

Wolf Creek Project
CRE-64N-06
Final Report

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Abstract

During the months of August and September, 2006, volunteers of the Yukon Fish and Game Association conducted a Chinook escapement monitoring program on Wolf Creek. In total, 4 creek walks and one GPS coordinate mapping walk were conducted on Wolf Creek during the salmon migration to the upper water shed of the Yukon River. One beaver dam and several small log jams were the major obstruction to the migration of the Chinook salmon returning to Wolf Creek, which were manually breached or cleared several times during the month of August. All coded wire heads and corresponding scale and length data collected from the spawned out sampled fish was organized and delivered to D.F.O. for future analyses. In addition to the creek walks an amended collection permit was issued to perform G-trapping of juvenile fry.

Under the contract agreement 3 interpretive signs regarding the Yukon River / Wolf Creek Salmon were drafted to replace the outdated Chinook salmon life cycle sign at the Wolf Creek Campground. Input from the volunteers of the Yukon Fish and Game Association, Yukon Energy, D.F.O., and members of the Yukon River Panel reviewed and revised these signs many times before a final decision was made on the wording of the text.

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Attached

Wolf Creek Sign layout

Introduction

The main focus of the Wolf Creek Monitoring Project is based on community knowledge and local stewardship of the Yukon's Chinook salmon resource. The location of the creek is well within the city limits of Whitehorse and flows through a territorial campground which is utilized by local residents and people from all over the world.

Historically there was a salmon run up Wolf Creek, but over the years there was a decrease in the number of Chinook salmon seen in Wolf Creek. This decline may be attributed to the construction of the Alaska Highway over the creek and the upstream Whitehorse Copper Mine which ceased operation in the late nineteen seventies. The result, what ever the cause, was that adult salmon had not been observed in the creek for several years.

The Yukon Fish and Game Association, with the technical support from D.F.O. Whitehorse, and the Yukon Energy Corporation have made attempts to re-establish a salmon population in Wolf Creek. Since 1984 the Fish and Game Association has organized a public Chinook fry salmon release into the creek (Appendix 1). The fry for this annual release are supplied by the Whitehorse Rapids Fish Hatchery, which is funded by the Yukon Energy Corporation and Renewable Resources (Yukon Government). The Yukon River Panels Restoration and Enhancement Fund funds the coded wire tagging operation, which marks the fry that are released. Since the inception of the Wolf Creek enhancement program some returning adults have been observed. Also by setting minnow traps around the location of the spawning areas, it was found that these salmon may have been spawning with some success as newly emergent fry were caught. Second or third generations wild Chinook spawned from those hatchery salmon may be present in the creek.

Methods

A 3 ton truck equipped with a Hyab crane was donated for the task of removing the old sign. The old sign was placed on the deck of the 3 ton truck and transported back to Whitehorse for recycling. After some discussion it was decided to leave the old steel post in the ground and reuse the site for the new interpretive signs.

The platform was flagged off to prevent the general public from entering the areas where the brush was being cleared from. Safety gear was provided by Shane Parker for chainsaw use during the cutting and clearing of trees. Some alder branches were left to provide some cover for returning adult salmon and juveniles that may be utilizing the area in mention. All cut material was piled away from public viewing for future pick up. At the completion of the clearing the creek and fish

way were clearly visible from the platform area. Some railing boards were missing and replaced.

Volunteers ventured to the confluence of the Wolf Creek where it enters the Yukon River for creek walks, dam clearing and sampling. A sampling kit which was assembled a week prior to the creek walk was checked for items such as scale books, thermometer, measuring tape, coded wire head tags, flagging tape, waders, bear spray and other instruments that may be used during the creek walk.

Results and Discussion

Stream Walks and Data Collection;

Date	Tasks Performed
Aug 17	Initial Wolf Creek walk to clear up dam
Aug 18	Revisited the dam site to see if any salmon had migrated past the obstruction
Aug 21	Volunteers and students from the Renewable Resource Program at the College walked the river and breached the dam
Aug 24	Side channel of the dam breached
Sep 2	Final dam breach and collection permit for juvenile trapping amended due to actively feeding juvenile salmon
Sep 14 & 15	Set G-traps around the log jam and captured juvenile fry
Oct 12	GPS coordinates of the sites taken by Challenger Geomatics

Three juvenile traps were set at the previously flagged log jam and were baited with Yukon River salmon roe as an attractant which proved to be acceptable to the juveniles as fry were captured within minutes of placing them into the water. On September 14 volunteers pulled the G-traps and anesthetized the captured fry with clove oil. Fry were sampled by length and whether they were adipose clipped or wild (Appendix 2). After the fry were sampled and the data recorded they were immediately placed into a recovery bucket with fresh oxygenated water until full recovery from the anesthetic was observed. The fry were then released into calm water around the log jam to reorient themselves to the creek flow. No mortalities were observed during the sampling procedures. The response of experts in the field of juvenile migration was not conclusive on whether the fry had migrated up the creek from other rearing areas or if they were natural recruitment from the previous years spawn in the Wolf Creek drainage.

One hundred and twenty five fry were captured and sampled of which 15 were adipose clipped and presumed to be of hatchery origin with the remaining 110 fry having adipose fin present and presumed to be of wild origin. Minimum size of the fry was 50 mm with the maximum being 90 mm

Wolf Creek Signage

YFGA Director Pat Hogan, Rick Ferguson, Lawrence Vano, and YFGA office staff worked on the draft signs from September to December of 2007. The end result of the discussion was 3 signs, erected up in the Wolf Creek campground area during the spring of 2007. The Parks and Recreation Department (Yukon Government) was contacted in regards to the sign location.

WOLF CREEK CARCASS RECOVERY - 2006

FISH #	Date	Sample type	WILD or CLIPPED (hatchery)	Sex	Head Tag #	Scale Book #	Scale #	FL	POHL
1	17-Aug	Wolf Creek	Clipped	Male	208964E	42133	1 to 10	890	690
2	17-Aug	Wolf Creek	Clipped	Male	208968E	42133	11 to 20	730	570
3	17-Aug	Wolf Creek	Clipped	Male	208967E	42133	21 to 20	700	550
4	17-Aug	Wolf Creek	Clipped	Male	208971E	42133	31 to 40	710	580
5	17-Aug	Wolf Creek	Clipped	Male	208970E	42133	41 to 50	780	590
6	02-Sep	Wolf Creek	Clipped	Male	WF #1	42134	1 to 10	620	520
7	02-Sep	Wolf Creek	Clipped	Male	WF #5	42134	11 to 20	710	540
8	02-Sep	Wolf Creek	Clipped	Male	WF# 7	42134	21 to 20	780	580
9	02-Sep	Wolf Creek	Clipped	Male	WF# 8	42134	31 to 40	690	530
10	02-Sep	Wolf Creek	Clipped	Male	WF# 10	42134	41 to 50	780	590
11	02-Sep	Wolf Creek	Clipped	Male	WF# 12	47848	1 to 10	790	630
12	02-Sep	Wolf Creek	Clipped	Female	WF #2	47845	1 to 10	830	650
13	02-Sep	Wolf Creek	Clipped	Female	WF #3	47845	11 to 20	740	610
14	02-Sep	Wolf Creek	Clipped	Female	WF #4	47845	21 to 20	870	680

15	02-Sep	Wolf Creek	Clipped	Female	WF #6	47845	31 to 40	790	610
16	02-Sep	Wolf Creek	Clipped	Female	WF # 9	47845	41 to 50	900	720
17	02-Sep	Wolf Creek	Clipped	Female	WF # 10	47847	1 to 10	890	710
18	02-Sep	Wolf Creek	WILD	Male		47846	1 to 10	470	350
19	02-Sep	Wolf Creek	WILD	Male		47846	11 to 20	790	600

JUVENILE SAMPLING WOLF CREEK (h20 Temp 4 C)

DATE	LENGTH	CLIP	WILD	DATE	LENGTH	CLIP	WILD
Sept 14/06	70mm		#	Sept 14/06	50mm		#
Sept 14/06	80mm	#		Sept 14/06	60mm		#
Sept 14/06	70mm		#	Sept 14/06	80mm		#
Sept 14/06	70mm		#	Sept 14/06	75mm	#	
Sept 14/06	50mm		#	Sept 14/06	55mm		#
Sept 14/06	70mm		#	Sept 14/06	60mm		#
Sept 14/06	80mm	#		Sept 14/06	75mm		#
Sept 14/06	60mm		#	Sept 14/06	80mm		#
Sept 14/06	80mm		#	Sept 14/06	80mm	#	
Sept 14/06	70mm	#		Sept 14/06	70mm	#	
Sept 14/06	80mm		#	Sept 14/06	60mm		#
Sept 14/06	80mm	#		Sept 14/06	65mm		#
Sept 14/06	70mm		#	Sept 14/06	60mm		#
Sept 14/06	50mm		#	Sept 14/06	60mm		#
Sept 14/06	80mm		#	Sept 14/06	65mm		#
Sept 14/06	60mm		#	Sept 14/06	55mm		#
Sept 14/06	80mm		#	Sept 14/06	55mm		#
Sept 14/06	50mm		#	Sept 14/06	80mm	#	
Sept 14/06	50mm		#	Sept 14/06	75MM		#
Sept 14/06	50mm		#	Sept 14/06	80mm	#	
Sept 14/06	60mm		#	Sept 14/06	75MM	#	
Sept 14/06	60mm		#	Sept 14/06	75mm		#
Sept 14/06	60mm		#	Sept 14/06	55mm		#
Sept 14/06	60mm		#	Sept 14/06	65mm		#
Sept 14/06	50mm		#	Sept 14/06	90mm		#
Sept 14/06	50mm		#	Sept 14/06	60mm		#

				14/06				
Sept 14/06	60mm	#	TRAP #1	Sept 14/06	75mm	#		TRAP#3
Sept 14/06	50mm	#	TRAP #1	Sept 14/06	50mm	#		TRAP#3
Sept 14/06	90mm	#	TRAP #1	Sept 14/06	55mm	#		TRAP#3
Sept 14/06	80mm	#	TRAP #1	Sept 14/06	70mm	#		TRAP#3
Sept 14/06	65mm	#	TRAP #1	Sept 14/06	65mm	#		TRAP#3
Sept 14/06	70mm	#	TRAP #1	Sept 14/06	52mm	#		TRAP#3
Sept 14/06	60mm	#	TRAP #1	Sept 14/06	53mm	#		TRAP#3
Sept 14/06	80mm	#	TRAP #1	Sept 14/06	90mm	#		TRAP#3
Sept 14/06	60mm	#	TRAP #1	Sept 14/06	80mm	#		TRAP#3
Sept 14/06	65mm	#	TRAP #1	Sept 14/06	75mm	#		TRAP#3
Sept 14/06	55mm	#	TRAP #1	Sept 14/06	75mm	#		TRAP#3
Sept 14/06	85mm	#	TRAP #1	Sept 14/06	48mm	#		TRAP#3
Sept 14/06	65mm	#	TRAP #1	Sept 14/06	75mm	#		TRAP#3
Sept 14/06	75mm	#	TRAP #1	Sept 14/06	52mm	#		TRAP#3
Sept 14/06	50mm	#	TRAP#2	Sept 14/06	65mm	#		TRAP#3
Sept 14/06	55mm	#	TRAP#2	Sept 14/06	65mm	#		TRAP#3
Sept 14/06	70mm	#	TRAP#2	Sept 14/06	62mm	#		TRAP#3
Sept 14/06	70mm	#	TRAP#2	Sept 14/06	51mm	#		TRAP#3
Sept 14/06	65mm	#	TRAP#2	Sept 14/06	80mm	#		TRAP#3
Sept 14/06	55mm	#	TRAP#2	Sept 14/06	75mm	#		TRAP#3
Sept 14/06	55mm	#	TRAP#2	Sept 14/06	65mm	#		TRAP#3
Sept 14/06	65mm	#	TRAP#2	Sept 14/06	75mm	#		TRAP#3
Sept 14/06	55mm	#	TRAP#2	Sept 14/06	58mm	#		TRAP#3
Sept 14/06	55mm	#	TRAP#2	Sept 14/06	68mm	#		TRAP#3
Sept 14/06	55mm	#	TRAP#2	Sept 14/06	50mm	#		TRAP#3
Sept 14/06	55mm	#	TRAP#2	Sept 14/06	58mm	#		TRAP#3
Sept 14/06	55mm	#	TRAP#2	Sept 14/06	71mm	#		TRAP#3

Sept 14/06	60mm	#	TRAP#2	Sept 14/06	90mm	#	TRAP#3
Sept 14/06	65mm	#	TRAP#2	Sept 14/06	64mm	#	TRAP#3
Sept 14/06	60mm	#	TRAP#2	Sept 14/06	57mm	#	TRAP#3
Sept 14/06	60mm	#	TRAP#2	Sept 14/06	70mm	#	TRAP#3
Sept 14/06	55mm	#	TRAP#2	Sept 14/06	58mm	#	TRAP#3
Sept 14/06	60mm	#	TRAP#2	Sept 14/06	62mm	#	TRAP#3
Sept 14/06	50mm	#	TRAP#2	Sept 14/06	55mm	#	TRAP#3