

**Southern Boundary
Restoration & Enhancement Fund**

**Call for Project Concepts for the
2019 Project Year**

The Southern Fund Committee (SFC) anticipates that up to approximately U.S. \$2.7 million may be available for project funding in 2019. Because income from investments cannot be assured, the actual amount will depend on fund investment performance between now and the end of this year. The Committee wishes to draw attention to the fact that in this 2019 Call for Proposals, consideration will be given first and foremost to those proposals that are directly responsive to the specific priorities emphasized in this Call. It is likely that only limited funding will be available for projects that address purposes outside these priorities and proponents of such projects are cautioned to carefully weigh their costs of proposal preparation against the stiff competition they will face. Both private and public sector applicants are eligible to apply.

This Call for Proposals places emphasis upon the following two categories:

- Fraser River Panel Priorities
- Southern Panel Priorities

Project design criteria for Fraser River Panel priorities.

(1) Additional Fraser Sockeye salmon juvenile monitoring.

Two types of projects addressing one or both of the two elements below are desired:

- a) Monitoring of juvenile Sockeye in upstream locations in the Fraser watershed including either out-migrating smolts or lake surveys, and
- b) Monitoring of juvenile salmon in lower Fraser locations.

(2) Examination of mechanisms affecting early survival of Fraser River Sockeye salmon.

These projects should be restricted to either analysis of existing datasets and/or modest additions to existing field projects which are addressing freshwater and marine survival mechanisms. Linking proposals to monitoring programs under priority (1) above is desired, but not essential.

(3) Improvement of species composition estimates in the Fraser River during sockeye salmon migration.

Given the low returns of Fraser River sockeye salmon in 2015-2017, the prospects for large sockeye returns in 2019-2021 are poor. Therefore, species composition estimates and the possible bias they may create for both the daily and total sockeye abundance estimates require additional scrutiny. Proposals to evaluate alternative species composition estimation methods could include, but are not restricted to, the species composition method identified within the interim report by the independent consultant during the FSRC review, or methodologies to estimate in-river abundance of co-migrating salmon stocks such as pink salmon and chinook.

(4) Examination of primary causal factor(s) causing large discrepancies between Mission and Qualark on the 2010 cycle line, using data collected for this specific purpose in 2018.

Recommendations regarding future configurations of lower Fraser acoustic sites are expected from the FSRC in January 2019, which will arrive too late for the 2019 Call for Proposals. However, the collection of additional data through experiments designed to identify the primary causal factor(s) of the large discrepancies between Mission and Qualark on the 2010 cycle line have been planned at both sites in 2018. Therefore, the Panel supports proposals that utilize these additional data to investigate potential causal mechanisms through the evaluation of the new data streams. Given the timing of the funding cycle, this work will not be completed prior to the FSRC recommendations in January 2019, but may inform future work as well as future hydroacoustic operations at these sites.

(5) Further work to follow-up on the Test Fishery Workshop Report's five recommendations.

2019 will be the sixth year of a return to 'use of fish' to fund test fishery programs used to assess the return abundance, timing and diversion rate of Fraser River sockeye and pink salmon. This change increased the quantities of fish required relative to the 2007-2012 period when the majority of funds came from agencies (largely DFO). We greatly appreciate SEFC support of a two-year project to conduct two workshops related to this topic. This project has now concluded and resulted in a technical report being published (at <http://www.psc.org/download/33/psc-technical-reports/10620/psc-technical-report-no-40.pdf>). The Panel supports proposals to conduct work in support of the report's five recommendations.

(6) Exploration of alternative methods for making pre-season forecasts of northern diversion rate for Fraser River sockeye and pink salmon.

In recent years Fraser sockeye northern diversion rates have fluctuated between less than 20% in 2008 to more than 95% in 2014. Forecasts of northern diversion rate impact pre-season fisheries planning, and in-season values affect the implementation of fisheries designed to achieve agreed international shares of the TAC. In-season fluctuations in diversion rate have not typically been forecast pre-season. Consequently, the Fraser River Panel is interested in exploring alternative forecast methods for both Fraser sockeye and pink salmon diversion rates and in evaluating the relative performance of new and existing forecasts models.

(7) Work to restore salmon habitat that would be of benefit to Fraser River Sockeye populations (and possibly also other salmon species).

Over the past decade or more a number of Fraser River sockeye stocks which used to contribute to important fisheries have experienced significant declines, and despite large reductions in fishing pressure, have not recovered. Consequently, fishing opportunities for the two countries have been affected. While marine survival is likely a factor, changes to freshwater habitats may also be contributing to conservation challenges. The Fraser River Panel is therefore interested in opportunities to restore sockeye habitat, with the objective of taking action to address persistent limitations to sockeye productivity in freshwater spawning and rearing habitats.

Project design criteria for Southern Panel priorities.

(1) Determination of reference points and associated allowable exploitation rates for PST status categories for Canadian Coho Management Units (MU).

A third year of funding is needed for a project to build upon recent Canadian efforts to determine Wild Salmon Policy status of component Conservation Units and should translate this work into PST management unit (MU) status. This would enable continued progress on the Interior Fraser MU as well as further progress working on the Georgia Strait and Lower Fraser MUs.

(2) Development and administration of an information system for improving efficiency in archiving and sharing reports, data, and models produced by the Coho Technical Committee.

(3) Assessment of the performance of Coho FRAM to project pre-season exploitation rates and estimate post-season exploitation rates (e.g., sensitivity to or accuracy of mark rates, catch and escapement estimates, release mortalities, etc.).

(4) Improvements in abundance forecasting and escapement estimation for Coho Management Units (MUs), including better understanding of the impacts of environmental variability and uncertainty.

(5) Improved data collection and sampling -- including coded-wire tagging (CWT), parental-based tagging (PBT), and genetic stock identification (GSI) programs -- for Coho MUs and component populations, to address issues identified in PSC Technical Report 25.

These issues to be addressed include deficiencies in CWT releases, CWT indicator stocks, and adequacy of sampling programs to provide the data needed for analysis of stock compositions and survival.

(6) Improvements to the cost efficiency and effectiveness of Coho stock and fishery assessment and information reporting programs.

(7) Chum salmon run reconstruction model and biological database. (ChumGEM Model - Chum salmon Genetic and Environmental management Model)

Continued development of the existing run reconstruction model and biological database for Southern BC and Washington Chum salmon is needed. A central component of the Southern Chum Salmon Strategic Plan is to develop a model that incorporates genetic, escapement, fishery and environmental components. The Chum Technical Committee requests continued support for ongoing development of the *Chum salmon Genetic and Environmental Management (ChumGEM) Model*.

(8) Genetic stock identification (GSI) sampling of Chum salmon in commercial and test fisheries.

The Chum Technical Committee would like to continue with another three years of this sampling program to ensure that we capture the variability in distribution and migration timing required as inputs to the run reconstruction model (ChumGEM).

- Ongoing sampling should continue to focus on key mixed stock fisheries in Johnstone Strait and U.S. border areas, including any emerging fisheries.
- The sampling plan and analysis should follow the same protocol as the 2012-2015 SEF project “*Joint US and Canada Mixed Stock Fishery Sampling Design*”.

(9) Establish a Chum salmon assessment program in the Strait of Juan de Fuca.

A significant gap exists in our current understanding of the temporal and spatial distribution of Southern BC and Washington State Chum that migrate through the Strait of Juan de Fuca.

- A dedicated assessment project is currently funded from 2016 through 2019, contingent on annual approval. In the first two years (2016 and 2017) this project successfully demonstrated the feasibility of this assessment program. The Chum Technical Committee seeks funding to continue at least through two full brood cycles to evaluate the inter-annual variability.

(10) Southern BC and Washington Single Nucleotide Polymorphism (SNP) baseline implementation.

The Chum Technical Committee supports the development of and augmentation of the Joint Canadian and U.S. Southern B.C. and Washington State Chum SNP baseline for stock identification in mixed stock fisheries.

- New spawning ground samples from both Canadian and U.S. populations are required to augment this joint baseline. Dedicated sampling programs are needed to collect a minimum of 95 samples for each population and to supplement collections in the existing baseline represented by less than 95 samples or extremely dated collections.

(11) Improve Chum salmon escapement assessments

The Chum Technical Committee needs continued support to evaluate the feasibility of using alternate assessment approaches to increase coverage and improve estimates of spawning escapement for Southern BC and Washington Chum salmon.

- To that end, the Committee supports proposals that explore the feasibility of using new approaches or technology to improve Chum escapement estimation.

Application Process

The SFC uses a two-stage submission and review process. The initial review stage is designed primarily to evaluate the proposal's relevance and significance to the Pacific Salmon Treaty and the priorities outlined in the Strategic Plan and this Call for Proposals. As such, project proponents should focus on providing a clear description of project objectives and benefits in this first round concept stage, rather than on the development of detailed project implementation and budget information. That information will need to be provided in greater detail later, but only for those project concepts selected for second stage review.

The two-page "Project Concept" form that accompanies this Call for Proposals is the format that must be used by all proponents. The use of this format allows the SFC to conduct its first-round review of submissions in as fair and expeditious a manner as practicable. Completed forms must be returned to the Fund Manager at the Pacific Salmon Commission offices in Vancouver, BC in electronic format only by **midnight (24:00) on Sunday, September 2nd, 2018** at the following e-mail address: southfund@psc.org.

The first-round review of all Project Concept proposals by the SFC will take place in September, 2018. Those proponents who's Project Concepts appear to best match the stated objective of this Call for Proposals will be invited to prepare a more detailed proposal for submittal to stage two of the process. Projects approved to move to the second stage will have until November 18th, 2018 to submit final, detailed applications on a form that will be provided. The detailed applications will be subject to an in-depth technical review. The SFC will make its final funding decisions in February, 2019.

Deadlines

Project Concept forms must be in electronic format and must be received, preferably by e-mail, at the following address: southfund@psc.org by **midnight on Sunday, September 2nd, 2018**.

Contact Information

More information and "Project Concept" forms may be accessed online at www.psc.org. Questions or points of clarification should be directed to the Fund Manager, Angus Mackay or the Fund Assistant, Victor Keong via phone at (604) 684-8081, or email at Mackay@psc.org or Keong@psc.org

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