

Yukon River Panel Restoration and Enhancement Fund

Project Concept Form 2012

Project Title: Collection and Analysis of Yukon River DNA Baseline Samples in the Alaska and Canada

Proponents name: **Trix Tanner / Jan Conitz**

Affiliation: **Fisheries and Oceans Canada / Alaska Department of Fish and Game**

E-mail address: trix.tanner@dfo-mpo.gc.ca / jan.conitz@alaska.gov **Phone:** 867-393-6720 / 907-267-2135

Identify <u>one</u> Category and <u>one</u> Management Need only that best describes the main intent of the proposal.		Dollar amount requested (specify currency)
<i>Category</i>	<i>Management Need</i>	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">\$ 60,000 CDN</div>
<input type="checkbox"/> Conservation	<input checked="" type="checkbox"/> 1, 2, 3, 4, 5, 6, 7	
Restoration	8, 9,	
Enhancement	10,	
Stewardship	11,	
Communications	12.	

Project Location: Tributaries throughout the Yukon River drainage	Is this proposal a continuation of a project previously funded by the R&E Fund ? <input checked="" type="checkbox"/> Yes This is Year # <u>6</u> of <u>unknown</u> years.
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Start Date: **End Date:**

1. Overview: This project will involve the collection of baseline Chinook and fall chum salmon genetic samples in Alaska and Canada and the subsequent analysis of these samples for inclusion into existing ADF&G and DFO baselines. The project proponents will allocate the funding in a manner that addresses specific baseline gaps, in both Alaska and Canada, which will be identified by the JTC Genetics Sub-committee. DNA collection is challenging logistically due to individual fish population sizes, large geographic area involved, remoteness of spawning grounds, difficulties associated with capturing live fish, and a narrow window of opportunity. Decisions about which populations to address will depend upon both the prioritized list of required baseline samples and logistical constraints. This proposal provides the flexibility to approach the most appropriate priorities considering unpredictable conditions such as water levels and run abundance. Methodology will primarily involve live-capture and sampling of recently deceased fish in terminal spawning areas. Project personnel will involve agency staff, professional consultants and people from the communities.

ONGOING-1-CON

- 2. Relevance and Significance:** Mixed stock analyses, whether used to inform in-season management decisions, or to estimate the number of Canadian-origin fish in Alaskan subsistence harvest, are completely dependent on having a sound and extensive genetic baseline to avoid misallocations. Mixed stock analyses has become critical for both in-season management and postseason evaluation and run reconstruction on the Yukon River. Efforts to collect these samples are necessarily continual, as some tissue collections are depleted and become outdated, and other important stocks are still lacking from the baseline. Stocks immediately adjacent to the border, for instance, are currently lacking and misallocation within the important US/Canada stock distinction due to this data gap may hinder management objectives.
- 3. Technical Merit:** This project has been ongoing for several years and has provided a continually improving genetic baseline for use by managers and researchers. Tissues are shared among DFO, ADF&G and USFWS. The inherent flexibility and collaborative nature of this project has secured the success to date. By allowing the collection of samples that are most feasible given circumstances in a given year while still following established priorities, this project reduces costs for these collections. For example, thanks to additional baseline samples collected in preceding season, mixed stock analyses in 2011 were conducted with a baseline that allowed for 9 reporting groups for Chinook salmon instead of the previous 7; Koyukuk River and Teslin region can now be successfully differentiated with this methodology.
- 4. Key Personnel:** Trix Tanner, fishery biologist for DFO, and Jan Conitz, AYK regional research coordinator for ADF&G will be the primary investigators in this work. ADF&G's Yukon Area Summer Season Research Biologist (currently vacant) and Bonnie Borba, ADF&G's Yukon Area Fall Season Research Biologist will be central people involved in coordinating sampling in Alaska. Along with their respective genetics laboratories, they will identify sampling strategies that are most logistically feasible and best accommodates the JTC Genetic Sub-committee's sampling priorities. Some sampling may be conducted by agency staff. However, much of the work will be completed with subcontractors, as often local fishermen or researchers who work in a particular area may be able to take tissue samples in conjunction with their other occupations. This has been a useful strategy for reducing project costs while still effectively improving the baseline.

5. Project budget outline:

Wages and salaries	\$
Contract services	\$60,000
Travel	\$
Supplies and materials	\$
Capital equipment	\$
Indirect costs	\$
Total	\$
In-kind or other funding contributions	\$15,000

Yukon River Panel Restoration and Enhancement Fund
Project Concept Form 2012

Project Title: Yukon River Salmon Stock Identification

Proponents name: Terry D. Beacham
Affiliation: Fisheries and Oceans Canada

E-mail address: Terry.Beacham@dfo-mpo.gc.ca **Phone:** 250 756 7149

Identify <u>one</u> Category and <u>one</u> Management Need only that best describes the main intent of the proposal.		Dollar amount requested (specify currency)
<i>Category</i>	<i>Management Need</i>	\$ 30,000 Can
Conservation	2	

Project Location: Chum and Chinook salmon samples obtained from the mainstem Yukon River sonar site near Eagle, Alaska, as well as escapement and stock assessment projects in the Yukon Territory	Is this proposal a continuation of a project previously funded by the R&E Fund ? Yes This is Year # <u>11</u> of <u>unknown</u> years.
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Start Date: 01/07/2012 **End Date:** 31/03/2013

Limit your responses to the following questions to a page and a half (the whole Project Concept should not exceed 2 pages in total). Minimum font size: 11 pt

1. Overview:

The specific objective is to apply microsatellite variation to estimate stock compositions of chum and Chinook salmon from the Eagle sonar site and other mixed-stock locations as determined by DFO staff. This project will involve the following steps:

- Collection of appropriate mixed-stock samples from Eagle sonar site and other mixed-stock locations, with collections conducted either by agency staff (ADF&G, DFO) or contractors.
- Analysis of genetic variation by staff at the Molecular Genetics Laboratory (MGL), Pacific Biological Station, Nanaimo, BC. There will be 13-15 microsatellite loci analyzed for approximately 500 chum salmon samples and 1,000 Chinook salmon samples. Samples will be analyzed according to priorities by DFO staff.
- Use existing baselines to estimate stock compositions for these samples for as many specific populations as feasible.

2. Relevance and Significance:

Project is relevant to the following priorities:

ONGOING-2-CON

Stock Identification and Post-Season Management: Undertake post-season mixed stock analysis (genetic stock identification) programs which are beneficial to post-season fisheries management

Conservation-Stocks-Run Assessment

Improve information on stock ID and biological composition of run and improve post-season run-size estimates at various locations in the Yukon River

Conservation-Stocks-Research

Continue to evaluate stock ID or other assessment techniques that best meet objectives under JTC Plan goals and objectives: Monitor or project escapements by CMU. These would include:

- 1.1.2 Estimate the stock biological or other composition of escapements
- 1.4 Improve management and research capability
- 1.4.3 Investigate new technology, methods and models

3. Technical Merit:

Variation at microsatellite loci has been particularly useful for population-specific estimates of stock composition of Yukon River Chinook salmon and stock (regional) estimates of chum salmon. Microsatellites have been applied successfully during the last 10 years to provide estimates of stock composition in mixed-stock fishery samples from throughout the Yukon River drainage. Thousands of chum and Chinook salmon have been analyzed previously for microsatellite variation by staff in the Molecular Genetics Laboratory and estimated stock compositions from mixed-stock fisheries provided as required.

4. Key Personnel:

DFO staff:

Terry D. Beacham: Project management, reporting

Khai Le: Survey of microsatellite variation in chum salmon

Kim Jonsen: Survey of microsatellite variation in Chinook salmon

Experience in microsatellite analysis is required, and staff in the MGL the Pacific Biological Station have demonstrated over many years the capability to survey genetic variation in a variety of species.

5. Project budget outline:

Wages and salaries	\$
Contract services	\$
Travel	\$
Supplies and materials	\$30,000
Capital equipment	\$
Indirect costs	\$
Total	\$30,000
In-kind or other funding contributions	\$32,735

Yukon River Panel Restoration and Enhancement Fund

Project Concept Form 2012

Project Title: Technical Assistance, Development, and Support to the Yukon River Fish Wheel Salmon Monitoring Project at Rampart Rapids using Remote Video Technology

Proponents name: David Daum
Affiliation: U.S. Fish and Wildlife Service

E-mail address: david_daum@fws.gov **Phone:** 907 456 0290

<p>Identify <u>one</u> Category and <u>one</u> Management Need only that best describes the main intent of the proposal.</p>		<p>Dollar amount requested (specify currency)</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">\$ 5,500 US</div>											
<table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding-bottom: 5px;"><i>Category</i></td> <td style="padding-bottom: 5px;"><i>Management Need</i></td> </tr> <tr> <td style="padding-bottom: 5px;"><u>Conservation</u></td> <td style="padding-bottom: 5px;">1, <u>2</u>, 3, 4, 5, 6, 7</td> </tr> <tr> <td style="padding-bottom: 5px;">Restoration</td> <td style="padding-bottom: 5px;">8, 9,</td> </tr> <tr> <td style="padding-bottom: 5px;">Enhancement</td> <td style="padding-bottom: 5px;">10,</td> </tr> <tr> <td style="padding-bottom: 5px;">Stewardship</td> <td style="padding-bottom: 5px;">11,</td> </tr> <tr> <td style="padding-bottom: 5px;">Communications</td> <td style="padding-bottom: 5px;">12.</td> </tr> </table>	<i>Category</i>	<i>Management Need</i>	<u>Conservation</u>	1, <u>2</u> , 3, 4, 5, 6, 7	Restoration	8, 9,	Enhancement	10,	Stewardship	11,	Communications	12.	
<i>Category</i>	<i>Management Need</i>												
<u>Conservation</u>	1, <u>2</u> , 3, 4, 5, 6, 7												
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Enhancement	10,												
Stewardship	11,												
Communications	12.												

<p>Project Location: Rampart Rapids, Yukon River mile 731</p>	<p>Is this proposal a continuation of a project previously funded by the R&E Fund? Yes</p> <p>This is Year # <u>11</u> of <u>unknown</u> years.</p>
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Start Date: 1/06/2012 **End Date:** 15/01/2013

1. Overview: Video systems (originally developed by USFWS in 2000) are now an integral part of many fish wheel related projects throughout the Yukon River drainage. Video projects include catch monitoring projects on the Yukon and Tanana rivers, totalling over \$100,000 in annual project costs. The advantages of utilizing the video monitoring system over traditional fish wheels with live-boxes are reduced handling and holding time for captured fish; improved counting accuracy; unattended operation; and lower labor costs. The video enumeration project at Rampart Rapids began in 2000 and targets main-stem Yukon River salmon, primarily Canadian-origin Chinook and fall chum salmon. The site has been used throughout the years for development and testing of new video components. This project is a great success story, building local biological capacity within a rural community. Because of the technical nature of video technology and the data analysis required, there is a continued need for technical assistance and support throughout the annual video enumeration project. This proposal would provide funding for this support. Also, as old equipment becomes outdated, new equipment needs to be tested and incorporated into the video system. This project will involve the following steps: 1) in-season

ONGOING-3-CON

(June – September) assistance in video system troubleshooting, repair, and operations for the Rampart Rapids video monitoring project; 2) integrate new equipment, as needed, into the on-site video system; and 3) post-season data analysis, data checking, annual report editing, and proposal development for the Rampart Rapids video monitoring project.

- 2. Relevance and Significance:** The Rampart Rapids video fish wheel monitoring project was designed to collect run timing and assessment information on Chinook and chum salmon, inconnu, humpback and broad whitefish, and cisco spp. These data, along with data from other main-stem Yukon River run assessment projects, are used to help fishery managers estimate in-season run timing, set fishing schedules, and adjust harvest. To reduce stress on captured fish from assessment projects using fish wheels, an event-triggered video system was designed by USFWS that would remotely (i.e., with no user present) collect catch data without the need to handle or hold fish in live-boxes. This system has been used in the Yukon River drainage since 2000. In 2011, three fish wheel projects in the Yukon River drainage successfully operated using the video system (Y-5A and Nenana Fish Wheel Projects on the Tanana River and Rampart Rapids Video Project on the main-stem Yukon River). All three projects were run by local fish wheel operators trained by USFWS. These systems were custom built for each project, with design features specific to each site. Because of the technical nature of these projects, there is a continued need for mentorship, technical assistance, and support for the local operators.
- 3. Technical Merit:** This project has been a proven long-term, reliable assessment tool for monitoring runs of Yukon River salmon and other important fish species. Data from this project have been published in numerous government and scientific publications, including the North American Journal of Fisheries Management (Daum 2005). Because of the importance and quality of the data generated from this project, it has been funded by various sources since 2000.
- 4. Key Personnel:** David Daum, a fishery biologist with USFWS, Fairbanks Fish and Wildlife Field Office, will be the project leader for this project. Mr. Daum has worked as a biologist in Alaska for 30 years, with the majority of his experience studying many aspects of Yukon River salmon biology. He has published numerous scientific papers related to fisheries biology, both in peer-reviewed and government publications. Mr. Daum helped develop the present fish wheel video system and is recognized as an expert in applied video technology.

Stan Zuray. Mr. Zuray is a long-time Yukon River fisherman, founder of the Rapids Research Center, and coordinator of the Rapids Student Research Camp at Rampart Rapids. He has fished the video fish wheel site for over 25 years and has operated the video system since 2000.

5. Project Budget Outline:

Wages and salaries	\$ 3,840
Contract services	\$ 0
Travel	\$ 300
Supplies and materials	\$ 370
Capital equipment	\$ 0
Indirect costs	\$ 990
Total	\$ 5,500
In-kind or other funding contributions	\$ 4,000 (USFWS assistance)

Yukon River Panel Restoration and Enhancement Fund

Project Concept Form 2012

Project Title: Mountain Village Cooperative Chinook Salmon Drift Test Fishery Project , 2012

Proponents name: Gene Sandone
Affiliation : Yukon Delta Fisheries Development Association (YDFDA)

E-mail address: gjsandone@gci.net **Phone:** 907-631-6033

<p>Identify <u>one</u> Category and <u>one</u> Management Need only that best describes the main intent of the proposal.</p>		<p>Dollar amount requested (specify currency)</p>
<p><i>Category</i></p> <p><u>Conservation</u></p>	<p><i>Management Need</i></p> <p>1, <u>2</u>, 3, 4, 5, 6, 7</p>	<div style="border: 1px solid black; padding: 5px; display: inline-block;">\$21,850</div>

<p>Project Location: Yukon River at Mountain Village, Alaska</p>	<p>Is this proposal a continuation of a project previously funded by the R&E Fund ? Yes</p> <p>This is Year # <u>3</u> of <u>ongoing</u> years.</p>
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Start Date: 05/15/2012

End Date: 02/28/2013

Overview:

YDFDA, in cooperation with Asacarsarmiut Tribal Council (ATC) and ADF&G will conduct a Chinook salmon test fishery project near the village of Mountain Village, Alaska, on the mainstem Yukon River. This project (MVTF) was successfully conducted during the 2010 and 2011 seasons. This project is strategically located between two ADF&G assessment projects that are separated by over 100 river miles and 3 Chinook salmon travel days. Data from this project, in conjunction with the Lower Yukon Test Fish (LYTF) catch per unit effort (CPUE) information and the Pilot Station sonar counts, will allow a comparative and also a more accurate assessment of the inseason Chinook salmon run strength and run timing. This project will also provide additional insight into the expected Chinook salmon run strength at the Pilot Station sonar site. Age, sex, size information will provide insight into the characteristics of the run and the Lower River harvests. A genetic tissue sample, collected from all Chinook salmon captured, may aid in determination of the stock-specific nature of the run. All fish retained will be distributed to village residents for subsistence purposes. All recorded test fishery data will be reported to the ADF&G Emmonak office on a daily basis.

- 1. Relevance and Significance:** The specific objectives of this project are to:
- 1) estimate the relative abundance (test fish CPUE) and run timing of the Yukon River Chinook salmon run at Mountain Village;
 - 2) describe the ASL composition of the Chinook salmon caught in test drift nets ;
 - 3) provide genetic samples of the Chinook salmon catch for analysis; and

ONGOING-4-CON

- 4) provide a conservation and stewardship experience for rural local residents and/or local students.

The Mountain Village Cooperative drift test fishery for Chinook salmon will monitor Chinook salmon relative abundance after the stocks pass through the Lower Yukon test fisheries and merge into the mainstem from the three different mouths and before they pass through Pilot Station sonar. Because Chinook salmon enter into the Yukon River in distinct pulses, the relative size of each pulse will be compared among the three lower river projects. The information from the combined three projects provides ADF&G the basis for inseason assessment of the Chinook salmon run, resulting in specific management actions.

Age, from scales, length and sex information will be collected from each sampled Chinook salmon. This information will be useful in describing the characteristics of the run and provide insight into the characteristics of the Lower Yukon Chinook salmon harvests. Age and sex data will aide in the identification of trends in brood year assessment and may assist in future run forecasting. The genetic tissue sample may be used to provide additional information on the stock-specific characteristics of the Chinook salmon run. Various ACT fishermen and helpers will be trained in fish sampling and, because of contact with ADF&G personnel and the YDFDA contract consultant will be provided the opportunity for a better understanding of fish management strategies and the need for conservation.

2. Technical Merit:

On occasion, the LYTF and Pilot Station sonar counts have not provided useful information to describe the Chinook salmon run timing and abundance. Because of the strategic location of the MVTF project, this project provides additional information to assess the run. Data from all three lower Yukon projects are contrasted and compared to give the managers a much more accurate assessment of the Chinook salmon run timing and abundance. Standard methodologies for calculation of the CPUE and sampling have been adopted and are approved for use in this project by ADF&G. The use of the 7.5 in drift gillnets captures all but the smallest Chinook salmon and can be used with data from other test fish projects to determine the age, length, sex composition of the run. This project supports the resource management program in a cost effective manner and facilitate communications between various community and government entities. In addition, the project has support from the local area.

3. Key Personnel:

Gene J. Sandone, contract consultant for YDFDA: involved in all aspects of the project; ATC Fishermen; test fishing operations and fish sampling; ADF&G: involved in training the fishermen in sampling techniques.

4. Project budget outline:

Wages and salaries(ATC 47*\$250)	\$11,750
Contract services	\$ 7,100
Travel	\$
Supplies and materials	\$
Capital equipment	\$
Indirect costs	\$ 3,000
Total	\$21,850
In-kind or other funding contributions	\$9,100

Yukon River Panel Restoration and Enhancement Fund

Project Concept Form 2012

Project Title: Rampart Rapids All Season Video Monitoring, 2012

Proponents name: Stan Zuray
Affiliation: N/A

E-mail address: stanzuray@gmail.com **Phone:** 907 366 7114

Identify <u>one</u> Category and <u>one</u> Management Need only that best describes the main intent of the proposal.		Dollar amount requested (specify currency)
<i>Category</i>	<i>Management Need</i>	\$ 46,100 US
<u>Conservation</u>	1, <u>2</u> , 3, 4, 5, 6, 7	
Restoration	8, 9,	
Enhancement	10,	
Stewardship	11,	
Communications	12.	

Project Location: Rampart Rapids, Yukon River mile 731	Is this proposal a continuation of a project previously funded by the R&E Fund? Yes This is Year # <u>13</u> of <u>unknown</u> years.
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Start Date: 15/05/2012 **End Date:** 15/01/2013

1. Overview: Long-term monitoring of major salmon stocks is a necessary component of successful fisheries management on the Yukon River. This project provides the only U.S. main stem Yukon River assessment database of run strength, fish size (Chinook) and 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 Rapids video fish wheel project has provided daily catch and run timing 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, construction 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 as demonstrated by the successful R&E Fund pilot project in 1999 and

ONGOING-5-CON

operational projects from 2000 to 2011. Daily in-season project data are sent to ADF&G and USFWS for distribution.

- 2. Relevance and Significance:** The Rapids video monitoring project was designed to collect run timing and assessment information on Chinook (*Oncorhynchus tshawytscha*), chum salmon (*O. keta*), sheefish (*Stenodus leucichthys*), humpback whitefish (*Coregonus pidschian*), broad whitefish (*C. nasus*), and cisco spp (*C. laurettae* and *C. sardinella*) using a video capture system that greatly minimizes the handling stress to the fish sampled. In 2005 this project replaced a major chum salmon assessment project that cost 10 times the amount of funding to run and had, up to that time, a record of producing comparable or better passage estimates using a water discharge formula developed by this project. In recent years its run timing information has been instrumental in determining very accurate pulse protection closure dates for Chinook pulses moving into the upper river. This project partners with, and provides the working platform for, a separate salmon data collection project, run since 2001, which provides Chinook genetic, size, sex and Ichthyophonous disease information plus an accurate fall chum run timing arrival date each year.
- 3. Technical Merit:** The project has proven capable of implementation and continuing development of a system capable of low impact monitoring of a valuable fish resource on the main stem Yukon. It specifically monitors fish moving into the upper and Canadian Yukon River. Methods used have been proven by successful projects since 1999 and only 2 down days in all those years. A paper has been published in the North American Journal of Fisheries Management on the assessment of the video system developed at this site (Daum, D. W. 2005) using Yukon River Panel funding.
- 4. Key Personnel:** Project proponent, Stan Zuray, has been running fish wheels under USFWS contract or with R&E funding since 1996. Dave Daum with the U.S. Fish and Wildlife Service Fairbanks Field Office provides yearly project oversight, water temp monitoring equipment and video system development assistance (see in-kind budget below). Tanana Tribal Council has provided fax, copying, personnel and communication support since the project's start.

5. Project budget outline:

Wages and salaries	\$ 36,000
Contract services	\$
Travel	\$
Supplies and materials	\$ 10,100
Capital equipment	\$
Indirect costs	\$
Total	\$ 46,100
In-kind or other funding contributions	\$ 6,550 (USFWS assistance)

Yukon River Panel Restoration and Enhancement Fund

Project Concept Form 2012

Project Title:
Collection and Comparison of Chinook Salmon Age, Length, Sex and Genetic data using Fish Wheel

Proponents name: Gaetan Beaudet
Affiliation: Contractor. Dawson City

E-mail address: gaetan_beaudet@yahoo.ca **Phone:** n/a

Identify <u>one</u> Category and <u>one</u> Management Need only that best describes the main intent of the proposal.		Dollar amount requested (specify currency)
<i>Category</i>	<i>Management Need</i>	\$ 34,000 (CAD)
<u>Conservation</u>	1, 2, <u>3</u> , 4, 5, 6, 7	
Restoration	8, 9,	
Enhancement	10,	
Stewardship,	11,	
Communications	12.	

Project Location: Mainstem Yukon River near Eagle Alaska and Canadian border	Is this proposal a continuation of a project previously funded by the R&E Fund ? Yes This is Year # <u>3</u> of <u>unknown</u> years.
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Start Date: 1/07/2012 **End Date:** 30/9/2012

1. Overview:

The main objective of the program is to collect Chinook salmon biological data in a manner consistent with nearly thirty years of historic data collection at the site. This data can be used by agencies to compare with biological sampling data collected concurrently at the Eagle sonar program, and with historic biological sampling. The collection is carried out with a live-capture fishwheel, in the White Rock eddy on the mainstem Yukon River near the Alaska border.

The project will also collect other samples, such as tissue samples, or apply tags, such as spaghetti tags, as requested and licensed by Fisheries and Oceans Canada.

2. Relevance and Significance:

It may be valuable to continue to collect data at this site, close to the Eagle sonar border passage estimation sonar, to help managers to assess the biases associated with the different capture techniques so that a more representative estimate of the escapement can be determined. It will also enable comparison with the

ONGOING-6-CON

historic database for the purpose of monitoring changes in biological characteristics. This comparison may be useful for determining the effects of the mesh size restrictions introduced Alaska in 2011 to allow larger sized Chinook salmon to reach spawning grounds, particularly the Upper Yukon River drainage.

3. Technical Merit:

A live capture fishwheel of the same design as those historically used by DFO in the Yukon River mark recapture program will be deployed at the White Rock eddy upstream of the Alaskan border in June 2012. The White Rock site is the same one that has been used since the inception of the DFO mark recapture, and will thus provide sampling data that can be compared with historic data to determine change in run composition over time.

4. Key Personnel:

Key project personnel:

All activities will be led by technician supervisor Gaetan Beaudet, who has 20 years of experience with fishwheel operation and fish sampling.

Manuela Zeitlhofer, who has two years of experience with the project, will be the field crew and will provide data entry and administrative support

Partner:

The project team will be in daily contact with DFO Yukon Stock Assessment during the period of fishwheel operation. Genetic samples and scale book samples will be submitted to DFO Whitehorse. DFO will ship the scale book samples to the Pacific Biological Station Age Lab for processing (preparation and reading).

5. Project budget outline¹:

Wages and salaries	\$	20,000
Contract services	\$	1,000
Travel	\$	0
Supplies and materials	\$	1,500
Capital equipment (boat)	\$	10,000
Indirect costs (insurance, YWC)	\$	1,500
Total	\$	34,000
GST	\$	1,700
In-kind or other funding contributions	\$	

¹ While the contractor would be pleased to include the application of tags in the work description, non-labour costs associated with any tagging are not included, and would require additional funding. For example, the tag returns associated with a spaghetti tagging project would cost an additional \$2500: 1/3 of 1,500 tags=500 tags X 5\$.

Yukon River Panel Restoration and Enhancement Fund
Project Concept Form 2012

Project Title: Little Salmon Chinook Salmon Spawning Grounds Survey

Proponents name: Gene J Sandone
Affiliation: G. Sandone Consulting, LLC, Little Salmon Carmacks FN, respectively
E-mail address: gjsandone@gci.net Phone: 907-631-6033

Identify one Category and one Management Need only that best describes the main intent of the proposal. **Dollar amount requested (specify currency)**

<i>Category</i>	<i>Management Need</i>	\$ 23,730 US
<u>Conservation-Stocks-Escapement</u>	1, 2, 3, 4, <u>5</u> , 6, 7	

Project Location: Little Salmon River near Carmacks, YT	Is this proposal a continuation of a project previously funded by the R&E Fund ? <u>Yes</u> This is Year # <u>3</u> of <u>continuing</u> years.
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Start Date:	01/08/2012	End Date:	28/02/2013
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1. Overview:
 G.Sandone Consulting, LLC, in cooperation with the Little Salmon Carmacks First Nation (LSCFN), and the Department of Fisheries and Oceans, (DFO) Canada will sample spawned predominantly live Chinook salmon within the Little Salmon River drainage, Yukon, Canada. The Little Salmon is a tributary to the Yukon River with the confluence with the Yukon River near the village of Carmacks, Yukon. This is the third year of a ongoing study to define the Chinook salmon spawning population within the Little Salmon River drainage with regard to age, sex, and length (ASL).

The project will commence in mid to late August after peak spawning. Because the Little Salmon River is usually very shallow, a jet boat will be used to transport the crew and equipment within the drainage. A 4-person crew will sample live, but spent, Chinook salmon along with available carcasses throughout the drainage. In addition to using sport gear to capture live salmon, gillnets may be employed to capture live Chinook salmon for sampling. Additionally, collection of the usually few carcasses will be accomplished by either hand picking or spearing with gigs attached to telescoping rods. Location of redds will be recorded in degree decimal notation. Age, derived from scales, sex, and length (mm) will be determined for each Chinook salmon capture. Sampled fish will be marked and tagged to ensure that fish will not be sampled again. After marking/tagging, all fish will be released or returned to the river. All data, including scale and genetic samples, will be provided to DFO biologist in the Whitehorse office at the end of the sampling trip. DFO will age the scales.

2. Relevance and Significance: Objectives of the project are:
 1) describe the ASL composition of the Chinook salmon that spawn in the Little Salmon River;

ONGOING-7-CON

- 2) build community capacity and foster stewardship through involvement of local rural residents;
- 3) document specific locations of individual or groups of Chinook salmon redds within the Little Salmon drainage; and
- 4) graphically compare length frequency distributions and sex compositions among samples taken from available Yukon River mainstem monitoring projects and the Little Salmon Chinook salmon escapement sample(s).

ASL information from spawning populations of Chinook salmon within the Canadian portion of the Yukon River drainage is sparse. This project provides one of the few useful data sets of Chinook salmon spawning escapement and directly provides information on the quality of the escapement, in addition to specific spawning locations. Additionally, data from this project, in conjunction with ASL data collected at the Eagle sonar site, will allow a comparison of Chinook salmon ASL between these two projects within the same year, and may provide additional insight into the historic ASL information collected from the DFO fish wheels and carcass sampling information from the historic ASL spawning ground database. Data collected from the spawning grounds in 2012 will be used to further assess the effectiveness of the new maximum 7.5 inch stretch mesh gillnet regulation implemented in the Alaska portion of the Yukon River drainage in 2011 and ultimately, data from this project may also be used to refine escapement goals for the entire Yukon River in Canada for Chinook salmon.

3. Technical Merit:

Post-spawning, live, Chinook salmon samples can be collected using previously established methods that employed sport fish gear with snag hooks as terminal tackle. Using this technique and timing the sampling to occur after peak spawning results in disturbing very few ripe female salmon. Additionally, during the past two seasons, this project operated during extremely low water, in 2010, and in extremely high turbid water, in 2011, indicating that samples can be collected from this tributary stream in nearly all water conditions. Age, sex, and size data are collected based on standard methodologies. We believe that the samples collected during the past two seasons accurately describe the age, sex, and size characteristics of the spawning population within the Little Salmon River drainage. We also believe that carcass surveys are biased toward larger female salmon and therefore are of little utility in assessing the characteristics and quality of the Chinook salmon escapement. Sampling is done in an expedient manner and each fish is treated with care and respect. This project also provides a stewardship and learning opportunity for the Little Salmon Carmacks First Nation employees, who will take over this project in the near future.

4. Key Personnel:

Gene Sandone, G.Sandone Consulting: all aspects of the project from fish capture and data collection and compilation to report writing;

Robert Moar, Little Salmon Carmacks First Nation: coordination, administration for LSCFN
3 employees of the Little Salmon Carmacks First Nation: fish capture and data collection

5. Project budget outline: Provide estimates of line item costs for the following categories.

Wages and salaries	\$ 4,950
Contract services	\$10,100
Travel	\$ 2,430
Supplies and materials	\$ 6,250
Capital equipment	\$
Indirect costs	\$
Total	<u>\$23,730</u>
In-kind or other funding contributions	\$

**Yukon River Panel Restoration and Enhancement Fund
Project Concept Form 2012**

Project Title: Porcupine River Sonar Program – Fall Chum Salmon

Proponents name: Vuntut Gwitch'in Government – William Josie, Fish and Wildlife Coordinator
Additional Project Partners: Fisheries and Oceans Canada, Contact Trix Tanner, phone: (867) 393- 6720, Trix.Tanner@dfo-mpo.gc.ca, Marc Labelle, phone: (867) 393-6729, Marc.Labelle@dfo-mpo.gc.ca
 EDI Environmental Dynamics Inc. (EDI), Contact Ben Snow, Phone: (867) 393-4882, bsnow@edynamics.com

Proponent Affiliation: First Nations Government

Proponent E-mail address: wjosie@vgfn.net

Proponent Phone: (867) 966-3261

<i>Category</i>	<i>Management Need</i>	<i>Dollar amount requested (specify currency)</i>
Conservation	6	<div style="border: 1px solid black; padding: 5px; display: inline-block;">\$ 115,436 CAD</div>

Project Location: Old Crow, Yukon Territory. Porcupine River Watershed	Is this proposal a continuation of a project previously funded by the R&E Fund ? Yes This is Year # <u>2</u> of <u>4</u> years.
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Start Date:

01/06/2012

End Date:

01/31/2013

Overview: In 2011, VGG built on the previous success of a sonar site search/feasibility investigation (2009; CRE-114N-09) and trial (2010; CRE-114-10) and initiated a full-scale operational trail of a split beam sonar deployment at the trial site utilized in 2010. Two SIMRAD ES-60 (split-beam) sonar transducers were deployed on each bank of the Porcupine River (one system per bank) during the peak of the fall chum salmon run (late August to late September) for 4.5 weeks. A test netting program was conducted concurrently with the sonar program to allow for species apportionment of the sonar counts.

A total (unadjusted) of 11,431 fish were counted between August 23 and September 22, 2011. Test netting between August 25 and September 20, 2011 resulted in a capture of 70 fall chum salmon and 2 resident fish, thereby apportioning the majority of the collected sonar data as fall chum salmon. Bi-weekly updates were provided to Canadian fisheries managers on a bi-weekly basis. This data provided near real-time fall chum passage information for the community of Old Crow and supplemented data collected at the Fishing Branch enumeration weir.

In 2012, VGG proposes to build upon the success of the 2011 sonar program and conduct a second season of full-scale operation. VGG proposes to operate the sonar for up to 6 weeks total. This will allow for operation later into the season, to capture the majority of fall chum salmon run. A sonar deployment during the fall chum salmon run would provide timely, accurate in-season estimates of chum salmon passage over a range of water levels. In addition, the program could also provide a more complete estimate of total escapement of fall chum salmon in the Porcupine River. The Fishing Branch weir currently only provides an estimate of fall chum spawning in areas of the Fishing Branch River above the weir site; a sonar program would enumerate fish destined for all spawning areas of the Porcupine River upstream of the enumeration site.

The proposed project would involve operating sonar units to enumerate migrating fall chum salmon and test netting to apportion the sonar counts. This work would be conducted at the 2011 deployment site, and would involve the following activities:

- A crew of three will set up and operate sonar units on both banks of the candidate site on the Porcupine River;
- The crew will enumerate passing salmon during the fall chum salmon run (approximately one month total);
- The crew will conduct test netting (drift netting) in order to provide species apportionment for the collected sonar data;
- In-season estimates will be communicated to DFO throughout the season;
- A final report will be compiled and will provide an index of chum passage at Old Crow, as well as species composition, run timing and sex/age composition information.

The 2012 project is being proposed as the second year of a multi-year project (4 years total, 3 years with full run). This approach will allow for all involved parties to determine if a sonar enumeration will provide the best method for measuring TAC for fall chum in the Porcupine River Watershed. This approach will also allow for the capital costs associated with developing an effective program to be spread across several project years, thereby reducing the annual cost significantly. Given the multi-year nature of this project, VGG is pursuing other funding sources in order to purchase the required sonar system and to cover the cost of construction for camp facilities. DFO stock assessment personnel in Whitehorse also indicated support in principal for further development of a sonar program on the Porcupine River.

Relevance and Significance: This project contributes directly to the escapement plans for the Porcupine River chum salmon stock (Sections 25 and 26 of the Yukon Salmon Agreement [YSA]). Data collected by this project would supplement fall chum escapement data currently collected at the Fishing Branch Weir. As demonstrated in 2011, this data could also fulfill the YSA goal of collecting “critical information to escapement objectives for, and harvest sharing of Canadian-Origin Chum Salmon” (YSA, Appendix I, Attachment B). This would be especially valuable during times when escapement data from the Fishing Branch weir is unavailable (i.e. high water). In the long term, escapement data collected through the Porcupine River sonar program could be used in place of the Fishing Branch Weir data and would provide a broader, more timely and accurate picture of fall chum escapement into the upper Porcupine River Watershed (including those fish spawning below the Fishing Branch Weir and in other major tributary streams).

Technical Merit: The 2011 study provides evidence that the project is technically feasible and will provide valuable information -- the project will provide accurate and timely run estimates for the management of the Old Crow fall chum salmon fishery. Given the location of the project within the near vicinity (2 km) of Old Crow, the proposed sonar program will allow for near real-time fish passage estimates to be produced. This use of split beam sonar systems (ES-60) will allow for ensonification of the Porcupine River channel; drift netting will provide the requisite species apportionment data (as shown in 2011).

Key Personnel: The project team for this project will be comprised of two VGG technicians and qualified fisheries personnel from EDI. All field based project components will be conducted by VGG technicians with EDI staff providing technical on-site assistance. EDI staff will assist with data collection, analysis and project reporting; a project manager from EDI will oversee project activities and will provide senior review/quality control for project reporting. Project administration will be conducted VGG Natural Resource Department.

Project budget outline: Provide estimates of line item costs for the following categories.

Wages and salaries		\$51,660
Contract services		\$15,056
Travel		\$4,400
Supplies and materials		\$12,819
Capital equipment		\$0
Indirect costs		\$3,000
Sonar Lease		\$28,500
	Total	\$115,436
In-kind or other funding contributions		\$9,950

*Note, if the proposed Porcupine River Chinook sonar project is also supported, equipment and logistics costs could be shared between the two projects. This could reduce the budget estimate by approximately \$7,000.

Yukon River Panel Restoration and Enhancement Fund
Project Concept Form 2012

Project Title: Klondike River sonar project - 2012

Proponents name: B. Mercer & Associates Ltd
Affiliation:

E-mail address: bmercer@northwestel.net **Phone:** 867 633 2795

<i>Category</i>	<i>Management Need</i>	<i>Dollar amount requested (specify currency)</i>	
Conservation	6	<table border="1"> <tr> <td>\$ 71,000 Can</td> </tr> </table>	\$ 71,000 Can
\$ 71,000 Can			

Project Location: Lower Klondike River	Is this proposal a continuation of a project previously funded by the R&E Fund ? Yes This is Year #4 of <u>unknown</u>.
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Start Date: **End Date:**

- 1. Overview:** The objectives of the 2012 Klondike River sonar project are:
1. Enumerate the total Chinook salmon escapement entering the Klondike River watershed in 2012 using a high resolution sonar unit. Proposed period of sonar operation is from July 15 through August 30, 2012.
 2. Conduct a carcass pitch on the Klondike River to obtain biological information (ASL and DNA tissue samples) on the Klondike River Chinook population.

This project will build on the information and experience obtained from the 2010 and 2011 Klondike River sonar projects.

- 2. Relevance and Significance:**
- The objectives of the 2012 Klondike River sonar project are compatible with the 2012 specific R&E priorities under the level three conservation category – management needs number 5 and 6. Quantifying Chinook escapement into certain upper Yukon River index streams allows for independent (from Pilot station and Eagle sonar station estimates) assessment of total above border Chinook escapements. Since the Klondike River is one of the earliest stocks to enter the upper Yukon system monitoring this escapement provides information for early in-season management of the total upper Yukon Chinook run. The use of sonar allows for enumeration of migrating Chinook salmon while minimizing negative impacts on fish behaviour and providing un-restricted recreational use of the river. Age, length, and sex data provides important biological baseline data on the health of the stocks as well as information used in constructing future sibling based pre-season run forecasts.

3. Technical Merit:

In July and August 2009, 2010, and 2011 successful Chinook sonar enumeration projects were conducted on the Klondike River watershed. The projects were conducted from July 1 through to August 20, each year. A site 4.5 km upstream of the mouth of the Klondike River was selected during a feasibility study in 2008, and this site was utilized in the subsequent three years. The location has a total wetted river width of approximately 53 m with a maximum depth of approximately 2 meters. The cross section profile at this location is conducive to providing complete ensonification of the water column with no acoustic shadows or blind spots. During the course of each project two short weir structures were constructed on each side of the river to reduce the effective migration width to 38 m. For the 2010 and 2011 projects the weir structures were improved to allow operation in a wider range of flow regimes. Temporary living and operation quarters were established on the south side of the river using wall tents. Electricity to operate the sonar and related computer equipment was supplied by the local grid and purchased from a nearby resident. The sonar was typically operational from July 6 through August 20. The operation of the sonar was continuous, 24 hours per day over the project period, with at least one person on site at all times. All the recorded DIDSON files obtained during the project were reviewed yielding an actual count of passing Chinook. The techniques employed were the same as those used on the Big Salmon River Chinook enumeration project which has successfully operated for the past 7 years. Totals of 4,600, 777, and 1,215 Chinook salmon were counted entering the Klondike watershed in 2009, 2010, and 2011 respectively.

A carcass pitch to obtain age, sex, and length (ASL) information from the spawning Chinook was conducted during the 2011 project. It is anticipated the proposed 2012 Klondike sonar project will be conducted in the same manner as the previous projects at this site, including collection of ASL data.

4. Key Personnel:

Brian Mercer RPBio. : Brian Mercer has been associated with the Big Salmon and Teslin River sonar projects from 2005 through 2011. He will be the project manager for all aspects of the project.

Robert Gransden BSc. : Senior technician. Robert Gransden, who was the project supervisor the previous three years will again be the on-site supervisor for the 2012 project. He will be involved with the initial deployment, ongoing operation, and demobilization of the project.

5. Project budget outline:

Wages and salaries	\$ 36,375
Rentals (sonar, camp, power equipment)	\$ 20,025
Travel	\$ 1,760
Supplies and materials	\$ 3,200
Indirect costs (admin, GST)	\$ 9,658.73
Total	<u>\$ 71,000</u>
In-kind or other funding contributions	\$ 0

Yukon River Panel Restoration and Enhancement Fund
Project Concept Form 2012

Project Title: Mainstem Teslin River sonar project - 2012

Proponents name: B. Mercer & Associates Ltd
Affiliation:

E-mail address: bmercer@northwestel.net **Phone:** 867 633 2795

<i>Category</i>	<i>Management Need</i>	<i>Dollar amount requested (specify currency)</i>
Conservation	6	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> \$ 98,631 Can </div>

Project Location: Lower Mainstem Teslin River	Is this proposal a continuation of a project previously funded by the R&E Fund ? Yes This is Year #2 of <u>unknown</u>.
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Start Date: **End Date:**

1. Overview: The objectives of the 2012 mainstem Teslin River sonar project are:

1. Enumerate the total Chinook salmon escapement entering the Teslin River watershed in 2011 using two DIDSON sonar units. Proposed period of sonar operation is from July 15 through August 30, 2012.
2. Conduct a carcass pitch on the mainstem Teslin River to obtain biological information (ASLand DNA tissue samples) on the mainstem Teslin River Chinook population. The proposed carcass pitch component is from August 30 through September 11, 2012.

This project will build on the information obtained from the 2011 mainstem Teslin River sonar feasibility study.

2. Relevance and Significance:

The objectives of the 2012 mainstem Teslin River sonar project are compatible with the 2012 specific R&E priorities under the level three conservation category – management needs number 5 and 6. Quantifying Chinook escapement into certain upper Yukon River index streams allows for independent (from Pilot station and Eagle sonar project estimates) assessment of total above border Chinook escapements. Accurate Chinook escapement enumeration of select tributaries combined with GSI sampling information collected at the Eagle sonar project increases the accuracy of the post season upper Yukon River Chinook run re-construction. The goal of the project is to provide additional stock assessment information that will enhance the ability of salmon management agencies to manage Yukon River Chinook salmon. The use of sonar allows for enumeration of migrating Chinook salmon while minimizing negative impacts on fish behaviour and providing unrestricted recreational use of the river.

Age, length, and sex data provides important biological baseline data on the health of the stocks as well as information used in constructing future sibling based pre-season run forecasts.

3. Technical Merit:

Radio telemetry studies conducted on Yukon River Chinook from 2002 through 2004 indicated that the Teslin River system received 15%, 18%, and 20% of the total Canadian origin Chinook in the Yukon River watershed. Based on this radio telemetry data approximately 80% of the radio tagged fish entering the Teslin River watershed were located in the mainstem Teslin River. The Chinook stock proportions represented by the telemetry results have since been corroborated by subsequent sonar enumeration projects on the Klondike and Big Salmon rivers. Radio telemetry passage information indicates that the mainstem Teslin River Chinook are a later run component of the upper Yukon River Chinook stocks.

A 2011 feasibility study conducted on the lower Mainstem Teslin River indicated the presence of a viable DIDSON sonar site located approximately 10 km upstream from Hootalinqua at the confluence of the Yukon and Teslin Rivers. Two sonars were deployed and operational at this site over a 14 day period from August 2 through 16. A total of 3,390 Chinook salmon were counted passing the site during this period. Based on preliminary results from this feasibility study it was determined an accurate estimate of Chinook salmon entering the Teslin River watershed could be obtained. Although the preliminary findings of the feasibility study indicated 97% of the passing Chinook were within the field of the single north bank sonar, it is proposed that two sonars be used over a 30 day period during the peak of the run to verify the proportion for a second season. If the project continues in subsequent years it may be possible to confidently eliminate the requirement for two sonars.

Based on carcass pitch experience by the project proponent on the mainstem Teslin River, the concentrated Chinook spawning population and the physical river characteristics indicate the river is capable of annually yielding a relatively large number of moribund and dead Chinook for biological sampling.

4. Key Personnel:

Brian Mercer RPBio. : Brian Mercer has been associated with the Big Salmon and Klondike River sonar projects from 2005 through 2011. He will be the project manager for all aspects of the project.

Clive Osborne BSc. : Senior technician. It is probable the senior technician who worked on the 2011 Teslin River feasibility study will be the on-site supervisor for the 2012 project and would again be involved with the initial deployment and ongoing operation of the sonar project.

5. Project budget outline:

Wages and salaries	\$ 41,000
Rentals (sonar, camp, power equipment)	\$ 32,150
Travel	\$ 5,200
Supplies and materials	\$ 7,000
Capital equipment	\$ 0
Indirect costs (admin, GST)	\$ 13,500
Total	<u>\$ 98,600</u>
In-kind or other funding contributions	\$0

Yukon River Panel Restoration and Enhancement Fund
Project Concept Form 2012

Project Title: Blind Creek Chinook Salmon Enumeration Weir and Juvenile Chinook Mark Recapture Study.

Proponents name: Jane Wilson
Affiliation: Jane Wilson & Associates

E-mail address: janewilson@northwestel.net **Phone:** (867) 668-6225

<i>Category</i>	<i>Management Need</i>	Dollar amount requested (specify currency)
Conservation	6	\$59,747 CAN\$

Project Location: Blind Creek (Pelly River Watershed)	Is this proposal a continuation of a project previously funded by the R&E Fund ? <input checked="" type="radio"/> Yes This is Year # <u>10</u> of # <u>unknown</u>
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Start Date: **End Date:**

1. Overview: The objectives of this project are to: 1) install and operate a weir in Blind Creek to enumerate the Chinook salmon escapement; 2) conduct a sampling program to obtain age-sex-length (ASL) data from live Chinook salmon captured at the weir 3) during weir operation for adult returns, conduct a mark recapture study of juvenile Chinook salmon (JCS) in Blind Creek to obtain an abundance index which can be compared with adult escapements and 4) collect DNA samples from a subsample of captured JCS to distinguish Blind Creek juveniles from immigrating JCS from other spawning areas.

2. Relevance and Significance:
 The objectives of the 2012 Blind Creek weir project meet the management requirement of the R&E Fund priorities for 2012 under level three of the conservation category, management needs number 5 and 6. Quantifying Chinook escapement into upper Yukon River index streams allows for independent (from Pilot station and Eagle sonar project estimates) assessment of total above border Chinook escapements. Accurate Chinook escapement enumeration of select tributaries combined with GSI sampling information collected at the Eagle sonar project increases the accuracy of the post season upper Yukon River Chinook run re-construction. This project is the only escapement assessment project in the Pelly River Conservation Unit and provides a high percentage of ASL data taken throughout the run (in past operations up to 69% of the run) providing an excellent characterisation of the escapement in that system.

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The development of juvenile abundance indices is concordant with the JTC research plan for scientific research to obtain information for improving forecasting ability.

- 3. Technical Merit:** A weir will be installed in Blind Creek at the same location used in previous years of operation (2003-2011) and operated from July 11 through to August 20. The creek at this site is approximately 20 m in width with a maximum depth on the west bank of approximately 1 m. It is accessible from a maintained mining road 10 km from the town of Faro and is located below the major spawning areas in the creek. Chinook escapements into Blind Creek have ranged from a low of 270 (2010) to a high of 1,115 (2003). The weir will be constructed using materials stored on site from previous operations. The weir fence will consist of conduit panels and wooden tripods as in previous years. Live sampling will be conducted from a platform constructed adjacent to the counting chamber. Chinook held for sampling will be dip netted from the counting chamber and placed in a v-shaped trough filled with water. This method has been used successfully during previous operations to obtain ASL information on a representative sample of the run.

A mark recapture study to provide an index of relative abundance of JCS will be conducted during the course of adult weir operations (July 11-Aug.20) by weir staff. G-type minnow traps will be used to capture JCS at selected sites in Blind Creek. Sites will be marked for consistency in trap placement during the course of the trapping session and for future programs. Tags will be applied using the Visible Implant Fluorescent Elastomer Tagging system (VIE). This system has been used successfully for mark recapture studies of juvenile salmonids in Yukon by other agencies and in Northern B.C. by the proponent. The length, weight and age will be determined from a subsample of JCS captured. DNA samples will be collected in accordance with DFO protocols.

- 4. Key Personnel:** Jane Wilson, BSc., will be the project manager and supervisor of field operations and be responsible for administrative aspects of the operation and preparation of the summary report. She has been the project manager of weir operations at Blind Creek for the past 9 years. It is anticipated that technicians will be hired from local communities (Faro and Ross River) in 2012 as in all past operations.

5. Project budget outline:

Weir Operation	
Wages and salaries	\$32,875
Contract services	\$ 0
Travel	\$ 2,178
Supplies and materials	\$ 8,040
Capital equipment	\$ 0
Indirect costs (Administration, GST)	\$ 6,679
Total	\$49,772
*Juvenile Chinook density study	
Wages and salaries	\$ 1,200
Travel (ATV rental)	\$ 1,500
Supplies and materials	\$ 2,800
DNA analysis	\$ 4,000
Indirect costs (GST)	\$ 475
Total	\$ 9,975
In-kind or other funding contributions	\$ 0

* Expenses for the juvenile Chinook density study are separated from the weir project in the event that the YRP does not consider this study a priority for use of funds in 2012. If this is the case, the total cost of the project would be the cost of the weir operation (\$49,772).

Yukon River Panel Restoration and Enhancement Fund

Project Concept Form 2012

Project Title: Sonar Enumeration of Chinook Salmon on the Big Salmon River

Proponents name: Jane Wilson & Associates

Affiliation:

E-mail address: janewilson@northwestel.net

Phone: (867) 668-6225

<i>Category</i>	<i>Management Need</i>	<i>Dollar amount requested (specify currency)</i>
Conservation	6	\$ 79,914 CAN\$

Project Location:
Big Salmon River

Is this proposal a continuation of a project previously funded by the R&E Fund ? Yes

This is Year # 8 of # unknown

Start Date:

End Date:

1. Overview:

The objectives of this project are to: 1) operate a sonar station on the Big Salmon River to enumerate the Chinook salmon escapement and 2) conduct spawning ground sampling for age-sex-length data from post-spawn fish. This project will build on the information and experience obtained from the 2005 to 2011 Big Salmon River sonar projects.

2. Relevance and Significance:

The objectives of the 2012 Big Salmon River sonar project meet the management requirement of the R&E Fund priorities for 2012 under the level three conservation category, management needs number 5 and 6. Quantifying Chinook escapement into upper Yukon River index streams allows for independent (from Pilot station and Eagle sonar project estimates) assessment of total above border Chinook escapements. Accurate Chinook escapement enumeration of select tributaries combined with GSI sampling information collected at the Eagle sonar project increases the accuracy of the post season upper Yukon River Chinook run re-construction. This project provides enumeration of the spawning escapement for an entire Conservation unit and age-sex-length data to characterise this escapement. The goal of the project is to provide additional stock assessment information that will enhance the ability of salmon management agencies to manage Yukon River Chinook salmon.

3. Technical Merit:

In 2005, a sonar enumeration program was initiated on the Big Salmon River using a DIDSON (Dual Frequency Identification SONAR) to enumerate the Big Salmon River Chinook salmon escapements. Due to high flow rates and wilderness recreation utilization of the Big Salmon River, the DIDSON sonar was considered as a relatively low impact, non-intrusive method of enumerating annual Chinook escapements to the Big Salmon River system. The sonar site is located approximately 1.5 km upstream from the confluence with the Yukon River. The proposed project would be the eighth year of sonar operation at this site. The Big Salmon sonar counts have represented between 9.3% (2008) and 20% (2006) of the total upper Yukon River spawning escapement point estimates. The laminar river flow and substrate composition at this site are conditions that are conducive to operation of a DIDSON sonar. The stream bottom profile allows for complete ensonification of the water column. Partial weirs on either side of the river have been used to divert shoreline migrating Chinook salmon into the ensonified portion of the river. The DIDSON sonar unit purchased in 2004 by the Yukon River R&E Fund and used on the Big Salmon River since 2005 would be used again for the 2012 project.

The carcass pitch would be conducted using a 6.0 m open skiff powered by a 60 hp outboard jet motor. Carcass pitch efforts will extend from the camp approximately 120 river kilometers upstream. The carcass pitch will involve collecting dead and moribund Chinook using a spear and sampling each fish. This method has been used successfully in previous years.

4. Key Personnel:

Jane Wilson, BSc., will administer and co-ordinate the project. She has administered and co-ordinated the Big Salmon sonar enumeration project each year since 2005.

Brian Mercer, BSc, RPBio. will be responsible for the set up and operation of the sonar project. He initiated the Big Salmon sonar enumeration project in 2005 and has been responsible for the set up and successful operation of the sonar project during each year of operation.

5. Project budget outline:

Wages and salaries	\$45,335
Contract services	\$ 0
Travel	\$ 6,337
Supplies and materials	\$ 7,610
Capital equipment	\$ 0
Rentals (camp, boat/motor, sat internet)	\$ 9,908
Indirect costs (Administration, GST)	\$10,724
Total	<u>\$79,914</u>
In-kind or other funding contributions	\$ 0*

***Note: This project will use the DIDSON sonar unit purchased in 2004 by the Yukon River Panel R&E Fund.**

Yukon River Panel Restoration and Enhancement Fund

Project Concept Form 2012

Project Title: Whitehorse Rapids Hatchery (Agency only) Coded Wire Tagging and Recovery

Proponents name: Yukon Fish and Game Association

E-mail address: yfgaexdir@klondiker.com **Phone:** 867-667-4263

<p>Identify <u>one</u> Category and <u>one</u> Management Need only that best describes the main intent of the proposal.</p>	<p>Dollar amount requested (specify currency)</p>						
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 45%;"><i>Category</i></td> <td style="width: 45%;"><i>Management Need</i></td> <td style="width: 10%;"></td> </tr> <tr> <td>Conservation</td> <td>6</td> <td style="border: 1px solid black; text-align: center; vertical-align: middle;">\$ 47,700 (Can)</td> </tr> </table>	<i>Category</i>	<i>Management Need</i>		Conservation	6	\$ 47,700 (Can)	
<i>Category</i>	<i>Management Need</i>						
Conservation	6	\$ 47,700 (Can)					

<p>Project Location: Whitehorse, Yukon</p>	<p>Is this proposal a continuation of a project previously funded by the R&E Fund ? Yes</p> <p>This is Year # <u>16</u> of <u>ongoing project</u></p>
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Start Date: 01/06/2012 **End Date:** 15/09/2012

1. Overview:

All Chinook salmon released in the spring of 2012 will be marked with the removal of the adipose fin and tagged with coded wire tags. The fry will be released into the Upper Yukon River drainage above the Whitehorse Rapids Dam in locations determined by Fisheries and Oceans Canada. The fry release will involve the helicopter transport of the fry destined for Michie Creek and M'Clintock River and boat or helicopter transport of fry released in the main stem Yukon River. This proposal includes the Wolf Creek Fry release along with some support of the Fishway program which assists with brood stock collection, and the sampling of returning adult fish including the proportion of fish which are hatchery-origin.

A major crossover of this program is public education. In 2011 the wolf creek fry release had over 500 people participating and at the ladders open house over 550 people was recorded in attendance. There is no other project on the Yukon River system that has this degree of public exposure.

Deliverables – Stewardship (participants, student employees, youth at fry release...) and a final report.

2. Relevance and Significance:

The rationale for the project is that the Whitehorse hatchery is making a contribution to maintaining Yukon River salmon stocks and the marking of these fish will enable us to identify where these fish are taken in the various fisheries. To our knowledge these fish and the fry from McIntyre Creek are the only fish with a unique mark from the Yukon River that would allow us to identify Yukon River stocks taken offshore in the Bering Sea Fishery or elsewhere in their migration route. The results, from the Fishway program, will provide information on survival, exploitation rates, and run timing. It will permit the identification of hatchery fish in terms of broodstock collection and

ONGOING-13-CON

timing as they move through the ladder. This information is an indicator of the success rate of the Whitehorse Hatchery to produce Chinook salmon.

Create public venues 1) to highlight the salmon release and promote the involvement of all young people at Wolf Creek and 2) for the staff participation and public viewing at the Whitehorse Rapids Fishway in the collection of ASL and origin data. There will be a special day to focus on kids helping to release some of the fry into Wolf Creek, hosted by Yukon Fish and Game Association. Later in the summer fish ladder staff will be helping with the collection of adults for egg take and in the collection of ASL and origin data. This is in addition to their summer long education and service to the visitors at the fish ladder.

3. Technical Merit:

The objective is to ensure recognition of the stocks contributed from the Whitehorse hatchery. Our association recommends the decimal tags which would ensure accurate and detailed recognition of Yukon Chinook. Helicopter transport of fry is utilized to ensure the highest survival rate possible. The release sites are only available by helicopter in the upper area. We could release by boat in the main stem but the costs would be increased over the half hour of aerial time. The survival rate during CWT last year was over 99%. Stewardship is heightened with hands on release of fry and on-going training of staff (high school and post-secondary students) during the tagging and fish ladder program.

4. Key Personnel:

YFGA – Gord Zealand _ Overall administration and compilation of the Final Report
Phyllis Nelson– CWT project leader
Lawrence Vano – coordinating fry releases, broodstock collection

Partners:

Yukon Energy Corporation, Service Canada, Yukon Education, Whitehorse Rapids hatchery, DFO stock assessment and Habitat, and Dept. of Environment. These departments are contributors in the delivery of the Fish Ladder program which focuses on the Yukon Salmon run as well as the CWT project. The tagging will be contracted to an out of Territory supervisor with significant expertise in tagging operations.

5. Project budget outline: Provide estimates of line item costs for the following categories.

Wages and salaries	\$ 8,000
Contract services(Agency only tags)	\$ 20,500
Travel	\$ 2,500
Supplies and materials	\$ 9,500
Capital equipment	\$
Indirect costs	\$ 7,200
Total	<u>\$ 47,700</u>
In-kind or other funding contributions	\$ 4,500

As mentioned above the Fish Ladder project is tied very closely to this project involving a lot of the same people and about 60K of funding outside of this project. The fish ladder focuses on Yukon Salmon informing Yukon residents and people from all around the world on all the related details of Yukon Salmon, their life history, migration, and role in people's lives. This year 21,790 people visited the ladder a slight increase over last year's increase of 7,000 people.

Yukon River Panel Restoration and Enhancement Fund
Project Concept Form 2012

Project Title: Whitehorse Rapids Hatchery (**Decimal**) Coded Wire Tagging and Recovery

Proponents name: Yukon Fish and Game Association

E-mail address: yfgaexdir@klondiker.com **Phone:** 867-667-4263

Identify <u>one</u> Category and <u>one</u> Management Need only that best describes the main intent of the proposal.		Dollar amount requested (specify currency)
<i>Category</i>	<i>Management Need</i>	\$ 55,700 (Can)
Conservation	6	

Project Location: Whitehorse, Yukon	Is this proposal a continuation of a project previously funded by the R&E Fund ? Yes This is Year # <u>16</u> of <u>ongoing project</u>
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Start Date: **End Date:**

1. Overview:

All Chinook salmon released in the spring of 2012 will be marked with the removal of the adipose fin and tagged with coded wire tags. The fry will be released into the Upper Yukon River drainage above the Whitehorse Rapids Dam in locations determined by Fisheries and Oceans Canada. The fry release will involve the helicopter transport of the fry destined for Michie Creek and M'Clintock River and boat or helicopter transport of fry released in the main stem Yukon River. This proposal includes the Wolf Creek Fry release along with some support of the Fishway program which assists with brood stock collection, and the sampling of returning adult fish including the proportion of fish which are hatchery-origin.

A major crossover of this program is public education. In 2011 the wolf creek fry release had over 500 people participating and at the ladders open house over 550 people was recorded in attendance. There is no other project on the Yukon River system that has this degree of public exposure.

Deliverables – Stewardship (participants, student employees, youth at fry release...) and a final report.

2. Relevance and Significance:

The rationale for the project is that the Whitehorse hatchery is making a contribution to maintaining Yukon River salmon stocks and the marking of these fish will enable us to identify where these fish are taken in the various fisheries. To our knowledge these fish and the fry from McIntyre Creek are the only fish with a unique mark from the Yukon River that would allow us to identify Yukon River stocks taken offshore in the Bering Sea Fishery or elsewhere in their migration route.

ONGOING-14-CON

The results, from the Fishway program, will provide information on survival, exploitation rates, and run timing. It will permit the identification of hatchery fish in terms of broodstock collection and timing as they move through the ladder. This information is an indicator of the success rate of the Whitehorse Hatchery to produce Chinook salmon.

Create public venues 1) to highlight the salmon release and promote the involvement of all young people at Wolf Creek and 2) for the staff participation and public viewing at the Whitehorse Rapids Fishway in the collection of ASL and origin data. There will be a special day to focus on kids helping to release some of the fry into Wolf Creek, hosted by Yukon Fish and Game Association. Later in the summer fish ladder staff will be helping with the collection of adults for egg take and in the collection of ASL and origin data. This is in addition to their summer long education and service to the visitors at the fish ladder.

3. Technical Merit:

The objective is to ensure recognition of the stocks contributed from the Whitehorse hatchery. Our association recommends the decimal tags which would ensure accurate and detailed recognition of Yukon Chinook. Helicopter transport of fry is utilized to ensure the highest survival rate possible. The release sites are only available by helicopter in the upper area. We could release by boat in the main stem but the costs would be increased over the half hour of aerial time. The survival rate during CWT last year was over 99%. Stewardship is heightened with hands on release of fry and on-going training of staff (high school and post-secondary students) during the tagging and fish ladder program.

4. Key Personnel:

YFGA – Gord Zealand _ Overall administration and compilation of the Final Report
Phyllis Nelson– CWT project leader
Lawrence Vano – coordinating fry releases, broodstock collection

Partners:

Yukon Energy Corporation, Service Canada, Yukon Education, Whitehorse Rapids hatchery, DFO stock assessment and Habitat, and Dept. of Environment. These departments are contributors in the delivery of the Fish Ladder program which focuses on the Yukon Salmon run as well as the CWT project. The tagging will be contracted to an out of Territory supervisor with significant expertise in tagging operations.

5. Project budget outline: Provide estimates of line item costs for the following categories.

Wages and salaries	\$ 8,000
Contract services(Decimal tags)	\$ 20,500
Travel	\$ 2,500
Supplies and materials	\$ 16,500
Capital equipment	\$
Indirect costs	\$ 8,200
Total	<u>\$ 55,700</u>
In-kind or other funding contributions	\$ 4,500

As mentioned above the Fish Ladder project is tied very closely to this project involving a lot of the same people and about 60K of funding outside of this project. The fish ladder focuses on Yukon Salmon informing Yukon residents and people from all around the world on all the related details of Yukon Salmon, their life history, migration, and role in people’s lives. This year 21,790 people visited the ladder a slight increase over last year’s increase of 7,000 people.

Yukon River Panel Restoration and Enhancement Fund

Project Concept Form 2012

Project Title: Temperature monitoring of Canadian and Alaskan Yukon Tributaries

Proponents name: Heather Leba
Affiliation: Alaska Department of Fish and Game

E-mail address: heather.leba@alaska.gov **Phone:** 907-267-2385

<p>Identify <u>one</u> Category and <u>one</u> Management Need only that best describes the main intent of the proposal.</p>	<p>Dollar amount requested (specify currency)</p>				
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"><i>Category</i></td> <td style="width: 50%;"><i>Management Need</i></td> </tr> <tr> <td style="border: 1px solid black; background-color: yellow;">Conservation</td> <td style="border: 1px solid black; background-color: yellow;">1, 2, 3, 4, 5, 6, 7</td> </tr> </table>	<i>Category</i>	<i>Management Need</i>	Conservation	1, 2, 3, 4, 5, 6, 7	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <p>\$ 11,970 (USD)</p> </div>
<i>Category</i>	<i>Management Need</i>				
Conservation	1, 2, 3, 4, 5, 6, 7				

<p>Project Location: Streams within US and Canadian portions of the Yukon River watershed.</p>	<p>Is this proposal a continuation of a project previously funded by the R&E Fund ? Yes</p> <p>This is Year # <u>3</u> of <u>unknown</u> years.</p>
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Start Date: 05/01/2012 **End Date:** 03/31/2013

1. Overview:

This project aims to build from work conducted in 2010 and 2011 supported by the R&E Fund. We plan to continue monitoring the 10 sites established in 2011 and will add 6-8 new sites in 2012. At each monitoring site, data loggers will be installed and calibrated following a standardized protocol (see Dunham et al. 2005; von Finster 2010). Each site will have two HOBO Pro v2 water temperature data loggers and two i-Buttons deployed in order to assure redundancy of equipment and protect against data loss. We will also evaluate the difference between logger types for potential cost savings in long term monitoring. Installation location at each site will be contingent upon local water conditions, water depth, freshwater input, and river width. At each site, GPS coordinates will be recorded, details of data logger placement, and landmarks along the banks will be noted. Each data logger will be programmed to record water temperature hourly, 24 hours per day, 7 days per week, from the time of deployment until retrieval. Data loggers will be in place in most sites from May until September, but may be removed earlier if projects end for the season. All data will be entered into the publicly accessible database Alaska Department of Fish and Game (ADF&G) constructed in 2010, with the potential to use any observed temperature data in future analyses for Yukon salmon management.

2. Relevance and Significance:

Water temperature has been shown to influence adult spawning success, egg survival, and post-hatchling developmental processes (Geist et al. 2006). Because of temperature's importance to salmon survival and development coupled with effects of climate change, there is a need to

ONGOING-15-CON

develop a standardized water temperature monitoring program throughout the Yukon River Basin region. Although water temperature is already measured for several escapement monitoring sites through Alaska and the Yukon Territory, much of the available temperature data is not comparable statistically due to inconsistent sampling protocols (e.g. time series do not overlap, differing equipment).

3. Technical Merit:

Every effort will be made to situate monitoring equipment in non-visible areas to avoid theft and in well-mixed reaches to accurately represent in-river temperature. Hourly sampling rates ensure that minute changes in temperature throughout the day will be recorded and accurately reflect the temperature regime at that site. This approach has been utilized in the past for other sites within the Yukon and has been shown to adequately capture temperature regimes (von Finster 2010). The ADF&G water temperature database is a critical component of the project, incorporating a user-friendly web interface where the public can query data by project type, location, or date. Incorporating interagency and international partners, including the Department of Fisheries and Oceans Canada (DFO), Ta'an Kwach'an Council (TKC), Tanana Chiefs Conference (TCC), Alaska Department of Fish and Game (ADF&G), U.S. Fish and Wildlife Service (USFWS) and Al von Finster (formerly of DFO), enables the proponents to visit more watersheds and project locations within the drainage at a reduced project cost.

4. Key Personnel:

Jeremy Mears, US Fish and Wildlife Service, 101 12th Avenue, Room 110, Fairbanks, AK 99701; 907-456-0390; jeremy_mears@fws.gov: Collaborator on Alaskan tributaries.

Aaron Dupuis, Tanana Chiefs Conference, 122 First Avenue, Ste. 600, Fairbanks, AK 99701; aaron.dupuis@tananachiefs.org; 907-452-8251.

Sean Collins, Department of Fisheries and Oceans Canada, 100 – 419 Range Road Whitehorse, Yukon Y1A 3V1; 867-393-6722; sean.collins@dfo-mpo.gc.ca: Agency collaborator in the Yukon Territory.

Al von Finster, Whitehorse, YT, Canada; al.von.finster@gmail.com: Contractual partner and will develop and retrieve data loggers within the Yukon Territory.

Rosa Brown, Ta'an Kwach'an Council, Fish and Wildlife Program Coordinator, Suite 100-204 Black Street, Whitehorse, YT, Canada Y1A 2M9; 867-668-3444; rbrown@taan.ca: First Nations collaborator and is monitoring several sites within the TKC traditional territory.

5. Project budget outline: Provide estimates of line item costs for the following categories.

Wages and salaries (database tech time)	\$2,000
Contract services (Al von Finster)	\$6,000
Travel	\$
Supplies and materials	\$2,500
Capital equipment	\$
Indirect costs	\$1,470
Total	<u>\$11,970</u>
In-kind or other funding contributions	\$9,000

Yukon River Panel Restoration and Enhancement Fund
Project Concept Form 2012

Project Title: Ta'an Kwäch'än Council Community Stewardship Program

Proponents name: Rosa Brown
Affiliation: Ta'an Kwäch'än Council (TKC); Lands, Resources and Heritage Department (LRH)

E-mail address: rbrown@taan.ca **Phone:** (867) 668-3444 ext: 228

<i>Category</i>	<i>Management Need</i>	Dollar Amount Requested
Restoration	8	\$ 45,375.00 CAN

Project Location: Project activities will be based out of Whitehorse, with works conducted on salmon bearing waters within Ta'an Kwäch'än Council Traditional Territory.	Is this proposal a continuation of a project previously funded by the R&E Fund? Yes This is Year # <u>6</u> of <u>8</u> ¹ years.
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Start Date: 1/04/2012 **End Date:** 31/10/2012

Overview:

Two Community Stewards will be hired by TKC for a total of 35 person weeks of employment. The primary focus of this project is the restoration of Chinook salmon stocks to Fox Creek. The work of the Stewards will include fry releases, biophysical monitoring, monitoring for returns of precocious adults (jacks), habitat assessment and restoration, the collection of biological samples, and maintenance of an access trail. We will also be developing an enumeration plan for the expected return of adult Chinook salmon in 2013.

Other Stewardship activities include biophysical monitoring, habitat restoration, and monitoring of bioengineering works at McIntyre Creek (CRE-53N-06).

Preferably, the Community Stewards hired to work on this project will be young TKC citizens interested in pursuing careers in fisheries or renewable resources management.

Specific outcomes expected by the end of this project include the restoration of extirpated Chinook salmon to Fox Creek, restoration of fish habitat at Fox and McIntyre Creeks, increased understanding of the barriers to juvenile fish migration. We will be developing an enumeration plan for returning spawners, and a plan for the second cycle of stock restoration. It is also expected that

¹ The *Chinook Salmon Stock Restoration Plan for Fox Creek* recommends restoration activities over two full Chinook salmon lifecycles, or 12 years. Year 8 of the Community Stewardship Project (2014) corresponds with Year 7 of the Restoration Plan, and marks the completion of the first full cycle of stock restoration. At this point, a plan for the second cycle of stock restoration must be developed.

ONGOING-16-RES

this project will increase the capacity of TKC citizens and government in implementing management actions regarding Yukon River Chinook salmon.

Relevance and Significance:

This project focus of this project is Chinook salmon. The likely outcome is restoration of extirpated Chinook salmon to Fox Creek.

1. Technical Merit:

This project is guided by the *Chinook Salmon Stock Restoration Plan for Fox Creek, 2008* (CRE-52N-07). Technical support by our project partners (see below) is integral to the implementation and outcome of this project.

2. Key Personnel:

Project Personnel: Project management and administration will be undertaken by staff of the TKC, Lands, Resources and Heritage Department. Coralee Johns, Fish and Wildlife Steward, who has worked with the Stewardship Project since the beginning, will remain closely involved.

Project Partners:

Department of Fisheries and Oceans, Contact: Sean Collins, Resources Restoration Biologist Phone: (867) 393-6785, sean.collins@dfo-mpo.gc.ca	Technical and logistical support
Northern Research Institution McIntyre Creek Incubation Facility, Contact: Clint Sawicki, Manager Phone: (867) 668-8772, csawicki@yukoncollege.yk.ca	Incubation and tagging of fry
Access Consulting (and Yukon Energy Corporation), Whitehorse Rapids Fish Hatchery, Contact: David Petkovich, Senior Environmental Manager Phone: (867) 668-6463, david@accessconsulting.ca	Broodstock collection
Government of Yukon, Department of Environment Y2C2 Program Contact: Morris Lamrock, Youth Programs Coordinator, Phone: (867) 667-3041, morris.lamrock@gov.yk.ca	Youth work crew

3. Project budget outline: Provide estimates of line item costs for the following categories.

Wages and salaries	\$ 34,500
Contract services	\$ 3,000
Travel	\$ 2,000
Supplies and materials	\$ 250
Capital equipment	\$ 0
Other costs	\$ 1,500
Indirect costs	\$ 4,125
Total	\$ 45,375
In-kind or other funding contributions	\$ 16,000

Yukon River Panel Restoration and Enhancement Fund

Project Concept Form 2012

Project Title: Yukon Schools Fry Releases & Habitat Studies

Proponents name: Doug Davidge
Affiliation: Streamkeepers North Society (SKNS)

E-mail address: ddavidge@northwestel.net **Phone:** (867) 668-2233

Identify <u>one</u> Category and <u>one</u> Management Need only that best describes the main intent of the proposal.	Dollar amount requested (specify currency)												
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"><i>Category</i></td> <td style="width: 50%;"><i>Management Need</i></td> </tr> <tr> <td>Conservation</td> <td>1, 2, 3, 4, 5, 6, 7</td> </tr> <tr> <td>Restoration</td> <td>8, 9,</td> </tr> <tr> <td>Enhancement</td> <td>10,</td> </tr> <tr> <td>Stewardship</td> <td><input style="width: 20px;" type="text" value="11"/></td> </tr> <tr> <td>Communications</td> <td>12.</td> </tr> </table>	<i>Category</i>	<i>Management Need</i>	Conservation	1, 2, 3, 4, 5, 6, 7	Restoration	8, 9,	Enhancement	10,	Stewardship	<input style="width: 20px;" type="text" value="11"/>	Communications	12.	<div style="border: 1px solid black; padding: 5px; display: inline-block;">\$2,000 Can</div>
<i>Category</i>	<i>Management Need</i>												
Conservation	1, 2, 3, 4, 5, 6, 7												
Restoration	8, 9,												
Enhancement	10,												
Stewardship	<input style="width: 20px;" type="text" value="11"/>												
Communications	12.												

<p>Project Location: Various locations in the Yukon</p>	<p>Is this proposal a continuation of a project previously funded by the R&E Fund ? Yes / No</p> <p>This is Year # <u>10</u> of <u>unknown</u> years.</p>
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Start Date: **End Date:**

- 1. Overview:**
 This project will make funds available to classes at Yukon schools involved with the “Stream to Sea” studies to help enable them to participate in field trips. Students will participate in habitat studies at various Yukon creeks, guided by teachers and fisheries education coordinators. Some classes will be given the opportunity to release salmon back to their natal streams in the spring. Some classes will have the opportunity to observe salmon spawning when they collect their own chum eggs for classroom incubation in October. Exposing students to the natural habitat of the salmon they have studied and nurtured, and exposing students to aquatic habitats in general, will help to foster a stewardship ethic. The field trips will also help students to understand the scientific concepts that they have been taught in the classroom.

- 2. Relevance and Significance:**
 Supporting Yukon students, teachers and parent volunteer participation in aquatic study field trips to salmon habitat helps to meet the highest ranking objective in the “Stewardship” envelope of

ONGOING-17-STE

“involving and educating users and non-users to increase their desire to maintain and protect salmon stocks and habitat”.

3. Technical Merit:

The project funding enables student participation in aquatic studies field trips. Exposing students to the natural habitat of the salmon they have studied and nurtured, and exposing students to aquatic habitats in general, will help to foster a stewardship ethic. The field trips will also help students to understand the scientific concepts that they have been taught in the classroom.

4. Key Personnel:

Students in Yukon schools will participate in field trips. Teachers, and possibly with Salmon Stewardship Coordinators, will organize and facilitate field trips, with some assistance from DFO personnel.

5. Project budget outline:

Wages and salaries	\$
Contract services	\$
Travel	\$ 2,000
Supplies and materials	\$
Capital equipment	\$
Indirect costs	\$
Total	\$2,000*
In-kind or other funding contributions	\$ 2,000

*Note that this amount has been reduced from previous years due to a temporary reduction in Stream to Sea program delivery.

Yukon River Panel Restoration and Enhancement Fund

Project Concept Form 2012

Project Title: Yukon Fisheries Field Assistant Program: Online Delivery Development and 7th Offering - “Fish Tech”.

Proponents name: Shelagh Rowles
Affiliation: YukonCollege

E-mail address: srowles@yukoncollege.yk.ca **Phone:** 867 668 8741

<p>Identify <u>one</u> Category and <u>one</u> Management Need only that best describes the main intent of the proposal.</p>	<p>Dollar amount requested (specify currency)</p>				
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"><i>Category</i></td> <td style="width: 50%;"><i>Management Need</i></td> </tr> <tr> <td>Stewardship</td> <td>11</td> </tr> </table>	<i>Category</i>	<i>Management Need</i>	Stewardship	11	<div style="border: 1px solid black; padding: 5px; display: inline-block;">\$ 74,000 Cad\$</div>
<i>Category</i>	<i>Management Need</i>				
Stewardship	11				

<p>Project Location: Ayamdigut and Community Campuses (online delivery) and Field Camp</p>	<p>Is this proposal a continuation of a project previously funded by the R&E Fund? Yes</p> <p>This is Year #<u>7</u> of <u>unknown</u> years.</p>
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Start Date: 01/01/2012 **End Date:** 15/06/2012

1. Overview: Describe what is being proposed and what specific outcomes are expected to be delivered by the end of this project.

We are proposing to continue to develop, and deliver the Yukon Fisheries Field Assistant Program in 2012. The remaining classroom-based curriculum will be converted to online format. Delivery of the program will begin in early April and the field camp will run over 12 days in late May and early June 2012. Program graduates will be employable in fisheries field work with consultants, government agencies, Yukon First Nations, and Restoration and Enhancement Fund Projects. We would like to explore the opportunities for delivery of a modified version of this program into the State of Alaska to provide training opportunities to rural residents in communities along the lower Yukon River and its associated tributaries.

2.Relevance and Significance: (as per Stewardship Project)

Targeted students include members of community stewardship groups throughout the Yukon including First Nations and commercial fishers. Yukon Fisheries Field Assistant Program has been designed to meet Territorial needs for certified skilled fisheries field assistants, and to build capacity in that area. We will continue to maintain the relevance of course materials through collaboration with YTG Environment and Fisheries and Oceans, Whitehorse. The number of applications by qualified candidates continues to exceed the 16 seats made available for the program. The online format seems to meet student needs allowing those with full-time employment to complete a significant portion of the program from their respective home communities.

3.Technical Merit

The primary focus of this project will continue to be providing relevant fisheries field work training opportunities to students both within, and outside the Territory. Completing the conversion of curriculum to online delivery will increase access to this training by allowing students to remain in their respective home communities for most of the time during program delivery.

4. Key Personnel:

- Shelagh Rowles:Dean of Applied Science and Management – YukonCollege – Project Supervisor
- Robert Ferro: Chair of Science – YukonCollege – Project supervisor
- Darrell Otto: – YukonCollege – Responsible for course development and delivery as primary instructor

Potential Project Partners:

- Selkirk First Nation – provision of field camp facilities and support
- University of Alaska Fairbanks – Facilitating a proposed delivery of an Alaskan version of Fisheries Field Assistant Program
- YTG Fisheries – Technical expertise and guest lectures
- Fisheries and Oceans, Whitehorse – Technical expertise and guest lectures

5. Project budget outline: Provide estimates of line item costs for the following categories.

Wages and salaries	\$59,500
Contract services	\$2,300
Travel	\$14,700
Supplies and materials	\$7,500
Capital equipment	\$3,000
Indirect costs	\$10,000
Total	\$97,000
In-kind or other funding contributions	\$23,000
Total funding requested	\$74,000

Yukon River Panel Restoration and Enhancement Fund

Project Concept Form 2012

Project Title: McIntyre Creek Salmon Incubation Project - MCSIP

Proponents name: Clint Sawicki
Affiliation: Yukon Research Centre, Yukon College

E-mail address: csawicki@yukoncollege.yk.ca **Phone: 867-668-8772**

<p>Identify <u>one</u> Category and <u>one</u> Management Need only that best describes the main intent of the proposal.</p>	<p>Dollar amount requested (specify currency)</p>						
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%;"><i>Category</i></td> <td style="width: 40%;"><i>Management Need</i></td> <td style="width: 20%;"></td> </tr> <tr> <td>Stewardship</td> <td>11,</td> <td style="border: 1px solid black; text-align: center; vertical-align: middle;">\$ 42,000.00 CAD</td> </tr> </table>	<i>Category</i>	<i>Management Need</i>		Stewardship	11,	\$ 42,000.00 CAD	
<i>Category</i>	<i>Management Need</i>						
Stewardship	11,	\$ 42,000.00 CAD					

<p>Project Location: Whitehorse - Unnamed groundwater tributary to McIntyre Creek alongside Mountainview Drive in road right-of-way.</p>	<p>Is this proposal a continuation of a project previously funded by the R&E Fund ? Yes This is Year # <u>10</u> of <u>ongoing</u> years.</p>
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Start Date: **End Date:**

1. **Overview:** The MCIP will collect brood stock, fertilise eggs, incubate, rear, thermal mark and tag Yukon River Chinook from the Whitehorse Rapids Fishway and Tatchun Creek. Eggs will be provided to Yukon Schools in support of “Salmon in the Classroom” and hands on school activities will take place at the facility. Annual evaluations of the returns to Tatchun Creek are completed by walking the creek so that only bloodstock from an acceptable limited proportion of the years return is taken. Tests of thermal marking of otoliths and Heath tray investigations will continue. Tatchun origin fry will be released back into Tatchun Creek, and Fishway origin fry will be released into Fox Creek in support of the Taan Kwachan Chinook stock restoration plan. Yukon College students will be trained in salmon egg-takes, incubation, marking, tagging, rearing, enumeration and hatchery and field sampling of juvenile and adult Chinook salmon. The facility will serve as an educational and outreach destination for Stream to Sea, visiting and local research institutes, management agencies, schools and the public.

2. **Relevance and Significance:** Although the MCIP provides more than a stewardship role, this is one of its greatest and most diverse facets. The MCIP provides a hands on educational experience for Yukon College students. Course RRM 134 Introduction to Salmon Hatcheries and Related Fisheries Practices was developed with and for MCIP. Yukon College students also work and manage the MCIP during the school year. This hands on experience has been invaluable for student’s ongoing careers. MCIP provides

ONGOING-19-STE

the staging ground for the Eggs in the Classroom project which provides public schools with eggs so that they can learn about the salmon life cycle. The location of MCIP also provides opportunities for various community and school groups to view a working hatchery. Oceans day is celebrated with an open house and tours are provided upon request. The MCIP is also a significant partner in the Ta'an Kwachan Fox Creek Project, providing a site for the development of the projects fry and a training ground for Ta'an Stewards. Ta'an members can visit, learn and get hands on experience in a working hatchery. Finally the site is a significant research resource through its development as an off grid hatchery, thermal marking trials and the ongoing collection of salmon rearing data.

3. Technical Merit: MCIP was developed as a stewardship, research and stock restoration site in the early 90's. It is in an accessible location with perfect natural conditions to develop a small hatchery using natural topography and spring water. It is close to the college and it has a good connection to the community as can be seen through our Taan partnership. The design of the hatchery is simple, robust and uses no electricity. This makes it perfect for students to run and learn the techniques of hatchery management. As its location is within the City of Whitehorse and very accessible it is very easy for the public to visit and for partners such as Ta'an to use. Its proximity to our stock at the Rapids hatchery is also desirable. Using technical experience from DFO and the Rapids Hatchery assists in the egg takes and releases where care is needed.

4. Key Personnel: Clint Sawicki, Director of the Northern Research Institute, Yukon College has been managing and administering the project since 2002. He will continue to manage the project.

Gerald Hasse, Yukon College Instructor, RRM 134 Intro. to Salmon Hatcheries.
Teaching course and working with students at MCIP

Yukon College Renewable Resource Students – Four to six students and one student manager work throughout the year. The students take care of all elements of the hatchery including assisting with egg takes to releasing fry.

Sean Collins and Elizabeth Macdonald, DFO – Technical assistance with all elements of the hatchery.

Rosa Brown, Ta'an Kwachan FN, Renewable Resource Coordinator, Fox Creek Project coordination.

5. Project budget outline:

Wages and salaries	\$18000
Contract services	\$5000
Travel	\$1000
Supplies and materials	\$12000
Capital equipment	\$0
Indirect costs	\$6000
Total	<u>\$42000</u>
In-kind or other funding contributions	\$28000

Yukon River Panel Restoration and Enhancement Fund

Project Concept Form 2012

Project Title: 2012 Michie Creek Salmon and Habitat Monitoring Project

Proponents name: Dave Sembsmoen
Affiliation: Kwanlin Dun First Nation

E-mail address: dsembsmoen@kdfn.yk.ca **Phone:** (867) 633 7814

Identify <u>one</u> Category and <u>one</u> Management Need only that best describes the main intent of the proposal.	Dollar amount requested (specify currency)				
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"><i>Category</i></td> <td style="width: 50%; border: none;"><i>Management Need</i></td> </tr> <tr> <td style="border: none;">Stewardship</td> <td style="border: none;">11</td> </tr> </table>	<i>Category</i>	<i>Management Need</i>	Stewardship	11	<div style="border: 1px solid black; display: inline-block; padding: 5px;">\$ 30,450 Can</div>
<i>Category</i>	<i>Management Need</i>				
Stewardship	11				

<p>Project Location: Michie Creek, tributary to M'Clintock River; Whitehorse Rapids Fishway, Whitehorse, Yukon.</p>	<p>Is this proposal a continuation of a project previously funded by the R&E Fund ? <input checked="" type="radio"/> Yes</p> <p>This is Year # <u>15</u> of <u>n/a</u> years. Ongoing since 1998.</p>
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Start Date: **End Date:**

1. Overview: Describe what is being proposed and what specific outcomes are expected to be delivered by the end of this project.

The project will focus on upper Michie Creek, the primary spawning location for salmon migrating past Whitehorse. A series of site visitations will be conducted, with specific sampling methods depending on timing. ATVs or aircraft will be used to access the site. All relevant Yukon River Panel Protocols will be followed. The first visitation will be prior to the release of hatchery fish. Later visitations will monitor the presence and implied densities of hatchery and wild juvenile salmon; the condition of the upstream migration habitat, and the breaching of obstructions as required; the condition of escapement, including the collection of ASL and other data that the JTC may request; and a final late season monitoring of juvenile salmon presence and implied densities. Observations will be made of the location and densities of salmon redds. Collection and analysis of benthos will follow CABIN protocols for the inclusion of Michie Creek as a reference site. Long term collections of temperature and flow data will be continued. Pre-release sizes of juveniles from the WRFH will be determined, and the thermal regimes of the hatchery and the fishway during operation will be measured.

Specific outcomes are as follows:

- 1) Increasing KDFN capacity and interest in the management, maintenance and protection of salmon stocks and habitat through training of KDFN staff and communication of results to FN citizens;

ONGOING-20-STE

- 2) Monitoring juvenile salmon, and particularly the behaviour of juvenile Chinook out plants from the Whitehorse Rapids Hatchery and potential effects on wild salmon in Michie Creek;
- 3) Maintaining access by adult Chinook to spawning grounds;
- 4) Monitoring of Chinook escapement to Michie Creek, by collecting age, sex, and length (ASL) data, hatchery/wild origin, and DNA samples if requested;
- 5) Environmental monitoring of the bio-physical environment of Michie Creek.

2. Relevance and Significance:

(For *Stewardship and Communications projects*) Justify the selection of the target group that you intend to reach (preschool, grade K-12, adult) and the relevance of the education or awareness components of this project to the local community.

This project directly benefits KDFN heritage, lands and resources staff, elders, students and citizenry who have used the information gathered from this project to protect, enhance and maintain Chinook salmon runs throughout their Traditional Territory. On numerous occasions field crews have lead KDFN staff, Elders, students, politicians (including the Yukon's Commissioner and KDFN chief), members of the Yukon Fish and Game Association, Fisheries and Oceans Canada staff and many others for guided tours of the primary spawning site. Field crews in 2011 assisted an independent filmmaker to capture video footage of spawning salmon for local educational use. Information about the project is also disseminated to government and non-government agencies to broaden awareness and provide data to other researchers and projects.

3. Technical Merit: Describe the logic behind the project's design; the feasibility of the methodologies to be used and the appropriateness of the approach.

This is the only project that monitors juvenile densities in addition to adult escapement in the upper Yukon Basin. The multifaceted project has been ongoing since 1998. As such, access constraints have been resolved. Yukon Panel protocols related to barrier removals and minnow trapping are explicitly followed each year. This is a long term Chinook monitoring project focusing on one of the longest salmon runs in the world.

4. Key Personnel:

The KDFN F&W Manager will administer the project. Nick de Graff of Can-nic-a-nick Environmental Sciences will be the primary investigator and will train and mentor KDFN F&W and other staff as required in field techniques and salmon management.

5. Project budget outline:

Wages and salaries	\$ 15,250
Contract services	\$ 500
Travel (aircraft and truck)	\$ 3,300
Supplies and materials (including rentals)	\$ 6,000
Capital equipment (logger replacement)	\$ 1,400
Indirect costs (administration)	\$ 4,000
<u>Total</u>	<u>\$ 30,450</u>
In-kind or other funding contributions	\$

Yukon River Panel Restoration and Enhancement Fund

Project Concept Form 2012

Project Title: YUKON RIVER NORTH MAINSTEM STEWARDSHIP

Proponents name : Linda Taylor
Affiliation: Dawson District Renewable Resource Council

E-mail address: ddrcc@northwestel.net **Phone:** 867-993-6976

Identify <u>one</u> Category and <u>one</u> Management Need only that best describes the main intent of the proposal.		Dollar amount requested (specify currency)
<i>Category</i>	<i>Management Need</i>	\$ 30,748.00
Stewardship	11,	

<p>Project Location: Dawson City Yukon River North Mainstem Watersheds - Fortymile and Klondike River basins.</p>	<p>Is this proposal a continuation of a project previously funded by the R&E Fund ? Yes</p> <p>This is Year # <u>7</u> of <u>(project not time limited)</u></p>
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<p>Start Date: 01/05/2012 (field July – Sept)</p>	<p>End Date: 31/12/2012 (to completion final report)</p>
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1. **Overview:** This project centers on the development of capacity in the community of Dawson City through the provision of hands-on training and participation in Chinook salmon management and research projects to two local high school students. The management and research activities include 0+ Chinook salvage, access restoration, growth monitoring, and such other activities as agency staff may suggest or lead. The youth demonstrate their acquired skills and knowledge to children and community members in a Public Involvement Day. This is held on the banks of the Klondike River. A “Record of Activities” is updated annually, forms the basis of the following year’s project and is included in the project report.

2. **Relevance and Significance:** Mining dominates the economy, history and much of the culture of Dawson City. Protection of fish and salmon stocks and habitats is generally considered to be secondary to the maintenance of the health of extractive industries. Youth provide a means of reaching the overall community both in the short and longer term to strengthen awareness of the benefits of healthy aquatic ecosystems and the

ONGOING-21-STE

salmon they support. The primary group we intend to reach are young adults through gainful employment and training of young leaders. They will reach the secondary group, that of children ages 4 – 8, during the public involvement day. The youth provide role models by demonstrating their skills to the children while showing them juvenile salmon and other fish. Both age groups then return to their homes and neighbourhoods to share their experiences with the tertiary groups we intend to reach, that of their peers and adult family members.

3. **Technical Merit:** The design of the project is based on the concept that community members can best communicate with their communities, and that engaging youth positively in opportunities related to salmon stock and habitat management and research will pay the greatest dividends for the longest periods. The implementation strategy to do this has been developed over the last 7 years, with gratifying results. Technical methodologies – which have included the restoration of juvenile Chinook salmon to productive habitats, collection of length, weight and (in 2009) GSI samples from sub-samples of the juvenile Chinook captured, and the collection of juvenile Chinook distribution information are well established, feasible and appropriate.
4. **Key Personnel:** Recognizing that the funding decision will not be made until April, 2012, we can only provide a tentative list of personnel we intend to retain. Mark Wierda, Co-chair, will serve as the DDRRC contact for the project. Hans Algotsson will be the Field Supervisor and will lead the field work. Al von Finster will serve as Technical Consultant and will assist with permitting, planning, training and reporting. Andria Oppen will lead the Public Involvement day.
5. **Project budget outline:** Provide estimates of line item costs for the following categories.

Wages and salaries	\$ 17,873.00
Contract services	\$ 3,320.00
Travel	\$ 6,800.00
Supplies and materials	\$ 2,180.00
Capital equipment	\$ 575.00
Indirect costs	\$
<u>Total</u>	<u>\$ 30,748.00</u>
In-kind or other funding contributions	\$ 2,180.00

Yukon River Panel Restoration and Enhancement Fund

Project Concept Form 2012

Project Title: Ta'an Kwäch'än Council (TKC) Family Fish Camp

Proponents name: Rosa Brown

Affiliation: Ta'an Kwäch'än Council - Lands, Resources and Heritage Department

E-mail address: rbrown@taan.ca **Phone:** (867) 668-3444 ext: 228

<i>Category</i>	<i>Management Need</i>	<i>Dollar amount requested</i>
Communications	12	\$ 8,560 Can

<p>Project Location: This project is based at Helen's Fish Camp, a traditional meeting place for TKC people located on Lake Laberge (north of Whitehorse, in the Yukon River Upper Lakes Watershed).</p>	<p>Is this proposal a continuation of a project previously funded by the R&E Fund? Yes</p> <p>This is Year # <u>3</u> of <u>5</u> years.</p>
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Start Date: 01/06/2012 **End Date:** 31/09/2012

1. Overview:

Family Fish Camp will take place over 4 days/3 nights in early August, at the time that Chinook salmon is migrating through the area. This event will offer the opportunity for TKC citizens to learn how to craft and repair gill nets, while promoting the selective fishing technique of using smaller size gill nets. Participants will learn how to mend and maintain nets with demonstrations of how to hang (assemble) a net, and how to build a net the traditional way, with twine. Salmon harvest is also a large part of cultural/educational activities. Camp participants, lead by experienced members of the community, and Elders, will learn how to set nets, clean, cut and handle the salmon.

While the main focus of Family Fish Camp is on hands-on, experiential learning, there will also be a formal education component. This information may be delivered through brief presentations and with visual material such as posters and handouts. In collaboration with DFO, we will assemble an information package which will include information on the Pacific Salmon Treaty and the Pacific Salmon Agreement, Ichthyophonus disease, salmon harvest calendars and information regarding the importance of in-season harvest data, Chinook salmon life cycle and biology, fish identification cards, etc.

At completion of Family Fish Camp, participants will have a better understanding of selective fishing methods and the lifecycle/biology of Yukon River salmon. This knowledge could lead to increased support and participation in management actions.

2. Relevance and Significance:

TKC is an urban-based First Nation with a demonstrated need for structured programs such as Family Fish Camp, to teach the younger generation traditional ways in a modern context; in an environment where Elders, youth and families share time and learn cooperatively from one another.

People of all ages will attend Family Fish Camp with their family members. Educational programming will be planned for all age groups.

3. Technical Merit:

In some cases, Yukon First Nations people and communities concerned with declining stocks, weak run sizes and conservation efforts, have chosen not to fish or to limit their harvest to a few fish. Fishing equipment most commonly used in the Yukon ranges up to 8¹/₂” mesh size and a hanging ratio of 3:1. Individual efforts to practice conservation often result in reducing the amount of time spent fishing with a large mesh size net, unintentionally catching the large spawners. Educating citizens about selective fishing will encourage people to continue fishing, will address conservation concerns, and promote a viable First Nations fishery and participation in management objectives.

4. Key Personnel:

Project coordination and administration will be the responsibility of the TKC Lands, Resources and Heritage Department. Demonstration of net building and repair will be undertaken by one qualified individual in the community (preferably TKC) assisted by knowledgeable Elders. Staff of the TKC Lands, Resources and Heritage Department, in partnership with the Health and Education Department, will provide logistical and staffing assistance. TKC Community Stewards (CRE-54) will assist in compiling and delivering educational presentations and materials, and with hands-on educational opportunities. Assistance in the compilation of educational material will be sought from the Department of Fisheries & Oceans Canada, Whitehorse.

5. Project budget outline:

Wages and salaries (incl. Elder honorariums)	\$5 250.00
Contract services	\$
Travel	\$ 200.00
Supplies and materials	\$2 000.00
Capital equipment	\$
Indirect costs	\$1 110.00
Total	\$8 560.00
In-kind or other funding contributions	\$5 000.00

Yukon River Panel Restoration and Enhancement Fund

Project Concept Form 2012

Project Title: Yukon River Educational Exchange

Proponents name: Jason Hale, Communications Director
Affiliation: Yukon River Drainage Fisheries Association (YRDFA)

E-mail address: jason@yukonsalmon.org **Phone:** 907-746-7355

Identify <u>one</u> Category and <u>one</u> Management Need only that best describes the main intent of the proposal.		Dollar amount requested (specify currency)
<i>Category</i>	<i>Management Need</i>	\$ 31,500 US
Communications	12	

<p>Project Location: The exchange will visit a minimum of 3 communities in the U.S. portion of the Yukon River drainage. Participants will hail from 3 to 5 communities in the Canadian portion of the drainage.</p>	<p>Is this proposal a continuation of a project previously funded by the R&E Fund? Yes</p> <p>This is Year #10 of the program and the first half of the seventh cycle of exchanges. However, each exchange stands independently.</p>
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Start Date: 01/04/2012 **End Date:** 31/03/2013

1. **Overview:** YRDFA will plan and execute a trip bringing 5 Yukoners with strong ties to Yukon River fisheries to representative fishing spots in Alaska to gain and share knowledge, both during and after the trip. This program will build cross-border understanding and cooperation among Yukon River drainage individuals and communities.

2. **Relevance and Significance:** The primary target group is adult fishers, Elders, and the public dependent on the salmon fishery, though youth will also be engaged during the trip and all will benefit from exposure to fishers from across the border. The project will enable members of host and home communities to better understand drainage-wide needs and concerns for use of Canadian-origin Chinook and fall chum salmon. Personal relationships and experiences will be built, which will help people work together on a cooperative basis. Ultimately, the purpose of the program is furthering communication, transferring knowledge, and transforming perceptions of divergent groups to foster an increased appreciation for the perspectives and needs of other people in the Yukon River drainage. Understanding differences in culture, lifestyle, and opinion proves to strengthen one's ability to think and act on a cooperative basis.

3. **Technical Merit:** An educational exchange is a powerful, intensive approach to transferring knowledge and transforming perceptions. Participants have the opportunity to witness, question, and interact with the subject matter first hand, which can foster much deeper understanding than other forms of communication typically provide. As such, the Yukon River Educational

ONGOING-23-COM

Exchange Program is a sound way for fishers and other fisheries stakeholders from the U.S. and Canada to come together to learn about the international agreement, to appreciate the different salmon resource users, and to increase awareness of fishery-related issues.

U.S. and Canadian users of the salmon resource are participants in a world of interdependence. Understanding differences in culture, lifestyle, and opinion proves to strengthen one's ability to think and act on a cooperative basis. Therefore, a key priority of this project is to build relationships between upriver and downriver fishers, as one becomes the exchange participant and the other the host community member.

Participants in the Yukon River Educational Exchange are challenged to learn by pursuing issues of interest and concern, to research through observation and personal experience, and to document their experience for further transfer of knowledge with their home communities. The exchange also takes advantage of the participants' differences in age, motivation, cultural background, and past fisheries experience. The most effective exchange experience requires participants be immersed in the host community to develop and nurture a holistic and mutual view of life on the Yukon River.

YRDFA has successfully coordinated this program since its inception in 2002, and has honed its practices and protocols to maximize effectiveness. Participants are hand-picked to ensure that they have the capacity to represent the fishery in their region and are well suited to use the knowledge gained. The itinerary is crafted to visit key venues to paint a representative, realistic picture of the fishery. Every detail from daily orientations to back-up logistics is covered before the trip begins to minimize interruptions in the learning. YRDFA has more than 20 years of experience coordinating events throughout the Yukon River drainage, has developed contacts and relationships in every community and with virtually every vendor, and is uniquely suited to the task of managing this program.

4. Key Personnel:

- Jason Hale, YRDFA: manager/coordinator of program. Mr. Hale will recruit participants, set the itinerary, purchase and prepare all supplies, and make all necessary travel arrangements.
- Jill Klein, YRDFA: assistant/contributor to program. Ms. Klein will provide recommendations on key contacts and logistics, and may assist in orienting and guiding the group.
- Becca Robbins Gisclair, YRDFA: assistant/contributor to program. Ms. Gisclair may assist in orienting and guiding the group.

5. Project budget outline: Provide estimates of line item costs for the following categories.

Wages and salaries	\$6,500
Contract services	\$2,900
Travel	\$18,080
Supplies and materials	\$760
Capital equipment	\$0
Indirect costs	\$3,260
Total	\$31,500
In-kind or other funding contributions	\$1,520

Yukon River Panel Restoration and Enhancement Fund

Project Concept Form 2012

Project Title: Yukon River In-Season Management Teleconferences

Proponents name: Jason Hale, Communications Director
Affiliation: Yukon River Drainage Fisheries Association (YRDFA)

E-mail address: jason@yukonsalmon.org **Phone:** 907-746-7355

Identify <u>one</u> Category and <u>one</u> Management Need only that best describes the main intent of the proposal.		Dollar amount requested (specify currency)
<i>Category</i>	<i>Management Need</i>	\$ 10,000 US
Communications	12	

<p>Project Location: This program will be promoted to every community within the Yukon River drainage, and calls will be open to the public in the U.S. and Canada.</p>	<p>Is this proposal a continuation of a project previously funded by the R&E Fund? Yes</p> <p>This is Year # 9 of the program. However, each year the project stands independently.</p>
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Start Date: 01/04/2012

End Date: 31/03/2013

1. **Overview:** YRDFA will promote, coordinate, facilitate, and summarize weekly in-season management teleconferences in the summer of 2012 for fishers, managers, processors, and other stakeholders in Yukon River drainage fisheries. This program will provide a forum for sharing information and ideas, building understanding and capacity, among all user groups in the Yukon River drainage.

2. **Relevance and Significance:** The primary target group is adult fishers, Elders, and the public dependent on the salmon fishery. These teleconferences enable local users to provide valuable insight to fisheries managers and other fishers on in-season salmon subsistence needs, river conditions, and abundance and quality of salmon. In addition, the teleconferences provide information to fishers and other stakeholders regarding management actions, research and escapement monitoring tools, and timely in-season fisheries news, and have facilitated information sharing and capacity building amongst all interested parties. The teleconferences also give fishers a direct means of influencing management of the fishery as the run is occurring.

3. **Technical Merit:** Teleconference calls are a practical and useful method for discussing the complexities of salmon management and for gaining immediate real-time information from fishers and other stakeholders along the expanse of the Yukon River. The teleconference calls, promoted in the spring and held every Tuesday at 1 p.m. Alaska time (2 p.m. Yukon time) through the summer, enable salmon resource users drainage-wide to communicate in real time while the run is occurring.

ONGOING-24-COM

YRDFA has operated this program since its inception in 1994 and has the expertise, visibility, reputation, and capacity to successfully continue its operation. Key tasks include promoting, agenda planning, moderating, summarizing, and analyzing results, and this is all well within YRDFA's capabilities. Yukon River fisheries-related communication is the cornerstone of the organization, and there is no entity better suited to manage this project.

4. Key Personnel:

- Jason Hale, YRDFA: manager/moderator. Mr. Hale will coordinate all promotions, schedule teleconferences with a phone service provider, and liaise with agency representatives regarding scheduling and agendas. He will also moderate some of the teleconferences.
- Jill Klein, YRDFA: contributor/co-moderator. Ms. Klein will provide advice on the structure of the teleconferences. She will also moderate some of the teleconferences.
- Becca Robbins Gisclair, YRDFA: co-moderator. Ms. Gisclair may moderate some of the teleconferences, based on the availability of other YRDFA staff.

5. Project budget outline: Provide estimates of line item costs for the following categories.

Wages and salaries	\$3,150
Contract services	\$200
Travel	\$0
Supplies and materials	\$5,615
Capital equipment	\$0
Indirect costs	\$1,035
Total	\$10,000
In-kind or other funding contributions	\$16,520

Yukon River Panel Restoration and Enhancement Fund

Project Concept Form 2012

Project Title: Yukon River Summer Season Preparedness Process

Proponents name: Jason Hale, Communications Director
Affiliation: Yukon River Drainage Fisheries Association (YRDFA)

E-mail address: jason@yukonsalmon.org **Phone:** 907-746-7355

<p>Identify <u>one</u> Category and <u>one</u> Management Need only that best describes the main intent of the proposal.</p>		<p>Dollar amount requested (specify currency)</p>
<p><i>Category</i></p> <p>Communications</p>	<p><i>Management Need</i></p> <p>12</p>	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <p>\$ 60,500 US</p> </div>

<p>Project Location: Alaskan portion of the Yukon River drainage.</p>	<p>Is this proposal a continuation of a project previously funded by the R&E Fund? Yes</p> <p>This is Year #4 of the program. However, each year the project stands independently.</p>
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Start Date: 01/01/2012 **End Date:** 31/12/2012

1. **Overview:** YRDFA will plan, promote, coordinate, facilitate, and summarize one in-person meeting for representatives from the entire Alaskan portion of the Yukon River drainage. This program will provide a forum for sharing information and ideas, and building understanding and strategies, among all user groups in the Alaskan portion of the Yukon River drainage concerning the 2012 and future Chinook and fall chum salmon runs. The primary outcomes will include a more informed group of involved stakeholders and a narrowed list of management approaches for responsibly and equitably managing the 2012 and future Chinook salmon runs.

2. **Relevance and Significance:** The primary target group is Tribes, fishers, and other fisheries stakeholders from every community in the Alaskan portion of the Yukon River drainage. The relevance of this program to local communities is twofold: representatives from each community will be able to learn about the latest fisheries issues and news, and each Tribal Council will be able to provide the input that will shape the Alaskan pre-season management plan for 2012 and future years.

3. **Technical Merit:** Given the breadth of communications efforts on this topic over the past three years, stakeholders are already well informed and well versed in the issue at hand. As such, reducing the public pre-season plan development process to this one riverwide meeting (within Alaska) is the most efficient way of reaching the objectives and providing for riverwide input from all key Alaskan stakeholder groups.

ONGOING-25-COM

Representatives from every Tribal Council in the Alaskan portion of the drainage, intertribal consortiums, YRDFA board members, Yukon River Panel members, Regional Advisory Council members, and other stakeholders will be invited and strongly encouraged to participate. ADF&G and USFWS will be involved throughout the planning and implementation process.

Pending Panel approval, this project will begin in January 2012 with planning and promotional efforts. The meeting will be held the in early April 2012.

YRDFA has coordinated meetings with Yukon River fisheries stakeholders for more than 20 years and hosted the 2009, 2010, and 2011 Summer Season Preparedness Processes. YRDFA has the expertise, contacts, and staff capacity to successfully complete this project in 2012,

4. Key Personnel:

- Jason Hale, YRDFA: Mr. Hale will manage the project, overseeing all aspects. He will likely also co-moderate the meeting.
- Jill Klein, YRDFA: Ms. Klein will provide guidance on the structure and content of the meeting. She will also personally invite select representatives, and will likely co-moderate the meeting.
- Teddy Willoya, YRDFA: Mr. Willoya will coordinate many of the meeting logistics, such as travel, invitations, and registration.

5. **Project budget outline:** Provide estimates of line item costs for the following categories.

Wages and salaries		\$8,300
Contract services		\$2,100
Travel		\$43,200
Supplies and materials		\$635
Capital equipment		\$0
Indirect costs		\$6,265
	Total	\$60,500
In-kind or other funding contributions		\$0

Yukon River Panel Restoration and Enhancement Fund
Project Concept Form 2012

Project Title: Tr'ondëk Hwëch'in First Fish Culture Camp

Proponents name: Roberta Joseph
Affiliation: Tr'ondëk Hwëch'in Box 599 Dawson City, YT Y0B 1G0

E-mail address: roberta.joseph@gov.trondek.com **Phone:** 867-993-7107

Identify <u>one</u> Category and <u>one</u> Management Need only that best describes the main intent of the proposal.		Dollar amount requested (specify currency)
<i>Category</i>	<i>Management Need</i>	\$ 10,000 Can
Conservation		
Restoration		
Enhancement		
Stewardship		
Communications	12	

Project Location: The Town of Dawson City, Yukon: Yukon north mainstem watershed	Is this proposal a continuation of a project previously funded by the R&E Fund ? Yes This is Year # <u>10</u> of <u>on-going</u> years.
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Start Date: 18/07/2012 **End Date:** 22/07/2012

1. Overview: This project seeks to access the conservation and stewardship envelopes of the Yukon River Panel's Budget Priorities Framework. Through the conservation envelope, we will impart to local youth the principles of conservation by expounding on the value (both cultural and biological) of salmon and their habitat. Through the stewardship envelope, we will help to educate both users and non-user youth (as the case may be) on the importance of maintaining healthy salmon stocks now and into the future. It is our expectation that these principles will be carried forward for, as the youth grow into young adults, they will carry with them an appreciation for salmon. This project will provide youth with an education and appreciation for salmon, it's habitat, and it's value. The success of this project would not happen without the efforts of TH Staff from each department, Health and Social, Fish and Wildlife, Lands and Heritage, along with community elders, other agencies including DFO and YG, Conservation Officers. For more information, a final report will be provided to the Panel at the end of the season.

2. Relevance and Significance:

ONGOING-26-COM

Tr'ondëk Hwëch'in has been providing this fish camp to local youth for many years now. Over the years, we've observed the knowledge that the youth have gained and we continue to feel the need to provide opportunities for youth to learn more about conservation and stewardship of salmon. Through this project, local children have grown to know the value of salmon and the importance of their habitat and conservation. By continuing to educate as many youth as possible, we believe we are helping to instill within them the value of stewardship and are thereby helping to ensure the future health of our salmon resources.

Early in July, camp personnel will be identified and all workshops will be coordinated with the respective participants. The camp is a joint effort of the various TH governmental departments (Heritage and Culture, Youth Enhancement), with much valued input from TH elders, who provide not only traditional handling methods but also oral history and Hän language. This intergenerational approach is one way by which we are able to maintain a link to past practice while crafting modern means of salmon harvesting. In this way, we are able to help frame our children's understanding of our social world according to the beliefs passed down to us.

- 3. Technical Merit:** In the management of our salmon resources, rarely do we manage fish; rather we manage their harvest. By teaching our youth the importance of salmon and the habitats on which they depend, we instill within them conservation and stewardship ethics. By imparting these ethics, the next generation will work to ensure the future health of our salmon resources.

In the summer of 2000, 2002, 2003, 2005, 2006, 2007, 2008, 2009, 2010 and again in 2011, very successful fish camps geared towards salmon conservation and stewardship were hosted by Tr'ondëk Hwëch'in for local Dawson City youth. During this time, children were exposed to many issues and practices, such as: First Nation and commercial fishing values; First Nation and commercial fishing methods, which included cleaning, smoking and drying methods; educational talks and field trips on life histories, fry habitat, habitat management, stock assessment, conservation and protection techniques; and, boat/river safety techniques. The youth then participated in a very large public gathering where they, customarily and respectfully, gave their first fish away to Elders. The children left the camp having learned a great deal of respect for the river and all the salmon it affords our community. It is our intent that the youth, now young adults, will look to the river and the salmon with the same affinity as we do and as did our ancestors.

4. Key Personnel:

Tr'ondëk Hwëch'in Staff:

- Fish and Wildlife
 - Heritage Department
 - Health and Social Department
- Department of Fisheries and Oceans

5. Project budget outline:

Wages and salaries	\$
Contract services	\$3,160
Travel	\$
Supplies and materials	\$
Operation and Maintenance	\$6,840
Capital equipment	\$
Indirect costs	\$
	Total
	<u>\$10,000</u>
In-kind or other funding contributions	\$13,000

Yukon River Panel Restoration and Enhancement Fund
Project Concept Form 2012

Project Title: Science and Salmon Education Outreach Series

Proponents name: Heather Leba
Affiliation: Alaska Department of Fish and Game

E-mail address: heather.leba@alaska.gov **Phone:** 907-267-2385

Identify <u>one</u> Category and <u>one</u> Management Need only that best describes the main intent of the proposal.		Dollar amount requested (specify currency)
<i>Category</i>	<i>Management Need</i>	\$ 7,410 (USD)
Communications	12.	

Project Location: Attending various regional meetings throughout the Alaskan Yukon Area.	Is this proposal a continuation of a project previously funded by the R&E Fund ? Yes This is Year # <u>2</u> of <u>ongoing</u> years.
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Start Date: **End Date:**

1. Overview:

This project aims to continue developing a science education outreach program in the Alaska portion of the Yukon River by creating a series of lessons for adults, targeting fishermen and other community members. In 2011, the initial year of this project, 2 topics were chosen for lesson development: 1) freshwater life history of salmon and 2) marine life history of salmon. The framework and content of these lessons is being developed and the lessons will be ready to present at meetings in early 2012. If funding is awarded for 2012, lessons created in 2011 will be modified to target K-12 students using Yukon River-specific standards-based science education modules. Future lessons would cover other topics related to fish biology, habitat ecology, current scientific research, and scientific methodology of Yukon River research projects. Examples include sonar and genetics. Other topics could be covered on request. Partnerships with other organizations (like TCC, UAF GK-12 program, UAF SeaGrant) may also be possible in the future to expand the number of participants and reach a wider range of villages.

2. Relevance and Significance:

Our goal with this project is to advance information, education and training to enable more effective community participation in the management of Yukon River salmon stocks and habitats. In addition, these workshops aim to increase Yukon inhabitants' awareness of salmon topics and motivate communities to maintain and protect salmon stocks and their habitat.

3. Technical Merit:

This project is one that fills an information void, where we can communicate often complex scientific topics to community members with little science background in accessible, easy to understand ways. In doing so, this creates a more knowledgeable public and facilitates communication between the fishermen and managers. Variations to lesson plans presented to adults will be modified for students and classroom teachers, or presented in the classroom by the proponents. Lessons would be interactive and dynamic and would include demonstrations, PowerPoint presentations, handouts and other activities to engage the participants and facilitate discussion and information exchange. Supplementary information could be distributed through radio, newsletters, and email announcements (e.g. YRDFA newsletter, YRDFA e-news, handouts at ADF&G offices etc.). Workshop participants will assess the workshops from 2011 and those responses will be utilized to improve and expand the program for 2012.

4. Key Personnel:

Heather Leba, Alaska Department of Fish and Game, Commercial Fisheries Division, 333 Raspberry Road, Anchorage, AK 99518; 907-267-2385; heather.leba@alaska.gov: Heather is a co-PI on this project and has been involved with the program during its first year and will continue to be a key proponent. She has spent several years as a teaching assistant during her MS program and has been with ADF&G for over two years.

Jan Conitz, Alaska Department of Fish and Game, Commercial Fisheries Division, 333 Raspberry Road, Anchorage, AK 99518; 907-267-2135; jan.conitz@alaska.gov: Jan's role is advisory in nature and provides feedback on workshop content and organization. Jan brings to the project many years of experience at ADF&G, working with salmon fisheries and communities throughout Southeast Alaska.

Jason Hale, Yukon River Drainage Fisheries Association, 725 Christensen Drive, Suite 3-B, Anchorage, AK 99501; 907-272-3141; jason@yukonsalmon.org: Jason is a key collaborator and will be integral in advertising, soliciting feedback from participants and managing logistics at meetings. He has successfully organized numerous community meetings within the Yukon Area over the last several years, facilitates the in-season management teleconferences, and is well respected within the Yukon River communities

5. Project budget outline: Provide estimates of line item costs for the following categories.

Wages and salaries	\$
Contract services	\$2,000
Travel	\$4,000
Supplies and materials	\$ 500
Capital equipment	\$
Indirect costs	\$ 910
Total	\$7,410
In-kind or other funding contributions	\$7,000