

**RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:**
**Bid Receiving Public Works and Government
Services Canada/Réception des soumissions
Travaux publics et Services gouvernementaux
Canada**
**1713 Bedford Row
Halifax, N.S./Halifax, (N.É.)
B3J 1T3
Bid Fax: (902) 496-5016**

**REQUEST FOR PROPOSAL
DEMANDE DE PROPOSITION**

**Proposal To: Public Works and Government
Services 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.

**Proposition aux: Travaux Publics et Services
Gouvernementaux Canada**

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

Comments - Commentaires

Title - Sujet ELECTRO FISHING BOAT/MOTOR/TRAILER	
Solicitation No. - N° de l'invitation F5286-130175/A	Date 2014-01-02
Client Reference No. - N° de référence du client F5286-13-0175	
GETS Reference No. - N° de référence de SEAG PW-\$HAL-403-9176	
File No. - N° de dossier HAL-3-71235 (403)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2014-01-20	Time Zone Fuseau horaire Atlantic Standard Time AST
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Brow, Theresa	Buyer Id - Id de l'acheteur hal403
Telephone No. - N° de téléphone (902) 496-5166 ()	FAX No. - N° de FAX (902) 496-5016
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: DEPARTMENT OF FISHERIES AND OCEANS BEDFORD INSTITUTE OF OCEANOGRAPHY FISH LAB, ROOM 108, P.O. BOX 1006 DARTMOUTH NOVA SCOTIA B2Y 4A2 Canada	

Instructions: See Herein

Instructions: Voir aux présentes

**Vendor/Firm Name and Address
Raison sociale et adresse du
fournisseur/de l'entrepreneur**

Issuing Office - Bureau de distribution
Acquisitions
1713 Bedford Row
Halifax, N.S./Halifax, (N.É.)
B3J 3C9

Delivery Required - Livraison exigée SEE HEREIN	Delivery Offered - Livraison proposée
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
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)	
Signature	Date

4.8-5.1 m aluminium shallow draft electrofishing boat

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PART 1 - GENERAL INFORMATION

1. Security Requirement

There is no security requirement associated with this bid solicitation.

2. Requirement

To supply one 4.8-5.1 m aluminium shallow draft electrofishing boat complete with motor and trailer. As detailed in Annex A attached.

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

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>) 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 (2013-06-01) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

Bidders who are incorporated or who are a sole proprietorship, including those bidding as a joint venture, have already provided a list of names of all individuals who are directors of the Bidder, or the name of the owner, at the time of submitting an arrangement under the Request for Supply Arrangement (RFSA). These bidders must diligently maintain this list up-to-date by informing Canada in writing of any change occurring during the validity period of the bid as well as during the period of any contract arising from this bid solicitation.

Canada may, at any time, request that a Bidder provide properly completed and Signed Consent Forms (*Consent to a Criminal Record Verification form - PWGSC-TPSGC 229*) for any or all individuals aforementioned within the time specified. Failure to provide such Consent Forms within the time period provided will result in the bid being declared non-responsive.

2. Submission of Bids

Bids must be submitted only to Public Works and Government Services Canada (PWGSC) Bid Receiving Unit by the date, time and place indicated on page 1 of the bid solicitation.

3. Former Public Servant

Refer: SACC Manual Clause A3025T (13-11-06)

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 questions or may request that the Bidder do so, so that the proprietary nature of the question is eliminated, and the enquiry can be answered with copies to all bidders. Enquiries not submitted in a form that can be distributed to all bidders may not be answered by Canada.

5. 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 », et préciser le média tel que CD, DVD) Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the bidders.

PART 3 - BID PREPARATION INSTRUCTIONS

1. Bid Preparation Instructions

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

Section I: Technical Bid (three (3) hard copies)
 Section II: Financial Bid (one (1) hard copy)
 Section III: Certifications (one (1) hard copy)

If there is a discrepancy between the wording of the soft copy and the hard copy, the wording of the hard copy will have priority over the wording of the soft copy.

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

Canada requests that bidders follow the format instructions described below in the preparation of their bid:

- (a) use 8.5 x 11 inch (216 mm x 279 mm) paper;
- (b) use a numbering system that corresponds to the bid solicitation.

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process [Policy on Green](#)

Procurement

(<http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html>). To assist Canada in reaching its objectives, bidders should:

- 1) use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably-managed forest and containing minimum 30% recycled content; and
- 2) use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

Section I: Technical Bid

In their technical bid, bidders should explain and demonstrate how they meet the requirements and how they will carry out the Work.

Section II: Financial Bid

Bidders must submit their financial bid in accordance with the Basis of Payment. The total amount of Applicable Taxes must be shown separately.

Section III: Certifications

Bidders must submit the certifications required under Part 5.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION**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.

2. Basis of Selection

- 2.1** A bid must comply with the requirements of the bid solicitation and meet all mandatory technical evaluation criteria to be declared responsive. The responsive bid with the lowest evaluated price will be recommended for award of a contract.

PART 5 - CERTIFICATIONS

Bidders must provide the required certifications and documentation 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 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 with this request will also render the bid non-responsive or will constitute a default under the Contract.

1.1 Code of Conduct and Certifications - Related documentation

By submitting a bid, the Bidder certifies that the Bidder and its affiliates are in compliance with the provisions as stated in Section 01 Code of Conduct and Certifications - Bid of Standard Instructions 2003. The related documentation therein required will assist Canada in confirming that the certifications are true.

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 (http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml) available from Human Resources and Skills Development Canada (HRSDC) - 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.

PART 6 - RESULTING CONTRACT CLAUSES

1. Security Requirement

There is no security requirement applicable to this Contract.

2. Requirement

To supply one 4.8-5.1 m aluminium shallow draft electrofishing boat complete with motor and trailer. As detailed in Annex A attached

3. 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>) issued by Public Works and Government Services Canada.

3.1 General Conditions

2010A (2013-04-25), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

4. Term of Contract

4.1 Delivery Date

All the deliverables must be received on or before 31 March 2014.

5. Authorities

5.1 Contracting Authority

The Contracting Authority for the Contract is:

Theresa Brow, Supply Specialist
Public Works and Government Services Canada
Acquisitions Branch

Telephone: 902-496-5166
Facsimile: 902-496-5016
E-mail address: theresa.brow@pwgsc-tpsgc.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.

5.2 Project Authority

The Project Authority for the Contract is:

Mr. Shane O'Neil

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.

5.3 Contractor's Representative

NAME;
TELEPHONE
EMAIL:

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. Payment

7.1 Basis of Payment

The contractor will be paid in accordance with the pricing as detailed in Annex B

7.2 Limitation of Expenditure

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.

7.3 PAYMENT

SACC *Manual* clause H1000C (08-05-12) Single Payment

8. Invoicing Instructions

1. The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is completed.

2. Invoices must be distributed as follows:

- a. The original and one (1) copy must be forwarded to the address shown on page 1 of the Contract for certification and payment.
- b. One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.

9. Certifications

9.1 Compliance

Compliance with the certifications and related documentation provided by the Contractor in its bid is a condition of the Contract and subject to verification by Canada during the term of the Contract. If the Contractor does not comply with any certification, provide the related documentation 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.

9.2 Federal Contractors Program for Employment Equity - Default by the Contractor

The Contractor understands and agrees that, when an Agreement to Implement Employment Equity (AIEE) exists between the Contractor and HRSDC-Labour, the AIEE must remain valid during the entire period of the Contract. If the AIEE becomes invalid, the name of the Contractor will be added to the "[FCP Limited Eligibility to Bid](#)" list. The imposition of such a sanction by HRSDC will constitute the Contractor in default as per the terms of the Contract.

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.

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 2010A (2013-04-25);
- (c) Annex A, Requirement;
- (e) Annex B, Basis of Payment
- (e) Annex C, Federal Contractors Program for Employment Equity - Certification (*if applicable*);

Solicitation No. - N° de l'invitation

F5286-130175/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur

ha1403

Client Ref. No. - N° de réf. du client

F5286-13-0175

File No. - N° du dossier

HAL-3-71235

CCC No./N° CCC - FMS No/ N° VME

-
- (f) Annex D, Insurance
(g) the Contractor's bid

Solicitation No. - N° de l'invitation

F5286-130175/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur

ha1403

Client Ref. No. - N° de réf. du client

File No. - N° du dossier

CCC No./N° CCC - FMS No/ N° VME

F5286-13-0175

HAL-3-71235

ANNEX "A"

REQUIREMENT

ATTACHED AS A SEPARATE ITEM.

Solicitation No. - N° de l'invitation

F5286-130175/A

Client Ref. No. - N° de réf. du client

F5286-13-0175

Amd. No. - N° de la modif.

File No. - N° du dossier

HAL-3-71235

Buyer ID - Id de l'acheteur

ha1403

CCC No./N° CCC - FMS No/ N° VME

**ANNEX B
BASIS OF PAYMENT**

Boat AS DETAILED

\$ _____

Motor as detailed herein

\$ _____

TRAILER

\$ _____

Delivery

+ _____

Total

\$ _____

ANNEX C

FEDERAL CONTRACTORS PROGRAM FOR EMPLOYMENT EQUITY - CERTIFICATION

I, the Bidder, by submitting the present information to the Contracting Authority, certify that the information provided is true as of the date indicated below. The certifications provided to Canada are subject to verification at all times. I understand that Canada will declare a bid non-responsive, or will declare a contractor in default, if a certification is found to be untrue, whether during the bid evaluation period or during the contract period. Canada will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply with such request by Canada will also render the bid non-responsive or will constitute a default under the Contract.

For further information on the Federal Contractors Program for Employment Equity visit HRSDC-Labour's website.

_____ Date

Complete both A and B.

A. Check only one of the following:

- ☐ A1. The Bidder certifies having no work force in Canada.
- ☐ A2. The Bidder certifies being a public sector employer.
- ☐ A3. The Bidder certifies being a federally regulated employer being subject to the *Employment Equity Act*.
- ☐ A4. The Bidder certifies having a combined work force in Canada of less than 100 employees (combined work force includes: permanent full-time, permanent part-time and temporary employees [temporary employees only includes those who have worked 12 weeks or more during a calendar year and who are not full-time students]).
- A5. The Bidder has a combined workforce in Canada of 100 or more employees; and

- ☐ A5.1. The Bidder certifies already having a valid and current Agreement to Implement Employment Equity (AIEE) in place with HRSDC-Labour.

OR

- ☐ A5.2. The Bidder certifies having submitted the Agreement to Implement Employment Equity (LAB1168) to HRSDC-Labour. As this is a condition to contract award, proceed to completing the form Agreement to Implement Employment Equity (LAB1168), duly signing it, and transmit it to HRSDC-Labour.

B. Check only one of the following:

- ☐ B1. The Bidder is not a Joint Venture.

OR

- ☐ B2. The Bidder is a Joint Venture and each member of the Joint Venture must provide the Contracting Authority with a completed annex Federal Contractors Program for Employment Equity - Certification. (Refer to the Joint Venture section of the Standard Instructions)

ANNEX “D” /ANNEXE D
INSURANCE REQUIREMENTS
EXIGENCES EN MATIÈRE D'ASSURANCES

D1 Commercial General Liability

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 \$10,000,000 per accident or occurrence and in the annual aggregate.
2. The Commercial General Liability Insurance 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) 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.
 - (d) 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.
 - (e) 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.
 - (f) Employees and, if applicable, Volunteers must be included as Additional Insured.
 - (g) Employers' Liability (or confirmation that all employees are covered by Worker's compensation (WSIB) or similar program)
 - (h) Notice of Cancellation: The Insurer will endeavor to provide the Contracting Authority thirty (30) days written notice of policy cancellation.
 - (i) 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.
 - (j) Owners' or Contractors' Protective Liability: Covers the damages that the Contractor becomes legally obligated to pay arising out of the operations of a subcontractor.
 - (k) Sudden and Accidental Pollution Liability (minimum 120 hours): To protect the Contractor for liabilities arising from damages caused by accidental pollution incidents.

DEPARTMENT OF FISHERIES AND OCEANS

ANNEX A

Technical Statement of Requirements

Requisition number F5286-130175

provision of Quantity (1),

4.8-5.1 m aluminium shallow draft electrofishing boat

**TRANSPORT CANADA MARINE SAFETY BRANCH (TCMSB) TP1332
APPROVED CONSTRUCTION**

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1.0 OVERVIEW

1.1 GENERAL

- 1.1.1 DFO buys, manages and operates numerous small craft in support of its Departmental programs and other missions. This requirement is for a welded aluminum electrofishing boat in the 4.8 to 5.1 meter range. The vessel will be trailered to and deployed in a wide variety of lakes and rivers within the Maritime Provinces, where it will be used to conduct fisheries research.
- 1.1.2 This vessel will be the primary sampling platform for research essential to fulfilling requirements for the Atlantic whitefish recovery program. The platform will be a critical piece of equipment to conduct invasive species control on the Petite Rivière where there are smallmouth bass and chain pickerel. Additionally, the equipment will increase DFO's capacity for monitoring and research on aquatic invasive species in freshwater of the Maritime Provinces (Gulf and Maritimes Regions). It will be equipped with an integrated 7500 watt generator powered pulsator (GPP) electrofisher, generator, lighting system, sounder, dual axle trailer, outboard motor, and live well.

- 1.1.3 This craft will be primarily shore-based and will be launched and recovered by trailer or deployed from a shore facility dock.

2.0 DESIGN AND CONSTRUCTION REQUIREMENTS

2.1 GENERAL

- 2.1.1 Unless stated otherwise all components, equipment and material must be Contractor supplied.

2.2 ERGONOMIC DESIGN

- 2.2.1 Hazardous operating conditions must be prevented by arranging machinery and equipment in a safe manner
- 2.2.2 Human engineering factors considered in design must include accessibility, visibility, readability, crew efficiency and comfort for a range of physiques for individuals from approx. 5 ft. to 6' 4" in height.

2.3 VIBRATION

- 2.3.1 The boat and all components must be free of local vibration that could endanger boat personnel, damage boat structure, machinery or systems, or interfere with the operation or maintenance of boat machinery or systems.

2.4 STRUCTURAL STRENGTH

- 2.4.1 All structures and components (hull, deck, seating, etc.) must be of sufficient strength to withstand the lateral and vertical impact-loading that equates to the conditions of the operational requirements and must adhere to requirements of TP1332.
<http://www.tc.gc.ca/eng/marinesafety/tp-tp1332-menu-521.htm>

2.5 LAUNCHING

- 2.5.1 Vessel must be capable of being launched, recovered and transported by trailer.

2.6 STANDARDS

- 2.6.1 The vessel must be designed, constructed, inspected, and certified to meet the requirements of the following standards, regulations and codes:
- 2.6.2 Transport Canada Marine Safety Regulation TP 1332 (2004) Construction Standards for Small Vessels. This standard references ISO and ABYC standards covering structure, fuel, electrical, stability and drainage requirements.
- 2.6.3 CSA C22.2 No. 183.2-M1983 (R1999) Standards for DC Electrical Installations on Boats and ABYC 'E' Electrical Standards.
- 2.6.4 CWB CSA\ACNOR W47.2; Division 2.1 certification for Aluminum Welding— latest revision."

3.0 PHYSICAL CHARACTERISTICS

3.1 VESSEL PARTICULARS

- 3.1.1 Length overall between 4.8 and 5.1 meters.
- 3.1.2 Shallow flat bottomed-type hull configuration
- 3.1.3 Railing at least 1 meter high, enclosing the bow work area with integrated net holders. Open rear deck
- 3.1.4 50 HP outboard motor, electric start, and power tilt and trim
- 3.1.5 Fully integrated 7.5 kW GPP electrofisher
- 3.1.6 Water cooled gas powered generator enclosed in sound insulated cabinet.
- 3.1.7 On board built in fuel tanks with capacity not lower than 200 litres to supply generator and outboard motor. Fittings to facilitate using standard 24 liter portable marine fuel tanks to supplement the main fuel tanks.
- 3.1.8 DOT rated capacity to be at least 3 persons

3.2 NORMAL LOADED CONDITION

- 3.2.1 Weight of empty vessel to be reported by bidder
- 3.2.2 Crew of 3 = 270 kg
- 3.2.3 Fuel = 200 litres in one or two tank(s), (160 kg)
- 3.2.4 Equipment & supplies = 500 kg Load capacity

4.0 OPERATIONAL REQUIREMENTS

4.1 GENERAL

- 4.1.1 Unless otherwise stated, performance must be for conditions of zero sea state and no wind, in freshwater with Normal Load Condition.
- 4.1.2 Cruising speed: 15 knots at normal load condition.
- 4.1.3 Maximum speed: 20-25 knots.
- 4.1.4 Range: 100 nautical miles with 10% reserve at 15 knots cruising speed.
- 4.1.5 Maintain course, made good over ground, when proceeding at 3 knots with relative crosswind of 15 knots.
- 4.1.6 Sufficient floatation along sides and under deck to allow the vessel to float level in the event of flooding.

4.2 ELECTROFISHING

- 4.2.1 Minimum 7500 kW generator powered electrofishing unit fully integrated into the boat with controls in the center console with outboard motor controls
- 4.2.2 Water cooled generator integrated into hull enclosed in soundproofed compartment and connected to built-in fuel tanks supplying outboard motor.
- 4.2.3 Three foot activated safety control switches for the electrofishing unit. Two are to be located on the bow work deck for dip netters and the third is to be located aft of the center console for the boat operator.

4.3 ENVIRONMENTAL CONDITIONS

4.3.1 Capable of operating day or night in the following conditions:

4.3.1.1 Average ambient air temperature range: 5°C to + 30°C

4.3.1.2 Average water temperature: 5°C to +30°C.

5.0 HULL AND DECK

5.1 HULL

5.1.1 Hull must be a shallow-flat bottom type configuration with a draft of not more than 20 cm to allow work in shallow water.

5.1.2 Hull shape must not impede water flow to the propulsion units and must direct spray and waves away from onboard personnel.

5.2 DECK

5.2.1 All deck and walkways must be non-skid/non-slip.

6.0 VESSEL CONFIGURATION

6.1 EXTERNAL SPECIFICATIONS

The following equipment shall be fitted externally.

6.1.1 Bow eye for towing/trailing to be fitted on the stem of the vessel

6.1.2 Bow railings 1 to 1.1 meter high fitted to the bow so as to provide a safe working deck. Railings shall have integrated net holders for electrofishing.

6.1.3 Non-skid decking and walkways

6.1.4 Bilge pump with 3-way switch (on/off/auto)

6.1.5 Exterior work area lighting

6.1.6 Dual battery bank electrical system with battery isolation switch

6.1.7 Built-in fuel tanks compatible with Transport Canada regulations

6.2 EXTERIOR EQUIPMENT

6.2.1 Adjustable electrofishing booms mounted at each forward corner of the bow work area.

6.2.2 Pair of anode dropper arrays with stainless steel dropper cables expandable from 30 to 91 cm (12 to 36 inches)

6.2.3 Minimum capacity 220 liter live well located in front of the console, dual pumps, aeration, and lighting.

6.3 DASH / CONSOLE

6.3.1 Controls are to be integrated into a center console

6.3.2 The helm will incorporate a steering system capable of handling the horsepower of the vessel, with manufacturers' engine controls designed for the power units.

6.3.3 Electrofisher controls are to be integrated into the dash

- 6.3.4 Switches/controls on dash will include: bilge pump (on/off/auto), lights (navigational, electrofishing, work deck, and instruments).

6.4 STOWAGE

- 6.4.1 Stowage for items of equipment must be provided in void spaces beneath seats, on deck below gunwales, and anywhere practicable to maximize storage space.

7.0 BILGE SYSTEM

7.1 ELECTRIC BILGE PUMP

- 7.1.1 A marine grade electric bilge pump shall be supplied and installed.

7.2 FLOAT SWITCH

- 7.2.1 An automatic float switch control must be fitted that turns on the electric bilge pump when water is present in the bilge. (This" float switch" must have the float mechanism contained in a protected housing, at the base of the pump or separately.)

7.3 BILGE CONTROL PANEL

- 7.3.1 The electric bilge pump control panel must be located visibly on the operator's console, with settings for 'on', 'off' and 'automatic' operation. An indicator light must be provided at the console that lights when the bilge pump is operating.
- 7.3.2 Bilge High Water Alarm for each compartment equipped with a pump as per TP1332 with alarm indicators at helm to be clearly visible by the operator.

7.4 HULL DRAINAGE

- 7.4.1 a non-corroding threaded plug must be provided in the lowest point to drain the aft compartments of the hull when out of the water

8.0 PROPULSION

8.1 MOTOR

- 8.1.1 Propulsion must be by a single gasoline-powered 50 HP outboard motor (Contractor Furnished Materiel) supplied with a spare stainless steel propeller.
- 8.1.2 The outboard motor must be installed and operated in accordance with the engine manufacturer's recommendations. The use of engine manufacturer's approved accessories and equipment is required. Equipment and components must not be used, or trials performed on the engines that would, in any way, void the engine manufacturer's warranties.
- 8.1.3 Motor should be mounted in accordance with manufacturer's recommendations.

8.2 PROPELLER(S)

8.2.1 Propeller(s) must be properly sized and Contractor supplied and installed (CFM).

8.3 CONTROLS

8.3.1 Controls must conform to engine manufacturer's recommendations and be installed on the center console.

8.3.2 Engine package must incorporate a lanyard style automatic shutdown feature (kill switch) for the engine to be mounted near the ignition switch

8.4 PROTECTION OF CONTROLS

8.4.1 All control cables, electrical wiring for the motor and the steering hydraulic hoses are to be installed in such a manner as to provide UV protection.

9.0 STEERING SYSTEM

9.1 GENERAL

9.1.1 Steering systems must be remote hydraulic with self-contained oil reservoir. Particular propulsion systems may have their own requirements for steering which must be adhered to.

9.1.2 All hydraulic steering hoses must be routed below deck and all hoses must be routed so that there is no pinch or chafing points on the hoses.

9.1.3 Hydraulic hoses must be of sufficient size and length to prevent pulsing. Hoses must be suitable for use in an exposed marine environment complete with stainless steel fittings.

9.1.4 The wheel / console connection must be of robust construction, to eliminate fore and aft or lateral movement of wheel / steering shaft fixture.

10.0 FUEL SYSTEM

10.1 GENERAL

10.1.1 Fuel systems must meet with all requirements of TP 1332 "Construction Standards for Small Vessels", which reference the ABYC standards.

10.1.2 Arrangements must be provided for fuel tank and associated lines, vents, fills, and on / off valves, to be fitted to the boat.

10.2 FUEL TANKS

10.2.1 The vessel must be fitted with two (2) fuel tanks with baffles, to be located under the deck for a total capacity of a minimum of two hundred (200) litres.

10.2.2 Fittings are to be installed at the fuel filter to facilitate the installation of standard portable marine fuel tanks to supplement the main fuel tanks.

10.3 IDENTIFICATION

10.3.1 All fuel valves are to be identified and easily accessible.

10.4 FUEL LINES

10.4.1 Fuel lines from the required inboard shutoff valve or manifold to the outboard motors to be protected against chafing and wear.

10.5 FUEL SUPPLY REDUNDANCY

10.5.1 The boat is to be equipped with cross-over valves to allow the motor to procure fuel from any tank. These valves are to be clearly identified.

10.6 FUEL FILTERS

10.6.1 A fuel / water separator filter is to be mounted "in-line" to the engine with easy access to drain the sediment bowl.

11.0 ELECTRICAL SYSTEM

11.1 GENERAL

11.1.1 The electrical system design, component selection and installation must be in accordance with Canadian Standards Association C22.2 NO. 183.2-M1983 (R1999) "Standards for D.C. Electrical Installations on Boats", and TP1332 and/or ABYC 'E' as referenced by TP1332. All electrical equipment and hardware must be installed in accordance with the manufacturer's specifications.

11.1.2 A Twelve (12) volt DC distribution system must be provided to power the engine starting and boat service loads including:

11.1.2.1 Navigation, interior, and exterior lighting

11.1.2.2 Electrical equipment

11.1.2.3 Instrumentation

11.1.3 All fitted electrical equipment must be capable of operating simultaneously with any other fitted electronics equipment without causing interference to any electronic equipment

11.2 CABLING INSTALLATION

11.2.1 Cables for all electrical distribution must be ample in size for the particular service, of marine grade tinned boat cable.

11.2.2 Cables must be grouped into wiring harnesses wherever possible. All wiring harnesses must be routed below deck.

11.2.3 All electrical equipment must be readily accessible for performing maintenance.

11.2.4 Cables and conductors must be supported with clamps or straps at least every 18 inches on horizontal runs and every 14 inches on vertical runs.

11.3 BATTERIES

- 11.3.1 Two (2) batteries must be identical, marine grade and properly sized for starting and boat service loads.
- 11.3.2 The batteries shall be 12 V deep cycle maintenance free (group 31), with the ability to cross connect via selector switch for engine start up from either battery.
- 11.3.3 Battery selector/isolation switches will be 'Coast Guard' or CSA, or UL approved and must be mounted to prevent snagging or accidental switching.
- 11.3.4 Battery compartment must be weathertight and fitted with a suitable means of gas venting.

11.4 LIGHTING

- 11.4.1 Lighting shall be provided for illumination of the work deck.
- 11.4.2 Specialized lighting must be installed for conducting electrofishing operations at night. These would include halogen headlights to illuminate the water in front of the work deck around each dropper array and stern flood lights.

11.5 NAVIGATION LIGHTING

- 11.5.1 Navigation lights must be permanently fitted and must be waterproof.
- 11.5.2 The fixtures must be of such a design as to resist the effects of vibration and moisture.
- 11.5.3 The navigation lights must be mounted so as not to interfere with vision of the operator.
- 11.5.4 Non-white lighting must be wired together on a separate breaker of the 12-volt DC electrical system.

12.0 TRAILER

12.1 GENERAL

- 12.1.1 A dual axle galvanized trailer is to be supplied with the boat. The trailer is to come complete with waterproof lights, wiring harness, and brakes (if required).

13.0 DOCUMENTATION

13.1 TECHNICAL PUBLICATIONS

- 13.1.1 Contractor shall provide, upon delivery of the vessel, complete sets of technical publications of a comprehensive owner/operator manual that provides a physical and functional description of the craft, its machinery and equipment. The manual shall include but

not be limited to sections such as: General Information, Technical Information, and Spare Parts List.

13.2 GENERAL INFORMATION SECTION

13.2.1 The General Information Section shall include a description of the arrangement and function of all structures, systems, fittings and accessories that comprise the boat, with illustrations as appropriate:

- 13.2.1.1 Operating procedures;
- 13.2.1.2 Basic operating characteristics (such as temperatures, pressures, flow rates)
- 13.2.1.3 Installation criteria and drawings, assembly and disassembly instructions with comprehensive illustrations showing each step;
- 13.2.1.4 Recommended planned maintenance;
- 13.2.1.5 Complete troubleshooting procedures.

13.3 TECHNICAL INFORMATION SECTION

13.3.1 The Technical Information Section shall include a complete set of detailed owners/operators manuals, drawings, parts lists and supplemental data for all components of the boat (whether acquired from external sources or custom-manufactured), including:

- 13.3.1.1 The list must include the name, part number and serial number if applicable of the parts, items or components and must indicate the supplier (name, address, phone number, email address) of this part, equipment or component and in which part of the specification the item appears.
- 13.3.1.2 Engine(s) and equipment: including engine and propulsion serial numbers.
- 13.3.1.3 Electronics, (if applicable): including model and serial numbers.

13.4 INFORMATION REQUIRED FOR TENDERING STAGE

13.4.1 The following information must be provided for the tendering stage:

- 13.4.1.1 A general arrangement.
- 13.4.1.2 A description of how the bidder will meet each of the requirements of this Statement of Requirements
- 13.4.1.3 Structural Drawings showing Deck Plan, a Centerline profile and frame station construction details.
- 13.4.1.4 A detailed Lines Plan
- 13.4.1.5 A drawing of the fuel supply arrangement

14.0 SHIPPING AND DELIVERY

14.1 GENERAL

14.1.1 Prior to shipping, the boat is to be cleaned, appropriately protected and covered in accordance with the instructions specified in this section. All areas of the boat are to be cleaned prior to covering for shipping. Bilges are to be dry and free of oil and debris and the fuel tanks are to be dry. The propulsion system is to have been protected in accordance with the manufacturer's recommendations for storage in an environment that will be subjected to freezing temperatures (below -10 degrees Celsius). The batteries are to be disconnected. A warning plate is to be tied to the steering wheel with a wire indicating that the boat has been protected for shipping and storage and shall not be started until the propulsion machinery has been reactivated. All contact points with the boat are to be padded. A shrink wrap cover is to be provided to protect the boat during shipping and storage.