Klukshu Chinook and Sockeye Enumeration 2016

(A project funded through the Northern Fund of the Pacific Salmon Commission)

Project NF-2015-I-52
DFO 57913

Prepared by:

Ian Boyce and Sean Stark
Fisheries and Oceans Canada
Whitehorse, Yukon
Y1A 3V1

February 2017

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1.0 Introduction

Chinook and sockeye salmon enumeration via counting fence has been conducted on the Klukshu River in the Alsek River drainage for approximately 35 years. This provides a long term index of escapement into the Alsek River. Now that genetic stock identification (GSI) capabilities have been developed the value of the Klukshu River as an index for drainage wide abundance is enhanced.

In recent years, core agency (DFO) funding has been reduced and consequently these assessment activities are at risk of being discontinued. Support from the Northern Endowment Fund (NEF) was provided to secure this project for 2016.

As detailed in the Transboundary chapter of the PST, the Parties agree to implement assessment programs in support of the abundance-based management regimes for Alsek River Chinook and sockeye salmon. As proposed, this project will serve to assist in fulfilling that obligation. In March of 2009, the Transboundary Panel and the TTC finalized the "*Pacific Salmon Commission Transboundary Panel Strategic Salmon Plan*" which identified the desire of the Panel to continue the enumeration of Chinook and sockeye at the Klukshu River weir.

In February 2013, the bilateral TTC and bilateral TBR Panel agreed to the revised biological escapement goals for Alsek River and Klukshu River Chinook and sockeye salmon. These were: Alsek River Chinook MSY target of 4,700 (esc. goal range 3,500 – 5,300), Klukshu River Chinook MSY target of 1,000 (esc. goal range of 800 – 1,200), Alsek River sockeye MSY target of 29,700 (esc. goal range of 24,000 – 33,500), and Klukshu River sockeye MSY target of 9,700 (esc. goal range 7,500 – 11,000).

As noted, the Klukshu River weir serves as the primary tool for identifying both the Klukshu River and Alsek River drainage-wide escapements using GSI. This work was supported through an additional NEF project, specifically "*2016 Alsek Sockeye Salmon Run Reconstruction Using Genetic Stock Identification"*.

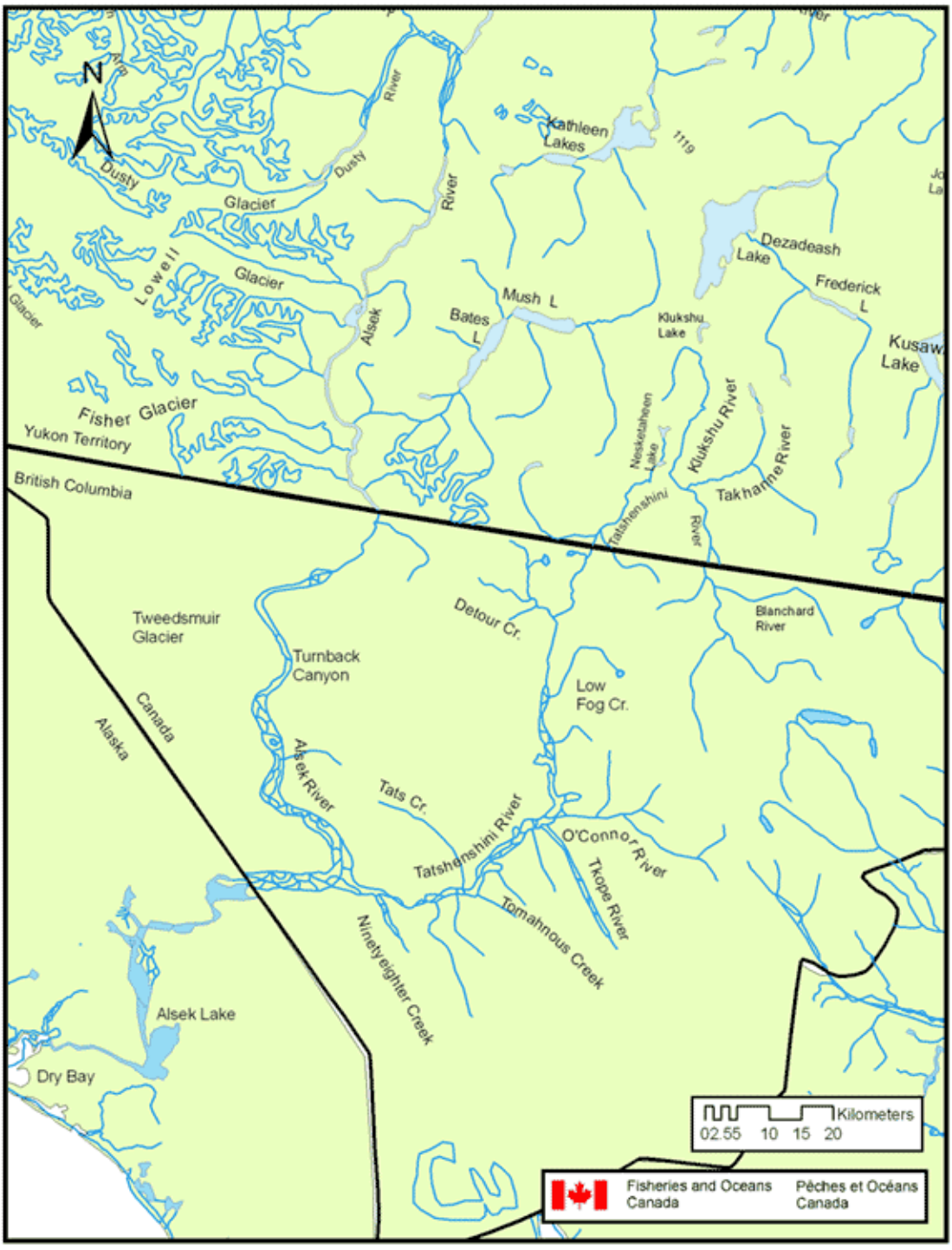

Figure 1. Alsek River drainage map.

2.0 Objectives

The objectives of this project were to:

(1) Obtain an absolute count of the escapement of Chinook and sockeye into the Klukshu River.

(2) Collect age-sex-length information from a representative sample of each species.

3.0 Methodology

A 20 meter conduit fence supported by up to 8 steel tripods was constructed across the Klukshu River approximately 1600 meters upstream of the river's mouth. The weir is designed with a counting chamber from which hourly and daily counts were taken, and a holding chamber from which a random selection of migrating fish were sampled for scales, sex, and length. Concurrently with this, a video counting system was installed, and after field testing, served as the primary enumeration method.

Construction of the weir and installation of the video enumeration system began on June 9, 2016. The structure was complete / fish tight as of 11 am on June 15. The weir was dismantled on October 6, 2016. A rotating crew of three technicians (EG-3) conducted the project with two technicians on site at any one time. The project was supervised by an EG-4 technician based in Whitehorse who made weekly site visits.

For age determination, five scales were collected from both Chinook and sockeye salmon. All scales were collected from above the lateral line within a radius measuring three to four scales from the preferred area, i.e. one scale row above the lateral line along a diagonal line between the anterior end of the pelvic fin and the posterior end of the dorsal fin. Scales were placed in gum-card booklets and sent to the Pacific Biological Station in Nanaimo, B.C for reading and interpretation. Length measurements were taken to the nearest five millimetres using a flexible tape measure. The measurement taken was fork length, i.e. the distance between the tip of the nose to the fork of the tail.

As part of a separate Northern Endowment Fund Project conducted by the Champagne Aishihik First Nation (CAFN) “Sampling to investigate Klukshu Early/Late population structure” radio tags were applied to, and DNA tissue samples were collected from, representative samples of sockeye salmon.

Also as part of a separate NEF project (noted in the introduction), sockeye salmon tissue samples (severed axillary appendages) were collected from the 2016 U.S. commercial fishery catch in Dry Bay at the mouth of the Alsek River, from the beginning of June to the middle of August. (The not-target catch did not support collection of an adequate number of Chinook samples.) These were sent to the DFO Molecular Genetics Lab in Nanaimo, BC for GSI processing. A ratio-based Alsek sockeye salmon abundance estimate will be generated using the escapement and stock composition data.

4.0 Results and Discussion

Chinook Salmon

Two Chinook passed the site on the date that the weir installation was completed (June 15). However, as is typical for Klukshu River Chinook, the run was slow to gather strength, and the first day with passage of more than five fish did not occur until June 28.

A total of 651 Chinook salmon were counted as they migrated through the weir over the next seven weeks, i.e. until August 1. The peak count, 102 fish, occurred on July 20. Dates by which 25, 50 and 90% of the run had passed through the weir were July 20, July 24, and August 3, respectively. Over the past ten years, the respective dates for these milestones have averaged July 19, July 24 and August 5. Hourly and daily counts are presented in Appendices 1 and 2. Daily and cumulative counts are presented in Figures 2 and 3.

Sampling for age-sex- length information commenced on June 21 and concluded on August 17. Dates by which 25, 50 and 90% of the samples had been taken were July 14, July 24, and August 3, respectively. A total of 300 samples were collected, comprising a large proportion of the total run (46%). Of the 300 fish, 180 were male and 120 were female.

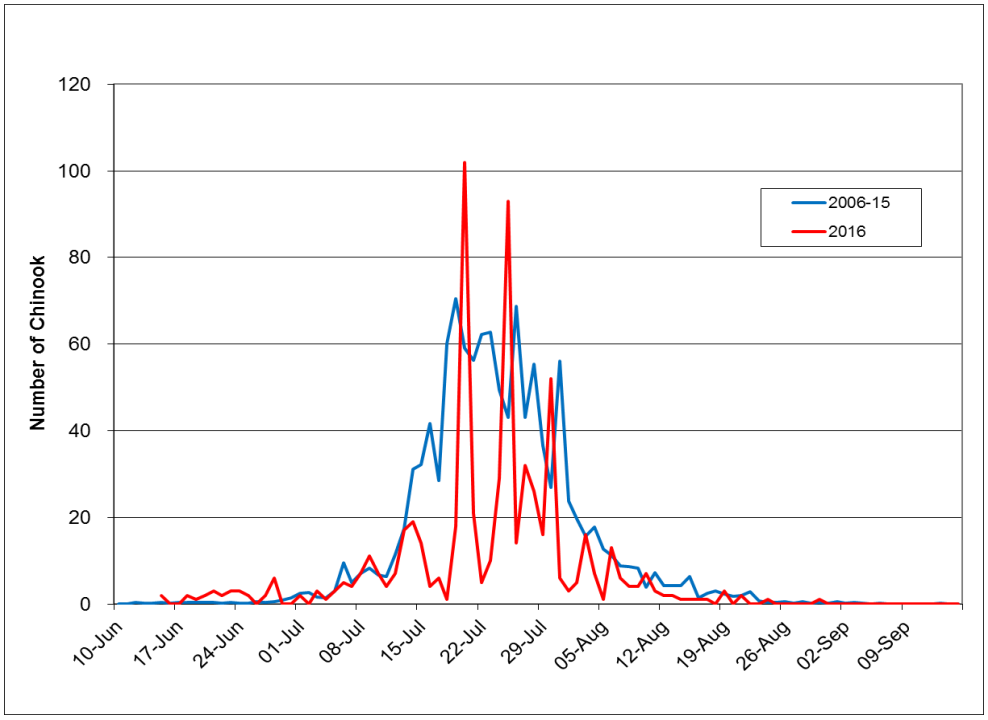

Figure 2. Daily counts of Chinook salmon through the Klukshu River weir, 2016 versus 2006-2015 average.

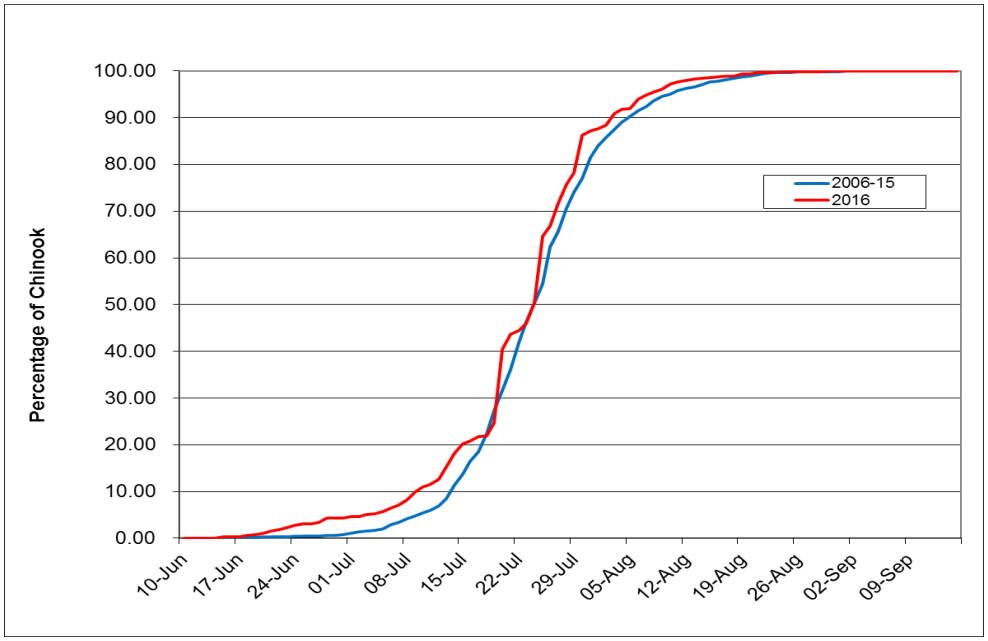

Figure 3. Cumulative passage of Chinook salmon through the Klukshu River weir, 2016 versus 2006-2015 average.

Sockeye Salmon

A total of 7,584 sockeye salmon were counted as they migrated through the weir over a period of 13 weeks, i.e. from July 7 until October 6. The peak count, 728 fish, occurred on August 25. Dates by which 25, 50 and 90% of the run had passed through the weir were August 21, August 29, and September 19, respectively. Over the past ten years, the respective dates for these milestones have averaged August 19, August 28 and September 26. Hourly and daily counts are presented in Appendices 3 and 4. Daily counts and cumulative counts are presented in Figures 4 and 5.

Sampling for age-sex- length information commenced on July 7 and concluded on October 4. Dates by which 25, 50 and 90% of the samples had been taken were August 2, August 19, and September 17, respectively. A total of 817 samples were collected, comprising 11% of the total run and surpassing the annual objective of 700 fish. Of these 817 fish, 408 were male and 409 were female.

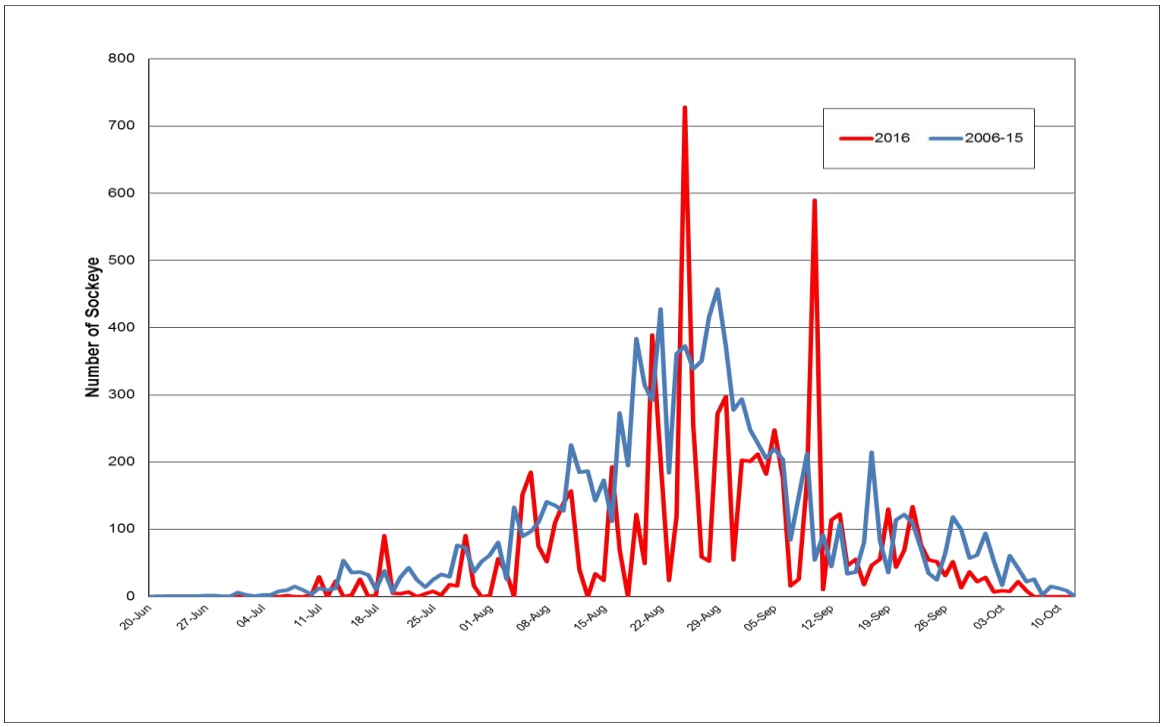

Figure 4. Daily counts of sockeye salmon through the Klukshu River weir, 2016 versus 2006-2015 average.

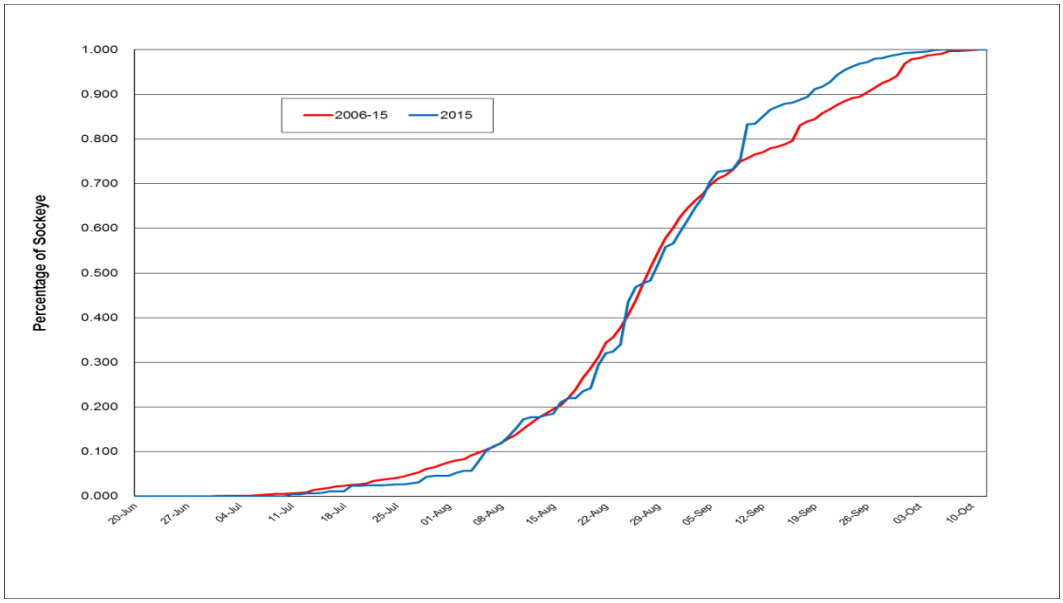

Figure 5. Cumulative passage of sockeye salmon through the Klukshu River weir, 2016 versus 2006-2015 average.

5.0 Budget

Scheduling and operations went as planned.

As presented in Appendix 2, the expenditure of Northern Funds amounted to $49,770, which was the budgeted amount. All expenditures were for technician wages. The 10% holdback of $4,977 is anticipated once the final project report is accepted by the Pacific Salmon Commission.

A summary of Fund expenditures in relation to budgeted amounts is as follows:

Description	Budget	Expenditure	Balance
Labour Costs	49,770	49,770	0
Site/Project Costs	0	0	0
Training Costs	0	0	0
Overhead Costs	0	0	0
Capital Costs	0	0	0
Grand Total	**49,770**	**49,770**	**0**

6.0 Conclusion

The project objectives for 2016 were achieved; water levels were appropriate for weir operations. In some years there is a high water event in June which creates challenges, however due to low winter snow-pack this did not occur in 2016. Complete sockeye and Chinook counts were obtained, with the video enumeration methodology working effectively, and representative samples goals were obtained.

After subtracting harvest from the Chinook salmon weir count 651 fish, the escapement estimate was 646 fish. This was below the escapement goal range of 800 to 1,200 Klukshu Chinook salmon, and also significantly below the principle brood year escapements of 2,259 in 2010 and 1,610 in 2011.

After subtracting harvest from the sockeye salmon weir count 7,584 fish, the escapement estimate was 7,391 fish. As with Chinook salmon, this was below the escapement goal range (7,500 to 11,000 fish). It was also significantly below the primary brood year escapements of 20,800 in 2011 and 17,200 in 2012.

This project maintained the long term escapement monitoring program for Klukshu Chinook and sockeye salmon. Although there was insufficient Chinook catch in the Dry Bay fishery in Alaska to permit GSI-based drainage-wide Chinook salmon run estimates, a GSI-based run estimate will be produced for sockeye salmon using the Klukshu River escapement count. In addition this project supported another Northern Endowment fund endeavour designed to study the population structures of early and late-run Klukshu River sockeye salmon.

7.0 Acknowledgments

Sean Stark, Mark McFarland, Alfie Lavallee and Teresa Bachynski operated the weir and conducted the sampling. Ian Matthews assisted with the purchase, fabrication, and installation of the video monitoring equipment. Steve Smith supervised and assisted with project administration. Peter Etherton and Bill Waugh provided technical support and expertise. Will Parker purchased supplies and assisted with logistics. Colleen Claggett, Carole Laframboise and Marnie Barteaux (DFO) assisted with financial administration and accounting.

8.0 Appendices

Appendix 1. Hourly counts of Chinook salmon passing through Klukshu River weir, 2016.

																									Counts	
	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	Daily	Cum.
																									0	0
15-Jun											2														2	2
16-Jun																									0	2
17-Jun																									0	2
18-Jun			1									1													2	4
19-Jun																	1								1	5
20-Jun		1			1																				2	7
21-Jun		1		1																1					3	10
22-Jun			1																	1					2	12
23-Jun		1		1										1											3	15
24-Jun			1	1																		1			3	18
25-Jun	1																			1					2	20
26-Jun																									0	20
27-Jun	1																			1					2	22
28-Jun		1		2													2				1				6	28
29-Jun																									0	28
30-Jun																									0	28
01-Jul															1			1							2	30
02-Jul																									0	30
03-Jul																1			2						3	33
04-Jul												1													1	34
05-Jul												2										1			3	37
06-Jul												2										2	1		5	42
07-Jul												3							1						4	46
08-Jul		1	3											1								2			7	53
09-Jul		1	2	2		1										1				1			3		11	64
10-Jul								1			4			1	1										7	71
11-Jul									4																4	75
12-Jul	1	1	1										1	1							1	1			7	82
13-Jul											6							9					2		17	99
14-Jul																	4	12			2		1		19	118
15-Jul											3	7									1	3			14	132
16-Jul													1								3				4	136
17-Jul																			6						6	142
18-Jul																							1		1	143
19-Jul	4		1	3	3			1				1		1					3				1		18	161
20-Jul																		95		7					102	263

																									Counts	
	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	Daily	Cum.
21-Jul										1		1	3	4	3	5		1			3				21	284
22-Jul		1				1												2			1				5	289
23-Jul												1				1		7				1			10	299
24-Jul												1	2	4				9		6	4	3			29	328
25-Jul										1	2		1			43	25	13	5		3				93	421
26-Jul													5						9						14	435
27-Jul										1			1				3			13	4	3	7		32	467
28-Jul																22				1	3				26	493
29-Jul											1		3						2	2	8				16	509
30-Jul																			12	7	16	17			52	561
31-Jul																			6						6	567
01-Aug																		2		1					3	570
02-Aug																		1				4			5	575
03-Aug									1				1					7					7		16	591
04-Aug																		7							7	598
05-Aug																							1		1	599
06-Aug	8			1		1																3			13	612
07-Aug																		2	2	2					6	618
08-Aug											1							3							4	622
09-Aug															1						3				4	626
10-Aug		1					1											5							7	633
11-Aug	1	1																1							3	636
12-Aug		1																					1		2	638
13-Aug																	1						1		2	640
14-Aug																					1				1	641
15-Aug																							1		1	642
16-Aug																				1					1	643
17-Aug																			1						1	644
18-Aug																									0	644
19-Aug										1									1			1			3	647
20-Aug																									0	647
21-Aug																1		1							2	649
22-Aug																								0	0	649
23-Aug																									0	649
24-Aug																							1		1	650
25-Aug																									0	650
26-Aug																									0	650
27-Aug																									0	650
28-Aug																									0	650
29-Aug																									0	650
30-Aug												1													1	651
31-Aug																									0	651
	16	11	10	11	4	3	1	2	5	4	19	21	18	13	6	74	36	178	50	45	54	42	28	0	651	

Appendix 2. Daily counts of Chinook salmon passing through Klukshu River weir, 2016.

	Chinook Daily Counts 2016					
	Daily			Cumulative		
	Counted	Sampled	Total	Counted	Sampled	Total
15-Jun	2		**2**	2	0	2
16-Jun			**0**	2	0	2
17-Jun			**0**	2	0	2
18-Jun	2		**2**	4	0	4
19-Jun	1		**1**	5	0	5
20-Jun	2		**2**	7	0	7
21-Jun	2	1	**3**	9	1	10
22-Jun	1	1	**2**	10	2	12
23-Jun	2	1	**3**	12	3	15
24-Jun	2	1	**3**	14	4	18
25-Jun	1	1	**2**	15	5	20
26-Jun	0		**0**	15	5	20
27-Jun	1	1	**2**	16	6	22
28-Jun	6		**6**	22	6	28
29-Jun	0		**0**	22	6	28
30-Jun	0		**0**	22	6	28
1-Jul	0	2	**2**	22	8	30
2-Jul	0		**0**	22	8	30
3-Jul	0	3	**3**	22	11	33
4-Jul	0	1	**1**	22	12	34
5-Jul	0	3	**3**	22	15	37
6-Jul	0	5	**5**	22	20	42
7-Jul	0	4	**4**	22	24	46
8-Jul	4	3	**7**	26	27	53
9-Jul	7	4	**11**	33	31	64
10-Jul	1	6	**7**	34	37	71
11-Jul	0	4	**4**	34	41	75
12-Jul	5	2	**7**	39	43	82
13-Jul	1	16	**17**	40	59	99
14-Jul	0	19	**19**	40	78	118
15-Jul	0	14	**14**	40	92	132
16-Jul	0	4	**4**	40	96	136
17-Jul	0	6	**6**	40	102	142
18-Jul	0	1	**1**	40	103	143
19-Jul	14	4	**18**	54	107	161
20-Jul	82	20	**102**	136	127	263
21-Jul	17	4	**21**	153	131	284

	Chinook Daily Counts 2016 Continued					
	Daily			Cumulative		
	Counted	Sampled	Total	Counted	Sampled	Total
22-Jul	2	3	**5**	155	134	289
23-Jul	2	8	**10**	157	142	299
24-Jul	10	19	**29**	167	161	328
25-Jul	85	8	**93**	252	169	421
26-Jul	1	13	**14**	253	182	435
27-Jul	15	17	**32**	268	199	467
28-Jul	4	22	**26**	272	221	493
29-Jul	12	4	**16**	284	225	509
30-Jul	33	19	**52**	317	244	561
31-Jul	1	5	**6**	318	249	567
1-Aug	0	3	**3**	318	252	570
2-Aug	1	4	**5**	319	256	575
3-Aug	1	15	**16**	320	271	591
4-Aug	1	6	**7**	321	277	598
5-Aug	1	0	**1**	322	277	599
6-Aug	10	3	**13**	332	280	612
7-Aug	5	1	**6**	337	281	618
8-Aug	0	4	**4**	337	285	622
9-Aug	2	2	**4**	339	287	626
10-Aug	2	5	**7**	341	292	633
11-Aug	2	1	**3**	343	293	636
12-Aug	1	1	**2**	344	294	638
13-Aug	0	2	**2**	344	296	640
14-Aug	0	1	**1**	344	297	641
15-Aug	0	1	**1**	344	298	642
16-Aug	0	1	**1**	344	299	643
17-Aug	0	1	**1**	344	300	644
18-Aug	0	0	**0**	344	300	644
19-Aug	3	0	**3**	347	300	647
20-Aug	0	0	**0**	347	300	647
21-Aug	2	0	**2**	349	300	649
22-Aug	0	0	**0**	349	300	649
23-Aug	0	0	**0**	349	300	649
24-Aug	1	0	**1**	350	300	650
25-Aug	0	0	**0**	350	300	650
26-Aug	0	0	**0**	350	300	650
27-Aug	0	0	**0**	350	300	650
28-Aug	0	0	**0**	350	300	650
29-Aug	0	0	**0**	350	300	650
30-Aug	1	0	**1**	351	300	651

Appendix 3. Hourly counts of sockeye salmon passing through Klukshu River weir, 2016.

	Sockeye Hourly Counts																								Count	
	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	Daily	Cum.
07-Jul												1													1	1
08-Jul																									0	1
09-Jul																									0	1
10-Jul				2																					2	3
11-Jul								19	10																29	32
12-Jul																									0	32
13-Jul												19						4							23	55
14-Jul																									0	55
15-Jul												2													2	57
16-Jul											18	7									1				26	83
17-Jul																									0	83
18-Jul											2														2	85
19-Jul	33	24	6	12	11	3	1																		90	175
20-Jul								3										2							5	180
21-Jul	3	1																							4	184
22-Jul		3			4																				7	191
23-Jul																									0	191
24-Jul															4										4	195
25-Jul											1					5	2								8	203
26-Jul													1						1						2	205
27-Jul										5							7			2	3	1			18	223
28-Jul																8				3	5				16	239
29-Jul												14	9	1	12		11	21	13	6	2	1			90	329
30-Jul																			11		4	1			16	345
31-Jul																									0	345
01-Aug																		1							1	346
02-Aug																8	39	9							56	402
03-Aug	29		2	4																					35	437
04-Aug																									0	437
05-Aug												14	2	10	8	50	29	27	4	2			6		152	589
06-Aug	117	50	6	3	3	7		-1																	185	774
07-Aug												6			7			30	30	2					75	849

	Sockeye Hourly Counts																								Count	
	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	Daily	Cum.
08-Aug											5	42											5		52	901
09-Aug	55																		38	10	3		4		110	1011
10-Aug	52	51	21	5																			10		139	1150
11-Aug	74	29	28	12	9	5																			157	1307
12-Aug	3	4	9	14	8	2																			40	1347
13-Aug																									0	1347
14-Aug												15			1				1				17		34	1381
15-Aug												17										3	4		24	1405
16-Aug	64	44	26	17	19	20															3				193	1598
17-Aug												31				10	6	10	7	2	3	1			70	1668
18-Aug																									0	1668
19-Aug										10	4						12	19	2	7	63	5			122	1790
20-Aug												10					12	10	7	10					49	1839
21-Aug													20	3	43	166	90	41	25	1					389	2228
22-Aug																20	50	106	26						202	2430
23-Aug							8												16						24	2454
24-Aug		12	3																3	17	2	26	56		119	2573
25-Aug	66	61	22	20	77	48	12	6	11					35	37		20		14	1		95	203		728	3301
26-Aug	62	54	38	11	14	12	22	29	8	2										3					255	3556
27-Aug											10	17	21	8			2			1					59	3615
28-Aug											10	11	31	1											53	3668
29-Aug												21	16	3		1					1	150	80		272	3940
30-Aug	54	67	56	18	25	9	3	1														35	29		297	4237
31-Aug												12										42			54	4291
01-Sep												10			1	5	1				1	67	118		203	4494
02-Sep	79	49	22	18	14	14	5																		201	4695
03-Sep												15										137	60		212	4907
04-Sep	36	36	30	11	21	30	14	4																	182	5089
05-Sep												11								1	13	133	90		248	5337
06-Sep	44	45	26	26	14	17	5																		177	5514
07-Sep																		14		2					16	5530
08-Sep												10					14			2					26	5556

	Sockeye Hourly Counts																								Count	
	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	Daily	Cum.
09-Sep												15				68	24	42				1		25	175	5731
10-Sep	230	148	106	44	34	15	9	4																	590	6321
11-Sep																								10	10	6331
12-Sep	15	25	36	19	12	5	2																		114	6445
13-Sep												24	3	35		13	1	12	9	8	5	4	1	8	123	6568
14-Sep	16	11	7	2		6														3					45	6613
15-Sep												7						31			7	10			55	6668
16-Sep												18													18	6686
17-Sep											15	27		3				1							46	6732
18-Sep										10	5	27			5	3		5							55	6787
19-Sep												46	3	1	18	4	14		25			13		6	130	6917
20-Sep								26											7	2	4	5			44	6961
21-Sep															3		4			3	13	30	16		69	7030
22-Sep	64	37	13	10	6																		4		134	7164
23-Sep	16	18	7	6	19	8	1														1	1			77	7241
24-Sep	13	20	5	2	4	5															2	3			54	7295
25-Sep												19	19	8	1					2	3				52	7347
26-Sep														9							3	12	7		31	7378
27-Sep	16	16	6	3	3	4	0	2														1	1		52	7430
28-Sep									10												2	1			13	7443
29-Sep												6	1				1		2	2	15	3	6		36	7479
30-Sep	1	4	2	2	3	2	2	5															1		22	7501
01-Oct													9					1	1	1	2	11	3		28	7529
02-Oct	2	2				1					1											1			7	7536
03-Oct	3	4		1			1																		9	7545
04-Oct																						2	1	5	8	7553
05-Oct							7	7	2	3	2										1				22	7575
06-Oct	1	1	4		1	1	1																		9	7584
																									0	7584
Total	1148	816	481	262	301	214	93	105	41	30	73	474	135	117	140	361	339	386	242	93	162	795	722	54	7584	

Appendix 4. Daily counts of sockeye salmon passing through Klukshu River weir, 2016.

	Sockeye Daily Counts 2016					
	Daily			Cumulative		
	Counted	Sampled	Total	Counted	Sampled	Total
6-Jul			0			
7-Jul		1	1	0	1	1
8-Jul			0	0	1	1
9-Jul			0	0	1	1
10-Jul	2		2	2	1	3
11-Jul	1	28	29	3	29	32
12-Jul			0	3	29	32
13-Jul		23	23	3	52	55
14-Jul			0	3	52	55
15-Jul		2	2	3	54	57
16-Jul		26	26	3	80	83
17-Jul			0	3	80	83
18-Jul		2	2	3	82	85
19-Jul	90		90	93	82	175
20-Jul	1	4	5	94	86	180
21-Jul	1	3	4	95	89	184
22-Jul	7	0	7	102	89	191
23-Jul			0	102	89	191
24-Jul		4	4	102	93	195
25-Jul	8		8	110	93	203
26-Jul		2	2	110	95	205
27-Jul	4	14	18	114	109	223
28-Jul	8	8	16	122	117	239
29-Jul	57	33	90	179	150	329
30-Jul	6	10	16	185	160	345
31-Jul	0	0	0	185	160	345
1-Aug	1	0	1	186	160	346
2-Aug	0	56	56	186	216	402
3-Aug	35	0	35	221	216	437
4-Aug	0	0	0	221	216	437
5-Aug	78	74	152	299	290	589
6-Aug	185	0	185	484	290	774
7-Aug	62	13	75	546	303	849
8-Aug	40	12	52	586	315	901
9-Aug	100	10	110	686	325	1,011
10-Aug	131	8	139	817	333	1,150
11-Aug	157	0	157	974	333	1,307
12-Aug	40	0	40	1,014	333	1,347
13-Aug	0	0	0	1,014	333	1,347
14-Aug	17	17	34	1,031	350	1,381
15-Aug	7	17	24	1,038	367	1,405

	Sockeye Daily Counts 2016 Continued					
	Daily			Cumulative		
	Counted	Sampled	Total	Counted	Sampled	Total
16-Aug	190	3	193	1,228	370	1,598
17-Aug	50	20	70	1,278	390	1,668
18-Aug	0	0	0	1,278	390	1,668
19-Aug	102	20	122	1,380	410	1,790
20-Aug	29	20	49	1,409	430	1,839
21-Aug	369	20	389	1,778	450	2,228
22-Aug	182	20	202	1,960	470	2,430
23-Aug	14	10	24	1,974	480	2,454
24-Aug	99	20	119	2,073	500	2,573
25-Aug	708	20	728	2,781	520	3,301
26-Aug	255	0	255	3,036	520	3,556
27-Aug	39	20	59	3,075	540	3,615
28-Aug	33	20	53	3,108	560	3,668
29-Aug	252	20	272	3,360	580	3,940
30-Aug	297	0	297	3,657	580	4,237
31-Aug	44	10	54	3,701	590	4,291
1-Sep	193	10	203	3,894	600	4,494
2-Sep	201	0	201	4,095	600	4,695
3-Sep	202	10	212	4,297	610	4,907
4-Sep	182	0	182	4,479	610	5,089
5-Sep	238	10	248	4,717	620	5,337
6-Sep	177	0	177	4,894	620	5,514
7-Sep	2	14	16	4,896	634	5,530
8-Sep	0	26	26	4,896	660	5,556
9-Sep	165	10	175	5,061	670	5,731
10-Sep	590	0	590	5,651	670	6,321
11-Sep	0	10	10	5,651	680	6,331
12-Sep	114	0	114	5,765	680	6,445
13-Sep	103	20	123	5,868	700	6,568
14-Sep	42	3	45	5,910	703	6,613
15-Sep	48	7	55	5,958	710	6,668
16-Sep	3	15	18	5,961	725	6,686
17-Sep	31	15	46	5,992	740	6,732
18-Sep	35	20	55	6,027	760	6,787
19-Sep	120	10	130	6,147	770	6,917
20-Sep	38	6	44	6,185	776	6,961
21-Sep	67	2	69	6,252	778	7,030
22-Sep	132	2	134	6,384	780	7,164
23-Sep	76	1	77	6,460	781	7,241
24-Sep	54	0	54	6,514	781	7,295
25-Sep	50	2	52	6,564	783	7,347
26-Sep	23	8	31	6,587	791	7,378
27-Sep	52	0	52	6,639	791	7,430
28-Sep	4	9	13	6,643	800	7,443
29-Sep	30	6	36	6,673	806	7,479
30-Sep	22	0	22	6,695	806	7,501
1-Oct	19	9	28	6,714	815	7,529
2-Oct	7	0	7	6,721	815	7,536
3-Oct	9	0	9	6,730	815	7,545
4-Oct	6	2	8	6,736	817	7,553
5-Oct	22	0	22	6,758	817	7,575
6-Oct	9	0	9	6,767	817	7,584

Appendix 5. Financial Summary

Project Budget Form

Page 1 of 2

Name of Project: Klukshu Chinook and Sockeye 2016

ELIGIBLE COSTS					**BUDGET**	**OTHER FUNDING**	**CONTRIBUTION FUNDING (PSC)**		
Labour									
Wages & Salaries									
Position	# of crew	# of work days	rs per da	rate per hour	**Total (PSC + In-kind + cash)**	**In-Kind & Cash**	**Budget**	**Expenditures**	**Variance**
DFO Stock Assessment Biologist Bi-3	1	5	7.5	39	1,463	1,463			
DFO Stock Assessment Biologist Bi-2	1	10	7.5	37	2,775	2,775			
DFO Fishery Technician EG 4	1	60	7.5	35	21,750		21,750		
DFO Fishery Technician EG 3	1	61	7.5	30	19,725		19,725	42,085	
DFO Fishery Technician EG 3	2	55	7.5	30	30,750	30,750			
Person Days (# of crew x work days)		191		**sub total**	76,463	34,988	41,475	42,085	(610)
Labour - Employer Costs (percent of wages subtotal amount)									
	rate	20%		**sub total**	15,293	6,998	8,295	7,685	610
Subcontractors & Consultants	# of crew	# of work days	rs per da	rate per hour					
					-		-		
					-		-		
							-		
Insurance if applicable	rate	0%							
114				**sub total**	-	-	-		
Volunteer Labour	# of crew	# of work days	rs per day						
Skilled									
Un-skilled									
Insurance if applicable	rate	0%							
				sub total					
			Total Labour Costs		91,755	41,985	49,770	49,770	-
Site / Project Costs	**Detail (use additional page for details if needed)**								
Travel (do not include to & from work)						4,979	-		
Small Tools & Equipment						500	-		
Site Supplies & Materials						5,000	-		
Equipment Rental							-		
Work & Safety Gear						800	-		
Repairs & Maintenance						1,000	-		
Permits							-		
Technical Monitoring							-		
Other site costs							-		
			Total Site / Project Costs		-	12,279	-	-	-

Project Budget Form (continued)

ELIGIBLE COSTS				BUDGET	OTHER FUNDING	CONTRIBUTION FUNDING (PSC)		
Training (e.g Swiftwater, bear aware, electrofishing, etc).				Total (PSC + In-kind + cash)	In-Kind & Cash	PSC Amount	Expenditures	Variance
Name of course	# of crew	# of days						
Firearm Safety	3	2	300	600	600			
			Total Training Costs	600	600	-	-	-
Overhead / Indirect Costs (not to exceed 20% of PSC Amount)								
Office space; including utilities, etc.								
Insurance								
Office supplies								
Telephone & long Distance				1,200	1,200			
Photocopies & printing								
Other overhead costs	Admin Overhead @ 3% / 20%			2,771	2,771	-		
			Total Overhead Costs	3,971	3,971	-	-	-
Capital Costs / Assets	**Detail (use additional page for details if needed)**							
Assets are things of value that have an initial cost of $250 CAN or more and which can be readily misappropriated for personal use or gain or which are not, or will not be, fully consumed during the term of the project.								
				-				
				-				
				-				
				-				
			Total Capital Costs	-		-	-	-
			Project Total Costs Cdn$	96,326	58,835	49,770	49,770	-