



Return Bids to :

Bid Receiving Natural Resources Canada

See article 2.2 for bid submission instructions

Attention: Roya Ayam

Request for Proposal (RFP)

Proposal To: Natural Resources Canada

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

Comments – Commentaires

Issuing Office – Bureau de distribution

Finance and Procurement Management Branch
 Natural Resources Canada
 580 Booth Street
 Ottawa, ON
 K1A 0E4

Title – Sujet National scale data enhancement for groundwater– surface-water modelling	
Solicitation No. – No de l’invitation NRCan-5000069789	Date October 25, 2022
Client Reference No. - N° de reference du client 173311	
Solicitation Closes – L’invitation prend fin at – à 02:00 PM EST (Eastern Standard Time) on – le November 24, 2022	
Address Enquiries to: - Adresse toutes questions à: Roya Ayam Roya.Ayam@nrca-nrcan.gc.ca	Buyer ID – Id de l’acheteur
If marked "X" please see the box to the left / S'il ya un "X" ici, s.v.p. voir la boîte à la gauche <input checked="" type="checkbox"/> Acknowledgement copy required / Accusé de réception requis	
Destination – of Goods, Services and Construction: Destination – des biens, services et construction: Natural Resources Canada Geological Survey of Canada Lands and Minerals Sector (LMS) Natural Resources Canada 601 Booth Street, K1A 0E8, Ottawa, ON	
Security – Sécurité There are no security requirements associated with this requirement	
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l’entrepreneur Telephone No.:- No. de téléphone: Email : - Courriel :	
Name and Title of person authorized to sign on behalf of Vendor/Firm (type or print) Signature _____ Date _____	



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The Articles contained in this document are mandatory in their entirety, unless otherwise indicated. Acceptance of these Articles, in their entirety, as they appear in this document, is a Mandatory requirement of this RFP.

Suppliers submitting a proposal containing statements implying that their proposal is conditional on modification of these clauses or containing terms and conditions that purport to supersede these clauses or derogate from them will be considered non-responsive.

Bidders with concerns regarding the provisions of the Bid Solicitation document (including the Resulting Contract Clauses) should raise such concerns in accordance with the Enquiries provision of this RFP.



PART 1 - GENERAL INFORMATION

1.1 Introduction

The bid solicitation is divided into seven parts plus attachments and annexes, as follows:

- Part 1 General Information:** provides a general description of the requirement;
- Part 2 Bidder Instructions:** provides the instructions, clauses and conditions applicable to the bid solicitation;
- Part 3 Bid Preparation Instructions:** provides bidders with instructions on how to prepare their bid;
- Part 4 Evaluation Procedures and Basis of Selection:** indicates how the evaluation will be conducted, the evaluation criteria that must be addressed in the bid, and the basis of selection;
- Part 5 Certifications:** includes the certifications to be provided;
- Part 6 Security, Financial and Other Requirements:** includes specific requirements that must be addressed by bidders; and
- Part 7 Resulting Contract Clauses:** includes the clauses and conditions that will apply to any resulting contract.

The Annexes and Appendix include:

- Annex A** - the Statement of Work
- Annex B** - the Basis of Payment
- Appendix 1** – Financial Bid presentation

1.2 Summary

Land and Mineral Sector (LMS) and the Geological Survey of Canada (GSC) of Natural Resources Canada (NRCan) has a mandate to complete thematic groundwater studies and mapping of Canadian Aquifers. As part of the Groundwater Geoscience Program, this theme has a 5 year time frame (2019–2024) and expectations to deliver innovative science on aquifers to support economic prosperity for Canada.

In particular, national scale modelling activities currently require extensive data preconditioning. The GSC lacks inhouse resources to compile some of this data in a timely fashion and is seeking external assistance to support national initiatives such as Canada 3D and Canada 1 Water.

The work required by this contract will support the Geological Survey of Canada's role in research that aims to quantify the Open Access National Hydrological Network and upgrade the attribute information for publication. Contractor will provide details on operational specifics within the response and will be ranked as per the evaluation criteria in the companion document.

1.3 Security Requirement

There is no security requirements associated with this requirement.

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 will be done in writing, by email.



PART 2 - BIDDER INSTRUCTIONS

2.1 Standard Instructions, Clauses and Conditions

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 with the modifications to the text below. If there is a conflict between the provisions of 2003 and this document, this document prevails.

In the complete text content (except Section 1 and 3)

Delete: "Public Works and Government Services Canada" and Insert: "Natural Resources Canada."

Delete: "PWGSC" and Insert: "NRCan"

In Section 2 – Procurement Business Number:

DELETE: "Suppliers are required to"

INSERT: "It is suggested that suppliers"

Subsection 1 of Section 8: Delete entirely

Subsection 2 of Section 8:

DELETE: The only acceptable email address to use with CPC Connect for responses to bid solicitations issued by PWGSC headquarters is: tpsgc.pareceptiondessoumissions-apbidReceiving.pwgsc@tpsgc-pwgsc.gc.ca, or, if applicable, the email address identified in the bid solicitation.

INSERT: The only acceptable email address to use with CPC Connect for responses to bid solicitation issued by NRCan is: procurement-appvisionnement@NRCan-RNCan.gc.ca

Subsection 2b of Section 8:

DELETE: "six business days"

INSERT: "five business days"

In Section 5.4 – Submission of Bids:

DELETE: sixty (60) days

INSERT: one hundred and twenty (120) days

In Section 20.2 – Further Information:

DELETE: in its entirety

2.2 Submission of Bids

Bidders must submit all proposals using the Canada Post Canada (CPC) Connect service. Given the current constraints on NRCan's networks, the electronic mail system has a limit of 1GB per single message received and a limit of 20GB per conversation.

Bids must be submitted no later than the date and time indicated on page 1 of the bid solicitation.



Only bids submitted using CPC Connect service will be accepted.

At least five (5) business days before the bid solicitation closing date, it is necessary for the Bidder to send an email requesting to open CPC Connect conversation to the following address:

procurement-approvisionnement@NRCan-RNCan.gc.ca

Note: Bids will not be accepted if e-mailed directly to this address. This e-mail address is to be used to open CPC Connect conversation, as detailed in the Standard Instructions [2003 \(Subsection of Section 08\)](#), or to send bids through CPC Connect message if the bidder is using its own licensing agreement for CPC Connect.

IMPORTANT

It is requested that you write the following information in "Subject" of the e-mail:

[NRCan-5000069789 - National scale data enhancement for groundwater-surface-water modelling](#)

Due to the nature of the bid solicitation, bids transmitted by email, mail or facsimile to NRCan will not be accepted. NRCan will not assume responsibility for proposals directed to any other location.

The onus is on the Bidder to ensure that the proposal is submitted correctly to the above address. Not complying with the above instructions may result in NRCan's inability to ascertain reception date and/or to consider the bid prior to contract award. Therefore, NRCan reserves the right to reject any proposal not complying with these instructions.

2.3 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](#).

Work Force Adjustment Directive

Is the Bidder a FPS who received a lump sum payment pursuant to the terms of the Work Force Adjustment Directive? Yes () No ()

If so, the Bidder must provide the following information:

- a) name of former public servant;
- b) conditions of the lump sum payment incentive;
- c) date of termination of employment;
- d) amount of lump sum payment;
- e) rate of pay on which lump sum payment is based;
- f) period of lump sum payment including start date, end date and number of weeks;
- g) number and amount (professional fees) of other contracts subject to the restrictions of a work force adjustment program.

2.4 Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than **five (5)** 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.

2.5 Applicable Laws

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

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.



2.6 Improvement of Requirement During Solicitation Period

Should bidders consider that the specifications or Statement of Work contained in the bid solicitation could be improved technically or technologically, bidders are invited to make suggestions, in writing, to the Contracting Authority named in the bid solicitation. Bidders must clearly outline the suggested improvement as well as the reason for the suggestion. Suggestions that do not restrict the level of competition nor favour a particular bidder will be given consideration provided they are submitted to the Contracting Authority at least five (5) days before the bid closing date. Canada will have the right to accept or reject any or all suggestions.

2.7 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)
- (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

It is requested that bidders provide their bid as follows:

Section I: Technical Bid – 1 electronic copy

Section II: Financial Bid - 1 electronic copy ([in a separate file and document](#))

Section III: Certifications – 1 electronic copy

Section I: Technical Bid

In their technical bid, Bidders should demonstrate their understanding of the requirements contained in the bid solicitation and explain how they will meet these requirements. Bidders should demonstrate their capability and describe their approach in a thorough, concise and clear manner for carrying out the work.

The technical bid should address clearly and in sufficient depth the points that are subject to the evaluation criteria against which the bid will be evaluated. Simply repeating the statement contained in the bid solicitation is not sufficient. In order to facilitate the evaluation of the bid, Canada requests that Bidders address and present topics in the order of the evaluation criteria under the same headings. To avoid duplication, Bidders may refer to different sections of their bids by identifying the specific paragraph and page number where the subject topic has already been addressed.

Page 1 of the RFP Document

It is mandatory that all bidders sign their submitted proposal. It is requested that all bidders complete, sign and date Page 1 of this RFP (including the name of the submitting organization, the name of the authorized signing person, appropriate addresses, and telephone) when submitting their proposal. As the signature indicates a clear acceptance of the terms and conditions set out in the RFP, it is the Bidder's responsibility to ensure that the signatory has the authority within its organization to commit the Bidder by making such a contractual offer.

As per article 1 of Part 2, the Bidder hereby agrees, by submitting his/her proposal in response to this RFP, to all the instructions, terms, conditions and clauses detailed herein.

Section II: Financial Bid

Bidders must submit their financial bid in accordance with Appendix 1- Financial Bid Presentation. The total amount of Goods and Services Tax or Harmonized Sales Tax must be shown separately, if applicable.

All bids are evaluated in Canadian currency. Therefore, for evaluation purposes, the noon rate quoted by the Bank of Canada as being in effect on date of bid closing will be applied as the initial conversion factor for the specified currency.

Canada will pay the exchange rate adjustment amount in Canadian currency using the prevailing noon rate on the date of payment by Canada.

Exchange Rate Fluctuation

[C3011T \(2013-11-06\), Exchange Rate Fluctuation](#)

Section III: Certifications

Bidders must submit the certifications as per Part 5.



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 evaluation criteria.
- (b) An evaluation team composed of representatives of Canada will evaluate the bids.

4.1.1 Technical Criteria

Bidders are advised to address these criteria in the following order and in sufficient depth in their proposals to enable a thorough assessment. NRCan’s assessment will be based solely on the information contained within the proposal. NRCan may confirm information or seek clarification from bidders.

Bidders are advised that only listing experience without providing any supporting data to describe responsibilities, duties and relevance to the criteria will not be considered demonstrated for the purpose of this evaluation.

The Bidder should provide complete details as to where, when (month and year) and how (through which activities/ responsibilities) the stated qualifications/experience were obtained. Experience gained during formal education shall not be considered work experience. All criteria for work experience shall be obtained in a legitimate work environment as opposed to an educational setting. Co-op terms are considered work experience provided they are related to the required services.

Bidders are also advised that the month(s) of experience listed for a project whose time frame overlaps that of another referenced project will only be counted once. For example: project one time frame is July 2001 to December 2001; project two time frame is October 2001 to January 2002; the total months of experience for these two project references is seven (7) months.

4.1.1.1 Mandatory Technical Criteria

The following mandatory criteria are evaluated on a simple pass/fail basis. A proposal that does not meet the mandatory criteria will be considered non-compliant.

Criterion ID	Mandatory Criteria	Proposal Page #	Compliance Pass/Fail
M1	<p>Workplan</p> <p>The Bidder must provide a Work Plan that presents a logical and feasible approach for accomplishing the four (4) tasks outlined under section SW.2 OBJECTIVES and PROJECT TASKS <u>and</u> the two (2) optional tasks. Six tasks in total.</p> <p>The work plan should provide information for the following six (6) elements for each of the six (6) tasks.</p> <ol style="list-style-type: none"> 1. Methods / approach; 2. resources required and allocation; 3. team member(s); 4. timelines; 5. description of deliverables, and 6. risks and risk mitigation. 		(Pass/Fail)



Criterion ID	Mandatory Criteria	Proposal Page #	Compliance Pass/Fail
M2	<p>Groundwater Modelling:</p> <p>The proposed resource(s) must have at least five (5) years of experience in the fields of hydrogeological modelling (numeric modelling involving groundwater and surface water).</p> <p>The bidder may propose more than one Resource, but at a minimum, one Resource must have the minimum required years of experience in each field (e.g., hydrogeological, hydrostratigraphy, groundwater modelling, climate, data management, GIS).</p> <ul style="list-style-type: none"> • All experience requirements must have been acquired within the last ten (10) years from the solicitation closing date. • One of the proposed resource must have a MSc and a publication history via public domain technical reports and in peer reviewed publications. • Copies of the curriculum vitae (CV) must be included referencing above 		(Pass/Fail)
M3	<p>GIS:</p> <p>The proposed resource(s) must have at least five (5) years of experience in the field of GIS and demonstrated applications to hydrogeological issues, particularly as it pertains to correction and processing of data input for hydrogeological modelling</p> <ul style="list-style-type: none"> • The bidder may propose more than one resource but at a minimum, one resource must have the minimum required years of experience in each field (GIS). • All experience requirements must have been acquired within the last ten (10) years from the solicitation closing date. At least one year of experience must be within the past two years from the solicitation closing date. • One of the proposed resource must have a MSc and a publication history in peer reviewed publications. • Copies of the curriculum vitae (CV) must be included referencing above. 		(Pass/Fail)



4.1.2 Evaluation of rated criteria

The criteria contained herein will be used by NRCan to evaluate each proposal that has met all of the mandatory criteria.

Proposals must achieve the stated minimum points required overall for the rated criteria to be assessed as responsive under the point rated technical criteria section; proposals not meeting the minimum required points will be deemed non-responsive.

Proposals will be evaluated based on the following criteria:

Requirement No.	Rated requirement	Scoring method for evaluation criteria	Maximum number of points
C1	<p>The Bidder will provide a Work Plan that presents a logical and feasible approach for accomplishing the four (4) tasks outlined under section SW.2 OBJECTIVES and PROJECT TASKS and the two (2) optional tasks. Six tasks in total.</p> <p>The work plan should provide information for the following six (6) elements for each of the six (6) tasks.</p> <ol style="list-style-type: none"> 1. Methodology / approach; 2. resources required and allocation; 3. team member(s); 4. timelines; 5. description of deliverables; and 6. risks and risk mitigation. 	<p>Points will be awarded based on the following guidelines:</p> <ul style="list-style-type: none"> • All six (6) task descriptions are listed with a clear and detailed description of all six elements for each task. • The resource allocation and timelines devoted to each task are reasonable. • Deliverables are clearly described. • Mitigation strategies are provided for each risk identified (e.g. COVID). <p>For each of the 6 task descriptions missing parts will result in a 1 point deducted per item</p> <ul style="list-style-type: none"> • elements are listed, but some lack detail. • The resource allocation and timelines are not provided • Mitigation strategies are not provided for risks identified. 	30 points
C2	<p>RESOURCE QUALIFICATION</p> <p>The bidder <u>should demonstrate using</u> project descriptions or project summaries that the proposed resource(s) has knowledge and experience directly related to the project requirements as stated in the SOW section 4.0. (CV of resources including the list of projects completed).</p> <p>If the bidder proposes more than one resource, the final score of each resource will be added and the cumulative score recorded.</p> <p>Publications can be counted multiple times as applicable for different</p>		60 points



	evaluation criteria at the C1, C2, etc. level.		
	C2.1. Experience in the field of regional (>10,000 km ²) groundwater modelling	<p>10 points: Groundwater modelling <i>at regional scales</i> (>10,000 km²).</p> <p>1 point per project documented by abstract, technical report (minimum title page and contact reference to be provided), and 2 points per project documented in a peer reviewed journal (title page and journal citation required) to a total of 10 points</p>	
	C2.2 Experience assembling datasets for regional (>10,000 km ²) scale groundwater modelling	<p>10 points: Groundwater modelling at regional scale <i>>10,000 km²</i>.</p> <p>1 point per project documented by abstract, technical report (minimum title page and contact reference to be provided), and 2 points per project documented in a peer reviewed journal (title page and journal citation required) to a total of 10 points</p>	
	C2.3. Experience in researching, gathering, compiling, analyzing, and summarizing data to support the prescribed domains (surface-water networks, bathymetry, digital elevation models, soils, bedrock and surficial geology) related to development of a groundwater-surface-water model;	<p>20 points: Experience in the following modelling domains:</p> <ol style="list-style-type: none"> 1. surface-water networks 2. bathymetry 3. digital elevation models 4. soils 5. bedrock geology 6. surficial geology <p>1 points per project with abstract, technical report documentation (minimum title page and contact reference to be provided), and 2 points per peer review journal publication (title page and journal citation required) to a maximum of 10 points per domain to a total of 20 points. Publications can only be counted once if applicable to multiple domains.</p>	
	C2.4. Experience in researching, gathering, compiling, analyzing, and summarizing data in a GIS environment, including (data assembly, data management, GIS operations, data standardization).	<p>20 points: Experience in the following data management domains:</p> <ol style="list-style-type: none"> 1. data assembly 2. data management 3. GIS operations 4. data standardization <p>1 points per project with abstract, technical report documentation (minimum title page and contact reference to be provided), and 2 points per peer review journal publication (title page</p>	



		<i>and journal citation required) to a maximum of 10 points per domain to a total of 20 points. Publications can only be counted once if applicable to multiple domains.</i>	
C3	<p>The Bidders should demonstrate the following corporate activities they have implemented to promote anti-racism and diversity within their organisation:</p> <ol style="list-style-type: none"> The bidder has internally published policies or commitments on anti-racism and inclusiveness; The bidder has publicly available organisational commitments to a diverse workforce; The bidder’s employees are mandated to take mandatory training on anti-racism The bidder’s employees are mandated to take unconscious bias training; The bidder has developed internal staffing and/or recruitment strategy(ies) to increase representation of underrepresented groups in their workforce. 	<p>10 points: The bidder should provide details of the following activities.</p> <p>For activities described in a. and b. (policy and commitments), the bidder should provide copies of policy or commitment documents including their effective date.</p> <p>For activities described in c. and d. (training), the bidder should provide the name of the course and the service provider; if developed internally, a copy of the course outline.</p> <p>For activities described in e. (staffing), the bidder should provide copies of job posting, or other staffing/recruitment documents demonstrating compliance with the rated criteria.</p> <p>Maximum 2 points for each activity.</p> <p>0 pts = the bidder does not address. 1 pts = The bidder has provided information on the existence of the activity but does not provide sufficient detail or supporting documents. 2 pts =The bidder has fully described the activity and provided supporting documents as evidence.</p>	10 points
Subtotal for C1 out of 30			
Subtotal for C2 out of 60			
Subtotal for C3 out of 10			
Total Points Available:			100
Minimum Points to Pass			60

4.2 Basis of Selection

4.2.1 Minimum Point Rating

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 **(60)** points overall for the technical evaluation criteria which are subject to point rating. The rating is performed on a scale of **(100)** points.



2. Bids not meeting (a) or (b) or (c) will be declared non-responsive. The responsive bid with the lowest evaluated price will be recommended for award of a contract.

In the event of a tie from the Basis of Selection methodology (Minimum Point Rating), the bidder with the highest Total Technical Score of rated criteria # C2 will be recommended for contract award.



PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION

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. 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 Ineligibility and Suspension Policy (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Bidder must provide with their bid, if applicable, the integrity declaration form available on the [Forms for the Integrity Regime](http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html) website (<http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html>), to be given further consideration in the procurement process.

5.2 Certifications Precedent to Contract Award and Additional Information

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

- Bidders who are incorporated, including those bidding as a joint venture, must provide a complete list of names of all individuals who are currently directors of the Bidder or, in the case of a private company, the owners of the company.
- Bidders bidding as sole proprietorship, as well as those bidding as a joint venture, must provide the name of the owner(s).
- Bidders bidding as partnerships do not need to provide lists of names.

Name of Bidder: _____

OR

Name of each member of the joint venture:

Member 1: _____

Member 2: _____

Member 3: _____

Identification of the administrators/owners:



SURNAME	NAME	TITLE

5.3 Additional Certifications Precedent to Contract Award

5.3.1 Status and Availability of Resources

The Bidder certifies that, should it be awarded a contract as a result of the bid solicitation, every individual proposed in its bid will be available to perform the Work as required by Canada's representatives and at the time specified in the bid solicitation or agreed to with Canada's representatives. If for reasons beyond its control, the Bidder is unable to provide the services of an individual named in its bid, the Bidder may propose a substitute with similar qualifications and experience. The Bidder must advise the Contracting Authority of the reason for the substitution and provide the name, qualifications and experience of the proposed replacement. For the purposes of this clause, only the following reasons will be considered as beyond the control of the Bidder: death, sickness, maternity and parental leave, retirement, resignation, dismissal for cause or termination of an agreement for default.

If the Bidder has proposed any individual who is not an employee of the Bidder, the Bidder certifies that it has the permission from that individual to propose his/her services in relation to the Work to be performed and to submit his/her résumé to Canada. The Bidder must, upon request from the Contracting Authority, provide a written confirmation, signed by the individual, of the permission given to the Bidder and of his/her availability.

5.3.2 Education and Experience

The Bidder certifies that all the information provided in the résumés and supporting material submitted with its bid, particularly the information pertaining to education, achievements, experience and work history, has been verified by the Bidder to be true and accurate. Furthermore, the Bidder warrants that every individual proposed by the Bidder for the requirement is capable of performing the Work described in the resulting contract.



PART 6 - SECURITY, FINANCIAL AND OTHER REQUIREMENTS

Security Requirements

NRCan has determined that there is no security requirement associated with this request.



PART 7 - RESULTING CONTRACT CLAUSES

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

7.1 Statement of Work

The Contractor must perform the Work in accordance with the Statement of Work at Annex A and the Contractor's technical bid dated _____. (*to be completed at contract award*)

7.1.1 Optional Services

The Contractor grants to Canada the irrevocable option to acquire the goods, services or both described at *Annex A Statement of Work* of the Contract under the same conditions and at the prices and/or rates stated in the Contract. The option may only be exercised by the Contracting Authority and will be evidenced, for administrative purposes only, through a contract amendment.

The Contracting Authority may exercise the option at any time before the expiry of the Contract by sending a written notice to the Contractor.

7.2 Standard Clauses and Conditions

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

7.2.1 General Conditions

[2035 \(2022-05-12\)](#), **General Conditions - Higher Complexity - Services**, apply to and form part of the Contract.

As applicable, replace references to Public Works and Government Services Canada (PWGSC) with Natural Resources Canada (NRCan).

7.3 Security Requirements

There is no security requirement applicable to the Contract.

7.4 Term of Contract

7.4.1 Period of the Contract

The period of the Contract is from date of Contract Award to February 28, 2023.

7.5 Authorities

7.5.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Roya Ayam
Title: Procurement Consultant
Organization: Natural Resources Canada
E-mail address: roya.ayam@nrca-nrcan.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.



7.5.2 Project Authority (to be provided at contract award)

The Project Authority for the Contract is:

Name:
 Title:
 Organization:
 Address:
 Telephone: - - -
 Facsimile: - - -
 E-mail address: _____

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

7.5.3 Contractor's Representative (To be completed by the bidder)

Name:
 Title:
 Tel:
 Email:

7.6 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.

7.7 Payment

7.7.1 Basis of Payment – Firm Price

In consideration of the Contractor satisfactorily completing all its obligations under the Contract, the Contractor will be paid a firm price, as specified in Annex B for a cost of \$ _____ (to be inserted at the contract award). Customs duties are Included and Applicable Taxes are extra.

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

7.7.2 Method of Payment – Milestone payment

Canada will make milestone payments in accordance with the Schedule of Milestones detailed in the Contract and the payment provisions of the Contract if:

- a. an accurate and complete claim for payment, and any other document required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
- b. all work associated with the milestone and as applicable any deliverable required has been completed and accepted by Canada.



7.8 Invoicing Instructions

Invoices shall be submitted using **the following method**:

E-mail:

Invoicing-Facturation@nrcan-rncan.gc.ca

Note: Attach "PDF" file. No other formats will be accepted

Invoices and all documents relating to a contract must be submitted on the Contractor's own form and shall bear the following reference numbers: Contract number: _____ *(provided at time of contract award)*

Invoicing Instructions to suppliers: <http://www.nrcan.gc.ca/procurement/3485>

7.9 Certifications

7.9.1 Compliance

The continuous compliance with the certifications provided by the Contractor in its bid and the ongoing cooperation in providing additional information are conditions of the Contract. Certifications are subject to verification by Canada during the entire period of the Contract. If the Contractor does not comply with any certification, fails to provide the additional information, or if it is determined that any certification made by the Contractor in its bid is untrue, whether made knowingly or unknowingly, Canada has the right, pursuant to the default provision of the Contract, to terminate the Contract for default.

7.10 Applicable Laws

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

7.11 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 [2035 \(2022-05-12\), Higher Complexity – Services](#);
- c) Annex A, Statement of Work;
- d) Annex B, Basis of Payment; and
- e) the Contractor's bid dated _____.

7.12 Foreign Nationals (Canadian Contractor OR Foreign Contractor)

SACC Manual clause [A2000C](#) (2006-06-16) - Foreign Nationals (Canadian Contractor)

OR

SACC Manual clause [A2001C](#) (2006-06-16) - Foreign Nationals (Foreign Contractor)



7.13 Insurance Requirements

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.

7.14 Dispute Resolution

The parties agree to maintain open and honest communication about the Work throughout and after the performance of the contract.

- (a) 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.
- (b) 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.
- (c) Options of alternative dispute resolution services can be found on Canada's Buy and Sell website under the heading "[Dispute Resolution](#)".



ANNEX A – STATEMENT OF WORK

SW.1.0 TITLE

National scale data enhancement for groundwater–surface-water modelling

SW 2.0 BACKGROUND

Land and Mineral Sector (LMS) and the Geological Survey of Canada (GSC) of Natural Resources Canada (NRCan) has a mandate to complete thematic groundwater studies and mapping of Canadian Aquifers. As part of the Groundwater Geoscience Program, this theme has a 5 year time frame (2019–2024) and expectations to deliver innovative science on aquifers to support economic prosperity for Canada.

Assessing groundwater (GW) sustainability at the national scale requires datasets that provide complete coverage for not only Canada, but also areas outside of Canada that are hydrologically connected to Canada via transborder aquifers and river basins, thus forming a domain of interest larger than that within the Canadian political boundaries. It is imperative that these datasets are uniform across the entire domain, such that spatial and temporal resolution, and attribute details, are consistent. As many datasets extend only to political boundaries, there is often extensive data stitching required before datasets suitable for national scale analysis in Canada are available. However, once assembled, these datasets can facilitate a wide range of national scale water resources analyses.

In particular, national scale modelling activities currently require extensive data preconditioning. The GSC lacks inhouse resources to compile some of this data in a timely fashion and is seeking external assistance to support national initiatives such as Canada 3D and Canada 1 Water.

SW.3.0 OBJECTIVES

The work required by this contract will support the Geological Survey of Canada's role in research that aims to quantify the Open Access National Hydrological Network and upgrade the attribute information for publication. Contractor will provide details on operational specifics within the response and will be ranked as per the evaluation criteria in the companion document.

SW.4.0 PROJECT REQUIREMENTS

SW.4.1 Tasks, Deliverables, Milestones and Schedule

Task 1: Surface water network data processing

Ensure there is standardized stream density and ranking across provincial jurisdictional boundaries and NTS map sheet boundaries for a national hydrographic network (NHN).

- i) Remove tiling effects from dataset where present due to legacy origin of data from NTS topographic photogrammetric origin.
- ii) Support any network pruning by reference to stream orders and geological terrain types
- iii) Provide complete documentation on the operations completed on the data
- iv) The contractor will review the methodology with GSC staff prior to completing any assignments.

Deliverable 1.1. Surface water network data processing

- a) GIS files of NHN dataset with ranking attribution
- b) Documentation of processing
- c) Presentation

Task 2: Lake bathymetry derivation and assembly

Identify and assemble existing lake bathymetry data from multiple sources (the provinces, NOAA, CHS, NRCan) into a master dataset. For lakes with surface area > 10 km² in Canada that are not represented in the existing lake bathymetry data, derive a bathymetry modelling methodology based on best practices, and then use the methodology to calculate



lake bathymetry for the represented lakes. Assemble the modelled lake bathymetry data into the master dataset, inclusive of metadata that describes the origins of the data for each lake (i.e. modelled, NOAA, etc).

- i) Identify and isolate lakes > 10 km²
- ii) Assemble available lake bathymetry
- iii) Develop a methodology for estimating of bathymetry
- iv) Ensure all datasets are integrated with appropriate metadata
- v) Provide as a raster or shape file independent of the DEM coverage
- vi) The contractor will review the methodology with GSC staff prior to completing any assignments.

Deliverable 2. Lake bathymetry derivation and assembly

- a) GIS files of lakes with bathymetry and metadata
- b) Documentation of processing
- c) Presentation

Task 3: Data Assembly – Soil attribution

- i) Assemble mineral and organic (peatland) soil dataset with complete coverage for the continental Canada drainage areas.
- ii) Attribute with layering scheme and hydraulic property configuration, wherein hydraulic properties are defined for all major mineral and organic (soil) peatland units.
- iii) The contractor will review the methodology with GSC staff prior to completing any assignments.

Deliverable 3. Soil Data Assembly– Soil attribution

- a) GIS files of mineral and organic (peatland) with attributes
- b) Documentation of processing
- c) Presentation

Task 4: Data assembly – Bedrock Geology map attribution

Description

- i) The synthesis geological map of North America (NA) requires reclassification with the use of 1:1,000,000 provincial and 1:500,000 geological maps as appropriate.
- ii) Maps are available through respective provincial, state, USGS, and GSC web distributions sites.
- iii) New attributes to the synthesis map will include, Formation names, lithology, hydraulic conductivities, etc.
- iv) The contractor will review the methodology with GSC staff prior to completing any assignments.

Deliverable 4. Data assembly – Bedrock Geology map attribution

- a) GIS files of lakes with bathymetry dataset
- b) Documentation of processing
- c) Presentation

SW.4.1.1 Optional Deliverables

Task O1: Data assembly – Bedrock surface refinement

Description

- i) The GSC has a preliminary bedrock surface for Canada. It contains a number of artifacts and can be improved in a number of areas. This is particularly important for applications in groundwater modelling. Notable areas of improvement are the Mackenzie valley, Peace River area, and British Columbia.
- ii) GSC will provide the unpublished dataset to a successful bidder
- iii) The contractor will review the areas requiring correction with GSC staff prior to completing any assignments.



Deliverable O1: Data assembly – Bedrock surface refinement

- a) GIS files of lakes with bathymetry dataset
- b) Documentation of processing
- c) Presentation

Task O2: Data attribution for Surficial Geology

Description

- i) The synthesis surficial (glacial) geology of Canada at 1:5,000,000 scale requires attribution of hydraulic conductivity (K) properties.
- ii) This should be applied to the respective map unit textures with demonstrated consideration of likely scales of heterogeneity with the respective map units.

Deliverable O2: Data attribution for Surficial Geology

- a) GIS files of lakes with bathymetry dataset
- b) Documentation of processing
- c) Presentation

SW 4.2 Tasks, Deliverables and Schedule

	Tasks/Activities	Deliverables/Milestones	Time Schedule
1	Surface water network data processing	GIS dataset and Report–MSWord document, submitted electronically. Presentation on work completed	One month after contract award
2	Lake bathymetry derivation and assembly	GIS dataset and Report–MS Word document, submitted electronically. Presentation on work completed	One month after contract award
3	Data Assembly – Soils	GIS dataset and Report–MSWord document, submitted electronically. Presentation on work completed	One month after contract award
4	Data Assembly – Bedrock Geology	GIS dataset and Report–MSWord document, submitted electronically. Presentation on work completed	Two months after contract award
Optional Services			
O1	Data Assembly – Bedrock Elevation Surface	GIS dataset and Report–MSWord document, submitted electronically. Presentation on work completed	TBD
O2	Data attribution for Surficial Geology	Final report - MSWord document, submitted electronically. Presentation.	TBD



SW 4.3 Reporting Requirements

- The contractor and project authority will communicate at the convenience of the respective parties; and
- The final report deliverable will be submitted in a suitable format for a GSC Open File publication with the consultant's authors and affinity as the publication authors.

SW.4.4 Method and Source of Acceptance

- All deliverables rendered under any contract are subject to inspection by GSC technical staff (Ottawa) for the Project Authority. The Project Authority shall have the right to reject any deliverables that are not considered satisfactory or require their correction before payment will be authorized.

SW.5.0 OTHER TERMS AND CONDITIONS OF THE SOW

SW.5.1 Contractor's Obligations

The Contractor shall:

- keep all documents and proprietary information confidential.
- submit all written reports in electronic Microsoft Office Word, PDF format;
- At the end of the contract the contractor will provide all of the files, data input and output to successfully allow the model to be rerun with the exception of the climate input data; and
- The contractor should be prepared that all deliverables will be published by the GSC as an Open File report with the contractor's authority as the author.

SW.5.2 NRCan's Obligations

The Contractor shall:

- Respond to requests from the contractor in a timely manner; and
- Provide contractor the unpublished GSC data where it is central to the contract deliverable.

SW.6.0 Location of Work, Work Site and Delivery Point

- Work is to be completed at Contractor's place of business and delivered to:

Geological Survey of Canada
Lands and Minerals Sector (LMS)
Natural Resources Canada
601 Booth Street, Ottawa, ON K1A 0E8



ANNEX B – BASIS OF PAYMENT

(to be completed at the contract award).

1. Firm Price - Milestone Payments

All-inclusive firm price to perform the work is in Canadian funds, applicable taxes excluded. Any Travel and Living Expenses and other miscellaneous expenses must be included in the firm price.

Milestone #	Description of Milestone	Firm Price (Applicable Taxes Excluded)
1	<i>Deliverable #1- Surface water network data processing</i>	\$ _____ (10%)
2	<i>Deliverable #2- Lake bathymetry derivation and assembly</i>	\$ _____ (20%)
3	<i>Deliverable #3- Data Assembly – Soils</i>	\$ _____ (30%)
4	<i>Deliverable #4- Data Assembly – Bedrock Geology</i>	\$ _____ (40%)

2. Optional Services

Milestone #	Description of Milestone	Firm Price (Applicable Taxes Excluded)
O1	<i>Deliverable #1- Data Assembly – Bedrock Elevation Surface</i>	\$ _____ (40%)
O2	<i>Deliverable #2- Data attribution for Surficial Geology</i>	\$ _____ (60%)



APPENDIX 1 - FINANCIAL BID PRESENTATION SHEET

1. Firm Price Contract

Bidder tendered all-inclusive firm price to perform the work is Canadian funds, applicable taxes excluded. Any Travel and Living Expenses and other miscellaneous expenses must be included in the firm price.

Description	Firm Price (Applicable Taxes Excluded)
A- National scale data enhancement for groundwater– surface-water modelling	\$ _____
B- Optional Services (Data assembly – Bedrock surface refinement and Data attribution for Surficial Geology)	\$ _____
Total Firm Price for Financial Proposal Evaluation (A+B):	\$ _____