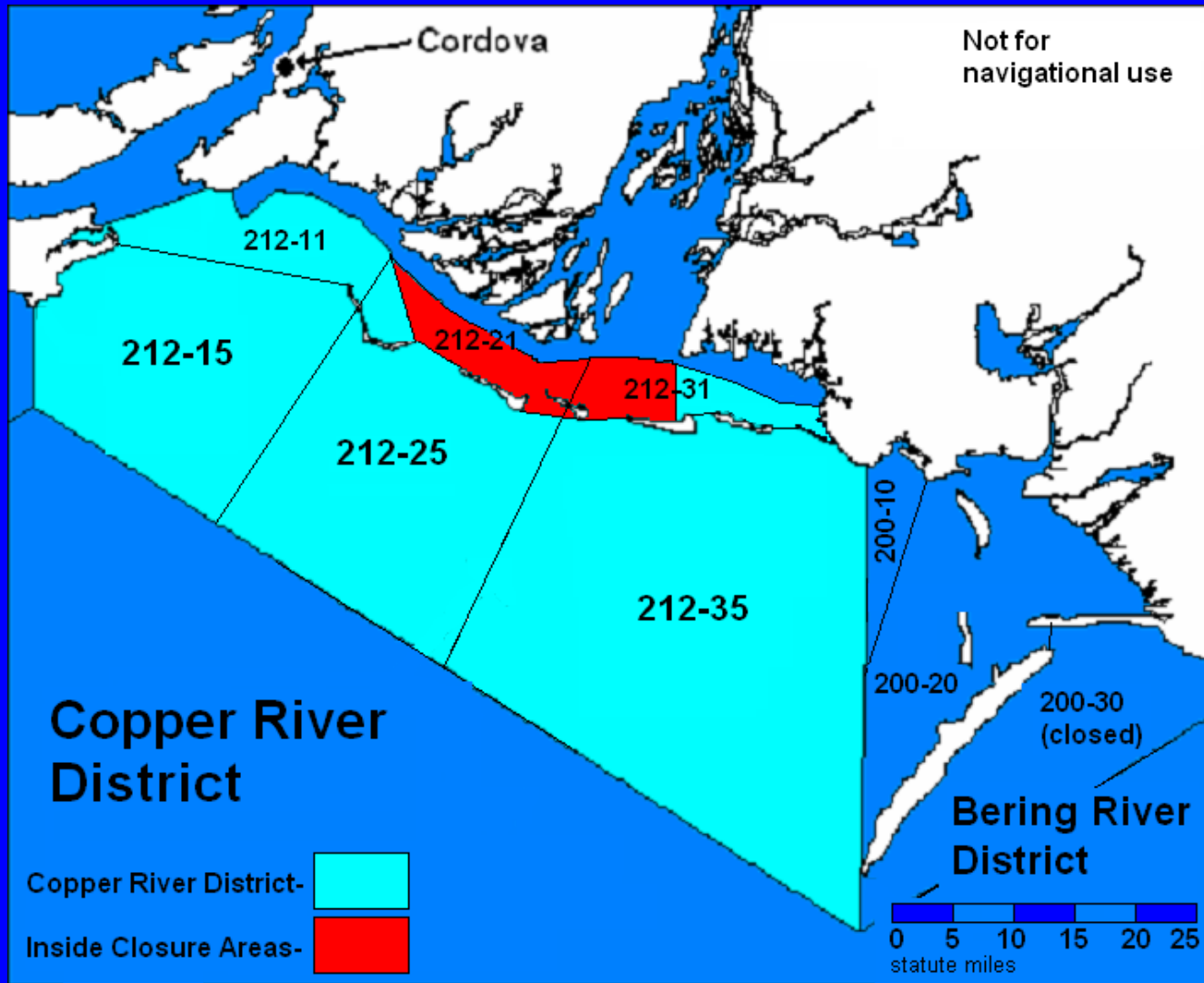
- Copper River Drainage and Commercial Districts Overview
- Fishery Assessment Tools and Methods Summary
- Copper River District Commercial Escapement and Harvest Levels
- Proposals Before the Board

Copper River Drainage



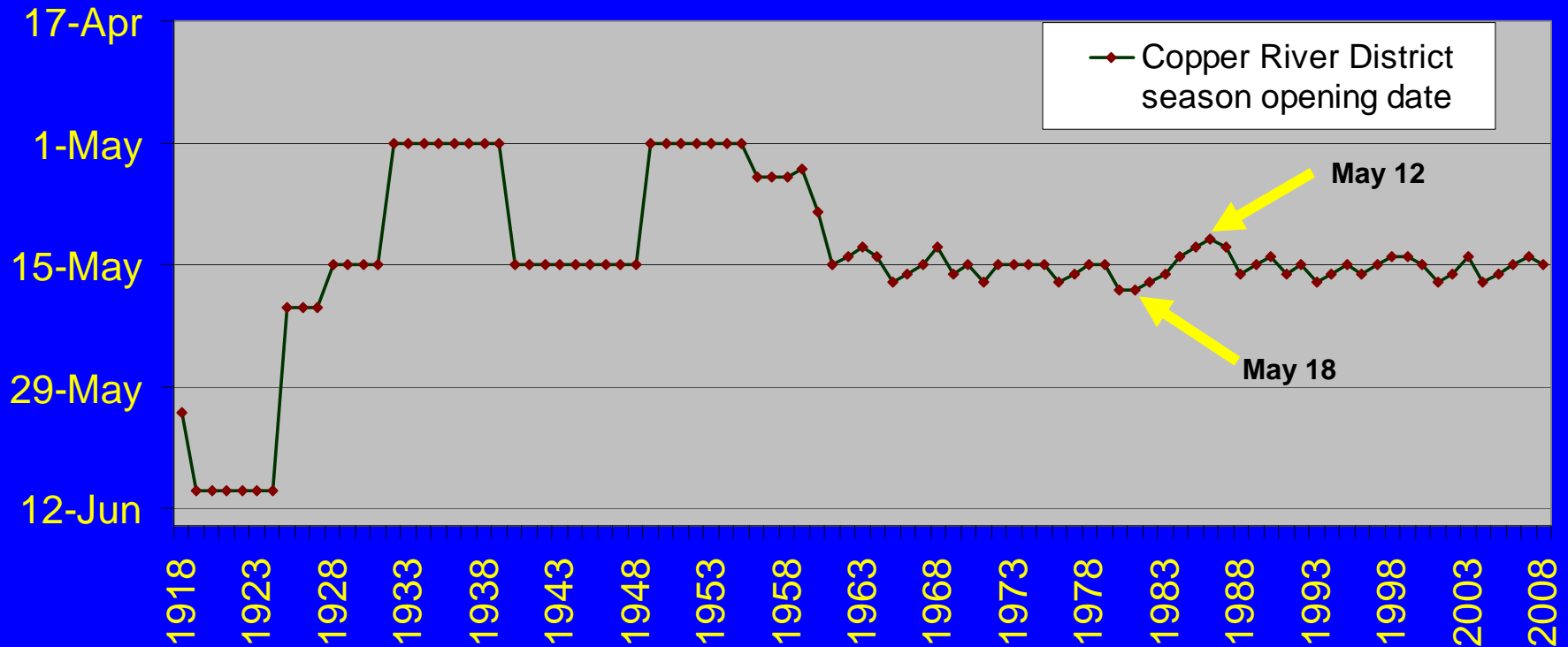
- Extends from Summit Lake to the Gulf of Alaska
- Has 11 major communities within its boundaries
- Encompasses over 24,000 square miles and is Alaska's fifth largest river system

Copper River District



- Is over 60 miles in length
- Contains 6 subdistricts, 3 are “inside areas” and 3 are “outside areas”
- Inside closures were first initiated in 1997 as a component of a user wide 5% reduction in Copper River Chinook salmon harvest mandated by the Alaska Board of Fisheries.

Copper River District Season Opening Date



Since statehood, the Copper River District has opened to subsistence and commercial fishing on about May 15



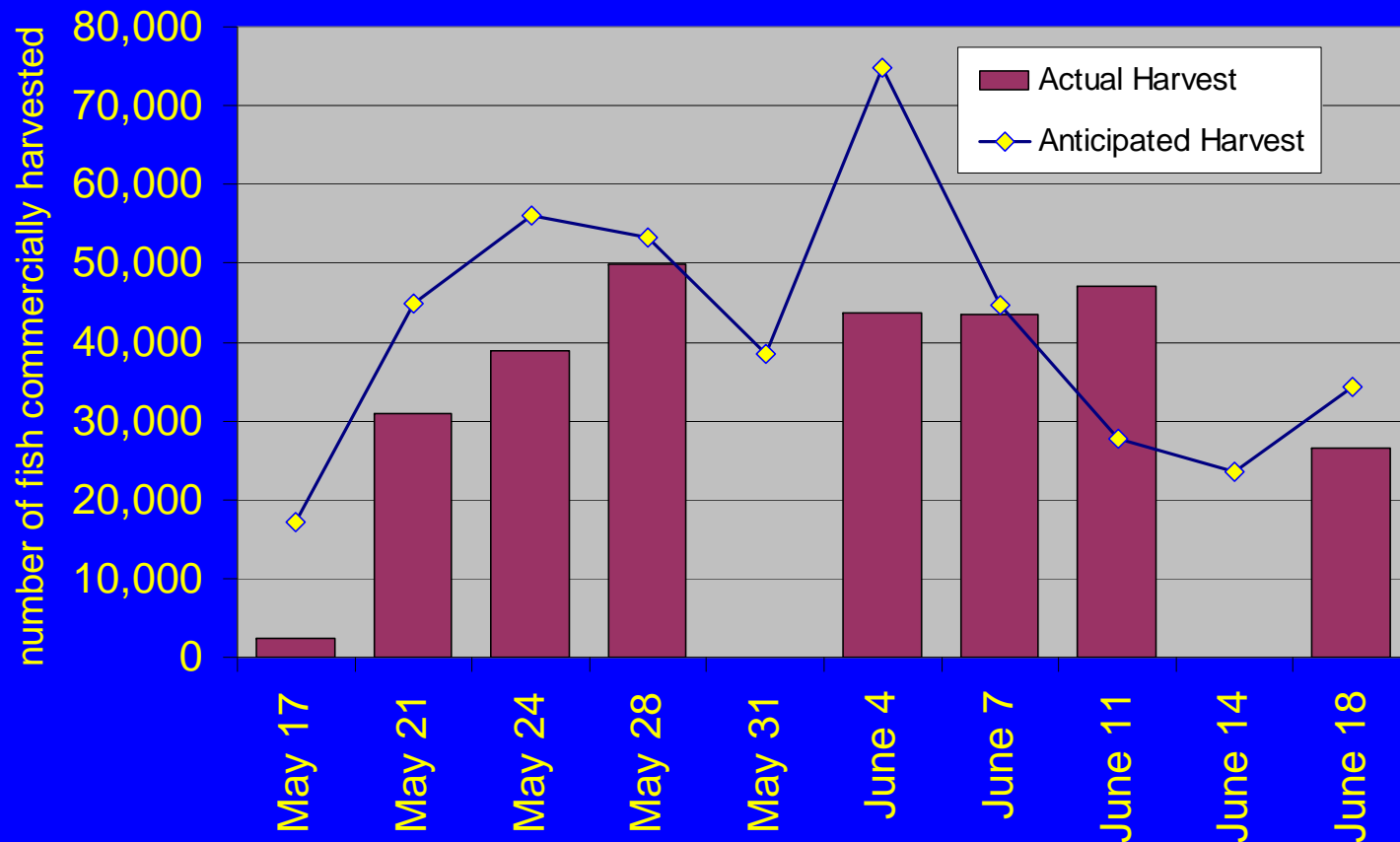
There Are 3 Primary Tools Used Inseason to Assess Fisheries in the Copper River District

These are:

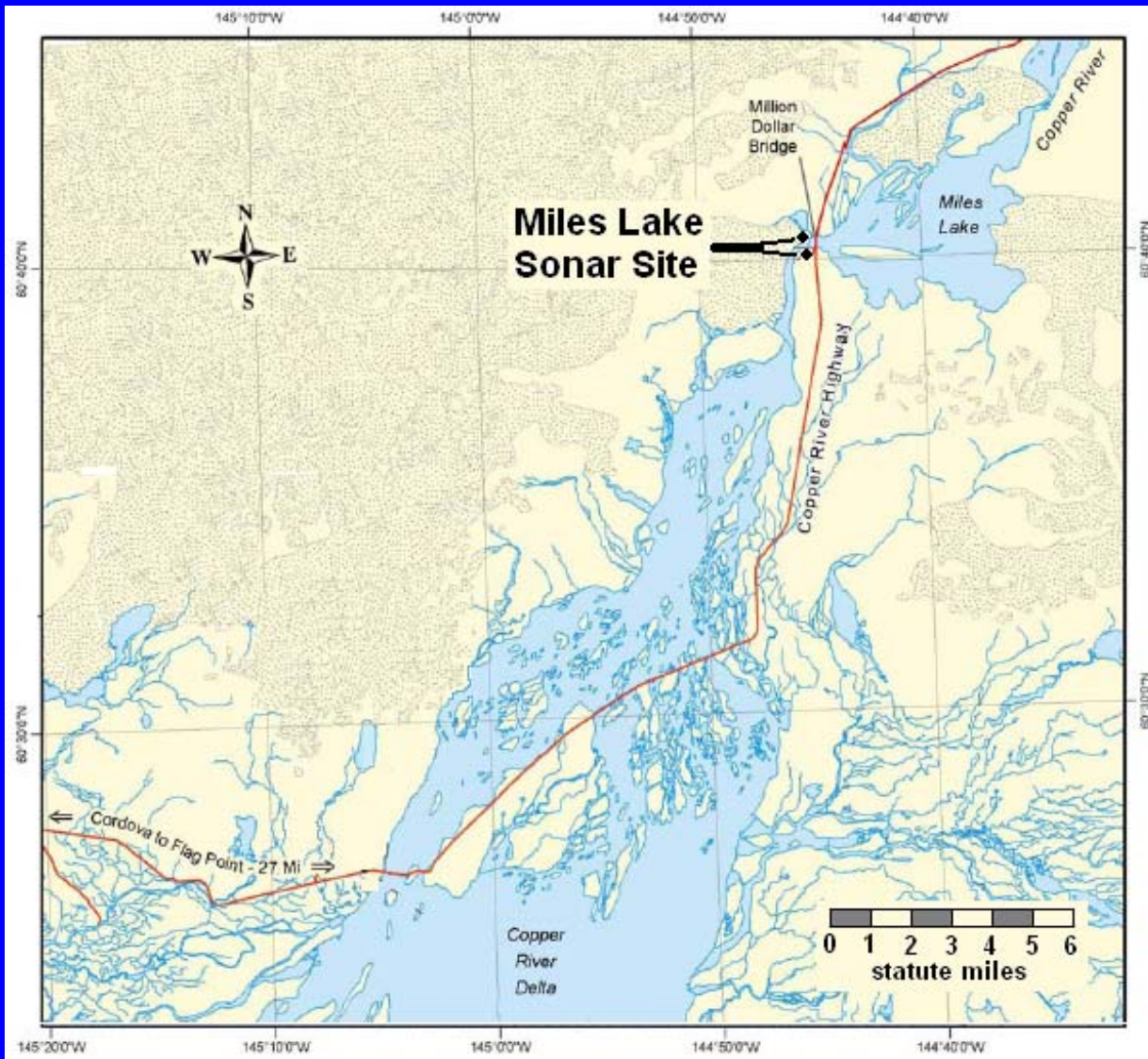
- Abundance Based Management (early season),**
- Sonar Counts from Miles Lake (early to mid-season),**
- Aerial Survey Estimates (mid to late season)**

ABUNDANCE BASED MANAGEMENT

2008 Anticipated vs Actual Semi-Weekly Sockeye Salmon Harvest



Miles Lake Didson Sonar



Miles Lake sonar operates from early May to early August.

The Miles Lake sonar is approximately 30 miles upstream of the commercial fishing district.

Typical travel time for salmon is 6-12 days and is dependent on river flow.



Miles Lake Sonar Site – South Bank

Old Bendix
facility

New Didson
facility

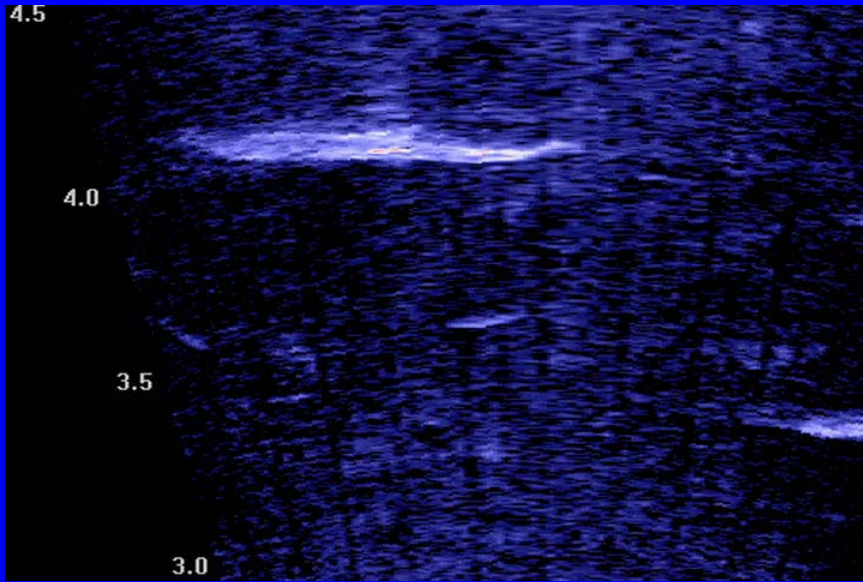


Didson Acoustical Lensing Sonar

(Dual-frequency IDentification SONar)



Didson Acoustical Lensing Sonar Image

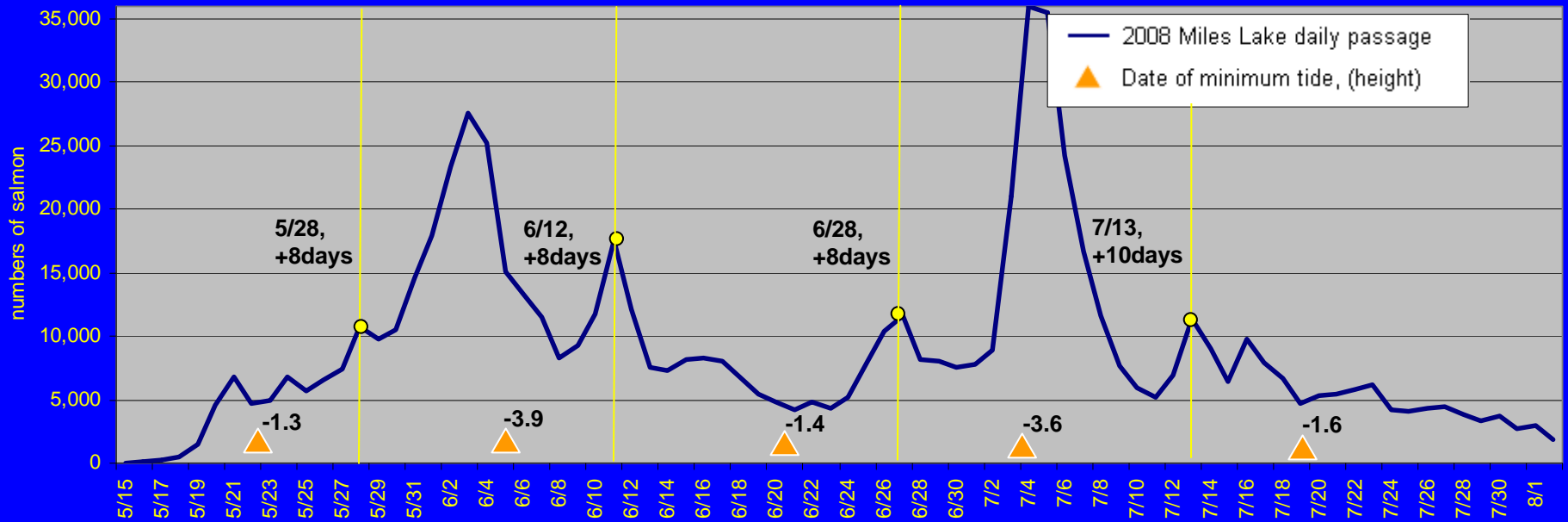


Didson Image



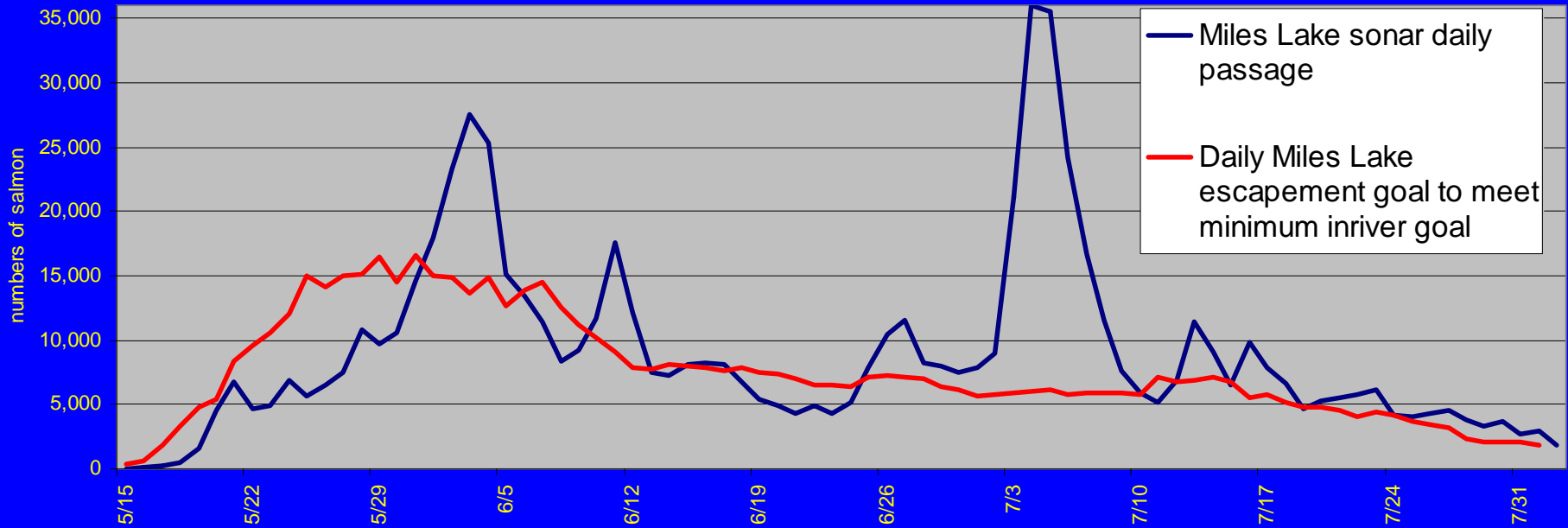
Bendix Image

Miles Lake Daily Sonar Numbers and Tides



Sonar passage is often correlated to tidal cycles with increased numbers of salmon counted 8-10 days after the lowest low water in a tidal series.

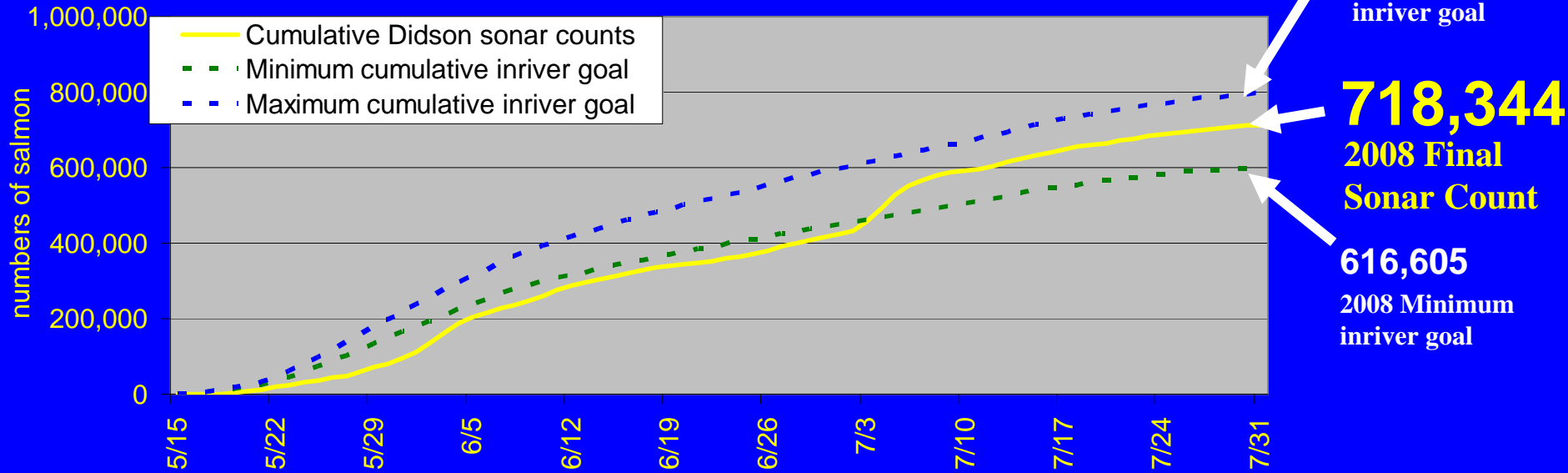
Miles Lake Daily Sonar Numbers



Salmon returns in 2008 were late and below anticipated levels.

The reduced level may have been related to the hot and dry summer of 2004 killing off 1-year old Chinook and sockeye salmon in freshwater.

Miles Lake Cumulative Sonar Numbers



Cumulative sonar counts in the first half of the 2008 Copper River return were below anticipated counts for those dates.



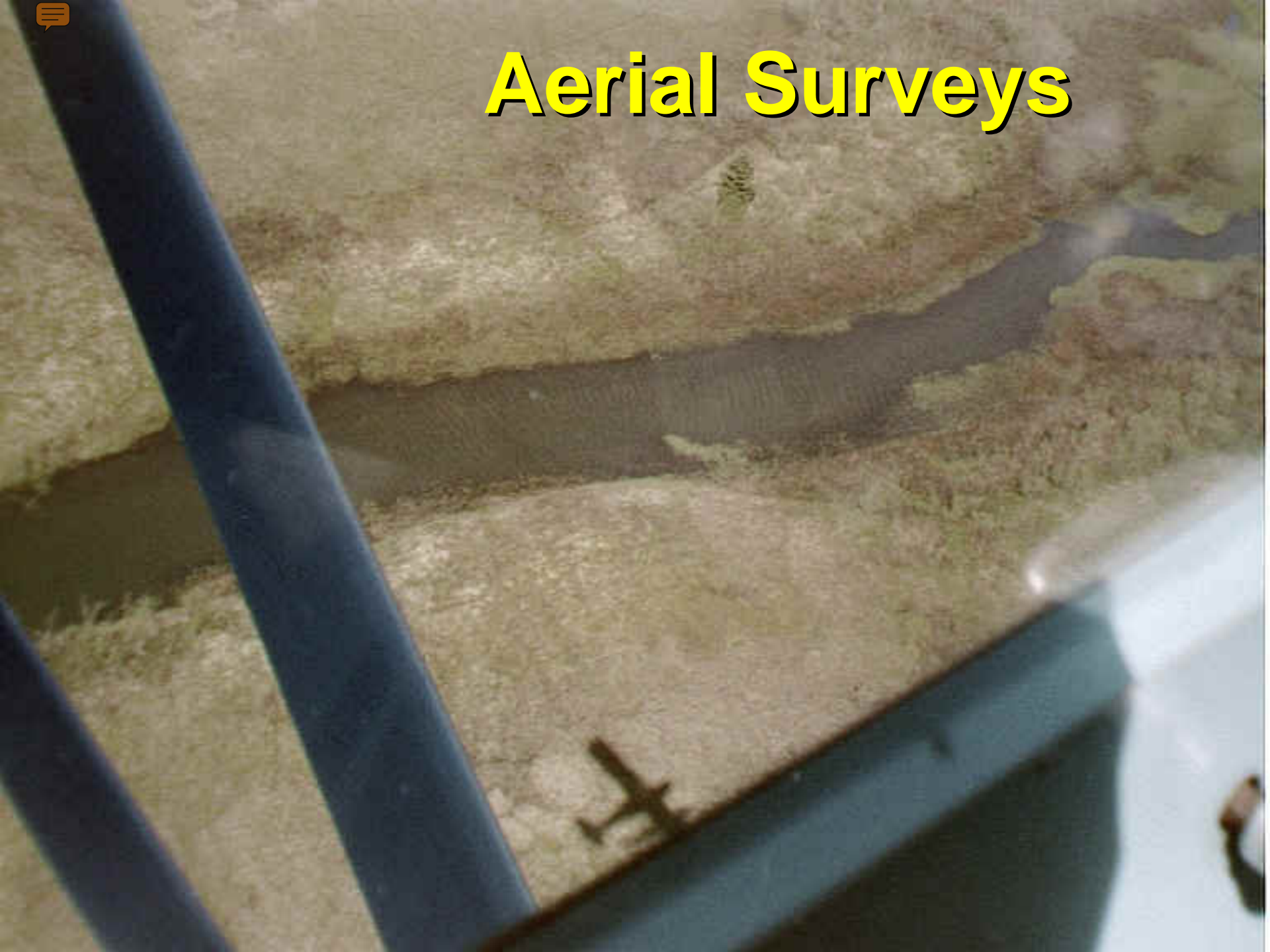
2008 INRIVER SONAR GOAL*

		<u>2008</u>
Spawning Escapement	300,000 Sockeye 17,500 Other Salmon	300,000-500,000 17,500
Glennallen Subsistence Chitina Personal Use	60-82,500 Salmon 100-150,000 Salmon	77,710 122,825
Sport Fishery	15,000 Salmon	15,000
Hatchery Brood (Sockeye Salmon)	Estimated Annually	20,000
Hatchery Surplus (Sockeye Salmon)	Estimated Annually	63,570
Total	Estimated Annually	616,605 – 816,605

*as specified in 5 AAC 24.360(b)



Aerial Surveys



An aerial photograph showing a wide, dark brown river delta flowing through a dense forest. The forest is composed of various types of trees, including tall evergreens and shorter deciduous trees. The river branches out into several smaller channels, creating a complex delta system. The overall scene is lush and green, with the dark water of the river providing a stark contrast to the surrounding vegetation.

Aerial Delta Surveys

Delta Escapement Goals

- Sockeye Salmon, SEG of 55-130 thousand (17 index systems)
 - Coho Salmon, SEG of 32-67 thousand (21 index systems)



Copper River Escapement and Harvest

- **Sockeye Salmon**
- **Chinook Salmon**
- **Coho Salmon**



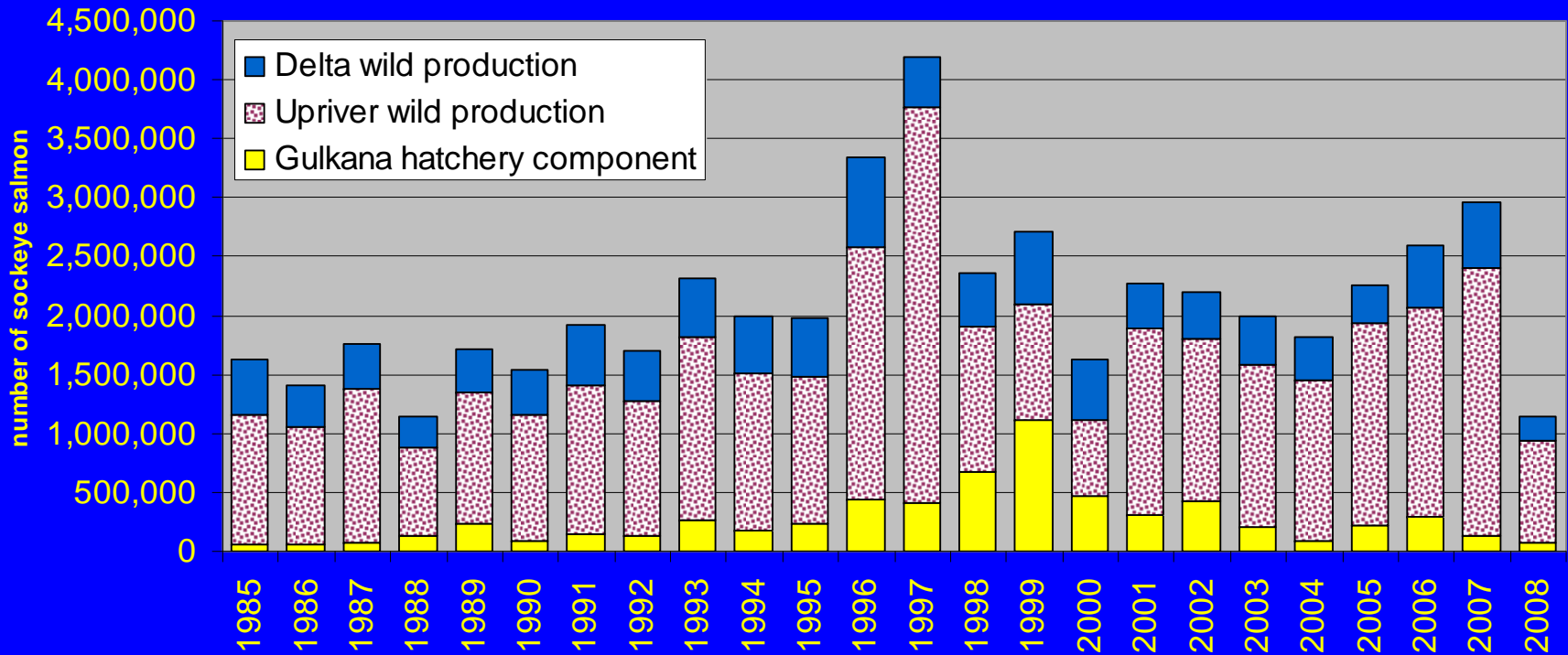
Copper River Escapement and Harvest

Sockeye Salmon

- Run origin
- Run destination
- Historic run comparison

Copper River Sockeye Salmon

...where do they come from?

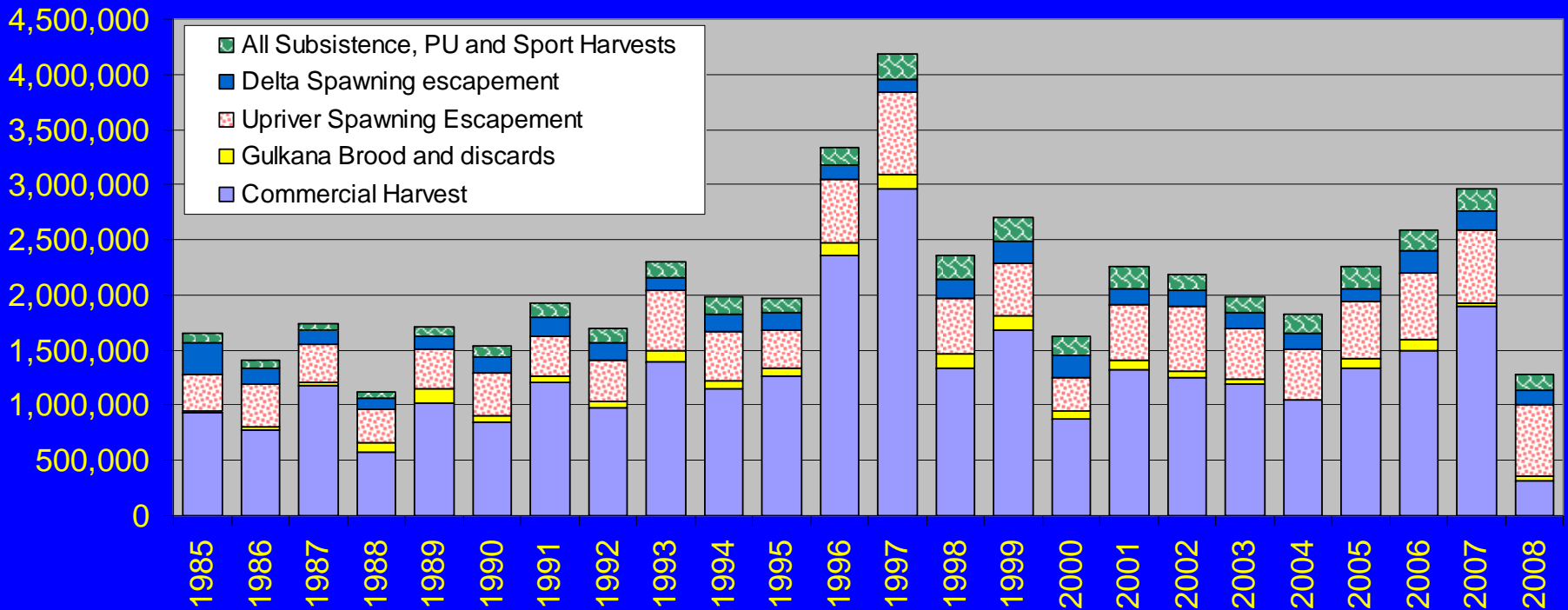


		<u>2008*</u>	<u>10 year average (98-07)</u>
Total Run	Upriver Wild Sockeye	863,415* (75.7%)	1,429,355 (62.7%)
“	Delta Wild Sockeye	201,409* (17.7%)	454,374 (19.9%)
“	Enhanced Sockeye	<u>76,090* (6.7%)</u>	<u>394,860 (17.3%)</u>
	Sum	1,140,914*	2,278,589

* 2008 harvest and escapement numbers are PRELIMINARY

Copper River Sockeye Salmon

...where did they go?



Of the **1.14** million sockeye salmon that returned to the Copper River in 2008,
28.1% were commercially harvested,
13.6% were harvested by subsistence, personal use and sport users,
42.5% went to upriver spawning escapement,
11.9% spawned on the Copper River Delta
and **3.9%** were used for hatchery brood stock and excess by PWSAC.



Copper River Sockeye Salmon: 2008 compared with the 10-yr average

	2008 harvest and escapement*	10-year average (1998-2007) harvest and escapement	2008 compared to 10-year average (1998-2007)
Commercial harvest	320,582* (28.1%)	1,344,291 (59.0%)	23.8%
All subsistence, personal use and sport harvests	155,212* (13.6%)	187,496 (8.2%)	82.8%
Gulkana brood and hatchery excess	44,499* (3.9%)	73,059 (3.2%)	60.9%
Delta spawning escapement	135,900* (11.9%)	164,288 (7.2%)	82.7%
Upriver spawning escapement	484,720* (42.5%)	509,455 (22.4%)	95.1%
Total return	1,140,914* (100.0%)	2,278,589 (100.0%)	50.1%

Copper River Sockeye Salmon: Meeting Escapement Goals

	2008 escapement	10-year average (1998-2007) escapement	2008 compared to 10-year average (1998-2007)
Delta spawning escapement	135,900*	164,288	82.7%
Upriver spawning escapement	484,720*	509,455	95.1%

Copper River Delta SEG is **110,000-260,000**.

Upriver sockeye SEG is **300,000-500,000**.

In 2008 both stocks were within SEG ranges.

Copper River Escapement and Harvest

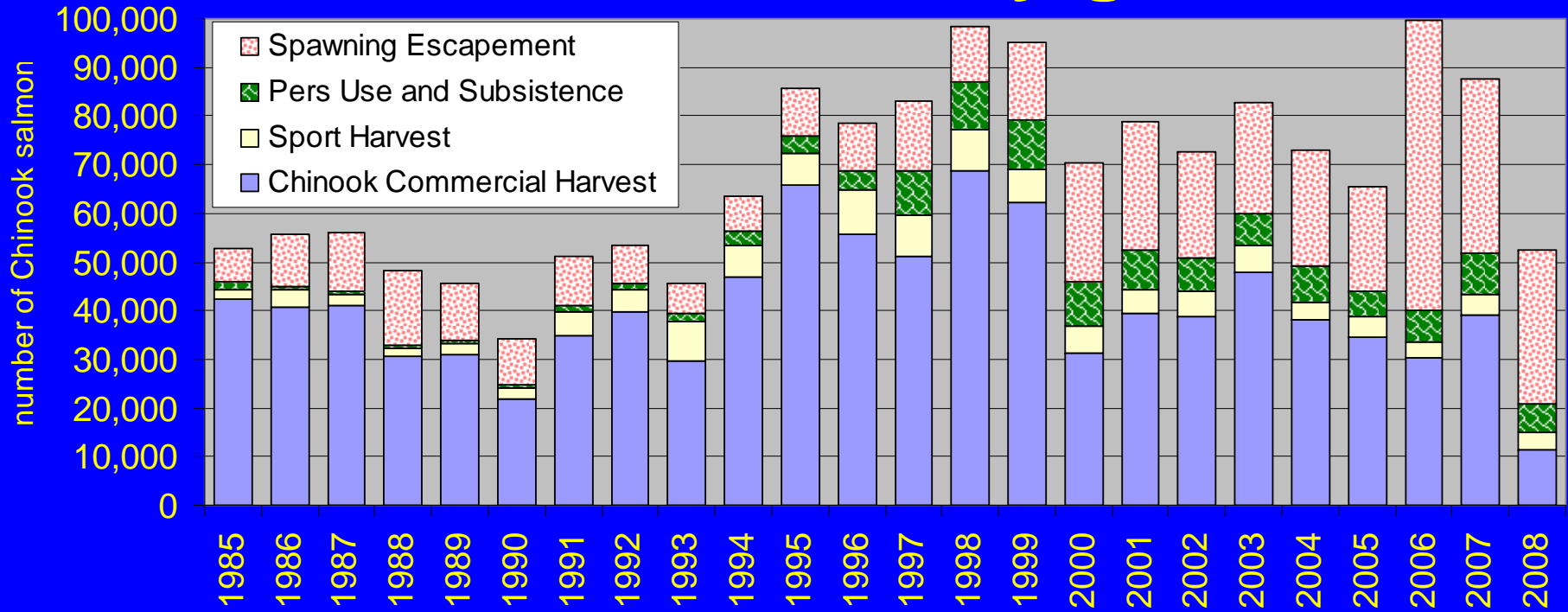


Chinook Salmon

- Run size and user group harvest
- Historic run comparison

Copper River Chinook Salmon

...where did they go?



Of the **52,649*** Chinook salmon that returned to the Copper River in 2008,
60.5% went to upriver spawning escapement
11.3% were harvested by personal use and subsistence users,
6.5% were sport harvested,
and **21.7%** were commercially harvested.



Copper River Chinook Salmon: 2008 compared with the 10-yr average

	2008 harvest and escapement		10-year average (1998-2007) harvest and escapement		2008 compared to 10-year average (1998-2007)
Commercial Harvest	11,437*	(21.7%)	43,059	(52.2%)	26.6%
Personal use and subsistence harvest	5,925*	(11.3%)	7,823	(9.5%)	75.7%
Sport harvest	3,444*	(6.5%)	5,154	(6.3%)	66.8%
Spawning escapement	31,843*	(60.5%)	26,375	(32.0%)	120.7%
Total return	52,649*	(100.0%)	82,411	(100.0%)	63.9%



Copper River Chinook Salmon: Meeting the Escapement Goal

	2008 Escapement*	10-year average (1998-2007) Escapement	2008 escapement compared to 10- year average (1998-2007)
Spawning escapement	31,843*	26,375	120.7%

Copper River Chinook salmon SEG is **24,000 or more**

In 2008 Chinook escapement was within the SEG range.

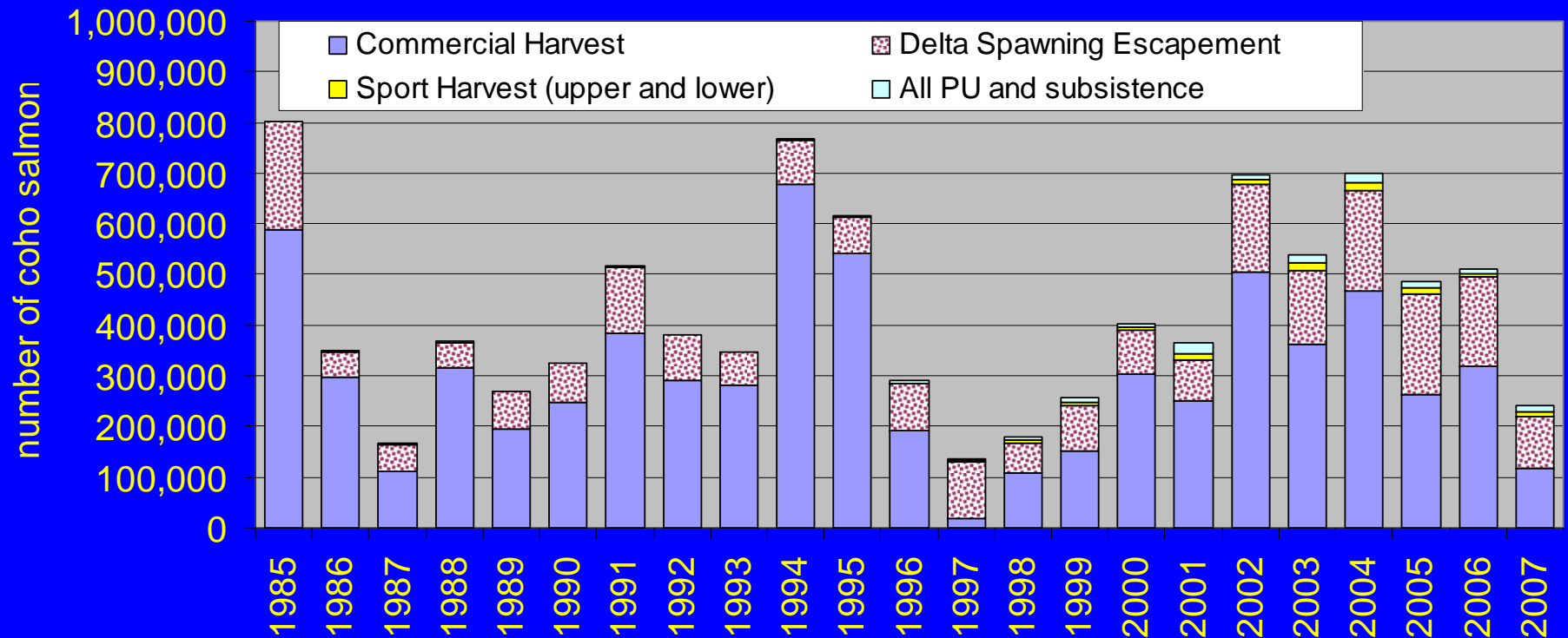
Copper River Escapement and Harvest



Coho Salmon

- Run size and user group harvest
- Historic run comparison

Copper River Coho Salmon



Of the **382,213*** coho salmon that returned to the Copper River in 2008,
53.0% were commercially harvested.
3.5% were harvested by personal use and subsistence users,
an estimated **3.3%** were sport harvested,
and **40.2%** went to spawning escapement



Copper River Coho Salmon: 2008 compared with the 10-yr average

	2008 harvest and escapement	10-year average (1998-2007) harvest and escapement	2008 compared to 10-year average (1998-2007)
Commercial Harvest	202,621* (88.7%)	285,221 (93.0%)	71.0%
Personal use and subsistence harvest	13,336* (5.8%)	12,471 (4.1%)	106.9%
Sport harvest	12,471* (5.5%)	9,027 (2.9%)	138.2%
Spawning escapement	153,784* (67.3%)	131,166 (42.8%)	117.2%
Total return	382,213* (100.0%)	437,885 (100.0%)	87.3%



Copper River Coho Salmon: Meeting the Escapement Goal

	2008 Escapement*	10-year average (1998-2007) Escapement	2008 compared to 10-year average (1998- 2007)
Spawning escapement	153,784*	131,166	117.2%

Copper River delta SEG for coho salmon is **64,000-134,000**.



PROPOSALS (16)

- **(2) gear requirements,**
- **(4) fishing area,**
- **(3) Copper River District Salmon Management Plan,**
- **(4) Copper River King Salmon Management Plan,**
- **(3) Commercial Users Harvest of Homepack and Subsistence Salmon.**



Thank You For Your Time.



Questions or Comments?



Gear Requirements, (2 proposals)

- **#121 would prohibit use of gaffs and dipnets to land king salmon caught in drift gillnets,**
- **#122 would require buoys on commercial drift gillnets to be marked with letters 4” high x 1” wide.**



Fishing Area Adjustments, (4 proposals)

- **#123 would adjust Inside Closure area to match the current position of the islands that define that area,**
- **#124 and 125 would open the south side of Kayak Is. to commercial drift gillnet,**
- **#61 would open the southeast side of Montague and Hinchinbrook Is. to commercial drift gillnet.**



Copper River District Salmon Management Plan, (3 proposals)

- **#126** revise inriver sonar goals,
- **#127** remove obsolete reference to the subsistence component of the inriver goal,
- **#128** delay commercial fishing until 5,000 fish are counted by the sonar.



Copper River King Salmon Management Plan, (4 proposals)

- **#129 increase the SEG for king salmon,**
- **#130 increase the number of fishing periods in the Inside Closure Area to 3 periods in weeks 20 and 21,**
- **#131 limit fishing in the Inside Closure Area in weeks 22 and 23 to one period per week,**
- **#132 repeal Inside Closure requirement in weeks 20 and 21.**



Commercial Users Harvest of Homepack and Subsistence Salmon, (3 proposals)

- **#118 Restrict the commercial activity of participants in a subsistence fishery.**
- **#119 Prohibit retention of Chinook salmon from a commercial harvest for home use,**
- **#120 Repeal 5AAC 24.356 Chinook salmon reporting requirement.**