

**Southern Boundary
Restoration & Enhancement Fund**

**Call for Project Concepts for the
2017 Project Year**

The Southern Fund Committee (SFC) anticipates that approximately U.S. \$1.73 million may be available to continue funding up to fourteen on-going projects (i.e., projects funded by the Southern Fund in 2016 and earlier) including a multi-year commitment to the Salish Sea Marine Survival Program. Specific guidance provided by the Pacific Salmon Commission with respect to very high priority chinook projects supporting the implementation of Chapter 3 of the Pacific Salmon Treaty will also be given due consideration.

As a result, only a limited amount of funding will be available for grants to new projects starting in 2017. 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 therefore wishes to draw attention to the fact that in this 2017 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 not likely that any 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 four categories:

- Fraser River Panel Priorities
- Southern Panel Priorities
- Very High Priority Chinook Projects
- Short-term Habitat & Enhancement Projects

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 marine survival mechanisms. Linking proposals to monitoring programs under priority (1) above is desired, but not essential.

(3) Improvements to methods used to estimate mainstem Fraser escapements.

These projects should be related to hydroacoustic estimates of Fraser River Sockeye escapements in the lower Fraser. They could include capital purchases, data processing and evaluation of methods consistent with advice from the Fraser River Strategic Review Committee. Proposals related to programs at Mission and Qualark (as an evaluation tool) should be considered for funding.

(4) Analytical work to evaluate test fisheries and alternative opportunities to collect Fraser sockeye and pink adult assessment information.

2017 will be the fourth 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 has increased the quantities of fish required relative to the 2007-2012 period when the majority of funds came from agencies (largely DFO). The Panel supports proposals to conduct an analytical evaluation of alternatives and/or a workshop leading to recommendations for an optimal assessment program that could consider the integrated evaluation of hydroacoustics and alternative test and other fisheries data in a way that balances management objectives such as conservation requirements, information needs, and financial risk, with the ultimate goal of ensuring the cost-effective use of fish. Other related work may be considered.

Project design criteria for Southern Panel priorities.

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

This builds on recent Canadian efforts to determine Wild Salmon Policy status of component Conservation Units and should translate this work into PST MU status.

- Initial process to be focused on the Interior Fraser MU.
- Subsequent process to be focused on Georgia Strait Mainland, Georgia Strait Vancouver Island, and Lower Fraser MUs.

(2) Improvements/increased efficiencies for Coho-FRAM functionality.

These should include:

- Data management;
- Development of standard formats for data compilation and exchange, and data inputs to FRAM and backwards FRAM; and
- Development of an audit and tracking system for reporting of changes to FRAM code and data.

- Requires collaboration with Coho Technical Committee Model Working Group and to include presentation and discussion at Coho Technical Committee Model Working Group meeting.

(3) Improvements to the effectiveness of the Coho CWT program; Management Unit representation; and, monitoring program coverage.

Coho stock assessment and management is hampered by shortcomings in the effectiveness of the Coded Wire Tag program due to low tagging rates; insufficient Management Unit representation and incomplete coverage of monitoring programs. Proposals are sought to address these deficiencies or find alternative ways to achieve the same information.

(4) Improved estimation of the migration timing for Interior Fraser River Coho stocks.

Given continuing concerns for the depressed status of this Management Unit, some method for obtain data for migration timing and distribution through non-lethal means is desired. For example, DNA analysis could be employed to determine dates and locations where fisheries could be conducted with acceptable impacts on Interior Fraser Coho, particularly in approach areas to the Fraser River.

(5) Chum salmon run reconstruction model and biological database (ChumGEM)

Continued development of a post-season run reconstruction for Southern BC and Washington State Chum Conservation and Management units is needed.

- Minimum output will include:
 - Age-specific posterior distributions for pre-terminal run size by Conservation Unit (CU) and Management Unit (MU)
 - CU and MU specific exploitation rates
- Programming support required to continue run reconstruction model development, testing and improve model usability by Chum technical members.
 - Model development should keep in mind future developments and expansion capabilities for things such as annual fishery planning and long term stock management.
 - Include a comprehensive run reconstruction assessment for all years 2008-2015 based on data availability.
 - Construct a simulation framework to evaluate alternative monitoring designs.
- Requires collaboration with Chum Technical Committee Model Working Group and to include presentation and discussion at Chum Technical Committee Model Working Group meeting.

(6) Genetic sampling of Chum salmon in commercial and test fisheries

Comprehensive sampling of existing and developing fisheries is needed for determining the stock composition, migration timing, and distribution of Chum salmon in the various fisheries relevant to the Chum salmon Annex. Continuing multi-year genetic sampling activities is needed to capture the variability in distribution and migration timing.

- Sampling should focus on key mixed stock fisheries in Johnstone Strait and U.S. border Areas, including any emerging fisheries.

(7) Test fishery sampling program in the Juan de Fuca Strait

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 Juan de Fuca Strait. Understanding the magnitude and timing of Chum migration through this area is critical for generating accurate run reconstruction estimates. The existing fishery in the Strait of Juan de Fuca has limited effort and a dedicated Chum sampling program of limited duration is required to generate adequate samples for analysis.

Work should include:

- Sampling of Chum migration through Juan de Fuca Strait to improve our understanding of stock specific temporal and spatial distribution of Southern BC and Washington State Chum
- Collecting CPUE and biological information (i.e. Age, sex, length and DNA tissue)

(8) Improve Chum Salmon Escapement Assessments

Work should include:

- Application of new technology and techniques for escapement estimation for Chum Salmon in Southern BC and Washington State
- Assess the feasibility of using alternative assessment approaches to increase coverage and improve estimates of spawning escapement for Southern BC and Washington State Chum

(9) Development of Chum salmon escapement reference points

The selection of a methodology for developing escapement reference points depends on the quality and type of data available. Because of this, numerous approaches have been used in Southern BC and Washington State to establish reference points (i.e. escapement goals, upper and lower escapement benchmarks), and there is little consistency in methodology across Chum stock groups. Additionally, many escapement reference points currently being used were established over twenty years ago and may not reflect current trends in freshwater and ocean productivity.

Work should include:

- Summarize the current state of Chum stock assessment data and provide advice and demonstrate appropriate methodologies for reference point development given the existing data.
- Develop a “toolkit” which can be used both domestically and internationally to evaluate current and/or establish new escapement reference points for Southern BC and Washington State Chum.

Project design criteria for Very High Priority Chinook Projects.

Guided by the recommendations of the Pacific Salmon Commission and the Chinook Technical Committee (CTC), the Southern Fund Committee is again soliciting proposals for very high priority chinook projects. The following is a list for 2017 of priority activity themes for projects to support the implementation of Annex IV, Chapter 3.

- (1) Sampling in fisheries and escapements, lab processing, and data reporting to support the recovery of adequate numbers of Coded Wire Tags (CWT) to support estimation of precise statistics produced by the cohort analysis procedure.
- (2) Coded Wire Tagging of CTC exploitation rate indicator stocks (single index tagging and double index tagging) designed to improve the quality and quantity of CWT data identified in PSC CWT guidelines.
- (3) Continued or improved estimates of catch, terminal returns, and escapements to meet CTC data standards.
- (4) Development of additional escapement goals and stock-specific exploitation rate management objectives needed to implement the Chinook management regime.
- (5) PSC Coast Wide Chinook model and Exploitation Rate Analysis improvements.
- (6) Improvement of methods for stock and fishery assessments (e.g., estimation of spatial/temporal stock-age distribution, projection of maturation rates for incomplete broods, systematic evaluation of current analytical methods using the Data Generation Model).

Project design criteria for Habitat and Enhancement projects.

Small-scale, on-the-ground projects designed to benefit wild stocks of salmon by improving the quality or quantity of their habitat, as described in the Strategic Plan of the Southern Fund Committee.

- (1) Implement modifications of in-stream habitat to improve productivity e.g. large woody debris structures, spawning gravel placement, boulder clusters and bank stabilization.
- (2) Construct side channels and other off-channel habitat, including spawning and rearing channels or ponds, ox-bow reconnection, dike breaching, etc.
- (3) Restore salmon habitat in estuaries by re-establishing eelgrass beds, restoring or reclaiming salt water marsh benches, etc.
- (4) Restore fish passage through such things as culvert removal / replacement, remediation of barriers to migration.

- (5) Restoring and protecting riparian and upland habitat, through activities such as livestock exclusion fencing, riparian re-vegetation and re-planting, upland sediment source remediation, conservation easements, etc.

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 on Thursday, September 1st, 2016** 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, 2016. 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 20th, 2016 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, 2017.

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 Thursday, September 1st, 2016**.

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 or by fax (604) 666-8707.

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