

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

Bid Receiving/Réception des soumissions

Procurement Hub | Centre  
d'approvisionnement  
Fisheries and Oceans Canada | Pêches et  
Océans Canada  
301 Bishop Drive | 301 promenade Bishop  
Fredericton, NB, E3C 2M6

**Email / Courriel :** [DFO.Tenders-  
Soumissions.MPO@dfo-mpo.gc.ca](mailto:DFO.Tenders-Soumissions.MPO@dfo-mpo.gc.ca)

**Copy to:** [Louise.Martel@dfo-mpo.gc.ca](mailto:Louise.Martel@dfo-mpo.gc.ca)

**REQUEST FOR PROPOSAL  
DEMANDE DE PROPOSITION**

Proposal to: Fisheries and Oceans Canada

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

Proposition à : Pêches et Océans Canada

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

|  |  |   |
|--|--|---|
| <b>Title / Titre</b><br>Aerial photos Lower Nord Shore,<br>Saguenay and St. Lawrence Estuary   |  | <b>Date</b><br>June 5th, 2024                       |
| <b>Solicitation No. / N° de l'invitation</b><br>30005729   |  |   |
| <b>Client Reference No. / No. de référence du client(e)</b><br>30005729  |  |   |
| <b>Solicitation Closes / L'invitation prend fin</b><br><b>At / à :</b> 14 :00<br>EDT (Eastern Daylight Time) / HAE (Heure Avancée de l'Est)<br><b>On / le :</b> June 21, 2024  |  |   |
| <b>F.O.B. / F.A.B.</b><br>Destination  | <b>Taxes</b><br>See herein — Voir<br>ci-inclus | <b>Duty / Droits</b><br>See herein — Voir ci-inclus |
| <b>Destination of Goods and Services / Destinations des biens et services</b><br>See herein — Voir ci-inclus   |  |   |
| <b>Instructions</b><br>See herein — Voir ci-inclus   |  |   |
| <b>Address Inquiries to : /<br/>Adresser toute demande de renseignements à :</b><br>Louise Martel, Contracting Specialist<br><b>Email / Courriel:</b> <a href="mailto:DFO.Tenders-Soumissions.MPO@dfo-mpo.gc.ca">DFO.Tenders-Soumissions.MPO@dfo-mpo.gc.ca</a><br><b>Copy to:</b> <a href="mailto:Louise.Martel@dfo-mpo.gc.ca">Louise.Martel@dfo-mpo.gc.ca</a> |  |   |
| <b>Delivery Required / Livraison exigée</b><br>See herein — Voir ci-inclus   | <b>Delivery Offered / Livraison proposée</b>   |   |
| <b>Vendor Name, Address and Representative / Nom du vendeur, adresse et représentant du fournisseur/de l'entrepreneur</b>  |  |   |
| <b>Telephone No. / No. de téléphone</b>  | <b>Facsimile No. / No. de télécopieur</b>      |   |
| <b>Name and title of person authorized to sign on behalf of Vendor (type or print) / Nom et titre de la personne autorisée à signer au nom du fournisseur (taper ou écrire en caractères d'imprimerie)</b>   |  |   |
| <b>Signature</b>   | <b>Date</b>                                    |   |



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## **PART 1 - GENERAL INFORMATION**

### **1.1 Security Requirements**

No Security Requirement, **escort required at DFO site(s), except for public zones.**

### **1.2 Statement of Work**

The Contractor must perform the Work in accordance with the Statement of Work at Annex "A".

### **1.3 Procurement Strategy for Indigenous Business**

#### **1.3.1 Conditional Set-Aside under the Federal Government Procurement Strategy for Indigenous Business (PSIB)**

This is an open tender. However, it will be conditionally set-aside under the Government of Canada's Procurement Strategy for Indigenous Business (PSIB) if two or more bids have been received by Indigenous businesses who are certified under the Procurement Strategy for Indigenous Business (PSIB) criteria and who may be listed in the Government of Canada's Indigenous Business Directory (<https://www.sac-isc.gc.ca/eng/1100100033057/1610797769658>).

If your Indigenous business is not yet registered in the Indigenous Business Directory, please do so at the link provided above. If bids from two or more Indigenous businesses are compliant with the terms of the Request for Proposal, the contracting authority will limit the competition to those Indigenous businesses and will not consider bids from any non-Indigenous businesses that may have been submitted.

If the bids from the Indigenous businesses are found to be non-compliant or non-responsive or are withdrawn, such that fewer than two compliant bids from Indigenous businesses remain, bids from all of the non-Indigenous businesses that had submitted bids will then be considered by the contracting authority.

### **1.4 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 from receipt of the results of the bid solicitation process. The debriefing may be in writing or by telephone.

### **1.5 Trade Agreements**

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



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## PART 2 - BIDDER INSTRUCTIONS

### 2.1 Standard Instructions, Clauses and Conditions

**As this solicitation is issued by Fisheries and Oceans Canada (DFO), any reference to Public Works and Government Services Canada or PWGSC or its Minister contained in any term, condition or clause of this solicitation, including any individual SACC clauses incorporated by reference, will be interpreted as reference to DFO or its Minister.**

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.

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.

The [2003](#) (2022-03-29) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

Subsection 5.4 of [2003](#), Standard Instructions - Goods or Services - Competitive Requirements, is amended as follows:

Delete: 60 days  
Insert: 120 days

### 2.2 Submission of Bids

Bids must be submitted by the date, time and place indicated on page 1 of the bid solicitation.

Due to the nature of the bid solicitation, bids transmitted by facsimile to DFO will not be accepted.

### 2.3 Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than 7 calendar days before the bid closing date. Enquiries received after that time may not be answered.

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

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in **Quebec**.

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.

## 2.5 Bid Challenge and Recourse Mechanisms

- (a) Several mechanisms are available to potential suppliers to challenge aspects of the procurement process up to and including contract award.
- (b) Canada encourages suppliers to first bring their concerns to the attention of the Contracting Authority. Canada's [Buy and Sell](#) website, under the heading "[Bid Challenge and Recourse Mechanisms](#)" contains information on potential complaint bodies such as:
- Office of the Procurement Ombudsman (OPO)
  - Canadian International Trade Tribunal (CITT)

The Office of the Procurement Ombudsman (OPO) was established by the Government of Canada to provide an impartial, independent venue for Canadian bidders to raise complaints regarding the award of certain federal contracts under \$30,300 for goods and \$121,200 for services. If you have concerns regarding the award of a federal contract below these dollar amounts, you may contact OPO by e-mail at [boa.opo@boa-opo.gc.ca](mailto:boa.opo@boa-opo.gc.ca), by telephone at 1-866-734-5169, or by web at [www.opo-boa.gc.ca](http://www.opo-boa.gc.ca).

- (c) Suppliers should note that there are **strict deadlines** for filing complaints, and the time periods vary depending on the complaint body in question. Suppliers should therefore act quickly when they want to challenge any aspect of the procurement process.



## **PART 3 - BID PREPARATION INSTRUCTIONS**

### **3.1 Bid Preparation Instructions**

Canada requests that the Bidder submit **all** its **email** bid in separately saved sections as follows and **prior to the bid closing date, time and location**:

**Section I: Technical Bid** (one soft copy in PDF format)

**Section II: Financial Bid** (one soft copy in PDF format)

**Section III: Certifications** (one soft copy in PDF format)

#### **Important Note:**

The maximum size per email (including attachments) is limited to 10MB. If the limit is exceeded, your email might not be received by DFO. It is suggested that you compress the email size to ensure delivery. Bidders are responsible to send their proposal and to allow enough time for DFO to receive the proposal by the closing period indicated in the RFP. Emails with links to bid documents will not be accepted.

For bids transmitted by email, DFO will not be responsible for any failure attributable to the transmission or receipt of the email bid. DFO will send a confirmation email to the Bidders when the submission is received.

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

#### **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.

#### **Section II: Financial Bid**

Bidders must submit their financial bid in accordance with the Basis of Payment in Annex "B"

#### **3.1.2 Exchange Rate Fluctuation**

C3011T (2013-11-06), Exchange Rate Fluctuation

#### **3.1.3 SACC Manual Clauses**

#### **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, financial, and evaluation criteria.
- (b) An evaluation team composed of representatives of Canada will evaluate the bids.

#### 4.1.1 Technical Evaluation

##### 4.1.1.1 Mandatory Technical Criteria

Refer to annex "C"

##### 4.1.1.2 Point Rated Technical Criteria

Refer to annex "C"

#### 4.1.2 Financial Evaluation

SACC Manual Clause [A0220T](#) (2014-06-26) , Evaluation of Price-Bid

SACC Manual Clause [A0220T](#) (2013-04-25):

The maximum funding available for the Contract resulting from the bid solicitation is \$300,000.00 (Applicable Taxes extra). Bids valued in excess of this amount will be considered non-responsive. This disclosure does not commit Canada to pay the maximum funding available.

### 4.2 Basis of Selection

#### 4.2.1 Highest Combined Rating of Technical Merit and Price within Budget - A0027T (2022-12-01)

1. To be declared responsive, a bid must:
  - a. comply with all the requirements of the bid solicitation; and
  - b. meet all mandatory criteria; and
  - c. obtain the required minimum of **20 points** per flight for the technical evaluation criteria which are subject to point rating. The rating is performed on a scale of **30 points** per flight.
2. Bids not meeting (a) or (b) or (c) will be declared non-responsive.
3. 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.
4. To establish the technical merit score, the overall technical score for each responsive bid will be determined as follows: total number of points obtained divided by the maximum number of points available multiplied by the ratio of 60 %.



5. To establish the pricing score, each responsive bid will be prorated against the lowest evaluated price and the ratio of 40 %.
6. For each responsive bid, the technical merit score and the pricing score will be added to determine its combined rating.
7. 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 The eligible bid with the highest combined score for technical merit and the award for Option 2 if the price is below the maximum funding will be recommended for contract award. If Option 2 does not meet the maximum funding requirement, the eligible bid with the highest combined score for technical merit and the award for Option 1 if the price is below the maximum funding will then be recommended for contract award.

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 equal 135 and the lowest evaluated price is \$45,000 (45).

| <b>Basis of Selection - Highest Combined Rating Technical Merit (60%) and Price (40%)</b> |                              |                             |                            |                            |
|---|------------------------------|-----------------------------|----------------------------|----------------------------|
|   |                              | <b>Bidder 1</b>             | <b>Bidder 2</b>            | <b>Bidder 3</b>            |
| <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>   |                              | <b>1st</b>                  | <b>3rd</b>                 | <b>2nd</b>                 |





## 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.

#### 5.1.1 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.

#### 5.1.2 Additional Certifications Required with the Bid

##### 5.1.2.1 Conditional Set-aside for Indigenous Business

If requested by the Contracting Authority, the Bidder must provide the following certification for each owner who is Indigenous:

1. I am an owner of \_\_\_\_\_ (*insert name of business*), and an Indigenous person, as defined in [Annex 9.4](#) of the *Supply Manual* entitled "Requirements for the Set-aside Program for Indigenous Business".
2. I certify that the above statement is true and consent to its verification upon request by Indigenous Services Canada.

\_\_\_\_\_  
Printed name of owner

\_\_\_\_\_  
Signature of owner

\_\_\_\_\_  
Date

### 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.

**5.2.1 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) (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.

**5.2.2 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" list available at the bottom of the page of the [Employment and Social Development Canada \(ESDC\) - Labour's](#) 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" list at the time of contract award.

**5.2.3 Additional Certifications Precedent to Contract Award**

**5.2.3.1 Status and Availability of Resources**

SACC Manual clause [A3005T](#) (2010-08-16) Status and Availability of Resources

**5.2.3.2 Education and Experience**

SACC Manual clause [A3010T](#) (2010-08-16) Education and Experience

**5.2.3.3 List of Names for Integrity Verification Form**

Bidders must complete the List of Names for Integrity Verification form found in Attachment 1 to Part 5.

**5.2.3.4 Contractor's Representative**

The Contractor's Representative for the Contract is:

Name: \_\_\_\_\_  
 Title: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Telephone: \_\_\_\_\_  
 Facsimile: \_\_\_\_\_  
 E-mail: \_\_\_\_\_

**5.2.3.5 Supplementary Contractor Information**

Pursuant to paragraph 221 (1)(d) of the Income Tax Act, payments made by departments and agencies under applicable services contracts (including contracts involving a mix of goods and services) must be



reported on a T4-A supplementary slip.

To enable the Department of Fisheries and Oceans to comply with this requirement, the Contractor hereby agrees to provide the following information which it certifies to be correct, complete, and fully discloses the identification of this Contractor:

- a) The legal name of the entity or individual, as applicable (the name associated with the Social Insurance Number (SIN) or Business Number (BN), as well as the address and the postal code:

\_\_\_\_\_

- b) The status of the contractor (individual, unincorporated business, corporation or partnership:

\_\_\_\_\_

- c) For individuals and unincorporated businesses, the contractor's SIN and, if applicable, the BN, or if applicable, the Goods and Services Tax (GST)/Harmonized Sales Tax (HST) number:

\_\_\_\_\_

- d) For corporations, the BN, or if this is not available, the GST/HST number. If there is no BN or GST/HST number, the T2 Corporation Tax number must be shown:

\_\_\_\_\_

#### 5.2.4 Former Public Servant

Contracts awarded to former public servants (FPS) in receipt of a pension or of a lump sum payment must bear the closest public scrutiny, and reflect fairness in the spending of public funds. In order to comply with Treasury Board policies and directives on contracts awarded to FPSs, bidders must provide the information required below before contract award. If the answer to the questions and, as applicable the information required have not been received by the time the evaluation of bids is completed, Canada will inform the Bidder of a time frame within which to provide the information. Failure to comply with Canada's request and meet the requirement within the prescribed time frame will render the bid non-responsive.

#### Definitions

For the purposes of this clause, "former public servant" is any former member of a department as defined in the [Financial Administration Act](#), R.S., 1985, c. F-11, a former member of the Canadian Armed Forces or a former member of the Royal Canadian Mounted Police. A former public servant may be:

- a. an individual;
- b. an individual who has incorporated;
- c. a partnership made of former public servants; or



- d. a sole proprietorship or entity where the affected individual has a controlling or major interest in the entity.

"lump sum payment period" means the period measured in weeks of salary, for which payment has been made to facilitate the transition to retirement or to other employment as a result of the implementation of various programs to reduce the size of the Public Service. The lump sum payment period does not include the period of severance pay, which is measured in a like manner.

"pension" means a pension or annual allowance paid under the [Public Service Superannuation Act](#) (PSSA), R.S., 1985, c. P-36, and any increases paid pursuant to the [Supplementary Retirement Benefits Act](#), R.S., 1985, c. S-24 as it affects the PSSA. It does not include pensions payable pursuant to the [Canadian Forces Superannuation Act](#), R.S., 1985, c. C-17, the [Defence Services Pension Continuation Act](#), 1970, c. D-3, the [Royal Canadian Mounted Police Pension Continuation Act](#), 1970, c. R-10, and the [Royal Canadian Mounted Police Superannuation Act](#), R.S., 1985, c. R-11, the [Members of Parliament Retiring Allowances Act](#), R.S. 1985, c. M-5, and that portion of pension payable to the [Canada Pension Plan Act](#), R.S., 1985, c. C-8.

#### **Former Public Servant in Receipt of a Pension**

As per the above definitions, is the Bidder a FPS in receipt of a pension? **Yes ( ) No ( )**

If so, the Bidder must provide the following information, for all FPSs in receipt of a pension, as applicable:

- a. name of former public servant;
- b. date of termination of employment or retirement from the Public Service.

By providing this information, Bidders agree that the successful Bidder's status, with respect to being a former public servant in receipt of a pension, will be reported on departmental websites as part of the published proactive disclosure reports in accordance with [Contracting Policy Notice: 2019-01](#) and the [Guidelines on the Proactive Disclosure of Contracts](#).

#### **The following certification signed by the contractor or an authorized officer:**

"I certify that I have examined the information provided above and that it is correct and complete"

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name of Signatory



## ATTACHMENT 1 TO PART 5 LIST OF NAMES FOR INTEGRITY VERIFICATION FORM

### Requirements

Section 17 of the [\*Ineligibility and Suspension Policy\*](#) (the Policy) requires suppliers, regardless of their status under the Policy, to submit a list of names with their bid or offer. The required list differs depending on the bidder or offeror's organizational structure:

- Suppliers including those bidding as joint ventures, whether incorporated or not, must provide a complete list of the names of all current directors.
- Privately owned corporations must provide a list of the owners' names.
- Suppliers bidding as sole proprietors, including sole proprietors bidding as joint ventures, whether incorporated or not, must provide a complete list of the names of all owners.
- Suppliers that are a partnership do not need to provide a list of names.

Suppliers may use this form to provide the required list of names with their bid or offer submission. Failure to submit this information with a bid or offer, where required, will render a bid or offer non-responsive, or the supplier otherwise disqualified for award of a contract or real property agreement. Please refer to [Information Bulletin: Required information to submit a bid or offer](#) for additional details.

List of names for [integrity verification form](#)



## PART 6 - RESULTING CONTRACT CLAUSES

The following clauses and conditions apply to and form part of any contract resulting from the bid solicitation.

### 6.1 Security Requirements

6.1.1 No Security Requirement, **escort required at DFO site(s), except for public zones.**

### 6.2 Statement of Work

The Contractor must perform the Work in accordance with the Statement of Work at Annex "A".

### 6.3 Standard Clauses and Conditions

**As this contract is issued by Fisheries and Oceans Canada (DFO), any reference to Public Works and Government Services Canada or PWGSC or its Minister contained in any term, condition or clause of this contract, including any individual SACC clauses incorporated by reference, will be interpreted as reference to DFO or its Minister.**

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>) issued by Public Works and Government Services Canada.

#### 6.3.1 General Conditions

6.3.1.1 2010B (2022-12001), General Conditions - Professional Services (Medium Complexity) apply to and form part of the Contract.

6.3.2.1 Subsection 10 of 2010B (2013-12-01), General Conditions - Professional Services (Medium Complexity) – Invoice submission, is amended as follows:

Delete: 2010B 10 (2013-03-21), Invoice submission

Insert: **Invoice submission**

1. Invoices must be submitted in the Contractor's name to [DFO.invoicing-facturation.MPO@DFO-MPO.gc.ca](mailto:DFO.invoicing-facturation.MPO@DFO-MPO.gc.ca) with a cc to **(to be inserted at Contract award)**. The Contractor must submit invoices for each delivery or shipment; invoices must only apply to the Contract. Each invoice must indicate whether it covers partial or final delivery.
2. Invoices must show:
  - a. Contractor's Name and remittance physical address;
  - b. Contractor's CRA Business Number or Procurement Business Number (PBN);
  - c. Invoice Date;
  - d. Invoice Number;
  - e. Invoice Amount (broken down into item and tax amounts);
  - f. Invoice Currency (if not in Canadian dollars);
  - g. DFO Reference Number (PO Number or other valid reference number);
  - h. DFO Contact Name (DFO employee who initiated the order or to whom the goods were sent. **Note:** Invoice will be return to the Contractor if that information is not provided);



- i. Description of the goods or services supplied (provide details of expenditures (such as item, quantity, unit of issue, fixed time labour rates and level of effort, subcontracts, as applicable) in accordance with the Basis of Payment, exclusive of Applicable Taxes;
  - j. Deduction for holdback, if applicable;
  - k. The extension of the totals, if applicable; and
  - l. If applicable, the method of shipment together with date, case numbers and part or reference numbers, shipment charges and any other additional charges.
3. Applicable Taxes must be specified on all invoices as a separate item along with corresponding registration numbers from the tax authorities. All items that are zero-rated, exempt or to which Applicable Taxes do not apply, must be identified as such on all invoices.
4. By submitting an invoice, the Contractor certifies that the invoice is consistent with the Work delivered and is in accordance with the Contract.

## 6.4 Term of Contract

### 6.4.1 Period of the Contract

The period of the Contract is from date of the Contract to October 8<sup>th</sup>, 2024

## 6.5 Authorities

### 6.5.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Louise Martel  
 Title: Contracting Specialist  
 Department: Fisheries and Oceans Canada  
 Directorate: Materiel and Procurement Services

Address: 301 Bishop Drive Fredericton, NB E3C 2M6

Telephone: 819-962-7325  
 E-mail address: [Louise.Martel@dfo-mpo.gc.ca](mailto:Louise.Martel@dfo-mpo.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.

### 6.5.2 Project Authority (to be inserted at Contract award)

The Project Authority for the Contract is:

Name: \_\_\_\_\_  
 Title: \_\_\_\_\_  
 Organization: \_\_\_\_\_  
 Address: \_\_\_\_\_



Telephone: \_\_\_\_\_  
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.

**6.5.3 Contractor's Representative (to be inserted at Contract award)**

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

**6.6 Proactive Disclosure of Contracts with Former Public Servants**

By providing information on its status, with respect to being a former public servant in receipt of a [Public Service Superannuation Act](#) (PSSA) pension, the Contractor has agreed that this information will be reported on departmental websites as part of the published proactive disclosure reports, in accordance with [Contracting Policy Notice: 2012-2](#) of the Treasury Board Secretariat of Canada.

**6.7 Payment**

**6.7.1 Basis of Payment**

The Contractor will be paid for the Work performed, in accordance with the Basis of payment in Annex "B", to a limitation of expenditure of \$\_\_\_\_\_ (to be inserted at contract award). Customs duties are included and Applicable Taxes are extra.

**6.7.2 Limitation of Expenditure**

1. Canada's total liability to the Contractor under the Contract must not exceed \$ \_\_\_\_\_ (to be inserted at contract award). Customs duties are included and Applicable Taxes are extra.
2. No increase in the total liability of Canada or in the price of the Work resulting from any design changes, modifications or interpretations of the Work, will be authorized or paid to the Contractor unless these design changes, modifications or interpretations have been approved, in writing, by the Contracting Authority before their incorporation into the Work. The Contractor must not perform any work or provide any service that would result in Canada's total liability being exceeded before obtaining the written approval of the Contracting Authority. The Contractor must notify the Contracting Authority in writing as to the adequacy of this sum:
  - a. when it is 75% committed, or
  - b. four months before the contract expiry date, or





- c. as soon as the Contractor considers that the contract funds provided are inadequate for the completion of the Work, whichever comes first.
3. If the notification is for inadequate contract funds, the Contractor must provide to the Contracting Authority a written estimate for the additional funds required. Provision of such information by the Contractor does not increase Canada's liability.

### 6.7.3 Methods of Payment

#### 6.7.3.1 Single Payment

SACC Manual clause [H1000C](#) (2008-05-12), single payment

### 6.7.4 Electronic Payment of Invoices – Contract

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

- i. Acquisition Card;
- ii. Direct Deposit (Domestic and International)

### 6.8 Invoicing Instructions

**6.8.1** The Contractor must submit invoices in accordance with subsection 7.2.1 entitled “Invoice Submission” above. Invoices cannot be submitted until all work identified in the invoice is completed.

**6.8.2** Payments will be made provided that the invoice(s) are emailed to DFO Accounts Payable at [DFO.invoicing-facturation.MPO@DFO-MPO.gc.ca](mailto:DFO.invoicing-facturation.MPO@DFO-MPO.gc.ca) with a cc to: **(to be inserted at contract award)** and provides the required information as stated in subsection 6.8.1 above.

### 6.9 Certifications and Additional Information

#### 6.9.1 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.

#### 6.9.2 SACC Manual Clauses

SACC Manual clause [A3000C](#) (2022-05-12) Aboriginal Business Certification

SACC Manual clause [A3015C](#) (2014-06-26) Certification - Contract

### 6.10 Applicable Laws

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

### 6.11 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;
- (b) the general conditions [2010B](#) (2022-12-01) professional services (medium complexity);
- (c) Annex A, Statement of Work;
- (d) Annex B, Basis of Payment;
- (e) Annex C, Evaluation criteria;
- (f) the Contractor's bid dated \_\_\_\_\_ (to be inserted at contract award)

#### 6.12 Insurance - [G1005C](#) (2016-01-28)

The Contractor is responsible for deciding if insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any insurance acquired or maintained by the Contractor is at its own expense and for its own benefit and protection. It does not release the Contractor from or reduce its liability under the Contract.

#### 6.13 Dispute Resolution

- (a) The parties agree to maintain open and honest communication about the Work throughout and after the performance of the contract.
- (b) The parties agree to consult and co-operate with each other in the furtherance of the contract and promptly notify the other party or parties and attempt to resolve problems or differences that may arise.
- (c) If the parties cannot resolve a dispute through consultation and cooperation, the parties agree to consult a neutral third party offering alternative dispute resolution services to attempt to address the dispute.
- (d) Options of alternative dispute resolution services can be found on Canada's Buy and Sell website under the heading "[Dispute Resolution](#)".
- (e) The Parties agree to make every reasonable effort, in good faith, to settle amicably all disputes or claims relating to the Contract, through negotiations between the Parties' representatives authorized to settle. If the Parties do not reach a settlement within 25 working days after the dispute was initially raised to the other party in writing, *either Party* may contact the Office of the Procurement Ombudsman (OPO) to request dispute resolution/mediation services. OPO may be contacted by e-mail at [boa.opo@boa-opo.gc.ca](mailto:boa.opo@boa-opo.gc.ca), by telephone at 1-866-734-5169, or by web at [www.opo-boa.gc.ca](http://www.opo-boa.gc.ca).
- (f) The Office of the Procurement Ombudsman (OPO) was established by the Government of Canada to provide an impartial, independent venue for Canadian bidders to raise complaints regarding the administration of certain federal contracts, regardless of dollar value. If you have concerns regarding the administration of a federal contract, you may contact OPO by e-mail at [boa.opo@boa-opo.gc.ca](mailto:boa.opo@boa-opo.gc.ca), by telephone at 1-866-734-5169, or by web at [www.opo-boa.gc.ca](http://www.opo-boa.gc.ca).

#### 6.14 Environmental Considerations

As part of Canada's policy directing federal departments and agencies to take the necessary steps to acquire products and services that have a lower impact on the environment than those traditionally acquired, Contractors should:

- a) Paper consumption:



- Provide and transmit draft reports, final reports in electronic format. Should printed material be required, double sided printing in black and white format is the default unless otherwise specified by the Project Authority.
- Printed material is requested on minimum recycled content of 30% and/or certified as originating from a sustainably managed forest.
- Recycle unneeded printed documents (in accordance with Security requirements).

b) Travel requirements:

- The Contractor is encouraged to use video and/or teleconferencing where possible to cut down unnecessary travel.
- Use of Properties with Environmental Ratings: Contractors to the Government of Canada may access the PWGSC Accommodation directory, which includes Eco-Rated properties. When searching for accommodation, Contractors can go to the following link and search for properties with Environmental Ratings, identified by Green Keys or Green Leafs that will honour the pricing for Contractors.
- Use public transportation or another method of green transportation as much as possible.



**ANNEX “A ”  
STATEMENT OF WORK**

Acquisition of aerial photos  
Lower North Shore (Basse Côte-Nord), Saguenay and St. Lawrence Estuary

**1 - Description of tasks**

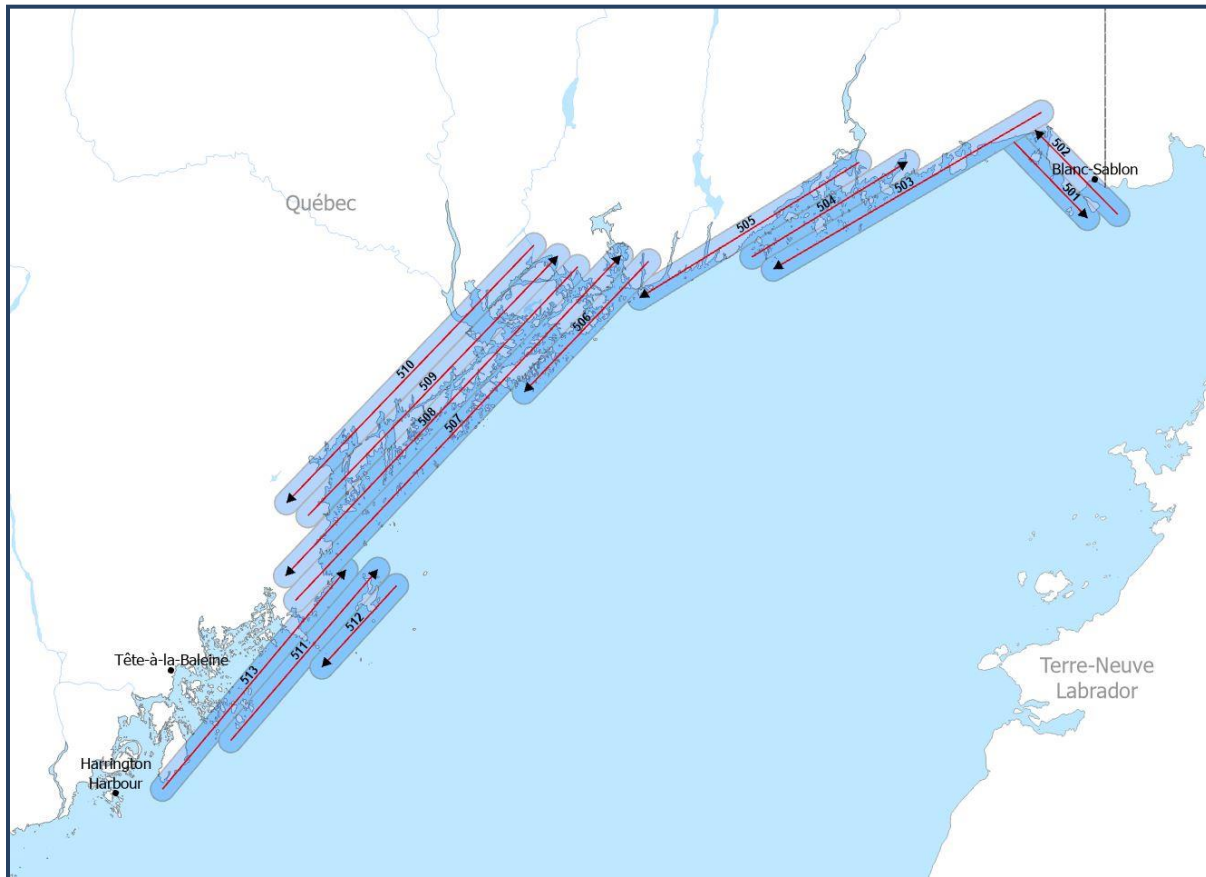
The contract consists of acquiring a series of aerial photographs on the Lower North Shore and on the north and south shores of the Middle Estuary of the St. Lawrence River in the province of Quebec. The acquisition will be made following previously identified flight lines. The photos acquired will feed the bank of images of the coast of Quebec obtained since 2015 by DFO. They will be used to identify and describe eelgrass beds and increase knowledge of the coastal zone, an important ecosystem for many species in the St. Lawrence. These flights must be made between July 15 and October 8, 2024 to match the eelgrass growing season. This document contains all the information necessary to understand the requirements related to the contract.

**1.1 Flight number 500: Blanc-Sablon to Tête-à-la-Baleine**

13 flight lines (501 to 513) totaling approximately 565.9 km from Blanc-Sablon to Tête-à-la-Baleine. The order of the 13 flight lines was selected to monitor the evolution of low tide levels. (Table 1 and Figure 1).

**Table 1:** Order of flight lines with start and end coordinates as well as the length of each flight line (measured using UTM Zone 21 projection).

| Flight line number | Longitude Start | Latitude Start | Longitude End | Latitude End | Length (km)   |
|--------------------|-----------------|----------------|---------------|--------------|---------------|
| 501                | -057.32601729   | 51.48254838    | -057.14968862 | 51.36909291  | 17,6          |
| 502                | -057.07800982   | 51.37492157    | -057.27515906 | 51.49992702  | 19,5          |
| 503                | -057.25981828   | 51.52605479    | -057.89946258 | 51.29343121  | 51,5          |
| 504                | -057.95060273   | 51.31144207    | -057.57913683 | 51.45300399  | 30,3          |
| 505                | -057.69420710   | 51.45218157    | -058.21884270 | 51.25060090  | 42,9          |
| 506                | -058.19677580   | 51.30534931    | -058.49394207 | 51.11012014  | 30,0          |
| 507                | -059.03958977   | 50.79785538    | -058.26300519 | 51.31387622  | 79,1          |
| 508                | -058.36617474   | 51.29691706    | -059.06363890 | 50.83472630  | 70,9          |
| 509                | -059.01004574   | 50.92504563    | -058.41351521 | 51.31309356  | 60,1          |
| 510                | -058.47044145   | 51.32920481    | -059.06094693 | 50.94434668  | 59,5          |
| 511                | -059.19453186   | 50.58635871    | -058.84334311 | 50.84439330  | 37,9          |
| 512                | -058.79890071   | 50.81992047    | -058.97671333 | 50.69745522  | 18,5          |
| 513                | -059.35735831   | 50.51285588    | -058.91925699 | 50.84396588  | 48,1          |
| <b>Total</b>       |                 |                |               |              | <b>566 km</b> |



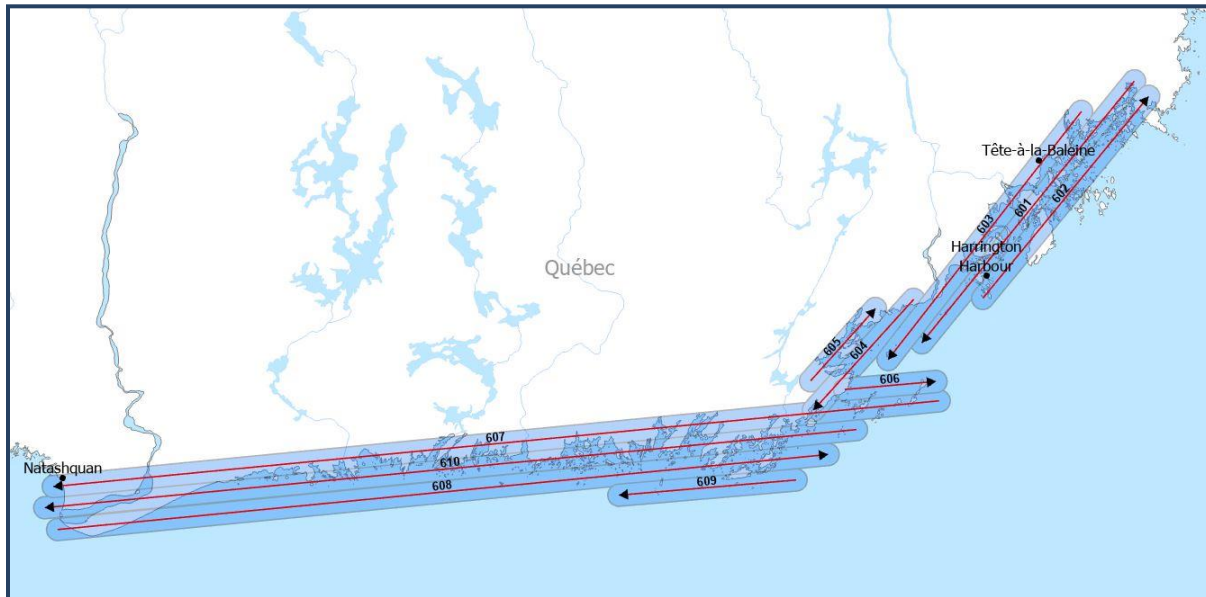
**Figure 1:** Flight lines and flight direction of the lines from Blanc-Sablon (departure of line 501) to Tête-à-la-Baleine (end of line 513).

**1.2 - Flight number 600: Tête-à-la-Baleine to Natashquan**

10 flight routes (601 to 610) totaling approximately 705.5 km from Tête-à-la-Baleine to Natashquan. The order of the 10 flight lines was selected to monitor the evolution of low tide levels. (Table 2 and Figure 2).

**Table 2:** Order of flight lines with start and end coordinates as well as the length of each flight line (measured using UTM Zone 21 projection).

| Flight line number | Longitude Start | Latitude Start | Longitude End | Latitude End | Length (km)  |
|--------------------|-----------------|----------------|---------------|--------------|--------------|
| 601                | -059.09299317   | 50.81985711    | -059.63153298 | 50.39860847  | 60,40        |
| 602                | -059.47707819   | 50.47036844    | -059.05708523 | 50.79514872  | 46,77        |
| 603                | -059.22730129   | 50.77102771    | -059.71700017 | 50.37140091  | 56,39        |
| 604                | -059.65227968   | 50.46862726    | -059.90622596 | 50.28942553  | 26,90        |
| 605                | -059.91335864   | 50.33697935    | -059.74920242 | 50.45383682  | 17,47        |
| 606                | -059.82702830   | 50.32291732    | -059.59576126 | 50.33592995  | 16,53        |
| 607                | -059.58779994   | 50.30457121    | -061.83233078 | 50.16547236  | 160,96       |
| 608                | -061.82145104   | 50.09552861    | -059.86911825 | 50.21756682  | 140,25       |
| 609                | -059.95029023   | 50.17609130    | -060.39923971 | 50.15143069  | 32,20        |
| 610                | -059.79719063   | 50.25794925    | -061.85388838 | 50.13107075  | 147,61       |
| <b>Total</b>       |                 |                |               |              | <b>705,5</b> |



**Figure 2:** Flight lines and flight direction of flight lines for Flight 600 - Tête-à-la-Baleine to Natashquan

### 1.3 - Flight 900 : Saguenay

24 flight lines (901 to 924) totalling approximately 241.8km, covering the Saguenay River from its mouth at Tadoussac to the 175 bridge at Chicoutimi. The order of the 24 flight lines was selected to follow the evolution of low tide levels (Table 3 and Figure 3).

**Table 3 :** Order of flight lines (Flight 900 - Saguenay) with start and end coordinates and length of each flight line (measured in UTM Zone 19 projection).

| Flight line numbers | Longitude Start | Latitude Start | Longitude End | Latitude End | Length km |
|---------------------|-----------------|----------------|---------------|--------------|-----------|
| 901                 | -069.67388403   | 48.13365811    | -069.83633536 | 48.15581739  | 12,33     |
| 902                 | -069.84094187   | 48.15862397    | -069.88557205 | 48.22397599  | 7,99      |
| 903                 | -069.88675055   | 48.22792899    | -069.96341849 | 48.25536784  | 6,46      |
| 904                 | -069.97380808   | 48.25632197    | -070.04474384 | 48.26371587  | 5,33      |
| 905                 | -070.05441690   | 48.26276187    | -070.12177005 | 48.25989979  | 5,01      |
| 906                 | -070.12320309   | 48.25989979    | -070.39411753 | 48.37045028  | 23,55     |
| 907                 | -070.41388898   | 48.36539154    | -070.64196566 | 48.38567983  | 17,04     |
| 908                 | -070.64600341   | 48.38692692    | -070.70763584 | 48.37289188  | 4,82      |
| 909                 | -070.70998374   | 48.37523132    | -070.74344135 | 48.42433479  | 5,99      |
| 910                 | -070.74872413   | 48.42433479    | -070.98879713 | 48.45665482  | 18,12     |
| 911                 | -071.07625648   | 48.43251408    | -070.99818874 | 48.45120469  | 6,14      |
| 912                 | -070.98703620   | 48.44575397    | -070.74226740 | 48.38146931  | 19,48     |
| 913                 | -070.74696320   | 48.37796053    | -070.87198899 | 48.34324963  | 10,03     |
| 914                 | -070.86259738   | 48.32686099    | -070.73757159 | 48.35651277  | 9,84      |



|              |               |             |               |             |              |
|--------------|---------------|-------------|---------------|-------------|--------------|
| 915          | -070.73878223 | 48.35746348 | -070.35082809 | 48.34100627 | 28,81        |
| 916          | -070.34991094 | 48.33795806 | -070.31322496 | 48.31539558 | 3,70         |
| 917          | -070.33065080 | 48.30136523 | -070.30405347 | 48.31295580 | 2,36         |
| 918          | -070.30130202 | 48.31295580 | -070.19223291 | 48.25644600 | 10,24        |
| 919          | -070.19896822 | 48.24732381 | -070.15822673 | 48.25436598 | 3,12         |
| 920          | -070.15455813 | 48.25558728 | -070.10319777 | 48.23848633 | 4,26         |
| 921          | -070.10136348 | 48.24092968 | -070.03888727 | 48.24317745 | 4,65         |
| 922          | -070.02839508 | 48.24117401 | -069.89500489 | 48.21404649 | 10,36        |
| 923          | -069.90234208 | 48.21099069 | -069.85831891 | 48.14983635 | 7,54         |
| 924          | -069.85189887 | 48.14800060 | -069.66950579 | 48.09998156 | 14,59        |
| <b>Total</b> |               |             |               |             | <b>241,8</b> |



**Figure 3 :** Flight lines and direction of flight for lines on the Saguenay River (starting at line 901 and ending at line 924).

**1.4 - Flight number 100: Upper Estuary, North and South Shore**

This flight consists of 17 flight lines (101 to 117) totaling approximately 536 km from the Middle Estuary, North and South Shore to the eastern tip of Île d'Orléans. The order of the 17 flight lines was selected to monitor the evolution of low tide levels. (Table 4 and Figure 4).

**Table 4:** Order of flight lines with start and end coordinates as well as the length of each flight line (measured using UTM Zone 19 projection).

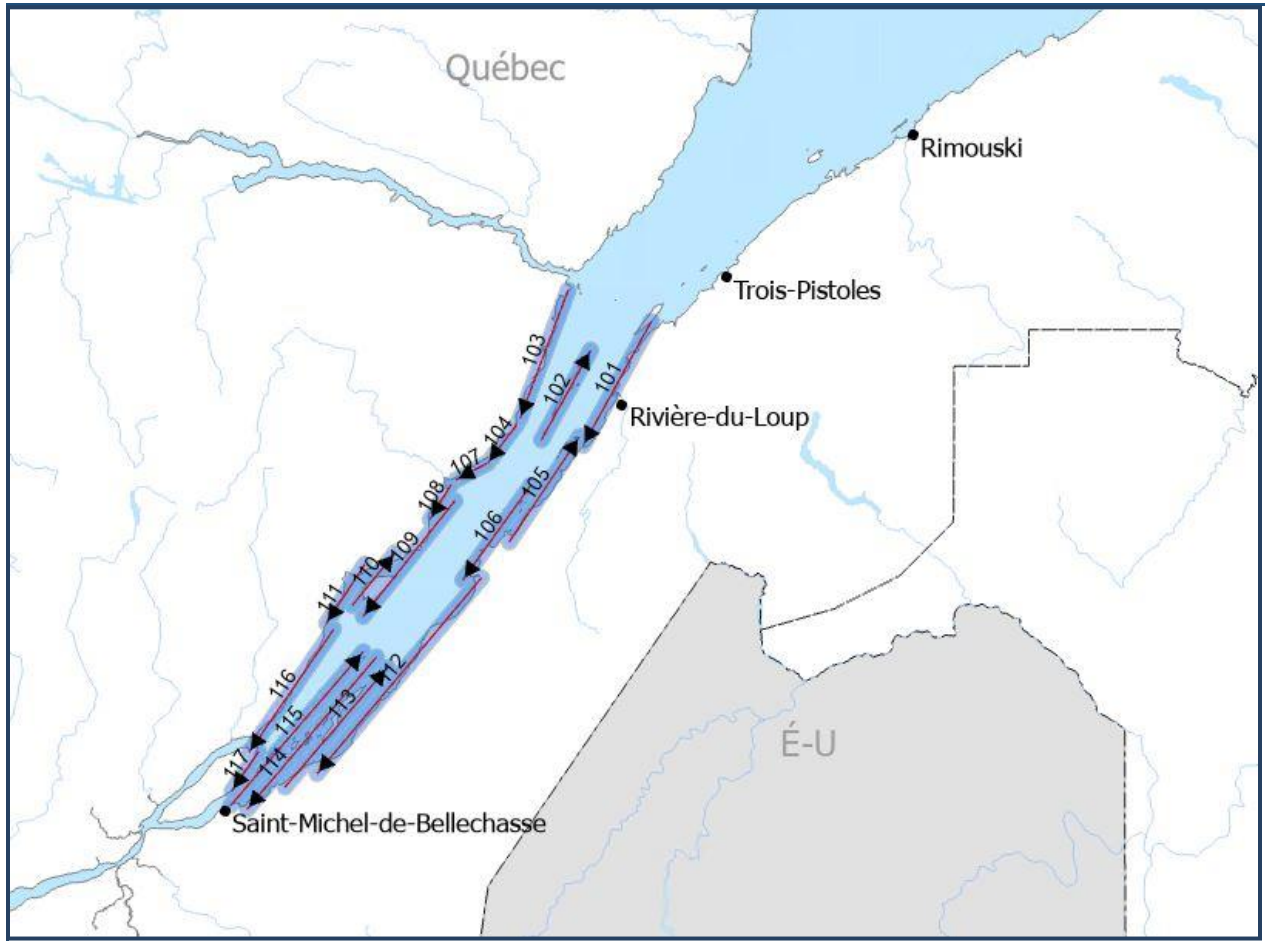
| Flight line number | Longitude Start | Latitude Start | Longitude End | Latitude End | Length |
|--------------------|-----------------|----------------|---------------|--------------|--------|
|--------------------|-----------------|----------------|---------------|--------------|--------|





|     |               |             |              |              | (km) |
|-----|---------------|-------------|--------------|--------------|------|
| 101 | -069.43136541 | 48.02018372 | 069.66807047 | 47.73120267  | 37   |
| 102 | -069.81288865 | 47.74427083 | 069.64180499 | 47.95294244  | 26   |
| 103 | -069.72025347 | 48.09146485 | 069.88698977 | 47.79421085  | 35   |
| 104 | -069.89577526 | 47.78263691 | 069.99913399 | 47.68995256  | 13   |
| 105 | -069.92454976 | 47.50610085 | 069.68047374 | 47.75204546  | 33   |
| 106 | -069.84955862 | 47.63847727 | 070.08553994 | 47.41708118  | 30   |
| 107 | -070.00281100 | 47.68951169 | 070.10935459 | 47.65078252  | 9    |
| 108 | -070.12537265 | 47.64025495 | 070.19939153 | 47.55848352  | 11   |
| 109 | -070.11248936 | 47.60265267 | 070.43105863 | 47.33161335  | 39   |
| 110 | -070.46884673 | 47.35735332 | 070.31890724 | 47.48114291  | 18   |
| 111 | -070.42545107 | 47.45384940 | 070.55784075 | 47.31542657  | 18   |
| 112 | -070.02027976 | 47.42232337 | 070.59099852 | 46.96096093  | 67   |
| 113 | -070.70229742 | 46.92922479 | 070.34579106 | 47.21231795  | 42   |
| 114 | -070.38424141 | 47.23629352 | 070.83309930 | 46.87701675  | 53   |
| 115 | -070.88995642 | 46.88644223 | 070.43044815 | 47.24890213  | 53   |
| 116 | -070.53311641 | 47.30120016 | 070.82659763 | 47.01143548  | 39   |
| 117 | -070.79235480 | 47.01358749 | 070.88647690 | 46.92032637  | 13   |
|     |               |             |              | <b>Total</b> | 536  |





**Figure 4:** Flight lines and flight direction of the lines of the river and middle estuary, north and south shore to the tip of Île d'Orléans (departure of line 101 and end at line 117).

## 2– Contract requirements

### 2.1 – Clarifications

- Aerial photographs must have a ground resolution of 30 cm, +/- 10% (pixel ground value) and be sharp.
- Flight lines must be taken in the prescribed order (from 501 to 513, from 601 to 610, etc. ) according to the order of tables 1 to 4 above.
- The equipment used should allow coverage of a ground corridor about 4 km wide or more along the flight line (Figures 1 to 4 above).
- Two successive photos should have an overlap percentage of 60% to 80% to optimize the clarity of the images available in the event of gale force winds and specular scintillation on the water surface.
- A flight should only be undertaken if it can be completed in its entirety (all flight lines), taking into account the environmental conditions (specified below).
- Photography should be timed as close as possible to the lowest tide; if previous and subsequent high tides are less than 1.8m, the flight window extends to 3 hours before and after the time of low tide. If the previous and following high tides are more than 1.8m and less than 3.6m, the flight window will be 2h before and after low tide. On the other hand, if the previous and subsequent high tides are 3.6m or more, the flying window will be 1.5h before and after low tide.



- Photography must be synchronized with the time of day when the sun's angle of elevation is greater than 25°, to minimize shadows on the ground.
- Photo-taking times for flights must respect the flight periods identified in the favorable days in appendix 1. These include information on sunrise times above 25°, low tide times and levels for sites at the extremities of flights 500, 600, 900 and 100, and possible flight times (Appendix 1).

## 2.2 - Environmental conditions to be met:

- **Solar angle: minimum required of 25°**

In order to avoid elongated shadows created by elements close to the coast, a minimum elevation of the sun at the horizon must be equal to or greater than 25°. If weather and tide conditions justify it, a tolerance of 2° will be accepted (equal to or greater than 23°). This tolerance implies being able to extend the flight period by around 10 minutes (50 km at 300 km/h). Acceptable situations are, for example, an hour of low tide early in the morning or late in the afternoon which, if the 25° limit were maintained, would prevent the flight planned for the day from being completed.

- **Tides**

Photographs should be taken as close as possible to the lowest tide in order to identify as accurately as possible the intertidal and subtidal vegetation zones, such as eelgrass beds and kelp beds, in the area covered.

- **Wind speed:**

With some exceptions, it must be less than 20 km/h (10.8 knots).

- EXCEPTION: When it comes from offshore (this origin varies depending on the location on the coast), the wind speed must be less than 13 km/h (7.02 knots), in order to avoid too much specular reflection due to the waves.
- Site to consult: <https://www.windyty.com/>

- **Wave height:**

The wave **height** forecast for the St. Lawrence must be 1 meter or less for the sector according to the following site:

- website to consult: <https://www.windyty.com/>

If the wave height forecast for the St. Lawrence is not available at the previous site, it must be 1 meter or less for the area consulted according to the following sites:

- [Marine Forecasts and Warnings for Canada - Environment Canada \(meteo.gc.ca\)](http://meteo.gc.ca)

- **The cloudiness and fog conditions under the aircraft must be zero.**

## 3. Technical specifications

### 3.1 – Generalities



Aerial photography must be obtained in accordance with photography requirements, deliverables and start and completion dates. The photographs will be used primarily to determine the extent of eelgrass. The usefulness and value of these images therefore depend on compliance with the specified conditions.

### 3.2 - Aerial photography requirements

- **Camera to use:** Multi-spectral digital camera of UltraCam Xp type or of equivalent or better technical quality.
- Photos must be captured vertically below the flight lines provided, **georeferenced and orthorectified**.
- Ground accuracy does not require ground control points.
- The resolution must be 30 cm per pixel and the flight altitude must be constant during a flight. UltraCam Xp achieves a swath of at least 4 km at this resolution.
- **Spectral bands** : true color (RGB) and infrared (IR)
- **Overlap** : Two successive photos must have an overlap percentage of 60% to 80% to ensure a minimum loss of information related to specular reflections in some photos.
- Side cladding does not have to be considered for this project.

### 3.3 – DFO's responsibilities

DFO is providing bidders for **flight number 500**:

- A file including the 13 flight lines to be covered for the mission as electronic files in GIS formats (**LignesVol\_500\_BCN\_TeteBaleine-BlancSablon.shp**: 1 Shapefile ) (see Figure 1).
- A file including the 13 ground corridors of 4 km width along the flight lines as electronic files in GIS formats (**LignesVol\_500\_BCN\_TeteBaleine-BlancSablon\_4km.shp**: 1 Shapefile) (see Figure 1).
- **Appendix 1** with the **possible flight periods** for flight 500 (Blanc-Sablon to Tête-à-la-Baleine) from July 15 to October 8, 2024.

DFO provides bidders for **flight number 600**:

- A file including the 10 flight lines to be covered for the mission as electronic files in GIS formats (**LignesVol\_600\_BCN\_Natashquan-TeteBaleine.shp**: 1 Shapefile ) (see Figure 2).
- A file including the 10 ground corridors of 4 km width along the flight lines as electronic files in GIS formats (**LignesVol\_600\_BCN\_Natashquan-TeteBaleine\_4km.shp**: 1 Shapefile) (see Figure 2).
- **Appendix 1** with the **possible flight periods** for flight 600 (Tête-à-la-Baleine to Natashquan) from July 15 to October 8, 2024.

DFO provides bidders for **flight number 900** :

- A file including the 24 flight lines to be covered for the mission as electronic files in GIS formats (**LignesVol\_900\_Saguenay.shp**: 1 Shapefile ) (see Figure 3).
- A file including the 24 ground corridors of 4 km width along the flight lines as electronic files in GIS formats (**LignesVol\_900\_Saguenay\_4Km.shp**: 1 Shapefile) (see Figure 3).
- **Appendix 1** with the **possible flight periods** for flight 900 (de Tadoussac to Chicoutimi) from July 15 to October 8, 2024.

DFO provides bidders for **flight number 100**:

- A file including the 17 flight lines to be covered for the mission as electronic files in GIS formats (**LignesVol\_Estuaire\_100\_RiveNord-Sud.shp**: 1 Shapefile ) (see Figure 4).



- A file including the 17 ground corridors of 4 km width along the flight lines as electronic files in GIS formats (**LignesVol\_Estuaire\_100\_RiveNordSud\_4Km.shp**: 1 Shapefile) (see Figure 4).
- **Appendix 1** with the **possible flight periods** for flight 100 from July 15 to October 8, 2024.

### 3.4 - Deliverables:

#### For each flight completed:

A) A flight report (electronic format) including:

- Specifications of the camera used for the flight;
- the date, start and end times of the various flight lines performed;
- the number of each flight line and the number of photos on that flight line, as well as the flight altitude.

B) A copy of the raw photos (not orthorectified) and a Flight Index (Shapefile format) of these photos, including as attributes the photo ID, flight line, date, time, camera model, and various information from the GPS/IMU system such as the centroid coordinates of each photo, the reference systems used, camera orientation parameters (Omega, Phi, Kappa), etc.

C) Digital files (multiband) of the various photos taken, orthorectified and georeferenced, as well as the methodology used for orthorectification.

#### If a flight is not performed:

Considering the possibility that one of the flights cannot be carried out, a schedule must be provided:

For each date considered possible according to Appendix 1, which the bidder has indicated as a date on which its personnel and equipment were available, the calendar must mention the weather conditions making it impossible to fly on that date. The weather conditions to be considered are as follows:

- Wind speed too high, taking wind direction into account;
- presence of fog or cloud cover below flight altitude;
- forecast wave heights in excess of 1 metre.

### 3.5 – Flight and delivery dates

Dates considered for work: July 15 (or contract award date) to October 8, 2024.

#### 3.5.1 - Start Date

Photographs should be taken as early in the season as possible, as eelgrass growth peaks between July 15 and October 8. Ideally, on the first day when weather conditions are favourable, and within the range of possible flying hours indicated in Appendix 1 for the sector under consideration.

#### 3.5.2 - Completion and Delivery Dates

Aerial photography must be completed by October 8, 2024. If the scheduled flights have not been completed by this date, the contractor must cease all work related to the photography and contact the project manager within 24 hours. For each flight, photos and other deliverables must be delivered to DFO for inspection within 30 days of capture.

## APPENDIX 1 POSSIBLE FLIGHT RANGES AND TIME PERIODS

### Note on reviews and estimated flight time:

- The time range does not take into account the approach time of a flight line.
- Possible photo periods lasting more than **3h30 or 3,5 hours**, depending on the flight, are in **bold**

**Note on submission evaluation:** The number of days for which the "Possible duration" for the flight is equal to or greater than **3h30** will be considered favorable and will be used as a technical criterion for evaluating bids.

### Possible photo period: July 15 to October 8, 2024

#### Table:

- |                       |   |
|-----------------------|---|
| • Date                | Table built from July 15 to October 8 inclusively   |
| • Hr_Sun_Morning      | Hour (GMT-5 avec DST - Daylight saving time) rounded to the nearest 10 minutes, according to the required minimum elevation angle of 25 degrees                                   |
| • Hr_Sun_Night        | Hour (GMT-5 avec DST - Daylight saving time) rounded to the nearest 10 minutes, preceding the required minimum elevation angle of 25 degrees                                      |
| • Hour_LowTide        | Expected low tide time  |
| • N_LowTide           | Expected low tide level   |
| • Hour minimum (Tide) | Minimum time to fly over the site according to the delta determined by the tide.  |
| • Hour maximum (Tide) | Maximum time to fly over the site according to the delta determined by the tide.  |
| • Flight possibility  | Possibility of carrying out a flight if weather conditions are acceptable (Favourable or unfavourable)  |
| • Hour start Min      | Minimum flight start time at departure site   |
| • Start max_(FD)      | Maximum flight start time at departure site   |
| • Hour End max        | Maximum arrival time at arrival site according to determined flight duration  |
| • Possible duration   | Estimated duration of possible flight range (in hours). Ideally, within this range, the flight should be planned to be as synchronized as possible with the low tides of the day. |

### Sites used to retrieve information:

**SUN ELEVATION:** : [http://www.sunearthtools.com/dp/tools/pos\\_sun.php?lang=fr#table](http://www.sunearthtools.com/dp/tools/pos_sun.php?lang=fr#table)

FLIGHT 500 - Time in GMT -4 (All year)

FLIGHT 600 - Time in GMT -5 (DST) - (is equivalent to GMT -4)

#### TIDES :

**Blanc-Sablon (#02588):** <https://marees.gc.ca/fr/stations/02588>

Coordinates used for sunrise hours : 51.4121624,-57.2018488 in 2024

**Tête-À-La-Baleine (#02554):** <https://marees.gc.ca/fr/stations/02554>

Coordinates used for sunrise hours : 50.7025322,-59.3225430 in 2024

**Natashquan (#02510):** <https://marees.gc.ca/fr/stations/02510>

Coordinates used for sunrise hours : 50.1839077,-61.8174062 in 2024



FLIGHT 500

| Flight 500 - Blanc-Sablon (#02588) / Tête-à-la-Baleine (#02554) |   |                            |   |                     |                     |               | 566km; approximate flight time 3h30 |                     |                     |                |                    |                |              |                   |      |
|---|---|----------------------------|---|---------------------|---------------------|---------------|-------------------------------------|---------------------|---------------------|----------------|--------------------|----------------|--------------|-------------------|------|
| Criteria:   | Sun: Elevation greater than 25° (GMT-5 with DST - Daylight saving time) |                            | Tides : High tides considered: Previous for start of flight; Next for end of flight |                     |                     |               |                                     |                     |                     |                | Results            |                |              |                   |      |
|   | Blanc-Sablon (#02588)   | Tête à la baleine (#02554) | Next or previous high tide:   |                     |                     |               |                                     |                     |                     |                |                    |                |              |                   |      |
|   |   |                            | Blanc-Sablon (#02588)   |                     |                     |               | Tête à la baleine (#02554)          |                     |                     |                |                    |                |              |                   |      |
| Date  | Hr_Sun Morning  | Hr_Sun Night               | Low Tide Time   | Hour minimum (Tide) | Hour maximum (Tide) | LowTide_Level | Low Tide Time                       | Hour minimum (Tide) | Hour maximum (Tide) | Low Tide Level | Flight possibility | Hour start Min | Hour End max | Possible duration | Date |
| 15-juil-24  | 06:50   | 17:00                      | 10:54   | 7:54                | 13:54               | 0.7           | 11:36                               | 8:36                | 14:36               | 0.7            | favorable          | 7:54           | 11:06        | 14:36             | 6:42 |
| 16-juil-24  | 06:50   | 17:00                      | 11:45   | 8:45                | 14:45               | 0.7           | 12:24                               | 9:24                | 15:24               | 0.7            | favorable          | 8:45           | 11:54        | 15:24             | 6:39 |
| 17-juil-24  | 07:00   | 17:00                      | 12:39   | 9:39                | 15:39               | 0.6           | 13:13                               | 10:13               | 16:13               | 0.6            | favorable          | 9:39           | 12:43        | 16:13             | 6:34 |
| 18-juil-24  | 07:00   | 17:00                      | 13:31   | 10:31               | 16:31               | 0.5           | 14:04                               | 11:04               | 16:04               | 0.5            | favorable          | 10:31          | 12:34        | 16:04             | 5:33 |
| 19-juil-24  | 07:00   | 17:00                      | 14:20   | 11:20               | 16:20               | 0.4           | 14:55                               | 11:55               | 16:55               | 0.4            | favorable          | 11:20          | 13:25        | 16:55             | 5:35 |
| 20-juil-24  | 07:00   | 17:00                      | 15:05   | 12:05               | 17:05               | 0.3           | 15:43                               | 12:43               | 17:43               | 0.3            | favorable          | 12:05          | 13:30        | 17:00             | 4:55 |
| 21-juil-24  | 07:00   | 17:00                      | 15:48   | 12:48               | 17:48               | 0.2           | 16:30                               | 13:30               | 18:30               | 0.2            | favorable          | 12:48          | 13:30        | 17:00             | 4:12 |
| 22-juil-24  | 07:00   | 17:00                      | 16:31   | 13:31               | 18:31               | 0.2           | 17:16                               | 14:16               | 19:16               | 0.2            | favorable          | 13:31          | 13:30        | 17:00             | 3:29 |
| 23-juil-24  | 07:00   | 17:00                      | 17:16   | 14:16               | NA                  | 0.2           | 18:02                               | 15:02               | 20:02               | 0.2            | non favorable      | 14:16          | 13:30        | 17:00             | 2:44 |
| 24-juil-24  | 07:00   | 17:00                      | 6:26  | 4:26                | 9:26                | 0.5           | 6:59                                | 4:59                | 9:59                | 0.5            | non favorable      | 7:00           | 6:29         | 9:59              | 2:59 |
| 25-juil-24  | 07:00   | 16:50                      | 7:09  | 5:09                | 10:09               | 0.4           | 7:41                                | 5:41                | 9:41                | 0.5            | non favorable      | 7:00           | 6:11         | 9:41              | 2:41 |



|            |       |       |       |       |       |     |       |       |       |     |               |       |       |       |      |
|------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-----|---------------|-------|-------|-------|------|
| 26-juil-24 | 07:10 | 16:50 | 7:54  | 4:54  | 10:54 | 0.4 | 8:25  | 6:25  | 10:25 | 0.5 | non favorable | 7:10  | 6:55  | 10:25 | 3:15 |
| 27-juil-24 | 07:10 | 16:50 | 8:41  | 5:41  | 11:41 | 0.5 | 9:13  | 7:13  | 11:13 | 0.6 | favorable     | 7:10  | 7:43  | 11:13 | 4:03 |
| 28-juil-24 | 07:10 | 16:50 | 9:33  | 6:33  | 12:33 | 0.5 | 10:07 | 7:07  | 12:07 | 0.6 | favorable     | 7:10  | 8:37  | 12:07 | 4:57 |
| 29-juil-24 | 07:10 | 16:50 | 10:31 | 7:31  | 13:31 | 0.6 | 11:08 | 8:08  | 13:08 | 0.7 | favorable     | 7:31  | 9:38  | 13:08 | 5:37 |
| 30-juil-24 | 07:10 | 16:50 | 11:39 | 8:39  | 14:39 | 0.6 | 12:16 | 9:16  | 14:16 | 0.6 | favorable     | 8:39  | 10:46 | 14:16 | 5:37 |
| 31-juil-24 | 07:10 | 16:50 | 12:51 | 9:51  | 14:51 | 0.6 | 13:23 | 10:23 | 15:23 | 0.6 | favorable     | 9:51  | 11:53 | 15:23 | 5:32 |
| 01-août-24 | 07:10 | 16:50 | 13:53 | 10:53 | 15:53 | 0.5 | 14:24 | 11:24 | 16:24 | 0.5 | favorable     | 10:53 | 12:54 | 16:24 | 5:31 |
| 02-août-24 | 07:10 | 16:50 | 14:43 | 11:43 | 16:43 | 0.5 | 15:17 | 12:17 | 17:17 | 0.3 | favorable     | 11:43 | 13:20 | 16:50 | 5:07 |
| 03-août-24 | 07:10 | 16:40 | 15:25 | 12:25 | 17:25 | 0.4 | 16:02 | 13:02 | 18:02 | 0.3 | favorable     | 12:25 | 13:10 | 16:40 | 4:15 |
| 04-août-24 | 07:20 | 16:40 | 16:02 | 13:02 | 18:02 | 0.4 | 16:43 | 13:43 | 18:43 | 0.3 | favorable     | 13:02 | 13:10 | 16:40 | 3:38 |
| 05-août-24 | 07:20 | 16:40 | 16:38 | 13:38 | 18:38 | 0.4 | 17:20 | 14:20 | 19:20 | 0.3 | non favorable | 13:38 | 13:10 | 16:40 | 3:02 |
| 06-août-24 | 07:20 | 16:40 | 17:13 | 14:13 | 20:13 | 0.4 | 17:55 | 14:55 | 20:55 | 0.3 | non favorable | 14:13 | 13:10 | 16:40 | 2:27 |
| 07-août-24 | 07:20 | 16:40 | 6:08  | 3:08  | 9:08  | 0.6 | 6:42  | 3:42  | 9:42  | 0.6 | non favorable | 7:20  | 6:12  | 9:42  | 2:22 |
| 08-août-24 | 07:20 | 16:40 | 6:40  | 3:40  | 9:40  | 0.6 | 7:12  | 4:12  | 10:12 | 0.6 | non favorable | 7:20  | 6:42  | 10:12 | 2:52 |
| 09-août-24 | 07:20 | 16:30 | 7:12  | 4:12  | 10:12 | 0.6 | 7:42  | 4:42  | 10:42 | 0.6 | non favorable | 7:20  | 7:12  | 10:42 | 3:22 |
| 10-août-24 | 07:20 | 16:30 | 7:45  | 4:45  | 10:45 | 0.6 | 8:14  | 5:14  | 11:14 | 0.7 | favorable     | 7:20  | 7:44  | 11:14 | 3:54 |
| 11-août-24 | 07:20 | 16:30 | 8:19  | 5:19  | 11:19 | 0.7 | 8:49  | 5:49  | 11:49 | 0.7 | favorable     | 7:20  | 8:19  | 11:49 | 4:29 |
| 12-août-24 | 07:20 | 16:30 | 8:58  | 5:58  | 11:58 | 0.7 | 9:31  | 6:31  | 12:31 | 0.7 | favorable     | 7:20  | 9:01  | 12:31 | 5:11 |
| 13-août-24 | 07:20 | 16:30 | 9:46  | 6:46  | 12:46 | 0.7 | 10:23 | 7:23  | 13:23 | 0.8 | favorable     | 7:20  | 9:53  | 13:23 | 6:03 |
| 14-août-24 | 07:30 | 16:30 | 10:47 | 7:47  | 13:47 | 0.7 | 11:25 | 8:25  | 14:25 | 0.7 | favorable     | 7:47  | 10:55 | 14:25 | 6:38 |
| 15-août-24 | 07:30 | 16:30 | 11:58 | 8:58  | 14:58 | 0.6 | 12:35 | 9:35  | 15:35 | 0.7 | favorable     | 8:58  | 12:05 | 15:35 | 6:37 |
| 16-août-24 | 07:30 | 16:20 | 13:05 | 10:05 | 16:05 | 0.5 | 13:43 | 10:43 | 15:43 | 0.6 | favorable     | 10:05 | 12:13 | 15:43 | 5:38 |
| 17-août-24 | 07:30 | 16:20 | 14:01 | 11:01 | 16:01 | 0.4 | 14:41 | 11:41 | 16:41 | 0.4 | favorable     | 11:01 | 12:50 | 16:20 | 5:19 |
| 18-août-24 | 07:30 | 16:20 | 14:49 | 11:49 | 16:49 | 0.2 | 15:31 | 12:31 | 17:31 | 0.3 | favorable     | 11:49 | 12:50 | 16:20 | 4:31 |
| 19-août-24 | 07:30 | 16:20 | 15:34 | 12:34 | 17:34 | 0.2 | 16:18 | 13:18 | 18:18 | 0.2 | favorable     | 12:34 | 12:50 | 16:20 | 3:46 |
| 20-août-24 | 07:30 | 16:20 | 16:18 | 13:18 | 18:18 | 0.1 | 17:03 | 14:03 | 19:03 | 0.1 | non favorable | 13:18 | 12:50 | 16:20 | 3:02 |
| 21-août-24 | 07:40 | 16:10 | 17:04 | 14:04 | 19:04 | 0.2 | 17:49 | 15:49 | 19:49 | 0.2 | non favorable | 14:04 | 12:40 | 16:10 | 2:06 |
| 22-août-24 | 07:40 | 16:10 | 17:54 | 14:54 | 20:54 | 0.3 | 18:37 | 16:37 | 20:37 | 0.3 | non favorable | 14:54 | 12:40 | 16:10 | 1:16 |





|            |       |       |       |       |       |     |       |       |       |     |               |       |       |       |             |
|------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-----|---------------|-------|-------|-------|-------------|
| 23-août-24 | 07:40 | 16:10 | 6:30  | 3:30  | 9:30  | 0.3 | 7:04  | 5:04  | 9:04  | 0.4 | non favorable | 7:40  | 5:34  | 9:04  | 1:24        |
| 24-août-24 | 07:40 | 16:10 | 7:13  | 4:13  | 10:13 | 0.3 | 7:46  | 5:46  | 9:46  | 0.4 | non favorable | 7:40  | 6:16  | 9:46  | 2:06        |
| 25-août-24 | 07:40 | 16:10 | 8:01  | 5:01  | 11:01 | 0.4 | 8:33  | 5:33  | 10:33 | 0.5 | non favorable | 7:40  | 7:03  | 10:33 | 2:53        |
| 26-août-24 | 07:50 | 16:10 | 8:57  | 5:57  | 11:57 | 0.5 | 9:31  | 6:31  | 11:31 | 0.6 | favorable     | 7:50  | 8:01  | 11:31 | <b>3:41</b> |
| 27-août-24 | 07:50 | 16:00 | 10:04 | 7:04  | 13:04 | 0.6 | 10:40 | 7:40  | 12:40 | 0.7 | favorable     | 7:50  | 9:10  | 12:40 | <b>4:50</b> |
| 28-août-24 | 07:50 | 16:00 | 11:25 | 8:25  | 14:25 | 0.7 | 11:58 | 8:58  | 13:58 | 0.7 | favorable     | 8:25  | 10:28 | 13:58 | <b>5:33</b> |
| 29-août-24 | 07:50 | 16:00 | 12:45 | 9:45  | 15:45 | 0.7 | 13:11 | 10:11 | 15:11 | 0.6 | favorable     | 9:45  | 11:41 | 15:11 | <b>5:26</b> |
| 30-août-24 | 07:50 | 16:00 | 13:47 | 10:47 | 15:47 | 0.6 | 14:15 | 11:15 | 16:15 | 0.5 | favorable     | 10:47 | 12:30 | 16:00 | <b>5:13</b> |
| 31-août-24 | 07:50 | 15:50 | 14:35 | 11:35 | 16:35 | 0.5 | 15:07 | 12:07 | 17:07 | 0.4 | favorable     | 11:35 | 12:20 | 15:50 | <b>4:15</b> |
| 01-sept-24 | 08:00 | 15:50 | 15:14 | 12:14 | 17:14 | 0.5 | 15:52 | 12:52 | 17:52 | 0.4 | favorable     | 12:14 | 12:20 | 15:50 | <b>3:36</b> |
| 02-sept-24 | 08:00 | 15:50 | 15:50 | 12:50 | 18:50 | 0.5 | 16:31 | 13:31 | 19:31 | 0.3 | non favorable | 12:50 | 12:20 | 15:50 | 3:00        |
| 03-sept-24 | 08:00 | 15:50 | 16:23 | 13:23 | 19:23 | 0.4 | 17:06 | 14:06 | 20:06 | 0.4 | non favorable | 13:23 | 12:20 | 15:50 | 2:27        |
| 04-sept-24 | 08:00 | 15:50 | 16:55 | 13:55 | 19:55 | 0.5 | 17:37 | 14:37 | 20:37 | 0.4 | non favorable | 13:55 | 12:20 | 15:50 | 1:55        |
| 05-sept-24 | 08:00 | 15:40 | 17:28 | 14:28 | 20:28 | 0.5 | 18:08 | 15:08 | 21:08 | 0.5 | non favorable | 14:28 | 12:10 | 15:40 | 1:12        |
| 06-sept-24 | 08:00 | 15:40 | 18:03 | 15:03 | 21:03 | 0.6 | 18:39 | 15:39 | 21:39 | 0.5 | non favorable | 15:03 | 12:10 | 15:40 | 0:37        |
| 07-sept-24 | 08:10 | 15:40 | 6:16  | 3:16  | 9:16  | 0.6 | 6:51  | 3:51  | 9:51  | 0.5 | non favorable | 8:10  | 6:21  | 9:51  | 1:41        |
| 08-sept-24 | 08:10 | 15:30 | 6:43  | 3:43  | 9:43  | 0.6 | 7:19  | 4:19  | 9:19  | 0.6 | non favorable | 8:10  | 5:49  | 9:19  | 1:09        |
| 09-sept-24 | 08:10 | 15:30 | 7:13  | 4:13  | 10:13 | 0.6 | 7:52  | 4:52  | 10:52 | 0.6 | non favorable | 8:10  | 7:22  | 10:52 | 2:42        |
| 10-sept-24 | 08:10 | 15:30 | 7:54  | 4:54  | 10:54 | 0.6 | 8:33  | 5:33  | 11:33 | 0.7 | non favorable | 8:10  | 8:03  | 11:33 | 3:23        |
| 11-sept-24 | 08:10 | 15:30 | 8:51  | 5:51  | 11:51 | 0.7 | 9:29  | 6:29  | 12:29 | 0.8 | favorable     | 8:10  | 8:59  | 12:29 | <b>4:19</b> |
| 12-sept-24 | 08:20 | 15:30 | 10:06 | 7:06  | 13:06 | 0.7 | 10:45 | 7:45  | 13:45 | 0.8 | favorable     | 8:20  | 10:15 | 13:45 | <b>5:25</b> |
| 13-sept-24 | 08:20 | 15:20 | 11:29 | 8:29  | 14:29 | 0.6 | 12:10 | 9:10  | 14:10 | 0.7 | favorable     | 8:29  | 10:40 | 14:10 | <b>5:41</b> |
| 14-sept-24 | 08:20 | 15:20 | 12:44 | 9:44  | 15:44 | 0.5 | 13:24 | 10:24 | 15:24 | 0.6 | favorable     | 9:44  | 11:50 | 15:20 | <b>5:36</b> |
| 15-sept-24 | 08:20 | 15:20 | 13:42 | 10:42 | 16:42 | 0.3 | 14:23 | 11:23 | 16:23 | 0.4 | favorable     | 10:42 | 11:50 | 15:20 | <b>4:38</b> |
| 16-sept-24 | 08:20 | 15:10 | 14:32 | 11:32 | 17:32 | 0.2 | 15:14 | 12:14 | 17:14 | 0.3 | favorable     | 11:32 | 11:40 | 15:10 | <b>3:38</b> |
| 17-sept-24 | 08:30 | 15:10 | 15:19 | 12:19 | 17:19 | 0.1 | 16:02 | 14:02 | 18:02 | 0.2 | non favorable | 12:19 | 11:40 | 15:10 | 2:51        |
| 18-sept-24 | 08:30 | 15:10 | 16:05 | 13:05 | 19:05 | 0.1 | 16:48 | 14:48 | 18:48 | 0.2 | non favorable | 13:05 | 11:40 | 15:10 | 2:05        |
| 19-sept-24 | 08:30 | 15:10 | 16:52 | 14:52 | 19:52 | 0.2 | 17:35 | 15:35 | 19:35 | 0.2 | non favorable | 14:52 | 11:40 | 15:10 | 0:18        |





|            |       |       |       |       |       |     |       |       |       |     |               |       |       |       |             |
|------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-----|---------------|-------|-------|-------|-------------|
| 20-sept-24 | 08:30 | 15:00 | 17:42 | 15:42 | 20:42 | 0.3 | 18:24 | 16:24 | 21:24 | 0.3 | non favorable | 15:42 | 11:30 | 15:00 | N/A         |
| 21-sept-24 | 08:30 | 15:00 | NA    | NA    | NA    | NA  | NA    | NA    | NA    | NA  | non favorable | NA    | NA    | NA    | N/A         |
| 22-sept-24 | 08:40 | 15:00 | 6:37  | 3:37  | 8:37  | 0.3 | 7:13  | 4:13  | 9:13  | 0.4 | non favorable | 8:40  | 5:43  | 9:13  | 0:33        |
| 23-sept-24 | 08:40 | 14:50 | 7:28  | 4:28  | 10:28 | 0.4 | 8:03  | 5:03  | 10:03 | 0.5 | non favorable | 8:40  | 6:33  | 10:03 | 1:23        |
| 24-sept-24 | 08:40 | 14:50 | 8:28  | 5:28  | 11:28 | 0.6 | 9:02  | 6:02  | 11:02 | 0.6 | non favorable | 8:40  | 7:32  | 11:02 | 2:22        |
| 25-sept-24 | 08:40 | 14:50 | 9:43  | 6:43  | 12:43 | 0.7 | 10:15 | 7:15  | 12:15 | 0.7 | favorable     | 8:40  | 8:45  | 12:15 | <b>3:35</b> |
| 26-sept-24 | 08:50 | 14:40 | 11:10 | 8:10  | 14:10 | 0.7 | 11:35 | 8:35  | 13:35 | 0.7 | favorable     | 8:50  | 10:05 | 13:35 | <b>4:45</b> |
| 27-sept-24 | 08:50 | 14:40 | 12:32 | 9:32  | 15:32 | 0.7 | 12:52 | 9:52  | 14:52 | 0.7 | favorable     | 9:32  | 11:10 | 14:40 | <b>5:08</b> |
| 28-sept-24 | 08:50 | 14:40 | 13:33 | 10:33 | 16:33 | 0.6 | 13:59 | 10:59 | 15:59 | 0.6 | favorable     | 10:33 | 11:10 | 14:40 | <b>4:07</b> |
| 29-sept-24 | 08:50 | 14:40 | 14:20 | 11:20 | 17:20 | 0.6 | 14:54 | 11:54 | 16:54 | 0.6 | non favorable | 11:20 | 11:10 | 14:40 | 3:20        |
| 30-sept-24 | 09:00 | 14:30 | 14:59 | 11:59 | 17:59 | 0.5 | 15:39 | 12:39 | 18:39 | 0.5 | non favorable | 11:59 | 11:00 | 14:30 | 2:31        |
| 01-oct-24  | 09:00 | 14:30 | 15:34 | 12:34 | 18:34 | 0.5 | 16:15 | 13:15 | 19:15 | 0.5 | non favorable | 12:34 | 11:00 | 14:30 | 1:56        |
| 02-oct-24  | 09:00 | 14:30 | 16:06 | 13:06 | 19:06 | 0.5 | 16:47 | 13:47 | 19:47 | 0.4 | non favorable | 13:06 | 11:00 | 14:30 | 1:24        |
| 03-oct-24  | 09:10 | 14:20 | 16:37 | 13:37 | 19:37 | 0.5 | 17:16 | 14:16 | 20:16 | 0.5 | non favorable | 13:37 | 10:50 | 14:20 | 0:43        |
| 04-oct-24  | 09:10 | 14:20 | 17:10 | 14:10 | 20:10 | 0.6 | 17:45 | 15:45 | 20:45 | 0.5 | non favorable | 14:10 | 10:50 | 14:20 | 0:10        |
| 05-oct-24  | 09:10 | 14:20 | 17:45 | 14:45 | 20:45 | 0.6 | 18:16 | 16:16 | 21:16 | 0.6 | non favorable | 14:45 | 10:50 | 14:20 | N/A         |
| 06-oct-24  | 09:10 | 14:10 | 18:26 | 15:26 | 21:26 | 0.7 | 18:51 | 16:51 | 21:51 | 0.7 | non favorable | 15:26 | 10:40 | 14:10 | N/A         |
| 07-oct-24  | 09:20 | 14:10 | NA    | NA    | NA    | NA  | 6:36  | 3:36  | 8:36  | 0.5 | non favorable | NA    | NA    | NA    | N/A         |
| 08-oct-24  | 09:20 | 14:00 | 6:27  | 3:27  | 9:27  | 0.6 | 7:12  | 4:12  | 9:12  | 0.6 | non favorable | 9:20  | 5:42  | 9:12  | N/A         |
| 09-oct-24  | 09:20 | 14:10 | 7:13  | 4:13  | 10:13 | 0.6 | 7:58  | 4:58  | 10:58 | 0.7 | non favorable | 9:20  | 7:28  | 10:58 | 1:38        |
| 10-oct-24  | 09:20 | 14:00 | 8:19  | 5:19  | 11:19 | 0.6 | 9:00  | 6:00  | 12:00 | 0.8 | non favorable | 9:20  | 8:30  | 12:00 | 2:40        |
| 11-oct-24  | 09:30 | 14:00 | 9:42  | 6:42  | 12:42 | 0.6 | 10:22 | 7:22  | 13:22 | 0.8 | favorable     | 9:30  | 9:52  | 13:22 | <b>3:52</b> |
| 12-oct-24  | 09:30 | 13:50 | 11:07 | 8:07  | 14:07 | 0.6 | 11:47 | 8:47  | 13:47 | 0.8 | favorable     | 9:30  | 10:17 | 13:47 | <b>4:17</b> |
| 13-oct-24  | 09:30 | 13:50 | 12:22 | 9:22  | 15:22 | 0.5 | 12:59 | 9:59  | 14:59 | 0.6 | favorable     | 9:30  | 10:20 | 13:50 | <b>4:20</b> |
| 14-oct-24  | 09:40 | 13:50 | 13:23 | 10:23 | 16:23 | 0.4 | 14:01 | 11:01 | 16:01 | 0.5 | non favorable | 10:23 | 10:20 | 13:50 | 3:27        |
| 15-oct-24  | 09:40 | 13:40 | 14:16 | 11:16 | 17:16 | 0.3 | 14:55 | 12:55 | 16:55 | 0.4 | non favorable | 11:16 | 10:10 | 13:40 | 2:24        |
| 16-oct-24  | 09:50 | 13:40 | 15:05 | 12:05 | 18:05 | 0.2 | 15:46 | 13:46 | 17:46 | 0.3 | non favorable | 12:05 | 10:10 | 13:40 | 1:35        |



| Flight 600 - Tête-à-la-Baleine (#02554) / Natashquan (#02510) |   |                     |  |                     |                     |               | 706km; approximate flight time 3h30 |                     |                     |                |                    |                |              |                   |      |  |
|---|---|---------------------|--|---------------------|---------------------|---------------|-------------------------------------|---------------------|---------------------|----------------|--------------------|----------------|--------------|-------------------|------|--|
| Criteria:   | Sun: Elevation greater than 25° (GMT-5 with DST - Daylight saving time) |                     | Tides: High tides considered: Previous for start of flight; Next for end of flight |                     |                     |               |                                     |                     |                     |                | Results            |                |              |                   |      |  |
|   | Tête-à-la-Baleine (#02554)  | Natashquan (#02510) | Next or previous high tide:  |                     |                     |               |                                     |                     |                     |                |                    |                |              |                   |      |  |
|   |   |                     | Tête-à-la-Baleine (#02554)   |                     |                     |               | Natashquan (#02510)                 |                     |                     |                |                    |                |              |                   |      |  |
| Date  | Hr_Sun Morning  | Hr_Sun Night        | Low Tide Time  | Hour minimum (Tide) | Hour maximum (Tide) | LowTide_Level | Low Tide Time                       | Hour minimum (Tide) | Hour maximum (Tide) | Low Tide Level | Flight possibility | Hour start Min | Hour End max | Possible duration | Date |  |
| 15-juil-24  | 07:00   | 17:10               | 11:36  | 8:36                | 14:36               | 0.7           | 12:27                               | 9:27                | 15:27               | 0.5            | favorable          | 8:36           | 11:57        | 15:27             | 6:51 |  |
| 16-juil-24  | 07:00   | 17:10               | 12:24  | 9:24                | 15:24               | 0.7           | 13:23                               | 10:23               | 16:23               | 0.5            | favorable          | 9:24           | 12:53        | 16:23             | 6:59 |  |
| 17-juil-24  | 07:10   | 17:10               | 13:13  | 10:13               | 16:13               | 0.6           | 14:20                               | 11:20               | 17:20               | 0.4            | favorable          | 10:13          | 13:40        | 17:10             | 6:57 |  |
| 18-juil-24  | 07:10   | 17:10               | 14:04  | 11:04               | 16:04               | 0.5           | 15:11                               | 12:11               | 18:11               | 0.3            | favorable          | 11:04          | 13:40        | 17:10             | 6:06 |  |
| 19-juil-24  | 07:10   | 17:10               | 14:55  | 11:55               | 16:55               | 0.4           | 15:55                               | 12:55               | 18:55               | 0.3            | favorable          | 11:55          | 13:40        | 17:10             | 5:15 |  |
| 20-juil-24  | 07:10   | 17:10               | 15:43  | 12:43               | 17:43               | 0.3           | 16:39                               | 13:39               | 19:39               | 0.2            | favorable          | 12:43          | 13:40        | 17:10             | 4:27 |  |
| 21-juil-24  | 07:10   | 17:10               | 16:30  | 13:30               | 18:30               | 0.2           | 6:26                                | 14:24               | 19:24               | 0.1            | non favorable      | 13:30          | 5:56         | 9:26              | NA   |  |
| 22-juil-24  | 07:10   | 17:10               | 17:16  | 14:16               | 19:16               | 0.2           | 7:09                                | 5:09                | 9:09                | 0.4            | non favorable      | 14:16          | 5:39         | 9:09              | NA   |  |
| 23-juil-24  | 07:10   | 17:10               | 6:17   | 4:17                | 9:17                | 0.5           | 7:51                                | 5:51                | 10:51               | 0.4            | favorable          | 7:10           | 7:21         | 10:51             | 3:41 |  |
| 24-juil-24  | 07:10   | 17:10               | 6:59   | 4:59                | 9:59                | 0.5           | 8:32                                | 5:32                | 11:32               | 0.4            | favorable          | 7:10           | 8:02         | 11:32             | 4:22 |  |



|            |       |       |       |       |       |     |       |       |       |     |               |       |       |       |      |
|------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-----|---------------|-------|-------|-------|------|
| 25-juil-24 | 07:10 | 17:10 | 7:41  | 5:41  | 9:41  | 0.5 | 9:13  | 6:13  | 12:13 | 0.3 | favorable     | 7:10  | 8:43  | 12:13 | 5:03 |
| 26-juil-24 | 07:10 | 17:00 | 8:25  | 6:25  | 10:25 | 0.5 | 9:53  | 6:53  | 12:53 | 0.3 | favorable     | 7:10  | 9:23  | 12:53 | 5:43 |
| 27-juil-24 | 07:10 | 17:00 | 9:13  | 7:13  | 11:13 | 0.6 | 10:34 | 7:34  | 13:34 | 0.4 | favorable     | 7:13  | 10:04 | 13:34 | 6:21 |
| 28-juil-24 | 07:20 | 17:00 | 10:07 | 7:07  | 12:07 | 0.6 | 11:15 | 8:15  | 14:15 | 0.4 | favorable     | 7:20  | 10:45 | 14:15 | 6:55 |
| 29-juil-24 | 07:20 | 17:00 | 11:08 | 8:08  | 13:08 | 0.7 | 12:00 | 9:00  | 15:00 | 0.4 | favorable     | 8:08  | 11:30 | 15:00 | 6:52 |
| 30-juil-24 | 07:20 | 17:00 | 12:16 | 9:16  | 14:16 | 0.6 | 12:55 | 9:55  | 15:55 | 0.4 | favorable     | 9:16  | 12:25 | 15:55 | 6:39 |
| 31-juil-24 | 07:20 | 17:00 | 13:23 | 10:23 | 15:23 | 0.6 | 14:02 | 11:02 | 17:02 | 0.4 | favorable     | 10:23 | 13:30 | 17:00 | 6:37 |
| 01-août-24 | 07:20 | 17:00 | 14:24 | 11:24 | 16:24 | 0.5 | 15:11 | 12:11 | 18:11 | 0.4 | favorable     | 11:24 | 13:30 | 17:00 | 5:36 |
| 02-août-24 | 07:20 | 17:00 | 15:17 | 12:17 | 17:17 | 0.3 | 16:09 | 13:09 | 19:09 | 0.3 | favorable     | 12:17 | 13:30 | 17:00 | 4:43 |
| 03-août-24 | 07:20 | 16:50 | 16:02 | 13:02 | 18:02 | 0.3 | 16:59 | 13:59 | 19:59 | 0.3 | favorable     | 13:02 | 13:20 | 16:50 | 3:48 |
| 04-août-24 | 07:20 | 16:50 | 16:43 | 13:43 | 18:43 | 0.3 | 6:35  | 3:35  | 9:35  | 0.5 | non favorable | 13:43 | 6:05  | 9:35  | NA   |
| 05-août-24 | 07:30 | 16:50 | 17:20 | 14:20 | 19:20 | 0.3 | 7:07  | 4:07  | 10:07 | 0.5 | non favorable | 14:20 | 6:37  | 10:07 | NA   |
| 06-août-24 | 07:30 | 16:50 | 6:12  | 4:12  | 9:12  | 0.6 | 7:37  | 4:37  | 10:37 | 0.5 | non favorable | 7:30  | 7:07  | 10:37 | 3:07 |
| 07-août-24 | 07:30 | 16:50 | 6:42  | 3:42  | 9:42  | 0.6 | 8:04  | 5:04  | 11:04 | 0.5 | favorable     | 7:30  | 7:34  | 11:04 | 3:34 |
| 08-août-24 | 07:30 | 16:50 | 7:12  | 4:12  | 10:12 | 0.6 | 8:27  | 5:27  | 11:27 | 0.5 | favorable     | 7:30  | 7:57  | 11:27 | 3:57 |
| 09-août-24 | 07:30 | 16:50 | 7:42  | 4:42  | 10:42 | 0.6 | 8:48  | 5:48  | 11:48 | 0.5 | favorable     | 7:30  | 8:18  | 11:48 | 4:18 |
| 10-août-24 | 07:30 | 16:40 | 8:14  | 5:14  | 11:14 | 0.7 | 9:13  | 6:13  | 12:13 | 0.5 | favorable     | 7:30  | 8:43  | 12:13 | 4:43 |
| 11-août-24 | 07:30 | 16:40 | 8:49  | 5:49  | 11:49 | 0.7 | 9:46  | 6:46  | 12:46 | 0.5 | favorable     | 7:30  | 9:16  | 12:46 | 5:16 |
| 12-août-24 | 07:30 | 16:40 | 9:31  | 6:31  | 12:31 | 0.7 | 10:30 | 7:30  | 13:30 | 0.5 | favorable     | 7:30  | 10:00 | 13:30 | 6:00 |
| 13-août-24 | 07:30 | 16:40 | 10:23 | 7:23  | 13:23 | 0.8 | 11:26 | 8:26  | 14:26 | 0.5 | favorable     | 7:30  | 10:56 | 14:26 | 6:56 |
| 14-août-24 | 07:40 | 16:40 | 11:25 | 8:25  | 14:25 | 0.7 | 12:30 | 9:30  | 15:30 | 0.5 | favorable     | 8:25  | 12:00 | 15:30 | 7:05 |
| 15-août-24 | 07:40 | 16:40 | 12:35 | 9:35  | 15:35 | 0.7 | 13:38 | 10:38 | 16:38 | 0.4 | favorable     | 9:35  | 13:08 | 16:38 | 7:03 |
| 16-août-24 | 07:40 | 16:30 | 13:43 | 10:43 | 15:43 | 0.6 | 14:41 | 11:41 | 17:41 | 0.4 | favorable     | 10:43 | 13:00 | 16:30 | 5:47 |
| 17-août-24 | 07:40 | 16:30 | 14:41 | 11:41 | 16:41 | 0.4 | 15:35 | 12:35 | 18:35 | 0.3 | favorable     | 11:41 | 13:00 | 16:30 | 4:49 |
| 18-août-24 | 07:40 | 16:30 | 15:31 | 12:31 | 17:31 | 0.3 | 16:26 | 13:26 | 19:26 | 0.2 | favorable     | 12:31 | 13:00 | 16:30 | 3:59 |
| 19-août-24 | 07:40 | 16:30 | 16:18 | 13:18 | 18:18 | 0.2 | 17:17 | 14:17 | 19:17 | 0.1 | non favorable | 13:18 | 13:00 | 16:30 | 3:12 |
| 20-août-24 | 07:40 | 16:30 | 17:03 | 14:03 | 19:03 | 0.1 | 6:39  | 4:39  | 9:39  | 0.3 | non favorable | 14:03 | 6:09  | 9:39  | NA   |
| 21-août-24 | 07:50 | 16:30 | 17:49 | 15:49 | 19:49 | 0.2 | 7:15  | 4:15  | 10:15 | 0.3 | non favorable | 15:49 | 6:45  | 10:15 | NA   |



|            |       |       |       |       |       |     |       |       |       |     |               |       |       |       |      |
|------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-----|---------------|-------|-------|-------|------|
| 22-août-24 | 07:50 | 16:20 | 6:24  | 4:24  | 8:24  | 0.3 | 7:51  | 4:51  | 10:51 | 0.3 | non favorable | 7:50  | 7:21  | 10:51 | 3:01 |
| 23-août-24 | 07:50 | 16:20 | 7:04  | 5:04  | 9:04  | 0.4 | 8:27  | 5:27  | 11:27 | 0.3 | favorable     | 7:50  | 7:57  | 11:27 | 3:37 |
| 24-août-24 | 07:50 | 16:20 | 7:46  | 5:46  | 9:46  | 0.4 | 9:04  | 6:04  | 12:04 | 0.3 | favorable     | 7:50  | 8:34  | 12:04 | 4:14 |
| 25-août-24 | 07:50 | 16:20 | 8:33  | 5:33  | 10:33 | 0.5 | 9:42  | 6:42  | 12:42 | 0.3 | favorable     | 7:50  | 9:12  | 12:42 | 4:52 |
| 26-août-24 | 07:50 | 16:20 | 9:31  | 6:31  | 11:31 | 0.6 | 10:24 | 7:24  | 13:24 | 0.4 | favorable     | 7:50  | 9:54  | 13:24 | 5:34 |
| 27-août-24 | 07:50 | 16:10 | 10:40 | 7:40  | 12:40 | 0.7 | 11:14 | 8:14  | 14:14 | 0.5 | favorable     | 7:50  | 10:44 | 14:14 | 6:24 |
| 28-août-24 | 08:00 | 16:10 | 11:58 | 8:58  | 13:58 | 0.7 | 12:25 | 9:25  | 15:25 | 0.5 | favorable     | 8:58  | 11:55 | 15:25 | 6:27 |
| 29-août-24 | 08:00 | 16:10 | 13:11 | 10:11 | 15:11 | 0.6 | 13:52 | 10:52 | 16:52 | 0.5 | favorable     | 10:11 | 12:40 | 16:10 | 5:59 |
| 30-août-24 | 08:00 | 16:10 | 14:15 | 11:15 | 16:15 | 0.5 | 15:04 | 12:04 | 18:04 | 0.4 | favorable     | 11:15 | 12:40 | 16:10 | 4:55 |
| 31-août-24 | 08:00 | 16:10 | 15:07 | 12:07 | 17:07 | 0.4 | 16:01 | 13:01 | 19:01 | 0.3 | favorable     | 12:07 | 12:40 | 16:10 | 4:03 |
| 01-sept-24 | 08:00 | 16:00 | 15:52 | 12:52 | 17:52 | 0.4 | 16:49 | 13:49 | 19:49 | 0.3 | non favorable | 12:52 | 12:30 | 16:00 | 3:08 |
| 02-sept-24 | 08:00 | 16:00 | 16:31 | 13:31 | 19:31 | 0.3 | 17:32 | 14:32 | 20:32 | 0.3 | non favorable | 13:31 | 12:30 | 16:00 | 2:29 |
| 03-sept-24 | 08:10 | 16:00 | 17:06 | 14:06 | 20:06 | 0.4 | 18:11 | 15:11 | 21:11 | 0.3 | non favorable | 14:06 | 12:30 | 16:00 | 1:54 |
| 04-sept-24 | 08:10 | 16:00 | 17:37 | 14:37 | 20:37 | 0.4 | 6:50  | 3:50  | 9:50  | 0.4 | non favorable | 14:37 | 6:20  | 9:50  | NA   |
| 05-sept-24 | 08:10 | 15:50 | 18:08 | 15:08 | 21:08 | 0.5 | 7:11  | 4:11  | 10:11 | 0.4 | non favorable | 15:08 | 6:41  | 10:11 | NA   |
| 06-sept-24 | 08:10 | 15:50 | 6:25  | 3:25  | 9:25  | 0.5 | 7:30  | 4:30  | 10:30 | 0.5 | non favorable | 8:10  | 7:00  | 10:30 | 2:20 |
| 07-sept-24 | 08:10 | 15:50 | 6:51  | 3:51  | 9:51  | 0.5 | 7:51  | 4:51  | 10:51 | 0.5 | non favorable | 8:10  | 7:21  | 10:51 | 2:41 |
| 08-sept-24 | 08:10 | 15:50 | 7:19  | 4:19  | 9:19  | 0.6 | 8:18  | 5:18  | 11:18 | 0.5 | non favorable | 8:10  | 7:48  | 11:18 | 3:08 |
| 09-sept-24 | 08:20 | 15:40 | 7:52  | 4:52  | 10:52 | 0.6 | 8:53  | 5:53  | 11:53 | 0.4 | favorable     | 8:20  | 8:23  | 11:53 | 3:33 |
| 10-sept-24 | 08:20 | 15:40 | 8:33  | 5:33  | 11:33 | 0.7 | 9:37  | 6:37  | 12:37 | 0.4 | favorable     | 8:20  | 9:07  | 12:37 | 4:17 |
| 11-sept-24 | 08:20 | 15:40 | 9:29  | 6:29  | 12:29 | 0.8 | 10:32 | 7:32  | 13:32 | 0.4 | favorable     | 8:20  | 10:02 | 13:32 | 5:12 |
| 12-sept-24 | 08:20 | 15:40 | 10:45 | 7:45  | 13:45 | 0.8 | 11:39 | 8:39  | 14:39 | 0.5 | favorable     | 8:20  | 11:09 | 14:39 | 6:19 |
| 13-sept-24 | 08:20 | 15:30 | 12:10 | 9:10  | 14:10 | 0.7 | 13:01 | 10:01 | 16:01 | 0.5 | favorable     | 9:10  | 12:00 | 15:30 | 6:20 |
| 14-sept-24 | 08:30 | 15:30 | 13:24 | 10:24 | 15:24 | 0.6 | 14:19 | 11:19 | 17:19 | 0.4 | favorable     | 10:24 | 12:00 | 15:30 | 5:06 |
| 15-sept-24 | 08:30 | 15:30 | 14:23 | 11:23 | 16:23 | 0.4 | 15:21 | 12:21 | 18:21 | 0.3 | favorable     | 11:23 | 12:00 | 15:30 | 4:07 |
| 16-sept-24 | 08:30 | 15:30 | 15:14 | 12:14 | 17:14 | 0.3 | 16:17 | 13:17 | 19:17 | 0.2 | non favorable | 12:14 | 12:00 | 15:30 | 3:16 |
| 17-sept-24 | 08:30 | 15:20 | 16:02 | 14:02 | 18:02 | 0.2 | 17:10 | 14:10 | 20:10 | 0.1 | non favorable | 14:02 | 11:50 | 15:20 | 1:18 |
| 18-sept-24 | 08:30 | 15:20 | 16:48 | 14:48 | 18:48 | 0.2 | 18:03 | 15:03 | 21:03 | 0   | non favorable | 14:48 | 11:50 | 15:20 | 0:32 |



|            |       |       |       |       |       |     |       |       |       |     |               |       |       |       |      |
|------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-----|---------------|-------|-------|-------|------|
| 19-sept-24 | 08:40 | 15:20 | 17:35 | 15:35 | 19:35 | 0.2 | 6:33  | 3:33  | 9:33  | 0.2 | non favorable | 15:35 | 6:03  | 9:33  | NA   |
| 20-sept-24 | 08:40 | 15:20 | 18:24 | 16:24 | 21:24 | 0.3 | 7:08  | 4:08  | 10:08 | 0.2 | non favorable | 16:24 | 6:38  | 10:08 | NA   |
| 21-sept-24 | 08:40 | 15:10 | 6:29  | 3:29  | 8:29  | 0.3 | 7:43  | 4:43  | 10:43 | 0.2 | non favorable | 8:40  | 7:13  | 10:43 | 2:03 |
| 22-sept-24 | 08:40 | 15:10 | 7:13  | 4:13  | 9:13  | 0.4 | 8:19  | 5:19  | 11:19 | 0.2 | non favorable | 8:40  | 7:49  | 11:19 | 2:39 |
| 23-sept-24 | 08:40 | 15:10 | 8:03  | 5:03  | 10:03 | 0.5 | 8:58  | 5:58  | 11:58 | 0.3 | non favorable | 8:40  | 8:28  | 11:58 | 3:18 |
| 24-sept-24 | 08:50 | 15:00 | 9:02  | 6:02  | 11:02 | 0.6 | 9:43  | 6:43  | 12:43 | 0.4 | favorable     | 8:50  | 9:13  | 12:43 | 3:53 |
| 25-sept-24 | 08:50 | 15:00 | 10:15 | 7:15  | 12:15 | 0.7 | 10:42 | 7:42  | 13:42 | 0.5 | favorable     | 8:50  | 10:12 | 13:42 | 4:52 |
| 26-sept-24 | 08:50 | 15:00 | 11:35 | 8:35  | 13:35 | 0.7 | 12:06 | 9:06  | 15:06 | 0.5 | favorable     | 8:50  | 11:30 | 15:00 | 6:10 |
| 27-sept-24 | 08:50 | 14:50 | 12:52 | 9:52  | 14:52 | 0.7 | 13:38 | 10:38 | 16:38 | 0.5 | favorable     | 9:52  | 11:20 | 14:50 | 4:58 |
| 28-sept-24 | 09:00 | 14:50 | 13:59 | 10:59 | 15:59 | 0.6 | 14:50 | 11:50 | 17:50 | 0.5 | favorable     | 10:59 | 11:20 | 14:50 | 3:51 |
| 29-sept-24 | 09:00 | 14:50 | 14:54 | 11:54 | 16:54 | 0.6 | 15:48 | 12:48 | 18:48 | 0.4 | non favorable | 11:54 | 11:20 | 14:50 | 2:56 |
| 30-sept-24 | 09:00 | 14:50 | 15:39 | 12:39 | 18:39 | 0.5 | 16:37 | 13:37 | 19:37 | 0.4 | non favorable | 12:39 | 11:20 | 14:50 | 2:11 |
| 01-oct-24  | 09:00 | 14:40 | 16:15 | 13:15 | 19:15 | 0.5 | 17:21 | 14:21 | 20:21 | 0.4 | non favorable | 13:15 | 11:10 | 14:40 | 1:25 |
| 02-oct-24  | 09:10 | 14:40 | 16:47 | 13:47 | 19:47 | 0.4 | 18:00 | 15:00 | 21:00 | 0.4 | non favorable | 13:47 | 11:10 | 14:40 | 0:53 |
| 03-oct-24  | 09:10 | 14:40 | 17:16 | 14:16 | 20:16 | 0.5 | 18:36 | 15:36 | 21:36 | 0.4 | non favorable | 14:16 | 11:10 | 14:40 | 0:24 |
| 04-oct-24  | 09:10 | 14:30 | 17:45 | 15:45 | 20:45 | 0.5 | 19:11 | NA    | NA    | NA  | non favorable | 15:45 | 11:00 | 14:30 | NA   |
| 05-oct-24  | 09:10 | 14:30 | 18:16 | 16:16 | 21:16 | 0.6 | 6:44  | 3:44  | 9:44  | 0.4 | non favorable | 16:16 | 6:14  | 9:44  | NA   |
| 06-oct-24  | 09:20 | 14:30 | 6:07  | 3:07  | 8:07  | 0.5 | 7:08  | 4:08  | 10:08 | 0.4 | non favorable | 9:20  | 6:38  | 10:08 | 0:48 |
| 07-oct-24  | 09:20 | 14:20 | 6:36  | 3:36  | 8:36  | 0.5 | 7:38  | 4:38  | 10:38 | 0.4 | non favorable | 9:20  | 7:08  | 10:38 | 1:18 |
| 08-oct-24  | 09:20 | 14:20 | 7:12  | 4:12  | 9:12  | 0.6 | 8:15  | 5:15  | 11:15 | 0.4 | non favorable | 9:20  | 7:45  | 11:15 | 1:55 |
| 09-oct-24  | 09:20 | 14:20 | 7:58  | 4:58  | 10:58 | 0.7 | 8:58  | 5:58  | 11:58 | 0.4 | non favorable | 9:20  | 8:28  | 11:58 | 2:38 |
| 10-oct-24  | 09:30 | 14:10 | 9:00  | 6:00  | 12:00 | 0.8 | 9:51  | 6:51  | 12:51 | 0.4 | non favorable | 9:30  | 9:21  | 12:51 | 3:21 |
| 11-oct-24  | 09:30 | 14:10 | 10:22 | 7:22  | 13:22 | 0.8 | 11:02 | 8:02  | 14:02 | 0.5 | favorable     | 9:30  | 10:32 | 14:02 | 4:32 |
| 12-oct-24  | 09:30 | 14:10 | 11:47 | 8:47  | 13:47 | 0.8 | 12:36 | 9:36  | 15:36 | 0.5 | favorable     | 9:30  | 10:40 | 14:10 | 4:40 |
| 13-oct-24  | 09:30 | 14:00 | 12:59 | 9:59  | 14:59 | 0.6 | 14:03 | 11:03 | 17:03 | 0.5 | favorable     | 9:59  | 10:30 | 14:00 | 4:01 |
| 14-oct-24  | 09:40 | 14:00 | 14:01 | 11:01 | 16:01 | 0.5 | 15:09 | 12:09 | 18:09 | 0.3 | non favorable | 11:01 | 10:30 | 14:00 | 2:59 |
| 15-oct-24  | 09:40 | 14:00 | 14:55 | 12:55 | 16:55 | 0.4 | 16:06 | 13:06 | 19:06 | 0.2 | non favorable | 12:55 | 10:30 | 14:00 | 1:05 |
| 16-oct-24  | 09:50 | 13:50 | 15:46 | 13:46 | 17:46 | 0.3 | 17:01 | 14:01 | 20:01 | 0.1 | non favorable | 13:46 | 10:20 | 13:50 | 0:04 |



FLIGHT 900

**Note on comments and estimated flight times:**

- The time range does not take into account the time taken to approach a flight line
- Possible photo periods lasting more than **3 hours** are shown in **bold**

**Note on submission evaluation:** The number of days for which the "Possible duration" for the flight is equal to or greater than **3h** will be considered favorable and will be used as a technical criterion for evaluating bids.

**Possible photo period: July 15 to October 8, 2024**

**Table:**

- Date Table built from July 15 to October 8 inclusively
- Hr\_Sun\_Morning Hour (GMT-5 avec DST - Daylight saving time) rounded to the nearest 10 minutes, according to the required minimum elevation angle of 25 degrees
- Hr\_Sun\_Night Hour (GMT-5 avec DST - Daylight saving time) rounded to the nearest 10 minutes, preceding the required minimum elevation angle of 25 degrees
- Low Tide Time Expected low tide time
- LowTide\_Level Expected low tide level
- Hour minimum (Tide) Minimum time to fly over the site according to the delta determined by the tide.
- Hour maximum (Tide) Maximum time to fly over the site according to the delta determined by the tide.
- Flight possibility Possibility of carrying out a flight if weather conditions are acceptable (Favourable or unfavourable)
- Hour start Min Minimum flight start time at departure site
- Start max\_(FD) Maximum flight start time at departure site
- Hour End max Maximum arrival time at arrival site according to determined flight duration
- Possible duration Estimated duration of possible flight range (in hours). Ideally, within this range, the flight should be planned to be as synchronized as possible with the low tides of the day.

**Sites used to retrieve information :**

**SUN ELEVATION :** [: http://www.sunearthtools.com/dp/tools/pos\\_sun.php?lang=fr#table](http://www.sunearthtools.com/dp/tools/pos_sun.php?lang=fr#table)

FLIGHT 900 - - (GMT-5 avec DST - Daylight saving time)

**TIDES:**

**Tadoussac (#03425) :** <https://marees.gc.ca/fr/stations/03425/predictions/annual/2024?tz=EDT>

Coordinates used for sunrise hours : 48.1380000,-69.7140000 in 2024

**Chicoutimi (#03480) :** <https://marees.gc.ca/fr/stations/03480/predictions/annual>



Coordinates used for sunrise hours : 48.4310000,-71.0550000 in 2024

Flight 900

| Flight 900 - Tadoussac (#03425) / Chicoutimi (#03480) |   |                     | 241,8 km; approximate flight time 3h00   |                     |                     |               |               |                     |                     |                    |                    |                |              |                   |  |
|---|---|---------------------|--|---------------------|---------------------|---------------|---------------|---------------------|---------------------|--------------------|--------------------|----------------|--------------|-------------------|--|
| Criteria:   | SUN: Elevation greater than 25° (GMT-5 avec DST - Daylight saving time) |                     | TIDES: High tides considered: Previous for start of flight; Next for end of flight |                     |                     |               |               |                     |                     |                    |                    | Results        |              |                   |  |
|   | Tadoussac (#03425)  | Chicoutimi (#03480) | Next or previous high tide of:   |                     |                     |               |               |                     |                     |                    |                    |                |              |                   |  |
|   |   |                     | - Less than 1.8m: Delta de 3h  |                     |                     |               |               |                     |                     |                    |                    |                |              |                   |  |
|   |   |                     | - Over 1.8m and under 3.6m: Delta de 2h  |                     |                     |               |               |                     |                     |                    |                    |                |              |                   |  |
|   | - Over 3.6m: Delta de 1.5h  |                     |  |                     |                     |               |               |                     |                     | Tadoussac (#03425) |                    |                |              |                   |  |
| Date  | Hr_Sun Morning  | Hr_Sun Night        | Low Tide Time  | Hour minimum (Tide) | Hour maximum (Tide) | LowTide_Level | Low Tide Time | Hour minimum (Tide) | Hour maximum (Tide) | Low Tide Level     | Flight possibility | Hour start Min | Hour End max | Possible duration |  |
| 15 juil. 2024   | 07:50   | 17:50               | 16:10  | 14:10               | 17:40               | 1.5           | 16:57         | 14:57               | 18:27               | 1.8                | Favorable          | 14:10          | 17:50        | 3:40              |  |
| 16 juil. 2024   | 07:50   | 17:50               | 17:10  | 15:10               | 18:40               | 1.5           | 18:08         | 16:08               | 19:38               | 1.8                | Non favorable      | 15:10          | 17:50        | 2:40              |  |
| 17 juil. 2024   | 07:50   | 17:50               | 6:35   | 5:05                | 8:35                | 1.4           | 7:39          | 06:09               | 09:39               | 1.7                | Non favorable      | 7:50           | 9:39         | 1:49              |  |
| 18 juil. 2024   | 07:50   | 17:50               | 7:32   | 6:02                | 9:32                | 1.2           | 8:53          | 07:23               | 10:53               | 1.5                | Favorable          | 7:50           | 10:53        | 3:03              |  |
| 19 juil. 2024   | 07:50   | 17:50               | 8:22   | 6:52                | 10:22               | 1.0           | 9:52          | 08:22               | 11:52               | 1.3                | Favorable          | 7:50           | 11:52        | 4:02              |  |





|               |       |       |       |       |       |     |       |       |       |     |               |       |       |      |
|---------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-----|---------------|-------|-------|------|
| 20 juil. 2024 | 07:50 | 17:50 | 9:08  | 7:38  | 11:08 | 0.7 | 10:44 | 09:14 | 12:14 | 1   | Favorable     | 7:50  | 12:14 | 4:24 |
| 21 juil. 2024 | 07:50 | 17:40 | 9:50  | 8:20  | 11:20 | 0.5 | 11:31 | 10:01 | 13:01 | 0.8 | Favorable     | 8:20  | 13:01 | 4:41 |
| 22 juil. 2024 | 07:50 | 17:40 | 10:32 | 9:02  | 12:02 | 0.3 | 12:14 | 10:44 | 13:44 | 0.6 | Favorable     | 9:02  | 13:44 | 4:42 |
| 23 juil. 2024 | 07:50 | 17:40 | 11:14 | 9:44  | 12:44 | 0.2 | 12:55 | 11:25 | 14:25 | 0.5 | Favorable     | 9:44  | 14:25 | 4:41 |
| 24 juil. 2024 | 07:50 | 17:40 | 11:55 | 10:25 | 13:25 | 0.2 | 13:34 | 12:04 | 15:04 | 0.5 | Favorable     | 10:25 | 15:04 | 4:39 |
| 25 juil. 2024 | 07:50 | 17:40 | 12:37 | 11:07 | 14:07 | 0.2 | 14:12 | 12:42 | 15:42 | 0.6 | Favorable     | 11:07 | 15:42 | 4:35 |
| 26 juil. 2024 | 08:00 | 17:40 | 13:20 | 11:50 | 14:50 | 0.4 | 14:48 | 13:18 | 16:18 | 0.7 | Favorable     | 11:50 | 16:18 | 4:28 |
| 27 juil. 2024 | 08:00 | 17:40 | 14:05 | 12:35 | 15:35 | 0.6 | 15:26 | 13:56 | 16:56 | 0.9 | Favorable     | 12:35 | 16:56 | 4:21 |
| 28 juil. 2024 | 08:00 | 17:40 | 14:56 | 13:26 | 16:26 | 0.9 | 16:07 | 14:37 | 17:37 | 1.1 | Favorable     | 13:26 | 17:37 | 4:11 |
| 29 juil. 2024 | 08:00 | 17:40 | 15:56 | 13:56 | 17:26 | 1.2 | 16:59 | 15:29 | 18:29 | 1.3 | Favorable     | 13:56 | 17:40 | 3:44 |
| 30 juil. 2024 | 08:00 | 17:40 | 17:04 | 15:04 | 18:34 | 1.3 | 18:08 | 16:08 | 19:38 | 1.4 | Non favorable | 15:04 | 17:40 | 2:36 |
| 31 juil. 2024 | 08:00 | 17:30 | 6:29  | 4:59  | 8:29  | 1.0 | 7:47  | 06:17 | 09:47 | 1.1 | Non favorable | 8:00  | 9:47  | 1:47 |
| 1 août 2024   | 08:00 | 17:30 | 7:37  | 6:07  | 9:37  | 0.9 | 9:01  | 07:31 | 11:01 | 1   | Favorable     | 8:00  | 11:01 | 3:01 |
| 2 août 2024   | 08:00 | 17:30 | 8:33  | 7:03  | 10:33 | 0.8 | 10:04 | 08:34 | 12:04 | 0.9 | Favorable     | 8:00  | 12:04 | 4:04 |
| 3 août 2024   | 08:00 | 17:30 | 9:19  | 7:49  | 10:49 | 0.6 | 10:56 | 09:26 | 12:26 | 0.8 | Favorable     | 8:00  | 12:26 | 4:26 |
| 4 août 2024   | 08:00 | 17:30 | 9:58  | 8:28  | 11:28 | 0.6 | 11:39 | 10:09 | 13:09 | 0.7 | Favorable     | 8:28  | 13:09 | 4:41 |
| 5 août 2024   | 08:10 | 17:30 | 10:33 | 9:03  | 12:03 | 0.5 | 12:14 | 10:44 | 13:44 | 0.7 | Favorable     | 9:03  | 13:44 | 4:41 |
| 6 août 2024   | 08:10 | 17:30 | 11:04 | 9:34  | 12:34 | 0.5 | 12:41 | 11:11 | 14:11 | 0.8 | Favorable     | 9:34  | 14:11 | 4:37 |
| 7 août 2024   | 08:10 | 17:30 | 11:34 | 10:04 | 13:04 | 0.6 | 13:03 | 11:33 | 14:33 | 0.8 | Favorable     | 10:04 | 14:33 | 4:29 |
| 8 août 2024   | 08:10 | 17:20 | 12:03 | 10:33 | 13:33 | 0.7 | 13:21 | 11:51 | 14:51 | 0.9 | Favorable     | 10:33 | 14:51 | 4:18 |
| 9 août 2024   | 08:10 | 17:20 | 12:31 | 11:01 | 14:01 | 0.8 | 13:39 | 12:09 | 15:09 | 1   | Favorable     | 11:01 | 15:09 | 4:08 |
| 10 août 2024  | 08:10 | 17:20 | 13:01 | 11:31 | 14:31 | 1.0 | 14:01 | 12:31 | 15:31 | 1.1 | Favorable     | 11:31 | 15:31 | 4:00 |
| 11 août 2024  | 08:10 | 17:20 | 13:33 | 12:03 | 15:03 | 1.2 | 14:29 | 12:29 | 15:59 | 1.2 | Favorable     | 12:03 | 15:59 | 3:56 |
| 12 août 2024  | 08:10 | 17:20 | 14:12 | 12:12 | 15:42 | 1.4 | 15:05 | 13:05 | 16:35 | 1.4 | Favorable     | 12:12 | 16:35 | 4:23 |
| 13 août 2024  | 08:10 | 17:20 | 15:02 | 13:02 | 17:02 | 1.5 | 15:54 | 13:54 | 17:54 | 1.5 | Favorable     | 13:02 | 17:20 | 4:18 |
| 14 août 2024  | 08:20 | 17:20 | 16:11 | 14:11 | 17:41 | 1.6 | 17:06 | 15:06 | 18:36 | 1.6 | Favorable     | 14:11 | 17:20 | 3:09 |
| 15 août 2024  | 08:20 | 17:10 | 6:04  | 4:34  | 8:04  | 1.5 | 7:03  | 05:33 | 09:03 | 1.6 | Non favorable | 8:20  | 9:03  | 0:43 |
| 16 août 2024  | 08:20 | 17:10 | 7:10  | 5:40  | 9:10  | 1.3 | 8:31  | 07:01 | 10:31 | 1.3 | Non favorable | 8:20  | 10:31 | 2:11 |
| 17 août 2024  | 08:20 | 17:10 | 8:03  | 6:33  | 10:03 | 0.9 | 9:31  | 08:01 | 11:31 | 1   | Favorable     | 8:20  | 11:31 | 3:11 |
| 18 août 2024  | 08:20 | 17:10 | 8:47  | 7:17  | 10:17 | 0.6 | 10:21 | 08:51 | 11:51 | 0.7 | Favorable     | 8:20  | 11:51 | 3:31 |





|               |       |       |       |       |       |      |       |       |       |     |               |       |       |      |
|---------------|-------|-------|-------|-------|-------|------|-------|-------|-------|-----|---------------|-------|-------|------|
| 19 août 2024  | 08:20 | 17:10 | 9:28  | 7:58  | 10:58 | 0.3  | 11:07 | 09:37 | 12:37 | 0.5 | Favorable     | 8:20  | 12:37 | 4:17 |
| 20 août 2024  | 08:20 | 17:10 | 10:08 | 8:38  | 11:38 | 0.1  | 11:48 | 10:18 | 13:18 | 0.2 | Favorable     | 8:38  | 13:18 | 4:40 |
| 21 août 2024  | 08:20 | 17:00 | 10:46 | 9:16  | 12:16 | -0.1 | 12:27 | 10:57 | 13:57 | 0.1 | Favorable     | 9:16  | 13:57 | 4:41 |
| 22 août 2024  | 08:30 | 17:00 | 11:25 | 9:55  | 12:55 | -0.1 | 13:03 | 11:33 | 14:33 | 0.1 | Favorable     | 9:55  | 14:33 | 4:38 |
| 23 août 2024  | 08:30 | 17:00 | 12:04 | 10:34 | 13:34 | 0.1  | 13:37 | 12:07 | 15:07 | 0.2 | Favorable     | 10:34 | 15:07 | 4:33 |
| 24 août 2024  | 08:30 | 17:00 | 12:45 | 11:15 | 14:15 | 0.3  | 14:09 | 12:39 | 15:39 | 0.4 | Favorable     | 11:15 | 15:39 | 4:24 |
| 25 août 2024  | 08:30 | 17:00 | 13:29 | 11:59 | 14:59 | 0.7  | 14:41 | 13:11 | 16:11 | 0.6 | Favorable     | 11:59 | 16:11 | 4:12 |
| 26 août 2024  | 08:30 | 16:50 | 14:19 | 12:49 | 15:49 | 1.0  | 15:17 | 13:47 | 16:47 | 0.9 | Favorable     | 12:49 | 16:47 | 3:58 |
| 27 août 2024  | 08:30 | 16:50 | 15:24 | 13:24 | 16:54 | 1.3  | 16:07 | 14:07 | 17:37 | 1.1 | Favorable     | 13:24 | 16:50 | 3:26 |
| 28 août 2024  | 08:30 | 16:50 | 16:49 | 14:49 | 18:19 | 1.5  | 17:35 | 15:35 | 19:05 | 1.3 | Non favorable | 14:49 | 16:50 | 2:01 |
| 29 août 2024  | 08:40 | 16:50 | 6:28  | 4:58  | 8:28  | 1.2  | 7:42  | 06:12 | 09:42 | 1   | Non favorable | 8:40  | 9:42  | 1:02 |
| 30 août 2024  | 08:40 | 16:50 | 7:34  | 6:04  | 9:34  | 1.0  | 8:51  | 07:21 | 10:51 | 0.8 | Non favorable | 8:40  | 10:51 | 2:11 |
| 31 août 2024  | 08:40 | 16:40 | 8:23  | 6:53  | 10:23 | 0.9  | 9:45  | 08:15 | 11:45 | 0.6 | Favorable     | 8:40  | 11:45 | 3:05 |
| 1 sept. 2024  | 08:40 | 16:40 | 9:00  | 7:30  | 10:30 | 0.7  | 10:30 | 09:00 | 12:00 | 0.5 | Favorable     | 8:40  | 12:00 | 3:20 |
| 2 sept. 2024  | 08:40 | 16:40 | 9:32  | 8:02  | 11:02 | 0.6  | 11:05 | 09:35 | 12:35 | 0.5 | Favorable     | 8:40  | 12:35 | 3:55 |
| 3 sept. 2024  | 08:40 | 16:40 | 10:01 | 8:31  | 11:31 | 0.5  | 11:32 | 10:02 | 13:02 | 0.4 | Favorable     | 8:40  | 13:02 | 4:22 |
| 4 sept. 2024  | 08:40 | 16:40 | 10:28 | 8:58  | 11:58 | 0.5  | 11:55 | 10:25 | 13:25 | 0.4 | Favorable     | 8:58  | 13:25 | 4:27 |
| 5 sept. 2024  | 08:50 | 16:30 | 10:54 | 9:24  | 12:24 | 0.6  | 12:15 | 10:45 | 13:45 | 0.5 | Favorable     | 9:24  | 13:45 | 4:21 |
| 6 sept. 2024  | 08:50 | 16:30 | 11:21 | 9:51  | 12:51 | 0.6  | 12:36 | 11:06 | 14:06 | 0.5 | Favorable     | 9:51  | 14:06 | 4:15 |
| 7 sept. 2024  | 08:50 | 16:30 | 11:47 | 10:17 | 13:17 | 0.8  | 12:59 | 11:29 | 14:29 | 0.6 | Favorable     | 10:17 | 14:29 | 4:12 |
| 8 sept. 2024  | 08:50 | 16:30 | 12:15 | 10:45 | 13:45 | 0.9  | 13:26 | 11:56 | 14:56 | 0.7 | Favorable     | 10:45 | 14:56 | 4:11 |
| 9 sept. 2024  | 08:50 | 16:20 | 12:45 | 10:45 | 14:15 | 1.1  | 13:55 | 11:55 | 15:25 | 0.9 | Favorable     | 10:45 | 15:25 | 4:40 |
| 10 sept. 2024 | 08:50 | 16:20 | 13:22 | 11:22 | 14:52 | 1.3  | 14:29 | 12:29 | 15:59 | 1.1 | Favorable     | 11:22 | 15:59 | 4:37 |
| 11 sept. 2024 | 08:50 | 16:20 | 14:10 | 12:10 | 15:40 | 1.5  | 15:15 | 13:15 | 17:15 | 1.2 | Favorable     | 12:10 | 16:20 | 4:10 |
| 12 sept. 2024 | 09:00 | 16:20 | 15:26 | 13:26 | 17:26 | 1.7  | 16:28 | 14:28 | 18:28 | 1.4 | Non favorable | 13:26 | 16:20 | 2:54 |
| 13 sept. 2024 | 09:00 | 16:20 | 17:06 | 15:06 | 18:36 | 1.6  | 6:44  | 04:44 | 08:44 | 1.3 | NA            | 15:06 | 8:44  | NA   |
| 14 sept. 2024 | 09:00 | 16:10 | 6:45  | 5:15  | 8:45  | 1.2  | 8:06  | 06:06 | 10:06 | 1.1 | Non favorable | 9:00  | 10:06 | 1:06 |
| 15 sept. 2024 | 09:00 | 16:10 | 7:36  | 6:06  | 9:36  | 0.9  | 9:02  | 07:32 | 11:02 | 0.8 | Non favorable | 9:00  | 11:02 | 2:02 |
| 16 sept. 2024 | 09:00 | 16:10 | 8:19  | 6:49  | 9:49  | 0.5  | 9:51  | 08:21 | 11:21 | 0.4 | Non favorable | 9:00  | 11:21 | 2:21 |
| 17 sept. 2024 | 09:00 | 16:10 | 8:58  | 7:28  | 10:28 | 0.2  | 10:35 | 09:05 | 12:05 | 0.1 | Favorable     | 9:00  | 12:05 | 3:05 |



|               |       |       |       |       |       |      |       |       |       |      |               |       |       |      |
|---------------|-------|-------|-------|-------|-------|------|-------|-------|-------|------|---------------|-------|-------|------|
| 18 sept. 2024 | 09:10 | 16:00 | 9:36  | 8:06  | 11:06 | -0.1 | 11:16 | 09:46 | 12:46 | -0.1 | Favorable     | 9:10  | 12:46 | 3:36 |
| 19 sept. 2024 | 09:10 | 16:00 | 10:14 | 8:44  | 11:44 | -0.2 | 11:53 | 10:23 | 13:23 | -0.2 | Favorable     | 9:10  | 13:23 | 4:13 |
| 20 sept. 2024 | 09:10 | 16:00 | 10:52 | 9:22  | 12:22 | -0.1 | 12:28 | 10:58 | 13:58 | -0.2 | Favorable     | 9:22  | 13:58 | 4:36 |
| 21 sept. 2024 | 09:10 | 16:00 | 11:31 | 10:01 | 13:01 | 0.1  | 13:01 | 11:31 | 14:31 | 0    | Favorable     | 10:01 | 14:31 | 4:30 |
| 22 sept. 2024 | 09:10 | 15:50 | 12:11 | 10:41 | 13:41 | 0.4  | 13:31 | 12:01 | 15:01 | 0.2  | Favorable     | 10:41 | 15:01 | 4:20 |
| 23 sept. 2024 | 09:20 | 15:50 | 12:56 | 11:26 | 14:26 | 0.8  | 14:02 | 12:32 | 15:32 | 0.5  | Favorable     | 11:26 | 15:32 | 4:06 |
| 24 sept. 2024 | 09:20 | 15:50 | 13:48 | 11:48 | 15:18 | 1.2  | 14:37 | 12:37 | 16:07 | 0.8  | Favorable     | 11:48 | 15:50 | 4:02 |
| 25 sept. 2024 | 09:20 | 15:40 | 15:01 | 13:01 | 16:31 | 1.5  | 15:31 | 13:31 | 17:01 | 1.1  | Non favorable | 13:01 | 15:40 | 2:39 |
| 26 sept. 2024 | 09:20 | 15:40 | 16:39 | 14:39 | 18:09 | 1.6  | 17:25 | 15:25 | 19:25 | 1.3  | Non favorable | 14:39 | 15:40 | 1:01 |
| 27 sept. 2024 | 09:20 | 15:40 | 6:16  | 4:46  | 8:16  | 1.3  | 7:27  | 05:27 | 09:27 | 0.9  | Non favorable | 9:20  | 9:27  | 0:07 |
| 28 sept. 2024 | 09:30 | 15:40 | 7:14  | 5:44  | 9:14  | 1.1  | 8:26  | 06:56 | 10:26 | 0.7  | Non favorable | 9:30  | 10:26 | 0:56 |
| 29 sept. 2024 | 09:30 | 15:30 | 7:55  | 6:25  | 9:25  | 0.9  | 9:12  | 07:42 | 11:12 | 0.5  | Non favorable | 9:30  | 11:12 | 1:42 |
| 30 sept. 2024 | 09:30 | 15:30 | 8:28  | 6:58  | 9:58  | 0.8  | 9:49  | 08:19 | 11:19 | 0.4  | Non favorable | 9:30  | 11:19 | 1:49 |
| 1 oct. 2024   | 09:30 | 15:30 | 8:56  | 7:26  | 10:26 | 0.7  | 10:19 | 08:49 | 11:49 | 0.4  | Non favorable | 9:30  | 11:49 | 2:19 |
| 2 oct. 2024   | 09:30 | 15:30 | 9:23  | 7:53  | 10:53 | 0.6  | 10:45 | 09:15 | 12:15 | 0.3  | Non favorable | 9:30  | 12:15 | 2:45 |
| 3 oct. 2024   | 09:40 | 15:20 | 9:50  | 8:20  | 11:20 | 0.6  | 11:10 | 09:40 | 12:40 | 0.3  | Favorable     | 9:40  | 12:40 | 3:00 |
| 4 oct. 2024   | 09:40 | 15:20 | 10:16 | 8:46  | 11:46 | 0.6  | 11:35 | 10:05 | 13:05 | 0.3  | Favorable     | 9:40  | 13:05 | 3:25 |
| 5 oct. 2024   | 09:40 | 15:20 | 10:42 | 9:12  | 12:12 | 0.7  | 12:02 | 10:32 | 13:32 | 0.4  | Favorable     | 9:40  | 13:32 | 3:52 |
| 6 oct. 2024   | 09:40 | 15:10 | 11:09 | 9:39  | 12:39 | 0.8  | 12:31 | 11:01 | 14:01 | 0.5  | Favorable     | 9:40  | 14:01 | 4:21 |
| 7 oct. 2024   | 09:50 | 15:10 | 11:38 | 10:08 | 13:08 | 0.9  | 13:00 | 11:30 | 14:30 | 0.6  | Favorable     | 10:08 | 14:30 | 4:22 |
| 8 oct. 2024   | 09:50 | 15:10 | 12:11 | 10:11 | 13:41 | 1.1  | 13:32 | 11:32 | 15:02 | 0.8  | Favorable     | 10:11 | 15:02 | 4:51 |
| 9 oct. 2024   | 09:50 | 15:00 | 12:49 | 10:49 | 14:19 | 1.3  | 14:08 | 12:08 | 15:38 | 1    | Favorable     | 10:49 | 15:00 | 4:11 |
| 10 oct. 2024  | 09:50 | 15:00 | 13:40 | 11:40 | 15:10 | 1.5  | 14:55 | 12:55 | 16:55 | 1.2  | Favorable     | 11:40 | 15:00 | 3:20 |
| 11 oct. 2024  | 10:00 | 15:00 | 15:01 | 13:01 | 16:31 | 1.7  | 16:13 | 14:13 | 18:13 | 1.3  | Non favorable | 13:01 | 15:00 | 1:59 |
| 12 oct. 2024  | 10:00 | 14:50 | 16:47 | 14:47 | 18:17 | 1.6  | 18:03 | 16:03 | 19:33 | 1.2  | Non favorable | 14:47 | 14:50 | 0:03 |
| 13 oct. 2024  | 10:00 | 14:50 | 6:11  | 4:41  | 8:11  | 1.1  | 7:32  | 06:02 | 09:32 | 1    | NA            | 10:00 | 9:32  | NA   |
| 14 oct. 2024  | 10:00 | 14:50 | 7:01  | 5:31  | 8:31  | 0.8  | 8:27  | 06:57 | 09:57 | 0.7  | NA            | 10:00 | 9:57  | NA   |
| 15 oct. 2024  | 10:10 | 14:40 | 7:43  | 6:13  | 9:13  | 0.5  | 9:15  | 07:45 | 10:45 | 0.4  | Non favorable | 10:10 | 10:45 | 0:35 |
| 16 oct. 2024  | 10:10 | 14:40 | 8:23  | 6:53  | 9:53  | 0.2  | 9:59  | 08:29 | 11:29 | 0.1  | Non favorable | 10:10 | 11:29 | 1:19 |



Flight 100

**Note on comments and estimated flight times:**

- The time range does not take into account the time taken to approach a flight line
- Possible photo periods lasting more than **3h30** are shown in **bold**

**Note on submission evaluation:** The number of days for which the "Possible duration" for the flight is equal to or greater than **3.5 hours** will be considered favorable and will be used as a technical criterion for evaluating bids.

**Possible photo period: July 15 to October 8, 2024**

**Table:**

|                       |   |
|-----------------------|---|
| • Date                | Table built from July 15 to October 8 inclusively   |
| • Hr_Sun_Morning      | Hour (GMT-5 avec DST - Daylight saving time) rounded to the nearest 10 minutes, according to the required minimum elevation angle of 25 degrees                                   |
| • Hr_Sun_Night        | Hour (GMT-5 avec DST - Daylight saving time) rounded to the nearest 10 minutes, preceding the required minimum elevation angle of 25 degrees                                      |
| • Low Tide Time       | Expected low tide time  |
| • LowTide_Level       | Expected low tide level   |
| • Hour minimum (Tide) | Minimum time to fly over the site according to the delta determined by the tide.  |
| • Hour maximum (Tide) | Maximum time to fly over the site according to the delta determined by the tide.  |
| • Flight possibility  | Possibility of carrying out a flight if weather conditions are acceptable (Favourable or unfavourable)  |
| • Hour start Min      | Minimum flight start time at departure site   |
| • Start max_(FD)      | Maximum flight start time at departure site   |
| • Hour End max        | Maximum arrival time at arrival site according to determined flight duration  |
| • Possible duration   | Estimated duration of possible flight range (in hours). Ideally, within this range, the flight should be planned to be as synchronized as possible with the low tides of the day. |

**Sites used to retrieve information :**

**SUN ELEVATION :** [http://www.sunearthtools.com/dp/tools/pos\\_sun.php?lang=fr#table](http://www.sunearthtools.com/dp/tools/pos_sun.php?lang=fr#table)

FLIGHT 100 - (GMT-5 with DST - Daylight saving time)

July 15 to October 8, 2024

**TIDES :**

**Rivière-Du-Loup (#03130) :** <https://marees.gc.ca/fr/stations/03130>

Coordinates used for sunrise times: 47.8358164,-69.5368025 in 2024



**Saint-Michel-de-Bellechasse (station de Berthier-sur-Mer #03200) :** <https://marees.gc.ca/fr/stations/03200>

Coordinates used for sunrise times: 46.9265054,-70.7312726 in 2024

Flight 100

| Flight 100 - Rivière-du-Loup (#03130) / Saint-Michel-de-Bellechasse (station de Berthier-sur-Mer #03200) |   |  |  |                     |                     |  | 536km; approximate flight time 3h30 |   |                     |                |                    |                |              |                   |  |  |
|--|---|--|--|---------------------|---------------------|--|-------------------------------------|---|---------------------|----------------|--------------------|----------------|--------------|-------------------|--|--|
| Criteria:  | Sun: Elevation greater than 25° (GMT-5 avec DST - Daylight saving time) |  | Tides: High tides considered: Previous for start of flight; Next for end of flight |                     |                     |  |                                     |   |                     |                |                    |                | Results      |                   |  |  |
|  | Rivière-Du-Loup (#03130)  | Saint-Michel-de-Bellechasse (station de Berthier-sur-Mer #03200) | Next or previous high tide of:   |                     |                     |  |                                     |   |                     |                |                    |                |              |                   |  |  |
|  |   |  | - Less than 1.8m: Delta de 3h  |                     |                     |  |                                     | - Over 1.8m and under 3.6m: Delta de 2h |                     |                |                    |                |              |                   |  |  |
|  |   |  | - Over 3.6m: Delta de 1.5h   |                     |                     |  |                                     |   |                     |                |                    |                |              |                   |  |  |
|  | Rivière-Du-Loup (#03130)  |  |  |                     |                     | Saint-Michel-de-Bellechasse (station de Berthier-sur-Mer #03200) |                                     |   |                     |                |                    |                |              |                   |  |  |
| Date   | Hr_Sun Morning  | Hr_Sun Night   | Low Tide Time  | Hour minimum (Tide) | Hour maximum (Tide) | LowTide_Level  | Low Tide Time                       | Hour minimum (Tide)                     | Hour maximum (Tide) | Low Tide Level | Flight possibility | Hour start Min | Hour End max | Possible duration |  |  |
| 15 juil. 2024  | 07:50   | 17:50  | 16:42  | 14:42               | 18:12               | 1.8  | 08:06                               | 06:36                                   | 09:36               | 1.1            | Non favorable      | 14:42          | 9:36         | NA                |  |  |
| 16 juil. 2024  | 07:50   | 17:50  | 6:02   | 04:32               | 08:02               | 1.8  | 09:12                               | 07:42:00                                | 10:42               | 1.0            | Non favorable      | 7:50           | 10:42        | 2:52              |  |  |
| 17 juil. 2024  | 07:50   | 17:50  | 7:12   | 05:42               | 09:12               | 1.7  | 10:21                               | 08:51                                   | 11:51               | 0.9            | Favorable          | 7:50           | 11:51        | 4:01              |  |  |
| 18 juil. 2024  | 07:50   | 17:50  | 8:08   | 06:38               | 10:08               | 1.5  | 11:21                               | 09:51                                   | 12:51               | 0.8            | Favorable          | 7:50           | 12:51        | 5:01              |  |  |



|               |       |       |       |       |       |     |       |          |          |     |               |       |       |      |
|---------------|-------|-------|-------|-------|-------|-----|-------|----------|----------|-----|---------------|-------|-------|------|
| 19 juil. 2024 | 07:50 | 17:40 | 8:54  | 07:24 | 10:24 | 1.2 | 12:21 | 10:51    | 13:51    | 0.7 | Favorable     | 7:50  | 13:51 | 6:01 |
| 20 juil. 2024 | 07:50 | 17:40 | 9:35  | 08:05 | 11:05 | 1   | 13:12 | 11:42    | 14:42    | 0.6 | Favorable     | 8:05  | 14:42 | 6:37 |
| 21 juil. 2024 | 07:50 | 17:40 | 10:16 | 08:46 | 11:46 | 0.7 | 14:00 | 12:30    | 15:30    | 0.5 | Favorable     | 8:46  | 15:30 | 6:44 |
| 22 juil. 2024 | 07:50 | 17:40 | 10:57 | 09:27 | 12:27 | 0.5 | 14:48 | 13:18    | 16:18    | 0.4 | Favorable     | 9:27  | 16:18 | 6:51 |
| 23 juil. 2024 | 07:50 | 17:40 | 11:40 | 10:10 | 13:10 | 0.4 | 15:30 | 14:00    | 17:00    | 0.4 | Favorable     | 10:10 | 17:00 | 6:50 |
| 24 juil. 2024 | 07:50 | 17:40 | 12:23 | 10:53 | 13:53 | 0.3 | 16:12 | 14:42    | 17:42    | 0.4 | Favorable     | 10:53 | 17:40 | 6:47 |
| 25 juil. 2024 | 07:50 | 17:40 | 13:07 | 11:37 | 14:37 | 0.4 | 16:54 | 15:24    | 18:24    | 0.4 | Favorable     | 11:37 | 17:40 | 6:03 |
| 26 juil. 2024 | 08:00 | 17:40 | 13:52 | 12:22 | 15:22 | 0.6 | 17:36 | 16:06    | 19:06    | 0.4 | Favorable     | 12:22 | 17:40 | 5:18 |
| 27 juil. 2024 | 08:00 | 17:40 | 14:39 | 13:09 | 16:09 | 0.9 | 18:15 | 16:45    | 19:45    | 0.5 | Favorable     | 13:09 | 17:40 | 4:31 |
| 28 juil. 2024 | 08:00 | 17:40 | 15:31 | 14:01 | 17:01 | 1.3 | 06:54 | 05:24    | 08:24    | 0.6 | Non favorable | 14:01 | 8:24  | NA   |
| 29 juil. 2024 | 08:00 | 17:40 | 16:32 | 15:02 | 18:02 | 1.5 | 07:57 | 06:27    | 09:27    | 0.7 | Non favorable | 15:02 | 9:27  | NA   |
| 30 juil. 2024 | 08:00 | 17:30 | 17:41 | 16:11 | 19:11 | 1.6 | 09:09 | 07:39    | 10:39    | 0.7 | Non favorable | 16:11 | 10:39 | NA   |
| 31 juil. 2024 | 08:00 | 17:30 | 7:02  | 5:32  | 9:02  | 1.3 | 10:24 | 08:54    | 11:54    | 0.7 | Favorable     | 8:00  | 11:54 | 3:54 |
| 1 août 2024   | 08:00 | 17:30 | 8:10  | 6:40  | 9:40  | 1.2 | 11:30 | 10:00    | 13:00    | 0.6 | Favorable     | 8:00  | 13:00 | 5:00 |
| 2 août 2024   | 08:00 | 17:30 | 9:05  | 7:35  | 10:35 | 1   | 12:27 | 10:57    | 13:57    | 0.6 | Favorable     | 8:00  | 13:57 | 5:57 |
| 3 août 2024   | 08:00 | 17:30 | 9:50  | 8:20  | 11:20 | 0.9 | 13:18 | 11:48    | 14:48    | 0.5 | Favorable     | 8:20  | 14:48 | 6:28 |
| 4 août 2024   | 08:00 | 17:30 | 10:29 | 8:59  | 11:59 | 0.8 | 14:03 | 12:33    | 15:33    | 0.5 | Favorable     | 8:59  | 15:33 | 6:34 |
| 5 août 2024   | 08:10 | 17:30 | 11:03 | 9:33  | 12:33 | 0.7 | 14:39 | 13:09    | 16:09:00 | 0.5 | Favorable     | 9:33  | 16:09 | 6:36 |
| 6 août 2024   | 08:10 | 17:30 | 11:34 | 10:04 | 13:04 | 0.8 | 15:12 | 13:42    | 16:42    | 0.5 | Favorable     | 10:04 | 16:42 | 6:38 |
| 7 août 2024   | 08:10 | 17:30 | 12:02 | 10:32 | 13:32 | 0.9 | 15:45 | 14:15    | 17:15    | 0.5 | Favorable     | 10:32 | 17:15 | 6:43 |
| 8 août 2024   | 08:10 | 17:20 | 12:30 | 11:00 | 14:00 | 1   | 16:12 | 14:42    | 17:42    | 0.5 | Favorable     | 11:00 | 17:20 | 6:20 |
| 9 août 2024   | 08:10 | 17:20 | 12:59 | 11:29 | 14:29 | 1.1 | 16:39 | 15:09    | 18:09    | 0.6 | Favorable     | 11:29 | 17:20 | 5:51 |
| 10 août 2024  | 08:10 | 17:20 | 13:30 | 12:00 | 15:00 | 1.3 | 17:06 | 15:36    | 18:36:00 | 0.7 | Favorable     | 12:00 | 17:20 | 5:20 |
| 11 août 2024  | 08:10 | 17:20 | 14:04 | 12:34 | 15:34 | 1.5 | 17:36 | 16:06    | 19:06    | 0.8 | Favorable     | 12:34 | 17:20 | 4:46 |
| 12 août 2024  | 08:10 | 17:20 | 14:45 | 12:45 | 16:15 | 1.7 | 18:12 | 16:42:00 | 19:42    | 1.0 | Favorable     | 12:45 | 17:20 | 4:35 |
| 13 août 2024  | 08:10 | 17:20 | 15:39 | 13:39 | 17:09 | 1.9 | 07:09 | 05:39:00 | 08:39    | 1.0 | Non favorable | 13:39 | 8:39  | NA   |



|              |       |       |       |       |       |     |       |          |          |     |               |       |       |      |
|--------------|-------|-------|-------|-------|-------|-----|-------|----------|----------|-----|---------------|-------|-------|------|
| 14 août 2024 | 08:10 | 17:20 | 16:51 | 14:51 | 18:21 | 2   | 08:18 | 06:48    | 09:48    | 1.1 | Non favorable | 14:51 | 9:48  | NA   |
| 15 août 2024 | 08:20 | 17:10 | 6:37  | 5:07  | 8:37  | 1.7 | 09:39 | 08:09:00 | 11:09    | 1.0 | Non favorable | 8:20  | 11:09 | 2:49 |
| 16 août 2024 | 08:20 | 17:10 | 7:42  | 6:12  | 9:42  | 1.5 | 10:54 | 09:24    | 12:24    | 0.8 | Favorable     | 8:20  | 12:24 | 4:04 |
| 17 août 2024 | 08:20 | 17:10 | 8:31  | 7:01  | 10:01 | 1.2 | 11:57 | 10:27    | 13:27    | 0.7 | Favorable     | 8:20  | 13:27 | 5:07 |
| 18 août 2024 | 08:20 | 17:10 | 9:13  | 7:43  | 10:43 | 0.9 | 12:51 | 11:21    | 14:21    | 0.5 | Favorable     | 8:20  | 14:21 | 6:01 |
| 19 août 2024 | 08:20 | 17:10 | 9:53  | 8:23  | 11:23 | 0.5 | 13:42 | 12:12    | 15:12    | 0.4 | Favorable     | 8:23  | 15:12 | 6:49 |
| 20 août 2024 | 08:20 | 17:10 | 10:32 | 9:02  | 12:02 | 0.3 | 14:24 | 12:54    | 15:54    | 0.3 | Favorable     | 9:02  | 15:54 | 6:52 |
| 21 août 2024 | 08:20 | 17:00 | 11:12 | 9:42  | 12:42 | 0.1 | 15:06 | 13:36    | 16:36    | 0.3 | Favorable     | 9:42  | 16:36 | 6:54 |
| 22 août 2024 | 08:20 | 17:00 | 11:52 | 10:22 | 13:22 | 0.1 | 15:48 | 14:18    | 17:18    | 0.3 | Favorable     | 10:22 | 17:00 | 6:38 |
| 23 août 2024 | 08:30 | 17:00 | 12:33 | 11:03 | 14:03 | 0.3 | 16:24 | 14:54    | 17:54    | 0.3 | Favorable     | 11:03 | 17:00 | 5:57 |
| 24 août 2024 | 08:30 | 17:00 | 13:15 | 11:45 | 14:45 | 0.6 | 17:00 | 15:30    | 18:30    | 0.4 | Favorable     | 11:45 | 17:00 | 5:15 |
| 25 août 2024 | 08:30 | 17:00 | 14:00 | 12:30 | 15:30 | 1   | 17:39 | 16:09    | 19:09    | 0.6 | Favorable     | 12:30 | 17:00 | 4:30 |
| 26 août 2024 | 08:30 | 17:00 | 14:53 | 13:23 | 16:23 | 1.3 | 18:24 | 16:54    | 19:54    | 0.8 | Favorable     | 13:23 | 17:00 | 3:37 |
| 27 août 2024 | 08:30 | 16:50 | 15:59 | 13:59 | 17:29 | 1.6 | 07:33 | 06:03    | 09:03:00 | 0.7 | Non favorable | 13:59 | 9:03  | NA   |
| 28 août 2024 | 08:30 | 16:50 | 17:23 | 15:23 | 18:53 | 1.8 | 08:48 | 07:18    | 10:18:00 | 0.8 | Non favorable | 15:23 | 10:18 | NA   |
| 29 août 2024 | 08:30 | 16:50 | 7:00  | 5:30  | 9:00  | 1.5 | 10:06 | 08:36    | 11:36    | 0.8 | Non favorable | 8:30  | 11:36 | 3:06 |
| 30 août 2024 | 08:40 | 16:50 | 8:04  | 6:34  | 10:04 | 1.3 | 11:15 | 09:45    | 12:45    | 0.7 | Favorable     | 8:40  | 12:45 | 4:05 |
| 31 août 2024 | 08:40 | 16:50 | 8:51  | 7:21  | 10:21 | 1.1 | 12:12 | 10:42    | 13:42    | 0.6 | Favorable     | 8:40  | 13:42 | 5:02 |
| 1 sept. 2024 | 08:40 | 16:40 | 9:29  | 7:59  | 10:59 | 1   | 13:00 | 11:30    | 14:30    | 0.6 | Favorable     | 8:40  | 14:30 | 5:50 |
| 2 sept. 2024 | 08:40 | 16:40 | 10:01 | 8:31  | 11:31 | 0.9 | 13:36 | 12:06    | 15:06:00 | 0.5 | Favorable     | 8:40  | 15:06 | 6:26 |
| 3 sept. 2024 | 08:40 | 16:40 | 10:29 | 8:59  | 11:59 | 0.8 | 14:09 | 12:39    | 15:39    | 0.5 | Favorable     | 8:59  | 15:39 | 6:40 |
| 4 sept. 2024 | 08:40 | 16:40 | 10:55 | 9:25  | 12:25 | 0.8 | 14:39 | 13:09    | 16:09    | 0.5 | Favorable     | 9:25  | 16:09 | 6:44 |
| 5 sept. 2024 | 08:40 | 16:40 | 11:20 | 9:50  | 12:50 | 0.9 | 15:06 | 13:36    | 16:36    | 0.5 | Favorable     | 9:50  | 16:36 | 6:46 |
| 6 sept. 2024 | 08:50 | 16:30 | 11:46 | 10:16 | 13:16 | 0.9 | 15:30 | 14:00    | 17:00    | 0.5 | Favorable     | 10:16 | 16:30 | 6:14 |
| 7 sept. 2024 | 08:50 | 16:30 | 12:13 | 10:43 | 13:43 | 1   | 15:57 | 14:27    | 17:27    | 0.6 | Favorable     | 10:43 | 16:30 | 5:47 |
| 8 sept. 2024 | 08:50 | 16:30 | 12:42 | 11:12 | 14:12 | 1.2 | 16:21 | 14:51    | 17:51    | 0.7 | Favorable     | 11:12 | 16:30 | 5:18 |



|               |       |       |       |       |       |     |       |          |          |     |               |       |       |      |
|---------------|-------|-------|-------|-------|-------|-----|-------|----------|----------|-----|---------------|-------|-------|------|
| 9 sept. 2024  | 08:50 | 16:30 | 13:13 | 11:43 | 14:43 | 1.4 | 16:48 | 15:18    | 18:18    | 0.8 | Favorable     | 11:43 | 16:30 | 4:47 |
| 10 sept. 2024 | 08:50 | 16:20 | 13:51 | 11:51 | 15:21 | 1.7 | 17:21 | 15:51:00 | 18:51    | 1.0 | Favorable     | 11:51 | 16:20 | 4:29 |
| 11 sept. 2024 | 08:50 | 16:20 | 14:43 | 12:43 | 16:13 | 1.9 | 18:09 | 16:39    | 19:39    | 1.3 | Favorable     | 12:43 | 16:20 | 3:37 |
| 12 sept. 2024 | 08:50 | 16:20 | 16:09 | 14:09 | 17:39 | 2   | 07:39 | 06:09    | 09:09    | 1.1 | Non favorable | 14:09 | 9:09  | NA   |
| 13 sept. 2024 | 09:00 | 16:20 | 6:05  | 4:35  | 8:05  | 1.7 | 09:09 | 07:39:00 | 10:39    | 1.0 | Non favorable | 9:00  | 10:39 | 1:39 |
| 14 sept. 2024 | 09:00 | 16:20 | 7:14  | 5:44  | 9:14  | 1.4 | 10:24 | 08:54    | 11:54    | 0.9 | Non favorable | 9:00  | 11:54 | 2:54 |
| 15 sept. 2024 | 09:00 | 16:10 | 8:03  | 6:33  | 9:33  | 1.1 | 11:30 | 10:00    | 13:00    | 0.7 | Favorable     | 9:00  | 13:00 | 4:00 |
| 16 sept. 2024 | 09:00 | 16:10 | 8:44  | 7:14  | 10:14 | 0.7 | 12:24 | 10:54    | 13:54:00 | 0.5 | Favorable     | 9:00  | 13:54 | 4:54 |
| 17 sept. 2024 | 09:00 | 16:10 | 9:23  | 7:53  | 10:53 | 0.4 | 13:12 | 11:42    | 14:42    | 0.4 | Favorable     | 9:00  | 14:42 | 5:42 |
| 18 sept. 2024 | 09:00 | 16:10 | 10:00 | 8:30  | 11:30 | 0.1 | 13:54 | 12:24    | 15:24    | 0.3 | Favorable     | 9:00  | 15:24 | 6:24 |
| 19 sept. 2024 | 09:10 | 16:00 | 10:39 | 9:09  | 12:09 | 0   | 14:36 | 13:06    | 16:06    | 0.3 | Favorable     | 9:10  | 16:00 | 6:50 |
| 20 sept. 2024 | 09:10 | 16:00 | 11:18 | 9:48  | 12:48 | 0.1 | 15:12 | 13:42    | 16:42    | 0.3 | Favorable     | 9:48  | 16:00 | 6:12 |
| 21 sept. 2024 | 09:10 | 16:00 | 11:59 | 10:29 | 13:29 | 0.4 | 15:48 | 14:18    | 17:18    | 0.4 | Favorable     | 10:29 | 16:00 | 5:31 |
| 22 sept. 2024 | 09:10 | 16:00 | 12:41 | 11:11 | 14:11 | 0.7 | 16:24 | 14:54    | 17:54    | 0.5 | Favorable     | 11:11 | 16:00 | 4:49 |
| 23 sept. 2024 | 09:10 | 15:50 | 13:27 | 11:57 | 14:57 | 1.1 | 17:00 | 15:30    | 18:30    | 0.7 | Favorable     | 11:57 | 15:50 | 3:53 |
| 24 sept. 2024 | 09:20 | 15:50 | 14:20 | 12:50 | 15:50 | 1.5 | 17:45 | 16:15    | 19:15    | 0.9 | Non favorable | 12:50 | 15:50 | 3:00 |
| 25 sept. 2024 | 09:20 | 15:50 | 15:33 | 13:33 | 17:03 | 1.8 | 07:06 | 05:36    | 08:36    | 0.9 | Non favorable | 13:33 | 8:36  | NA   |
| 26 sept. 2024 | 09:20 | 15:50 | 17:11 | 15:11 | 18:41 | 1.9 | 08:24 | 06:54    | 09:54    | 0.9 | Non favorable | 15:11 | 9:54  | NA   |
| 27 sept. 2024 | 09:20 | 15:40 | 6:46  | 5:16  | 8:46  | 1.5 | 09:45 | 08:15    | 11:15    | 0.9 | Non favorable | 9:20  | 11:15 | 1:55 |
| 28 sept. 2024 | 09:20 | 15:40 | 7:41  | 6:11  | 9:41  | 1.4 | 10:51 | 09:21    | 12:21    | 0.8 | Non favorable | 9:20  | 12:21 | 3:01 |
| 29 sept. 2024 | 09:30 | 15:40 | 8:23  | 6:53  | 9:53  | 1.2 | 11:45 | 10:15    | 13:15    | 0.7 | Favorable     | 9:30  | 13:15 | 3:45 |
| 30 sept. 2024 | 09:30 | 15:40 | 8:56  | 7:26  | 10:26 | 1.1 | 12:27 | 10:57    | 13:57    | 0.6 | Favorable     | 9:30  | 13:57 | 4:27 |
| 1 oct. 2024   | 09:30 | 15:30 | 9:25  | 7:55  | 10:55 | 1.1 | 13:03 | 11:33    | 14:33    | 0.6 | Favorable     | 9:30  | 14:33 | 5:03 |
| 2 oct. 2024   | 09:30 | 15:30 | 9:50  | 8:20  | 11:20 | 1   | 13:33 | 12:03    | 15:03    | 0.6 | Favorable     | 9:30  | 15:03 | 5:33 |





|             |       |       |       |       |       |     |       |       |       |     |           |       |       |      |
|-------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-----|-----------|-------|-------|------|
| 3 oct. 2024 | 09:30 | 15:30 | 10:15 | 8:45  | 11:45 | 1   | 14:00 | 12:30 | 15:30 | 0.6 | Favorable | 9:30  | 15:30 | 6:00 |
| 4 oct. 2024 | 09:40 | 15:30 | 10:39 | 9:09  | 12:09 | 0.9 | 14:27 | 12:57 | 15:57 | 0.6 | Favorable | 9:40  | 15:30 | 5:50 |
| 5 oct. 2024 | 09:40 | 15:20 | 11:05 | 9:35  | 12:35 | 1   | 14:51 | 13:21 | 16:21 | 0.6 | Favorable | 9:40  | 15:20 | 5:40 |
| 6 oct. 2024 | 09:40 | 15:20 | 11:33 | 10:03 | 13:03 | 1.1 | 15:18 | 13:48 | 16:48 | 0.7 | Favorable | 10:03 | 15:20 | 5:17 |
| 7 oct. 2024 | 09:40 | 15:20 | 12:03 | 10:33 | 13:33 | 1.2 | 15:45 | 14:15 | 17:15 | 0.8 | Favorable | 10:33 | 15:20 | 4:47 |
| 8 oct. 2024 | 09:50 | 15:10 | 12:36 | 11:06 | 14:06 | 1.4 | 16:12 | 14:42 | 17:42 | 0.9 | Favorable | 11:06 | 15:10 | 4:04 |





**APPENDIX "B"**  
**BASIS OF PAYMENT**

DFO requests the contractor to provide a quote for each option detailed below.  
For the provision of any service, including the costs associated with carrying out the required work, Canada will pay lump sums as follows:

| Article | Description  | Quantity (A) | Distribution unit | Price per unit (B)          | Calculated price (A x B) |
|---------|--|--------------|-------------------|-----------------------------|--------------------------|
| 1       | Administrative preparation of the project for flight number 500                                | 1            | Each              |                             |                          |
| 2       | Flight <b>500</b> : Technical flight preparation and photo shooting (566 km of flight lines)   | 1            | Each              |                             |                          |
| 3       | Flight <b>500</b> : Post-treatment costs   | 1            | Each              |                             |                          |
| 4       | Administrative preparation of the project for flight number 600                                | 1            | Each              |                             |                          |
| 5       | Flight <b>600</b> : Technical flight preparation and photo shooting (706 km of flight lines)   | 1            | Each              |                             |                          |
| 6       | Flight <b>600</b> : Post-treatment costs   | 1            | Each              |                             |                          |
| 7       | Administrative preparation of the project for flight number 900                                | 1            | Each              |                             |                          |
| 8       | Flight <b>900</b> : Technical flight preparation and photo shooting (241.8 km of flight lines) | 1            | Each              |                             |                          |
| 9       | Flight <b>900</b> : Post-treatment costs   | 1            | Each              |                             |                          |
| 10      | Administrative preparation of the project for flight number 100                                | 1            | Each              |                             |                          |
| 11      | Flight <b>100</b> : Technical flight preparation and photo shooting (536 km of flight lines)   | 1            | Each              |                             |                          |
| 12      | Flight <b>100</b> : Post-treatment costs   | 1            | Each              |                             |                          |
|         |  |              |                   | Total price (without taxes) |                          |

**Amount payable if the contract cannot be completed :**

The amounts incurred by the contractor (Article 1 above), will be payable in the event of impossibility of carrying out the contract by the deadline (October 8, 2024) for reasons related to inadequate weather conditions only (deliverable 3.4 D). As a form of price support, supporting documentation for the amounts in article 1 may be requested by DFO before payment is made.



**ANNEX "C"  
EVALUATION CRITERIA**

**MANDATORY REQUIREMENTS**

Proposals will be evaluated against the mandatory evaluation criteria, as described below. Bidders' proposals must clearly meet all mandatory requirements to proceed to the next stage of evaluation. Proposals that do not meet the mandatory criteria will be excluded from the selection process.

**Bidders should include the following table in their proposal and indicate the page or section number that contains the information to verify that each criterion has been met.**

**The following mandatory criteria will be evaluated:**

| N° | Mandatory criteria   | Proposal Page N° |
|----|--|------------------|
| O1 | <p>The bidder must provide:</p> <p>The name of the UltraCam Xp camera model (or one of equivalent or higher technical quality) you intend to use and its technical specifications.<br/>If the camera model is not an UltraCam Xp, provide an Internet address where the model's specifications can be evaluated.</p>   |                  |
| O2 | <p>The bidder must provide:</p> <p>A calendar of dates considered favorable in which are identified:</p> <ul style="list-style-type: none"> <li>➤ 1: Days when the bidder's equipment or personnel are not available to carry out the contract.</li> <li>➤ 2: The days on which they estimate they will be able to carry out the flight if weather conditions permit (see flight duration in Appendix 1 of the Statement of Work).</li> </ul> <p><b>bidders must be able to fly a minimum of 65% of the days on the dates considered Favorable according to Appendix 1. In the event of a delay in the bidding dates, bidders must be able to fly a minimum of 65% of the remaining Favourable days from the bid closing date.</b></p> |                  |

In their bids, bidders must provide evidence and demonstrate that they meet each mandatory criterion mentioned above.



**Rated technical criteria**

Bids that meet all criteria will subsequently be evaluated and scored as specified in the tables below.

| Technical criteria                   |  | Note<br>minimum /<br>maximum<br>score | Example of calculation  | Points<br>Points<br>allocated | Renvoi<br>Submission<br>page no. |
|--------------------------------------|--|---------------------------------------|---|-------------------------------|----------------------------------|
| <b>C1<br/>Vol 500</b>                | Number of days available out of the number of favorable days as per Appendix 1 | 20/30                                 | <ul style="list-style-type: none"> <li>• 15** available days /15* maximum favorable days = 30 points</li> <li>• 12** days available /15 *days maximum = 24 points</li> <li>• 10** days available /15 *days maximum = 20 points</li> </ul> |                               |                                  |
| <b>C2<br/>Vol 600</b>                | Number of days available out of the number of favorable days as per Appendix 1 | 20/30                                 | <ul style="list-style-type: none"> <li>• 15** available days /15* maximum favorable days = 30 points</li> <li>• 12** days available /15 *days maximum = 24 points</li> <li>• 10** days available /15 *days maximum = 20 points</li> </ul> |                               |                                  |
| <b>C3<br/>Vol 900</b>                | Number of days available out of the number of favorable days as per Appendix 1 | 20/30                                 | <ul style="list-style-type: none"> <li>• 15** available days /15* maximum favorable days = 30 points</li> <li>• 12** days available /15 *days maximum = 24 points</li> <li>• 10** days available /15 *days maximum = 20 points</li> </ul> |                               |                                  |
| <b>C4<br/>Vol 100</b>                | Number of days available out of the number of favorable days as per Appendix 1 | 20/30                                 | <ul style="list-style-type: none"> <li>• 15** available days /15* maximum favorable days = 30 points</li> <li>• 12** days available /15 *days maximum = 24 points</li> <li>• 10** days available /15 *days maximum = 20 points</li> </ul> |                               |                                  |
| <b>Total : points<br/>per flight</b> |  |                                       |   |                               |                                  |
|                                      |  |                                       |   |                               |                                  |



**\*The maximum number of days are based on the favorable days of the calendars in Appendix 1 from the closing date of the tender.**

**\*\* The number of days available for flights are the number of favorable days for which the bidder is available to carry out the flights if the weather conditions are suitable.**

**NOTE: Calculations will be made on the basis of possible and available days on the closing date of the call for tenders, and bidders must be able to fly a minimum of 65% of the favorable days from that date.**

**Scoring will be calculated per flight evaluated, for a maximum total of 30 pts per flight and for a minimum availability of 65% of favorable days per flight to be eligible, i.e. 20/30.**