



**RETURN BIDS TO:  
RETOURNER LES SOUMISSIONS À:**

**Bid Receiving  
PWGSC  
33 City Centre Drive  
Suite 480C  
Mississauga  
Ontario  
L5B 2N5  
Bid Fax: (905) 615-2095**

**REQUEST FOR PROPOSAL  
DEMANDE DE PROPOSITION**

**Proposal To: Public Works and Government  
Services Canada**

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

**Proposition aux: Travaux Publics et Services  
Gouvernementaux Canada**

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens, services et construction énumérés ici sur toute feuille ci-annexée, au(x) prix indiqué(s).

**Comments - Commentaires**

**Vendor/Firm Name and Address**

**Raison sociale et adresse du  
fournisseur/de l'entrepreneur**

**Issuing Office - Bureau de distribution**

Public Works and Government Services Canada  
Ontario Region  
33 City Centre Drive  
Suite 480  
Mississauga  
Ontario  
L5B 2N5

<b>Title - Sujet</b> Unmanned fixed-wing aerial drone	
<b>Solicitation No. - N° de l'invitation</b> KW405-180322/A	<b>Date</b> 2018-01-17
<b>Client Reference No. - N° de référence du client</b> KW405-180322	
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$TOR-024-7470	
<b>File No. - N° de dossier</b> TOR-7-40098 (024)	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2018-02-01</b>	<b>Time Zone Fuseau horaire</b> Eastern Standard Time EST
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input checked="" type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Brewster, Shannon	<b>Buyer Id - Id de l'acheteur</b> tor024
<b>Telephone No. - N° de téléphone</b> (905) 615-2028 ( )	<b>FAX No. - N° de FAX</b> ( ) -
<b>Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:</b> DEPARTMENT OF THE ENVIRONMENT 867 LAKESHORE RD P.O.BOX 5050 BURLINGTON Ontario L7R4A6 Canada	

**Instructions: See Herein**

**Instructions: Voir aux présentes**

<b>Delivery Required - Livraison exigée</b> See Herein	<b>Delivery Offered - Livraison proposée</b>
<b>Vendor/Firm Name and Address</b> <b>Raison sociale et adresse du fournisseur/de l'entrepreneur</b>	
<b>Telephone No. - N° de téléphone</b> <b>Facsimile No. - N° de télécopieur</b>	
<b>Name and title of person authorized to sign on behalf of Vendor/Firm (type or print)</b> <b>Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)</b>	
<b>Signature</b>	<b>Date</b>

Solicitation No. - N° de l'invitation  
KW405-180322/A

Client Ref. No. - N° de réf. du client  
KW405-180322

Amd. No. - N° de la modif.

File No. - N° du dossier  
TOR-7-40098

Buyer ID - Id de l'acheteur  
tor024

CCC No./N° CCC - FMS No./N° VME

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## **BID SOLICITATION**

**FOR**

## **UNMANNED FIXED-WING AERIAL DRONE SYSTEM**

**REQUIRED BY**

**SCIENCE AND TECHNOLOGY BRANCH,  
ENVIRONMENT AND CLIMATE CHANGE CANADA**

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**List of Annexes:**

ANNEX A      REQUIREMENT

ANNEX B      BASIS OF PAYMENT

ANNEX C      BID EVALUATION CRITERIA

ANNEX "D" (TO PART 3 OF THE BID SOLICITATION) – Electronic Payment Instruments

ANNEX "E" (TO PART 5 OF THE BID SOLICITATION) – Additional Certification

## **PART 1 - GENERAL INFORMATION**

### **1.1 Security Requirement**

There is no security requirement associated with this bid solicitation.

### **1.2 Requirement**

The requirement is detailed under Article 6.2, Part 6 - Resulting Contract Clauses.

### **1.3 Debriefings**

Bidders may request a debriefing on the results of the bid solicitation process. Bidders should make the request to the Contracting Authority within 15 working days of receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

### **1.4 Trade Agreements**

The requirement is subject to the provisions of the Canadian Free Trade Agreement (CFTA).

## PART 2 - BIDDER INSTRUCTIONS

### 2.1 Standard Instructions, Clauses and Conditions

- (a) All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the [Standard Acquisition Clauses and Conditions Manual](https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-Manual) (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-Manual>) issued by Public Works and Government Services Canada.
- (b) Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the bid solicitation and accept the clauses and conditions of the resulting contract.
- (c) The 2003 (2017-04-27) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.
- (d) The following modification is to the standard instructions 2003:  
Subsection 5.4 of 2003, Standard Instructions - Goods or Services - Competitive Requirements, is amended as follows:  
Delete: sixty (60) days  
Insert: ninety (90) days

### 2.2 Submission of Bids

- (a) Bids must be submitted only to Public Works and Government Services Canada (PWGSC) Bid Receiving Unit by the date, time and place indicated on page 1 of the bid solicitation.
- (b) Due to the nature of the bid solicitation, bids transmitted by facsimile to PWGSC will not be accepted.

### 2.3 Enquiries - Bid Solicitation

- (a) All enquiries must be submitted in writing to the Contracting Authority no later than ten (10) calendar days before the bid closing date. Enquiries received after that time may not be answered.
- (b) Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by Bidders to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the question(s) or may request that the Bidder do so, so that the proprietary nature of the question(s) is eliminated, and the enquiry can be answered to all Bidders. Enquiries not submitted in a form that can be distributed to all Bidders may not be answered by Canada.

### 2.4 Applicable Laws

- (a) Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.
- (b) Bidders may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their bid, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the Bidders.

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## PART 3 - BID PREPARATION INSTRUCTIONS

### 3.1 Bid Preparation Instructions

- (a) Canada requests that bidders provide their bid in separately bound sections as follows:

- (i) Section I: Technical Bid (4 hard copies)
- (ii) Section II: Financial Bid (1 hard copy)
- (iii) Section III: Certifications (1 hard copy)

Prices must appear in the financial bid only. No prices must be indicated in any other section of the bid.

- (b) Canada requests that bidders follow the format instructions described below in the preparation of their bid:

- (i) use 8.5 x 11 inch (216 mm x 279 mm) paper;
- (ii) use a numbering system that corresponds to the bid solicitation.

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process [Policy on Green Procurement](http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-Eng. Html) (<http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-Eng. Html>). To assist Canada in reaching its objectives, bidders should:

- (i) use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably-managed forest and containing minimum 30% recycled content; and
- (ii) use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

### 3.2 Section I: Technical Bid

In their technical bid, bidders should explain and demonstrate how they propose to meet the requirements and how they will carry out the Work.

### 3.3 Section II: Financial Bid

- (a) Bidders must submit their financial bid in accordance with the Basis of Payment.

(b) **Electronic Payment of Invoices – Bid**

- (i) If you are willing to accept payment of invoices by Electronic Payment Instruments, complete Annex "D" Electronic Payment Instruments, to identify which ones are accepted.
- (ii) If Annex "D" Electronic Payment Instruments is not completed, it will be considered as if Electronic Payment Instruments are not being accepted for payment of invoices.
- (iii) Acceptance of Electronic Payment Instruments will not be considered as an evaluation criterion.

### 3.4 Section III: Certifications

Bidders must submit the certifications and additional information required under Part 5.

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## **PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION**

### **4.1 Evaluation Procedures**

- (a) Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical and financial evaluation criteria.
- (b) An evaluation team composed of representatives of Canada will evaluate the bids.

### **4.2 Technical Evaluation**

#### **(a) Mandatory Technical Evaluation Criteria**

Each proposed resource will be reviewed to determine whether they meet the mandatory requirements of the bid solicitation. Any element of the bid solicitation that is identified specifically with the words "must" or "mandatory" is a mandatory requirement. Bids that do not comply with each and every mandatory requirement will be considered non-responsive and be disqualified. The Mandatory evaluation criteria are described in Annex C - Bid Evaluation Criteria.

#### **(b) Point Rated Technical Criteria**

Each bid will be rated by assigning a score to the rated requirements, which are identified in the bid solicitation by the word "rated" or by reference to a score. Bidders who fail to submit complete bids with all the information requested by this bid solicitation will be rated accordingly. The rated requirements are described in Annex C - Bid Evaluation Criteria.

### **4.3 Financial Evaluation**

#### **(a) Evaluation of Price**

- (i) The Bidder must complete and submit with its bid, pricing in accordance with Annex B – Basis of Payment, in Canadian funds.
- (ii) The Total Evaluated Price will be the Firm Lot Price of the Firm Requirement in Annex B - Basis of Payment.
- (iii) The price of the bid will be evaluated in Canadian dollars, Applicable Taxes excluded, FOB destination, Canadian customs duties and excise taxes included.

### **4.4 Basis of Selection – Highest Combined Rating of Technical Merit and Price**

- (a) To be declared responsive, a bid must:
  - (i) comply with all the requirements of the bid solicitation; and
  - (ii) meet all mandatory criteria; and
  - (iii) obtain the required minimum of 1200 points overall for the technical evaluation criteria which are subject to point rating. The rating is performed on a scale of 2000 points.
- (b) Bids not meeting (i), (ii) and (iii) will be declared non-responsive.
- (c) The selection will be based on the highest responsive combined rating of technical merit and price. The ratio will be 60% for the technical merit and 40% for the price.
- (d) To establish the technical merit score, the overall technical score for each responsive bid will be determined as follows: total number of points obtained/maximum number of points available multiplied by the ratio of 60%.
- (e) To establish the pricing score, each responsive bid will be prorated against the lowest evaluated price and the ratio of 40%.
- (f) For each responsive bid, the technical merit score and the pricing score will be added to determine the combined rating.



- (g) Neither the responsive bid obtaining the highest technical score nor the one with the lowest evaluated price will necessarily be accepted. The responsive bid with the highest combined rating of technical merit and price will be recommended for award of a contract.

The table below illustrates an example where all three bids are responsive and the selection of the contractor is determined by a 60/40 ratio of technical merit and price, respectively. The total available points equals 135 and the lowest evaluated price is \$45,000 (45).

**Table 1: Example Highest Combined Rating Technical Merit (60%) and Price (40%)**

		Bidder 1	Bidder 2	Bidder 3
<b>Overall Technical Score</b>		115/135	89/135	92/135
<b>Bid Evaluated Price</b>		\$55,000.00	\$50,000.00	\$45,000.00
<b>Calculations</b>	<b>Technical Merit Score</b>	$115/135 \times 60 = 51.11$	$89/135 \times 60 = 39.56$	$92/135 \times 60 = 40.89$
	<b>Pricing Score</b>	$45/55 \times 40 = 32.73$	$45/50 \times 40 = 36.00$	$45/45 \times 40 = 40.00$
<b>Combined Rating</b>		83.84	75.56	80.89
<b>Overall Rating</b>		1st	3rd	2nd

- (h) In the event of identical Combined Ratings occurring, then the bid with the highest Technical Score will become the top-ranked bidder.
- (i) One contract may be awarded in total as a result of this bid solicitation.

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## PART 5 - CERTIFICATIONS

Bidders must provide the required certifications and additional information to be awarded a contract.

The certifications provided by Bidders to Canada are subject to verification by Canada at all times. Unless specified otherwise, Canada will declare a bid non-responsive, or will declare a contractor in default if any certification made by the Bidder is found to be untrue whether made knowingly or unknowingly, during the bid evaluation period or during the contract period.

The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority will render the bid non-responsive or constitute a default under the Contract.

### 5.1 Certifications Required with the Bid

Bidders must submit the following duly completed certifications as part of their bid.

#### (a) Integrity Provisions - Declaration of Convicted Offences

In accordance with the Integrity Provisions of the Standard Instructions, all bidders must provide with their bid, **if applicable**, the declaration form available on the [Forms for the Integrity Regime](http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html) website (<http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html>), to be given further consideration in the procurement process.

### 5.2 Certifications Precedent to Contract Award and Additional Information

The certifications and additional information listed below should be submitted with the bid, but may be submitted afterwards. If any of these required certifications or additional information is not completed and submitted as requested, the Contracting Authority will inform the Bidder of a time frame within which to provide the information. Failure to provide the certifications or the additional information listed below within the time frame provided will render the bid non-responsive.

#### (a) Integrity Provisions – Required Documentation

In accordance with the section titled Information to be provided when bidding, contracting or entering into a real procurement agreement of the Ineligibility and Suspension Policy (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Bidder must provide the required documentation, as applicable, to be given further consideration in the procurement process.

#### (b) Federal Contractors Program for Employment Equity - Bid Certification

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "[FCP Limited Eligibility to Bid](http://www.hrsdc.gc.ca/eng/labour/index.shtml)" list (<http://www.hrsdc.gc.ca/eng/labour/index.shtml>) available from [Human Resources and Skills Development Canada \(HRSDC\) - Labour's](http://www.hrsdc.gc.ca/eng/labour/index.shtml) website.

Canada will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the "[FCP Limited Eligibility to Bid](http://www.hrsdc.gc.ca/eng/labour/index.shtml)" list at the time of contract award.

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## PART 6 - RESULTING CONTRACT CLAUSES

### 6.1 Security Requirement

There is no security requirement applicable to this Contract.

### 6.2 Requirement

The Contractor must provide the items detailed under the "Requirement" at Annex A.

### 6.3 Standard Clauses and Conditions

All clauses and conditions identified in the Contract by number, date and title are set out in the [Standard Acquisition Clauses and Conditions Manual](https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

#### (a) General Conditions

2010A (2016-04-04), General Conditions – Goods (Medium Complexity), apply to and form part of the Contract.

#### (b) Supplemental General Conditions

4001 (2015-04-01) Supplemental General Conditions - Hardware Purchase, Lease and Maintenance, apply to and form part of the Contract.

### 6.4 Term of Contract

#### (a) Period of Contract

The period of the Contract is from the date of contract award ending April 30, 2018

#### (b) Delivery Date

All the deliverables must be received on or before the dates outlined in Annex A.

### 6.5 Authorities

#### (a) Contracting Authority

The Contracting Authority for the Contract is:

Name: Shannon Brewster  
Title: Supply Specialist  
Organization: Public Works and Government Services Canada  
Acquisitions Branch  
Ontario Region  
Address: 33 City Centre Drive, Suite 480C  
Mississauga ON L5B 2N5  
Telephone: 905-615-2028  
Facsimile: 905-615-2060  
E-mail address: shannon.brewster@pwgsc.gc.ca

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

#### (b) Project Authority

The Project Authority for the Contract is: *(to be provided at Contract Award)*

Name: \_\_\_\_\_

Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Address: \_\_\_\_\_  
Telephone: \_\_\_\_\_  
Facsimile: \_\_\_\_\_  
E-mail address: \_\_\_\_\_

The Project Authority is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Project Authority, however the Project Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

(c) **Contractor's Representative** (*fill out with bid*)

Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Business Procurement Number (PBN): \_\_\_\_\_  
Address: \_\_\_\_\_  
Telephone: \_\_\_\_\_  
Facsimile: \_\_\_\_\_  
E-mail address: \_\_\_\_\_

**6.6 Payment**

(a) **Basis of Payment - Firm Price, Firm Unit Price(s) or Firm Lot Price(s)**

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm lot price, as specified in Annex B for a cost of \$\_\_\_\_\_. Customs duties are included and Applicable Taxes are extra.

Le Canada ne paiera pas l'entrepreneur pour tout changement à la conception, toute modification ou interprétation des travaux, à moins que ces changements à la conception, ces modifications ou ces interprétations n'aient été approuvés par écrit par l'autorité contractante avant d'être intégrés aux travaux.

(b) **Limitation of Price**

SACC Manual clause C6000C (2017-08-17), Limitation of Price

(c) **Single Payment**

SACC Manual clause H1000C (2008-05-12), Single Payment

(d) **Electronic Payment of Invoices – Contract** (*to be determined at Contract award*)

The Contractor accepts to be paid using any of the following Electronic Payment Instrument(s):

- (i) Visa Acquisition Card;
- (ii) MasterCard Acquisition Card;
- (iii) Direct Deposit (Domestic and International);
- (iv) Electronic Data Interchange (EDI);
- (v) Wire Transfer (International Only);
- (vi) Large Value Transfer System (LVTS) (Over \$25M)

## **6.7 Invoicing Instructions**

- (a) The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is completed.
- (b) Invoices must be distributed as follows:
  - (i) The original and one (1) copy must be forwarded to the address shown on page 1 of the Contract for certification and payment.
  - (ii) One (1) copy must be forwarded to the Contracting authority identified under the section entitled "Authorities" of the Contract.

## **6.8 Certifications and Additional Information**

### **(a) Compliance**

Unless specified otherwise, the continuous compliance with the certifications provided by the Contractor in its bid or precedent to contract award, and the ongoing cooperation in providing additional information are conditions of the Contract and failure to comply will constitute the Contractor in default. Certifications are subject to verification by Canada during the entire period of the Contract.

## **6.9 Applicable Laws**

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.

## **6.10 Priority of Documents**

If there is a discrepancy between the wording of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.

- (a) the Articles of Agreement, including any individual SACC clauses incorporated by reference in these Articles of Agreement;
- (b) the supplemental general conditions 4001 (2015-04-01) Supplemental General Conditions - Hardware Purchase, Lease and Maintenance;
- (c) the general conditions 2010A (2016-04-04), General Conditions – Goods (Medium Complexity);
- (d) Annex A, Requirement;
- (e) Annex B, Basis of Payment; and
- (f) the Contractor's bid dated \_\_\_\_\_ (to be provided at Contract Award)

## **6.11 Insurance**

G1005C (2016-01-28), Insurance

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## ANNEX A – REQUIREMENT

### 1. REQUIREMENT

Environment and Climate Change Canada (ECCC), Science and Technology Branch, has a requirement for a survey grade unmanned aerial drone system for fine resolution mapping of vegetation, saturated soils and inundated areas in support of hydrological research.

### 2. BACKGROUND

ECCC conducts climate change research to quantify the impact of permafrost loss on water resource availability and quality. In order to measure this impact accurate high resolution mapping of vegetation, saturated soils and inundated areas is required. The locations under research are remote without road access so the equipment must be robust enough to operate in extreme conditions, be self-contained and light yet functional.

This purchase is replacing a unit that proved incapable of meeting these requirements. The remote nature of the areas to be surveyed means the requirement needs to include all components of unmanned aerial system workflow. This includes applicable pre-flight mission planning and in-flight monitoring software, visible and infra-red cameras capable of differentiating vegetation types and ground wetness conditions, ground control hardware, spare parts, and post-flight photogrammetric / image analysis software. Training on the system and relevant unmanned aerial system regulations must be included.

### 3. SPECIFICATIONS

The Contractor must supply and deliver a fully functional unmanned fixed-wing aerial drone system that can be repeatedly deployed in remote northern Canadian regions. At a minimum, the system must adhere to the following specifications:

1. Must be Transport Canada compliant in order to facilitate flight certification and reduce operational costs.
2. The fixed-wing aerial drone must have a built-in autopilot that is capable of fully autonomous pre-programmed flight including take-off and landing with waypoint navigation and automatic camera triggering and geotagging of camera images.
3. The fixed-wing drone alone (without camera) must weigh a maximum of 3 pounds for deployment in remote areas.
4. Must be able to fly (wind speed threshold) in up to 40 km/hour winds to tolerate inclement weather.
5. The fixed-wing aerial drone system must be able to cover a minimum 2 square kilometers in one flight at an altitude of approximately 100 meters to allow the surveying of entire hillslopes and watersheds.
6. Must have real time kinetic (RTK) and post processed kinematic (PPK) functionality. The RTK and PPK functionality must be compatible with all major global navigation satellite systems in order to collect high accuracy data without ground control point surveys.
7. Must include a Red/Green/Blue (RGB) camera with a global shutter and a minimum resolution of 20 megapixels.
8. Must include a near infrared (770-810 nm) camera with a global shutter.
9. Must include pre-flight planning and in-flight monitoring software that has the capability of mosaicing and georeferencing individual images captured during flight survey in order to reduce incompatibility and/or awkward processes with additional software; (have no awkward transitions, interruptions, or indications of disparity)
10. Must include post-flight orthomosaicing, 3D point cloud and digital surface and terrain model (DEM) analysis software.

11. Must include ground control hardware including flight base station, radio modem and remote controller.
12. The power system must be capable of 50 minutes of flight time and the batteries must include a charger.
13. The drone must be capable of autonomous short landing distance of no more than 10 m in order to minimize damage risk to vehicle in rough terrain.
14. The global navigation satellite systems receiver on the drone must have dual frequency capabilities in order to consistently collect high accuracy data in high-latitude locations.

#### 4. DELIVERABLES

1. The Contractor must provide training that includes, at a minimum, the use of the system including flight planning basics, survey site evaluation, in-field tests of the system, trouble shooting, aviation law including understanding of the Transport Canada special flight operation certification process and image processing software training.
2. Must provide spare parts for aerial system including at least one propeller and two wings.

#### 5. PROJECT SCHEDULE

Phase	Description	Due Date
1	Supply and delivery of unmanned aerial system	On or before March 23, 2018
2	Acceptance tests completed, deliverables accepted	On or before March 31, 2018
3	System and Transport Canada regulation training	On or before March 31, 2018

#### 6. DELIVERY LOCATION

Watershed Hydrology and Ecology Research Division  
Saskatoon, SK, S7N 3H5  
Attn: *(to be provided at contract award)*

#### 7. WARRANTY, SERVICE, SUPPORT & UPDATES

The Contractor must provide a 1 year parts and labour warranty on the entire system. Warranty will begin on the day that the acceptance tests are completed and the deliverables are accepted by Environment and Climate Change Canada. The contractor must have product support, service and parts available upon request to purchase for a minimum of 5 years beginning after the day that the acceptance tests are completed (estimated 1 week after delivery) and the deliverables are accepted by Environment and Climate Change Canada.

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## ANNEX B - BASIS OF PAYMENT

The firm lot price must be an all-inclusive price for the supply, delivery and training of the requirement in accordance with Annex A –Requirement, in Canadian funds, including customs duties, all delivery and transportation charges, FOB destination, applicable taxes extra.

### FIRM REQUIREMENT:

**Contract Period:** Date of award to April 30, 2018.

Delivery of each system, within this contract period, must be received on or before March 23, 2018.

Item	Description	Quantity	All-inclusive Firm Lot Price ( Applicable Taxes extra)
1	Supply and delivery of one (1) fully-functional unmanned fixed-wing aerial drone system in accordance with Annex A, Requirement. Twelve (12) months of maintenance and warranty services commencing on the date of acceptance by the ECCC project authority is also included along with System and Transport Canada regulation training.  Manufacturer: _____  Model Number: _____	1 Lot	\$



## ANNEX C

### MANDATORY TECHNICAL EVALUATION CRITERIA

The bidder must provide documentation in the bid demonstrating that their proposed complete and fully functional unmanned aerial drone system meets each and every criterion. **Failure to provide supporting documentation may result in the bid being deemed non-responsive.**

#### 1. Mandatory Technical Criteria

#	Mandatory Criteria	Bidder's Response
		Identify where the supporting documentation is located in the bid. (Bidders to insert page number)
<b>M1</b>	The Bidder must demonstrate* that their fixed wing vehicle is Transport Canada complaint.  * As proof of compliance the Bidder must provide a copy of the listing of compliant unmanned aired vehicles from Transport Canada's website. If a copy of the list is not provided with the bid at bid closing, it must be provided within 2 days of request from the Contracting Authority.	
<b>M2</b>	The Bidder must demonstrate that their proposed aerial drone is able to fly (wind speed threshold) up to a maximum of 40 km/hour winds.	
<b>M3</b>	The Bidder must demonstrate that their proposed aerial drone (without cameras) weighs less than 3 lb.	
<b>M4</b>	The Bidder must demonstrate that their proposed aerial drone is be able to cover a minimum 2 square kilometers in one flight at an altitude of a maximum of 150 meters.	
<b>M5</b>	The Bidder must demonstrate that their proposed aerial drone system is RTK and PPK compatible with all major global navigation satellite systems. (GPS and GLONASS)	
<b>M6</b>	The Bidder must demonstrated that their proposed aerial drone system has a dual frequency L1/L2 global navigation satellite systems receiver.	
<b>M7</b>	The Bidder must demonstrate that their proposed aerial drone system's RGB camera has a minimum resolution of 20 megapixels.	
<b>M8</b>	The Bidder must demonstrate that both cameras in their proposed aerial drone have a global shutter.	
<b>M9</b>	The Bidder must demonstrate that their proposed aerial drone is capable of short autonomous landing within length of 10 m.	
<b>M10</b>	The Bidder must demonstrate that the in-flight monitoring software for their proposed aerial drone system is capable of mosaicing and georeferencing individual images captured during flight survey.	

## 2. Point Rated Technical Criteria

The point rated criteria will be used to evaluate each proposal that has met all of the mandatory criteria. Bidders are advised to address each of the criteria in the order in which they appear and in sufficient depth in their proposals to enable a thorough assessment. Assessments will be based solely on the information contained within the proposal.

Only those proposals which are responsive (compliant) with all of the mandatory criteria and then achieve (or exceed) the stated minimum points required for the point rated technical criteria section (which is equivalent to 1200 points, or 60%, of the total points available) will be further considered for award of a contract. Proposals not meeting the minimum points required will be deemed non-responsive.

#	Rated Criteria	Points Assigned	Points Max.
R1	The Bidder should demonstrate that their proposed aerial drone has a flight time which allows for a large area coverage.	<ul style="list-style-type: none"> <li>0 to 50 minute flight time = 0 points</li> <li>51 to 59 minute flight time = 250 points</li> <li>60+ minute flight times = 500 points</li> </ul>	500
R2	The Bidder should demonstrate that their proposed aerial drone has a hand launch mechanism.	<ul style="list-style-type: none"> <li>Catapult launch mechanism = 0 points</li> <li>Hand launch mechanism = 500 points</li> </ul>	500
R3	The Bidder should demonstrate that their proposed aerial drone has a carrying case.	<ul style="list-style-type: none"> <li>Total dimensions of case is greater than 0.1 m<sup>3</sup> = 250 points</li> <li>Total dimensions of case is equal or less than 0.1 m<sup>3</sup> = 500 points</li> </ul>	500
R4	The Bidder should demonstrate that they have the ability to provide spare parts for future product support.	<ul style="list-style-type: none"> <li>Available in 10 days or more = 0 points</li> <li>Available in 5 to 9 days = 250 points</li> <li>Available in 4 days or less = 500 points</li> </ul>	500
<b>Maximum Available Points:</b>			<b>2000</b>
<b>Minimum Pass Mark (60%):</b>			<b>1200</b>

Solicitation No. - N° de l'invitation  
KW405-180322/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
tor024

Client Ref. No. - N° de réf. du client  
KW405-180322

File No. - N° du dossier  
TOR-7-40098

CCC No./N° CCC - FMS No./N° VME

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**ANNEX “D” to PART 3 OF THE BID SOLICITATION**  
**ELECTRONIC PAYMENT INSTRUMENTS**

The Bidder accepts any of the following Electronic Payment Instrument(s):

- ☐ ( ) VISA Acquisition Card;
- ☐ ( ) MasterCard Acquisition Card;
- ☐ ( ) Direct Deposit (Domestic and International);
- ☐ ( ) Electronic Data Interchange (EDI);
- ☐ ( ) Wire Transfer (International Only);
- ☐ ( ) Large Value Transfer System (LVTS) (Over \$25M)

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## ANNEX "E" to PART 5 OF THE BID SOLICITATION

### ADDITIONAL CERTIFICATIONS

#### 1. Board of Directors

In accordance with Part 5, Article 5.2 - Certifications Precedent to Contract Award and Additional Information, (a), Integrity Provisions – Required Documentation, Bidders are required to provide a complete list of names of all individuals who are currently directors of the Bidder before contract award. Bidders are requested to provide this information in their bid.

Director Name - _____	Title: _____
Director Name - _____	Title: _____
Director Name - _____	Title: _____
Director Name - _____	Title: _____
Director Name - _____	Title: _____
Director Name - _____	Title: _____
Director Name - _____	Title: _____
Director Name - _____	Title: _____

#### 2. Procurement Business Number (PBN)

In accordance with Section 02, Procurement Business Number of the [2003](#) (2017-04-27) Standard Instructions - Goods or Services - Competitive Requirements, Suppliers are required to have a Procurement Business Number (PBN) before contract award. Bidders are requested to provide their PBN with their bid.

Procurement Business Number - \_\_\_\_\_

Suppliers may register for a PBN online at [Supplier Registration Information](#). For non-Internet registration, suppliers may contact the InfoLine at 1-800-811-1148 to obtain the telephone number of the nearest Supplier Registration Agent.