

NOTICE OF PROPOSED PROCUREMENT (NPP)

Solicitation #: 30004600B

This Proservices requirement is for Fisheries and Oceans Canada

Title: Decision-support tool for fisheries management for Pacific Salmon Strategy Initiative (PSSI)

Objective:

There is one main objective of the contract:

1. A decision-support tool that considers harvest, hatchery, and habitat management levers for Pacific salmon

Background:

DFO has a mandate to implement the Pacific Salmon Strategy Initiative to guide coordinated responses to fishing pressures, climate changes and habitat loss over the long term. Three pillars of this strategy include conservation and stewardship, salmon enhancement, and harvest transformation. Coordinating management actions among these pillars is a key element to the success of the strategy. DFO also has a mandate to develop rebuilding plans for depleted fish populations under the Fish Stocks Provisions of the *Fisheries Act*.

A prototype decision-supporting tool is required to develop a salmon-specific, open-source, flexible decision-support tool for use in integrated planning and development of rebuilding plans under the *Fisheries Act*. The proposed tool will fill a critical gap in DFO's ability to strategically evaluate decisions on all three management levers, and can act as a flagship for the implementation of a Management Procedure Framework in the future. This type of tool does not currently exist among those available to DFO for Pacific salmon. The outcome of this contract will be a prototype of the decision-support tool parameterized and applied to a generic population of West Coast Vancouver Island (WCVI) Chinook.

The tool will be used to address strategic questions about prioritizing management actions. Previously developed tools either do not consider uncertainty or risk (e.g., 'All-H-Analyzer', AHA) or do not consider hatchery or habitat impacts explicitly (e.g., samSim, those used in Recovery Potential Assessments, RPAs). Importantly, the AHA tool is implemented deterministically and does not account for uncertainty in population dynamics or associated risk to management and therefore does not conform to DFO's Precautionary Approach Framework.

Scope of Work:

The contractor will develop an open-source, decision-support tool, for application to Pacific salmon with west coast Vancouver Island (WCVI) Chinook as a case study, incorporating hatchery, harvest, and habitat management levers.. Over the course of the project, the tool will be expanded to simulate population dynamics of salmon in freshwater and marine life-stages and include differential survival and exploitation of wild and hatchery fish, mark-selective fisheries, harvest of immature marine fish, impacts of changes to habitat, and interactions among populations. The underlying model structure will be modular and flexible allowing for reduced complexity to simpler model forms when data are limited and increased complexity when data are available. The underlying model components will be adapted from those previously developed within and outside of DFO (e.g., samSim, AHA, the hatchery model described in Withler et al. 2018, and age-structured fisheries models being applied to East-Coast Vancouver Island Chinook).

Requirement

Provision of one (1) Intermediate level 1.7 Programmer / Analyst.

Comprehensive Land Claims Agreement:

The resulting Contract is not to be used for deliveries within a Comprehensive Land Claims Settlement Area (CLCSA). All requirements for delivery within a CLCSA are to be processed individually.

Security Requirement:

There is no security associated with this requirement.

Period of Contract:

The period of contract shall be from date of award to March 27, 2024. There is one (1) option period from March 28 2024 to October 31 2024 to be exercised at the discretion of the Department.

Trade Agreements:

This requirement is not subject to the provisions of any trade agreement.

Contract Authority:

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Inquiries:

Inquiries regarding this RFP requirement must be submitted to the Contracting Authority named above. BIDDERS ARE ADVISED THAT "CANADABUYS.GC.CA" IS NOT RESPONSIBLE FOR THE DISTRIBUTION OF SOLICITATION DOCUMENTS. The Crown retains the right to negotiate with any supplier on any procurement. Documents may be submitted in either official language.