



Procurement Hub – Ottawa Office,
Station 9E249, 9th Floor,
200 Kent Street,
Ottawa, Ontario K1A 0E6

ADDENDUM NO.10

Subject: Request for Standing Offer No. FP802-180053
Canadian Hydrographic Service Production and Maintenance of Nautical Charts

Dear Sir/Madam:

Further to the above-mentioned Request for Standing Offer, this Addendum (#10) is to advise potential bidders of the question(s) received during this tender call to date. Both the question(s) and the response(s) are attached hereto as Annex A-1.

This Addendum (#10) is also issued to advise potential bidders of the revisions to the following:

Delete: Annex A, Statement of Work, Stream 3-A, Page 56-58

Insert: Revised Annex A, Statement of Work, Stream 3-A, Page 56-58
(Dated August 21, 2018)

Delete: Attachment 1 to Part 4, Stream 3, Section 3, Resource Requirement Page 30

Insert: Attachment 1 to Part 4, Stream 3, Section 3, Resource Requirement Page 30
(Dated August 21, 2018)

Delete: Part 7, Section 7.1, Section B, Article 7.10 Page 48

Insert: Part 7, Section 7.1, Section B, Article 7.10 Page 48
(Dated August 21, 2018)

The closing date for this tender call has been changed as follows:

Delete: August 28, 2018

Insert: August 31, 2018

Note: The Department of Fisheries and Oceans will address updates to the Basis of Payment within the Request for Standing Offer in Addendum #11 to be posted shortly.

All other terms and conditions remain unchanged.



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Tenderers are to acknowledge this Addendum by signing in the space provided below and enclosing a copy of this document with their tender submission.

Yours truly,

(Original signed by)

Beverly Shawana
Senior Contracting Officer,
Financial & Materials Management Operations

RECEIPT ACKNOWLEDGED

Name of Company

Signature _____

Canada



Revised August 21, 2018

The Canadian Hydrographic Service (CHS) has determined that any intellectual property arising from the performance of the work under the SA will vest in Canada, invoking exception 5 contained in the Treasury Board Policy on Title to Intellectual Property Arising under Crown Procurement Contracts: (<https://www.ic.gc.ca/eic/site/068.nsf/eng/00005.html#s2>):

5 Where the Foreground IP consists of material subject to copyright, with the exception of computer software and all documentation pertaining to that software.

7.9 Ownership

1. Unless provided otherwise in the Contract, the Work or any part of the Work belongs to Canada after delivery and acceptance by or on behalf of Canada.
2. However if any payment is made to the Contractor for or on account of any Work, either by way of progress or milestone payments, that work paid for by Canada belongs to Canada upon such payment being made. This transfer of ownership does not constitute acceptance by Canada.

7.10 Non-Disclosure Agreement

During the course of their work for DFO, the Contractor's employees or subcontractors may require information that is confidential or proprietary to third parties, and information conceived, developed or produced by the Contractor as part of the Work will require the completion and signature of a non-disclosure agreement, attached at **Annex "G"**. The agreement must be provided to the DFO/CHS Project Authority, when requested to do so, before they are given access to information by or on behalf of Canada in connection with the Work.

7.11 Technological Developments

DFO/CHS will continue to investigate and possibly implement new technologies during the term of any Standing Offers which may be awarded as a result of this Request for Standing Offer, with CARIS HPD being one example. Under agreement of both parties, these technologies and processes may be acceptable for the task at hand. In these cases, the definitions, the steps, and the deliverables may be modified. These changes will appear on Call-Up documentation, as applicable.



Revised August 21, 2018

- Junior Level (involving basic QA/QC and production tasks or QA/QC tasks).

Stream 3: Hydrographic/Bathymetric Data Processing

INTRODUCTION

One of the mandates of The Canadian Hydrographic Service (CHS) of the Department of Fisheries and Oceans (DFO) is the production of nautical charts. To facilitate this work, CHS proposes to establish Standing Offers with qualified companies to provide technical support services for the processing of hydrographic/bathymetric data (comprising bathymetry, acoustic backscatter and vector shoreline data). These services will be used, on an as required basis, throughout the period of the Standing Offer.

Support services will be required in the following areas:

- A. Production Services**
- B. Consulting Services.**

A. Production Services

1.0 BACKGROUND INFORMATION

The Canadian Hydrographic Service (CHS) of the Department of Fisheries and Oceans (DFO) produces nautical charts using data collected from a variety of sources. Before this “raw” data can be used, however, it requires some form of processing to make it ready for product creation. To facilitate this process, CHS proposes to establish Standing Offers, with qualified companies, to provide the required technical services on an as required basis throughout the period of the Standing Offer.

1.1 Description of Required Services

Services will be required to perform the verification and processing of hydrographic/bathymetric data.

CHS utilizes various data acquisition systems to provide the basic data required for the production of nautical charts. As each of these acquisition systems provide their data in a unique format, it is necessary to subsequently process the data to ensure that it is accurate and that it is in a format which facilitates the production of the nautical charts. This is usually accomplished by using a variety of software packages, such as KONGSBERG SIS, HYPACK, HySweep, POSPAC, CARIS HIPS/SIPS, Geocoder, QTCView, SonarScope, CARIS BASE Editor/Manager, Fledermaus, ESRI, Surfer, etc.

Contractors will be provided with the source data and required to process the data to convert it to the format required by CHS. Detailed descriptions of the source data, required or suggested software programs to be used, and the output format will be provided with each **Call-Up**.



1.2 Processing Objective

- I) To verify and process hydrographic/bathymetric source data to make it ready for data integration and CHS product creation.

While CHS has several data acquisition systems, the following example is provided to illustrate the work which might be involved in the processing of multibeam data:

The multibeam data recording is done using KONGSBERG SIS software; for single-beam and multi-transducer data, recording is done with HYPACK. The data being processed should be submitted in one of these two data formats or already be converted to CARIS HDCS.

To meet the data processing objectives the following points should be noted:

- Treatment would be performed using software as specified in the Call-Up form.
- Treatment would be conducted in accordance with the following criteria:
 - Perform the processing of bathymetric data by completing the CHS quality records. Data processing must be done in the following order:
 - For each survey line, validate the position of the vessel. Detect anomalies and apply the appropriate corrections.
 - For each survey line, confirm the vessel's attitude (roll, pitch, "gyro," "heave") and tidal (normal or GPS). Detect anomalies and apply the appropriate corrections.
 - For each survey line, apply the best available sound speed profile information.
 - For each survey line, merge data using the GPS tide or normal tide.
 - For all data, clean soundings. Ensure that erroneous soundings are removed. Ensure that the check lines agree with the regular lines. Ensure that the swath soundings agree with each other. If the data contains errors due to a problem of refraction, correct these errors.

- II) To assess hydrographic data, for example, processing for Notices to Shipping.

Note: To ensure data integrity and consistency of processing, the processing must be verified by a third party application not involved in the process. The bidder must submit evidence of



such verification to CHS. This verification of the data processing must be included in the quality records.

1.3 Deliverables

For total coverage data, the final product must be a bathymetric surface (CUBE) with an appropriate spatial resolution (as specified in the Call-Up).

For other types of coverage, the final product must be cleaned soundings in the standard format specified in the Call-Up.

The processed data files must be submitted on DVD or external hard drive. The files must contain all the data processed in HDCS format (CARIS HIPS software format) and all products resulting from processing (final data sets, surfaces, object files, point files, etc.).

Appropriate metadata must accompany each completed final data set (e.g., ISO19115 (or FGDC) compliant metadata).

1.4 Government Furnished Information/Data

A copy of the quality records associated with the survey will be provided, as well as the configuration file of the vessel (e.g., Creed.HVF). CHS will supply the Total Propagated Uncertainty (TPU) values.

SECTION 2

B. Consulting Services

2.0 GENERAL INFORMATION

CHS wishes to have the capability of enlisting outside consulting expertise throughout the term of the Standing Offer to undertake a variety of primarily in-house production tasks such as digitizing, file preparation, file updating, Notice to Mariners or other updating, quality control and compilation. As well, CHS wishes to have the capacity to enlist outside consulting expertise to undertake a variety of production support tasks such as GIS application training, production software enhancements, and international standards development

The various classifications of consulting personnel which may be required are listed below.

2.1 Classifications

The following classifications of consulting personnel may be required from time to time based on the level of difficulty or complexity of the task. The level of the resource(s) required will be specified in the "Description" portion of the Call-Up.

GIS and/or Hydrographic Standard Consultant:

- Senior (involving complex analysis and problem solving or the provision of CARIS application training, production software enhancements, or production system upgrades)



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- Intermediate (Involving difficult analytical tasks and software enhancement development or difficult Quality Assurance (QA)/Quality Control (QC) and production tasks)
- Junior (Involving basic programming or analytical tasks or basic QA/QC and production tasks)



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<p>The bidder should demonstrate experience completing projects on Hydrographic Bathymetric Data Processing.</p> <p>Please Note: The project used to demonstrate experience for M1 cannot be used to demonstrate experience for R1.</p> <p>To demonstrate this experience the bidder must provide projects that have been successfully completed, including the names of the client, the dates and approximate magnitude of the project. The Project descriptions should be technically detailed, identifying particularly the technical aspects of the project which are relevant to Hydrographic Bathymetric Data Processing. Indicate individual resource's role within each project</p>	<p>1-5 Projects = 5pts 6-12 Projects = 10pts 13-20 Projects =15pts 20+ Projects = 20pts</p>	<p>20</p>	
Resource Requirements			
<p>The bidder should demonstrate that the resources proposed have experience in excess of the requirements described in M2, M3 or M4. Bidder should demonstrate this by providing the resumes of those resources.</p> <p>Definition: Junior Consultant (less than 2 years' experience in hydrographic Bathymetric Data Processing) Intermediate Consultant (more than 2 years' experience in hydrographic Bathymetric Data Processing) Senior Consultant (more than 5 years' experience in hydrographic Bathymetric Data Processing)</p>	<p><u>Scoring Grid for each proposed resource</u></p> <p><u>Senior Level</u> 5+ -10 yrs. = 5 points 10+ - 15 yrs. = 10 points 15+ -20 yrs. = 15 points 20+ yrs. = 20 points</p> <p><u>Intermediate Level</u> 2+ -5 yrs. = 5 points 5+ -8 yrs. = 10 points 8+ -10 yrs. = 15 points 10+ yrs. = 20 points</p> <p><u>Junior Level</u> 1-3 yrs. = 5 points 3+ -5yrs. = 10 points 5+ -7 yrs. = 15 points 7+ yrs. = 20 points</p>	<p>Up to 20 points for each resource proposed in each level</p>	
<p>The Bidder should demonstrate that each of the proposed resources at the Senior, Intermediate or Junior levels have the following experience:</p> <p>i) ESRI suite; ii) CARIS Hydrographic Production Database (HPD); and iii) CARIS BASE Editor and/or CARIS BASE Manager</p>	<p>Scoring Grid for Each Proposed Resource</p> <p>ESRI Suite = 5pts CARIS Hydrographic Productions Database suite = 5pts CARIS Base Database /Editor/manager = 5pts</p>	<p>Up to 15 points for each resource proposed in each level</p>	
Total Points Available for Each Resource :		55	
Total minimum amount to PASS		30	



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