

NISGA'A FISHERIES PROGRAM 2009

The Nisga'a Approach to Salmon Management



DFO – POST SEASON REVIEW MEETING
4 DECEMBER 2009

Healthy Stocks and Sustainable Fisheries !

Nisga'a Fisheries Program 1992-2009

18th year of program



Dedication



Hands on Stock Assessment



Team Work



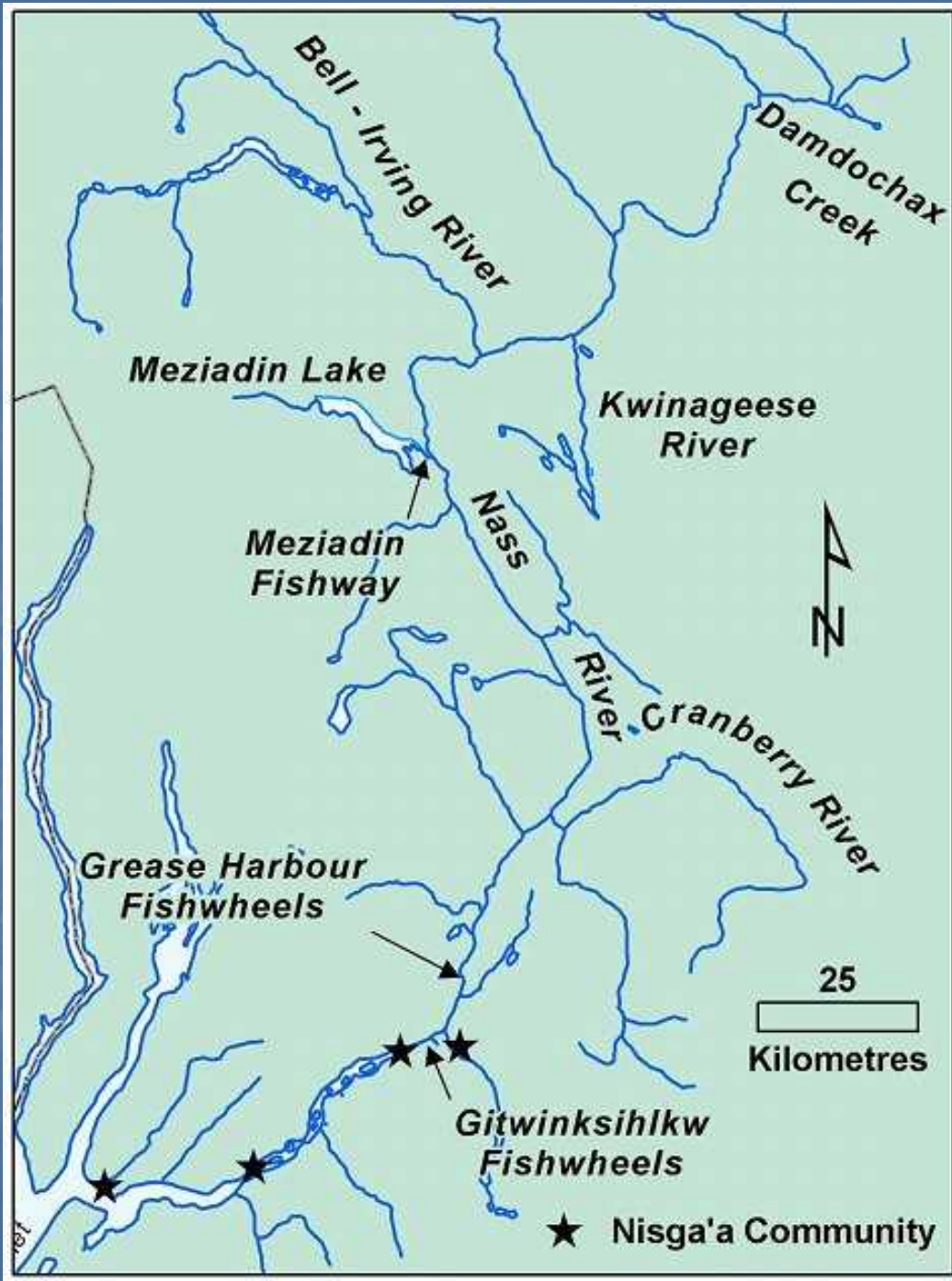
Leadership

CURRENT CORE PROGRAM PRIORITY ACTIVITIES

- Monitoring of Nass salmon escapement
- Monitoring of harvests in Nisga'a fisheries
- Determination of factors limiting the production of Nass salmon and non-salmon species
- Nisga'a capacity building (training)



Project activities - 2009



Assessment Programs:

- Fishwheel & Meziadin Program (NLG Funded)**
- Gingit Creek Sockeye AUC Surveys (DFO)**
- Damdochax Creek Sockeye Enumeration (DFO)**
- Kwinageese River Sockeye Enumeration (NLG Funded)**
- Upper Nass Chinook Escapement Surveys (DFO Funded)**
- Upper Nass Chinook Sentinel Program –Biometrics & Kwinageese Weir (PSC Funded)**
- Lower Nass Coho AUC Surveys (NLG Funded)**
- Kincolith Chinook Mark-recapture – (SEP Funded)**
- Lower Nass Chum DNA and habitat monitoring (NLG Funded)**

Catch Monitoring:

- Salmon Catch (NLG Funded)**
- Sale Fishery Marine Patrols (NLG Funded)**
- Abalone Patrols (Habitat Stewardship Protection Program)**
- Eulachon Catch (NLG Funded)**
- Kincolith River Sport Catch Monitoring (NLG Funded)**

Training:

- MED3 & SVOP Training (NLG Funded)**

Habitat Programs & Other:

- Kincolith Hatchery Revitalization Project (SEP)**
- Biotoxicity Program (DFO Funded)**
- Food fish and IS sale permitting**
- Marine Conservation Youth Program (HSP Funded)**

ACKNOWLEDGEMENTS OF STAFF

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Eve Leeson

Upper Nass Chinook Surveys

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Leonard Squires

Fishwheels

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Simon Guno
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Isaac Guno
Ben Munroe
Brian Adams
Niva Percival
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Gary Gonu
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Wildlife & Marine Mammal Studies

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Ben Gonu Jr (Grizzly)
Isaac Guno (Grizzly)

Lower Nass Coho Studies

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Ben Gonu Jr.
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Brian Adams
Gary Gonu

Sockeye Studies

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Ben Munroe
Andrew Nyce
Tim Angus
Wade Kennedy (Meziadin)

Kwinageese Weir

April Angus
Leonard Squires
Simon Haldane
Andrew Nyce
Reggie Robinson
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Kincolith Hatchery

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Charlie Max Lincoln
George Stevens
April Angus
Leonard Squires
Terry Morven

Marine Patrol & Biotoxin Studies

Alfred McKay
William McKay
Max Lincoln

Abalone/Eulachon

Nicole Morven
Bertram McKay
Rebecca McMillan



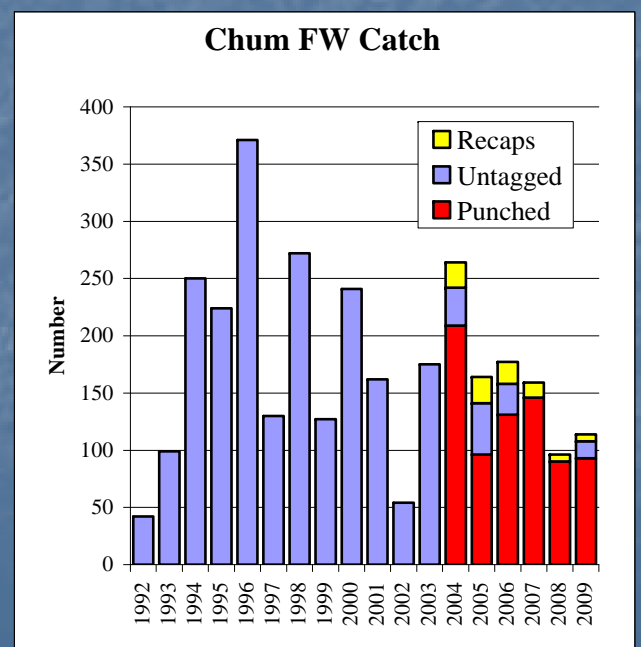
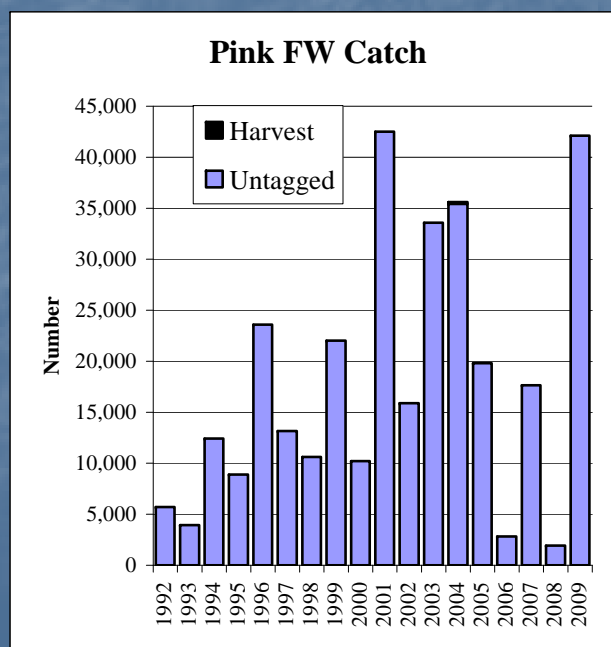
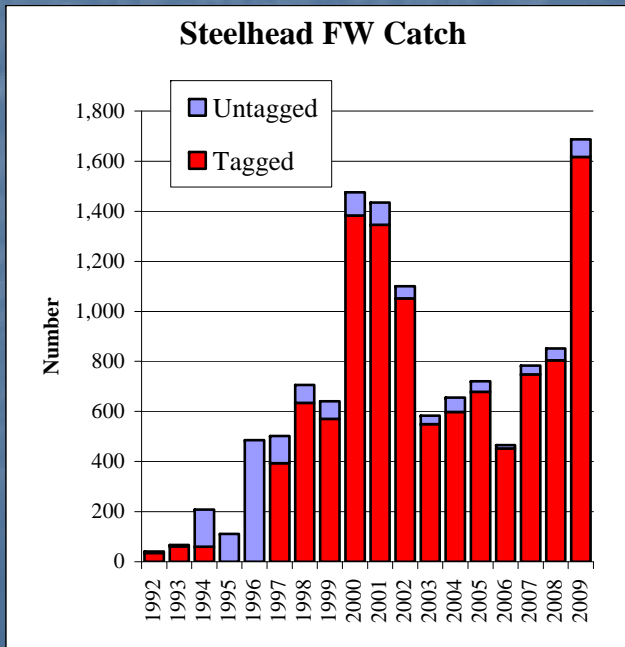
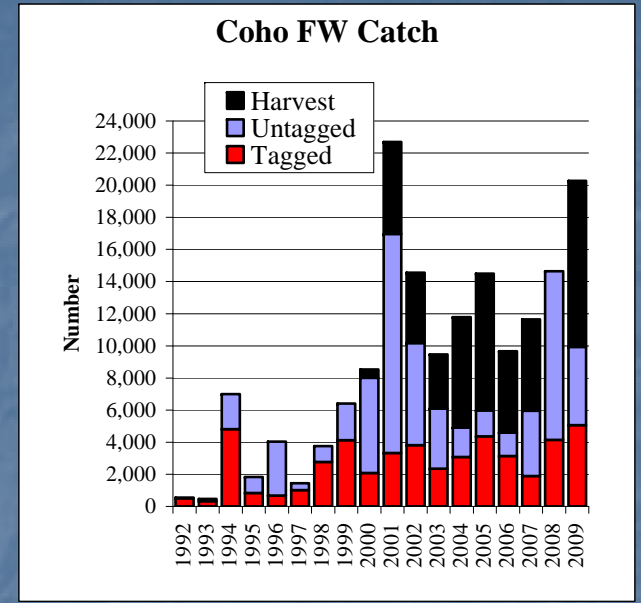
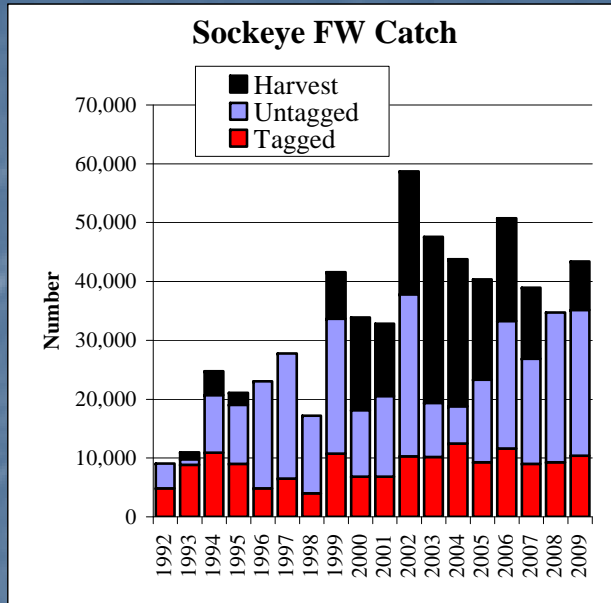
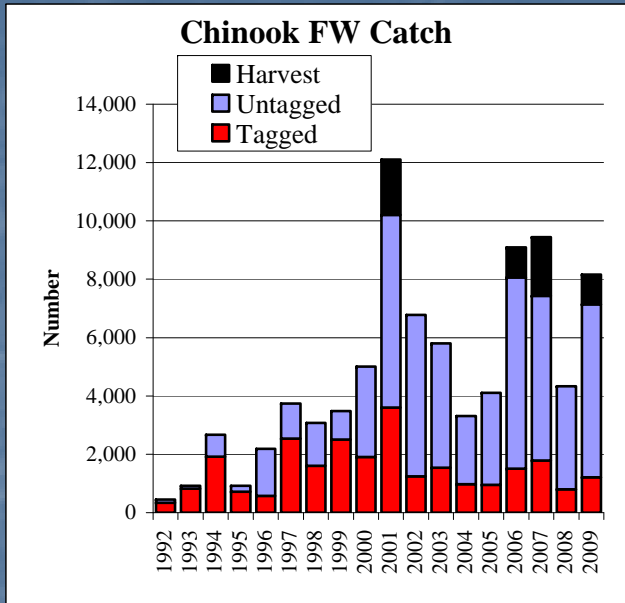


Nass Fishwheel Salmon Catches 2009

Numbers of each species of salmon caught and tagged at six fishwheels on the Nass River, 1 June to 12 September 2009.

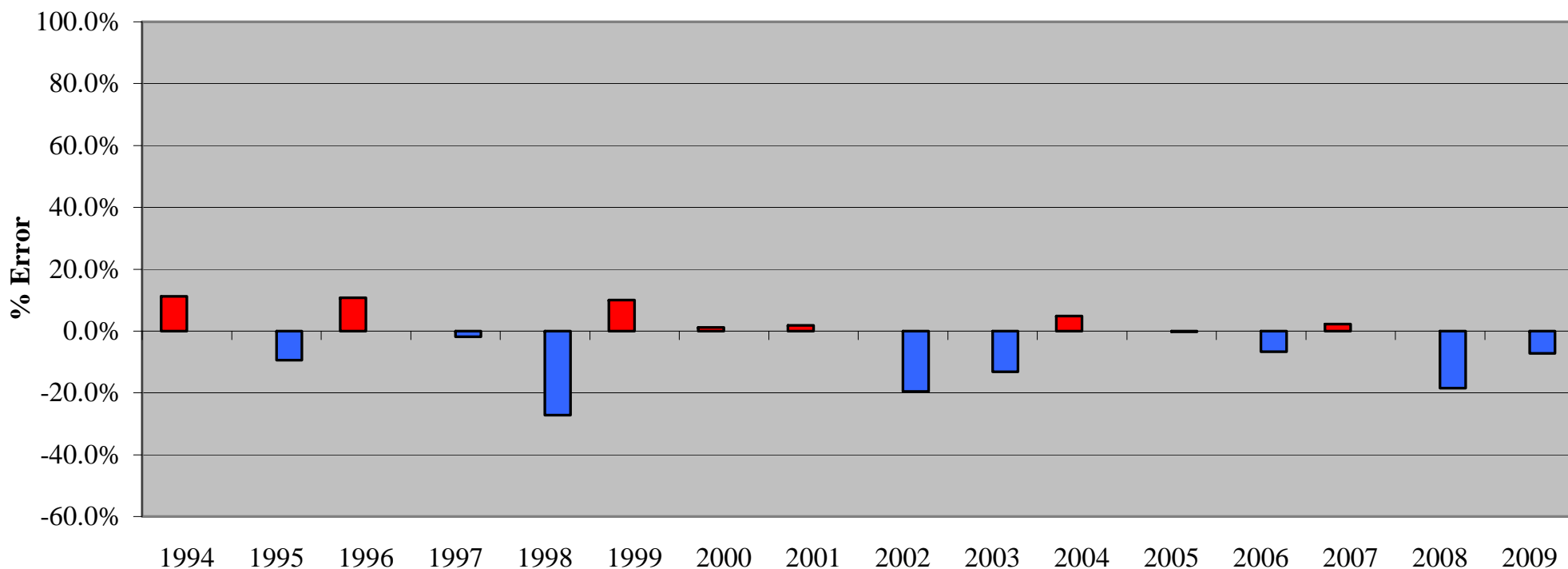
Location	Chinook			Sockeye			Coho			Steelhead		Pink	Chum
	Catch			Catch			Catch			Catch	Tagged or	Catch	Catch
	FW	Adults ^a	Jacks	Tagged	Adults ^a	Jacks	Tagged	Adults ^a	Jacks	Tagged	Adults ^a	punched	Adults
Gitwinksihlkw (GW)													
1	340	29	309	4,888	795	3,209	3,166	63	2,557	52	49	11,453	25
2	993	89	904	10,498	1,576	7,184	3,182	86	2,502	410	393	12,551	49
sub-total	1,333	118	1,213	15,386	2,371	10,393	6,348	149	5,059	462	442	24,004	74
Grease Harbour (GH)													
3	1,519	151	0	6,518	1,183	0	1,339	82	0	104	97	3,436	10
4	185	40	0	4,229	1,618	0	2,719	106	0	120	111	3,309	4
5	2,439	162	0	10,796	2,903	0	6,534	233	0	521	507	8,179	17
6	1,660	147	0	6,497	2,079	0	3,330	129	0	481	460	3,192	3
sub-total	5,803	500	0	28,040	7,783	0	13,922	550	0	1,226	1,175	18,116	34
Grand Total	7,136	618	1,213	43,426	10,154	10,393	20,270	699	5,059	1,688	1,617	42,120	108

Nass Fishwheel Salmon Catches – 1992 to 2009



Nass River Sockeye Test Fishery

Annual Error using Historical Catch Indices & Mark-recapture Techniques at
Gitwinksilkw Fishwheels - 1994-2009



2009:

Post- Season Estimate	Sockeye	Chinook	Coho
Run size estimate to Gitwinksilkw (GW) fishwheels	280,161	31,781	227,951
<i>In-season estimate to GW fishwheels</i>	<i>259,981</i>	<i>23,879</i>	<i>166,277</i>
<i>% Difference of in-season to post-season</i>	<i>-7%</i>	<i>-25%</i>	<i>-27%</i>
Net Escapement Estimate Above Gitwinksihlkw	243,826	28,038	215,898

SUMMARY OF NISGA'A FISHERIES SALMON ASSESSMENT DATA: 2009

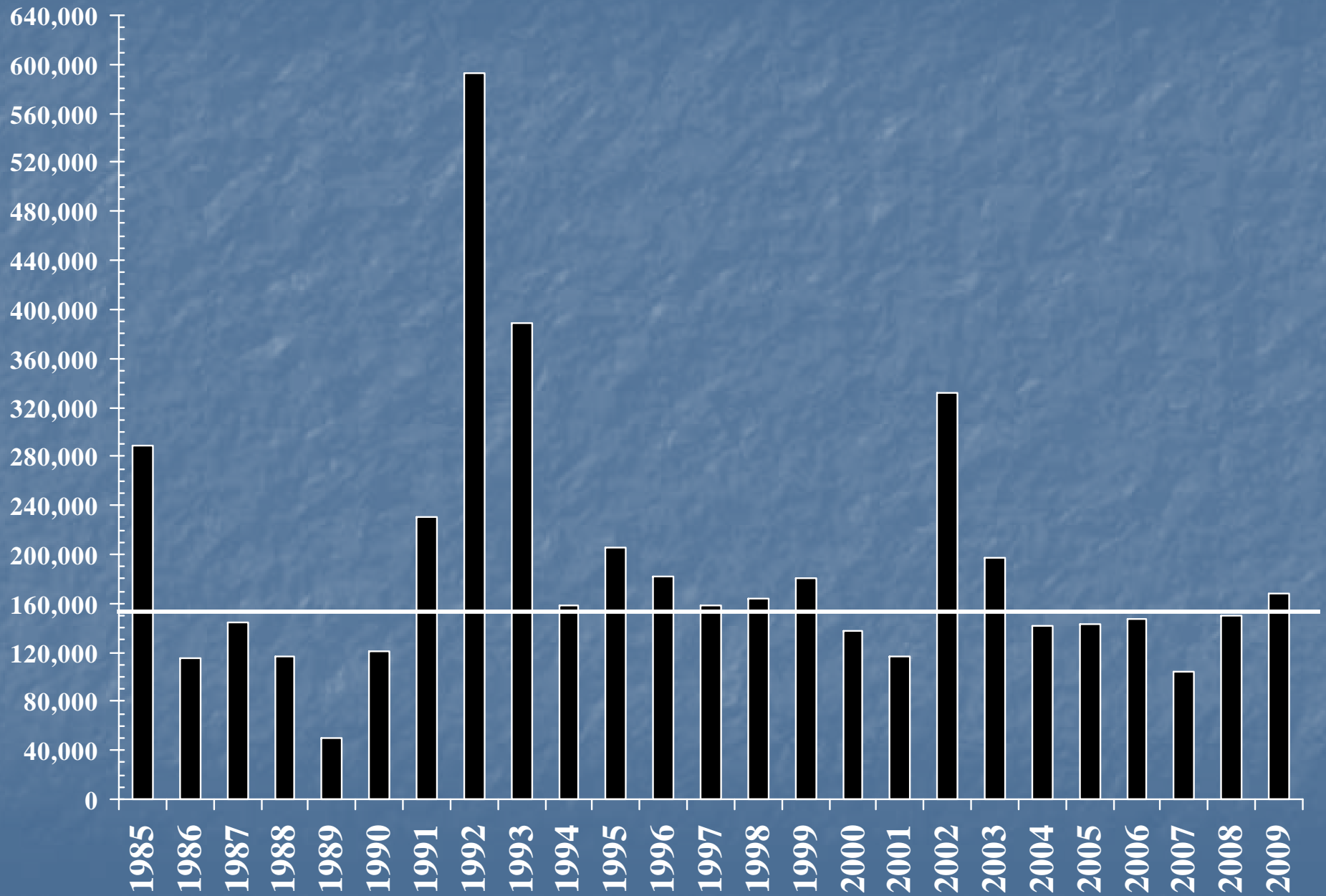
Area							Summer
System	Method	Sockeye	Chinook	Coho	Chum	Pink	Steelhead
Meziadin	Fishway count	168,404	339	5,430	0	0	18
Kwinageese	Weir count	105	910	62	0	0	35
Kwinageese	NF survey	100	764	58			
Tseax	NF survey				12	296	
Gingit	AUC Estimate	9,314					
Zolzap	NF surveys			2070			
Ansedegan	NF surveys			1180			
Ginlulak	NF surveys			880			
Diskangieq	NF surveys			5300			
Ksedin	NF survey				51	2,989	

Meziadin Fishway

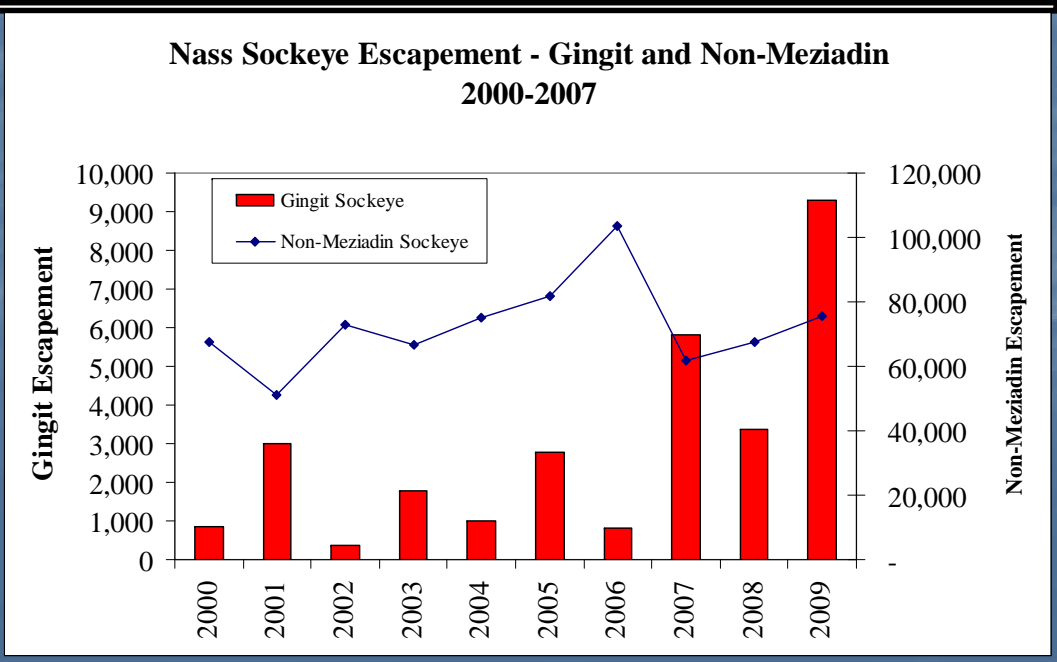
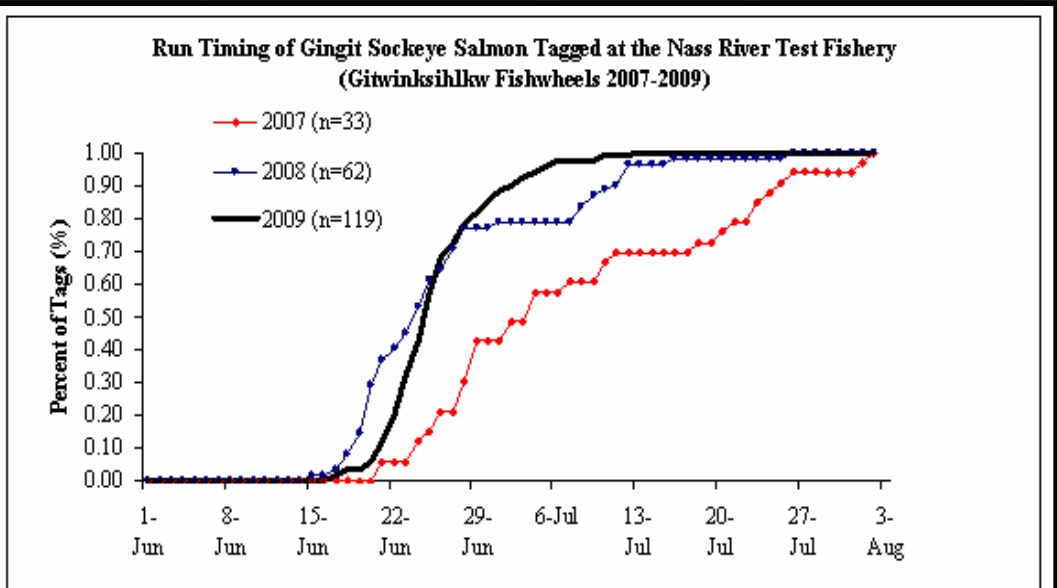


MEZIADIN ADULT SOCKEYE RETURN 2009 – 166,847

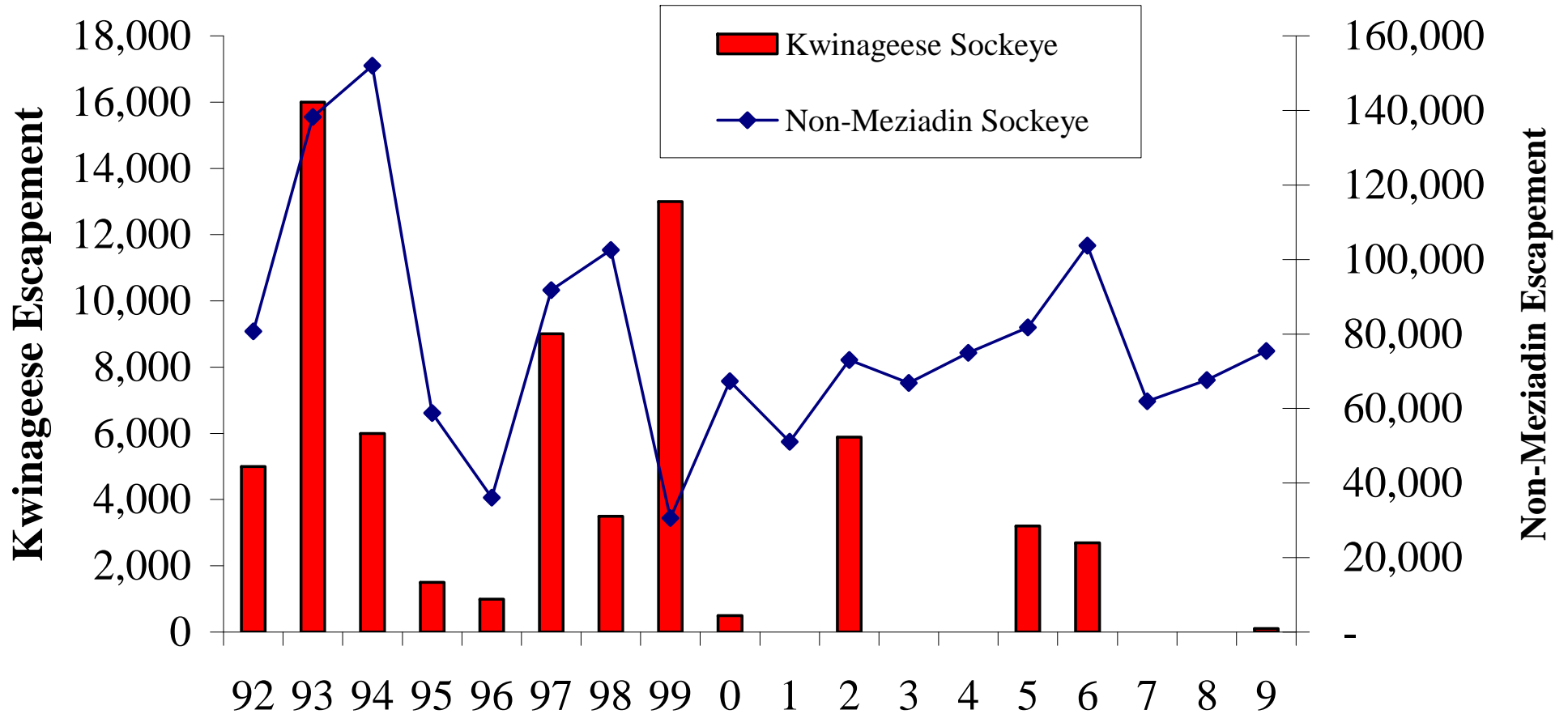
(Escapement goal – 160,000)



Non-Meziadin Sockeye Research – Gingit Creek

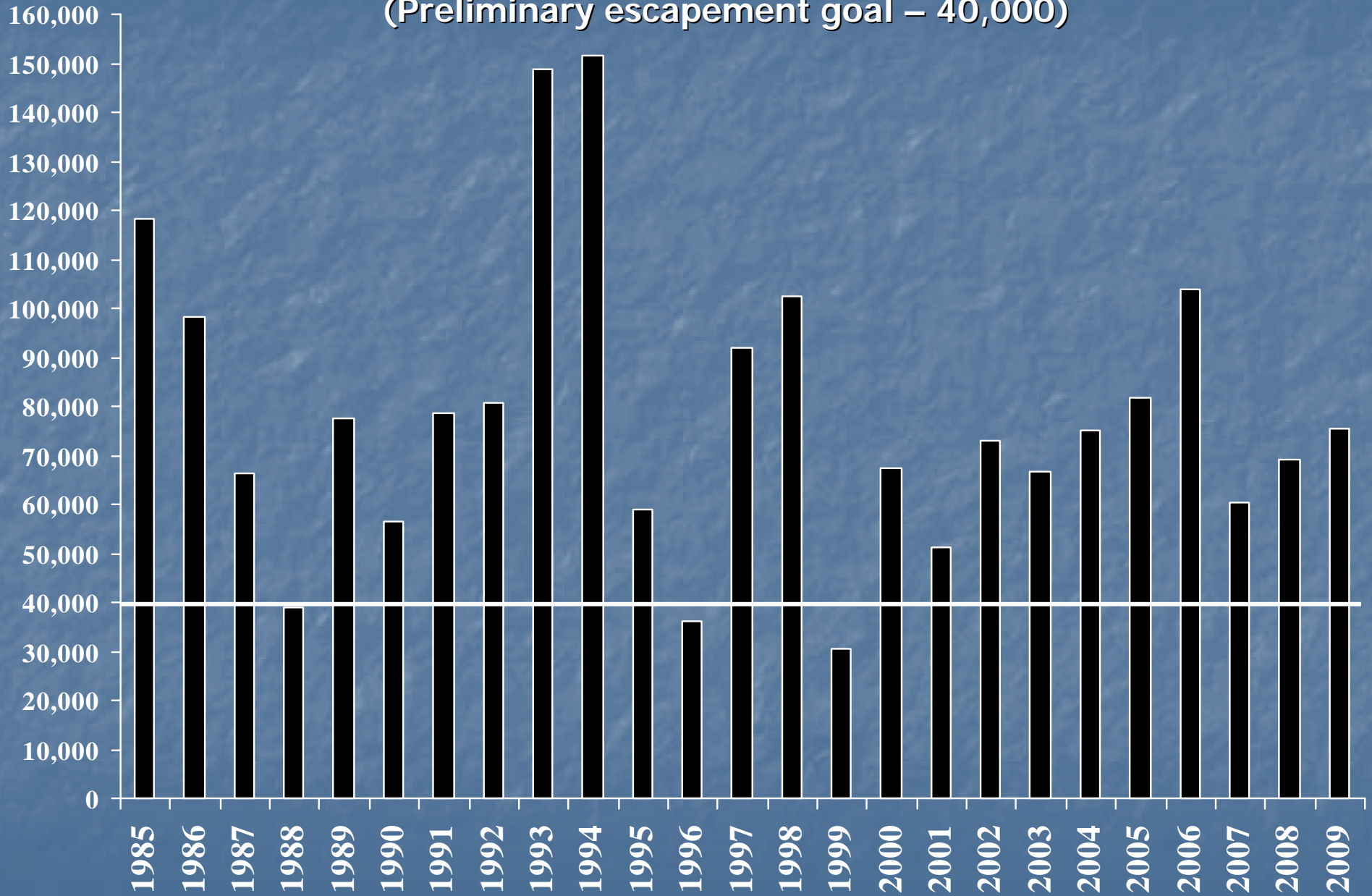


Nass Sockeye Escapement - Kwinageese and Non-Meziadin 1992 to 2009

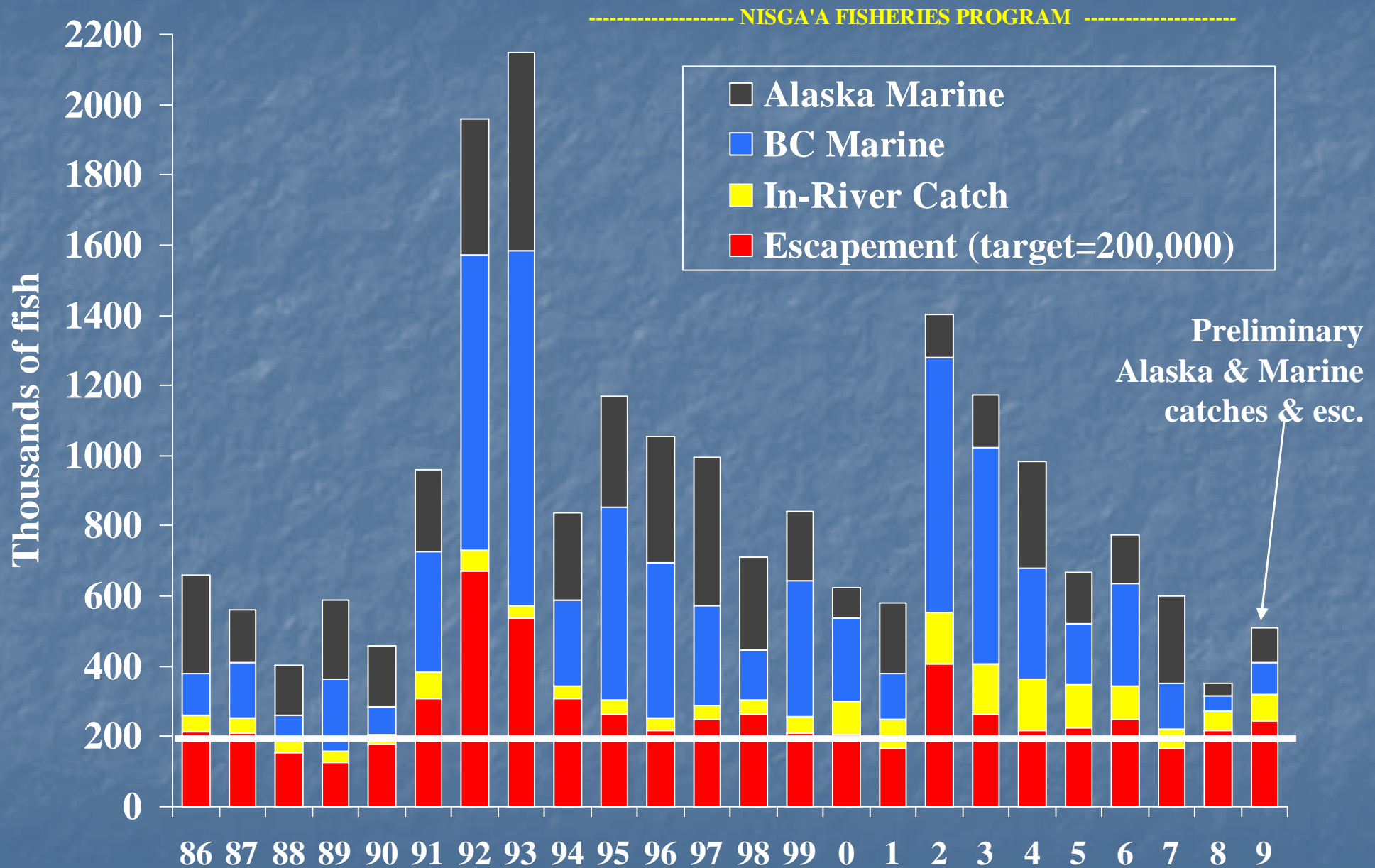


NON-MEZIADIN AGGREGATE ADULT SOCKEYE RETURN 2009 - 75,422

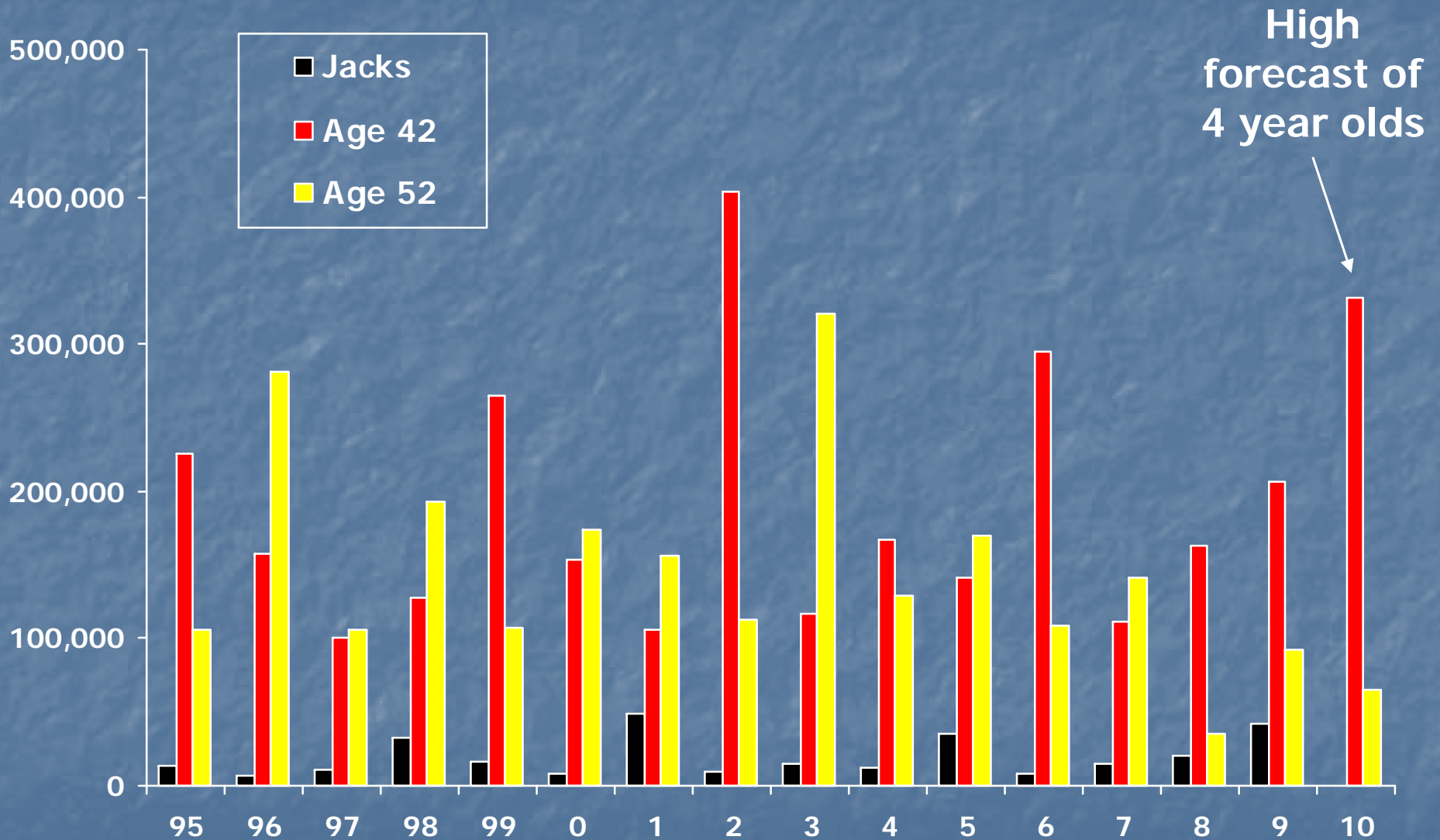
(Preliminary escapement goal – 40,000)



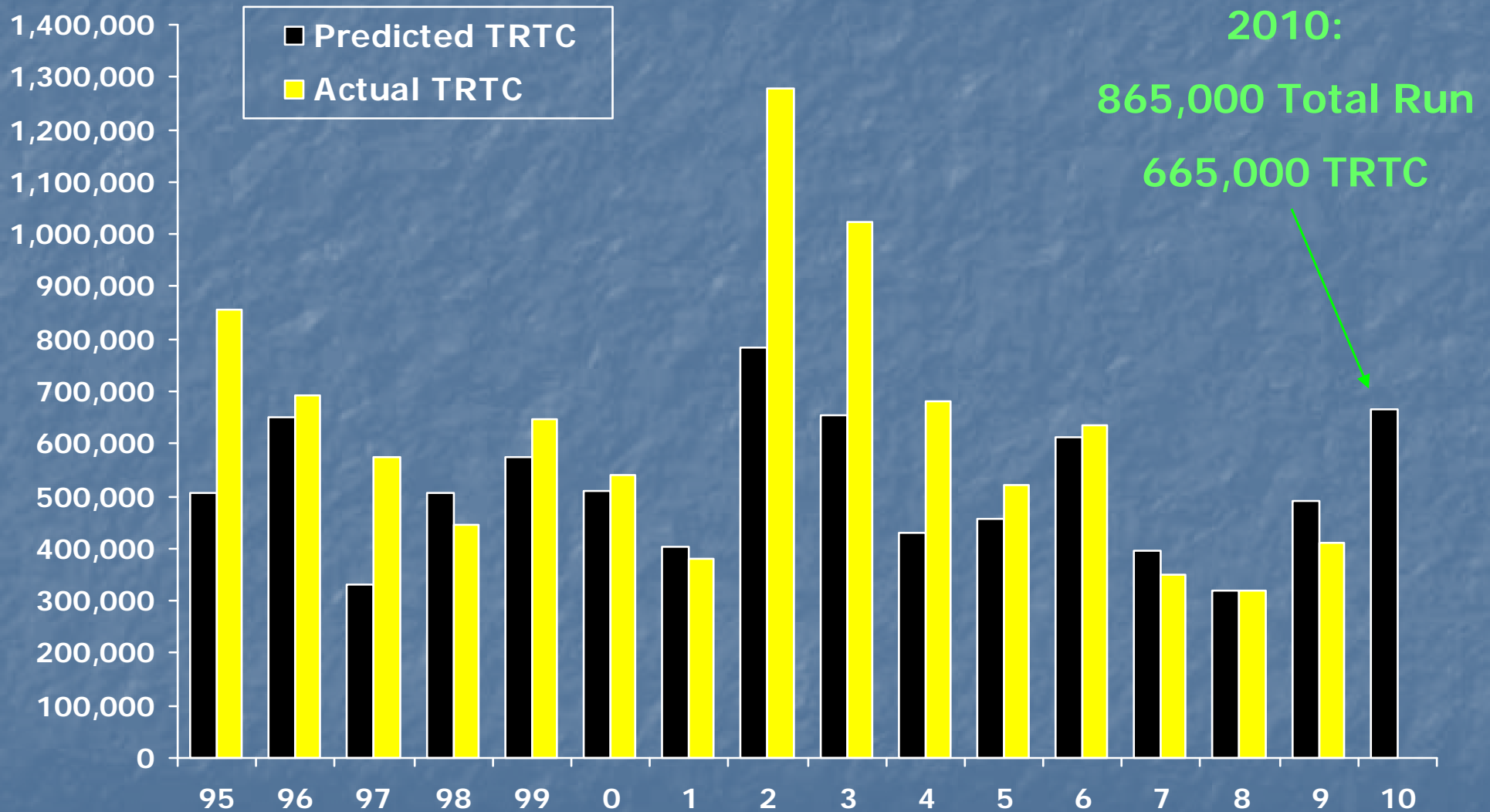
Nass Sockeye Total Stock Size



Nass Sockeye Forecasting – Age Predictions



Nass Sockeye Forecasting – TRTC Return Predictions



NASS CHINOOK SENTINEL STOCK ASSESSMENT PROGRAM 2009



KWINAGEESE WEIR - 2009

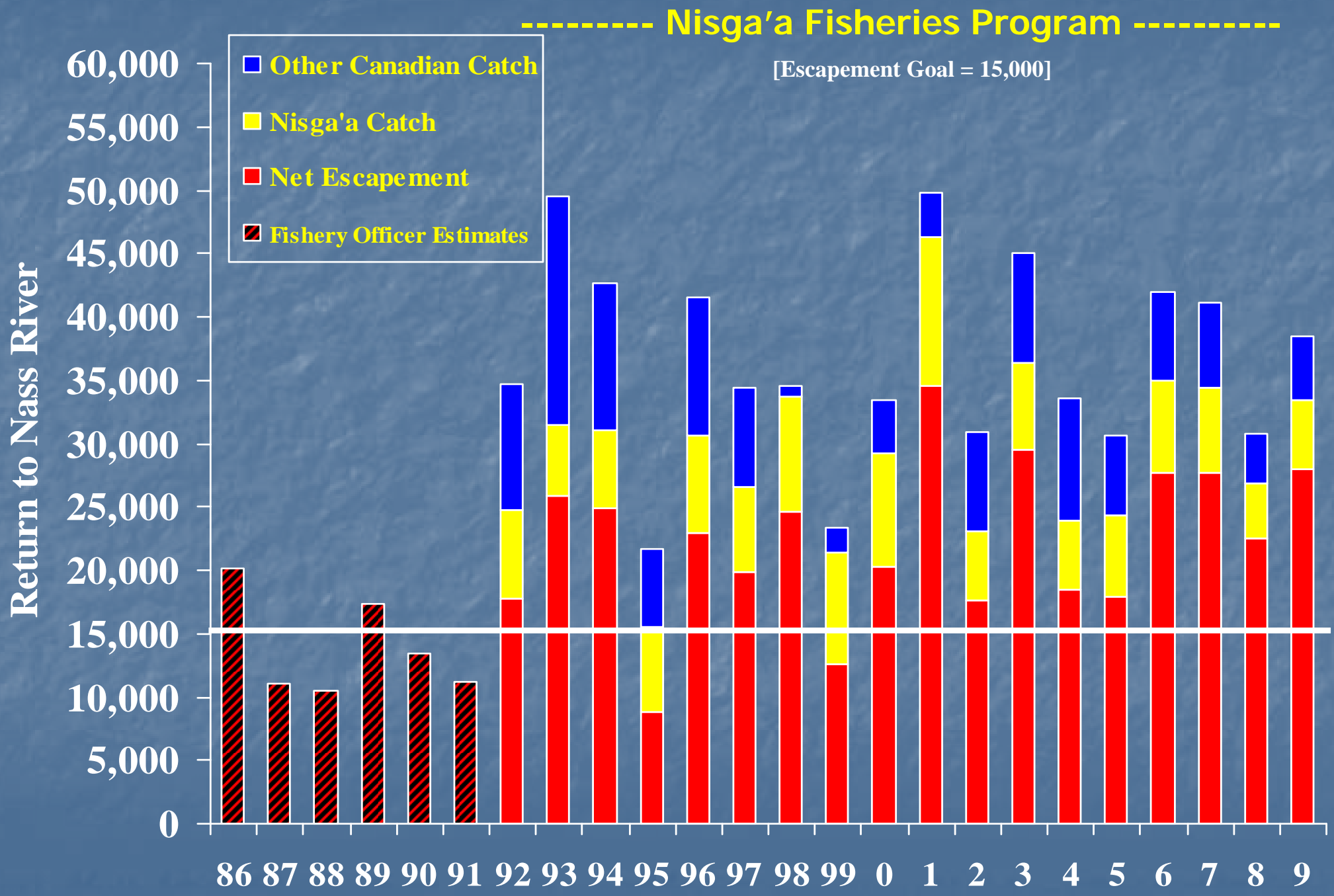


PRELIMINARY CONCLUSIONS OF NASS CHINOOK STUDY:

Population Estimates

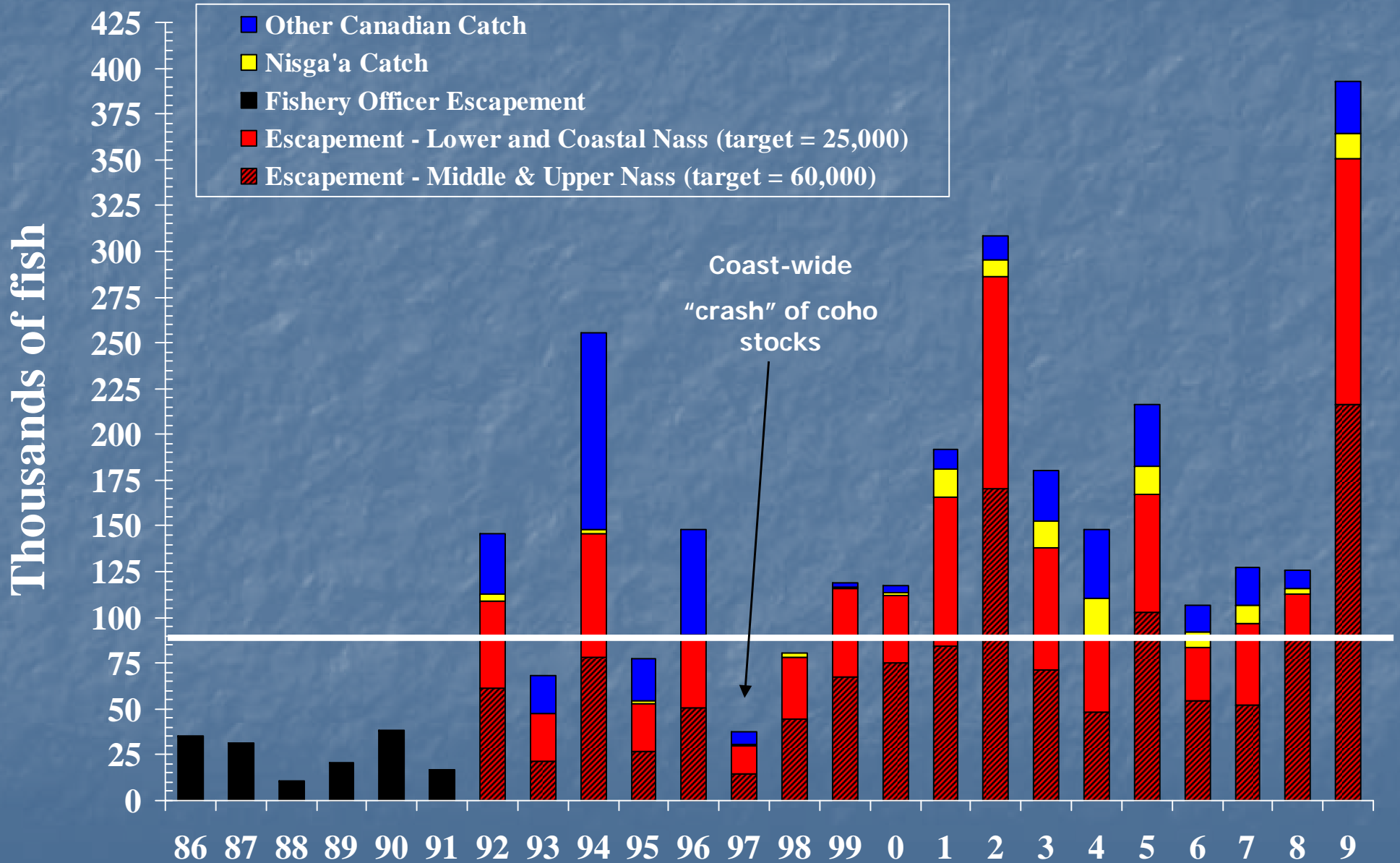
1. Achieved a CV of 13% for the MR estimate, all sizes pooled;
2. CV of 15% was partially achieved for size-stratified estimates:
 - 14% for larges
 - 35% for mediums (but $R = 6$)
3. Pooled and stratified estimates were virtually identical (27,332 and 27,972) with mediums accounting for 28% of population

Nass Chinook Total Return to Canada

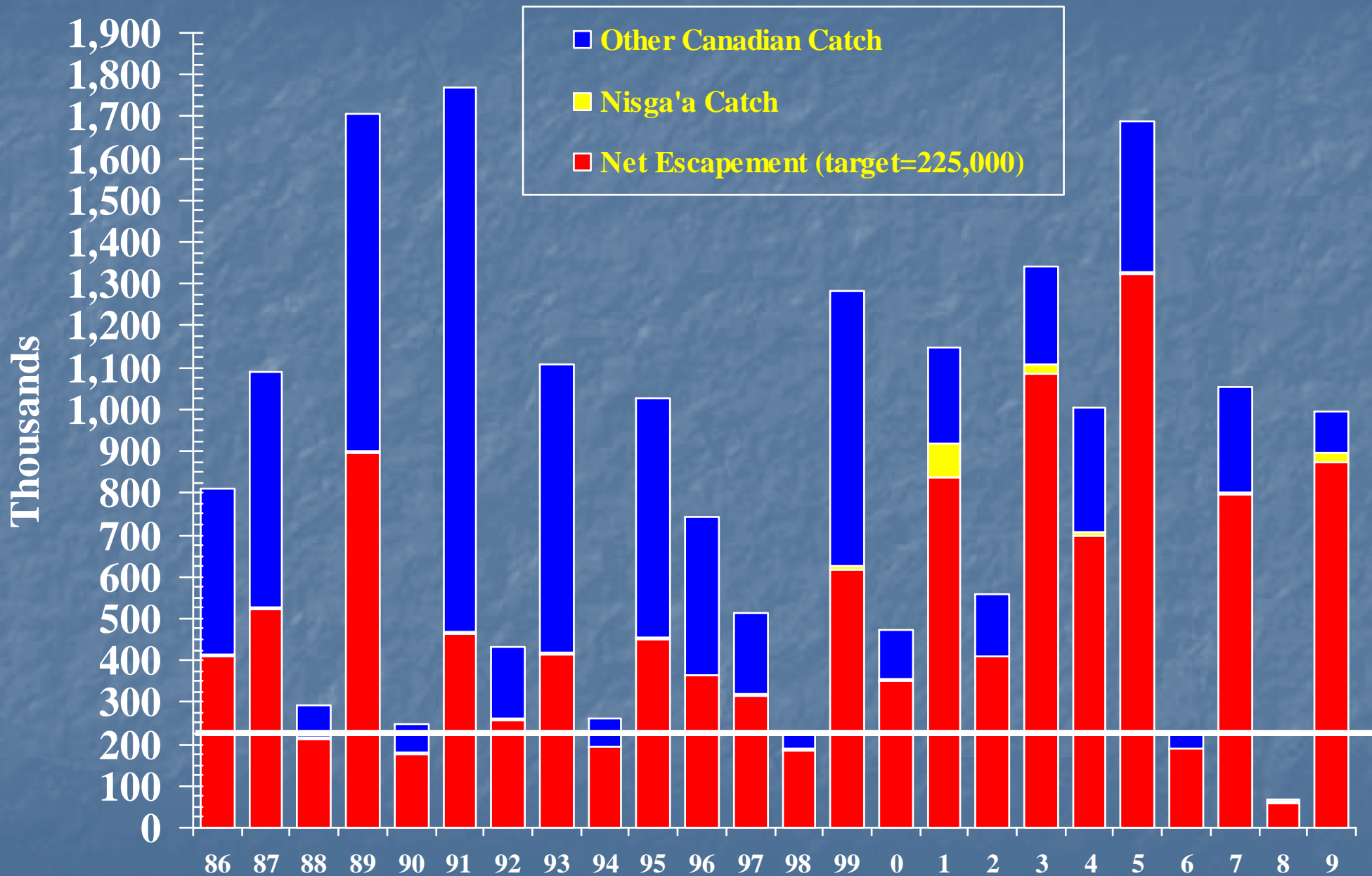


Nass Area Coho Total Return to Canada

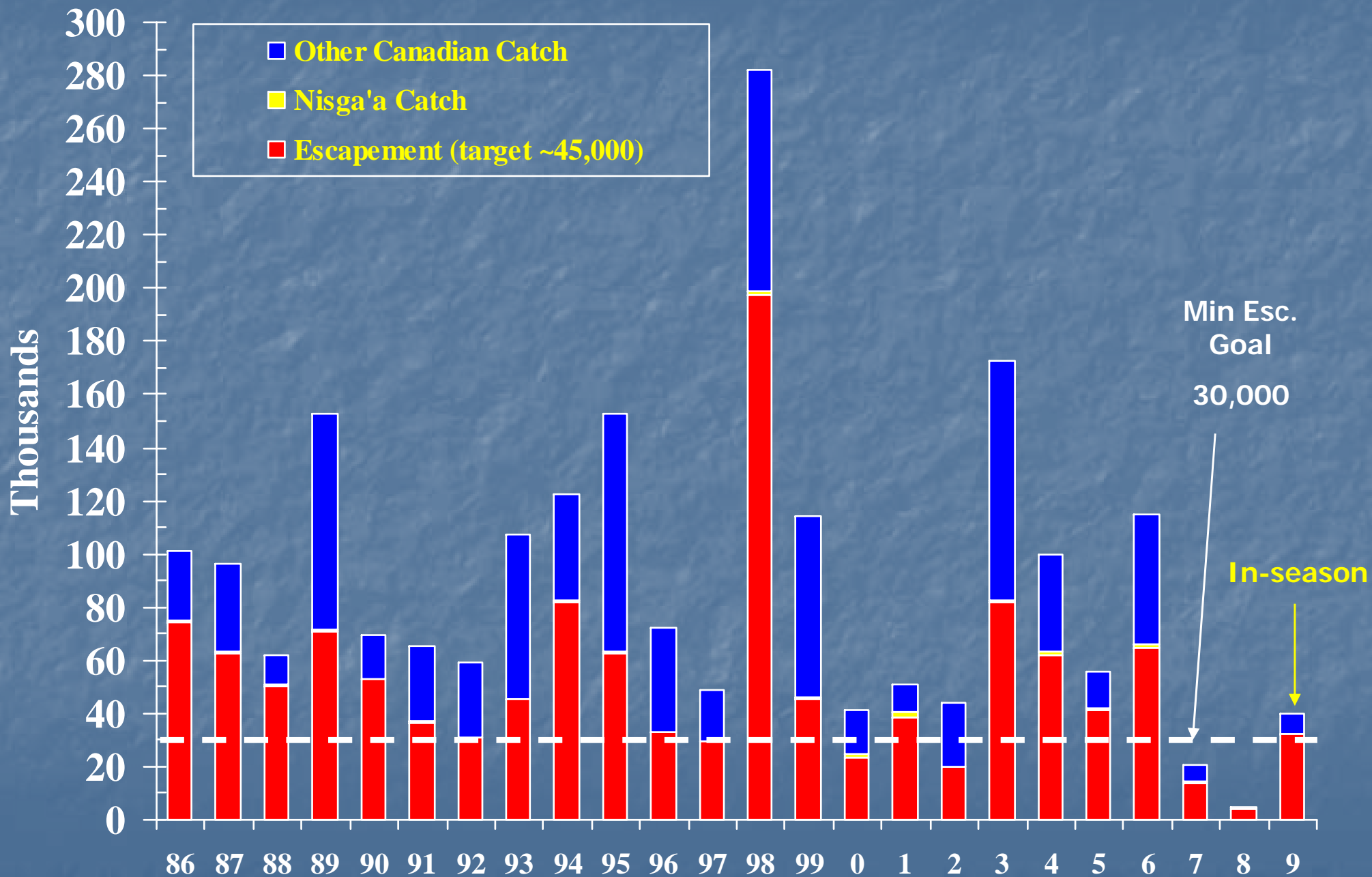
----- Nisga'a Fisheries Program -----



Nass Pink Total Return to Canada



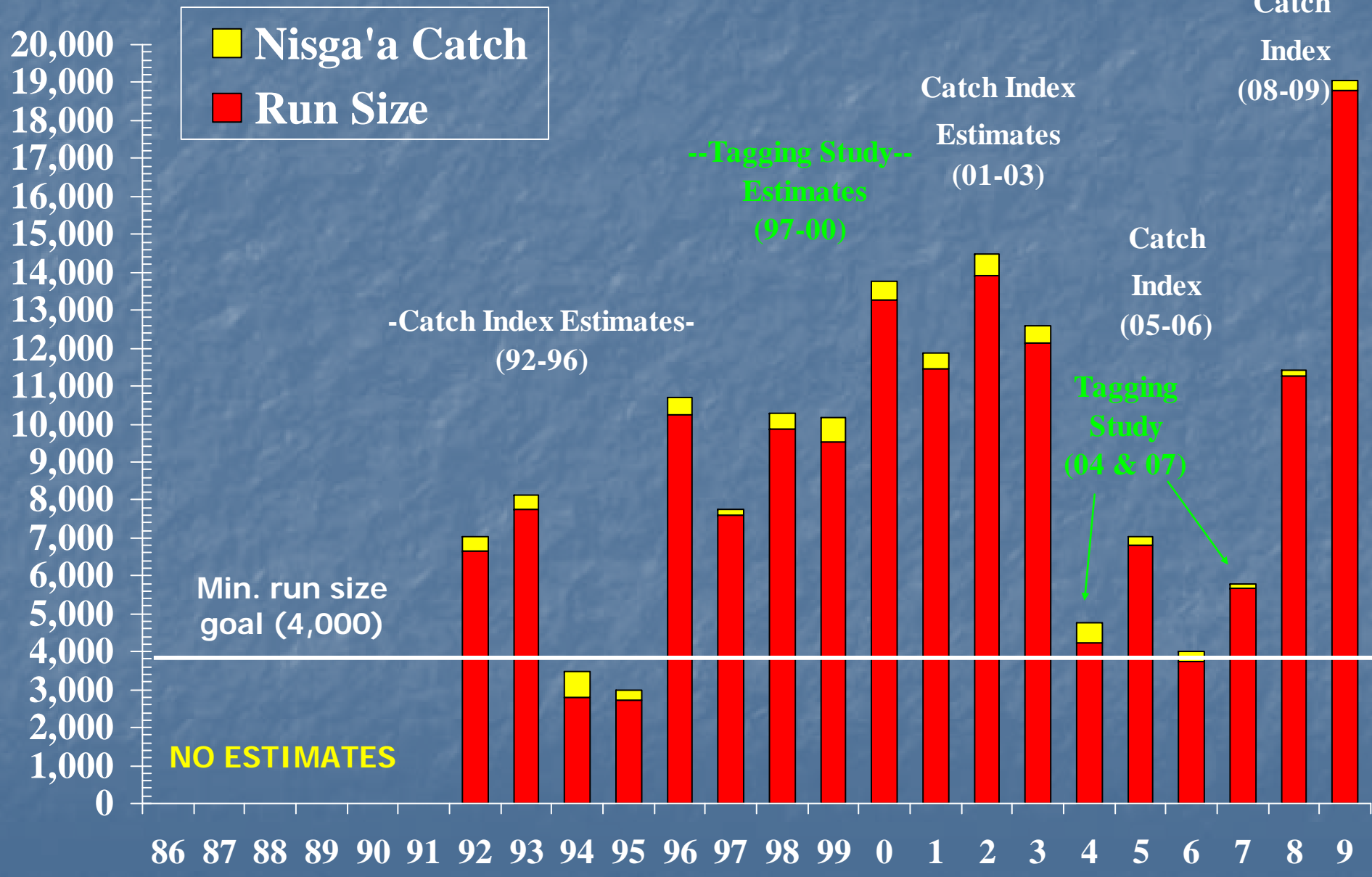
Nass Chum Total Return to Canada



Upper Nass Summer-run Steelhead Return

-----Nisga'a Fisheries Program -----

Returns to Nass River (above Gitwinksihkw)



■ Nisga'a Catch
■ Run Size

NO ESTIMATES

Min. run size goal (4,000)

-Catch Index Estimates- (92-96)

--Tagging Study-- Estimates (97-00)

Catch Index Estimates (01-03)

Tagging Study (04 & 07)

Catch Index (05-06)

Catch Index (08-09)

SUMMARY OF NISGA'A HARVESTS: 2009

Area/Village	Gear	Sockeye	Chinook	Coho	Pink	Chum	Steelhead
Gingolx	gillnet	25,214	757	808	23,669	125	30
	angling	0	221	18	80	0	0
Lakalzap	gillnet	5,047	413	445	190	1	38
	angling	0	20	30			10
Gitwinksihlkw	gillnet	11,022	983	1,038	329	4	38
	angling	0	10	10			0
	fishwheel	0					
Gitlakdamix	gillnet	19,901	1,724	1,106	217	9	127
	angling	0	30	0			10
	fishwheel	8,262	1,031	10,340			
Unmonitored harvest estimates ²		0	194	0	87	0	0
Total ¹		69,446	5,383	13,795	24,572	139	253
Total FSC ¹		23,904	3,786	3,389	3,677	139	253
Total Sales ¹		45,542	1,597	10,406	20,895	0	0

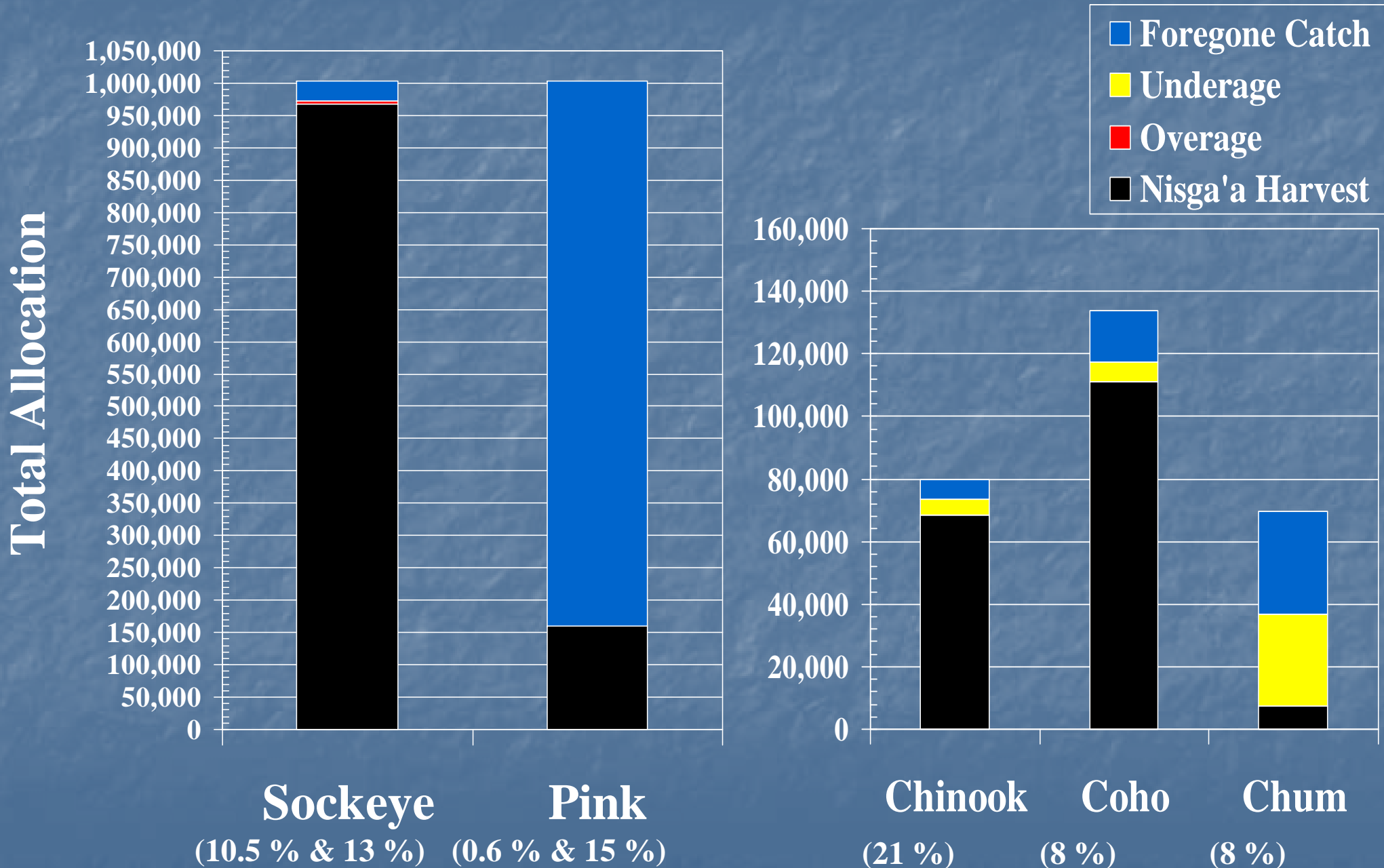
¹ Source of data from Nisga'a Fisheries Catch Monitoring Program (Nisga'a Fisheries 2010).

² Unmonitored catch correction for Chinook in the Lakalzap stratum when no boat surveys could be conducted and for Pink in the Gingolx stratum during one of the individual-sale fisheries.

SUMMARY OF TRTC & NISGA'A ENTITLEMENT: 2009 (PRELIMINARY DATA)

	Sockeye	Pink	Chinook	Coho	Chum
Canadian Catch					
Canadian Commercial	89,748	96,030	1,590	24,812	7,729
Nisga'a Harvest	69,446	24,572	5,383	13,795	139
Gitanyow Harvest	8,172	0	148	327	0
Sport - Saltwater	0		2,330	2,573	
Sport - Freshwater	0		1,000	510	
Catch Total	167,366	120,602	10,451	42,017	7,868
Escapement					
Upper Nass River	234,512		26,694	204,270	
Middle & Lower Nass River	9,314		1,344	67,289	
Outside Nass River	0		1,624	78,848	
Escapement Total	243,826	872,998	29,662	350,408	32,352
Total Return to Canada	411,192	993,599	40,113	392,425	40,220
Return to Canada					
Pre-Season Forecast	511,000	1,053,000	48,000	119,000	56,000
Post-Season (Estimate)	411,192	993,599	40,113	392,425	40,220
Min. Escapement	100,000	150,000	10,000	40,000	30,000
Escapement Goal	200,000	225,000	15,000	60,000	45,000
Nisga'a Allocation					
Treaty Entitlement	43,175	5,962	8,424	19,200	3,218
Harvest Agreement	21,842	114,396			
Adjustment for Overharvesting ⁶	0	0	0	0	0
Total Allocation	65,017	120,357	8,424	19,200	3,218

Nisga'a Salmon Cumulative Allocation Summary (2000-2009)



Nisga'a Fisheries Conservation, Management, & Outreach Program 2009: *Experiences, Sense of Place, Discovering Talent*



Summary of Accomplishments:

- 18 years of successful programs conducted with public recognition for excellence in fisheries management ([Pacific Fisheries Resource Conservation Council Brochure 2009](#));
- Protection of Nass fisheries stocks with accurate in-season management, tracking of salmon runs both in Canada and Alaska, and making all escapement goals in 2009;
- Continued training and development of Nisga'a people in technical and biologist positions;
- Developing sustainable fishery management practices where conservation and food fish needs are priority over economic opportunities ; and
- Active participation in the stewardship of the Nass River watershed to protect fisheries & wildlife resources and habitat.