

Yukon River Panel  
Restoration and Enhancement Fund  
Evaluation Framework

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Final Report

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## Introduction

The Yukon River Panel is creating a Budget Priorities Framework for its Restoration and Enhancement Fund. The Budget Priorities Framework is intended to assist the Yukon River Panel and its Restoration and Enhancement Fund Sub-Committee to best spend monies available under the Restoration and Enhancement Fund according to the goals, objectives and priorities of the Fund, as described in the Yukon River Salmon Agreement.

The Yukon River Panel wishes to establish an Evaluation Framework for the Restoration and Enhancement Fund. An Evaluation Framework is a “blueprint” setting out how a program will be evaluated in the future.

In this document, we present an Evaluation Framework for the Yukon River Panel’s Restoration and Enhancement Fund.

## Background: The Budget Priorities Framework

A workshop was held in Whitehorse in May 2003. The purpose of the workshop was to begin defining the Budget Priorities Framework. Workshop participants included members of the Restoration and Enhancement Fund Sub-Committee of the Yukon River Panel and technical staff of the Alaska Department of Fish and Game, Fisheries and Oceans Canada and the United States Fish & Wildlife Service.

The draft Budget Priorities Framework appears in a document entitled *Yukon River Panel Restoration and Enhancement Fund Budget Priorities Framework: Second Draft (August, 2003)*. Budget priorities are identified for seven “envelopes” or “portfolios” of salmon management needs

## Approach: The Evaluation Framework

The Evaluation Framework begins the definition of “indicators” to evaluate the Restoration and Enhancement Fund. Indicators are specified in terms of tables, graphs and charts showing key data on the program being evaluated. These key data usually reflect the explicit or implicit goals and objectives of the program.

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We then define some evaluation issues. These are particular questions that should be addressed during the evaluation. They may or may not be amenable to a quantitative response.

Finally, we define the data required to calculate the indicators and respond to the issues. We then discuss sources of these data and describe data collection and management strategies for ensuring that they are available when the time comes to evaluate the Restoration and Enhancement Fund.

## Evaluation Indicators

In this section, we present evaluation indicators for the Restoration and Enhancement Fund.

### Abundance

The first set of evaluation indicators focuses on fish production.

#### Fish Production by Species

The primary aim of the Restoration and Enhancement Fund is the restoration, conservation and enhancement of Canadian-origin salmon stocks. The first indicator, therefore, measures the Fund's contribution to salmon abundance in the Yukon.

Species	2002	2003	2004	2005	2006	Total
Chinook	# of returning adult fish attributable to Restoration and Enhancement Fund.					
Chum						
Coho						
Total						

Initially, it may be difficult to estimate the proportion of the returning salmon run(s) that are attributable to activities sponsored by the Restoration and Enhancement Fund. At current salmon abundance levels and with current stock identification technologies, it is not possible to distinguish "Restoration and Enhancement Fund" salmon from wild salmon. Professional judgement may therefore

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need to be used to identify and distinguish wild salmon from those produced by Restoration and Enhancement Fund projects.

### Escapement by Watershed

Another way of evaluating the Fund’s contribution to fish production would be to examine escapement levels following the implementation of Restoration and Enhancement Fund projects (allowing sufficient time for each brood year to return to spawn).

	2002	2003	2004	2005	2006	Total
Porcupine	# of salmon escaping (spawning population) attributable to Restoration and Enhancement Fund.					
Pelly						
Stewart						
Teslin						
White						
Yukon North						
Yukon Mid						
Yukon South						
<b>Total</b>						

A similar problem arises here in distinguishing wild spawning salmon from those produced by Fund projects. Furthermore, at present, salmon stocks are not identified by watershed due to low abundance and absence of stock identification technologies.

### Harvest

The benefit of increased fish production is generally realised when fish are harvested, whether in subsistence, domestic, commercial or recreational fisheries.

### Harvest by Fishery

The following table shows fish harvest by fishery. It may be useful to track harvest by species as well.

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Species	2002	2003	2004	2005	2006	Total
Subsistence	# of adult fish harvested attributable to Restoration and Enhancement Fund.					
Domestic						
Commercial						
Recreational						
<b>Total</b>						

## Employment, Earnings & Training

The Restoration and Enhancement Fund and its projects have an important benefit on citizens of the Yukon in terms of employment, earnings and training.

### Employment, Earnings & Training

	2002	2003	2004	2005	2006	Total
Employment	# person-months of employment in REF projects					
Earnings	\$ of income earned in REF projects					
Training	# of people trained in REF projects					

There will also be some employment generated in fisheries when they open/expand due to increased abundance. This source of employment and earnings should be added to that attributable to REF projects.

## Project Expenditures

### Total Expenditures by Type of Expenditure

In this section Restoration and Enhancement Fund expenditures would be presented by type of expenditure: Projects, Administration and Communications. It is assumed that these three categories account for 100 per cent of Restoration and Enhancement Fund expenditures.

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	2002	2003	2004	2005	2006	Total
Projects	\$					
Communications						
Administration						
<b>Total</b>						

### Project Expenditures by Type of Project

It may be useful to portray Restoration and Enhancement Fund expenditures in terms of the types of projects identified as priorities in the Yukon River Salmon Agreement.

	2002	2003	2004	2005	2006	Total
Restoration	\$					
Conservation						
Enhancement						
Stewardship						
Viable Fisheries						
<b>Total</b>						

### Project Expenditures by Watershed

A table like the one below could be used to show how Restoration and Enhancement Fund monies were distributed among Yukon River watersheds.

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	2002	2003	2004	2005	2006	Total
Porcupine	\$ spent on REF projects					
Pelly						
Stewart						
Teslin						
White						
Yukon North						
Yukon Mid						
Yukon South						
<b>Total</b>						

## Public Acceptance

The last indicator, suggested by the Yukon River Panel during the review of the Evaluation Framework, is public acceptance. The public's view of the Restoration and Enhancement Fund is important in terms of the Funds credibility and the derived support for protection, conservation and restoration of salmon stocks and habitat that accompanies a credible program. This is similar to the support for salmon stock and habitat restoration and enhancement that flows from the benefits derived from a viable fishery.

This indicator will be narrative, not quantitative. Information on public acceptance of the Restoration and Enhancement Fund will have to be gathered by interviews of members of the public in communities within each watershed, collection of media reports on the program, views of key contacts such as habitat stewards and fisheries agency staff.

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	2002	2003	2004	2005	2006	Total
Porcupine	Public accep- tance of REF					
Pelly						
Stewart						
Teslin						
White						
Yukon North						
Yukon Mid						
Yukon South						
<b>Total</b>						

The interviews of community members to gauge public acceptance of the Restoration and Enhancement Fund could be conducted annually or quinquennially (depending upon the perceived importance of this indicator and the Yukon River Panel’s willingness to take actions if public acceptance is not at “acceptable” levels to the Panel (ie, there is little use in measuring public acceptance annually if the Panel would not take actions to improve public acceptance should it prove to be “too low”). Whatever the schedule chosen, a baseline interview study now is advisable.

Someone should be tasked with monitoring and clipping media articles on the Restoration and Enhancement Fund (including summarising radio commentary and news reports). This information will then be available for textual analysis when the evaluation is conducted after five years.

## Evaluation Data

In this section we would discuss data requirements, availability, sources and gaps.

At this point, this section is very preliminary. Once the Evaluation Indicators are finalised, a much more detailed account of data requirements, availability, sources and gaps will be prepared.

## Biological Data

With regard to availability of biological data, records of returning abundance and escapement are maintained by fishery management agencies.

Currently, it is unlikely that the Restoration and Enhancement Fund contribution to fish production and escapement could be distinguished. Until new techniques are developed (eg, real-time DNA analysis), contributions of the Restoration and Enhancement Fund will depend upon professional judgement.

## Harvest Data

Management agencies should have harvest data by type of fishery and by species.

Professional judgement will be required to estimate the proportion of the harvest attributable to Restoration and Enhancement Fund projects.

## Employment, Earnings & Training Data

The Restoration and Enhancement Fund Secretariat has project documentation that reports (or should report) employment, earnings and training information.

REF project documentation should be reviewed for data included in the Evaluation Framework. This could lead to new requirements in Restoration and Enhancement Fund contracts to require proponents to report certain types of information identified as required for program evaluation.

## Project Data

The Restoration and Enhancement Fund Secretariat has records of projects for current and past years including project summaries and proponent's documentation.

## Public Acceptance Information

Information on public acceptance does not presently exist and must be collected, as discussed above, primarily through interviews with the members of the public in

communities throughout the watersheds of the Yukon River and its tributaries. This information is not likely to be quantitative; narrative information will be collected which can be summarised by the evaluator to describe public acceptance of the Restoration and Enhancement Fund.

Baseline narrative data should be collected now and evaluation data should be collected annually or quinquennially as determined by the Yukon River Panel.

## Evaluation Issues

In this section we suggest (in no particular order) some evaluation issues as candidates for inclusion in the Evaluation Framework.

1. To what extent have Restoration and Enhancement Fund projects contributed to knowledge of salmon stocks and habitat?
2. How have Restoration and Enhancement Fund resources been split between adding knowledge and contributing to fish production?
3. To what extent have the abundance and health of Yukon River salmon stocks, and accessibility and health of salmon habitat, been improved as a result of the Restoration and Enhancement Fund?
4. What has been the economic contribution of Restoration and Enhancement Fund projects to the Yukon (and Alaska)? Includes Restoration and Enhancement Fund project employment and economic benefits such as fisheries.
5. To what extent has the Restoration and Enhancement Fund fostered an ethic of stewardship and promulgated knowledge of salmon conservation and sustainability?
6. Are we any nearer to having a commercial fishery in the Yukon as a result of the Restoration and Enhancement Fund?
7. To what extent does the public support the Restoration and Enhancement Fund and to what extent has that support translated into greater effectiveness of salmon restoration and enhancement?