



NUNATSIAVUT

kavamanga Government

REQUEST FOR PROPOSALS

NUNATSIAVUT LIDAR AND AERIAL PHOTOGRAPHY COLLECTION

Issue Date:

August 21, 2024

Closing date and time:

September 17, 2024

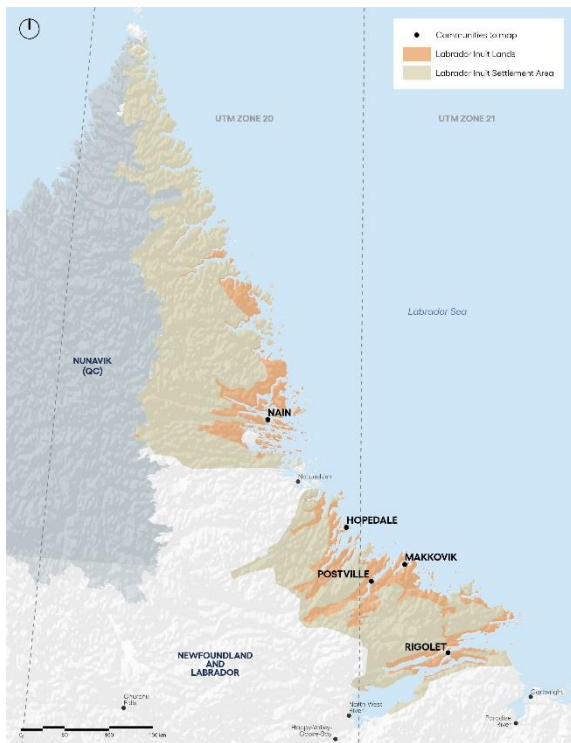
Context

The Nunatsiavut Government (NG) was established in 2005 following the ratification of the *Labrador Inuit Land Claims Agreement (LILCA)*. LILCA includes self-government provisions rendering the NG a regional Inuit government within the province of Newfoundland and Labrador. The NG has authority over many central governance areas including health, education, housing, culture and language, justice, and community matters.

Project Overview and Scope of Work

Scope of Work

1. INTRODUCTION



The Nunatsiavut Government manages a territory of over 72,000 km², most of which is uninhabited and natural. The five main communities can only be accessed by air or ferry, making most of the territory difficult to reach. The Nunatsiavut Government aims to acquire LiDAR data to improve its understanding of the territory and gain access to information that is difficult to obtain on the field. This data will provide a comprehensive overview of the topography of the communities and surrounding territory, providing information to plan future growth in all aspects of infrastructure- roads, airstrips, waste management sites, and future land development. This data will help drive decision-making on future infrastructure planning as well as risk mitigation for climate change.

There are two main deliverables for this work: Aerial photography and a Digital Elevation Model of each community.

2. WORK SCOPE

The Nunatsiavut Government seeks to conduct a Light Detection and Ranging (LiDAR) scan and aerial photography of the communities and a 10km radius of surrounding areas (**See Appendix 3**) for proposed coverage of communities. The proposed coverage and flight paths will be discussed with the successful proponent to maximize coverage of critical areas according to the landforms, and coasts. A final map

with the proposed flight paths will be provided and finalized by the successful proponent upon review by the NG, but coverage will not exceed the areas provided in the maps shown.

2.1 Technical Specifications

The Nunatsiavut LiDAR data acquisition shall follow the minimal specification of the Federal Airborne LiDAR Data Acquisition Guideline (CQL1).

Link: <https://ostr-backend-prod.azurewebsites.net/server/api/core/bitstreams/2cbe70ad-6e0e-4d1e-8dd4-053859c95a44/content>

Limitations and Restrictions:

Any perceptible physical or technical limitations must be reported prior to data collection. It is also the responsibility of the data collector to validate flight restrictions and comply with all federal and provincial laws and regulations regarding the capture of territories that may have special regulations, such as mines.

Geodetic Control:

The Area of Interest (AOI) is surrounded by two GPS base stations: Goose-Bay (passive) and Nain (active). Static GPS baselines shall be established where possible.

Coordinate System:

Projection: UTM Zone 20 and UTM Zone 21

Hz Datum: NAD 83 (CSRS)

Vertical Datum: CGVD2013

Geoid Model: CGG2013

2.2 Collection

- Collection to include orthorectified aerial imagery with minimum resolution of 15cm.
- Laser pulses must be spaced no more than 0.71 meters apart in both cross-track and along-track directions.
- The point cloud density should be at least 10 points per square meter for the communities.
- The LiDAR system used for data acquisition must collect at least the first and last returns and intensity data, if available.
- The total Field of View (FOV) should not exceed 40 degrees (+/- 20 degrees from the nadir).
- Flight lines must have a 15% overlap and including cross strips for quality control.
- Data collection should not occur during snow cover, ice buildup, or extensive flooding. Additionally, data collection should not take place when weather conditions such as rain, snowfall, smoke, or fog would significantly reduce data quality.
- LiDAR point cloud accuracy:
 - 0.19 meters vertically at the 95% confidence level.

- 0.60 meters horizontally at the 95% confidence level.

Innovation:

While survey data outside of the existing communities will be used for planning purposes and only requires the accuracy listed above, NG is considering that more detailed data may be beneficial to collect within certain portions of the community. This could include lands within 250m of existing development and shorelines, there may be a desire for data at a more detailed level for future detailed design and engineering purposes. Proponents are encouraged to propose an approach that aligns with this goal, and while the proposal should be based on the minimum specifications, the proponent can provide a breakdown of potential higher resolution options and methods of collection available.

2.3 Data Processing

- All point products will comply with LAS v.1.3 format or newer.
- The data collector and Nunatsiavut Government will establish a non-overlapping tiling scheme before collection. This scheme shall be used for all tiled deliverables. To keep the individual LAS/LAZ file size manageable, it would be recommended that each tile be 1 km² in size.
- A minimal classification of the point cloud is required. The points should be assigned to the proper class within the LAS format specification.
 - Ground
 - Low vegetation
 - High vegetation
 - Water
 - Buildings
 - Noise – Low Point and High Noise if applicable
- *Partial building data can be provided to aid in the classification process.*
- The DEM resolution shall be a minimum of 1 meter

2.4 Quality Control/Quality Assurance

The data collector is mainly responsible for performing a QC/QA of the LiDAR-derived data to demonstrate that the technical specifications are met. This includes field verifying the vertical accuracy of the ground surface where possible and ensuring that a DEM is used to satisfy the RMSE requirement for all major ground cover categories. The accuracy of the DEM for the main categories of ground cover, specified below, should be evaluated, and reported separately:

1. Bare earth
2. Low vegetation
3. High vegetation
4. Water
5. Buildings

The data collector must distribute at least 20 sample points evenly across the project area for each cover category.

3 Deliverables

3.1 Pre-Flight Deliverables

Upon award of the contract, the successful proponent will meet with NG to confirm the areas before data collection. The successful proponent must provide the following pre-flight information:

- Flight planning, survey control, ground truthing, schedule, and any limitations.
- A map displaying the AOI boundaries and planned flight paths, including GPS ground control points, must be submitted. The vertical and horizontal accuracy of selected GPS base points, where applicable, must be documented.
- Documentation specifying the laser system, GNSS, and IMU to be used (including manufacturers, model, and specifications) is required.
- Documentation should be provided that specifies altitude, airspeed, scan angles, scan rate, LiDAR pulse rates, receiver return mode, and any other relevant equipment information.
- Documentation detailing the tiling scheme.

3.2 Post-Flight Deliverables

Raw Point Clouds of all acquired laser returns, with a time stamp indicating GPS time, date, and local time of acquisition for each laser shot must be included in the successful proponent's final delivery. The X and Y positions shall be provided using meters. Easting and Northing on the project mapping plane, and the Z value is reported in meters as both ellipsoidal (WGS-84) and orthometric (CGVD2013).

Classified Point Clouds of laser returns are to be provided, with a timestamp, to the same datum noted previously. The delivery is tiled without overlap.

Raster DEM of bare earth surface orthometric elevations gridded at 1-meter resolution, georeferenced to the same datum as previously noted and tiled following the establish scheme.

Time-stamped GPS aircraft X,Y,Z trajectory, along with quality metrics such as PDOP and estimated RMS error.

A GIS file (preferably a shapefile) of the coverage of each LAS/LAZ tile shall be submitted as deliverables, with the file names included in the attributes and other necessary information including aerial imagery.

The final report shall clearly and comprehensively document the following:

1. System calibration
2. Instrument acquisition parameters
3. GPS ground control and LiDAR test points
4. GPS network adjustment report
5. Data processing procedures
6. Validation of data quality, demonstrating project specifications have been met.

Delivery Format

The specifications for all data delivery are as follows:

1. The point cloud files, both raw and classified, must be delivered as tiled LAZ files on a hard drive. Proprietary formats are not allowed.
2. All georeferenced post-flight deliverables, such as tile schemes, flight paths, ground truthing, and base station points, must be submitted as GIS files in either shapefile or GDB format.
3. The DEM tiles must be delivered as a TIF files.
4. Documents and reports must be submitted in PDF format.
5. All X and Y positions must be expressed in meters, in the appropriate coordinate system (UTM zone 20 or 21).

Please be advised that at the conclusion of the deliverables the NG shall be the sole owner of all work produced and associated documents and data collected and shall have exclusive rights to use, reproduce and transmit the work at the NG's sole discretion.

Requirements of Submission

Specific requirements outlined below do not constitute the final terms of an agreement or an engagement. A formal written agreement between the two parties will determine the ultimate terms.

Proposal Submission (Format & Response Guidelines)

To allow the NG the ability to conduct a thorough and timely evaluation, Proposals should be presented in a clear and concise manner. Failure to present information in the format that is requested may be to the proponent's disadvantage.

It is suggested that the following format and sequence be followed to provide consistency in proponent response and to ensure each Proposal receives full consideration.

1. Proposal Cover & Table of Contents

2. Corporate Profiles & Relevant Qualifications (past relevant experience)

Provide an overview of the company including number of years in business and description as well as a short summary of the project lead and qualifications. Team resumes of project team must be provided as part of the consultant's Proposal.

Project experience should include at minimum 5 examples of relevant projects and should include project descriptions, and project budget. Consultants shall also provide client references, list of key personnel.

3. **Project Approach and Workplan**

This should include a summary of the tasks and approaches of the project team in accordance with the scope of work outlined above.

Innovation: We welcome teams sharing additional items or supporting work that would be additional services to enhance the work including training, further research, analysis, mapping, and other innovation. These should be outlined within the proposal as additional tasks with corresponding budgets and may be selected to be added to the project scope by NG upon project award.

4. **Project Delivery Plan and Schedule**

The proponent should clearly indicate and illustrate, as necessary, the schedule outlining important dates and milestones. This should detail each phase, specific tasks and critical milestones. The target end date for this project is November, 2024. The project will kick-off in mid September with collection of data planned for October, 2024.

5. **Detailed Project Budget –Fees and Expenses**

All fees and expenses are to be included in the breakdown of fees. Proponents must provide a detailed fee breakdown by team member with hourly rates indicated.

6. **Mandatory Attachments to be Submitted with Proposal:**

Appendix A: Inuit Content Form

Appendix B: Team Resumes

Evaluation Criteria for Proposals

The NG will evaluate each Proposal received in response to this RFP on the principle of value for money by using the following criteria. Points awarded will be confidential and no details will be released to any of the proponents.

- a. **30% Corporate Experience:**
 - Experience and qualifications of the firm in undertaking similar projects including all aspects of the work scope.
 - Skills and qualifications of key personnel.
- b. **15% Project Workplan and Approach**
 - Clarity and feasibility of the project plan and timeline.
 - Understanding of the tasks, deliverables, and overall project approach.
 - Innovation and best practice
- c. **20% Project Schedule**, and availability to complete work and critical milestones, in particular ability to complete collection in fall of 2024, prior to the snowfall.
- d. **20% Fees and Expenses** Cost effectiveness and value for money

- e. **5% References**, including the contact information of former clients.
- f. **10% Inuit Culture Incorporation** and plan to incorporate Beneficiaries of the Labrador Inuit Land Claim Agreement & Inuit businesses into the Project, including the Inuit Content Scoresheet

The *Procurement Act* will be used to determine the preferred supplier and Inuit Content Factor of the submissions. **It is the responsibility of proponents to show, in their Proposal, a calculation of the Inuit Content Factor for the proponent and must include a completed copy of the Inuit Content Scoresheet as shown in the Appendix 2.**

The NG reserves the right to discuss any and/or all Proposals and to request additional information from the proponents.

The NG may not accept the lowest-cost or any Proposal and the NG reserves the right to cancel this RFP. Any Proposal that is accepted may be accepted in whole or in part.

Instructions to Proponents

Please note that this Request for Proposals (RFP) also consists of the following documents:

- Appendix 1: *Procurement Act*;
- Appendix 2: Inuit Content Factor Scoresheet.
- Appendix 3: *Maps of Communities and Proposed target areas for data collection to be confirmed with selected proponent.*

Enquiries

All enquiries regarding this Request for Proposals (RFP) must be submitted through the Project MERX solicitation advertisement with the subject line **ENQUIRIES: NUNATSIAVUT LIDAR AND AERIAL PHOTOGRAPHY COLLECTION**

Such enquiries should be submitted on or before **September 11, 2024** so that questions and answers can be sent to all proponents as an addendum. Information given by word of mouth will not be valid or enforceable.

Addenda

If deemed necessary by the NG, responses to any questions and/or any additional information will be issued by the NG in the form of an addendum, which shall form part of this RFP.

Any addenda issued to this RFP will be posted through the Project MERX page. It is the responsibility of the proponent to ensure that it has received any addenda issued prior to the Proposal submission date. Upon submitting a Proposal, a proponent will be deemed to have received notice of all addenda that have been issued.

Address for Submissions

To be considered, electronic copies of Proposals should be submitted through the Project MERX solicitation advertisement with the subject line **PROPOSAL SUBMITTAL: NUNATSIAVUT LIDAR AND AERIAL PHOTOGRAPHY COLLECTION**

Submission Deadline

Proposals must be received on or before 4:00 p.m. (ADT) on **September 17, 2024** (the “Closing Date”). **PROPOSALS RECEIVED AFTER THAT TIME WILL NOT BE CONSIDERED.**

Proposals must be submitted in English or Inuktitut. Proposals will be opened at the NG offices in Makkovik, Nunatsiavut.

Acceptance of Proposal

Proposals will be considered to be open for acceptance by the NG for at least ninety (90) days following the Closing Date and the proponent may not withdraw their Proposal during that time.

Once an award is made, the successful proponent will be held to its Proposal as of the Closing Date even if the proponent later alleges a mistake was made in the Proposal.

If a proponent discovers that it has made an error in its Proposal, the proponent may (1) forward a correction notice to the Nunatsiavut Government at the address identified in this RFP or (2) withdraw its Proposal, but the correction or withdrawal must be received before the Closing Date.

Before an award is made, if it appears that there is an error in a Proposal, the Nunatsiavut Government may, in its sole discretion, communicate with the proponent to ascertain if the proponent wishes to honour the Proposal or withdraw the Proposal. If the proponent withdraws its Proposal, the Proposal will not be considered further.

The Nunatsiavut Government reserves the right to award this contract in part or in full, on the basis of Proposals received unless a proponent specifies that its Proposal is valid only for the complete order.

The Nunatsiavut Government may not accept the lowest or any Proposal.

General Conditions

Governing Law

The laws of the Province of Newfoundland and Labrador and Nunatsiavut govern this RFP and any subsequent contract that may arise as a result of this RFP.

Cost of Proposal

Preparation and submission of a Proposal in response to this RFP is voluntary and any costs associated with Proposal preparation, submission, meetings, negotiations or discussions with the NG must be borne by the proponent submitting the Proposal.

No Claim

The NG will not be liable to any proponent for any claims, whether for costs, expenses, losses or damages, or loss of anticipated profits, or for any other matter whatsoever, incurred by the proponent in preparing and submitting a Proposal, or participating in negotiations for a contract, or other activity related to or arising out of this RFP. Except as expressly and specifically permitted in this RFP, no proponent shall have any claim for any compensation of any kind whatsoever as a result of participating in this RFP and by submitting a Proposal each proponent shall be deemed to have agreed that it has no claim.

Proponent's Qualifications

In submitting a Proposal, the proponent acknowledges and agrees that it has read, understood and agrees to all terms and conditions described in the RFP and that it has the necessary experience, skills and ability to effectively provide the services.

Withdrawal

Proponents may withdraw their Proposal at any time prior subject to the Acceptance of Proposal requirements (90 days after closing).

No Binding Contract

The NG may, after reviewing the Proposals received, enter into discussions with one or more of the proponents, without such discussion in any way creating a binding contract between the NG and any proponent. There will be no binding agreement between any proponent and the NG until a formal contract with negotiated terms has been signed by both the NG and a proponent.

Solicitation of NG Staff and Assembly Members

Prior to the Closing Date, proponents should not establish contact with employees or agents of the NG (including the Nunatsiavut Assembly) regarding this RFP, other than the representative(s) identified without that representative's permission.

Failure to abide by this requirement could be grounds for rejection of the proponent's Proposal.

Confidentiality

Any information acquired about the NG by a proponent during this process must not be disclosed unless authorized by the NG, and this obligation survives the termination of the RFP process.

Conflict of Interest

By submitting a Proposal, the proponent declares that it has no pecuniary interest in the business of any third party that would cause a conflict of interest or be seen to cause a conflict of interest in carrying out the services.

Modification of Terms

NG reserves the right to modify the terms of this RFP at any time in its sole discretion. This includes the right to cancel this RFP at any time prior to entering into a contract with the successful proponent.

Ownership of Proposals and Freedom of Information

All documents submitted to the NG will become the property of the NG. They will be received and held in confidence by the NG. All outcomes of this project will be made publicly available on a public

infrastructure planning webpage linked to the Nunatsiavut Government page. NG will be the owners of all materials, models, files, and documents developed during this project. Upon final completion, all information and project files (including GIS, CAD, excel files, and working files) will be packaged by the consultant and transferred to NG at project closeout.

Release of Information

At Proposal Opening:

Only the names of the bidders will be released.

After Proposal Opening:

No further information will be released until after the contract is awarded.

After contract is awarded:

All proponents will be advised of the NG's final decision regarding their respective Proposals.

On request, the NG will provide an unsuccessful proponent with the reasons that its Proposal was not successful. No other information will be released.

Appendix 1- Nunatsiavut Procurement Act

Will be attached to this document and can also be found on the Nunatsiavut Government website at:

<https://www.nunatsiavut.com/government/government-legislation/>

By searching: ***IL 2011-04 Procurement Act***

Appendix 2- Inuit Content Scoresheet

Nunatsiavut Inuit Content Factor Calculation (section 17 Nunatsiavut Procurement Act)

<p>a) A maximum of 20 points related to the percentage of Inuit ownership of the supplier calculated as 0.5 points per 1% of Inuit participation in excess of 50% of the ownership and control of the supplier with 0 points being awarded to a supplier that is not at least 50% owned and controlled by Inuit or Inuit Businesses.</p>	<p>/20</p>
<p>b) A maximum of 10 points related to the physical location of the head office and operating offices of the supplier where 10 points is awarded to a supplier having both its head office and principal operating office in an Inuit Community and 6 points is awarded to a company having an operating or a head office in an Inuit Community and 4 points is awarded for a head office or operating office elsewhere in Labrador.</p>	<p>/10</p>
<p>c) A maximum of 10 points related to training for Inuit calculated as 0.1 point per 1% of all training money spent by the supplier on the training of Inuit.</p>	<p>/10</p>
<p>d) A maximum of 20 points related to the percentage of the supplier's employees who are Inuit calculated as 0.2 points per 1% of employees who are Inuit.</p>	<p>/20</p>
<p>e) A maximum of 10 points related to the proportion of wages paid to Inuit by the supplier calculated as 0.1 point per 1% of payroll paid to Inuit.</p>	<p>/10</p>
<p>f) a maximum of 10 points related to the percentage of goods and services purchased by the supplier from Inuit Businesses in relation to the procurement calculated as 0.1 point per 15 of the value of all purchases obtained from Inuit.</p>	<p>/10</p>
<p>g) A maximum of 10 points related to the commitment by the supplier to utilize Inuit Businesses as sub-contractors calculated as 0.1 point per 1% of the value of all sub-contracts awarded to Inuit Businesses.</p>	<p>/10</p>
<p>Total (out of possible 90)</p>	<p>/90</p>

Appendix 3- Draft Community Coverage Maps

