

# YUKON RIVER SALMON RESTORATION & ENHANCEMENT FUND

Final Report- Project Number: CRE-140N-10

## Sharing Research Results with Communities and Scientists

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**Project Objectives:** Our project was composed of two parts related to communication and community education. First, we developed five newspaper columns that were published in the local *Yukon News* and made available on an archive on the Internet. Secondly we added 50 scientific reports, arising from research sponsored by the Yukon River Panel, to the Yukon Biodiversity Database.

**Project Summary:** We used some of the funds (\$2,200) to develop five newspaper articles to run in the *Your Yukon* column, that is published biweekly in the Friday edition of the *Yukon News*. These articles are also made available and archived on the Internet on the *Your Yukon* web site:

<http://www.taiga.net/yourYukon/index.html>

The newspaper articles are as follows:

- McIntyre Creek Incubation Facility on March 4 - Bringing along the baby salmon
- Al von Finster interview on Nov 5: Taking the river's temperature
- Aquatic food webs on July 2: Invisible world anchors aquatic food webs
- Role of climate change in water systems on March 18: Water, water everywhere – or not <http://www.taiga.net/yourYukon/col2055.html>
- Sandy Johnston interview – April 15 - *Johnston made a career of chasing fish*

We used the remaining funds (\$3,000) to add 50 citations to the Yukon Biodiversity Database ( <http://www.aina.ucalgary.ca/yb/> ). This database is a free, searchable database with a comprehensive listing of biodiversity related reports related to the Yukon and Beaufort Sea area. The selection of reports was done in consultation with the Yukon River Panel staff. We provide Internet links to the full listing of citations sorted by:

- Last name of first author of the report (see Appendix I):  
[http://www.aina.ucalgary.ca/scripts/minisa.dll/144/proe/proeaa/SE+Yukon+River+Salmon\\*?COMMANDSEARCH](http://www.aina.ucalgary.ca/scripts/minisa.dll/144/proe/proeaa/SE+Yukon+River+Salmon*?COMMANDSEARCH)
- Chronological order dating from 1997 to 2009:  
[http://www.aina.ucalgary.ca/scripts/minisa.dll/144/proe/proeya/SE+Yukon+River+Salmon\\*?COMMANDSEARCH](http://www.aina.ucalgary.ca/scripts/minisa.dll/144/proe/proeya/SE+Yukon+River+Salmon*?COMMANDSEARCH)

Note that both listings identify 56 citations and this reflects the 50 references added under this project along with six references that were added some years ago.

**Project Budget:** The YRP funding for this project was \$5,200 and there were in kind contributions of \$780 from the Northern Research Institute and \$1,800 in project management from the Yukon Biodiversity Working Group.

An initial payment of \$4,000 has been received and there is an outstanding balance of \$1,200 due upon submission of this report.

**Appendix 1** – Listing of all Yukon River Panel citations in the Yukon Biodiversity database – sorted in alphabetical order by last name of the first author. 42 pages



**ASTIS** Arctic Science and Technology  
Information System

**SISTA** Système d'information sur les  
sciences et les technologies arctiques

A search of the [ASTIS database](#) for "SE Yukon River Salmon\*" has found the following 56 records, which are sorted by first author.

**Sonar estimation of chinook and fall chum salmon passage in the Yukon River near Eagle, Alaska, 2008** / Alaska. Division of Commercial Fisheries Crane, A.B. Dunbar, R.D. United States. Fish and Wildlife Service [Sponsor] Yukon River Panel [Sponsor]

Anchorage, Alaska : Alaska Dept. of Fish and Game, Division of Sport Fish, Research and Technical Services, 2009.

ii, 37 p. : ill., maps ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. URE-16-08)

(Fishery data series, no. 09-30)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

References.

Appendix.

Report date: June 2009.

ASTIS record 72647.

Languages: English

Dual-Frequency Identification Sonar and split-beam sonar equipment were used to estimate Chinook salmon, *Oncorhynchus tshawytscha*, and fall chum salmon, *Oncorhynchus keta*, passage in the Yukon River near Eagle, Alaska from July 6 to October 6, 2008. A total of 38,097 Chinook were estimated to have passed the sonar site between July 6 and August 16, and an estimated 171,347 chum salmon passed between August 17 and October 6. The sonar-estimated passage of chum salmon was subsequently expanded to a total passage estimate of 193,397 to include fish that may have passed after operations ceased. By subtracting the preliminary subsistence catch above, the sonar site results in an estimated border passage of 37,407 Chinook salmon, and 180,397 chum salmon. A drift gillnet test fishery was conducted to collect age, sex, length, and genetic information. Species composition was also recorded to determine when the Chinook run ended and the fall chum run began. Both sonar systems functioned well with minimal interruptions to operation. Range of ensonification was considered adequate for most fish that migrated upstream. A continued long-term hydroacoustic enumeration project for Chinook and chum salmon near the United States/Canada border will help fishery managers meet conservation and management commitments made by both countries under the Yukon River Salmon Agreement. (Au)

I, N, F, B, T, E

Age; Animal distribution; Animal mortality; Animal population; Biological sampling; Bottom sediments; Chinook salmon; Chum salmon; Equipment and supplies; Fish management; Fishing; Genetics; Hydrology; Indians; Meteorology; Seasonal variations; Size; Sonar; Stream flow; Subsistence; Suspended solids; Temporal variations

G06, G0811

Eagle region, Alaska; Yukon River, Alaska/Yukon

**Inseason genetic stock identification of chinook salmon caught in lower Yukon River test fisheries, 2009** / Alaska. Division of Commercial Fisheries DeCovich, N.A. Evenson, D.F. Yukon River Panel [Sponsor]

Anchorage, Alaska : Alaska Dept. of Fish and Game, 2010.

v, 20 p. : ill., map ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. URE-19N-09)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

References.

Report date: April 2, 2010.

Cover title.

For project titled: "Inseason genetic stock identification of Chinook salmon harvests on the Yukon River, 2009; a pilot study to determine feasibility and application".

ASTIS record 72648.

Languages: English

This study evaluated the feasibility of inseason mixed stock analysis of Chinook salmon (*Oncorhynchus tshawytscha*) harvested in test fisheries of the Lower Yukon River. We utilized a 27 population, 42 single nucleotide polymorphism (SNP) baseline to analyze the stock composition of mixed fishery samples. In 2009, it was difficult to detect pulses in the Lower Yukon Test Fishery (LYTF), and 1221 fish from the LYTF and Pilot Station test fishery, representing three stratum, were analyzed. The estimated proportion of Canadian-origin Chinook salmon in each stratum ranged from a high of 70% in the first stratum to a low of 43% in the third stratum. The low overall run strength combined with inseason genetic information on the Canadian-bound proportion of the run highlighted concerns regarding the run's capacity to meet the escapement goal at the Canadian border and provide for subsistence harvest opportunity. Consequently, fishery managers implemented reductions in the subsistence fishery and delayed the summer chum salmon commercial fishery. (Au)

I, N, T

Animal distribution; Animal migration; Animal mortality; Animal population; Biological sampling;

Chinook salmon; Fish management; Fish spawning; Fisheries; Fishing; Genetics; Indians; Quotas;

Subsistence; Temporal variations

G06, G0811

Chatanika River, Alaska; Minto region, Alaska; Yukon River, Alaska/Yukon

**2009 Klondike River DIDSON sonar : CRE-16-09** / B. Mercer & Associates Ltd. Mercer, B.  
Yukon River Salmon Restoration and Enhancement Fund [Sponsor]  
[Whitehorse, Yukon : B. Mercer & Associates, 2010].

iii, 23 p. : ill., maps ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-16-09)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

Report date: March 2010.

References.

Appendices.

Cover title.

ASTIS record 72624.

Languages: English

As a result of a sonar feasibility study conducted in July 2008 and May 2009 on the Klondike River watershed, a suitable site was identified for the deployment of a DIDSON sonar unit. The purpose of the study was to determine the feasibility of obtaining accurate enumeration of Chinook salmon escapement into the drainage. In 2008 a proposal to conduct a sonar project to enumerate the 2009 Klondike River Chinook salmon escapement was submitted to the Yukon River Panel (YRP) Restoration and Enhancement Fund and accepted. The identified sonar site on the Klondike River is located approximately 3.5 km upstream of the confluence with the Yukon River. Fabrication of required weir and camp materials occurred in June 2009. Transport of equipment from Whitehorse to Dawson City occurred on July 2. The construction and placement of diversion weirs and camp setup at the sonar site commenced on July 3. Sonar operation began on July 6 and continued through to August 15. Due to a component malfunction the sonar was inoperable for approximately 78 hours from July 18 - 21. During this time 27 hours of visual counts were conducted over three days and an expanded estimate of Chinook salmon passage was obtained for this period. A total of 5,147 Chinook salmon was estimated to have entered the Klondike River drainage in 2009 based on sonar counts, expanded visual counts, and an end of the run extrapolation. The 2009 Klondike River Chinook escapement represented 7.8% of the Eagle sonar station total upper Yukon River Chinook spawning escapement estimate of 65,278. (Au)

I N T F

Animal distribution; Animal migration; Animal population; Animal tagging; Biological sampling; Chinook salmon; Fish spawning; Fisheries; Fishing; Indians; Instruments; Quality assurance; Quotas; Radio tracking of animals; Research stations; Sonar; Subsistence; Telemetry; Temporal variations; Water quality

G0811

Big Salmon River, Yukon; Klondike River region, Yukon; Klondike River, Yukon

**Distribution and abundance of radio tagged chinook salmon in the Canadian portion of the Yukon River watershed as determined by 2004 aerial telemetry surveys / B. Mercer & Associates Ltd.**

Merger, B. Yukon River Panel [Sponsor]

[Whitehorse, Yukon : B. Mercer & Associates Ltd., 2005].

v, 39, [8] p. : ill., maps ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-77-04)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

Report date: March, 2005.

References.

Appendices.

Cover title.

RE project 77-04.

ASTIS record 72638.

Languages: English

2004 was the third year of a Yukon River basin wide adult chinook salmon radio tagging and monitoring program. In 2004, a total of 995 chinook salmon were radio tagged with standard radio transmitters, including 77 fish tagged with radio-archival tags that record depth and water temperature. The radio tags were applied to migrating chinook salmon captured at Marshall and Russian Mission on the lower Yukon River in Alaska. As a complement to the basin wide chinook monitoring project, aerial surveys were conducted in the Canadian portion of the Yukon River to determine the distribution and relative abundance of the radio tagged fish. This report details the results of the 2004 aerial surveys conducted in Canada. Aerial tracking surveys were conducted on all major tributaries and streams with documented chinook spawning. The surveys were conducted between July 23 and September 15. Of the 284 radio tagged chinook that migrated upstream of the Alaska-Yukon border, 48 were captured in fisheries or assessment projects, 221 were detected and assigned terminal locations during the aerial surveys, and 15 were not located. A total of 15 archival radio tags passed upstream of the Alaska-Yukon border and 13 were recovered. Radio tagged fish were distributed throughout the survey area with higher concentrations in the Klondike, McQuesten, Big Salmon, Little Salmon, the mainstem Yukon, and the mainstem Teslin rivers. Proportional distribution of located radio tags ranged from a high of 56 (24%) in the Mainstem Yukon watershed to a low of 12 (4%) in both the south Yukon River and White River drainages. In general the 2004 radio tag distributions were similar to those observed during the 2002 and 2003 study years. A 2004 above border chinook population estimate of 67,280 with a 95% CI of  $\pm 22,989$  was obtained using telemetry and tag recovery data and in three combined but separate assessment projects. A revised and statistically more robust estimate of 50,121 (CI  $\pm 11,307$ ) was obtained using selective catch information. Using a radio tag ratio of one radio tag per 176 untagged chinook and a simple, linear arithmetic relationship of tagged/untagged ratios it was possible to generate 2004 escapement indices of all surveyed streams that contained radio tagged chinook. (Au)

I, N, F, L, J

Aerial surveys; Animal distribution; Animal live-capture; Animal migration; Animal population; Animal tagging; Chinook salmon; Effects monitoring; Fish management; Fish spawning; Radio tracking of animals; Rivers; Telemetry; Temperature; Wildlife habitat

G0811, G06

Big Salmon River, Yukon; Eagle, Alaska; Klondike River, Yukon; Little Salmon, Yukon; McQuesten River, Yukon; White River, Alaska/Yukon; Yukon River region, Alaska/Yukon; Yukon River, Alaska/Yukon

**Small stream investigations regarding restoration and enhancement of chinook salmon habitat on select tributaries of the Takhini River** / Blue River Consulting Zurachenko, P.

Finsson, B. Yukon River Salmon Restoration and Enhancement Fund [Sponsor]

[Whitehorse, Yukon : Blue River Consulting, 1998].

[4], v, [216] p. : ill., maps ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-15-97)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

Report date: March 1998.

References.

Appendices.

Cover title.

ASTIS record 72602.

Languages: English

Summary: The Yukon River Salmon Restoration and Enhancement Fund was established as part of the U.S./Canada Interim Yukon River Salmon Agreement in 1995. Funds are made available for programs that are directly associated with Yukon River research and management activities in the U.S. and Canada for restoration and enhancement of Canadian origin salmon stocks. Blue River Consulting received funding from the Yukon River Salmon Restoration and Enhancement Fund, administered by the Yukon River Panel, to conduct small stream investigations and gather information on chinook salmon (*Oncorhynchus tshawytscha*) habitat that would aid fisheries resource managers in developing a restoration/enhancement study plan for select tributaries of the Takhini River. Small stream investigations were completed on nine tributaries of the Takhini River: Ibex River, Arkeil Creek, AA (Easy Love) Creek, Mendenhall River, Stony Creek, Thirtyseven Mile Creek, Little River, Flat Creek and BB (Lucky Love) Creek in Aug.-Sept. 1997, and March 1998. The following study objectives were: -To review the existing data base with information relevant to chinook salmon spawning and rearing habitats in the smaller streams of the Takhini River. -To conduct field investigations providing up-to-date descriptions of chinook salmon habitat quality, quantity, upstream access by adults and juveniles, and to document human and other disturbances to these streams. -To report the findings to the Yukon River panel identifying restoration and/or enhancement possibilities as well as recommendations with respect to human and other impacts. As related to these objectives, an information review and consultations were carried out for each stream. Information was gathered on land and water use, mining activity, agricultural activity, forestry and fisheries information. Fieldwork was conducted from August to September 1997 and March 1998. The field program included stream surveys, adult chinook spawning surveys, juvenile chinook (jcs) sampling, an assessment of spawning and rearing habitats, and recording human impacts and other disturbances that may have an impact on salmonid bearing streams. Some of the information described in the Ibex River section regarding forest fire, beavers, predation and human disturbances may be applied to the other streams. ... (Au)

I, N, J, F, H

Age; Animal distribution; Animal migration; Animal population; Beavers; Benthos; Chinook salmon; Environmental impacts; Fish culture; Fish management; Fish spawning; Fisheries; Fishing; Land use; Rivers; Seasonal variations; Stream flow; Water quality; Water resources; Wildlife habitat; Wildlife management

G0811

Takhini River region, Yukon; Takhini River, Yukon

**Kwanlin Dün First Nation Michie Creek salmon studies 2008 : project #51-08 - progress report November 2008** / Can-Nic-A-Nick Environmental Sciences Yukon River Salmon

Restoration and Enhancement Fund [Sponsor] Yukon River Panel [Sponsor]

[Whitehorse, Yukon : Can-Nic-A-Nick Environmental, 2008].

3 p. ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-51-08)

Indexed a PDF file from the Web.

Cover title.

Project # 51-08.

Report date: November 19, 2008.

ASTIS record 72255.

Languages: English

Web: <http://yukonriverpanel.com/salmon/wp-content/uploads/2009/11/cre-51-08-michie-creek-salmon-and-habitat-monitori.pdf>

This progress report summarizes the results of 6 field trips (from June 1st to October 3rd) to seven different spawning areas; the numbers and condition of salmon captured/measured/weighed; as well as the water level, surface water temperature and discharge rates encountered during the Michie Creek surveys. (ASTIS)

I, F, N, H, T

Age; Animal distribution; Animal health; Animal live-capture; Animal migration; Animal population; Animal tagging; Beavers; Benthos; Chinook salmon; Dams; Effects monitoring; Fish culture; Fish management; Fish spawning; Fresh-water ecology; Fresh-water invertebrates; Hydroelectric power; Hydrology; Instruments; Kwanlin Dün First Nation; Measurement; River discharges; Seasonal variations; Size; Stream flow; Surface temperature; Temporal variations; Water level; Wildlife habitat

G0811

Michie Creek, Yukon; Whitehorse Rapids, Yukon

**2009 KDFN Michie Creek monitoring project : CRE-51-09** / Can-Nic-A-Nick Environmental Sciences de Graff, N.M. Kwanlin Dün First Nation Yukon River Panel [Sponsor]

[Yukon : Heritage, Lands and Resources Department, Kwanlin Dun Government, 2009].

iv, 29, [22] p. : ill., map ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-51-09)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

Appendices.

References.

Project no. CRE-51-09.

Report date: December 2009.

ASTIS record 72618.

Languages: English

Monitoring included assessment of the migratory habitat in Michie Creek to ensure that adult salmon were not obstructed; stream flows and temperatures at Station M1, in the primary Chinook salmon spawning area in upper Michie Creek; the collection and analysis of samples of the benthic community; and the presence and growth of wild and artificially propagated 0+ and 1+ juvenile Chinook salmon. No obstructions to upstream migration were observed. Flows were above average during the spring and below average during July and early August. Flows and stream temperatures were near average throughout the late summer and fall Chinook spawning period. Very few juvenile salmon originating from the Whitehorse Rapids Fish Hatchery (WRFH) were captured and then only during sampling a short time after they were planted. The bulk of the out-plants are believed to have left the stream and commenced their downstream migration soon after release. Growth rates of wild 0+ salmon implied from fork lengths of captured salmon were well above average until late summer and then slowed. Catches of age 1+ juvenile salmon were greater than normal and continued to be represented in the catch until early August. (Au)

I, F, N, T, R, J

Animal distribution; Animal growth; Animal live-capture; Animal migration; Benthos; Chinook salmon; Effects monitoring; Fish culture; Fish management; Fish spawning; Fresh-water ecology; Seasonal variations; Stream flow; Temperature; Wildlife habitat

G0811

Michie Creek, Yukon; Whitehorse Rapids, Yukon

**2009 fall chum salmon enumeration Yukon River (Minto to Fort Selkirk) Yukon Restoration and Enhancement project CRE-29-09** / Can-Nic-A-Nick Environmental Sciences de Graff, N.M. Selkirk Renewable Resource Council Yukon River Panel [Sponsor]

[Yukon : Yukon River Panel, 2009].

ii 11 [2] p. : ill. map. : 28 cm.

И, 11, [2] р. : III, map, 28 см.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-29-09)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

Appendix.

References.

Report date: December 2009.

ASTIS record 72629.

Languages: English

The Department of Fisheries and Oceans Canada has conducted programs on migratory Pacific salmon populations in the upper Yukon River drainage since 1982. The primary objective of these programs was to estimate the size of the fall chum spawning migration into Canada. In 2009 the fall chum salmon tagging program that was formally used to estimate migration size was replaced by a sonar enumeration project near the Yukon-Alaska border. The sonar count is currently used as the primary tool to monitor the size of the fall chum salmon population migrating into the Canadian portion of the Yukon River. This project was initiated to develop an additional estimate of Yukon-Alaska border escapement. It was first conducted in 2003 and has been carried out each year since then. During October of 2009 technicians enumerated post-spawning fall chum salmon and carcasses in the Minto Index Area of the Yukon River near Pelly Crossing, Yukon Territory. Tallies were made through several foot and boat surveys at known fall chum spawning locations. A total of 1,666 fall chum salmon in varied condition were enumerated at 12 spawning sites. Using counts from six key spawning locations and data from previous years, an estimate of 212,991 fall chum salmon migrated into the Canadian portion of the Yukon River in 2009. This is well above the 93,734 estimate for migrating fall chum salmon enumerated by the sonar program in Eagle, Alaska. (Au)

I, F, N, T, R, J, G

Animal food; Animal migration; Animal population; Animal tagging; Boating; Breakup; Chum salmon; Effects monitoring; Employment; Fish management; Fish spawning; Fishing; Ice scouring; Indians; Predation; River discharges; River ice; Sonar; Stream flow; Temporal variations; Water level; Wildlife habitat

G0811

Fort Selkirk, Yukon; Pelly Crossing, Yukon; Pelly River, Yukon; Yukon River region, Alaska/Yukon; Yukon River, Alaska/Yukon

**Juvenile chinook salmon downstream migration investigation** / Canada. Dept. of Fisheries and Oceans von Finster, A. W.R. Ricks Consulting Ricks, W.R. Kwanlin Dün First Nation Viksten, J. Yukon River Salmon Restoration and Enhancement Fund [Sponsor] [Whitehorse, Yukon] : Dept. of Fisheries and Oceans, 1998.

40, 7 leaves : maps ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-19-98)

Cover title.

Appendices.

References.

ASTIS record 55956.

Languages: English

Libraries: ACU

During the summer of 1998, a pilot project involving extensive trapping efforts for juvenile chinook salmon (jcs) took place in the mainstem Yukon River, just downstream of the outlet of Marsh Lake, Yukon Territory, in an attempt to determine the timing and duration of the downstream migration of jcs. Specific knowledge of such an event could be used to apply resources and procedures that might aid in the reduction of downstream migrating juvenile chinook salmon mortalities associated with their passage through the hydroelectric turbines at the Whitehorse Rapids Generating Facility. This project employed a variety of trapping devices, including a 4' x 4' inclined plane trap (IPT), minnow traps and beach seines. Supplemental trapping (minnow traps and beach seines) was also conducted during August in Michie Creek, a chinook salmon spawning/natal stream located upstream of the primary Yukon River trapping site. An insignificant number of jcs were captured during the primary trapping effort at the Yukon River site. However, an abundant number of juvenile salmon were captured during the Michie Creek sampling effort. While expertise was gained in all trapping methods applied during this project, insufficient data was obtained that would allow for



definitive conclusions relevant to the questions of magnitude, timing and duration of an out migration of juvenile chinook salmon. Previous studies are reviewed in this document, and numerous hypotheses regarding the results of the trapping efforts are discussed in detail. (Au)

I, F, N, J

Age; Animal behaviour; Animal distribution; Animal growth; Animal live-capture; Animal migration; Animal mortality; Animal population; Animal tagging; Chinook salmon; Dams; Drainage; Effects monitoring; Environmental impacts; Environmental protection; Equipment and supplies; Fish culture; Fish management; Fish spawning; Fishes; Fresh-water ecology; Hydroelectric power; Identification; Lakes; Occupational training; Research; River discharges; Rivers; Safety; Seasonal variations; Stream flow; Suspended solids; Temperature; Temporal variations; Water level; Wildlife habitat

G0811, G06

Croucher Creek, Yukon; M'Clintock River, Yukon; Marsh Lake, Yukon; Michie Creek, Yukon; Whitehorse, Yukon; Wolf Creek (60 37 15 N, 134 54 45 W), Yukon; Yukon River region, Alaska/Yukon; Yukon River, Alaska/Yukon

**Champagne & Aishihik First Nations' Nordenskiold River : upper Nordenskiold River salmon restoration 2001 : final report, August 2001** / Champagne and Aishihik First Nations

Environmental & Administrative Services Yukon Pumphrey, I.C. Yukon River Salmon Restoration and Enhancement Fund [Sponsor]

Whitehorse, Y.T. : Environmental & Administrative Services Yukon, 2002.

vi, 42 p. : ill., maps ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-17-01)

Indexed from a photocopy.

Cover title.

Page headers: Champagne & Aishihik First Nations' Restoration for the upper Nordenskiold River : removal of barriers to salmon migration - 2001.

Appendices.

References.

ASTIS record 57905.

Languages: English

Libraries: ACU

CAFN's overall objective on the Nordenskiold River is to facilitate the successful rebuilding of salmon populations to their fullest sustainable levels. The summer of 2001 project's objective was to continue with the removal of all obstructions to salmon migration on the upper Nordenskiold River as identified in the 1998 CAFN inventory and the 2000 Beaver management and Dam removal project funded by HRSEP and Yukon River Panel. This work was deemed necessary to help ensure that the successful distribution of Nordenskiold wild stocks were realized throughout the upper reaches of the River. Traditional Knowledge and in-situ surveys of past years revealed historic salmon use and an abundance of prime habitat but the numbers of returning salmon were at critical low limits. The following is a summary of the individual objectives for this year's R&E funding. 1. Perform a fixed wing reconnaissance flight over the study area at the beginning of the field season. 2. Continue to remove all obstructions to salmon migration at the critical migration time as per DFO Guidelines for the management of Beaver in Fish Bearing Streams in the Yukon & NBC Division; 3. Obtain temperature profiles in known historic spawning areas by installing data loggers; 4. Perform a helicopter aerial spawning survey in the fall to record the abundance, distribution, and location of adult salmon (live & dead) including GPS references of any new obstructions, spawning sites, and habitat features. 5. Perform Winter Beaver Trapping program in accordance with the DFO Guidelines for the Management of Beaver in Fish Bearing Streams; and 6. Write up and report the results. The crew of 2, through a total of 16 field days on the Nordenskiold, successfully performed objectives 1, 2, and 3. In addition, the crew obtained new and additional stream survey bio-physical data and performed a multitude of gee-type minnow trapping in-search of juvenile chinook salmon. No juvenile chinook salmon were captured. This was expected due to the dismal spawning forecasts and observations of 2000. A total of 50 traps were set. Each trap was set on average for 17.84 hrs for a grand total of 909.82 trapping hours. The crew successfully placed four temperature data loggers at strategic sites along the river and its associated tributaries. Temperature data loggers were placed in Kirkland Creek and at three other sites within the Nordenskiold. All the loggers were programmed to record temperatures every six hours. One very large beaver dam was removed from

below the outlet of Hutchi Lake with staggering results. This dam was not present during the 1998 summer field survey. ... (Au)

I, N, F, S, T, A, J

Aerial surveys; Animal distribution; Animal migration; Animal population; Beavers; Chinook salmon; Dams; Fish management; Fish spawning; Fisheries; Fresh-water ecology; Land use; Mass wasting; Planning; River discharges; Rivers; Salmoninae; Sedimentation; Stream flow; Temperature; Traditional knowledge; Trapping; Tutchone Indians; Water quality; Wildlife management

G0811

Hutshi Lakes region, Yukon; Kirkland Creek region, Yukon; Kirkland Creek, Yukon; Klusha Creek, Yukon; Nordenskiold River region, Yukon; Nordenskiold River, Yukon; Rowlinson Creek region, Yukon; Rowlinson Creek, Yukon; Yukon River region, Alaska/Yukon

**Champagne & Aishihik First Nations' Nordenskiold River : removal of barriers to salmon migration** / Champagne and Aishihik First Nations Environmental & Administrative Services

Yukon Pumphrey, I.C. Yukon River Salmon Restoration and Enhancement Fund [Sponsor]

Habitat Restoration and Salmon Enhancement Program (Canada) [Sponsor]

Whitehorse, Y.T. : Environmental & Administrative Services Yukon, 2001.

vii, 44 p. : ill., 1 map ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-05-00)

(Habitat Restoration and Salmon Enhancement Program project no. HRSEP-00-YT-HR-010)

Cover title.

Page headers: Champagne & Aishihik First Nations' Restoration for the upper Nordenskiold River : removal of barriers to salmon migration - 2000.

Appendices.

References.

ASTIS record 57907.

Languages: English

Libraries: ACU

In 1998/99 CAFN, in conjunction with Environmental and Administrative Services Yukon (E.A.S.Y.), were successful in proposing to the Yukon River Panel's Restoration and Enhancement Fund to provide the financial resources to complete the first stage of a restoration and enhancement (R&E) plan, a Salmon & Salmon Habitat Inventory. This inventory and subsequent restoration recommendations acted as a user-friendly guide for prioritizing and developing a restoration implementation plan for the upper Nordenskiold River. A number of recommendations under the 1998 plan were used to apply for further funding. The Removal of Barriers to Migration sections of the 1998 plan were successful for partial funding under the Yukon River Panel's Restoration & Enhancement (R&E) Program and the Department of Fisheries & Oceans Habitat Restoration and Salmon Enhancement Program (HRSEP) in 1999/2000. This report, and subsequent work performed in preparation of this report, is the outcome of this second stage of restoration on the upper Nordenskiold River. A total of 12 beaver dams were partially removed or breached from the entire project area. However, due to the unusually high water levels this year and the persistent rainfall during the project dates all the dams were partially or totally under water allowing migration of salmon possible. Only two adult salmon were observed during the last day of the 20 day field portion of project. There were only two lodges observed on the main-stem of the Nordenskiold but there were a number observed just off in pothole and oxbow lakes. There was continuous evidence of beaver activity and use throughout the main-stem of the Nordenskiold. It is this author's opinion that the beavers are using the Nordenskiold main-stem as a transportation route for food collection and storage but they utilize the oxbow and pothole lakes scattered within the river valley as their stable lodging environment. It was very evident that adult and juvenile Arctic Grayling were utilizing the habitat created by the beaver dams. Removal of these dams obviously stressed and dispersed these fish. Due to the limitations of the resources and resulting scope of this project the effects of beaver dam removal on Arctic Grayling was not quantified. It is recommended that the effects of beaver dam removal on Arctic Grayling be fully studied. Additional baseline habitat and stream data was collected at strategic sites within the watershed over and above the terms of reference of the project. This data is meant to be added to the existing baseline information collected in 1998. An immature Arctic Lamprey was observed latched onto a very small unidentifiable fry (believed to be a sucker). This was observed in a 3X3 feet pool with approximately 15-20 adult and juvenile lamprey present. A fascinating and rare sight. It is believed that this is the first documentation of Arctic

present. A fascinating and rare sight. It is believed that this is the first documentation of Arctic Lamprey in the upper Yukon in a parasitic relationship. It should be noted that the parasitic lamprey was a juvenile and no adults were observed in this fashion. In March, 2001, as the remainder of the budget permitted (approximately 10% of total budget), was spent to provide a local trapper with an incentive to return to the study area to map and remove beavers. It is recommended that this project continues in the following years until such time as beaver activities are not limiting migration to the upper reaches of the Nordenskiöld River. The author believes that Nordenskiöld River Chinook are early run Chinook in comparison to the entire upper Yukon River stocks. It is therefore recommended that DNA samples be obtained and matched up with timing of Nordenskiöld River Chinook at the commercial fisheries; and management practices, in the form of closures during Nordenskiöld River run timing through the commercial fisheries, are implemented in order to reestablish the Nordenskiöld River Chinook populations. (Au)

I, N, F, S, T, A, J

Aerial surveys; Animal behaviour; Animal distribution; Animal migration; Animal population; Arctic grayling; Arctic lamprey; Beavers; Chinook salmon; Dams; Fish management; Fish spawning; Fisheries; Fresh-water ecology; Land use; Mass wasting; Planning; River discharges; Rivers; Salmoninae; Sedimentation; Stream flow; Temperature; Trapping; Tutchone Indians; Water quality; Watersheds; Wildlife management

G0811

Cattle Creek region, Yukon; Cattle Creek, Yukon; Kirkland Creek region, Yukon; Kirkland Creek, Yukon; Nordenskiöld River region, Yukon; Nordenskiöld River, Yukon; Schwatka Creek region, Yukon; Schwatka Creek, Yukon; Yukon River region, Alaska/Yukon

**Champagne & Aishihik First Nations' salmon restoration development plan for the upper Nordenskiöld River : salmon & salmon habitat inventory** / Champagne and Aishihik First Nations

Environmental & Administrative Services Yukon Pumphrey, I.C. Yukon River Salmon Restoration and Enhancement Fund [Sponsor]

Whitehorse, Y.T. : Environmental & Administrative Services Yukon, 1999.

123, [44] p. : ill., maps ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-16-98)

Cover title.

Appendices.

References.

ASTIS record 57908.

Languages: English

Libraries: ACU

The Greater Kluane Land Use Plan and one of its supporting documents, Champagne & Aishihik First Nations' Fisheries Research, recommended immediate action and attention be paid towards the enhancement and rehabilitation of the salmon stocks and habitat in the upper Nordenskiöld River. Between the years 1910 to 1917, RCMP fishery harvest reports estimated that, on average, 10,000 lbs. of salmon per year were harvested by people at Hutchi (A.K.A. Hutshi), a historic First Nation village located along the headwaters of the study area. Traditional knowledge suggest salmon used to spawn beyond Hutchi Lake as far as Moraine Lake, the furthest upstream headwater on the Nordenskiöld, and Sakata Lake, the headwater of Kirkland Creek (Appendix I). To the best of our knowledge, these areas are now void of salmon. Within the last 6 years the Department of Fisheries and Oceans and industry have performed 4 cursory fishery surveys which denoted 3 years with limited chinook adult and fry utilization above Kirkland Creek confluence on the Nordenskiöld River. DFO's 1995 survey revealed no fry above Kirkland Creek confluence on the Nordenskiöld, and subsequently assumed no spawning having occurred in 1994 within this same area. Just below the Kirkland Creek confluence, the surveys revealed salmon spawning in great numbers. However, this project's biophysical survey results displayed ideal salmon spawning and rearing habitat but utilization was desperately low for chinook fry and critically low for adults. Even though this study's stream morphology, water quality, and resulting salmon habitat proved favorable and even ideal in a number of areas (Appendix A-J), the fishery survey results were disappointing (Appendix N). Only 9 chinook (*Oncorhynchus tshawytscha*) fry were captured in 2023 hours of gee-type minnow trapping. When these numbers are compared to known healthy areas with similar conditions, the situation appears desperate. Only two live adult chinook were observed during this project's 1998 helicopter survey. Both were observed below the Kirkland Creek confluence in separate locations.

There were no dead chinook salmon observed during the adult helicopter survey of the study area. The 1998 chinook salmon returns for the whole Yukon River drainage was approximately 10 days later and 25% lower than the 10 year average (Appendix M). It is evident that restoration activities are not only necessary but may be critical to the long-term viability of chinook salmon on the upper Nordenskiöld River. The 1998 upper Nordenskiöld salmon survey numbers are disappointing; however, the bio-physical survey revealed potential short and long-term restoration opportunities that could maximize chinook abundance and distribution yields (Appendix K & L). The removal of barriers to migration, maximizing the chinook numbers through artificial propagation and the implementation of stock-specific management practices make up the bulk of the short and long term potential restoration activities identified and recommended within this report. Artificial propagation of Nordenskiöld chinook and habitat restoration activities will help restore sustainable yields and distribution while maintaining the sub-stock genetic makeup. Performing Nordenskiöld chinook enumeration, timing, and stock-specific monitoring studies will aid in the assurance of stock diversity, utilization and subsequent abundance in the long term. Accurate run-timing data could help implement and direct stock-specific management practices of Yukon River Fisheries. An enumeration strategy would also provide a tool to monitor the health, strength, and the effectiveness of any of the accepted short-term restoration projects. If the restoration potentials outlined in detail within this report are implemented, the resulting abundance and distribution yields that may be realized will increase Yukon River chinook harvest potentials within the restored stocks migratory corridor. (Au)

I, N, F, S, T, A, J, B, H

Aerial surveys; Animal distribution; Animal migration; Animal population; Animal taxonomy; Animals; Aspect; Beavers; Benthos; Bottom sediments; Chinook salmon; Dams; Fish management; Fish spawning; Fisheries; Fishes; Fresh-water ecology; Heavy metals; Insects; Invertebrates; King salmon; Land use; Mass wasting; Planning; Plant cover; River banks; River discharges; Rivers; Seasonal variations; Sedimentation; Stream flow; Temperature; Traditional knowledge; Trapping; Tutchone Indians; Water quality; Wildlife management

G0811

Cattle Creek region, Yukon; Cattle Creek, Yukon; Hutshi Lakes region, Yukon; Kirkland Creek region, Yukon; Kirkland Creek, Yukon; Klusha Creek, Yukon; Nordenskiöld River region, Yukon; Nordenskiöld River, Yukon; Rowlinson Creek region, Yukon; Rowlinson Creek, Yukon; Schwatka Creek region, Yukon; Schwatka Creek, Yukon; Yukon River region, Alaska/Yukon; Yukon River, Alaska/Yukon

**Rearing & overwintering access restoration** / Dawson District Renewable Resources Council

Smart, C. Yukon River Panel [Sponsor]

[Whitehorse, Yukon : Yukon River Panel], 2007.

28 p. : ill. ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-06-07)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

Report date: September 2007.

References.

Appendices.

Cover title.

ASTIS record 72598.

Languages: English

This project aimed to restore access to upstream Chinook salmon rearing habitats and salvage juvenile Chinook from isolated habitats. We also aimed to foster community stewardship of salmon and salmon habitats. Planning was conducted in consultation with DFO. Two local high school students were retained and worked in the field under a field supervisor. DFO staff provided technical oversight. The project started on July 9 and ended on Aug. 10, 2007. A total of 4760 juvenile salmon were captured and transported to upstream habitats or from isolated pools to open waters. Both students remained with the project throughout (excepting one student during the final week) and performed well. We conclude that the project was successful in proving the continued feasibility of a Community based stream Stewardship project in the Dawson City area.

Recommendations to increase the scope and efficiency of future projects are provided. (Au)

I, N, R, F, T, J

Animal distribution; Animal live-capture; Animal migration; Animal population; Beavers; Capacity building; Chinook salmon; Co-management; Effects monitoring; Elders; Fish management; Fish spawning; Occupational training; Public education campaigns; Public opinion; Tr'ondëk Hwëch'in Indians; Wildlife habitat; Winter ecology

G0811

Clinton Creek, Alaska/Yukon; Dawson region, Yukon; Fortymile River region, Alaska/Yukon; Fortymile River, Alaska/Yukon; Germaine Creek, Yukon; Klondike River region, Yukon; Klondike River, Yukon

**Chinook salmon, Ichthyophonus, investigations** / Dehn, L. Nichols, K. Whipps, C. Yukon River Panel [Sponsor]

[Fairbanks, Alaska : School of Fisheries and Ocean Sciences, University of Alaska, Fairbanks, 2010]. 10 p. : ill. ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. URE-13-09)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

Report date: May 25, 2010.

References.

For project titled: "Ichthyophonus in Chinook salmon - continuation of a baseline in Emmonak and Eagle, Alaska and potential links to fecundity".

ASTIS record 72646.

Languages: English

Ichthyophonus hoferi is a protozoan parasite of various fish species, including salmonids, and infection has led to mass mortalities in species of economic significance. Prior evidence suggests that infection with Ichthyophonus leads to reduced endurance, increased pre-spawning mortality, and potentially low fecundity. Poor returns of Chinook salmon (*Oncorhynchus tshawytscha*) from adequate spawning escapements in 2007, 2008, and 2009 raise questions about involvement of disease in these declines. Prevalence of Ichthyophonus in Yukon Chinook salmon at the river mouth shows a cyclic variation over time. This study continued a temporal baseline (1999-2008) established for Ichthyophonus prevalence at the river mouth against which to judge a potential change. Ichthyophonus prevalence in 2009 was 8% in Emmonak and 13% in Eagle. Total egg counts and egg quality (as determined by proximate analyses) did not differ between healthy and infected females, however only 8 of 44 females sampled were infected with Ichthyophonus and stock-specific differences in lipid contents in particular may confound any potential differences in egg quality. (Au)

I, N, T

Age; Animal diseases; Animal health; Animal mortality; Animal population; Biological sampling; Chinook salmon; Fish management; Fish spawning; Fishing; Indians; Lipids; Measurement; Necropsy; Nitrogen; Numeric databases; Parasites; Public participation; Size; Subsistence; Temporal variations

G06, G0811

Eagle, Alaska; Emmonak, Alaska; Yukon River, Alaska/Yukon

**Juvenile fish identification** / Duncan, J. Waterman, E. Yukon River Salmon Restoration and Enhancement Fund [Sponsor]

[Dawson City, Yukon : s.n., 2004].

93 p. : ill., maps ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-62-03)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

Report date: March 2004, final report.

Appendices.

References.

ASTIS record 72588.

Languages: English

During a recent community-based fisheries project in the Dawson region it became abundantly clear that readily-accessible, easy to understand information on juvenile fish (<100-120mm in length) in the Yukon Territory was very difficult to find. It was for this reason volunteers became interested in

the Yukon Territory was very difficult to find. It was for this reason volunteers became interested in developing a handbook and website for the purpose of identifying juvenile fish. To this end, volunteers in the fisheries community were asked to provide photos, drawings and comments, and, a "criteria" or flowchart was developed to simplify and assist with identifying juvenile fish of different species. Resources were utilized from YTG Environment Fish and Wildlife Branch, Yukon College/Malaspina College's Fish Tech course, and many other publications, and, many people were approached in the development of this handbook/criteria for suggestions and comments. The criteria is in the form of a flowchart and helpful notes are included, as well as photos and drawings of juvenile fish. There are 35 species of fish documented in the Yukon. Some of the rarer species were omitted (9) from this handbook and 26 of the more common species were carefully detailed.

The handbook and website are intended to be used by community members working on fisheries restoration and enhancement projects. It is expected that this handbook and website will be updated periodically as new information becomes available, additional photographs are collected, and, comments from the public and scientific community are incorporated. ... This report is meant to accompany a website [www.juvenilefishid.com](http://www.juvenilefishid.com) and provide the basis for the downloadable handbook found on this site. ... (Au)

I, N, R, L

Age; Animal anatomy; Animal distribution; Animal taxonomy; Biological sampling; Fish management; Fishes; Identification; Photograph collections; Public education campaigns; Public participation; World Wide Web

G0811

Yukon

**Yukon River juvenile chinook and chum salmon out-migration timing and sampling characteristics as determined using a rotary screw trap, 2003** / Duncan, J. Canada. Dept. of Fisheries and Oceans Bradford, M. Yukon River Commercial Fishing Association (Canada) [Sponsor] Tr'ondek Hwech'in First Nation [Sponsor] Yukon River Salmon Restoration and Enhancement Fund [Sponsor] Dawson District Renewable Resources Council [Sponsor] [Yukon : s.n.], 2004.

iii, 35, [36] p. : ill., maps ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-01-03)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

Report date: January 2004, final report.

Many tables and graphs.

References.

ASTIS record 72592.

Languages: English

Building on pilot work conducted in 2002, a rotary screw trap was operated in the Yukon River mainstem near Dawson City from mid-May to the end of August 2003, to monitor downstream migrations of juvenile chinook (*Oncorhynchus tshawytscha*) and chum (*O. keta*) salmon from the upper Yukon River basin. This project was a community-based effort and a collaboration between a local First Nation, a community stakeholder group and Fisheries and Oceans, Canada. The rotary screw trap was operated successfully, and was rarely affected by debris. A total of 1,048 age 0+ chinook salmon, 122 age 1+ chinook salmon, and 267 age 0+ chum salmon were captured in 2003. Age 0+ chinook migration peaked in late June; the size and timing of chinook fry suggests growth occurred prior to, or during migration. The peak of age 1+ chinook salmon migration was in the second week in June. Based on size, our results indicate chum salmon are migrating directly from spawning areas, with migration peaking in mid to late June. A total of 3,655 other fish were captured in 2003, most of which (48%) were various whitefish species. Efforts to sample offshore water columns were made, and despite the learning that took place, limited success was achieved. Future trapping programs should begin in early May to fully sample the migrations of age 0+ chinook and 0+ chum salmon as well as age 1+ chinook salmon, and could cease by the end of July. The densities of chinook salmon in small streams were also sampled as a potential alternate method of evaluating the relative abundance of chinook migrants and freshwater productivity. An index program based on trap catches and not stream densities may be the best option as a stock assessment tool. (Au)

I. N. F. J

Age; Animal distribution; Animal live-capture; Animal migration; Animal population; Biological sampling; Chinook salmon; Chum salmon; Effects monitoring; Fish management; Fishes; Size; Surface temperature

G0811

Dawson Creek (City) region, British Columbia; Yukon River, Alaska/Yukon

**Compilation and mapping of fisheries information within the Teslin Tlingit traditional territory** / EDI Environmental Dynamics Inc. Ferguson, N.L. Tobler, P. Teslin Tlingit Council [Sponsor] Yukon River Salmon Restoration and Enhancement Fund [Sponsor] Whitehorse, Yukon : EDI, 2004.

v, 66 p. : ill., maps ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-43N-03)

Appendices.

References.

EDI project no. 605-02.

Report date: March 2004.

Indexed a PDF file.

All figures missing from the PDF file.

ASTIS record 60001.

Languages: English

Libraries: ACU

... This report is intended to provide information about the fisheries resources (with a special emphasis on salmon) located within the Teslin Tlingit Traditional Territory. It is anticipated that this document will provide the TTC [Teslin Tlingit Council] with a greater understanding of the fisheries resources and issues located within the Traditional Territory, as well as to greatly increase the level of success and effectiveness of management decisions by providing a base on which the TTC can root the future direction of fisheries management. ... In June of 2002, a salmon information-gathering workshop for the Teslin Tlingit Traditional Territory was held near Teslin, Yukon Territory. ... The main objective of this report is build upon the findings of the workshop by collecting and mapping all existing fisheries information within the Teslin Tlingit Traditional Territory. ... The Teslin Tlingit Traditional Territory was separated into watersheds as listed below: 1. Big Salmon River watershed; 2. Lower Teslin watershed (Teslin River from confluence with Boswell River to Teslin Lake, and Tributaries); 3. Upper Teslin watershed (Teslin Lake and tributaries not listed below); 4. Boswell River watershed; 5. Nisutlin River watershed (not including Wolf River); 6. Wolf River watershed; 7. Jennings River watershed; 8. Morley River watershed; 9. Swift River watershed. ... Each watershed was ranked according to the level of existing knowledge and was rated as having a high/moderate/low level of fisheries information available. This subjective ranking was based on the availability of information regarding the five criteria listed below: [1] Knowledge of quality salmon spawning locations; [2] Knowledge of salmon rearing locations, including tributaries to main streams; [3] Well documented salmon distributions within the watershed; [4] Well documented species diversity of freshwater fish; [5] Knowledge of the limitations to fish distributions including obstructions to fish passage. ... Results from this report show that development within the Teslin Tlingit Traditional Territory is mainly limited to the area around the Alaska Highway corridor, while most of the remaining Traditional Territory has had no or only low intensity development. As the majority of the watersheds within this region are still intact, the Teslin Tlingit are in a unique situation in that they have an opportunity to manage salmon populations within a natural system that is, for the most part, un-impacted by development. By using the information contained within this report and building upon it through future projects, the Teslin Tlingit can help to manage salmon populations by identifying the distribution and diversity of salmon within a specific area of the Traditional Territory before development occurs. With this knowledge the Teslin Tlingit can provide input into development projects with the fisheries resource in mind, in order to ensure its protection. ... (Au)

I, N, J, F, P

Aerial surveys; Animal distribution; Animal migration; Beavers; Chinook salmon; Chum salmon; Culverts; Dams; Environmental impacts; Erosion; Fish management; Fish spawning; Fisheries; Fishes; Fishing; Forestry; Geographic information systems; Hydraulic mining; Mapping; Maps; Mining; Quartz; Rivers; Temporal variations; Water quality; Watersheds; Wildlife habitat

G0811, G0821

Big Salmon River region, Yukon; Boswell River region, Yukon; Jennings River region, British Columbia; Morley River region, Yukon; Nisutlin River region, Yukon; Squanga Creek, Yukon; Swift River region, British Columbia/Yukon; Teslin Lake region, British Columbia/Yukon; Teslin River region, British Columbia; Teslin River region, Yukon; Wolf River region, Yukon; Yukon Plateau, Yukon

**Ta'an Kwäch'än community stewardship, 2009** / EDI Environmental Dynamics Inc. Ta'an Kwäch'än Council [Sponsor] Yukon River Panel [Sponsor] Whitehorse, Yukon : EDI Environmental Dynamics Inc., 2009.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-54-09)

Indexed a PDF file from the Web.

Cover title.

Appendices.

References.

Report date: December 2009.

ASTIS record 72258.

Languages: English

Web: <http://yukonriverpanel.com/salmon/wp-content/uploads/2010/04/cre-54-09-tkc-stewardship-final-report.pdf>

Two Community Stewards were hired for the summer of 2009 to conduct a range of salmon related stock and habitat activities in Ta'an Kwäch'än Traditional Territory. The Stewards conducted salmon related monitoring and other undertakings on several tributary streams, as well as the Yukon River mainstem. Information regarding the use of small non-natal tributaries to the Yukon River by juvenile Chinook salmon (*Oncorhynchus tshawytscha*) was collected with the objective of monitoring juvenile Chinook salmon habitat utilization over time. Bio-physical monitoring and trail maintenance and clearing were conducted at Fox Creek in accordance with the "Chinook Salmon Stock Restoration Plan for Fox Creek". The Stewards participated in the initial release of Chinook fry into the creek. Efforts were made to conduct biological sampling of adult Chinook salmon in the '30 Mile' area of the Yukon River mainstem and in McIntyre Creek. Two tributary streams in the Upper Lake Laberge area were also sampled for juvenile Chinook salmon. (Au)

I, N, T, H, J

Animal distribution; Animal live-capture; Animal migration; Animal tagging; Berms; Biological sampling; Chinook salmon; Effects monitoring; Erosion; Fish culture; Fish management; Fish spawning; Occupational training; Plant distribution; Poplars; Revegetation; River banks; Trails; Wildlife habitat; Willows

G0811

Klondike Highway region, Yukon; Laberge, Lake, region, Yukon; Laberge, Lake, Yukon; McIntyre Creek (60 46 N, 135 06 W), Yukon; Richthofen Creek, Yukon; Yukon River region, Alaska/Yukon

**Range Road dump stabilization project** / EDI Environmental Dynamics Inc. Ta'an Kwäch'än Council [Sponsor] Yukon River Salmon Restoration and Enhancement Fund [Sponsor] Whitehorse, Yukon : EDI Environmental Dynamics Inc., 2006.

v, 15, [2] p. : ill., maps ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-53N-05)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

Report date: January 2006.

Appendices.

References.

Cover title.

EDI project no: 05-YC-0006.

ASTIS record 72594.

Languages: English

Presently, a diversion channel isolates McIntyre Creek near Whitehorse from its original channel, which was located at the toe of the abandoned Range Road dump. The upstream end of the



diversion channel is actively eroding, and there is a high degree of risk that the creek will eventually return to its original channel. If this occurs it is likely that refuse and associated contaminants will be released into the Yukon River. To reduce this risk, the design and construction of a secondary berm and the design and application of bioengineering works to stabilize a section of the existing berm (downstream of the proposed secondary berm) was proposed. A public Bioengineering Course was held to complement the project and to provide training to Ta'an Kwäch'än Council (TKC) staff and members. In 2005 the design and permitting of the secondary berm was completed. Construction did not occur as a key partner was unable to provide necessary support in the time available. The downstream bank stabilization and associated Bioengineering Course and TKC training was completed successfully. (Au)

M, F, H, B, N, R, I, T, L, J

Animal distribution; Animal migration; Berms; Capacity building; Curricula; Design and construction; Employment; Environmental protection; Fish management; Landfills; Occupational training; Off-road transportation; Plant collections; Public education campaigns; Reclamation; River banks; Salmonids; Soil stabilization; Stream erosion; Ta'an Kwäch'än Indians; Trails; Waste management; Water pollution; Wildlife habitat

G0811

McIntyre Creek (60 46 N, 135 06 W) region, Yukon; McIntyre Creek (60 46 N, 135 06 W), Yukon; Whitehorse, Yukon; Yukon River, Alaska/Yukon

**Whitestone River juvenile chinook/coho assessment** / EDI Environmental Dynamics Inc.

Anderton, I. Schonewille, B. Tobler, P. Vuntut Gwitchin First Nation Yukon River Panel [Sponsor]

[Whitehorse, Yukon : EDI], 2005.

iii, 24 p. : ill., maps ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-15-04)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

Report date: February 2005.

References.

Appendices.

Cover title.

ASTIS record 72601.

Languages: English

During mid August 2004, an assessment of juvenile chinook (*Oncorhynchus tshawytscha*) and coho salmon (*Oncorhynchus kisutch*) use and habitat was carried out in the Whitestone River. The Whitestone is one of three major tributaries forming the upper Porcupine River. A total of twenty-nine juvenile chinook were captured at four of the ten sampling sites. All juvenile chinook were captured within the upper portion of the Whitestone River, above McParlon Creek. There were no juvenile coho captured during this project. In addition to fish capture data, water temperature, site characteristics, and some habitat information was gathered. (Au)

I, N, F

Animal distribution; Animal live-capture; Animal migration; Animal population; Chinook salmon; Chum salmon; Fish management; Fish spawning; Fishes; Fresh-water ecology; Size; Temperature; Water level; Wildlife habitat

G0811

Miner River, Yukon; Whitestone River, Yukon; Yukon River, Alaska/Yukon

**Juvenile Porcupine River chinook salmon out-migration and rearing - preliminary assessment** / EDI Environmental Dynamics Inc.

Anderton, I. Vuntut Gwitchin First Nation Yukon River Panel [Sponsor]

[Whitehorse, Yukon : EDI Environmental Dynamics Inc.], 2006.

iii, 33 p. : ill., maps ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-23N-06)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

Report date: November 2006.

References.

Appendices.

Cover title.

ASTIS record 72608.

Languages: English

During May and June of 2006, an assessment of juvenile chinook (*Oncorhynchus tshawytscha*) outmigration was conducted on the Porcupine River mainstem near Old Crow. A total of thirty-nine one-year-old (1+) juvenile chinook were captured at one of twelve beach seining stations. A total of two young-of-year (0+) chinook were captured at the same beach seining station. Two hundred and forty-three young-of-year (0+) chum salmon were also captured at various stations. This work was followed by an assessment of smaller tributary streams to the Porcupine River during July to identify the presence/absence of rearing juvenile chinook salmon. The July assessment of smaller tributary streams resulted in the capture of a single 0+ chinook salmon in one out of seventeen streams sampled. Habitat descriptions were made of each sampling station/site during both spring and summer works. (Au)

I, N, F, T

Animal distribution; Animal live-capture; Animal migration; Animal population; Capacity building; Chinook salmon; Chum salmon; Fish management; Fish spawning; Fishes; Fishing; Gwich'in Indians; Rivers; Seasonal variations; Subsistence; Wildlife habitat

G0811

Porcupine River region, Alaska/Yukon; Porcupine River, Alaska/Yukon

**Weir feasibility study for the Stewart River watershed : CRE-26N-03** / EDI Environmental Dynamics Inc. Ferguson, N. Antill, T. First Nation of Nacho Nyak Dun Yukon River Salmon Restoration and Enhancement Fund [Sponsor]

Whitehorse, Yukon : EDI, 2004.

iii, 24 p. : ill. ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-26N-03)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

References.

EDI project no. 604-04.

Report date: January 2004.

Figure 1. Study area map, missing from the PDF file.

ASTIS record 72626.

Languages: English

There is currently no chinook salmon indexing system located within the Stewart River watershed. During the summer and fall of 2003 Environmental Dynamics Inc. conducted assessments of potential weir locations for monitoring chinook salmon within the Stewart River watershed. Twelve streams were initially selected based on findings from literature review. Ultimately four of the twelve streams were chosen and investigated in the field, with the McQuesten River, Janet Creek, Mayo River and Crooked Creek being selected as potential candidates. Selections were reviewed based on several factors including the number of returning chinook salmon, stream and channel characteristics, access to high quality weir sites and the potential for community involvement. Although all four streams selected were found to be suitable for a weir, the Mayo River was chosen as the best overall site due to its proximity to the Village of Mayo, large numbers of returning chinook and its ability to provide a consistent annual index. (Au)

I, J, N, T, R, B, F

Animal distribution; Animal live-capture; Animal migration; Animal population; Bottom sediments; Capacity building; Chinook salmon; Effects monitoring; Employment; Fish management; Fish spawning; Location; Nacho Nyak Dun First Nation; Occupational training; River banks; Rivers; Stream flow; Topography; Wildlife habitat

G0811

Mayo River, Yukon; Mayo, Yukon; Stewart River region, Yukon; Stewart River, Yukon

**2005 Porcupine River chum mark/recapture program** / EDI Environmental Dynamics Inc. Schonewille, B. Vuntut Gwitchin First Nation Yukon River Panel [Sponsor] [Whitehorse, Yukon : EDI], 2006. 21, [68] p. : ill., 2 maps ; 28 cm. (Yukon River Salmon Restoration and Enhancement Fund project no. CRE-27-05) Indexed a PDF file supplied by Fisheries and Oceans Canada staff. Report date: February 2006. References. Appendices. Cover title. EDI project #: 05-YC-0008. ASTIS record 72628. Languages: English

A mark-recapture program was conducted on the Porcupine River near the community of Old Crow, YT during the fall of 2005. The main purpose of this project was to attempt to quantify the run size (in season) of the fall run of chum salmon (*Oncorhynchus keta*). A tagging fishery was located 24 km downstream of Old Crow to capture and mark chum salmon on their upstream migration. A test fishery was operated 25 km upstream from Old Crow in an attempt to recapture tagged chum salmon. Both fisheries were conducted using constantly monitored gill nets, and involved the collection of various biological information. In addition, an enumeration weir located on the Fishing Branch River recorded tag numbers passing through the weir. Through the use of data collected in the mark-recapture program and at the Fishing Branch weir, an estimation of the run strength was calculated. A total of 3,574 chum were tagged and 1,904 chum were caught in the test fishery, including 52 tag recoveries. In addition, 5,995 chum were caught in the subsistence fishery, including 188 tag recoveries. Through the use of a tagging and test fishery, a total estimate of 128,497 chum salmon was estimated to have passed Old Crow between August 17th and September 22nd. The results of this project in conjunction with enumeration/estimation by Fisheries and Oceans Canada indicate that the 2005 run of chum salmon in the Porcupine River was one of the largest in recent history. (Au)

I, N, F

Animal behaviour; Animal distribution; Animal live-capture; Animal migration; Animal population; Animal tagging; Chum salmon; Fish management; Fish spawning; Fishes; Fishing; Seasonal variations; Size; Subsistence; Temporal variations; Water level

G0811

Fishing Branch, Yukon; Old Crow, Yukon; Porcupine River, Alaska/Yukon

**Porcupine River coho radio tagging / telemetry project : Yukon River Panel project CRE-18-07** / EDI Environmental Dynamics Inc. Schonewille, B. Vuntut Gwitchin First Nation [Sponsor] Yukon River Panel [Sponsor] [Whitehorse, Yukon : EDI], 2008. [38] p. (various pagings) : ill., maps ; 28 cm. (Yukon River Salmon Restoration and Enhancement Fund project no. CRE-18-07) Indexed a PDF file supplied by Fisheries and Oceans Canada staff. Report date: April 2008. References. Appendices. Cover title. EDI project no.: 07-YC-0011. ASTIS record 72643. Languages: English

A coho salmon (*Oncorhynchus kisutch*) radio tagging / telemetry project was conducted in the Canadian portion of the Porcupine River during the fall and winter of 2007 / 2008. The primary objective of the study was to build upon the information gathered during a 2005 pilot project (CRE-18N-05; Schonewille and Anderton 2006) to learn more about the spawning areas used by this unique run of salmon. During September, October and November of 2007, coho were captured using

a gillnet and fitted with esophageal implant radio tags. Following the completion of tag application, two rounds of telemetry flights were conducted using a fixed wing aircraft to locate the radio tags. In total, 48 of the 50 tags applied were found, with the majority of tags located within the Fishing Branch River watershed. Smaller numbers of tags were also found in the Bluefish River and the Porcupine River mainstem. This project was successful in building upon the information obtained during the 2005 pilot project, and the combined projects have provided a general understanding of the spawning areas used by coho salmon in the Porcupine River. (Au)

I, N, F

Aerial surveys; Animal distribution; Animal live-capture; Animal migration; Animal population; Animal tagging; Coho salmon; Fish management; Fish spawning; Fishing; Radio tracking of animals; Telemetry; Wildlife habitat; Winter ecology

G0811

Fishing Branch, Yukon; Miner River, Yukon; Old Crow River, Alaska/Yukon; Porcupine River, Alaska/Yukon; Whitestone River, Yukon

**Yukon River North mainstem stewardship** / Fraser, L. Yukon River Panel [Sponsor] [Yukon : Dawson District Renewable Resources Council, 2009].

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-06-09)

Indexed a PDF file from the Web.

Appendices.

References.

Report date: October 2009.

ASTIS record 72257.

Languages: English

Web: <http://yukonriverpanel.com/salmon/restoration-enhancement/r-e-fund-reports/r-e-reports-2009/cre-06-09-ddrrc-final-report/>

This project aimed to restore Chinook salmon to rearing habitats and salvage juvenile Chinook from isolated habitats. Planning was conducted in consultation with DFO. Two local high school students were hired and worked in the field under a field supervisor. Both students remained with the project throughout, learned a lot from the season and they performed well. DFO staff provided invaluable technical support to the team. The project started on July 13 and ended on Aug. 14, 2009. A total of 1393 juvenile salmon were captured [from Clinton, Mickey, Germaine creeks; at Logjam Island; the North Fork Intake 10 km up the Dempster Highway by the North Klondike River; Lousetown at the side channel of the Klondike River; and Lousetown Pond] and transported to upstream habitats or from isolated pools to open waters. New areas were investigated. The DDRRC recommends that the project continues by assisting the juvenile Chinook to make it to rearing areas. (Au)

I, N, T, F

Animal distribution; Animal live-capture; Animal migration; Animal population; Beavers; Capacity building; Chinook salmon; Effects monitoring; Fish management; Fish spawning; Public education campaigns; Rivers; Tr'ondëk Hwëch'in Indians; Water level; Wildlife habitat; Winter ecology

G0811

Clinton Creek, Alaska/Yukon; Fortymile River, Alaska/Yukon; Klondike River region, Yukon; Klondike River, Yukon

**Blind Creek chinook salmon enumeration weir, 2009 : CRE-37-09** / J. Wilson & Associates Wilson, J. Yukon River Salmon Restoration and Enhancement Fund [Sponsor] [Whitehorse, Yukon : J. Wilson & Associates, 2010].

iii, 23 p. : ill., maps ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-37-09)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

Report date: March 2010.

References.

Appendices.

Cover title.

ASTIS record 72631.

Languages: English

A weir was operated in Blind Creek to enumerate the 2009 Chinook salmon escapement and obtain information on stock characteristics. This is an ongoing program, which has been funded by the Yukon River Panel, Restoration & Enhancement Fund since 2003. The weir was placed in the same general area as in previous years, approximately 1 km upstream of the confluence with the Pelly River. Operation of the weir began on July 20 and continued until August 19. The first fish passed through the weir on July 27. In total, 716 Chinook salmon were counted. Fifty percent of the run had passed through the weir by August 6 and 90% by August 10. Chinook spawners were sampled randomly throughout the weir operation to obtain information on the age-sex-length structure of the run. A total of 245 Chinook salmon (34% of the run) was sampled of which 106 (43%) were female and 139 (57%) were male. Jacks (males with a fork length < 630 mm) comprised 23% of the males sampled. The mean fork length of females and males sampled was 860 mm and 753 mm, respectively. Age data was determined from 147 Chinook sampled. Of these, age 6 and age 5 fish were the predominant age classes at 44.9% and 33.3%, respectively. Age 4 fish represented 16.3% and age 3 and age 7 fish represented 4.1% and 1.4%, respectively. As in the past three years, a salmon brochure containing information about the salmon resource and weir operations was produced for distribution to visitors of the Town of Faro Interpretive Centre. At least 40 people visited the weir over the course of operations this year. (Au)

I, N, F, E, L

Aerial surveys; Age; Animal live-capture; Animal migration; Animal population; Biological sampling; Chinook salmon; Fish management; Fish spawning; Gender differences; Meteorology; Public education campaigns; River discharges; Seasonal variations; Size; Stream flow; Visibility; Water level

G0811

Blind Creek, Yukon

**2009 chinook salmon sonar enumeration on the Big Salmon River : CRE-41-09** / J. Wilson & Associates Mercer, B. Wilson, J.K. Yukon River Salmon Restoration and Enhancement Fund [Sponsor]

[Whitehorse, Yukon : J. Wilson & Associates, 2010].

iii, 21 p. : ill., maps ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-41-09)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

Report date: February 2010.

References.

Appendices.

Cover title.

ASTIS record 72633.

Languages: English

A long range dual frequency identification sonar was used to enumerate the Chinook salmon escapement to the Big Salmon River in 2009, as well as determine associated run timing and diel migration patterns. This was the fifth year of sonar operation at this site. The sonar site was located on the Big Salmon River at the same location as in previous years, approximately 1.5 km upstream of the confluence with the Yukon River. Transport of equipment, partial weir placement and camp setup began on July 15. Sonar operation began on July 18 and operated continuously through to August 23. A total of 9,261 targets identified as Chinook salmon was counted past the sonar station between July 18 and August 23, 2009. The peak daily count of 808 fish occurred on July 31, at which time 39% of the run had passed the sonar station; 90% of the run had passed the station on August 10. A carcass pitch was conducted over approximately 120 km of the Big Salmon River. A total of 182 Chinook carcasses was collected. Of the 182 fish sampled, 97 (53%) were female and 85 (47%) were male. The mean fork length of females and males sampled was 822 mm and 763 mm, respectively. Age data was determined from 145 fish sampled. Age 1.4 (69.0%) was the dominant age class, followed by age 1.3 (23.4%) fish. Age 1.2 and age 1.5 fish represented 6.2% and 1.4% of the sample, respectively. (Au)

I, N, T, L, L, D

Age; Animal live-capture; Animal migration; Animal population; Biological sampling; Bottom sediments; Chinook salmon; Design and construction; Diurnal variations; Equipment and supplies; Fish management; Fish spawning; Gender differences; Instruments; Logistics; Meteorology; Necropsy; Quality assurance; Research stations; Seasonal variations; Size; Sonar; Stream flow; Temporal variations; Visibility

G0811

Big Salmon River, Yukon; Eagle, Alaska

**Chinook salmon habitat assessment and restoration enhancement possibilities for selected tributaries of the Pelly River in the vicinity of Pelly Crossing, 1998 (Needlerock, Mica, Willow and Grayling Creeks)** / Jane Wilson & Associates Environmental & Administrative Services

Yukon Laberge Environmental Services Withers, S.P. Yukon River Salmon Restoration and Enhancement Fund [Sponsor]

Yukon : Jane Wilson & Associates, 1999.

vi, 47, [46] p. : ill., maps (some folded) ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-33-98)

Appendices.

References.

ASTIS record 57900.

Languages: English

Libraries: ACU

Chinook habitat investigations were conducted on four major tributaries of the Pelly River downstream of Granite Canyon including: Needlerock, Mica, Willow and Grayling Creeks; between July 1998 and April 2, 1999. Detailed stream habitat surveys were conducted during critical low flow conditions in summer and winter to identify chinook restoration possibilities. Adult chinook enumeration was conducted August 26 by helicopter and obstructions and spawning areas identified and mapped. Of the four tributaries investigated, only Needlerock and Mica Creeks supported a spawning population of adult chinook. A total of 26 chinook salmon was observed in Needlerock Creek below the reaches affected by a forest fire in 1995. Silt and sand deposition was high below observed spawning areas due to active sliding of sand and silt from abutting slopes. Above the upper limit of spawning, a forest fire burned a large area adjacent to the creek in 1995 resulting in: the loss of canopy cover, the formation of logjams as a result of fallen fire-killed trees and subsequent erosion of weakened banks. As a result, the stream morphology was greatly altered and appeared unsuitable for spawning. A total of 15 adult chinook was observed in Mica Creek. Unusually low water levels prevented chinook from migrating upstream until August 17, after some precipitation raised the water level. A beaver dam, located approximately 2 km upstream of the mouth, obstructed further migration and all spawning occurred below the dam. In the past, chinook salmon have been observed spawning further upstream; as far as the outlet of Towhata Lake. The low, marsh-like conditions and extensive beaver activity above Towhata Lake make this area at the present time unsuitable for spawning chinook salmon. Chinook salmon fry were captured in all four tributaries investigated. Fry were captured below a high beaver dam near the mouth of Willow Creek. Extensive beaver activity in Willow Creek has made this creek unsuitable for spawning chinook at this time. However, water quality and habitat suitable for salmon spawning is found at sites below some of the beaver dams suggesting that this creek may have supported a spawning population at one time. Grayling Creek is a cold clear stream providing limited spawning habitat but excellent rearing habitat. The cold water temperatures suggest groundwater discharge which could be investigated for its potential in the establishment of an artificial streamside incubation facility to supply fry for out-planting to tributaries within the watershed. Winter stream flow and water quality indicate adequate over-wintering habitat for juvenile chinook salmon in all four tributaries investigated. (Au)

I, F, N, T, J, S

Aerial surveys; Animal distribution; Animal migration; Animal population; Beavers; Benthos; Chemical properties; Chinook salmon; Dams; Effects monitoring; Environmental protection; Fire ecology; Fish management; Fish spawning; Fisheries; Food; Groundwater; Indians; Invertebrates; Land use; Mapping; Rivers; Sedimentation; Stream flow; Subsistence; Temperature; Water pH; Water quality; Wildlife habitat; Winter ecology

G0811

Grayling Creek (62 50 55 N, 136 46 35 W), Yukon; Mica Creek, Yukon; Needlerock Creek, Yukon; Pelly Crossing region, Yukon; Pelly River region, Yukon; Willow Creek, Yukon

**Géis Tóo'e' : King Salmon River 2005 Michie Creek chinook salmon field investigations** / Kwanlin Dün First Nation Can-Nic-A-Nick Environmental Sciences Yukon River Panel [Sponsor] Canada. Dept. of Fisheries and Oceans [Sponsor]

[Whitehorse, Yukon : Can-Nic-A-Nick Environmental Sciences, 2006].

iv, 30, [18] p. : ill., map ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-50-05)

Indexed a PDF file from the Web.

Cover title.

Appendices.

References.

Project no. RE-50-05.

Report date: February 2006.

ASTIS record 72123.

Languages: English

Web: [http://yukonriverpanel.com/salmon/wp-content/uploads/2009/11/cre-50-05\\_mcclintock\\_watershed\\_plan\\_michie\\_creek\\_field\\_investigations\\_final\\_report\\_mar061.pdf](http://yukonriverpanel.com/salmon/wp-content/uploads/2009/11/cre-50-05_mcclintock_watershed_plan_michie_creek_field_investigations_final_report_mar061.pdf)

This report details the stewardship and research activities that were conducted in upper Michie Creek during the open water season of 2005. The primary purpose of the stewardship activities was to maintain salmon habitat in this watercourse by monitoring beaver activity and other potential barriers and breaching them when required. Research included the collection of benthic, hydrological and thermal data. In addition, the relative health of both wild and enhanced juvenile Chinook salmon populations that utilize upper Michie Creek was investigated. It is believed that water flow

conditions in 2005 in the upper Michie Creek spawning area were adequate to allow spawning success of Chinook salmon. Remedial efforts to remove beaver dams were not required in 2005, probably due to the higher flows. This allowed unrestricted access of migrating adult salmon into the upper Michie Creek spawning area. Surface temperatures in the Whitehorse fish ladder and the Yukon River mainstem downstream of the Whitehorse Rapids dam were lower than in 2004. Juvenile salmon investigations concluded that there was no apparent effect of hatchery plantings on the survival or growth of wild juvenile Chinook salmon, at densities of wild salmon found in upper Michie Creek and under the environmental conditions that occurred during the open water season of 2005. Based on coded wire tag recoveries in 2005, spawning adults of hatchery origin in upper Michie Creek and the M'Clintock River came from fry releases in 2000, 2001 and 2002. Tag recoveries also indicate there was little straying of spawning adults between release sites in upper Michie Creek and the M'Clintock River. The majority of recovered tags were from the 2002 plantings in upper Michie Creek. (Au)

I, F, N, T, H

Age; Animal distribution; Animal health; Animal live-capture; Animal migration; Animal population; Animal tagging; Beavers; Benthos; Chinook salmon; Co-management; Dams; Effects monitoring; Fish culture; Fish management; Fish spawning; Fresh-water ecology; Fresh-water flora; Fresh-water invertebrates; Hydroelectric power; Hydrology; Kwanlin Dün First Nation; Plant distribution; River banks; River discharges; Seasonal variations; Shrubs; Size; Stream flow; Subsistence; Surface temperature; Water level; Wildlife habitat; Wildlife management

G0811

M'Clintock River region, Yukon; M'Clintock River, Yukon; Michie Creek, Yukon; Whitehorse Rapids, Yukon; Yukon River, Alaska/Yukon

**Géis Tóo'e' : King Salmon River 2006 Michie Creek chinook salmon field investigations** / Kwanlin Dün First Nation Can-Nic-A-Nick Environmental Sciences Yukon River Panel [Sponsor] Canada. Dept. of Fisheries and Oceans [Sponsor]

[Whitehorse, Yukon : Can-Nic-A-Nick Environmental Sciences, 2007].

iv, 28, [19] p. : ill., map ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-50-06)

Indexed 4 PDF files from the Web: 1) final report (p. iv-20), 2) appendices (19 unnumbered pages), 3) figures (p. 21-22), 4) tables (p. 23-28).

Cover title.

Appendices: Appendix I: Benthic invertebrate data - Appendix II: Juvenile chinook salmon data - Appendix III: Fishway counts 1961 to 2006.

References.

Project no. RE-50-06.

Report date: February 2007.

ASTIS record 72250.

Languages: English

Web: <http://yukonriverpanel.com/salmon/wp-content/uploads/2009/03/cre-50-06-kdfn-salmon-stewardship-final-report.pdf>

Web: <http://yukonriverpanel.com/salmon/wp-content/uploads/2009/11/cre-50-06-kdfn-salmon-stewardship-appendix-1.pdf>

Web: <http://yukonriverpanel.com/salmon/wp-content/uploads/2009/03/cre-50-06-kdfn-salmon-stewardship-figures-1-2.pdf>

Web: [http://yukonriverpanel.com/salmon/wp-content/uploads/2009/03/cre-50-06-kdfn-salmon-stewardship-figures-3-10\\_tables.pdf](http://yukonriverpanel.com/salmon/wp-content/uploads/2009/03/cre-50-06-kdfn-salmon-stewardship-figures-3-10_tables.pdf)

This report details the stewardship and research activities that were conducted in upper Michie Creek during the open water season of 2006. The primary purpose of the project is to maintain salmon habitat in this watercourse by monitoring beaver activity and other potential barriers and breaching them when required. Research included the collection of benthic organisms and the monitoring of flow and temperature in upper Michie Creek. In addition, the relative health and abundance of both wild and enhanced juvenile Chinook salmon populations that utilize upper Michie Creek was investigated. It is believed that water flow conditions in 2006 in the upper Michie Creek spawning area were more than adequate to allow spawning success of Chinook salmon. Very little remedial effort was needed to assure access of migrating Chinook salmon to traditional spawning habitat in upper Michie Creek. Surface temperatures in upper Michie Creek and at the Whitehorse fish ladder were somewhat cooler than in previous years, especially when compared to 2004. Juvenile salmon investigations concluded that there was no apparent effect of hatchery plantings on the survival or growth of wild juvenile Chinook salmon, at densities of wild salmon found in upper Michie Creek and under the environmental conditions that occurred during the open water season of 2005. As in previous years, the bulk of the hatchery juvenile Chinook salmon (jcs) planted into upper Michie during 2006 most likely began downstream movement shortly after release. There is some indication that growth of wild jcs over the summer period is inversely related to their relative abundance in upper Michie Creek. A poor relationship exists between adult Chinook salmon counts through the Whitehorse Fish ladder and resulting yearly CPUE statistics for jcs in upper Michie Creek. Generally, catches of wild juvenile Chinook salmon captured in minnow traps are consistently low during the summer months and increase dramatically in the late fall. (Au)

I, F, N, T, H

Age; Animal distribution; Animal health; Animal live-capture; Animal migration; Animal population; Animal tagging; Beavers; Benthos; Chinook salmon; Co-management; Dams; Effects monitoring; Fish culture; Fish management; Fish spawning; Fresh-water ecology; Fresh-water flora; Fresh-water invertebrates; Hydroelectric power; Hydrology; Kwanlin Dün First Nation; River discharges; Seasonal variations; Size; Stream flow; Subsistence; Surface temperature; Water level; Wildlife habitat; Wildlife management

G0811

M'Clintock River region, Yukon; M'Clintock River, Yukon; Michie Creek, Yukon; Whitehorse Rapids, Yukon; Yukon River, Alaska/Yukon

**Géis Tóo'e' : King Salmon River 2007 Michie Creek chinook salmon field investigations - status report** / Kwanlin Dün First Nation Can-Nic-A-Nick Environmental Sciences Yukon River Panel [Sponsor]

[Whitehorse, Yukon : Can-Nic-A-Nick Environmental Sciences, 2007].

iv, 27, [20] p. : ill., map ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-50-07)

Indexed a PDF file from the Web.

Cover title



Cover title.

Appendices.

References.

Project no. RE-50-07.

Report date: December 2007.

ASTIS record 72253.

Languages: English

Web: [http://yukonriverpanel.com/salmon/wp-content/uploads/2009/11/re50\\_07\\_michie-creek-field-investigations-2007\\_final.pdf](http://yukonriverpanel.com/salmon/wp-content/uploads/2009/11/re50_07_michie-creek-field-investigations-2007_final.pdf)

This report details the monitoring activities that were conducted in upper Michie Creek during the open water season of 2007. The primary purpose of the project is to maintain access to salmon habitat in this watercourse by monitoring beaver activity and other potential barriers and breaching them when required. Research included the collection of benthic organisms and the monitoring of flow and temperature in upper Michie Creek. In addition, the relative health and abundance of both wild and enhanced juvenile chinook salmon populations that utilize upper Michie Creek were investigated. Water flow conditions in 2007 in the upper Michie Creek spawning area were more than adequate to allow spawning success of chinook salmon. No remedial effort was needed to assure access of migrating chinook salmon to traditional spawning habitat in upper Michie Creek. Michie Creek continues to display one of the most diverse benthic communities in the Whitehorse region. The bulk of the hatchery juvenile chinook salmon (jcs) planted into upper Michie during 2007 most likely began downstream movement shortly after release. There is some indication that growth of wild yearling jcs over the summer period was inhibited due to high densities found in upper Michie Creek in 2007. Catches of wild juvenile chinook salmon in minnow traps during the early June assessment were the greatest since minnow trapping began in 2003. (Au)

I, F, N, T, J

Age; Animal distribution; Animal health; Animal live-capture; Animal migration; Animal mortality; Animal population; Animal tagging; Beavers; Benthos; Chinook salmon; Co-management; Dams; Effects monitoring; Fish culture; Fish management; Fish spawning; Fresh-water ecology; Fresh-water flora; Fresh-water invertebrates; Hydroelectric power; Hydrology; Kwanlin Dün First Nation; River discharges; Seasonal variations; Size; Stream flow; Subsistence; Surface temperature; Water level; Wildlife habitat; Wildlife management

G0811

M'Clintock River region, Yukon; M'Clintock River, Yukon; Michie Creek, Yukon; Whitehorse Rapids, Yukon; Yukon River, Alaska/Yukon

**Supplemental juvenile chinook plantings and sex ratio study : Michie Creek, Yukon : project no. CRE-51N-07 and CRE-64N-08** / Kwanlin Dün First Nation Can-Nic-A-Nick Environmental Sciences de Graff, N.M. Yukon River Panel [Sponsor] Canada. Dept. of Fisheries and Oceans [Sponsor]

[Yukon : Heritage, Lands and Resources Department Kwanlin Dun Government, 2009].

iii, 13, [16] p. : ill., map ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-51N-07)

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-64N-08)

Indexed a PDF file from the Web.

Appendices.

References.

Project no. CRE-51N-07 and CRE-64N-08.

Report date: February 2009.

ASTIS record 72256.

Languages: English

Web: <http://yukonriverpanel.com/salmon/wp-content/uploads/2009/11/cre-64n-08-supplemental-juvenile-chinook-plantings.pdf>

Gametes from migrating adult chinook salmon were collected from the Whitehorse Rapids Fish Ladder and incubated in two separate facilities, the Whitehorse Rapids Fish Hatchery and the McIntyre Creek Incubation Facility. Water temperatures were tracked hourly using data-loggers installed at both facilities as well as upper Michie Creek. Water temperatures throughout the chinook egg incubation and early rearing periods at the MCIF and WRFH were more generally warmer

and more consistent than those recorded in upper Michie Creek during the winter of 2007-08. A significant male sex bias result for upper Michie Creek fry was apparent compared to fry of the same age sampled at the MCIF and WRFH during the spring of 2008. Only a single WRFH reared jcs was captured in upper Michie during the summer of 2008. This is consistent with past sampling, and implies strongly that fish originating from this facility most likely began downstream movement shortly after release. The recapture of 48 jcs in upper Michie Creek that originated from the MCIF suggests a sizable portion of these fish did not begin downstream movement shortly after release. (Au)

I, F, N, T, R

Animal behaviour; Animal distribution; Animal health; Animal live-capture; Animal migration; Animal mortality; Animal population; Animal tagging; Benthos; Chinook salmon; Effects monitoring; Equipment and supplies; Fish culture; Fish management; Fish spawning; Fisheries; Gender differences; Hydrology; Instruments; Measurement; Occupational training; River discharges; Sedimentation; Size; Stream flow; Temperature; Temporal variations; Trapping; Water quality; Watersheds; Winter ecology

G0811

Fortymile River, Alaska/Yukon; Klondike River region, Yukon; Klondike River, Yukon; McIntyre Creek (60 46 N, 135 06 W), Yukon; Michie Creek, Yukon; Whitehorse Rapids, Yukon

**Géis Tóo'e' : King Salmon River M'Clintock River watershed management planning and Michie Creek chinook salmon field investigations 2003** / Kwanlin Dün First Nation Yukon River Salmon Restoration and Enhancement Fund [Sponsor] [Whitehorse, Yukon : Kawnlin Dun First Nation, 2004].

viii, 151 p. : ill., maps ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-50-03)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

Cover title.

Appendices.

References.

Yukon River Panel Restoration and Enhancement Fund RE-50-03.

Report date: January, 2004.

ASTIS record 72611.

Languages: English

The Chinook salmon of the M'Clintock River watershed have been a vital resource for the Kwanlin Dun First Nation people for many generations. The salmon were once plentiful enough to support a rich salmon harvest by the Tagish Kwan people, who are now members of three First Nations - the Kwanlin Dun, Carcross/Tagish First Nation, and Ta'an Kwach'an Council, whose Traditional Territories overlap in the M'Clintock watershed. For three years, Kwanlin Dun First Nation has conducted fisheries research into the Chinook salmon population of the M'Clintock watershed. This year's research focused on the Michie Creek spawning grounds. The report documents the results of the fisheries assessment of this spawning population, as well as the habitat assessment of the spawning grounds. In addition to researching the health and status of the salmon population, KDFN has initiated watershed management planning as a means of taking a watershed approach to stewardship of the salmon. This report documents the range of land uses within the watershed, which at present, are primarily residential and agricultural development, and recreational access. An initial consideration of the potential risks to salmon from these land uses indicate that activities such as stream crossings, and other activities that could introduce sediments into the spawning areas, are of concern. Naturally occurring hazards are also identified. There is a risk of landslides occurring on the slopes above the spawning areas, which could potentially introduce sediments into the spawning grounds. This report also documents the significance of the M'Clintock salmon to the Tagish Kwan people, as recorded during gatherings of Elders and youth from the three First Nations. Information on harvesting and traditional land uses was recorded. Participants described a rich history associated with salmon fishing at Géis Tóo'e', King Salmon River. As a destination in the Tagish Kwan seasonal round, Géis Tóo'e' served as a reliable and varied source of food, a thoroughfare to other key hunting and living areas, and as a meeting place. The river and its salmon, and the connected lifeways, are very much a part of where the Tagish Kwan people have come from and who we are as a people. This connection is the basis for planning for future

stewardship of the watershed and its salmon. Recommendations for continued research into the salmon population and habitat, and for proceeding with watershed management planning are identified. (Au)

I, F, N, T, A, B, J

Agriculture; Animal distribution; Animal health; Animal migration; Animal population; Chinook salmon; Co-management; Customs; Dams; Environmental impacts; Environmental protection; Fish management; Fish spawning; Fishing; Forest fires; Fresh-water ecology; Glacial deposits; Kwanlin Dün First Nation; Land use; Landslides; Outdoor recreation; Research; Rivers; Sedimentation; Subsistence; Tagish Indians; Traditional knowledge; Traditional land use and occupancy; Trapping; Water quality; Watershed management; Wildlife habitat

G0811

M'Clintock River region, Yukon; M'Clintock River, Yukon; Michie Creek, Yukon

**Géis Tóo'e' : King Salmon River Michie Creek chinook salmon field investigations 2004** / Kwanlin Dün First Nation Can-Nic-A-Nick Environmental Sciences Yukon River Salmon Restoration and Enhancement Fund [Sponsor]

[Whitehorse, Yukon : s.n., 2005].

iv, 32, [15] p. : ill., map ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-50B-04)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

Cover title.

Appendices.

References.

Project no. RE-50B-04.

Report date: March 2005.

ASTIS record 72613.

Languages: English

This project is a continuation of a multi-year program of stewardship activities and related research on a population of Chinook salmon that utilize habitat located in upper Michie Creek, a tributary of the M'Clintock River. The watershed lies within the Traditional Territory of the Kwanlin Dün First Nation and is located in the southern Yukon Territory. The M'Clintock River represents a portion of the headwaters of the Yukon River Basin and supports one of the longest spawning runs of anadromous Chinook salmon in North America, with annual migration of over 3000 km. The continued maintenance of the Michie Creek Chinook salmon population is an important management objective for both the Kwanlin Dün people and the Department of Fisheries and Oceans Canada. This project details the stewardship and research activities that were conducted in upper Michie Creek during the open water season of 2004. The primary purpose of the stewardship activities was to maintain salmon habitat in this watercourse by monitoring beaver activity and other potential barriers. Research included the collection of baseline hydrological information. In addition, the relative health of both wild and enhanced juvenile Chinook salmon populations that utilize upper Michie Creek was investigated. It is believed that water flow conditions in 2004 in the upper Michie Creek spawning area were adequate to allow for some degree of spawning success of Chinook salmon. Remedial efforts to remove potential obstructions allowed access of migrating Chinook salmon into the upper Michie Creek spawning area. Surface water temperatures at the Whitehorse fish ladder and in upper Michie Creek were higher than in 2003 but were not a limiting factor to migration in 2004. Spawning temperatures in upper Michie Creek approached the maximum preferred by Chinook populations elsewhere and are near the upper limit of temperature tolerance of Chinook eggs. Although surface water temperatures were high, inter-gravel water temperatures can vary considerably from surface water temperatures under the influence of hyporheic flows. Juvenile salmon investigations concluded no apparent effect of hatchery plantings on the survival or growth of wild juvenile Chinook salmon, at densities of wild salmon found in upper Michie Creek and under the environmental conditions that occurred during the open water season of 2004. Based on coded wire tag recoveries, spawning adults of hatchery origin in upper Michie Creek in 2004 came from supplemental releases in 2000, 2001 and 2002 in Byng and Michie creeks. (Au)

I, F, N, T, H, J

Age; Animal distribution; Animal health; Animal live-capture; Animal migration; Animal population;

4/15/2011

ASTIS

Animal tagging; Beavers; Benthos; Chinook salmon; Co-management; Dams; Effects monitoring; Fish culture; Fish management; Fish spawning; Fresh-water ecology; Fresh-water flora; Fresh-water invertebrates; Hydroelectric power; Hydrology; Kwanlin Dün First Nation; River discharges; Seasonal variations; Size; Stream flow; Subsistence; Surface temperature; Water level; Wildlife habitat; Wildlife management

G0811

M'Clintock River region, Yukon; M'Clintock River, Yukon; Michie Creek, Yukon; Whitehorse Rapids, Yukon; Yukon River, Alaska/Yukon

**Supplemental juvenile chinook plantings study : Michie Creek, Yukon : project no. CRE-51N-07** / Kwanlin Dün First Nation Can-Nic-A-Nick Environmental Sciences Yukon River Panel [Sponsor]

[Yukon : Heritage, Lands and Resources Department Kwanlin Dun Government, 2008].

7 p. : ill. ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-51N-07)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

Cover title.

References.

Project no. CRE-51N-07.

Report date: June 2008.

ASTIS record 72615.

Languages: English

Gametes from migrating adult chinook salmon were collected from the Whitehorse Rapids Fish Ladder and incubated in two separate facilities, the Whitehorse Rapids Fish Hatchery and the McIntyre Creek Incubation Facility. Water temperatures were tracked hourly using data-loggers installed at both facilities as well as in two streams known to support wild spawning chinook salmon, McIntyre Creek and upper Michie Creek. The resulting temperature data and calculated accumulated heat units at each site (ATU's) were related to the egg to fry developmental stage at each facility. Fry reared for this project were subsequently adipose clipped, coded wire tagged and released into the upper Michie Creek spawning site. Additional study is continuing and a report outlining more detailed analysis of the project as part of an on-going series of investigations is forthcoming. (Au)

I, F, N, T, R

Animal behaviour; Animal distribution; Animal growth; Animal migration; Animal population; Animal tagging; Capacity building; Chinook salmon; Co-management; Effects monitoring; Equipment and supplies; Fish culture; Fish management; Fish spawning; Fresh-water ecology; Gender differences; Measurement; Rivers; Size; Temperature

G0811

McIntyre Creek (60 46 N, 135 06 W), Yukon; Michie Creek, Yukon; Whitehorse Rapids, Yukon

**CRE-87-06 - Klondike River at Germaine Creek soil bioengineering demonstration project : results of 2006 monitoring program** / M. Miles and Associates Limited Polster Environmental Services Ltd. Yukon River Panel [Sponsor]

[Victoria, B.C. : M. Miles and Associates ; Duncan, B.C. : Polster Environmental Services Ltd.], 2007.

[82] p. : ill., maps ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-87-06)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

Report date: January 2007.

Appendices.

References.

Cover title.

ASTIS record 72590.

Languages: English

Executive Summary: The Klondike River Panel [link] funded a demonstration soil bioengineering project on Klondike River near Germaine Creek in September 2004. This report presents the results of the second year's postconstruction monitoring program. The assessment has three principal components: i) to assess how the completed work has affected the channel morphometry, river stability and bed material characteristics of the study area; ii) to monitor the survival and growth of the soil bioengineering treatments; and iii) to discuss how the project results can be used to better design or implement similar work in the future. Site conditions did not change significantly over the period between 2005 and 2006. The 2006 freshet flow overtopped much of the live gravel bar staking but was insufficient to cause extensive sediment deposition or large changes in channel morphometry. The live gravel bar staking has successfully rooted and typically grown shoots of 48 to 77 mm in height. Survival rates have decreased from 73% in 2005 to 69% in 2006. This stocking rate is sufficient to form a dense cover of willows. Vegetation growth has increased the hydraulic roughness of the bar surface and up to 30 cm of fine sediment accumulation has occurred within areas that were inundated by the 2006 freshet. All other areas are typically within  $\pm 20$  cm of their post-construction elevation. Rates of sediment deposition are expected to increase as the vegetation continues to grow. This should result in a narrower and possibly deeper unvegetated channel. As the gravel bars stabilize and become terrestrial, the invasion by other species is expected to accelerate and eventually lead to an alluvial mixed wood forest of spruce and cottonwood, with willows and other species in the understory. Survival rates for the live palisades have decreased from 50% in 2005 to 14% in 2006. The live palisades constructed of cottonwood cuttings were subject to fungal attack after the cuttings were inundated for an extended period in 2005. Willow cuttings established under the same conditions do not appear to be affected by this fungus. Ice damaged both species equally, although the growing willows may be able to recover from ice damage once they have become established. The Germaine Creek project has demonstrated that soil bioengineering techniques can be successfully employed in the Dawson area. The project also provided training for the installation crew, the opportunity for Dawson residents to become familiar with the demonstrated techniques and increased government capability to design, permit, implement, monitor and evaluate this type of work. It would be desirable to encourage the continued use of soil bioengineering techniques at disturbed sites in the Dawson area. Legacy placer mining impacts provide ample opportunities, but would require site identification, land use agreements, a source of funding and permitting approvals. This likely warrants a scoping investigation, including both office and field studies, to identify suitable locations and negotiate an appropriate implementation program. Future soil bioengineering trials should include additional work on river flood plains and investigations of other techniques which are appropriate for gullies and disturbed open slope areas. The trials should also include installing live palisades on higher elevation sections of river bank to see if their performance can be improved. (Au)

F, H, B, N, R, I

Animal distribution; Bottom sediments; Effects monitoring; Environmental impacts; Fishes; Floods; Occupational training; Photograph collections; Plant cover; Plant growth; Plant succession; Reclamation; River banks; Sediment transport; Sedimentation; Stream erosion; Stream flow; Temporal variations; Topography; Willows

G0811

Dawson region, Yukon; Germaine Creek, Yukon; Klondike River region, Yukon

**Distribution and abundance of radio tagged chinook salmon in the Canadian portion of the Yukon River watershed as determined by 2003 aerial telemetry surveys** / Mercer, B.

Eiler, J.H. Yukon River Panel [Sponsor]

[Yukon : s.n., 2004].

iv, 38, [8] p. : ill., maps ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-77-03)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

Report date: March, 2004.

References.

Appendices.

Cover title.

RE project 77-03.

ASTIS record 72637.

Languages: English

In 2003, the second year of A Yukon River basin wide adult chinook salmon tagging and monitoring program, 1,097 radio tags were applied to migrating chinook salmon captured at Marshall and Russian Mission on the lower Yukon River in Alaska. As a complement to the larger basin wide monitoring project, aerial surveys were conducted in the Canadian portion of the Yukon River to determine the distribution and relative abundance of the radio tagged fish. This report details the results of the 2003 aerial surveys in Canada. Aerial tracking surveys were conducted on all major tributaries and streams with documented chinook spawning streams. The surveys were conducted between July 31 and September 14. Of the 419 radio tagged chinook that migrated upstream of the Alaska-Yukon border, 42 were captured in fisheries, 348 were detected and assigned terminal locations during the aerial surveys, and 29 were not located. Radio tagged fish were distributed throughout the survey area with higher concentrations in the Klondike, McQuesten, Big Salmon, Little Salmon, the mainstem Yukon, and the mainstem Teslin rivers. Proportional distribution of located radio tags ranged from a high of 70 (19%) in the Pelly drainage to a low of 10 (3%) in the south Yukon River. In general, the 2003 radio tag distribution was similar to that observed in the streams surveyed during the 2002 study. Based on telemetry data and the recovery of tags in three assessment projects a 2003 above border Chinook population estimate of 93,975 with a 95% CI of  $\pm 12,035$  was obtained. Using the telemetry data radio tag ratio of 0.00446 (1 radio tag per 224 untagged chinook) and a simple linear arithmetic relationship of tagged/untagged ratios it was possible to generate 2003 escapement indices of all surveyed streams that contained radio tagged chinook. (Au)

I, N, F, L

Aerial surveys; Animal distribution; Animal live-capture; Animal migration; Animal population; Animal tagging; Chinook salmon; Equipment and supplies; Fish management; Fish spawning; Radio tracking of animals; Rivers; Telemetry; Wildlife habitat

G0811

Big Salmon River, Yukon; Pelly River, Yukon; Stewart River, Yukon; Teslin River, Yukon; White River, Alaska/Yukon; Yukon River region, Alaska/Yukon; Yukon River, Alaska/Yukon

**Salmon research training and chinook/coho habitat assessment : Yukon River Panel project CRE-15-02 : final report** / North Yukon Renewable Resource Council Vuntut Gwitchin First Nation Anderton, I. Yukon River Panel [Sponsor]

[Yukon : s.n., 2002?].

46 p. : ill., maps ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-15-02)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

References.

Appendices.

Cover title.

ASTIS record 72599.

Languages: English

Four members of the Vuntut Gwitchin First Nation (Old Crow, Yukon) as well as a project coordinator, received training and experience related to conducting fish research in the field. The Miner River, a major tributary of the Porcupine River was sampled for juvenile chinook and coho salmon. An aerial survey was also conducted on the Miner Rivers as well as portions of the Whitestone and Fishing Branch Rivers to locate chinook spawning redds/adult salmon, and, to track via radio telemetry chinook salmon fitted with radio transmitters from Alaska. The results of the project indicate that much of the Miner River (from mouth of the Fishing Branch River upstream to Fishing Creek) is a major spawning ground for Porcupine River chinook salmon. (Au)

I, N, R, F, T, J, L

Aerial surveys; Animal distribution; Animal live-capture; Animal population; Animal tagging; Capacity building; Chinook salmon; Co-management; Coho salmon; Curricula; Fish management; Fish spawning; Fishes; Fresh-water ecology; Gwich'in Indians; Occupational training; Radio tracking of animals; Science; Secondary education; Stream flow; Telemetry; Temperature; Water quality; Wildlife habitat

G0811

Crow River, Yukon; Fishing Branch, Yukon; Miner River, Yukon; Old Crow, Yukon; Porcupine River, Alaska/Yukon; Whitestone River, Yukon

**Salmon research training and chinook/coho habitat assessment : Yukon River Panel project CRE-15-03 : final report** / North Yukon Renewable Resource Council Vuntut Gwitchin First Nation Anderton, I. Yukon River Panel [Sponsor]

[Yukon : s.n., 2003].  
14 p. : maps ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-15-03)  
Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

References.

Cover title.

ASTIS record 72600.

Languages: English

Three members of the Vuntut Gwitchin First Nation (Old Crow, Yukon) received training and experience related to conducting salmon research in the field. The upper Bell River and three of its significant tributaries were sampled for juvenile chinook and coho salmon. No juvenile chinook or coho were captured at any of the sites sampled. Due to high water conditions during the first three days of sampling, results from the upper Bell River are particularly inconclusive. OBJECTIVES: a. Inspire and build community capacity and stewardship for the conservation, restoration, and enhancement of salmon stocks and their habitat in the Porcupine River sub-basin: in order to carry out needed research and to ensure long-term salmon habitat stewardship, the human capacity must be developed within the community of Old Crow. This is consistent with goals and objectives of the Vuntut Gwitchin Final Agreement and that of VGFN. This project will provide valuable training and experience in this regard to community members; b. Provide information regarding the presence or absence of juvenile chinook and coho in the Bell and Fishing Branch Rivers: the assessment of chinook habitat and stocks has been established as a priority for local managers. This project will provide information about chinook rearing and possibly spawning habitat locations within the Porcupine River system; c. Set the stage to ensure the long-term conservation of the coho salmon resource and its habitat in the Porcupine River sub-basin: Both the knowledge acquired and experience gained by community members through this project will provide a basis from which local managers will pursue the conservation and restoration of this valued food resource. (Au)

I, N, R, F, T, J, L

Aerial surveys; Animal distribution; Animal live-capture; Animal migration; Animal population; Animal tagging; Capacity building; Chinook salmon; Chum salmon; Co-management; Coho salmon; Fish management; Fish spawning; Fishes; Fishing; Fresh-water ecology; Gwich'in Indians; Occupational training; Science; Seasonal variations; Secondary education; Stream flow; Subsistence; Temperature; Traditional knowledge; Water quality; Wildlife habitat

G0811

Bell River, Yukon; Fishing Branch, Yukon; Old Crow, Yukon; Porcupine River, Alaska/Yukon; Rock River (67 18 N, 137 06 W), Yukon

**Traditional/local knowledge salmon survey : Yukon River Panel project CRE-16-02 : final report** / North Yukon Renewable Resource Council Vuntut Gwitchin First Nation Anderton, I. Frost, P. Yukon River Panel [Sponsor]

[Yukon : s.n., 2002?].

33 p. : maps ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-16-02)  
Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

References.

Appendix.

Cover title.

ASTIS record 72603.

Languages: English

References to historic fish trap and salmon locations in the Porcupine River watershed were

researched in the Vuntut Gwitchin First Nation's Oral History Project. Fourteen elders in Old Crow, Dawson City, and Fort McPherson were interviewed regarding the historic location of fish traps and salmon. Results of interviews and previously documented references were analysed and compiled in this report, which documents the historic location of twenty-two fish traps, thirty-four locations of salmon, and associated information within the Porcupine River watershed. OBJECTIVES: 1. Provide information to assist in creating the basis for further projects. Information obtained through this project will provide the community with tools that will assist in the local management, conservation, and restoration of Porcupine River salmon stocks. 2. Provide information regarding the presence of chinook, coho and chum salmon in locations throughout the Porcupine River watershed. This will include contemporary, but more importantly, historical information. It will also include significant associated data such as time of year, conditions of fish, fishing methods, use of fish, preservation methods, and other observations. This information will assist in filling current information gaps and provide the basis for future research, restoration and enhancement work. To pursue such future research, traditional and local knowledge is necessary to identify key areas of interest. 3. Provide information regarding spawning habitat of chinook, coho and chum salmon in the Porcupine River watershed. This will include contemporary, but more importantly, historical information. This information will assist in filling current information gaps and provide the basis for future research, restoration and enhancement work. It will also provide the community with tools that will assist in the local management, conservation, and restoration of Porcupine River salmon stocks. 4. Document historic locations of fish-traps throughout the Porcupine River watershed. This information will be of key importance in identifying areas of important, productive fish habitat. This information will assist in filling current information gaps and provide the basis for future research, restoration and enhancement work. It will also provide the community with tools that will assist in the local management, conservation, and restoration of Porcupine River salmon stocks. 5. Inspire and build community capacity and stewardship for the conservation, restoration, and enhancement of salmon stocks in the Porcupine River sub-basin. Information obtained through this project will provide the community with tools that will assist in the local management, conservation, and restoration of Porcupine River salmon stocks. This project will also involve another community member in salmon related work and will help build further community interest in the stewardship of Porcupine River salmon resources. (Au)

I, N, R, F, T, J, V

Animal distribution; Capacity building; Chinook salmon; Chum salmon; Co-management; Coho salmon; Elders; Fish management; Fish spawning; Fishing; Food preservation; Gwich'in Indians; Oral history; Seasonal variations; Social surveys; Temporal variations; Traditional knowledge; Traditional land use and occupancy; Wildlife habitat

G0811

Dawson, Yukon; Fort McPherson, N.W.T.; Old Crow, Yukon; Porcupine River region, Alaska/Yukon; Porcupine River, Alaska/Yukon

**Traditional/local knowledge salmon survey : Yukon River Panel project CRE-16-03 : final**

**report** / North Yukon Renewable Resource Council Vuntut Gwitchin First Nation Anderton, I.

Frost, P. Yukon River Panel [Sponsor]

[Yukon : s.n., 2003?].

35 p. : maps ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-16-03)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

References.

Appendices.

Cover title.

ASTIS record 72605.

Languages: English

References to historic fish trap and salmon locations in the Porcupine River watershed were researched in the Vuntut Gwitchin First Nation's Oral History Project and the Yukon Archives. Seven elders in Old Crow were interviewed regarding the historic location of fish traps and salmon. Results of interviews and previously documented references were analysed and compiled in this report, which documents the historic location of fourteen fish traps, fourteen locations of salmon, and associated information within the Porcupine River watershed. OBJECTIVES: 1. Inspire and build community capacity and stewardship for the conservation, restoration, and enhancement of salmon



community capacity and stewardship for the conservation, restoration, and enhancement of salmon stocks and their habitat in the Porcupine River sub-basin: In order to carry out needed research and to ensure long-term salmon habitat stewardship, the human capacity must be developed within the community of Old Crow. This is consistent with goals and objectives of the Vuntut Gwitchin Final Agreement and that of VGFN. This project will provide valuable experience in this regard to community members; 2. Identify all areas where salmon are known to exist in the past: This information will tell managers where present and past salmon habitat exists in the Porcupine River system. This information will assist in filling current information gaps and provide the basis for future research, restoration and enhancement work. It will also provide the community with tools that will assist in the local management, conservation, and restoration of Porcupine River salmon stocks; 3. Document historic locations of fish-traps throughout the Porcupine River watershed. This information is of key importance in identifying areas of important, productive fish habitat. This information will assist in filling current information gaps and provide the basis for future research, restoration and enhancement work. It will also provide the community with tools that will assist in the local management, conservation, and restoration of Porcupine River salmon stocks; 4. Set the stage to ensure the long-term conservation of the coho salmon resource and its habitat in the Porcupine River sub-basin: Both the knowledge acquired and experience gained by community members through this project will provide a basis from which local managers will pursue the conservation and restoration of this valued food resource. (Au)

I, N, R, F, T, J, V

Animal distribution; Capacity building; Chinook salmon; Chum salmon; Co-management; Coho salmon; Elders; Fish management; Fish spawning; Fishing; Gwich'in Indians; Oral history; Social surveys; Traditional knowledge; Traditional land use and occupancy; Wildlife habitat

G0811

Old Crow, Yukon; Porcupine River region, Alaska/Yukon; Porcupine River, Alaska/Yukon

**Salmon research training and chinook/coho habitat assessment : Yukon River Panel project**

**RE-24-01 : final report** / North Yukon Renewable Resource Council Vuntut Gwitchin First Nation Anderton, I. Yukon River Panel [Sponsor]

[Yukon : s.n., 2001?].

25 p. ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-24-01)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

References.

Cover title.

ASTIS record 72609.

Languages: English

Four citizens of Old Crow, Yukon, received training and experience related to conducting fish research in the field. Two major tributaries of the Porcupine River (Whitestone and Miner Rivers) were sampled for juvenile chinook and coho salmon, with inconclusive results. An aerial survey was also conducted on both rivers to locate spawning chinook salmon and redds. The results of the survey suggest that the much of the Miner River is a major spawning ground for Porcupine River chinook salmon. OBJECTIVES: a. To provide a starting point for the development of a watershed restoration and enhancement plan, as well as creating the basis for further projects. b. To provide information regarding the presence or absence of juvenile coho and chinook in the Whitestone and Miner tributaries, as well as the Porcupine main-stem: little scientific information is known about the unique stocks of coho and chinook salmon that migrate up the Porcupine River to spawn, including where they spawn and in what numbers. c. To provide information regarding the presence/absence of adult chinook salmon in the Whitestone and Miner Rivers: Little scientific information is known about the unique stocks of coho and chinook salmon that migrate up the Porcupine River to spawn, including where they spawn and in what numbers. d. In order to carry out needed research and to ensure long-term salmon habitat stewardship, the human capacity must be developed within the community of Old Crow. One of the principle objectives of this project was to provide training, employment and experience to a number of interested community members with the long-term objective of establishing a pool of trained and experienced community habitat researchers, as well as habitat conservation and stewardship advocates. (Au)

I, N, R, F, T, J, L

Aerial surveys; Animal behaviour; Animal distribution; Animal migration; Animal population; Bottom sediments; Capacity building; Chinook salmon; Co-management; Coho salmon; Employment; Environmental protection; Fish management; Fish spawning; Fishing; Gwich'in Indians; Occupational training; Seasonal variations; Stream flow; Temperature; Traditional knowledge; Water quality; Watershed management; Wildlife habitat

G0811

Miner River, N.W.T.; Old Crow, Yukon; Porcupine River, Alaska/Yukon; Whitestone River, Yukon; Yukon River, Alaska/Yukon

**Stock identification of Yukon River chinook and chum salmon using microsatellite DNA loci**

/ Pacific Biological Station Beacham, T.D. Candy, J.R. Yukon River Salmon Restoration and Enhancement Fund [Sponsor] Canada. Dept. of Fisheries and Oceans [Sponsor] [Nanaimo, B.C. : Pacific Biological Station, 2009].

19 p. ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-79-08)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

Report date: January 20, 2009.

References.

Cover title.

ASTIS record 72639.

Languages: English

Stock identification of chum and Chinook salmon migrating past the DFO fish wheel program at Bio Island, as well as for Chinook salmon migrating past the Eagle sonar site near the Yukon-Alaska border, was conducted in 2008 through analysis of microsatellite variation. Variation at 14 microsatellite loci was surveyed for 735 chum salmon from the fish wheels and 758 Chinook salmon collected from the fish wheels and sonar site. The seasonal sample for chum salmon species was structured so that migrating salmon were sampled in proportion to run abundance on a weekly basis. For Chinook salmon, all fish sampled at the Eagle sonar site were analyzed, and fish sampled from three weekly intervals at the fish wheels were analyzed. The analysis of chum salmon samples indicated that spawning populations from the White River drainage were estimated to comprise 50% of the fish migrating past the Bio Island fish wheels, while 48% were estimated to have been from mainstem Yukon River chum salmon spawning populations. The analysis of Chinook salmon migrating past the Eagle sonar site indicated that the major regional stocks contributing to the run were the mainstem spawning stock (32%), Pelly River (21%), Carmacks area tributaries (Big Salmon River, Little Salmon River, Tatchun Creek) (15%), Teslin River (13%), Stewart River (8%), lower Yukon mainstem tributaries (Chandindu River, Klondike River) (9%), and upper Yukon tributaries (1%). Different stock compositions were observed for Chinook salmon sampled at the fish wheels, and the major regional stocks were estimated as Pelly River (24%), Carmacks area tributaries (20%), Teslin River (15%), lower Yukon mainstem tributaries (15%), Stewart (13%), and the mainstem spawning stock (12%). (Au)

I, N, F

Animal distribution; Animal migration; Animal population; Biological sampling; Chinook salmon; Chum salmon; Fish management; Fish spawning; Genetics

G0811, G06

Eagle region, Alaska; White River region, Alaska/Yukon; White River, Alaska/Yukon; Yukon River region, Alaska/Yukon; Yukon River, Alaska/Yukon

**Stock identification of Yukon River chinook and chum salmon using microsatellites** /

Pacific Biological Station Beacham, T.D. Candy, J.R. Yukon River Salmon Restoration and Enhancement Fund [Sponsor] Canada. Dept. of Fisheries and Oceans [Sponsor] [Nanaimo, B.C. : Pacific Biological Station, 2009].

19 p. ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-79-09)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

References.

Cover title.

ASTIS record 72640.

Languages: English

Stock identification of chum and Chinook salmon migrating past the Eagle, Alaska sonar site near the Yukon-Alaska border, as well as of a subsistence Chinook salmon fishery near Eagle, was conducted in 2009 through analysis of microsatellite variation. Variation at 14 microsatellites was surveyed for 366 chum salmon from the sonar site and variation at 15 microsatellites was surveyed for 917 Chinook salmon collected from the sonar site and the subsistence fishery. For chum and Chinook salmon, all fish sampled at the Eagle sonar site were analyzed. Additionally, all Chinook salmon sampled from the subsistence fishery were analyzed. The analysis of chum salmon samples indicated that spawning populations from the White River drainage were estimated to comprise 31% of the fish migrating past the sonar site, while 68% were estimated to have been from mainstem Yukon River chum salmon spawning populations. The analysis of Chinook salmon migrating past the Eagle sonar site indicated that the major regional stocks contributing to the run were the Carmacks area tributaries (19%), Pelly River (18%), Teslin River (16%), mainstem Yukon River (13%), Stewart River (11%), White River (11%), lower Yukon tributaries (10%), and upper Yukon tributaries (3%). For the subsistence fishery, major regional stock groups contributing to the catch were the mainstem spawning stock (19%), lower Yukon mainstem tributaries (18%), Carmacks area tributaries (16%), Teslin River (14%), Pelly River (10%), Stewart (9%), White River (9%), and upper Yukon tributaries (5%). (Au)

I, N, F

Animal distribution; Animal migration; Animal population; Biological sampling; Chinook salmon; Chum salmon; Fish management; Fish spawning; Fishing; Genetics

G0811, G06

Eagle region, Alaska; White River region, Alaska/Yukon; White River, Alaska/Yukon; Yukon River region, Alaska/Yukon; Yukon River, Alaska/Yukon

**Eagle sonar 2007 : progress report for the sonar site at Six Mile Bend** / Pacific Eumetrics Consulting Ltd. Withler, P. Yukon River Panel [Sponsor]  
[Nanoose Bay, B.C. : Pacific Eumetrics Consulting Ltd., 2007?].

17 p. : ill. ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-110-07)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

References.

Cover title.

Appendices.

ASTIS record 72641.

Languages: English

The technical and operational status of the Eagle Sonar Project is examined in the context of a progress report. The general observation is made that the project is maturing and methodologies are becoming more stable. Several current technical issues are discussed and in some cases changes are suggested. In particular, attaching attitude sensors to the sonar transducers is strongly recommended. Staff composition at the site is evolving and season-to-season continuity of DFO staff is recommended so far as that is possible. (Au)

I, N, F

Animal migration; Animal population; Biological sampling; Canada. Dept. of Fisheries and Oceans; Chinook salmon; Chum salmon; Employees; Equipment and supplies; Fish management; Fishing; Instruments; Logistics; Occupational training; Quality assurance; Research; River discharges; Sonar; Suspended solids

G0811, G06

Eagle region, Alaska; Yukon River, Alaska/Yukon

**Eagle sonar report : an evaluation of the sonar site at Six Mile Bend** / Pacific Eumetrics Consulting Ltd. Mulligan, T. Withler, P. Yukon River Panel [Sponsor]

Consulting Ltd. [Whitehorse, Yukon : Yukon River Panel [Sponsor]

[Nanose Bay, B.C. : Pacific Eumetrics Consulting Ltd., 2005?].

20 p. : ill., maps ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-110N-05)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

Cover title.

ASTIS record 72642.

Languages: English

In 2005 the Alaska Department of Fish and Game installed a sonar site on the Yukon River near Eagle Alaska. The primary goal of the site is to enumerate Pacific salmon escapement into the Canadian portion of the river. The authors, under contract by Yukon River Panel Restoration and Enhancement Fund (CRE-110N-5), were hired to evaluate the potential of the site based on our participation during the 2005 field season. This report documents our conclusions in terms of a number of factors including site location, bathymetry, substrate, fish behaviour and species composition. We conclude that, while some aspects of the program require further development, the site and choice of sonar equipment show excellent potential for providing consistent salmon passage estimates. Based on this conclusion, we propose three options for DFO participation with ADF&G in the operation of the site. (Au)

I, N, F, L, B

Animal migration; Animal population; Animal tagging; Bathymetry; Biological sampling; Boating; Bottom sediments; Canada. Dept. of Fisheries and Oceans; Chinook salmon; Chum salmon; Communication; Databases; Detection; Employees; Equipment and supplies; Fish management; Fishing; Instruments; Logistics; Occupational training; Quality assurance; Research personnel; Research stations; River banks; River discharges; Sonar; Stream flow; Suspended solids; Topography; Watershed management

G0811, G06

Eagle region, Alaska; Yukon River, Alaska/Yukon

**Salmon in the Yukon River basin, Canada** / Research Northwest Cox, J. Yukon River Salmon Restoration and Enhancement Fund [Sponsor]  
[Whitehorse, Yukon : Research Northwest, 1999].

vi, 303 p. : ill., map ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-17-98)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

Cover title.

Appendices.

References as footnotes.

Irregular paging (303 p. actually in 293 p.).

ASTIS record 72606.

Languages: English

A wide variety of written sources provide information about salmon and salmon - fisheries in the Upper Yukon River basin. Many records left by prospectors, missionaries, surveyors, Hudson's Bay Company traders, explorers and other people visiting or living in the Yukon include observations of the territory's fish and wildlife. Although references to salmon in the Yukon River basin in Canada prior to the 1940s provide few details about specific spawning locations in the Yukon River and its tributaries, many accounts refer to the people fishing and the abundance of the fish. Early records from several federal government departments contribute information about salmon in the Yukon. The federal government posted a fishery officer in Dawson City from 1900 to 1918 to enforce fishery regulations throughout the territory. The Royal Northwest Mounted Police assumed this responsibility in 1918 and retained it until 1958 when the Department of Fisheries again posted an officer to the Yukon. Records from the Department of Indian Affairs also contain relevant information as they reflect some of the work done by Indian Agents in addressing issues affecting First Nations people. Together, the material in these government records illustrates two important, somewhat contradictory points: how little the federal government actually knew about salmon populations in the Yukon until the 1950s, but also the government's recognition of the value of the salmon fishery to both native and non-native people. Although these government records seldom describe specific spawning areas, they do contain some valuable information. Efforts to gather specific information about salmon in the Yukon River in Canada began in the late 1940s and early

Specific information about salmon in the Yukon River in Canada began in the late 1940s and early 1950s in response to a number of proposals for large-scale hydroelectric projects and to mining developments. The federal Department of Fisheries in Ottawa realized that it had little or no information about the salmon in areas that would be affected by these developments. The department asked the RCMP to interview local residents about the fish, and it sent a number of biologists to investigate. Meanwhile, the United States Fish and Wildlife Service began conducting its own investigations in which the Canadian Department of Fisheries and the RCMP participated. Records from the Department of Fisheries, in particular, contain specific information about the use of the salmon and populations since the late 1940s. (Au)

V, I, F, N, T, Y, R, P, J

Animal distribution; Animal migration; Animal population; Archives; Canada. Dept. of Fisheries and Oceans; Canada. Dept. of Indian Affairs and Northern Development; Dams; Environmental impacts; Fish management; Fish spawning; Fisheries; Fishes; Government regulations; History; Hydroelectric power; Indians; Libraries; Mining; Regulatory agencies; Research; Royal Canadian Mounted Police; Subsistence; Wildlife habitat

G0811

Yukon River region, Alaska/Yukon; Yukon River, Alaska/Yukon

**Archival research - salmon in the upper lakes region, Yukon Territory** / Research

Northwest Cox, J. Yukon River Panel [Sponsor]

[Whitehorse, Yukon : Research Northwest, 1997].

ii, 59, [11] p. ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-11-97)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

Cover title.

References.

Report date: November 1997.

ASTIS record 72623.

Languages: English

According to historical records, early non-native residents in the Whitehorse area, on Marsh and Tagish lakes, and on Lake Laberge, fished exclusively for grayling and whitefish. In fact, none of the records consulted for this project made any reference to a non-native salmon fishery. First Nations people, on the other hand, set traps for salmon and had well-established fish camps on the Takhini River and McClintock River. Descriptions of the salmon populations and spawning areas in the historical records up until the 1940s are rare. A fishery officer for the entire territory was posted in Dawson between 1900 and 1918, and his reports focused primarily on the fishery in the central Yukon. His knowledge of the salmon populations further upstream was limited. The Royal Canadian Mounted Police assumed the responsibility of enforcing fishery regulations in 1918 and fulfilled this duty until 1958 when the Department of Fisheries again posted a fishery officer in the Yukon, this time in Whitehorse. Serious efforts to gather information about the salmon in the upper Yukon River began in the early 1950s in response to a number of proposals for large-scale hydroelectric projects. The federal Department of Fisheries in Ottawa found that it had no information about the salmon in the Whitehorse and Upper Lakes area. The department asked the RCMP to interview local residents about the salmon, and it sent a number of biologists to investigate. Meanwhile, the United States Fish and Wildlife Service began conducting its own investigations, in which the Canadian Department of Fisheries and the RCMP participated. By the time the Whitehorse Rapids dam construction was proposed in 1956 the value of these salmon to the health of the Yukon River stocks and to the First Nations fishery in the McClintock River system was recognized, and a fishway was included in the design. (Au)

V, I, F, N, T, Y, R, P, J, Q

Animal distribution; Animal food; Animal husbandry; Animal migration; Animal population; Archives; Canada. Dept. of Fisheries and Oceans; Canada. Dept. of Indian Affairs and Northern Development; Chinook salmon; Dams; Environmental impacts; Fish management; Fish spawning; Fisheries; Fishes; Food; Furbearing animals; Government regulations; History; Hydroelectric power; Indians; Libraries; Mining; Petroleum pipelines; Regulatory agencies; Research; Royal Canadian Mounted Police; Stream flow; Subsistence; Temporal variations; Water level; Wildlife habitat

G0811

Laberge, Lake, Yukon; Marsh Lake, Yukon; Tagish Lake, British Columbia/Yukon; Takhini River, Yukon; Whitehorse Rapids, Yukon; Yukon River region, Alaska/Yukon; Yukon River, Alaska/Yukon

**Ichthyophonus, tapeworms, nematodes and other parasites in Yukon River salmon and other fish** / W.R. Ricks Consulting Ricks, W.R. Yukon River Salmon Restoration and Enhancement Fund [Sponsor]

[Whitehorse, Yukon : W.R. Ricks Consulting, 2006].

6 p. ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-14-06)

Cover title.

A PowerPoint presentation presented in Dawson City, Yukon, on August 19, 2006.

References.

ASTIS record 72625.

Languages: English

Libraries: ACU

Summary: A professional PowerPoint presentation, dealing primarily with a parasite of some concern to Yukon Chinook salmon fishers, was included as part of the Salmon Celebration in Dawson City, Yukon. Conditions were somewhat less than optimal, and a major component of the presentation was omitted due to lack of fish specimens. Some suggestions for improvement are included at the end of this report. (Au)

I, L, R

Animal health; Chinook salmon; Communication; Equipment and supplies; Necropsy; Parasites; Protozoa; Public education campaigns; Quality assurance

G0811

Dawson, Yukon; Yukon River, Alaska/Yukon

**Chinook salmon assessment and restoration/enhancement options for selected tributaries of the Teslin River, 1997** / White Mountain Environmental Consulting Laberge Environmental Services Research Northwest Yukon River Salmon Restoration and Enhancement Fund [Sponsor]

[Yukon : s.n., 1997].

[122] p. : ill., maps ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-08-97)

Indexed a PDF file from the Web.

Cover title.

Appendices.

References.

Abstract missing from PDF file.

ASTIS record 72114.

Languages: English

Web: [http://yukonriverpanel.com/salmon/wp-content/uploads/2010/06/cre-08-97-chinook-salmon-assessment-and-resoration\\_enhancement-options-for-selected-tributaries-of-the-teslin-river.pdf](http://yukonriverpanel.com/salmon/wp-content/uploads/2010/06/cre-08-97-chinook-salmon-assessment-and-resoration_enhancement-options-for-selected-tributaries-of-the-teslin-river.pdf)

INTRODUCTION: The Teslin River, located in south central Yukon and northern British Columbia is a major headwater tributary of the Yukon River. A total of 15 first order, 16 second order, 6 third order, and 2 fourth order tributary streams of the Teslin River mainstem served as the focus of the study (Figure 1). The study area lies within the traditional territory of the Teslin First Nation and has been a traditional location of salmon harvesting. The Teslin River's proximity to population centers (Whitehorse and Teslin), relatively easy access, and recreational potential make it a good candidate for restoration/enhancement work that includes community involvement. Prior to this report, detailed information on the utilization of tributary streams by chinook salmon was lacking for much of the Teslin River. Spawning populations in some tributaries were undocumented, and other tributaries that once supported Chinook salmon populations no longer appeared to do so. The purpose of this study was to provide the background information required for (a) restoring habitat and wild stocks; (b) enhancing habitat; (c) enhancing wild stock, and (d) effective management of existing stocks. Documenting salmon utilization and restoration/enhancement potential of these tributaries will play an important role in influencing future land use decisions that might negatively

tributaries will play an important role in influencing future land use decisions that might negatively impact these creeks. The primary focus of this study was on tributaries of Teslin River large enough to support spawning Chinook salmon. These tributaries received detailed investigations including assessing the extent of adult salmon utilization, the potential availability of spawning habitat, and the utilization by rearing chinook salmon fry. The extent to which chinook salmon utilized smaller tributaries for rearing or spawning was previously unknown within the study area. These tributaries were given cursory investigations to determine the extent of, or potential for, salmon utilization. The Teslin Tlingit Council (TTC) has been developing an Integrated Resource Management Plan. This study will provide fisheries baseline data to aid in the development of that plan. Some work will be required to integrate this information to that program. The specific objectives of this proposal were as follows: - Conduct detailed investigations of tributaries to the Teslin River between Teslin Lake and Swift River to determine current and historical Chinook salmon utilization. - Conduct physical investigations of the tributaries to determine their potential as candidates for restoration/enhancement work. - Prepare a report that would outline restoration/enhancement options for this portion of the Teslin River. - Solicit support from local communities and other interested parties for possible future restoration/enhancement work resulting from the findings of these studies. Generate background data that could be used towards development of a regional plan for managing chinook salmon in the Yukon River drainage. White Mountain Environmental Consulting (WMEC) conducted the fisheries investigations and coordinated this project. Leberge Environmental Services (LES) conducted the water quality/quantity and benthic assessments, and Research Northwest conducted the background research. Each partner completed analysis of data they collected and the compilation of this report was completed by WMEC and LES. Funding for this study was provided by the Yukon River Panel Restoration and Enhancement Fund under the U.S./Canada Interim Agreement of the Pacific Salmon Treaty. (Au)

I, F, N, T

Animal distribution; Animal live-capture; Animal migration; Animal population; Bottom sediments; Chinook salmon; Fish management; Fishing; Fresh-water ecology; Fresh-water invertebrates; River banks; Rivers; Stream flow; Tlingit Indians; Traditional knowledge; Water level; Water quality; Wildlife habitat

G0811

Teslin River region, Yukon; Yukon River region, Alaska/Yukon

**Chinook salmon assessment and restoration/enhancement options for selected tributaries of the Nisutlin River and Teslin Lake drainages, 1998** / White Mountain Environmental Consulting Teslin Tlingit Council Laberge Environmental Services Yukon River Salmon Restoration and Enhancement Fund [Sponsor]  
[Yukon : s.n., 1999].

v, 83 p. : ill., maps ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-20-98)

Indexed a PDF file from the Web.

Appendices.

References.

Project # RE-20-98.

Report date: March 1, 1999.

ASTIS record 72117.

Languages: English

Web: <http://yukonriverpanel.com/salmon/wp-content/uploads/2010/06/cre-20-98-chinook-salmon-assessment.pdf>

Field investigations and assessments to document chinook salmon (*Onchorhynchus iswacha*) resources in the Nisutlin River drainage and major tributaries to the north-west arm of Teslin Lake, were conducted during July and August, 1998. Investigations included water quantity and quality assessments, benthic sampling, and fish habitat and utilization assessments. This report constitutes part of an ongoing effort to document the salmon resources of the Teslin Drainage basin in order to allow for salmon management on a watershed basis. The Teslin drainage is within the Teslin Tlingit Traditional Territory of the south central Yukon. The most significant observation of the hydrology component of this study was the extremely low discharge in many of the tributaries. In some cases the measured discharge approached or was lower than the estimated 7 day low flow extreme.

These drought-like conditions had direct effects on the chemistry as well as the biological and

physical characteristics of the watercourses, which likely affected distribution and well-being of juvenile salmon. In general, relatively high numbers of salmon fry were captured in the Nisutlin drainage. All the major tributaries, and most of the smaller ones, supported rearing chinook to some degree. The Sidney Creek and Rose River drainages supported the highest numbers of rearing chinook fry documented in the study area. The very low water levels prevalent during the study likely resulted in a reduction of available habitat and so concentrated fry in the remaining habitats. This reduction of habitat was particularly evident in smaller tributaries. Combined with a relatively high escapement in the 1997 run, this may account for the large numbers of fry captured during the study. Nevertheless, this study indicates the Nisutlin sub-basin represents a very significant salmon resource in the upper Yukon River drainage, and may contain some of the most extensive rearing habitat in this area. Much of the study area remains in a virtually pristine state, however access from the South Canal Road and Alaska Highway will likely lead to increases in human activity within the study area. Land and watershed management policies that protect the fisheries resource should be considered an important component of any land use planning process. Several culverts at creek crossings along the South Canal Road represented an obstruction to fish passage at the water levels encountered. This report recommends these obstructions be addressed. Potential sites for a salmon enumeration fence were assessed. The lower Wolf River near its outlet to the Nisutlin River was considered a suitable site for such a fence. (Au)

I, F, N, T, L, J

Aerial surveys; Animal distribution; Animal live-capture; Animal migration; Animal population; Bottom sediments; Chemical properties; Chinook salmon; Culverts; Environmental impacts; Fish management; Fishing; Fresh-water biology; Fresh-water ecology; Fresh-water invertebrates; Land use; Planning; Rivers; Roads; Stream flow; Tlingit Indians; Water level; Water quality; Watershed management; Watersheds; Wildlife habitat

G0811

Alaska Highway, Yukon; Canal Road, N.W.T./Yukon; Nisutlin River region, Yukon; Teslin Lake region, British Columbia/Yukon

**Croucher Creek 2000 : juvenile chinook salmon (*Oncorhynchus tshawtscha*) over-wintering and migration study in a small non-natal tributary of the upper Yukon River : phase II /**

Yukon Conservation Society Moodie, S. Kwanlin Dün First Nation Yukon River Salmon Restoration and Enhancement Fund [Sponsor]

[Whitehorse, Yukon : Yukon Conservation Society : Kwanlin Dün First Nation, 2000].

v, 36, [16] p. : ill., maps ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-01-00)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

Report date: December 2000.

References.

Appendices.

Cover title.

ASTIS record 72597.

Languages: English

Data are presented on the over-wintering and migration patterns of Croucher Creek by juvenile chinook salmon (*Oncorhynchus tshawytscha*). This tributary of the upper Yukon River does not support spawning adults. Research on Croucher Creek in 1993) suggested that juvenile chinook salmon over-wintered in this creek, the report is Juvenile Chinook Salmon (*Oncorhynchus tshawytscha* Utilization of Croucher Creek, A Small Non-natal Tributary of the Upper Yukon River) (Moodie, 1994)). In late summer and fall 1998, juvenile chinook salmon were tagged and re-captured with a downstream enumeration fence during out-migration in 1999. The study Croucher Creek 1999: Juvenile Chinook Salmon (*Oncorhynchus tshawytscha*) Overwintering and Migration Study in a Small Non-natal Tributary of the Upper Yukon River (Moodie, 1999) determined that juvenile chinook salmon do over-winter in Croucher Creek. The Phase II study was designed to determine: 1. the timing, magnitude and characteristics of the out-migration of 1 + juvenile chinook salmon (smolts) which may have over-wintered 2 years in the non-natal stream Croucher Creek using minnow trapping; and 2. the timing, magnitude and characteristics of in-migration of 0+ juvenile chinook salmon and their upstream migration patterns using minnow trapping. Additionally, the study was designed to delineate habitat range and behavioral characteristics of slimy sculpins



in Croucher Creek to determine if they could be effectively used as indicator species to monitor and protect the health of habitats used by chinook salmon in the Yukon. Sampling took place on a weekly basis at four stations along Croucher Creek using Gee-type minnow traps, the locations of these stations were comparable to the 1993 study (Moodie, 1994). Juvenile chinook salmon and slimy sculpins were tagged using Visible Implant Fluorescent Elastomer (VIE). Unique tag codes were used, distinguishing date and location of fish caught. The abundance of juvenile chinook salmon caught in the Phase II 2000 study was only 18% of the total 1993 catch. It is likely that the low adult chinook salmon returns of 1999 have affected the spawning rates and decreased the abundance of (0+) juvenile chinook salmon migrating in to Croucher Creek. The Phase II 2000 study provided no evidence to support the hypothesis that juvenile chinook salmon might over-winter two winters in Croucher Creek, though (1+) juvenile chinook salmon may have migrated out of Croucher Creek under ice prior to June 6, 2000. The re-capture rate for juvenile chinook salmon tagged in Croucher Creek in the Phase II 2000 study was 12%. All of the juvenile chinook salmon re-captured at Station #2 in August had been tagged originally and re-captured at the same location. The low re-capture rate suggests that juvenile chinook salmon were mobile in Croucher Creek throughout the 2000 study, though perhaps returning to certain locations in August. Only 6% of the sculpins tagged in this study were re-captured over the study period, one had moved 300 meters upstream and the others were caught in the location where they had been tagged. Due to the movement, slimy sculpins may not be appropriate for use as an indicator species. (Au)

I, N, B, H, F

Animal distribution; Animal health; Animal live-capture; Animal migration; Animal tagging; Arctic grayling; Bottom sediments; Chinook salmon; Fish management; Plant distribution; Rainbow trout; River banks; Seasonal variations; Slimy sculpin; Watershed management; Wildlife habitat; Winter ecology

G0811

Croucher Creek, Yukon

**Coded wire tagging of chinook salmon at the Whitehorse Rapids hatchery in 2009** / Yukon Fish and Game Association Yukon River Salmon Restoration and Enhancement Fund [Sponsor] [Whitehorse, Yukon : Yukon Fish and Game Association, 2009].

9 p. : maps ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-63-09)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

Report date: October, 2009.

References.

Appendices.

Cover title.

ASTIS record 72635.

Languages: English

Chinook salmon fry reared at the Whitehorse Rapids Hatchery were adipose finclipped and injected with "Agency-only" coded wire tags in the early summer of 2009. This was the third year the facility used an "Agency-only" coded wire tag. Tricaine methane sulphonate (MS222) was used to anaesthetize the fry prior to clipping and tagging. The 2009 release of a total of 169,646 fry in four areas upstream of the Whitehorse Rapids dam included: - 22,523 into Wolf Creek on May 31, June 3, and June 11; - 42,906 into the main stem Yukon River on June 5; - 77,826 into Michie Creek on June 5; and - 26,391 into the McIntock River on June 5. Three fry released with "Agency-only" coded wire tags in 2007 were recovered in mid-September in the Bering Strait during a surface trawl operation aboard a National Oceanic and Atmospheric Administration research vessel. These recoveries represent the most northerly recoveries of coded wire tagged Chinook salmon released in Whitehorse, Yukon. The Whitehorse Rapids Fishway program, another program undertaken by the Yukon Fish and Game Association, has a number of components that relate to the Whitehorse Rapids Hatchery coded wire tagging program. In 2009, 388 of the 828 returning adult Chinook salmon counted at the fishway were of hatchery origin. The hatchery component included 28 females and 360 males and represented 47% of the Whitehorse Rapids Fishway count. The 2009 season at the Whitehorse Rapids Fishway was a very successful season which was due in part to it being its 50th Anniversary. Our visitor's totals for June, July and August were actually more comparable with the 2007 season; which was a very busy year for tourists. We were able to surpass last year's visitor's totals in all the months except July. In the month of August alone we

surpass last year's visitor's totals in all the months except July. In the month of August alone we surpassed last year's numbers by 1195 people! All told we were visited by people from over 60 countries around the world, 13 countries in Africa alone. We had very good weather this summer and a much improved salmon run which helped to contribute to our great 2009 season. Visitors were provided opportunities to view the returning salmon and learn about the Upper Yukon Chinook salmon resource and the coded wire tag program. Local students employed at the Whitehorse Rapids Fishway provided information and answered the visitors' questions. The Whitehorse Rapids Fishway staff also assisted hatchery staff in the collection of biological data and the recovery of coded wire tags from the hatchery fish which were used for broodstock. (Au)

I, N, F, L, R

Age; Animal distribution; Animal health; Animal live-capture; Animal migration; Animal mortality; Animal population; Animal tagging; Biological sampling; Chinook salmon; Equipment and supplies; Fish culture; Fish management; Fish spawning; Fishing; Necropsy; Public education campaigns; Quality assurance; Size; Tourist trade

G0811, G04

Bering Strait; Whitehorse Rapids, Yukon

**Weight and girth of Yukon River chinook salmon, *Oncorhynchus tshawytscha*** / Yukon River Drainage Fisheries Association DuBey, R. Alaska. Dept. of Fish and Game Evenson, D. Yukon River Panel [Sponsor]

Anchorage, Alaska : Yukon River Drainage Fisheries Association, 2008.

10 p. : ill. ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. URE-07-07)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

Report date: March 13, 2008.

References.

Cover title.

For project titled: "Gillnet catch composition in lower and middle Yukon River fisheries", URE-07N-07. Final report to the Yukon River Panel.

ASTIS record 72644.

Languages: English

Concern about possible changes in the age, sex, length, weight, and girth (ASLWG) composition of Yukon River Chinook salmon populations has grown in recent years. The goal of this project was to gain information about the weight and girth composition from set gillnets in the Big Eddy and Middle Mouth (BEMM) test fisheries located in the North, South, and Middle mouths near Emmonak and from fish wheels near Rampart Rapids (RRFW). Chinook salmon were sampled for paired age, sex, length, weight, and girth (ASLWG) data from June 3 to July 15, 2007 at BEMM sites and from June 20 to July 31, 2007 at the RRFW sites. A total of 718 fish collected using 8.5 inch mesh set nets at BEMM sites were sampled for ASLWG; 361 were female and 357 were male. At RRFW, a total of 809 fish were sampled for ASLWG; 199 were female and 610 were male. Regression analysis revealed a significant and similar power relationship for both the BEMM and RRFW sites girth-weight and length-weight relationships and a significant and similar linear relationship for girth-length relationships. These relationships were significant even though the BEMM and RRFW sites used different sampling gear and there were morphometric and demographic differences between the sites. The mean girth-weight-length of the RRFW samples were significantly less than those exhibited at BEMM. The differences may be due to variations in the morphological characteristics between stocks, differences in the demographic composition between stocks, weight or girth changes due to energetics of upstream migration, or size selective bias of or between the two gear types. Analysis of male girth-weight-length differences between sites was complicated by a higher proportion males, of which there were more 'jacks', sampled at the RRFW sites. Differences in girth-weight-length relationships between males and females and between upriver and downriver fish could have management implications since they could correlate to differences in gear selectivity. Gillnets are girth-selective, thus, if large-mesh gear is selecting for fish of large girth, then under conditions where the males have lower mean girth, this gear would tend to select disproportionately and the remaining population would have a higher proportion of small males. (Au)

I, N

4/15/2011

ASTIS

Age; Animal anatomy; Animal migration; Animal population; Biological sampling; Chinook salmon; Equipment and supplies; Fish management; Fishing; Gender differences; Size; Temporal variations

G06, G0811

Emmonak, Alaska; Rapids, The, Alaska; Yukon River, Alaska/Yukon

**McIntyre Creek salmon incubation project, 2006-2007** / Yukon River Salmon Restoration and Enhancement Fund

[Whitehorse, Yukon : Yukon River Salmon Restoration and Enhancement Fund, 2007].

15, [19] p. : ill., maps ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. CRE-65-06)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

Report date: March 2007, final report.

References.

Appendices.

Cover title.

ASTIS record 72596.

Languages: English

As it has done for the last five seasons, the Northern Research Institute (NRI) at Yukon College operated the McIntyre Creek Salmon Incubation Project for the 2005-2006 season. The NRI works very closely with Yukon College Renewable Resource Management students (RRM), Fisheries and Oceans Canada, other partner organizations and contractors to operate the site. Education and public outreach on Chinook salmon research and management continues to be a major objective for McIntyre: the facility is operated by RRM students, hosts a variety of public events, and is involved with development and testing of a variety of techniques used in hatchery programs. Chinook fry reared at the McIntyre Creek project from the 2005 broodstock were coded, wire tagged, and released between July 5, 2006 and July 24, 2006. A total of 73,548 Chinook fry were tagged and released in 2006 - 36,366 Tatchun Creek salmon and 37,182 Takhini River salmon. Approximately 97,000 Chinook eggs were incubated in 2006: about 49,000 were taken from Tatchun Creek Chinook and about 48,000 were taken from Takhini River Chinook. Eggs and milt were transported from each site to the McIntyre facility where eggs were fertilized and then planted into health stack incubation trays. The initial egg fertilization estimates completed in the fall of 2006 were 85.7% on average for those of Takhini River origin and approximately 50% for those of Tatchun Creek origin (based on estimates from 1 batch of eggs). Subsequent survival estimates suggest that approximately 46,000 (of 49,000) Tatchun eggs and approximately 46,000 (of 48,000) Takhini eggs survived to alevins. Re-enumeration of Chinook fry will be completed in April or early May before tagging commences. The results of thermal marking trials on the 2005-2006 cohort were assessed by the DFO Whitehorse otolith lab in spring 2006. Four pre-hatch rings were visible on thermally marked Tatchun Creek fry and 3 or 5 pre-hatch rings were visible on thermally marked Takhini fry. This year all incubation units were upgraded to increase the efficiency of thermal marking and all Chinook at the McIntyre facility were thermally marked over the incubation period. Otoliths from 2006-2007 will be assessed by the DFO otolith lab in spring of 2007. Fry trapping during the spring and summer of 2006 was completed by Y2C2 and Yukon College students, with the assistance of the Education Coordinator from Fisheries and Oceans Canada. Fry trapping was conducted at Tatchun Creek in July and at Flat Creek in late June. (Au)

I, N, R

Animal food; Animal live-capture; Animal mortality; Animal tagging; Chinook salmon; Equipment and supplies; Fish culture; Fish management; Fish spawning; Higher education; Occupational training; Public education campaigns; Yukon College. Northern Research Institute

G0811

McIntyre Creek (60 46 N, 135 06 W), Yukon; Takhini River region, Yukon; Takhini River, Yukon; Tatchun River, Yukon

**Annual report to the Yukon River Panel, Anchorage, Alaska : Rampart Rapids full season video monitoring 2009 using a fish wheel on the Yukon River, Alaska** / Zuray, S. Yukon River Panel [Sponsor]

[Tanana, Alaska : Stan Zuray, 2009]

...ucalgary.ca/.../SE+Yukon+River+Sal...

[Tanana, Alaska : Staff Zula, 2007].

51 p. : ill., map ; 28 cm.

(Yukon River Salmon Restoration and Enhancement Fund project no. URE-09-09)

Indexed a PDF file supplied by Fisheries and Oceans Canada staff.

Report date: December 2009.

References.

Cover title: Rampart Rapids full season video monitoring 2009 : using a fish wheel on the Yukon River, Alaska.

ASTIS record 72645.

Languages: English

Long-term monitoring of major salmon stocks is a necessary component of successful fisheries management on the Yukon River. The Rampart Rapids video fish wheel project provides the only U.S. main stem Yukon River assessment database of run strength and relative abundance of Chinook and chum salmon in 1000 miles of river. Many of these stocks are bound for spawning grounds in Canada and contribute to international treaty obligations. Since 2000, the project has provided daily catch data of salmon and migratory whitefish species to fisheries managers throughout the Yukon drainage. The project's fish wheel design and construction incorporates features that reduce injury to fish. The installed video system allows fish to be immediately released back into the water, eliminating stress from live box holding and handling. Fish wheel operation and location is maintained in a consistent manner from year to year using a list of standards, so more meaningful comparisons and interpretations can be made. The video technology allows precise and reliable collection of catch-per-unit-effort data. The project has been used throughout the years for development and testing of new video components. Daily in-season update reports, which include daily species catch data, subsistence information and run timing graphs, have been sent to managers and interested persons from 2005 to 2009. (Au)

I, N, F, T, J

Animal health; Animal live-capture; Animal migration; Animal mortality; Animal population; Animal tagging; Chinook salmon; Chum salmon; Coregoninae; Design and construction; Effects monitoring; Electronic data processing; Environmental impacts; Equipment and supplies; Fish management; Fisheries; Fishes; Fishing; Food preservation; Numeric databases; Research; River discharges; Stream flow; Subsistence; Tanana Indians; Temporal variations; Video tapes

G0811

Rapids, The, Alaska; Yukon River, Alaska/Yukon

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