Client Reference No.: N/A
 Amendment No.:
 Contractin

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 Terry Imm

 Title:
 Helicopter Services, Whooping Crane Field Work

Contracting Authority: Terry Imm

ANNEX A

STATEMENT OF WORK

1. Scope of Requirement

Whooping Cranes are listed as Endangered under the Species at Risk Act (SARA). The primary objective of this project is to monitor the ecology of the Aransas-Wood Buffalo Population (AWBP) of Whooping Cranes on their breeding grounds in Wood Buffalo National Park (WBNP) and adjacent areas. Data are used to (a) track progress towards SARA recovery goals; (b) identify and protect areas designated as critical habitat for Whooping Cranes under SARA; and (c) conduct studies into the ecology of Whooping Cranes to provide information for recovery of the species and to mitigate existing or anticipated threats.

Parks Canada Agency is seeking the provision of helicopter services in support of Whooping Crane monitoring and recovery efforts to conduct:

- A. Aerial surveys of Whooping Cranes:
 - Juvenile survey in EC120; 22 hours flight time over 4-5 days in late July to early August
- B. Retrieval of equipment at Whooping Crane nests:
 - Retrieval of cameras and other equipment in AS350B2; 17 hours flight time over 4-5 days in late June
 - Retrieval of water loggers in AS350B2; up to 17 hours flight time over 4-5 days in late July or early August
- C. Capture and banding of juvenile Whooping Cranes:
 - Flights in AS350B2; 18 hours flight time over 4-5 days in late July to early August

2. Base of Operations and Geographical Operating Area

When executing this contract, the principal base of operations will be Fort Smith, NT. Operations will be completed in Wood Buffalo National Park and adjacent areas in AB and NT.

3. Requirement/Scope of Work:

A. Aerial surveys to determine the number and location of Whooping Crane juveniles (4-5d, late July/early August) in an EC120 Helicopter. Typical daily operations include transect-based aerial surveys to record spatial locations of cranes. The daily sequence is repeated until each survey block is surveyed. Pilots will be required to maintain the helicopter's position along established transects (that include frequent changes in direction), while maintaining consistent altitude (1100 ft AGL). Pilots will also be required to position the helicopter appropriately and efficiently to allow surveyors to identify cranes and coloured legbands (at altitudes between 600-1000 ft AGL).

B. Retrieval of equipment at Whooping Crane nests in an AS350B2 Helicopter (4-5 days in late June; and up to 4-5 days in late July). Operations include flights to remote wetlands containing crane nests where the pilot will be responsible for quickly finding suitable landing locations to deploy the ground crew for deployment and retrieval of cameras and other equipment.

C. Capture and banding of juvenile Whooping Cranes (4-5 days in late July/early August) in an AS350B2 Helicopter. Operations include flights to locate crane family groups where the pilot will be responsible for quickly finding suitable landing locations to deploy the ground crew. Once the ground crew is deployed, the pilot will be required to guide the ground crew (via radio) towards the juvenile crane for capture, while also positioning the helicopter to hold the target crane in range of the capture crew. The capture and

banding work causes disturbance to a species at risk, and demands precision and efficiency in aerial services to minimize impact on cranes

All activities will involve commuting from the base of operations (Fort Smith, NT) to the work locations in areas within and adjacent to WBNP. During the day, refuelling may occur at existing remote fuel caches (Mill 99 or Raven Tower), 2-4 times per day. Fuel at remote caches is provided by Parks Canada. At the end of each day, crews will return to the base of operations where the helicopter is stored and refueled at the Fort Smith Airport (YSM).

4. Constraints:

4.1 Aircraft Requirements

The aircraft provided for the Work under the Contract must meet the following minimum requirements:

- (a) Duly certified and maintained in accordance with all applicable Transport Canada Regulations;
- (b) Rotary Wing Requirements:

EC120 helicopter or equivalent:

- i. Capable of flying 1.5 hours with three passengers and gear on board (300-kg max load) before needing to refuel;
- ii. Enclosed tail rotor to minimize noise disturbance to nesting Whooping Cranes;
- iii. Suitable refueling and filtering system;
- iv. Onboard navigation capable of uploading survey transects or other spatial files provided by the client (in .shp, .kmz, .kml, or .gpx format);
- v. A 120V outlet to operate and charge a laptop computer;
- vi. Any additional equipment required by Transport Canada Regulations.

AS350B2 helicopter or equivalent:

- i. Capable of carrying five passengers (500-kg max load)
- ii. Suitable refueling and filtering system;
- iii. External cargo pod capable of carrying metal posts 7 ft in length;
- iv. Onboard navigation capable of uploading spatial files provided by the client (in .shp, .kmz, .kml, or .gpx format);
- v. A 120V outlet to operate and charge a laptop computer;
- vi. Any additional equipment required by Transport Canada Regulations.

4.2 Pilot Requirements

Please note, simultaneous activities amongst the various contract components (equipment retrieval & capture and banding) may occur where both helicopters would need to be flown on the same days (ex. late July) so there is a requirement for a total of two (2) pilots, one (1) pilot for each the EC120 and AS350B2 aircraft.

4.3 Communications Equipment Requirements

The aircraft provided for the Work under the Contract must have the following:

- (a) One VHF/AM radio transmitter-receiver;
- (b) Provision for operational capabilities of both radio and hot-mic intercom, through headset/boom microphones, by both pilot and passengers; and
- (c) Unserviceable radio equipment and accessories may be considered as rendering the aircraft unserviceable for operational use.

4.4 Directional, Safety and Emergency Equipment Requirements

The aircraft provided for work under this contract must have the following:

- (a) One (1) Aircraft Direction Finder (ADF) and/or VORTEC (VOR);
- (b) One (1) Emergency Locator Transmitter (ELT);
- (c) One (1) Helicopter Flight Data Monitoring Program (HFDM), and/or Voice and Video Recorder (CVVR), or equivalent; and
- (d) One (1) Global Positioning System (GPS), Trimble Trans Pack or equivalent.

4.5 Other Equipment

In addition to the above noted, the aircraft shall be equipped with any and all other standard safety, survival gear and emergency equipment as required by Transport Canada Regulations and the Canadian Aircraft Regulations (CARS).

4.6 Inspection

All services provided by the Contractor will be subject to the approval of and acceptance by the Project Authority, who shall have the right to inspect the aircraft, its equipment, and documents relating to the air worthiness of the aircraft, and operational documentation including flight plans or flight notification, loading records, logs, aircrew log books, air carrier licenses and dangerous goods certificates of company and pilot in order to ensure compliance with the terms and conditions of this agreement. Inspection shall include presentation of certificate of registration or lease agreement; current certificate of airworthiness; and journey and technical log book.

If the Contractor is unavailable due to failure to meet final inspection criteria at the start-up date, the Contractor shall also be responsible for any additional expenses incurred by Parks Canada to provide the necessary services that the Contractor has been unable to comply with.

5. Accommodation, Meals and Ground Transportation

5.1 Accommodations, Meals, and Incidentals

Carrier's crew will stay at a local hotel while the helicopter is based in Fort Smith, NT;

- (a) The Contractor is responsible for aircrew accommodations, meals, and incidentals;
- (b) Such expenses may be submitted through the invoicing process of this contract.

5.2 Ground Transportation

Parks Canada will ensure appropriate ground transportation is available to the Contractor's aircrew at the Fort Smith airport.