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	<p>EC Bid Solicitation No. /SAP No. – N° de la demande de soumissions EC / N° SAP 5000056915</p>	
	<p>Date of Bid solicitation (YYYY-MM-DD) – Date de la demande de soumissions (AAAA-MM-JJ) 2022-01-12</p>	
	<p>Bid Solicitation Closes (YEAR-MM-DD) - La demande de soumissions prend fin (AAAA-MM-JJ)</p> <p>at – à 2:00 P.M. on – le 2022-02-11</p>	<p>Time Zone – Fuseau horaire <i>Eastern Time Zone</i></p>
	<p>F.O.B – F.A.B <i>Destination</i></p>	
	<p>Address Enquiries to - Adresser toutes questions à <i>Megan Filliol megan.filliol@ec.gc.ca</i></p>	
	<p>Telephone No. – N° de téléphone 902-600-6216</p>	<p>Fax No. – N° de Fax</p>
	<p>Delivery Required (YEAR-MM-DD) – Livraison exigée (AAAA-MM-JJ) See herein</p>	
	<p>Destination of Services / Destination des services See herein</p>	
	<p>Security / Sécurité There is no security requirement associated with this requirement</p>	
<p>Vendor/Firm Name and Address - Raison sociale et adresse du fournisseur/de l'entrepreneur</p>		
<p>Telephone No. – N° de téléphone</p>	<p>Fax No. – N° de Fax</p>	
<p>Name and title of person authorized to sign on behalf of Vendor/Firm: (type or print) / Nom et titre de la personne autorisée à signer au nom du fournisseur/de l'entrepreneur (taper ou écrire en caractères d'imprimerie)</p>		
<p>Signature</p>	<p>Date</p>	

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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 and Additional Information: includes the certifications and additional information 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 Attachments include Financial Bid Presentation Sheet, Mandatory Technical Criteria And Point Rated Technical Criteria.

The Annexes include the Statement of Work, the Basis of Payment, and Insurance Requirements.

1.2 Summary

- 1.2.1 Environment and Climate Change Canada has a requirement for benthic assessment of a disposal at Sea site using Environmental DNA (eDNA) as detailed in the Statement of Work, Annex A to the bid solicitation. The period of the contract is from contract award to 31 March 2024, with the option to renew for two (2) additional two (2) year periods.
- 1.2.2 Bidders must provide a list of names, or other related information as needed, pursuant to section 01 Integrity Provisions of Standard Instructions 2003.
- 1.2.3 For services requirements, bidders in receipt of a pension or a lump sum payment must provide the required information as detailed in article 3 of Part 2 of the bid solicitation.
- 1.2.4 The requirement is subject to the provisions of the Canadian Free Trade Agreement (CFTA), the Canada–Chile Free Trade Agreement, the Canada–Colombia Free Trade

Agreement, the Canada–Honduras Free Trade Agreement, the Canada–Korea Free Trade Agreement, the Canada–Panama Free Trade Agreement, Canada-Peru Free Trade Agreement, the Comprehensive Economic Free Trade Agreement [CETA], the World Trade Organization – Agreement on Government Procurement [WTO-AGP], the Comprehensive and Progressive Agreement for Trans-Pacific Partnership [CPTPP], the Canada-Ukraine Free Trade Agreement and Canada-UK Trade Continuity Agreement (Canada-UK TCA).

1.3. Debriefings

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

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 PSPC/PWGSC *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 (2020-05-28) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

The standard instructions 2003 are modified as follows:

Under “Text” at 02:

Delete: “Procurement Business Number”

Insert: “Deleted”

At Section 02 Procurement Business Number

Delete: In its entirety

Insert: “Deleted”

At Section 05 Submission of Bids, Subsection 05 (2d):

Delete: In its entirety

Insert: “send its bid only to Environment and Climate Change Canada as specified on page 1 of the bid solicitation or to the address specified in the bid solicitation;”

At Section 06 Late Bids:

Delete: “PWGSC”

Insert: “Environment and Climate Change Canada”

At Section 07 Delayed Bids:

Delete: “PWGSC”

Insert: “Environment and Climate Change Canada”

At Section 08 Transmission by Facsimile, Subsection 08 (1):

Delete: In its entirety

At Section 12 Rejection of Bid, Subsection 12 (1) a. and b.:

Delete: In their entirety

Insert: “Deleted”

At Section 17 Joint Venture, Subsection 17 (1) b.:

Delete: “the Procurement Business Number of each member of the joint venture,”

Insert: "Deleted"

At Section 20 Further Information, Subsection 20 (2):

Delete: In its entirety

Insert: "Deleted"

At Section 05 Submission of Bids, Subsection 05 (4):

Delete: "sixty (60) days"

Insert: "one hundred and twenty (120) days"

2.2. SACC Manual Clauses

A7035T (2007-05-25), List of Proposed Subcontractors

2.3. Submission of Bids

Bids must be submitted to Environment and Climate Change Canada at the address and by the date, time and place indicated on page 1 of the bid solicitation.

2.4. Former Public Servant – Competitive Bid

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 FPS, 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 FPS 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: 2012-2 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.

For all contracts awarded during the lump sum payment period, the total amount of fees that may be paid to a FPS who received a lump sum payment is \$5,000, including Applicable Taxes.

2.5. 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.

2.6. Applicable Laws

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

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.

2.7. Improvement of Requirement During Solicitation Period

Clause [A9076T](#) advises Bidders that they can propose improvement to the technical requirement(s) contained in the bid solicitation.

2.8. Basis for Canada's Ownership of Intellectual Property

Environment and Climate Change Canada has determined that any intellectual property rights arising from the performance of the Work under the resulting contract will belong to Canada, for the following reasons, as set out in the [Policy on Title to Intellectual Property Arising Under Crown Procurement Contracts](#):

- (2.11.4) the main purpose of the contract, or of the deliverables contracted for, is to generate knowledge and information for public dissemination;

2.9. 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

Canada requests that bidders provide their bid in separately bound sections as follows:

Section I: Technical Bid (1 soft copies in PDF format)

Section II: Financial Bid (1 soft copies in PDF format)

Section III: Certifications (1 soft copies in PDF format)

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

Note for electronic submission of bids:

In order to be considered, bids must be received by the date and time indicated on the cover page to herein as the "Closing Date." Bids received after the Closing Date will be considered non-responsive and will not be considered for contract award. Bids submitted by email must be submitted ONLY to the following email address:

Email Address: soumissionsbids@ec.gc.ca

Attention: Megan Filliol

Solicitation Number: 5000056915

Bidders should ensure that their name, address, Closing Date of the solicitation and Solicitation Number are clearly indicated in the body of their email. Bids and supporting information may be submitted in either English or French.

The total size of the email, including all attachments, must be less than 15 megabytes (MB). It is each Bidder's responsibility to ensure that the total size of the email does not exceed this limit.

Bids sent by fax will not be accepted.

It is important to note that emails systems can experience systematic delays and, at times, large attachments may cause systems to hold or delay transmission of emails. It is solely the Bidder's responsibility to ensure that the Contracting Authority receives a bid on time, in the mailbox that has been identified for bid receipt purposes. Date stamps for this form of transmission are not acceptable.

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.

Part 4, Evaluation Procedures, contains additional instructions that bidders should consider when preparing their technical bid.

Section II: Financial Bid

- 1.1** Bidders must submit their financial bid in accordance with the Financial Bid Presentation Sheet in Attachment 1 to Part 3. The total amount of Applicable Taxes must be shown separately.
- 1.2** Bidders must submit their financial bid in Canadian funds and in accordance with the Financial Bid Presentation Sheet in Attachment 1 to Part 3. The total amount of Applicable Taxes must be shown separately.
- 1.3** Bidders must submit their rates FOB destination; Canadian customs duties and excise taxes included, as applicable; and Applicable Taxes excluded.

1.4 Price Breakdown

In their financial bid, the bidders are requested to provide a detailed breakdown of the price for the following elements for of the Work, as applicable:

- (a) Professional fees: For each individual and (or) labour category to be assigned to the Work, the bidders should indicate: i) the firm hourly rate or the firm daily rate, inclusive of overhead and profit; and ii) the estimated number of hours or days, as applicable. The bidders should indicate the number of hours in one working day.

The professional fees must include the total estimated cost of all travel and living expenses that may need to be incurred for:

- (i) Work described in Part 7, Resulting Contract of the bid solicitation required to be performed.
- (ii) travel between the successful bidder's place of business and the *applicable office in the region*; and
- (iii) the relocation of resources

to satisfy the terms of any resulting contract. These expenses cannot be charged directly and separately from the professional fees to any contract that may result from the bid solicitation.

- (b) Equipment (if applicable): The bidders should specify each item required to complete the Work and provide the pricing basis of each one, Canadian customs duty and excise taxes included, as applicable. These items will be deliverable to Canada upon completion of the contract.

- (c) **Materials and Supplies (if applicable):** The bidders should identify each category of materials and supplies required to complete the Work and provide the pricing basis. The Bidder should indicate, on a per category basis, whether the items are likely to be consumed during the performance of any resulting contract.
- (d) **Subcontracts (if applicable):** The bidders should identify all of the proposed subcontractors and provide in their financial bid for each one a price breakdown.
- (e) **Other Direct Charges (if applicable):** The bidders should identify all of the categories of other direct charges anticipated, such as long distance communications and rentals, providing the pricing basis for each and explaining the relevance to the work described in Part 7 of the bid solicitation.
- (f) **Applicable Taxes:** The bidders should indicate the Applicable Taxes separately.

1.5 Bidders should include the following information in their financial bid:

- (a) Their legal name; and
- (b) The name of the contact person (including this person's mailing address, phone and facsimile numbers and email address) authorized by the Bidder to enter into communications with Canada with regards to their bid; and any contract that may result from their bid.

Section III: Certifications

Bidders must submit the certifications required under Part 5.

ATTACHMENT 1 TO PART 3 - FINANCIAL BID PRESENTATION SHEET

The Bidder should complete the Financial Bid Presentation Sheet and include it in its financial bid once completed. As a minimum, the Bidder must respond to this Financial Presentation Sheet by including in its financial bid for each of the periods specified below its quoted all inclusive fixed hourly rate (in Cdn \$).

The inclusion of volumetric data in this document does not represent a commitment by Canada that Canada’s future usage of the services described in the bid solicitation will be consistent with this data.

Initial Contract Period (April 1, 2022 to March 31, 2024)

Task	Description	Estimated Quantity (A)	Firm Per Day/Sample (B)	Extended Total (C) = A x B
1	Project Management* ¹	180 days	\$	\$
2	Sample Collection Kit* ²	60 samples	\$	\$
3	Laboratory Analysis and Sequencing * ³	60 samples	\$	\$
4	Bioinformatics and Report * ⁴	180 days	\$	\$
<p><u>*¹ Note:</u> Firm per day rate includes task associated with Sections 2.1 and 3.1 of the Statement of Work.</p> <p><u>*² Note:</u> Firm per sample rate includes tasks associated with Sections 2.2 and 3.2 of the Statement of Work.</p> <p><u>*³ Note:</u> Firm per sample rate includes tasks associated with Sections 2.3 and 3.3 of the Statement of Work.</p> <p><u>*⁴ Note:</u> Firm per day rate includes tasks associated with Sections 2.4 and 3.4 of the Statement of Work.</p>				
Subtotal for Initial Contract Period (ICP) – excluding tax				\$

Optional Period One (April 1, 2024 to March 31, 2026)

Task	Description	Estimated Quantity (A)	Firm Per Day/Sample (B)	Extended Total (C) = A x B
1	Project Management* ¹	180 days	\$	\$
2	Sample Collection Kit* ²	60 samples	\$	\$
3	Laboratory Analysis and Sequencing * ³	60 samples	\$	\$
4	Bioinformatics and Report * ⁴	180 days	\$	\$
<p><u>*¹ Note:</u> Firm per day rate includes task associated with Sections 2.1 and 3.1 of the Statement of</p>				

Work.

*2 Note: Firm per sample rate includes tasks associated with Sections 2.2 and 3.2 of the Statement of Work.

*3 Note: Firm per sample rate includes tasks associated with Sections 2.3 and 3.3 of the Statement of Work.

*4 Note: Firm per day rate includes tasks associated with Sections 2.4 and 3.4 of the Statement of Work.

Subtotal for Optional Period One (P1) – excluding tax	\$
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Optional Period Two (April 1, 2026 to March 31, 2028)

Task	Description	Estimated Quantity (A)	Firm Per Day/Sample (B)	Extended Total (C) = A x B
1	Project Management* ¹	180 days	\$	\$
2	Sample Collection Kit* ²	60 samples	\$	\$
3	Laboratory Analysis and Sequencing * ³	60 samples	\$	\$
4	Bioinformatics and Report * ⁴	180 days	\$	\$

*1 Note: Firm per day rate includes task associated with Sections 2.1 and 3.1 of the Statement of Work.

*2 Note: Firm per sample rate includes tasks associated with Sections 2.2 and 3.2 of the Statement of Work.

*3 Note: Firm per sample rate includes tasks associated with Sections 2.3 and 3.3 of the Statement of Work.

*4 Note: Firm per day rate includes tasks associated with Sections 2.4 and 3.4 of the Statement of Work.

Subtotal for Optional Period Two (P2) – excluding tax	\$
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Subtotal for Initial Contract Period (ICP)	
Subtotal for Optional Period 1 (P1)	
Subtotal for Optional Period 1 (P2)	
Evaluated Price of Bid = ICP + P1 + P2	

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

4.1. Evaluation Procedures

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

4.2. Technical Evaluation

Except where expressly provided otherwise, the experience described in the bid must be the experience of the Bidder itself (which includes the experience of any companies that formed the Bidder by way of a merger but does not include any experience acquired through a purchase of assets or an assignment of contract). The experience of the Bidder's affiliates (i.e. parent, subsidiary or sister corporations), subcontractors, or suppliers will not be considered.

4.2. Technical Evaluation

Mandatory and point rated technical evaluation criteria are included in Attachment 1 to Part 4.

4.3. Financial Evaluation

4.3.1 Mandatory Financial Criteria

MF1 Financial Criteria	Met	Not Met
ECCC has established funding for this project at a maximum amount of \$300,000.00 (CAD) inclusive of all option periods, excluding taxes. Bids in excess of this value will be deemed non-compliant.		

4.3.2 Evaluation of Price

The price of the bid will be evaluated in Canadian dollars, the Applicable Taxes excluded, Canadian customs and excise taxes included.

For evaluation purposes only, the price of the bid will be determined as follows:

- 4.3.2.1.** The volumetric data included in the Financial Bid Presentation Sheet detailed in Attachment 1 to Part 3 are provided for bid evaluated price determination purposes only. They are not to be considered as a contract guarantee.

4.3.2.2. For bid evaluation and contractor(s) selection purposes only, the evaluated price of a bid will be determined in accordance with the Financial Bid Presentation Sheet detailed in Attachment 1 to Part 3.

4.4 Basis of Selection

Basis of Selection - Highest Combined Rating of Technical Merit (60%) and Price (40%)

1. To be declared responsive, a bid must:
 - (a) comply with all the requirements of the bid solicitation;
 - (b) meet all mandatory technical criteria and mandatory financial criteria;
 - and
 - (c) obtain the required minimum of 276 points overall for the technical evaluation criteria which are subject to point rating.

The rating is performed on a scale of 395 points.

2. Bids not meeting (a) or (b) or (c) will be declared non-responsive.
3. The evaluation 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 / 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 will be recommended for award of a contract.

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

Basis of Selection - Highest Combined Rating Technical Merit (60%) and Price (40%)

	Bidder		
	Bidder 1	Bidder 2	Bidder 3
Overall Technical Score	115/135	89/135	92/135
Bid Evaluated Price	\$55,000.00	\$50,000.00	\$45,000.00

Calculations

Technical Merit Score	$115/135 \times 60 = 51.11$	$89/135 \times 60 = 39.56$	$92/135 \times 60 = 40.89$
Pricing Score	$45/55 \times 40 = 32.73$	$45/50 \times 40 = 36.00$	$45/45 \times 40 = 40.00$
Combined Rating	83.84	75.56	80.89
Overall Rating	1st	3rd	2nd

ATTACHMENT 1 TO PART 4, MANDATORY TECHNICAL CRITERIA AND POINT RATED TECHNICAL CRITERIA

For bid evaluation criteria where the experience of proposed resources is provided, Bidders are advised that the duration of any overlapping time period will be counted only once toward any requirements that relate to the bidder’s length of experience. For example: Project 1 time frame is July 2001 to December 2001; Project 2 times frame is October 2001 to January 2002; the total months of experience for these two projects references is seven (7) months.

The Bidder should include the following table in their proposal, indicating that their proposal meets the mandatory criteria, and providing the proposal page number or section that contains information to verify that the criteria has been met.

It is the Bidder’s responsibility to ensure that a sufficient level of information is included in the proposal to allow the evaluation team to make an accurate assessment of the bid.

Mandatory Technical Evaluation Criteria

Each bid will be reviewed to determine whether it meets the mandatory requirements of the bid solicitation. Any element of the bid solicitation that is identified specifically with the words “must” or “mandatory” is a mandatory requirement. Bids that do not comply with each and every mandatory requirement will be considered non-compliant.

For the purpose of evaluation, one (1) year is defined as twelve (12) cumulative months. To qualify as a reference project, the proposed resource has to have worked full-time on the project for a minimum of six (6) months.

For each project that is cited as experience, the following information must be identified on the proposed resource’s resume:

- a) The name of the client organization (to whom the services were provided);
- b) The name, title, telephone number and e-mail address of the Project Authority;
- c) A brief description of the type and scope of services that meets the identified criteria provided by the resource;
- d) The dates and duration of the project (indicating the years and months of engagement and the start and end dates of the work)
- e)

#	Mandatory Criteria	Meets Criteria (yes/no)	Proposal Page # (to be filled out by Bidder)
M1	The Bidder must submit a detailed resume of one project team member that has a minimum of 10 years of experience in the last 20 years from bid closing date, as a lead or co-lead investigator of eDNA studies.		
M2	The Bidder must submit a list of minimum 10 relevant peer-reviewed publications (i.e. genomics, biodiversity monitoring) published in the past 20 years, from bid closing date that was authored or co-authored by the project team member identified in M2.		
M3	The Bidder must demonstrate by completing the Company Experience Table at Appendix 1 to Attachment 1 to Part 4 a minimum of two projects undertaken in the past 10 years that		

	demonstrate the bidder's experience as a lead or co-lead investigator of eDNA studies (i.e. genomics and biodiversity studies), including study design, eDNA analysis, data interpretation and making recommendations.		
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Point-Rated Technical Evaluation Criteria

The Point Rated evaluation criteria will be used by Environment and Climate Change Canada to evaluate only those bids that meet all of the Mandatory Technical Criteria. Bidders are advised to address these requirements in the following order and in sufficient depth in their bids to enable a thorough assessment. Environment and Climate Change Canada's assessment will be based solely on the information contained within the bids.

If a bid does not meet the required minimum points of the Point Rated Criteria, the bid will not be considered further.

Bids will be ranked solely upon the information provided in the proposal, using the factors and criteria in the evaluation table.

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

#	Point-Rated Criteria	Points Awarded	Proposal Page # (to be filled out by Bidder)
R1	<p>Project team member identified in M1 exceeds 10 years' experience as a lead or co-lead level investigator for eDNA studies.</p> <p><u>Evaluation Grid:</u></p> <ul style="list-style-type: none"> - 30 points: 20+ years of experience - 20 points: 15 years 1 month to 20 years of experience - 10 points: 10 years 1 month to 15 years of experience - 0 points: does not indicate 	/30	
R2	<p>The Bidder submits a list of relevant peer-reviewed publications (i.e. genomics, biodiversity monitoring) in the past 20 years that were authored by the project team member identified in M1.</p> <p><u>Evaluation Grid:</u></p> <ul style="list-style-type: none"> - 40 points: 100+ publications - 30 points: 57 to 79 publications - 20 points: 34 to 56 publications - 10 points: 11 to 33 publications - 0 points: does not provide more than 10 	/40	
R3	<p>The Bidder demonstrates by completing the Company Experience Table (refer to Appendix 1 to Attachment 1 to Part 4) a list of projects undertaken in the past 20 years up to the bid solicitation closing date that demonstrate the bidder's experience as a lead or co-lead investigator of eDNA studies (i.e. genomics and biodiversity studies), including study design, eDNA analysis, data interpretation and making recommendations.</p> <p><u>Evaluation Grid:</u></p> <ul style="list-style-type: none"> - 40 points: 7+ projects - 30 points: 5-6 projects 	/40	

	<ul style="list-style-type: none"> - 20 points: 3-4 projects - 10 points: 1-2 projects - 0 points: no demonstrated projects 		
R4	<p>The Bidder demonstrates by completing the Company Experience Table (refer to Appendix 1 to Attachment 1 to Part 4) a list of projects undertaken in the past 20 years up to the bid solicitation closing date that involve an assessment of general benthic eukaryotic biodiversity (i.e. in sediment samples) using eDNA technology.</p> <p><u>Evaluation Grid:</u></p> <ul style="list-style-type: none"> - 40 points: 7+ projects - 30 points: 5-6 projects - 20 points: 3-4 projects - 10 points: 1-2 projects - 0 points: no demonstrated projects 	/40	
R5	<p>The Bidder demonstrates by completing the Company Experience Table at Appendix 1 to Attachment 1 to Part 4) a list of projects undertaken in the past 20 years up to the bid solicitation closing date that involve eDNA analysis of general benthic eukaryotic biodiversity (i.e. in sediment samples) with a focus on <i>marine species along the Pacific or Atlantic coastlines of North America</i>.</p> <p><u>Evaluation Grid:</u></p> <ul style="list-style-type: none"> - 40 points: 4+ projects - 30 points: 3 projects - 20 points: 2 projects - 10 points: 1 project - 0 points: no demonstrated projects 	/40	
R6	<p>The Bidder demonstrates by completing the Company Experience Table (at Appendix 1 to Attachment 1 to Part 4), a list of eDNA projects for the Government of Canada, undertaken in the past 20 years up to the bid solicitation closing date.</p> <p><u>Evaluation Grid:</u></p> <ul style="list-style-type: none"> - 20 points: 4+ projects - 15 points: 3 projects - 10 points: 2 projects - 5 points: 1 project - 0 points: no demonstrated projects 	/20	
R7	<p>The Bidder demonstrates by completing the Company Experience Table (refer to Appendix 1 to Attachment 1 to Part 4) a list of projects undertaken in the past 20 years up to the bid solicitation closing date that involve a comparison of eDNA study results to results of studies using different methods (e.g. morphology-based benthic invertebrate study results, sediment profile imaging results, video survey results).</p> <p><u>Evaluation Grid:</u></p> <ul style="list-style-type: none"> - 40 points: 4+ projects - 30 points: 3 projects - 20 points: 2 projects - 10 points: 1 project - 0 points: no demonstrated projects 	/40	

R8	<p>The Bidder demonstrates by completing the Company Experience Table (refer to Appendix 1 to Attachment 1 to Part 4) a list of projects undertaken in the past 20 years up to the bid solicitation closing date that involve providing recommendations on how eDNA technology could or should be used in a regulatory or environmental monitoring program.</p> <p><u>Evaluation Grid:</u> - 40 points: 4+ projects - 30 points: 3 projects - 20 points: 2 projects - 10 points: 1 project - 0 points: no demonstrated projects</p>	/40	
R9	<p>The Bidder demonstrates by completing the Company Experience Table (refer to Appendix 1 to Attachment 1 to Part 4) that they have experience using Illumina MiSeq and/or NovaSeq 6000 sequencing platforms or equivalent, with a target minimum sequencing depth of 100,000 sequences per DNA marker per sample in the past 5 years.</p> <p><u>Evaluation Grid:</u> - 25 points: 5+ years of experience - 20 points: 4 years of experience - 15 points: 3 years of experience - 10 points: 2 years of experience - 5 points: 1 year of experience - 0 points: less than one year of experience, or does not indicate</p>	/25	
R10	<p>The Bidder demonstrates by completing the Company Experience Table (refer to Appendix 1 to Attachment 1 to Part 4) a list of projects undertaken in the past 20 years up to the bid solicitation closing date that involve an assessment of environmental impacts or effects using eDNA technology.</p> <p><u>Evaluation Grid:</u> - 40 points: 4+ projects - 30 points: 3 projects - 20 points: 2 projects - 10 points: 1 project - 0 points: no demonstrated projects</p>	/40	
R11	<p>The Bidder must submit a detailed resume of one project team member that has experience being part of an established network of experts in environmental genomics (i.e. working group, conference organizer, committee) in the past 20 years up to bid solicitation closing date.</p> <p><u>Evaluation Grid:</u> - 40 points: 20+ years of experience - 30 points: 15 years 1 month to 20 years of experience - 20 points: 10 years 1 month to 15 years of experience - 10 points: 5 years to 10 years of experience - 0 points: less than 5 years of experience</p>	/40	
Total Score		/395	
Minimum Pass Score (70%)		/276	

Appendix 1 to Attachment 1 to Part 4: Company Experience Table

The Bidder must complete the Company Experience Table and include it with its bid. The Bidder must complete a separate table for each project.

Project #

Project title:	
Client name:	
Contact information associated with the client name:	
Bidder's role in the project:	
Project start and end dates in yyyy-mm:	
Project objectives:	
Project location:	
Substrate sampled:	<input type="checkbox"/> Water <input type="checkbox"/> Sediment
Instrument used for eDNA analysis:	
Summary of eDNA project results:	

PART 5 - CERTIFICATIONS

Bidders must provide the required certifications and associated 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 in carrying out any of its obligations under the Contract, 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 may render the bid non-responsive or constitute a default under the Contract.

5.1. Certifications Required Precedent to Contract Award

5.1.1 Integrity Provisions - Associated Information

By submitting a bid, the Bidder certifies that the Bidder and its Affiliates are in compliance with the provisions as stated in Section 01 Integrity Provisions - Bid of Standard Instructions 2003. The associated information required within the Integrity Provisions will assist Canada in confirming that the certifications are true.

5.1.2. 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 (<https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html#afed>) available from 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. Additional Certifications Required Precedent to Contract Award

The certifications listed below should be completed and submitted with the bid but may be submitted afterwards. If any of these required certifications 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 comply with the request of the Contracting Authority and to provide the certifications within the time frame provided will render the bid non-responsive.

5.2.1. 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. Failure to comply with the request may result in the bid being declared non-responsive.

5.2.2. Education and Experience

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

PART 6 – INSURANCE REQUIREMENTS

6.1 Insurance Requirements

The Bidder must provide a letter from an insurance broker or an insurance company licensed to operate in Canada stating that the Bidder, if awarded a contract as a result of the bid solicitation, can be insured in accordance with the Insurance Requirements specified in the contract.

If the information is not provided in the bid, the Contracting Authority will so inform the Bidder and provide the Bidder with a time frame within which to meet the requirement. Failure to comply with the request of the Contracting Authority and meet the requirement within that time period will render the bid non-responsive.

PART 7 - RESULTING CONTRACT *(at contract award, delete this line)*

The following clauses and conditions apply to and form part of any contract resulting from the bid solicitation. *(at contract award, delete this sentence and add the title of the requirement)*

Title: *(insert only at contract award)*

7.1. Statement of Work

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

7.2. Standard Clauses and Conditions

All clauses and conditions identified in the Contract by number, date and title are set out in the PSPC/PWGSC *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 (2021-12-02), General Conditions - Professional Services (High Complexity), as modified below, apply to and form part of the Contract.

7.2.2 Supplemental General Conditions

The following supplemental general conditions apply to and form part of the Contract:

4007 (2010-08-16), *Canada to own Intellectual Property Rights in Foreground*

7.2.3 Specific Person(s)

The Contractor must provide the services of the following person(s) to perform the Work as stated in the Contract: _____ *(insert name(s) of person(s))*.

7.3. Security Requirement

7.3.1 There is no security requirement applicable to this Contract.

7.4. Term of Contract

7.4.1 Period of the Contract

The period of the Contract is from date of Contract to 31-March-2024 inclusive.

7.4.2 Option to Extend the Contract

The Contractor grants to Canada the irrevocable option to extend the term of the Contract by up to two (2) additional two (2) year period(s) under the same conditions. The Contractor agrees that, during the extended period of the Contract, it will be paid in accordance with the applicable provisions as set out in the Basis of Payment.

Canada may exercise this option at any time by sending a written notice to the Contractor at least 10 calendar days before the expiry date of the Contract. The option may only be exercised by the Contracting Authority, and will be evidenced for administrative purposes only, through a contract amendment.

Authorities

7.5.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Megan Filliol

Title: Team Manager – Procurement Operations Atlantic

Environment and Climate Change Canada

Procurement and Contracting Division

Address: 17th Floor, 45 Alderney Drive, Dartmouth NS B2Y 2N6

Telephone: 902-600-6216

E-mail address: megan.filliol@ec.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 Technical Authority *(insert only at contract award)*

The Technical Authority for the Contract is:

Name: _____

Title: _____

Organization: _____

Address: _____

Telephone: ____-____-_____

Facsimile: ____-____-_____

E-mail address: _____

The Technical Authority named above 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 Technical Authority, however the Technical 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

(Fill in or delete as applicable)

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

The Contractor will be reimbursed for the costs reasonably and properly incurred in the performance of the Work, as determined in accordance with the Basis of Payment in Annex B , to a limitation of expenditure of \$_____ *(insert the amount at contract award)*. Customs duties are included and Applicable Taxes are extra.

7.7.2 Limitation of Expenditure

- (a) Canada's total liability to the Contractor under the Contract must not exceed \$ _____. Customs duties are included and the Applicable Taxes are extra.
- (b) 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:
 - (i) when it is 75 percent committed, or
 - (ii) four (4) months before the contract expiry date, or
 - (iii) as soon as the Contractor considers that the contract funds provided are inadequate for the completion of the Work,

whichever comes first.

- (c) 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.

7.7.3 Multiple Payments

Canada will pay the Contractor upon completion and delivery of units in accordance with the payment provisions of the Contract if:

- a. an accurate and complete invoice and any other documents required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
- b. all such documents have been verified by Canada;
- c. the Work delivered has been accepted by Canada

7.7.4 Standard Procurement Clauses

[A9117C](#) (2007-11-30) T1204 – Direct Request by Customer Department

7.7.5 Discretionary Audit

C0705C (2010-01-11) Discretionary Audit

7.8. Invoicing Instructions

7.8.1 Milestone Payment

7.8.1.1 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 such documents have been verified by Canada;
- (c) all work associated with the milestone and as applicable any deliverable required have been completed and accepted by Canada.

7.9. Certifications and Additional Information

7.9.1 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.

7.10. Applicable Laws

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

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 supplemental general conditions 4007 (2010-08-16), *Canada to own Intellectual Property Rights in Foreground*
- (c) the general conditions 2035 (2021-12-02), General Conditions - Professional Services (High Complexity)
- (d) Annex A, Statement of Work;
- (e) Annex B, Basis of Payment;
- (f) Annex C, Insurance Requirements;
- (g) the Contractor's bid dated _____, (*insert date of bid*) (*If the bid was clarified or amended, insert at the time of contract award:*"), as clarified on _____ " **or** ", as amended on _____ " *and insert date(s) of clarification(s) or amendment(s)*).

7.12. Insurance Requirements – Specific requirement

The Contractor must comply with the insurance requirements specified in Annex C. The Contractor must maintain the required insurance coverage for the duration of the Contract. Compliance with the insurance requirements does not release the Contractor from or reduce its liability under the Contract.

The Contractor is responsible for deciding if additional insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any additional insurance coverage is at the Contractor's expense, and for its own benefit and protection.

The Contractor must forward to the Contracting Authority within ten (10) days after the date of award of the Contract, a Certificate of Insurance evidencing the insurance coverage and confirming that the insurance policy complying with the requirements is in force. For Canadian-based Contractors, coverage must be placed with an Insurer licensed to carry out business in Canada, however, for Foreign-based Contractors, coverage must be placed with an Insurer with an A.M. Best Rating no less than "A-". The Contractor must, if requested by the Contracting Authority, forward to Canada a certified true copy of all applicable insurance policies.

7.13. 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](#)".

ANNEX A STATEMENT OF WORK

TITLE: Benthic Assessment of a Disposal at Sea Site Using Environmental DNA (eDNA)

1.0 Background

Environment and Climate Change Canada (ECCC)'s Disposal at Sea (DAS) program conducts monitoring studies of the environmental conditions at representative disposal sites each year. The information is used both for managing the specific disposal site and feeds back into the decision-making and information requirements for permit applications. Monitoring a disposal at sea site involves an assessment of its physical, chemical and biological features. Physical, chemical and toxicological testing of the sediment helps to characterize both the contaminant concentrations and the potential biotic effect of disposal operations. However, it is only through benthic surveys that the true biological effect of disposal operations can be known. The DAS program has been conducting different types of benthic surveys for over twenty years, mainly towed video surveys, sediment profile imaging and morphology-based benthic grab surveys. While these methods have all proven to have utility in the program, they each have drawbacks, either in the quality of data provided or the resources and expertise required to complete a survey. The DAS program is therefore looking to expand the benthic survey methodologies available to the program in order to maximize the quality and value of the scientific information while minimizing the required time and resources.

Environmental genomics provides comprehensive biological data that allows scientists to document all organisms without the need to directly observe or disturb them. This method provides more data at higher resolution, increased accuracy and higher reproducibility than other benthic methods. DNA samples can also be frozen indefinitely, allowing for re-analysis in the future. The material that is collected from the field is analyzed by specialized instrumentation, which reduces the reliance on taxonomists and offers an efficient alternative to morphology-based methods. This approach provides information on the diversity of organisms in the benthic environment rather than life stage of the organisms or abundance. Water and surface sediments have high rates of DNA turnover. DNA is very robust from a sampling/handling perspective and because of its stability, less than 1g of sediment is required and the data provides a vast amount of information about the wider community, not just what is in that tiny subsample at that exact moment that it was sampled. ECCC's Science and Technology Branch (STB) brought the use of this method for assessing and monitoring impacts in aquatic environments to our attention. STB has undertaken biomonitoring projects using eDNA technology in freshwater streams across the country as part of the Canadian Aquatic Biomonitoring Network (CABIN) program and for wetland bioassessment as part of the Canada-Alberta Oil Sands Monitoring Program. The DAS program has reviewed the literature and determined that the benefits of eDNA technology are relevant to DAS and important to explore to ensure that the disposal sites are being monitored in a scientifically valid, ecologically relevant and cost effective manner. This method is complimentary to other lines of evidence that we routinely collect and will provide valuable information for evaluating impacts to the marine environment from disposal activities.

1.1 Objective

This work will serve as a pilot project to help ECCC build experience with advanced environmental genomics techniques for assessing impacts of disposal activities in the marine environment. The pilot project will take place at a disposal at sea site and take advantage of other planned monitoring. The main objective is to use eDNA technology to monitor impacts at the disposal site by looking at the differences in species diversity compared to reference sites. The end-result will have four components: (1) an assessment of the general benthic eukaryotic biodiversity at the disposal site, (2) an assessment of the effects of disposal at the site, (3) a comparison of the results of the study to ECCC's morphology-based benthic invertebrate survey results, if available, and (4) an expert opinion of it and how eDNA technology should play a role in the DAS disposal site monitoring program.

2.0 Project Scope and Mandatory Tasks

The requirements of the contract and the mandatory tasks associated with each requirement of the contract are listed below:

2.1 Develop study proposal and field survey design

- a) To be done in conjunction with ECCC, taking into account data from past field surveys of the disposal site and surrounding areas, study objectives and the logistics of the ECCC-led field work aboard an ocean-going vessel.
- b) The field study design must allow for comparison of impacts between the inside of the disposal site footprint and the environs outside the footprint and reference sites to draw conclusions about the impacts of disposal activities on the marine environment.
- c) The study proposal and study design must detail how the eDNA data will be compared to ECCC's morphology-based benthic invertebrate survey results and Sediment Profile Imaging data (both historical and that which is collected during the same survey). Details must also be provided as to how the data will be used to draw conclusions on how the different methodologies differ and/or compliment one another and how they could be used in the future to draw conclusions about the impacts of disposal activities on the marine environment.

2.2 Sample collection support

The contractor must facilitate the collection of samples by ECCC field staff, including the following:

- a) Provide all necessary eDNA-suitable collection supplies for the collection of up to 60 marine sediment samples, including replicates, on board an ocean going vessel.
- b) Provide all necessary eDNA-suitable supplies for the transport of samples from the vessel to the laboratory for analysis.
- c) Provide all field standard operating procedures (SOPs) for collection, storage and transport of samples from the Coast Guard vessel to the laboratory for analysis.
- d) Provide training to ECCC field staff on the collection, storage and transport of samples.
- e) Provide logistical support (i.e. be available to answer questions by phone or email) to field operations as necessary prior to and during field operations to facilitate the collection, storage and transport of samples.
- f) The contractor must be able to support field sampling by phone or email during the spring/summer/fall months of each first fiscal year of the Contract, depending on ship availability and logistics.

2.3 Laboratory analysis and sequencing

- a) Extraction of environmental DNA, development of "PCR primers" and PCR amplification, library preparation, and reading DNA sequences using advanced high throughput technologies, such as the Illumina MiSeq and/or NovaSeq 6000 sequencing platforms or equivalent, with a target minimum sequencing depth of 100,000 sequences per DNA marker per sample.
- b) Analysis of the eDNA samples to assess general benthic eukaryotic biodiversity with a focus on metazoans.
- c) To allow for flexibility in future analyses, the contractor must have the capability to provide secure preservation and long-term storage of environmental genomics material in the marine sediment samples in ultra-cold -80C storage units
- d) To minimize contamination of samples, the contractor must be able to provide dedicated, physically isolated lab spaces for pre-PCR (low template) DNA work, post-PCR (high template) DNA work, and sequencing. Appropriate controls (e.g. negative field control, negative extraction control, negative PCR control) must be included in the workflow.
- e) The contractor must be specialized to handle environmental DNA samples and adhere to a strict quality management program.

2.4 Bioinformatics and Report Writing

- a) The contractor must interpret the data and provide a summary of the biodiversity inventory and community analysis in a report along with statistical interpretation of biodiversity patterns among stations.
- b) The contractor must explain the comparison of impacts between the inside of the disposal site footprint and the environs outside the footprint and reference sites and draw conclusions about the impacts of disposal activities on the marine environment.
- c) The contractor must provide a comparison of the eDNA results to ECCC's morphology-based benthic invertebrate survey results (both historical and that which is collected during the same survey) as well as historical Sediment Profile Imaging data. The goal of this comparison is to allow ECCC to determine the circumstances when each method will be most useful and how we could possibly use them as complimentary lines of evidence.
- d) The contractor must also draw conclusions on how the different methodologies differ and/or compliment one another and make recommendations on how they could be used in the future to evaluate the impacts of disposal activities on the marine environment.

3.0 Deliverables

Note: Fieldwork dates are unknown at this time. Fieldwork periods are in the spring/summer/fall months of each first fiscal year of the Contract, depending on ship availability and logistics. Fieldwork dates are not negotiable; however ECCC will endeavor to provide notice up to three months in advance of survey start date.

3.1 Study Proposal and Field Survey Design

- a) The contractor must hold at least one meeting with ECCC Technical Authority by teleconference or videoconference within two to three weeks of being awarded the contract to discuss the objectives and requirements of the contract.
- b) The contractor must submit a draft of the study proposal and field survey design at least eight weeks prior to field work dates. They must be comprehensive documents that cover all facets of the Work (outlined in section 2.1) and must include sufficient technical and logistical detail to facilitate a full and accurate evaluation by ECCC Technical Authority.
- c) The contractor must hold at least one meeting with ECCC Technical Authority by teleconference or videoconference to discuss ECCC comments on the draft documents and submit a final draft of the documents at least six weeks prior to field work dates.

3.2 Sample Collection Support

- a) The contractor must provide all eDNA-suitable collection supplies for the collection of up to 60 marine sediment samples, including replicates, and all standard operating procedures (SOPs) for fieldwork, lab analysis (i.e. DNA extraction) and bioinformatics at least four weeks prior to field work dates.
- b) The contractor must support field sampling, exact dates to be confirmed, including all of the requirements outlined in section 2.2.
- c) The contractor must cover the costs of shipment of sampling supplies and samples to and/or from their facility to the delivery point. The delivery point will be confirmed following the initial meeting.

3.3 Laboratory Analysis and sequencing

- a) The contractor must provide the full set of raw sequence data from the laboratory analyses in a contractor recommended format (i.e. FASTQ file) and a list of taxa and associated sample information in Excel format alongside the draft report.

3.4 Bioinformatics and Report

- a) The Contractor must coordinate the review of the requirements listed under section 2.1 to 2.4 by an established network of experts in marine environmental genomics.
- b) The contractor must submit a draft of the final report in electronic format to ECCC Technical Authority for approval within 6 months of receipt of samples. All raw sequence data, the bioinformatics pipeline used and explanation of the analysis must be provided alongside this report. It must be comprehensive report on all facets of the Work and must include sufficient detail and a discussion of problems and successes associated with the Work to facilitate a full and accurate evaluation of the Work by ECCC. The report must be prepared in accordance with good scientific/professional practices and include, as a minimum, the following: a title page, a table of contents, an executive summary, an introduction, a technical discussion with conclusions and include, as applicable, supporting maps, graphs, tables and figures.
- c) The contractor must provide the final report, in electronic format, to ECCC Technical Authority within 3 months following approval of the draft final report by ECCC. The Contractor must forward an electronic copy of the covering letter accompanying the final report to the Technical Authority.

4.0 Government Supplied Material

- a) ECCC will supply all previous reports on morphology-based benthic invertebrate survey results and Sediment Profile Imaging survey results.
- b) ECCC will supply the morphology-based benthic invertebrate results of the current survey to allow for the comparison with eDNA analysis results.
- c) ECCC will supply physical and chemical data of the current survey to complement and facilitate the contractor's analysis of the eDNA analysis.
- d) ECCC will be responsible for ensuring that samples stay frozen throughout transit to the lab.

5.0 Anticipated Timeline of Activities and Deliverables of Each Year of the Contract

Activity or Deliverable	Anticipated Timing
Contract award	
ECCC provides all previous reports (s. 4a)	1 week following contract award
First meeting to discuss contract (s. 3.1a)	2-3 weeks following contract award
Contractor submits first draft of proposal (s. 3.1b)	10 weeks prior to field dates
ECCC provides feedback on draft report	
Contractor provides final draft of proposal (s. 3.1c)	6 weeks prior to field work
Contractor delivers SOPs for sample collection to ECCC (s. 3.2a)	4 weeks prior to field work dates
Field work dates	Date to be confirmed pending release of ship schedule by Canadian Coast Guard
ECCC provides morphology-based benthic survey results to contractor (s. 4b)	5 months after completion of field work
ECCC will supply SPI data (s. 4b)	5 months after completion of field work
ECCC will supply physical and chemical survey data (s. 4c)	5 months after completion of field work
Contractor submits first draft of report and raw sequence data (s. 3.4b)	6 months after completion of field work and 5 months after ECCC supplies morphology-based benthic survey results, SPI, physical and chemical data
ECCC completes review of draft report	
Contractor submits final report (s. 3.4c)	3 months after ECCC completes review

ANNEX B BASIS OF PAYMENT

(to be completed at contract award)

Initial Contract Period (April 1, 2022 to March 31, 2024)

Task	Description	Estimated Quantity (A)	Firm Per Day/Sample (B)	Extended Total (C) = A x B
1	Project Management* ¹	180 days	\$	\$
2	Sample Collection Kit* ²	60 samples	\$	\$
3	Laboratory Analysis and Sequencing * ³	60 samples	\$	\$
4	Bioinformatics and Report * ⁴	180 days	\$	\$
<p><u>*¹ Note:</u> Firm per day rate includes task associated with Sections 2.1 and 3.1 of the Statement of Work.</p> <p><u>*² Note:</u> Firm per sample rate includes tasks associated with Sections 2.2 and 3.2 of the Statement of Work.</p> <p><u>*³ Note:</u> Firm per sample rate includes tasks associated with Sections 2.3 and 3.3 of the Statement of Work.</p> <p><u>*⁴ Note:</u> Firm per day rate includes tasks associated with Sections 2.4 and 3.4 of the Statement of Work.</p>				
Subtotal				\$
Tax				
Total				

Option Period One (April 1, 2024 to March 31, 2026)

Task	Description	Estimated Quantity (A)	Firm Per Day/Sample (B)	Extended Total (C) = A x B
1	Project Management* ¹	180 days	\$	\$
2	Sample Collection Kit* ²	60 samples	\$	\$
3	Laboratory Analysis and Sequencing * ³	60 samples	\$	\$
4	Bioinformatics and Report * ⁴	180 days	\$	\$
<p><u>*¹ Note:</u> Firm per day rate includes task associated with Sections 2.1 and 3.1 of the Statement of Work.</p> <p><u>*² Note:</u> Firm per sample rate includes tasks associated with Sections 2.2 and 3.2 of the</p>				

Statement of Work.	
* ³ <u>Note:</u> Firm per sample rate includes tasks associated with Sections 2.3 and 3.3 of the Statement of Work.	
* ⁴ <u>Note:</u> Firm per day rate includes tasks associated with Sections 2.4 and 3.4 of the Statement of Work.	
Subtotal	\$
Tax	
Total	

Option Period Two (April 1, 2026 to March 31, 2028)

Task	Description	Estimated Quantity (A)	Firm Per Day/Sample (B)	Extended Total (C) = A x B
1	Project Management* ¹	180 days	\$	\$
2	Sample Collection Kit* ²	60 samples	\$	\$
3	Laboratory Analysis and Sequencing * ³	60 samples	\$	\$
4	Bioinformatics and Report * ⁴	180 days	\$	\$
* ¹ <u>Note:</u> Firm per day rate includes task associated with Sections 2.1 and 3.1 of the Statement of Work.				
* ² <u>Note:</u> Firm per sample rate includes tasks associated with Sections 2.2 and 3.2 of the Statement of Work.				
* ³ <u>Note:</u> Firm per sample rate includes tasks associated with Sections 2.3 and 3.3 of the Statement of Work.				
* ⁴ <u>Note:</u> Firm per day rate includes tasks associated with Sections 2.4 and 3.4 of the Statement of Work.				
Subtotal				\$
Tax				
Total				

ANNEX C INSURANCE REQUIREMENTS

Commercial General Liability Insurance

1. The Contractor must obtain Commercial General Liability Insurance, and maintain it in force throughout the duration of the Contract, in an amount usual for a contract of this nature, but for not less than \$2,000,000 per accident or occurrence and in the annual aggregate.
2. The Commercial General Liability policy must include the following:
 - a. Additional Insured: Canada is added as an additional insured, but only with respect to liability arising out of the Contractor's performance of the Contract. The interest of Canada should read as follows: Canada, as represented by Public Works and Government Services Canada.
 - b. Bodily Injury and Property Damage to third parties arising out of the operations of the Contractor.
 - c. Products and Completed Operations: Coverage for bodily injury or property damage arising out of goods or products manufactured, sold, handled, or distributed by the Contractor and/or arising out of operations that have been completed by the Contractor.
 - d. Personal Injury: While not limited to, the coverage must include Violation of Privacy, Libel and Slander, False Arrest, Detention or Imprisonment and Defamation of Character.
 - e. Cross Liability/Separation of Insureds: Without increasing the limit of liability, the policy must protect all insured parties to the full extent of coverage provided. Further, the policy must apply to each Insured in the same manner and to the same extent as if a separate policy had been issued to each.
 - f. Blanket Contractual Liability: The policy must, on a blanket basis or by specific reference to the Contract, extend to assumed liabilities with respect to contractual provisions.
 - g. Employees and, if applicable, Volunteers must be included as Additional Insured.
 - h. Employers' Liability (or confirmation that all employees are covered by Worker's compensation (WSIB) or similar program)
 - i. Broad Form Property Damage including Completed Operations: Expands the Property Damage coverage to include certain losses that would otherwise be excluded by the standard care, custody or control exclusion found in a standard policy.
 - j. Notice of Cancellation: The Contractor will provide the Contracting Authority thirty (30) days prior written notice of policy cancellation or any changes to the insurance policy.
 - k. If the policy is written on a claims-made basis, coverage must be in place for a period of at least 12 months after the completion or termination of the Contract.