

TITLE: Yukon River Panel (YRP) Restoration & Enhancement (R&E) Fund Achievements and Opportunities - Final Report

INTRODUCTION:

The Yukon River Panel (YRP) Restoration and Enhancement Fund (R&E Fund) provides financial resources to project proponents with the aim of achieving priorities and goals related to:

- the restoration, conservation, and enhancement of Canadian-origin salmon stocks
- the stewardship of salmon habitat and resources, and
- maintaining viable fisheries in the Canadian portion of the Yukon River.

Since 1997, the R&E Fund has supported nearly 600 programs, projects, and initiatives intended to advance the Fund's objectives and goals.

The purpose of the current work was to describe the achievements of the Fund and to explore future opportunities. The specific objectives of our work were to:

1. Compile, synthesize and analyze the results of projects funded by the R&E Fund to provide a comprehensive summary of the scope, themes, and overall achievements;
2. Provide recommendations regarding gaps in project results against R&E goals and objectives to potentially inform future project funding selections or decisions; and,
3. Provide recommendations for undertaking an evaluation, including potential evaluation questions and lines of enquiry to help the Yukon River Panel align the Fund with its long-term objectives.

This report provides a summary of our methods and findings, as well as a discussion, recommendations and conclusions with respect to the R&E Fund.

METHODS:

Data Collection:

In order to evaluate R&E Fund outcomes, we read all project reports available to us; there were a total of 596 reports from the time period of 1997 to 2018. We collected information on each project in a consistent manner using a database.

In creating the database, we examined various R&E Fund policy documents that described visions, goals, objectives, categories, and priorities since the fund was created. The latest Yukon River Panel R&E Fund Priorities Plan (2018)¹ reflects the past and current approaches; therefore, we used the categories and priorities in this plan to evaluate individual projects. Our review also considered the following:

- What were the project's objectives, accomplishments, and results?
- Did the project evaluate effectiveness in the context of R&E priorities?
- Did the project examine multi-year trends, and, if so, what were the trends?

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<https://www.yukonriverpanel.com/download/5/call-for-proposals/2132/yrp-re-fund-priorities-plan-2018.pdf>

- Which Restoration & Enhancement Fund Priorities (2018) were addressed by the project?

The database will be provided to the YRP Secretariat (Pacific Salmon Commission) and could be used to track projects and accomplishments in future funding cycles. Appendix 1 provides an example of a database entry.

For each project, we populated the database with the following:

- Organization, year, Project #, Value (Can/US \$)
- Objectives
- Results
- 2018 R&E Fund Priorities coded as a function of: Category (6) / Priorities (40)
- Salmon Species
- Presence / absence of biophysical, genetic, and other information such as water temperature and atmospheric data
- Watershed & River/Creek
- Presence /absence of multi-year trends, and a description of the trend (where available)
- Presence / absence of effectiveness monitoring
- Project author's recommendations (where available) and additional notes

Data Analysis:

When evaluating projects, we did not consider how well the project met a priority, how defensible a trend was reported, how robust the project methods were, or the effectiveness of their approach. Rather, we used a presence / absence approach by examining whether the authors reported on these criteria. Our focus on presence / absence (rather than evaluation of adequacy) had several benefits: it eliminated the need for subject-matter experts, reduced variations in professional judgement (or bias) between reviewers on our team, and allowed the review to be accomplished in a timely manner. As a result, a project could meet framework criteria simply if the criteria was reported by the author.

FINDINGS:

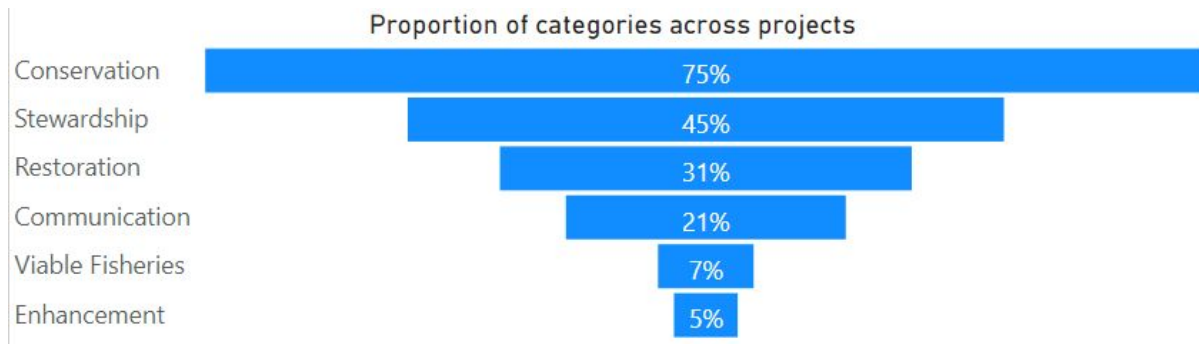
Overall we found that project objectives, as outlined in project reports, match the outcomes reported by project proponents.

The YRP has developed a list of 40 priority activities that are meant to focus the call for proposals of the R&E fund. These 40 priorities are arranged into six categories as follows:

- Restoration
- Conservation
- Enhancement
- Stewardship
- Communications
- Viable Fisheries

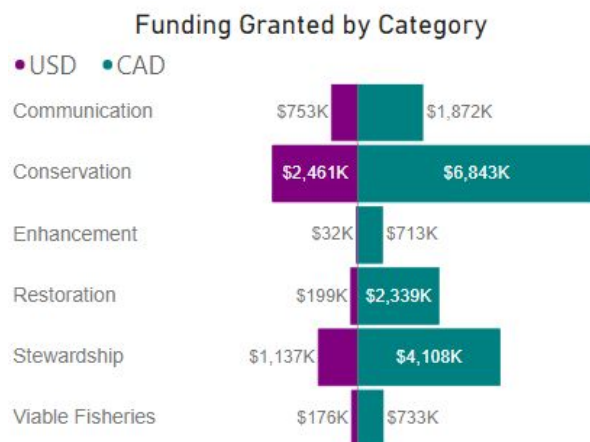
Our first analysis focused on the number of projects that were associated with particular categories. The large majority of projects contributed to the ‘conservation’ category (75% of projects), followed by ‘stewardship’ (45% of projects) (Figure 1). Any given project often was associated with more than one category, as such the reader should note that the sum of all proportion of categories adds up to more than 100 percent². The categories with the least number of projects associated were ‘viable fisheries’ and ‘enhancement’, which together were associated with less than 10% of the projects.

Figure 1: Proportion of projects funded by categories (n=596).



Our second analysis focused on project contribution to various categories, however we examined the financial and currency (USD vs CAD) allocations to each of these categories. Again the categories ‘conservation’ and ‘stewardship’ were allocated the most resources and ‘viable fisheries’ and ‘enhancement’ were allocated the least (Figure 2).

Figure 2: Funding allocations by categories (n=596).



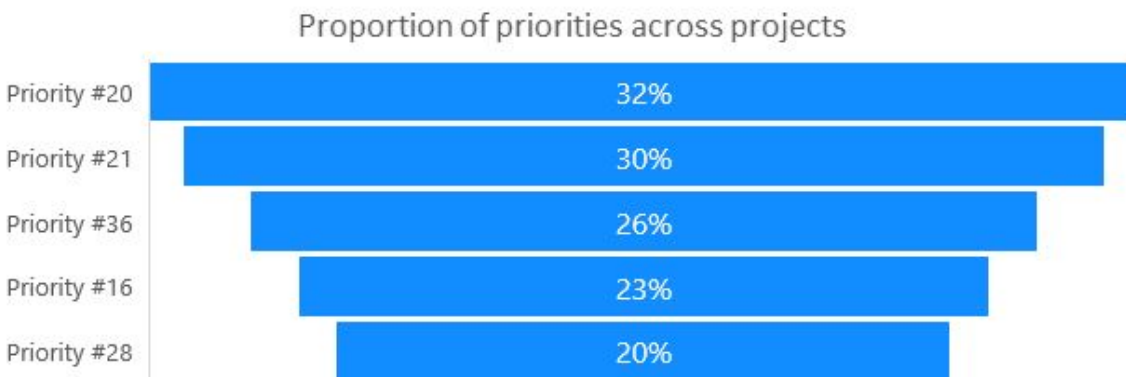
² In addition, we selected the “best-fit” priorities that applied to a given project rather than all possible priorities.

We note, therefore, that categories that are funded by the YRP do not appear to follow the ranked priorities outlined by the Yukon River Salmon Agreement (2001³) that provides guidance on funding first restoration, then conservation, then followed by enhancement⁴.

Our next phase of analysis examined the 40 detailed priority statements that further serve to describe the six categories. These priorities are described in the YRPs 2018 Priorities Plan². The reader can also refer to Appendix 2 for a summary table of all priorities ranked by the number of times the priority was associated with projects (i.e. project count per priority).

The priorities most and least often associated with a funded project are shown in Figure 3 and 4, respectively.

Figure 3: Top 5 Priorities

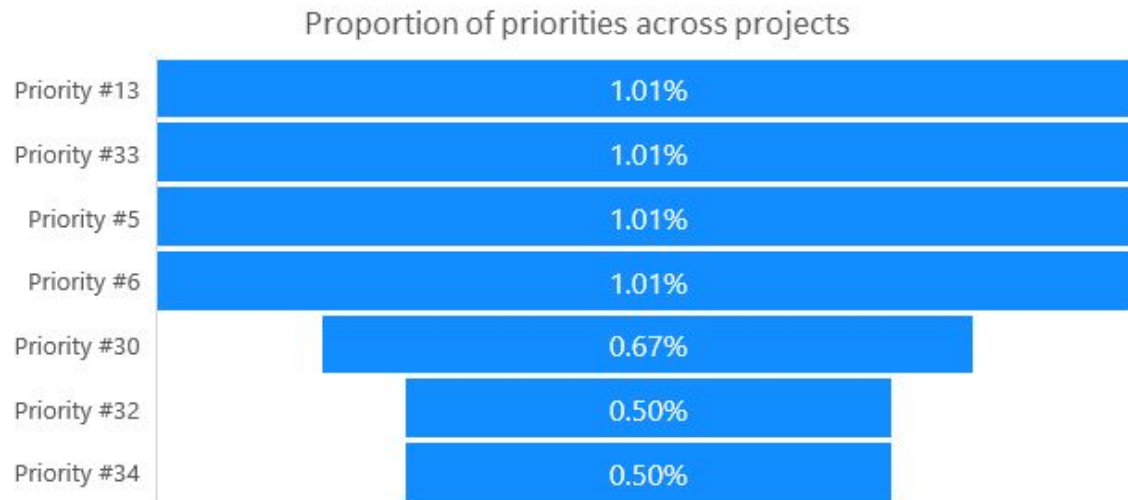


- Priority #20 = Obtain information on the quality of escapement (e.g. age/size/sex/health);
- Priority #21 = Identify and monitor escapements to key salmon spawning streams/area (e.g. index streams);
- Priority #36 = Technical capacity building in communities;
- Priority #16 = Improve in-season stock specific run-size estimates, assessment methodology and analysis of spatial and temporal aspects of salmon migration at the mouth of the Yukon River;
- Priority #28 = Environmental monitoring, particularly of key index streams.

³ Appendix I (attachment C) bullet 4 (page 12 of 14) of Yukon River Salmon Agreement (2001) - <https://www.yukonriverpanel.com/download/48/treaties-and-bylaws/456/yukon-river-salmon-agreement.pdf>

⁴ Page 3 of the Yukon River Panel R&E Fund Priorities Plan (2018) <https://www.yukonriverpanel.com/download/5/call-for-proposals/2132/yrp-re-fund-priorities-plan-2018.pdf>

Figure 4: Bottom 5 Priorities

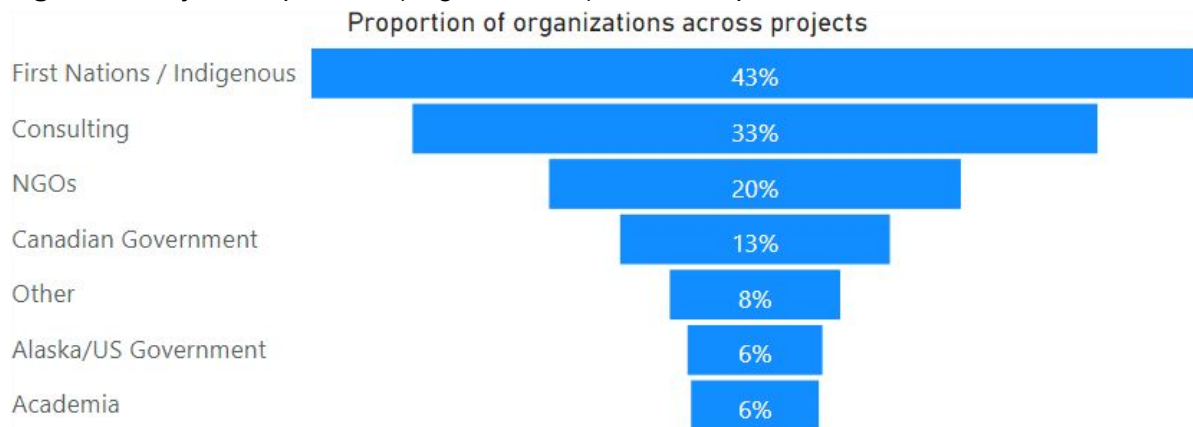


- Priority #13 = Develop and test habitat restoration techniques;
- Priority #33 = Conduct habitat enhancement projects;
- Priority #5 = Develop and test stock restoration techniques;
- Priority #6 = Conduct emergency response projects (e.g. harvest displacement, etc.);
- Priority #30 = Community development of individual watershed-based enhancement plans;
- Priority #32 = Assess feasibility and prepare plan for habitat enhancement;
- Priority #34 = Evaluate effects and success of habitat enhancement projects.

We note a similar pattern as in the previous analysis in that 6 of the top 10 priorities relate to conservation (Fig. 3). A large portion of the projects also contributed to ‘stewardship’ (45% of projects) through capacity building, involvement, and/or education programs within communities. At the other end of the spectrum, ‘enhancement’ has received the least contribution (only 5% of projects) with 4 of the 5 ‘enhancement’ priorities (#30-34) present in the bottom 10 priorities.

Our next analysis examined the project proponents associated with various projects approved for funding by the YRP. The reader should again recall that any given project may have multiple parties working together to deliver on a project. The proponents most often associated with a project are First Nations / Indigenous parties (43%) followed by consulting organizations (33%) (Figure 4).

Figure 4: Project Proponents (Organizations) across all priorities.



A similar pattern emerges when examining the allocation by proponents with First Nations / Indigenous parties and consulting organizations receiving the vast majority of funding (Figure 5). We note that financial allocation by project was only available to us for the years 2011 to 2018 with occasional information available for older projects (n=265); total allocations available for this analysis as a function of currency can be seen in Figure 6.

Figure 5: Funding allocation by organization

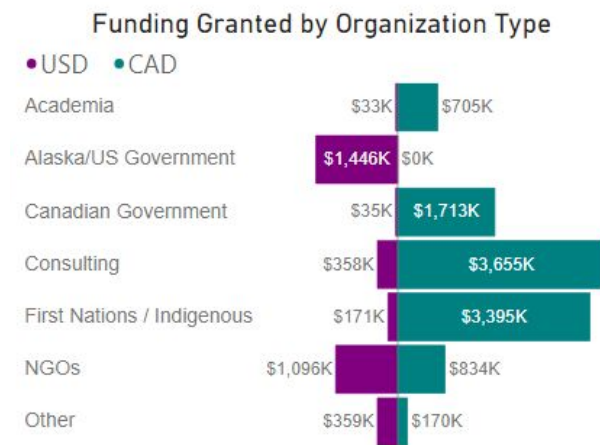
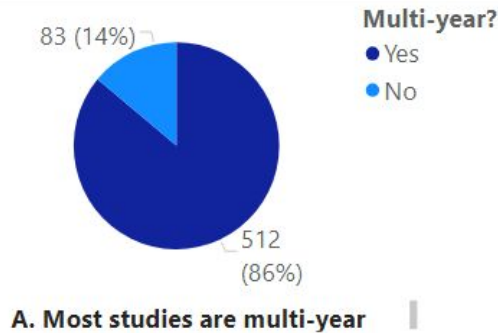


Figure 6: YRP Fund allocations by currency available for our analysis (n=265 out of 596)



The next part of our analysis examined the ability of funded projects to provide progressively more information that could be used by the YRP to form knowledge for its decision-making. We noticed in our review that most projects (86%) were funded more than one year and may be a useful source of information to help the YRP's knowledge-base grow progressively (Figure 7).

Figure 7: Proportion of studies funded for more than one year.



However, of the studies that were multi-year, only 25% reported some form of a multi-year trend (Figure 8). Of those studies that did report on multi-year trends, the nature of the trend was very context specific and not easily summarized (Figure 9). For example, one species of salmon may have shown an increasing trend in relative abundance while another species showed a decreasing trend, or a water parameter such as temperature may have shown variability with one cold year, followed by a warm and then a cold year. These contexts were important in explaining trends for each project but were also unique to these studies and not easily amalgamated into a coherent whole to describe the entire pool of 596 projects funded between 1997 and 2018.

Figure 8: Proportion of studies that reported on a multi-year trend. Only 25% of multi-year projects reported multi-year trends.

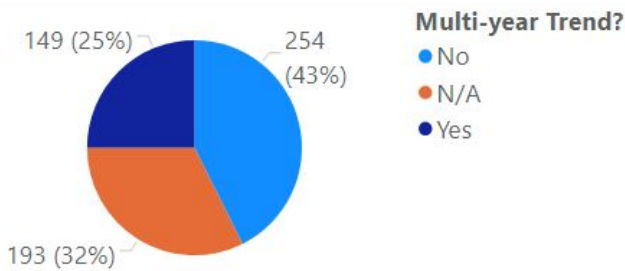
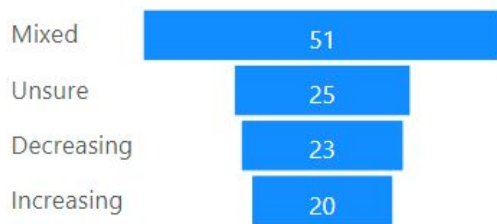
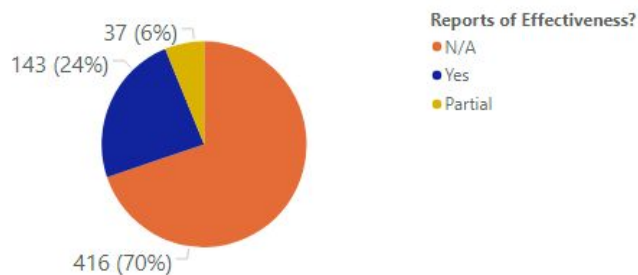


Figure 9: Number of studies reporting a specific multi-year trend.



Finally, we examined whether a project proponent described any component of effectiveness as part of their project. Any component of effectiveness, whether qualitative or quantitative, was considered in our analysis. Examples included reporting on participants' satisfaction with an education or outreach project, or the accuracy of one salmon enumeration method (sonar) compared to another (netting). Unfortunately, for the vast majority of projects (70%) we could not readily identify a form of effectiveness measure, while one-quarter of projects did have some form of effectiveness measure (Figure 10).

Figure 10: Number of studies that reported on effectiveness⁵



DISCUSSION:

We set out to compile, synthesize, and analyze results of projects funded by the R&E Fund in order to help the YRP understand the fund's achievements over the last two decades. We met this objective at a broad level and created a database of projects, results, funding, and achievements to allow the secretariat, the JTC, or other interested experts to further examine achievements. However, our focus on examining overall achievements over the last 20 years for some 596 projects required us to focus on larger emergent themes that would apply to as many studies as possible, and as such our findings tend to be generic and qualitative. This is a direct result of the diversity of projects that were analyzed and absence of common indicators uniting projects. As we progressed in our analysis we realized that emergent trends were difficult to discern because the R&E Fund did not have a specific structure in place (metrics, indicators) with which to track progress through time.

⁵ With respect to effectiveness reporting in Figure 10, the category N/A includes: No, unknown, and not applicable.

The R&E Funding Model in its current design has accomplished several important outcomes. Firstly, YRP-R&E Fund has successfully funded many (596) salmon-related projects over the last 20 years. It has helped many parties improve overall information as well as increase their technical capacity on salmon related matters. The proposal process is very accessible and inclusive; it consists of an open invitation process that welcomes any party to submit a proposal that meets R&E goals and priorities. The outcome of this open process has generated hundreds of project results consisting of a mixture of new exploratory work as well as multi-year long-term work.

However, the current funding model does not assess the effectiveness of funding decisions. For example, the top 5 categories funded by the YRP (Figure 1 & 2) do not appear to follow the ranked priorities outlined by the Yukon River Salmon Agreement (2001⁶) that provides guidance on funding first restoration, then conservation, then enhancement⁷. We highlight the need for the YRP to examine whether there is a discrepancy between what it aims to achieve and what it actually achieves in funding its work.

The absence of effectiveness assessment also makes it difficult to answer other important questions such as:

- Is the YRP advancing its knowledge with respect to salmon conservation, stewardship, restoration, or enhancement?
- Are relevant parties using the knowledge generated from the hundreds of projects funded by the panel?
- Does the YRP have enough information to inform its decision to fund further work?
- Should a multi-year project continue to be funded?
- In what region should funding be directed or prioritized?
- On what topic/issue should funding be directed or prioritized?
- Are people along the Yukon River benefiting from the outcome of the work funded by the R&E Fund?

The biggest gap to answering such questions is the absence of regular analysis of project findings and using this analysis to inform funding allocations the following year. Given this gap, we then re-focused our analysis on a coarse review of the current approach used by the YRP to administer its fund with a view to making recommendations for improvement.

⁶ Appendix I (attachment C) bullet 4 (page 12 of 14) of Yukon River Salmon Agreement (2001) - <https://www.yukonriverpanel.com/download/48/treaties-and-bylaws/456/yukon-river-salmon-agreement.pdf>

⁷ Page 3 of the Yukon River Panel R&E Fund Priorities Plan (2018) <https://www.yukonriverpanel.com/download/5/call-for-proposals/2132/yrp-re-fund-priorities-plan-2018.pdf>

Current YRP R&E Application Review & Approval Approach

The current review and approval process of the YRP R&E Fund includes the following approaches (Figure 11):



Figure 11 - Current YRP R&E Fund Process

1. The Fund is guided by "[The Priorities Plan](#)" (updated 2018 version), which provides an inventory of goals and priorities that guide the Panel in allocating R&E Fund monies amongst competing proposals.
2. Applicants submit their proposal by early fall (October 1)
 - 2.1. The YRP Secretariat gathers and tracks project information, such as project title, lead organization, salmon species, and funding requested, in an Excel file.
3. The Joint Technical Committee (JTC) reviews the Restoration and Enhancement project proposals in late fall. The JTC review consists of:
 - 3.1. Reviews by individual JTC members according to criteria in the Call for Proposals,
 - 3.2. Country-specific (section) meetings that result in separate Canada & US scores and proposed comments, and
 - 3.3. A bilateral meeting leading to consensus on JTC scores, ranks, and comments.The JTC uses a scoring matrix that considers 5 components:
 - Relevant and significant,
 - Technical merit,
 - Capacity to deliver,
 - Monitoring and assessment, and finally
 - Cost effectiveness.

It is unclear how proponent recommendations from their year-end reports are used by the JTC in formulating recommendations.

4. The Yukon River Panel meets in early December for its post-season meeting, at which time the JTC presents its review summary. The YRP may take this opportunity to ask questions or recommend modifications for the project proponents. The period for public comments on project proposals is now open.
5. The Yukon River Panel meets again the following Spring (early April) for its annual pre-season meeting, at which time final decisions are made on the allocation of funding to applicants. The period for public comments on project proposals is now closed.
6. Funded projects must submit a report during the first half of the following year; reports are posted on the YRP website.

As previously suggested, we believe there is a gap in the current YRP R&E funding process where there is an absence of a systematic review of results from previous years to inform future funding decisions. The JTC has also identified concerns with project proponents not summarizing their findings in their funding application for subsequent years. We believe the YRP / JTC should also be conducting its own analysis of results using reports from previous years rather than relying solely on proponent proposals. The below section summarizes two proposed approaches: 1) small process change; 2) large process change.

Proposed Approach 1: Small Change to Process

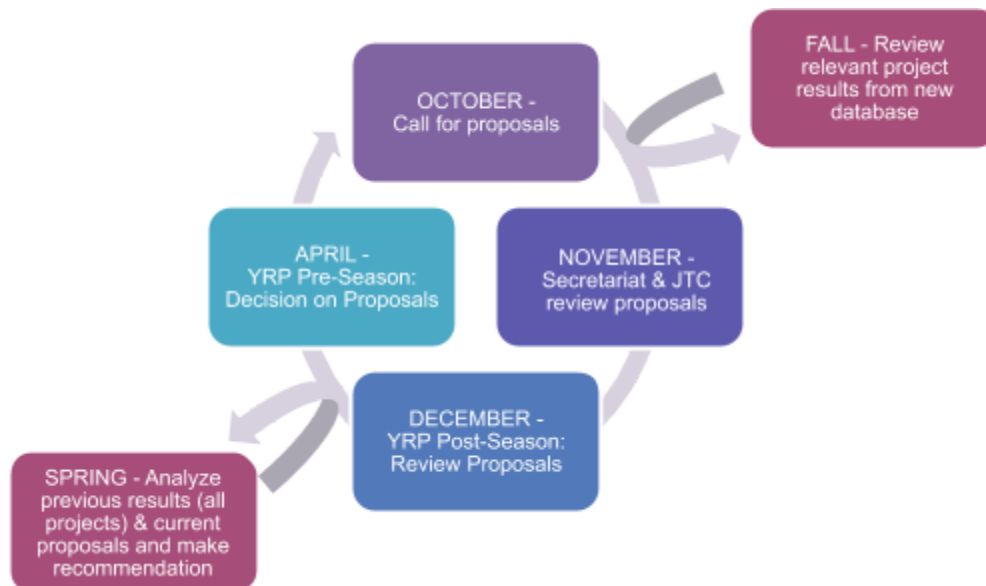


Figure 12 - Small Change to YRP R&E Fund Process (Option#1)

In order to ensure that outcomes and findings of previous years are integrated into the review process, we recommend that the YRP integrate previous project results into the decision-making process of the next funding cycle. This approach would require either the Secretariat or the JTC (and/or an external consultant) to review the results of previous years to:

- 1) Examine outcomes of the funded projects
- 2) Summarize outcomes

- 3) Inform funding decisions by providing summary information and recommendations to the YRP

The key questions to be considered by the Secretariat / JTC in its review include:

What results have been achieved? What information gaps or questions are being addressed? What are the outstanding gaps, or where is more work required?

Key sources of information for this review include the existing project summary information from 1997-2018 (under this NorthByNorth project, in the form of a database), as well as the previous year's reports (e.g. review 2019 reports for 2020 funding decisions).

Proposed Approach 2: Large Change

Similar to the above proposed approach, this recommended change would require the integration of results into the decision-making process of the next funding cycle, which is one significant component of the current challenge faced by YRP. A second modification to better ensure that YRP funding is directed effectively **is to enhance priorities by characterizing the outcomes (e.g. results) that are expected and the indicators that need to be tracked to measure progress. The call for proposals would then require funding proponents to more clearly identify how they intend to meet those priorities and measure outcomes and indicators.** The proponent self-assessment would also be supplemented with the YRP's own analysis of project results and indicators; conducted by the Secretariat / JTC.

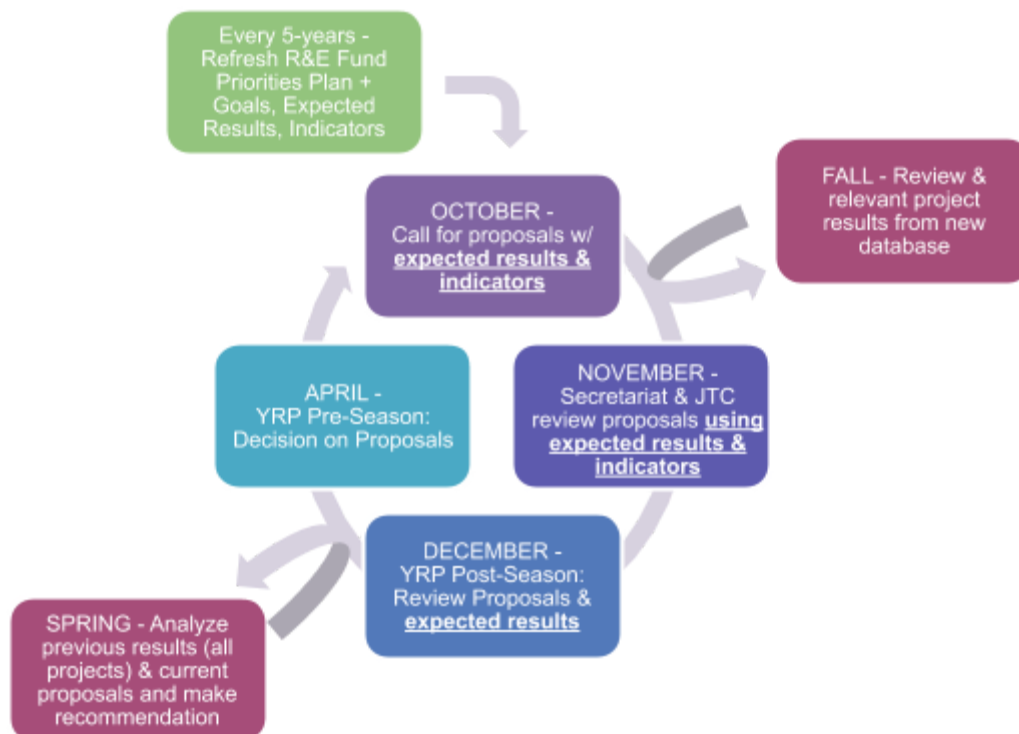


Figure 13 - Large Change to YRP R&E Fund Process (Option#2)

A more detailed process is included below.

1. Maintain “goals” (as is currently included in the Priorities Plan), but define the **end results** the YRP wants to see. Shift from mid-term and long-term priorities to **annual priorities**. Include priorities, goals, and results in the priorities plan - the goals would stay consistent for their defined time period (e.g. 5 years), with annual updates to the priorities (informed by previous year’s work – more on this below). The priorities plan would also include a set of indicators for proponents to adopt and report against in their respective reports.

Strategic Objective	Goals	End Results (5 years)	Performance Indicators
Restoration	<i>Identify and, when feasible and appropriate, restore depleted or extirpated wild Canadian-origin salmon stocks in the Yukon River drainage</i>	<i>e.g. Self-sustaining salmon sub-population at spawning ground X of river Y.</i>	<i>e.g. # of salmon spawning at location X vs other locations</i>
Conservation	Continue in-season border passage estimates	<i>e.g. Border passage estimates with a confidence interval accepted by all parties</i>	<i>e.g. Estimates by species reported x locations at y time of year.</i>
Stewardship	<i>Technical capacity building in communities.</i>	<i>e.g. Increased technical capacity of local community members..</i>	<i>e.g. # of learning opportunities per annum.</i>

The development of end results and indicators would require an investment of time and expertise by the YRP - it would likely take the form of multiple facilitated meetings to discuss and reach agreement on these strategic and performance management tools.

2. Issue a request for proposals that requires proponents to indicate which annual priority will be addressed and the indicators to be tracked. The YRP would need to update the guidance and templates provided to proponents to be clear and specific about what is being asked of them.
3. Review proposals against the new priorities plan and fund those projects that will achieve the results the YRP is seeking, supported by the Secretariat and Joint Technical Committee (similar to the current approach used by the YRP, but with annual priorities and indicators).

4. Review and analyze the results of the funded work from the proponents' reports & self-assessments. The results of the previous year's funded projects should also be reviewed and analyzed by the Secretariat / JTC to better understand: a) whether funding recipients are achieving what they set out to achieve, b) the impact of the work, c) whether the YRP's priorities are being addressed (i.e. evaluate outcomes of multiple projects against indicators of success), and d) whether more work is needed on this topic going forward.
5. Integrate the results into the decision-making process of the next funding cycle.
6. Secretariat to compile project outcomes and recommendations in an annual report for the YRP. The report could include:
 - a. Background and context information about the YRP and its goals and priorities
 - b. Financial information (total funding for that year, reported by strategic objective and type of organization)
 - c. A roll-up of project outcomes
 - d. Project summaries (*a hypothetical example is provided below*)

Project ID	Title	Lead organization	Location	Amount funded	Priority alignment	Project outcomes
<i>Example: 123</i>	<i>Restoration of Michie Creek</i>	<i>ABC Consulting</i>	<i>Michie Creek</i>	<i>\$50,000 CAN</i>	<i>Restoration 1A</i>	<i>The project team restored 100m² of Michie Creek, at X location. Two local Indigenous youth were trained and participated in the project, building skills in environmental restoration and monitoring.</i>

CONCLUSIONS:

We reviewed 596 project reports supported by the YRP's R&E Fund between 1997-2018. We found that the R&E Fund has helped hundreds of people on salmon-related projects for two decades. Results from these projects are wide and diverse in topics representing a diverse group of funding recipients. We found that project objectives, as outlined in project reports, match the outcomes reported by project proponents; in other words, proponents generally achieved what they set out to do. The top funded categories were Conservation (72%) & Stewardship (42%), and the top funded recipients were First Nations / Indigenous (39%) & Consultants (32%). We found most studies were funded more than once (i.e. multi-year) (82%), but few studies report on multi-year trends (28%).

We found the largest impediment to a comprehensive review of R&E Fund achievements is the absence of specific end results and measurable indicators that the YRP wishes to achieve from its funding decisions. Rather, there is an over-reliance by the R&E Fund on project proponents reporting their findings, conducting their own review, and providing their own recommendations (and these recommendations do not appear to be considered in the current review process). In order to remedy these gaps, the R&E fund should supplement the analysis of proponents by conducting its own review and analysis of past results for all project proponents to generate knowledge from the data and inform decision-making on project proposals. It could further enhance the process by developing indicators to measure whether fund goals are being achieved. Only with such a structured approach to learning can specific and measurable results be reported.

Appendix 1 - Data-entry screen representing evaluation framework

Michie Creek Monitoring 2018 Final

Organization	Kwanlin Dun First Nation (KDFN)	File 1	File 1
Code	CRE-51-18	Currency	CAD
Year	2018	PSC funding granted	\$22,800.00
Updated by	Marc Lange		
Updated on	10/16/2019		

Report assessment

Organization
 Currency: CAD

PSC funding granted

Objectives / Purpose
 The specific objectives of the 2018 Michie Creek Chinook salmon monitoring project were:
 1. Maintaining access by adult Chinook salmon to the primary spawning area in Michie Creek near the outlet of Michie Lake;
 2. Continuation of environmental monitoring of the physical

Results / conclusions
 1. The low snow-pack, dry and cool weather conditions during the early spring and throughout May and July resulted in flows that were well below the historic average for upper Michie Creek in 2018.
 2. Water temperatures in upper Michie Creek were thought to be above the

Categories
 Viable Fisheries
 Communication
 Stewardship
 Enhancement
 Conservation
 Restoration

Goals

- [Enhancement] Habitat - Increase Yukon River Canadian-origin salmon stock production through creation of improved habitat.
- [Conservation] Stocks - Provide for continued viability by developing improved information for in-season and long-term salmon management in the Yukon River drainage, including better stock assessment, data acquisition (including harvest monitoring and quality of escapement) and, improved understanding of factors affecting salmon production and harvest.
- [Restoration] Habitat - Maintain wild salmon stock productivity in the Yukon River drainage through ensuring salmon access to spawning and rearing habitat and restoration of degraded habitat.

Priorities

- 8. [Restoration - Habitat] - Identify potential spawning and rearing habitat restoration sites. [Mid-term]
- 20. [Conservation - Stocks] - Obtain information on the quality of escapement (e.g. age/size/sex/health). [Mid-term]
- 26. [Conservation - Habitat] - Locate and document spawning and rearing habitat. [Mid-term]
- 27. [Conservation - Habitat] - Characterize habitats used by different life stages of salmon. [Mid-term]
- 33. [Enhancement - Habitat] - Conduct habitat enhancement projects. [Long-term]

Complete additional information

Salmon species
 Chinook
 Chum
 Coho

Watershed

Rivers, Creeks

Multi-year? *
 Yes
 No
 N/A

Detection of Multi-year Trend? *
 Yes
 No
 N/A

Did the project monitor effectiveness?

Recommendations Provided

Additional Notes (e.g. effectiveness measurement tool):

Measured (estimated parameters)
 Biophysical (includes data related to age, length, sex, and health)
 Genetic (includes DNA, tissue analysis)
 Other (use this category to highlight other parameters that the project investigated such as water temperature, atmospheric data)

Other measured / estimated parameters

Description of trend

What is the Multi-year trend?
 (Does the project establish a multi-year trend (in a parameter significant to the YRP - e.g. abundance, water temperature, habitat)?)
 Trend analysis spanning the period from 2004 to 2018 suggests a temporal decline in both counts of female Chinook salmon enumerated at the WRFL and their associated redds in the Michie Creek index area

APPENDIX 2 - Number of projects associated with different YRP R&E Fund Priorities (ranked)

Priority #	Priority Statement	Count Number
20	Obtain information on the quality of escapement (e.g. age/size/sex/health).	193
21	Identify and monitor escapements to key salmon spawning streams/area (e.g. index streams).	180
36	Technical capacity building in communities.	154
16	Improve in-season stock specific run-size estimates, assessment methodology and analysis of spatial and temporal aspects of salmon migration at the mouth of the Yukon River.	135
28	Environmental monitoring, particularly of key index streams.	120
38	Conduct public outreach and education projects for people who fish on the river, youth, communities and the public to increase their desire to maintain and protect salmon stocks and habitat.	115
35	Involve and educate users and non-users in communities to increase their desire to maintain and protect salmon stocks and habitat.	111
26	Locate and document spawning and rearing habitat.	104
14	Improve in-season [fishing season] and post-season resolution of genetic stock identification for Yukon River salmon.	98
1	Identify depleted stocks or limits to production (e.g. based on information about historic levels, traditional ecological knowledge, conservation concerns, or habitat "bottle-necks") & identify candidates for stock restoration	75
37	Facilitate traditional or local knowledge research to document information on salmon and their habitats.	63
15	Continue in-season border passage estimates.	55
7	Restore fish access to spawning and rearing habitat.	50
19	Community-based management planning.	48
27	Characterize habitats used by different life stages of salmon.	42
3	Restore depleted stocks	37
25	Document factors affecting survival, health and mortality at all life stages (production).	30
8	Identify potential spawning and rearing habitat restoration sites.	24

40	Maximize the value of the Canadian harvest to make fisheries viable.	23
39	Conduct outreach projects that promote the integration of scientific and traditional knowledge.	21
10	Restore and/or improve quality of spawning and rearing habitat.	16
2	Assess feasibility of and prepare plan for restoring depleted stocks	16
29	Examine linkage of disease, parasites and contaminants to freshwater habitats.	16
4	Evaluate effects and success of restoration efforts	15
22	Obtain in-season stock specific harvest estimates for Canadian and U.S. run components.	14
23	Investigate and establish levels of confidence in subsistence harvest estimates.	14
9	Assess feasibility and prepare plan for habitat restoration.	11
11	Evaluate effects and success of restoration efforts.	10
31	Research and investigate habitats suitable for salmon range extension in existing systems, or that would benefit from habitat enhancement to expand wild stock productivity.	10
12	Community development of individual watershed-based restoration plans.	9
18	Investigate stock specific harvest strategies.	9
17	Assess and understand the impacts of fishing techniques.	8
24	Develop scientifically-based escapement objectives for Canadian-origin salmon.	8
13	Develop and test habitat restoration techniques.	6
33	Conduct habitat enhancement projects.	6
5	Develop and test stock restoration techniques	6
6	Conduct emergency response projects (e.g. harvest displacement, etc.).	6
30	Community development of individual watershed-based enhancement plans.	4
32	Assess feasibility and prepare plan for habitat enhancement.	3
34	Evaluate effects and success of habitat enhancement projects.	3