

**RETURN BIDS TO:  
RETOURNER LES SOUMISSIONS À:**  
**Bid Receiving Public Works and Government  
Services Canada/Réception des souissions  
Travaux publics et Services gouvernementaux  
Canada**  
**800 Burrard Street, Room 219  
800, rue Burrard, pièce 219  
Vancouver, B.C.  
Vancouver  
British Colubia  
V6Z 0B9  
Bid Fax: (604) 775-9381**

**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**

<b>Title - Sujet</b> Fulton Lake Dam Safety Review	
<b>Solicitation No. - N° de l'invitation</b> F1700-150449/A	<b>Date</b> 2015-08-31
<b>Client Reference No. - N° de référence du client</b> F1700-150449	
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$TPV-026-7597	
<b>File No. - N° de dossier</b> TPV-5-38120 (026)	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2015-10-13</b>	<b>Time Zone Fuseau horaire</b> Pacific Daylight Saving Time PDT
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input checked="" type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Liu (TPV), Patty	<b>Buyer Id - Id de l'acheteur</b> tpv026
<b>Telephone No. - N° de téléphone</b> (604) 775-6227 ( )	<b>FAX No. - N° de FAX</b> (604) 775-6633
<b>Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:</b> DFO - Fulton Lake Dam - Topley, BC	

**Instructions: See Herein**

**Instructions: Voir aux présentes**

**Vendor/Firm Name and Address**

**Raison sociale et adresse du  
fournisseur/de l'entrepreneur**

<b>Delivery Required - Livraison exigée</b> See Herein	<b>Delivery Offered - Livraison proposée</b>
<b>Vendor/Firm Name and Address</b> <b>Raison sociale et adresse du fournisseur/de l'entrepreneur</b>	
<b>Telephone No. - N° de téléphone</b> <b>Facsimile No. - N° de télécopieur</b>	
<b>Name and title of person authorized to sign on behalf of Vendor/Firm (type or print)</b> <b>Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)</b>	
<b>Signature</b>	<b>Date</b>

**Issuing Office - Bureau de distribution**

Public Works and Government Services Canada - Pacific  
Region  
800 Burrard Street, Room 219  
800, rue Burrard, pièce 219  
Vancouver, B.C.  
V6Z 0B9  
British C

Solicitation No. - N° de l'invitation

F1700-150449/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur

tpv026

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

File No. - N° du dossier

CCC No./N° CCC - FMS No/ N° VME

F1700-150449

TPV-5-38120

**NOTE TO Tenderers:** Please use the mailing label below and affix it securely to the outside of the envelope or package containing your tender. Always ensure your company name, return address, tender number and closing date appear legibly on the outside of your bid submission.

**REAL PROPERTY CONTRACTING  
Public Works & Government Services Canada  
Room 219 - 800 Burrard Street  
Vancouver, BC V6Z 0B9**

**Solicitation No.: F1700-150449/A  
Tender Closing Date & Time: October 13, 2015 @ 1400 PDST  
Project Description: Fulton Lake Dam Safety Review  
Topley, BC**

**PHASE ONE  
PL**

## **REQUEST FOR PROPOSAL (RFP)**

### **TABLE OF CONTENTS**

The following is intended to clarify the general structure of the whole document.

Front Page

Supplementary Instructions to Proponents (SI)

- SI1 Introduction
- SI2 Proposal Documents
- SI3 Questions or request for clarifications
- SI4 Canada's Trade Agreements
- SI5 Certificates
- SI6 Web Sites

Terms, Conditions and Clauses

- Agreement
- Supplementary Conditions (SC)
- Agreement Particulars

Team Identification Format (Appendix A)

Declaration/Certifications Form (Appendix B)

Price Proposal Form (Appendix C)

Submission Requirements and Evaluation (SRE)

Project Brief / Terms of Reference

- Description of Project (PD)
- Description of Services - Required Services (RS)

## SUPPLEMENTARY INSTRUCTIONS TO PROPONENTS (SI)

### SI1 INTRODUCTION

1. Public Works and Government Services Canada (PWGSC) intends to retain an individual consulting firm or joint venture to provide the professional services for the project as set out in this Request for Proposal (RFP).
2. Because of the considerable time and expense involved in the preparation, submission and evaluation of full proposals, proponents responding to this RFP are requested to submit a proposal in two phases. Phase One proposals cover only the qualifications, experience and organization of the proposed Consultant Team. Following evaluation and rating of these proposals, proponents are advised of their competitive standing and have the opportunity to decide whether or not to continue their participation by submitting a Phase Two proposal. Phase Two proposals cover the detailed approach to the work, and the pricing and terms offered. A combination of the Phase One and Phase Two submissions constitutes the final proposal.
3. Initially, firms are invited to submit a proposal in the first phase of the selection procedure outlined below. Only the Phase One information asked for in the RFP is to be included in the Phase One proposal, and evaluation and rating of Phase One proposals will be carried out only on the Phase One information requested. **IN PHASE ONE, NO MATERIAL IS TO BE SUBMITTED ON THE SUBJECT PROJECT ITSELF.**

### SI2 PROPOSAL DOCUMENTS

1. All instructions, general terms, conditions and clauses identified in the RFP by number, date and title, are hereby incorporated by reference into and form part of this solicitation and any resultant contract.

All instructions, general terms, conditions and clauses identified in the RFP 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.

2. The following are the proposal documents:
  - (a) Supplementary Instructions to Proponents (SI);  
R1110T (2015-07-03), General Instructions (GI) – Architectural and/or Engineering Services – Two Phase Request for Proposal;  
Submission Requirements and Evaluation (SRE);
  - (b) the general terms, conditions and clauses, as amended, identified in the Agreement clause;
  - (c) Project Brief / Terms of Reference;

- (d) any amendment to the solicitation document issued prior to the date set for receipt of Phase Two proposals;
  - (e) the proposal submitted at Phase One and Declaration/Certifications Form; and
  - (f) the proposal submitted at Phase Two and Price Proposal Form.
3. Submission of a proposal constitutes acknowledgment that the Proponent has read and agrees to be bound by these documents.

### **SI3 QUESTIONS OR REQUEST FOR CLARIFICATION**

Questions or requests for clarification during the Phase One solicitation period must be submitted in writing to the Contracting Authority named on the RFP - Page 1 as early as possible. Enquiries should be received no later than seven (7) working days prior to the closing date identified on the front page of the Request for Proposal. Enquiries received after that date may not be answered prior to the closing date of the solicitation.

### **SI4 CANADA'S TRADE AGREEMENTS**

This procurement is subject to the provisions of the North American Free Trade Agreement (NAFTA), the World Trade Organization - Agreement on Government Procurement (WTO-AGP) and the Agreement on Internal Trade (AIT).

### **SI5 CERTIFICATIONS**

#### **1. Integrity Provisions – Declaration of Convicted Offences**

As applicable, pursuant to subsection Declaration of Convicted Offences, of section 01 of the General Instructions, the Proponent must provide with its bid, a completed Declaration Form, to be given further consideration in the procurement process.

#### **2. Federal Contractors Program for Employment Equity - Proposal Certification**

By submitting a proposal, the Proponent certifies that the Proponent, and any of the Proponent's members if the Proponent 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](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml)) available from Employment and Social Development Canada (ESDC) - Labour's website.

Canada will have the right to declare a proposal non-responsive if the Proponent, or any member of the Proponent if the Proponent is a Joint Venture, appears on the "FCP Limited Eligibility to Bid" list at the time of contract award.

## **SI6 - WEBSITES**

The connection to some of the Web sites in the RFP is established by the use of hyperlinks. The following is a list of the addresses of the Web sites:

Employment Equity Act

<http://laws-lois.justice.gc.ca/eng/acts/E-5.401/index.html>

Federal Contractors Program (FCP)

[http://www.labour.gc.ca/eng/standards\\_equity/eq/emp/fcp/index.shtml](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/index.shtml)

Certificate of Commitment to Implement Employment Equity form LAB 1168

<http://www.servicecanada.gc.ca/cgi-bin/search/eforms/index.cgi?app=profile&form=lab1168&dept=sc&lang=e>

Code of Conduct for Procurement

<http://www.tpsgc-pwgsc.gc.ca/app-acq/cndt-cndct/contexte-context-eng.html>

Lobbying Act

<http://laws-lois.justice.gc.ca/eng/acts/L-12.4/?noCookie>

Contracts Canada

<https://buyandsell.gc.ca/>

Supplier Registration Information

<https://srisupplier.contractscanada.gc.ca>

Consultant Performance Evaluation Report Form

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/2913-1.pdf>

Canadian economic sanctions

<http://www.international.gc.ca/sanctions/index.aspx?lang=eng>

National Joint Council (NJC) Travel Directive

<http://www.njc-cnm.gc.ca/directive/travel-voyage/index-eng.php>

## TERMS, CONDITIONS AND CLAUSES

### AGREEMENT

1. The Consultant understands and agrees that upon acceptance of the offer by Canada, a binding Agreement shall be formed between Canada and the Consultant and the documents forming the Agreement shall be the following:
  - (a) the Front Page and this Agreement clause;
  - (b) the General Terms, Conditions and Clauses, as amended, identified as:
    - R1210D (2015-07-09), General Condition (GC) 1 - General Provisions – Architectural and/or Engineering Services
    - R1215D (2014-06-26), General Condition (GC) 2 - Administration of the Contract
    - R1220D (2015-02-25), General Condition (GC) 3 - Consultant Services
    - R1225D (2015-04-01), General Condition (GC) 4 - Intellectual Property
    - R1230D (2015-02-25), General Condition (GC) 5 - Terms of Payment
    - R1235D (2011-05-16), General Condition (GC) 6 - Changes
    - R1240D (2011-05-16), General Condition (GC) 7 - Taking the Services Out of the Consultant's Hands, Suspension or Termination
    - R1245D (2012-07-16), General Condition (GC) 8 - Dispute Resolution
    - R1250D (2015-02-25) R1650D (2015-02-25), General Condition (GC) 9 - Indemnification and Insurance
    - Supplementary Conditions
    - Agreement Particulars
  - (c) Project Brief / Terms of Reference;
  - (d) any amendment to the solicitation document incorporated in the Agreement before the date of the Agreement;
  - (e) the Phase One proposal and Declaration/Certifications Form;
  - (f) the Phase Two proposal and Price Proposal Form.
2. The documents identified above by title, number and date are hereby incorporated by reference into and form part of this Agreement, as though expressly set out herein, subject to any other express terms and conditions herein contained.

The documents identified above by title, number and date are set out in the Standard Acquisition Clauses and Conditions (SACC) Manual, issued by Public Works and Government Services Canada (PWGSC). The SACC Manual is available on the PWGSC Web site: <https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>
3. If there is a discrepancy between the wording of any documents that appear on the following 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) any amendment or variation in the Agreement that is made in accordance with the terms and conditions of the Agreement;
  - (b) any amendment to the solicitation document incorporated in the Agreement before the date of the Agreement;

Solicitation No. - N° de l'invitation  
F1700-150449/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
tpv026

Client Ref. No. - N° de réf. du client  
F1700-150449

File No. - N° du dossier  
TPV-5-38120

CCC No./N° CCC - FMS No./N° VME

---

- (c) this Agreement clause;
- (d) Supplementary Conditions;
- (e) General Terms, Conditions and Clauses;
- (f) Agreement Particulars;
- (g) Project Brief / Terms of Reference;
- (h) the proposal.

## **SUPPLEMENTARY CONDITIONS (SC)**

### **SC1 FEDERAL CONTRACTORS PROGRAM FOR EMPLOYMENT EQUITY - DEFAULT BY THE CONSULTANT**

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

## **AGREEMENT PARTICULARS**

The Agreement Particulars will be issued at time of award of contract and will identify the fee to be paid to the Consultant for the services determined in the Price Proposal Form.



Solicitation No. - N° de l'invitation  
F1700-150449/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
tpv026

Client Ref. No. - N° de réf. du client  
F1700-150449

File No. - N° du dossier  
TPV-5-38120

CCC No./N° CCC - FMS No./N° VME

---

## APPENDIX A - TEAM IDENTIFICATION FORMAT

For details on this format, please see SRE in the Request For Proposal.

The prime consultant and other members of the Consultant Team shall be, or eligible to be, licensed, certified or otherwise authorized to provide the necessary professional services to the full extent that may be required by provincial or territorial law.

### I. Prime Consultant (Proponent ):

Firm or Joint Venture Name: .....  
.....  
.....

Key Individuals and provincial professional licensing status and/or professional accreditation:

.....  
.....  
.....  
.....  
.....

### II. Key Sub Consultants / Specialists: \*At least one Geotechnical Engineer must be provided.

#### \*Geotechnical Engineer (1)

Firm Name: .....  
.....  
.....

Key Individuals and provincial professional licensing status and/or professional accreditation:

.....  
.....  
.....  
.....  
.....

#### Geotechnical Engineer (2)

Firm Name: .....  
.....  
.....

Solicitation No. - N° de l'invitation  
F1700-150449/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
tpv026

Client Ref. No. - N° de réf. du client  
F1700-150449

File No. - N° du dossier  
TPV-5-38120

CCC No./N° CCC - FMS No./N° VME

---

Key Individuals and provincial professional licensing status and/or professional accreditation:

.....  
.....  
.....  
.....  
.....

**III. Key Sub Consultants / Specialists: \*At least one Civil/Hyrotechnical Engineer must be provided.**

**\* Civil/Hyrotechnical Engineer (1)**

Firm Name: .....  
.....  
.....

Key Individuals and provincial professional licensing status and/or professional accreditation:

.....  
.....  
.....  
.....  
.....

**Civil/Hyrotechnical Engineer (2)**

Firm Name: .....  
.....  
.....

Key Individuals and provincial professional licensing status and/or professional accreditation:

.....  
.....  
.....  
.....  
.....

**IV. Key Sub Consultants / Specialists: : \*At least one Structural Engineer must be provided.**

**\*Structural Engineer (1)**

Firm Name: .....  
.....  
.....

Solicitation No. - N° de l'invitation  
F1700-150449/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
tpv026

Client Ref. No. - N° de réf. du client  
F1700-150449

File No. - N° du dossier  
TPV-5-38120

CCC No./N° CCC - FMS No./N° VME

---

Key Individuals and provincial professional licensing status and/or professional accreditation:

.....  
.....  
.....  
.....  
.....

### **Structural Engineer (2)**

Firm Name: .....  
.....  
.....

Key Individuals and provincial professional licensing status and/or professional accreditation:

.....  
.....  
.....  
.....  
.....

**V. Key Sub Consultants / Specialists: : \*At least one Mechanical Engineer must be provided.**

### **\*Mechanical Engineer (1)**

Firm Name: .....  
.....  
.....

Key Individuals and provincial professional licensing status and/or professional accreditation:

.....  
.....  
.....  
.....  
.....

### **Mechanical Engineer (2)**

Firm Name: .....  
.....  
.....

Key Individuals and provincial professional licensing status and/or professional accreditation:

.....  
.....  
.....

Solicitation No. - N° de l'invitation  
F1700-150449/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
tpv026

Client Ref. No. - N° de réf. du client  
F1700-150449

File No. - N° du dossier  
TPV-5-38120

CCC No./N° CCC - FMS No./N° VME

---

**VI. Key Sub Consultants / Specialists: : \*At least one Electrical Engineer must be provided.**

**\*Electrical Engineer (1)**

Firm Name: .....  
.....  
.....

Key Individuals and provincial professional licensing status and/or professional accreditation:

.....  
.....  
.....  
.....  
.....

**Electrical Engineer (2)**

Firm Name: .....  
.....  
.....

Key Individuals and provincial professional licensing status and/or professional accreditation:

.....  
.....  
.....

Solicitation No. - N° de l'invitation  
F1700-150449/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
tpv026

Client Ref. No. - N° de réf. du client  
F1700-150449

File No. - N° du dossier  
TPV-5-38120

CCC No./N° CCC - FMS No./N° VME

---

## APPENDIX B - DECLARATION/CERTIFICATIONS FORM

**Project Title:**

**Name of Proponent:**

**Street Address:**

**Mailing Address:**

**Telephone Number:** (    )

**Fax Number:** (    )

**E-Mail:**

**Procurement Business Number:**

<b>Type of Organization:</b>  _____ Sole Proprietorship  _____ Partnership  _____ Corporation  _____ Joint Venture	<b>Size of Organization:</b>  Number of Employees _____  Graduate Architects / Professional Engineers _____  Other Professionals _____  Technical Support _____  Other _____
--	---

Solicitation No. - N° de l'invitation  
F1700-150449/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
tpv026

Client Ref. No. - N° de réf. du client  
F1700-150449

File No. - N° du dossier  
TPV-5-38120

CCC No./N° CCC - FMS No./N° VME

## APPENDIX B - DECLARATION/CERTIFICATIONS FORM (CONT'D)

### Name of Proponent:

#### DECLARATION:

I, the undersigned, being a principal of the proponent, hereby certify that the information given on this form and in the attached proposal is accurate to the best of my knowledge. If any proposal is submitted by a partnership or joint venture, then the following is required from each component entity.

.....  
name

.....  
signature

.....  
title

I have authority to bind the Corporation / Partnership / Sole Proprietorship / Joint Venture

.....  
name

.....  
signature

.....  
title

I have authority to bind the Corporation / Partnership / Sole Proprietorship / Joint Venture

.....  
name

.....  
signature

.....  
title

I have authority to bind the Corporation / Partnership / Sole Proprietorship / Joint Venture

During proposal evaluation period, PWGSC contact will be with the following person:\_\_\_\_\_.

Telephone Number: (    ) \_\_\_\_\_ Fax Number: (    ) \_\_\_\_\_

E-mail: \_\_\_\_\_

This Appendix "B" should be completed and submitted with the Phase One proposal, but may be submitted afterwards as follows: if Appendix "B" is not completed and submitted with the

Solicitation No. - N° de l'invitation  
F1700-150449/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
tpv026

Client Ref. No. - N° de réf. du client  
F1700-150449

File No. - N° du dossier  
TPV-5-38120

CCC No./N° CCC - FMS No./N° VME

---

proposal, the Contracting Authority will inform the Proponent 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 proposal non-responsive.

Solicitation No. - N° de l'invitation  
F1700-150449/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
tpv026

Client Ref. No. - N° de réf. du client  
F1700-150449

File No. - N° du dossier  
TPV-5-38120

CCC No./N° CCC - FMS No./N° VME

## APPENDIX C - PRICE PROPOSAL FORM

INSTRUCTIONS: Complete this Price Proposal Form and submit in a **separate sealed envelope** with the Name of Proponent, Name of Project, PWGSC Solicitation Number, and the words "PRICE PROPOSAL FORM" typed on the outside of the envelope. Price Proposals are not to include Applicable Taxes.

PROPOSERS SHALL NOT ALTER THIS FORM

**Project Title:**

**Name of Proponent:**

**The following will form part of the evaluation process:**

**Time Based Fees** (R1230D (2015-02-25), GC 5 - Terms of Payment)

<b>Consultant Services</b>	<b>ESTIMATED HOURS Column A</b>	<b>HOURLY RATES** Column B</b>	<b>TIME BASED FEE Columns AxB</b>
Geotechnical Engineer	250	\$.....	\$.....
Structural Engineer	200	\$.....	\$.....
Civil/Hyrotechnical Engineer	220	\$.....	\$.....
Mechanical Engineer	100	\$.....	\$.....
Electrical Engineer	100	\$.....	
<b>MAXIMUM TIME BASED FEES</b>			\$.....

\*Payment will be based on actual hours spent. Travel time and/or expenses will not be reimbursed separately (Refer to R1230D (2015-02-25), GC 5.12 – Disbursements).

\*\* All inclusive hourly rate is applicable to both normal working hours and any other shift work as required.

**END OF PRICE PROPOSAL FORM**



Solicitation No. - N° de l'invitation  
F1700-150449/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
tpv026

Client Ref. No. - N° de réf. du client  
F1700-150449

File No. - N° du dossier  
TPV-5-38120

CCC No./N° CCC - FMS No./N° VME

---

## **SUBMISSION REQUIREMENTS AND EVALUATION**

SRE 1 General Information

SRE 2 Proposal Requirements

SRE 3 Phase One Submission Requirements and Evaluation

SRE 4 Phase Two Submission Requirements and Evaluation

SRE 5 Price of Services

SRE 6 Total Score

SRE 7 Submission Requirements - Checklist

## **SUBMISSION REQUIREMENTS AND EVALUATION**

### **SRE 1 GENERAL INFORMATION**

#### **1.1 Reference to the Selection Procedure**

An 'Overview of the Selection Procedure' can be found in R1110T General Instructions to Proponents (GI3).

#### **1.2 Calculation of Total Score**

For this project the Total Score will be established as follows:

Phase One Rating x 30%	=	Phase One Score (Points)
Phase Two Technical Rating x 60%	=	Technical Score (Points)
<u>Phase Two Price Rating x 10%</u>	=	<u>Price Score (Points)</u>
Total Score	=	Max. 100 Points

### **SRE 2 PROPOSAL REQUIREMENTS**

#### **2.1 Requirement for Proposal Format (for phases one and two)**

The following proposal format information should be implemented when preparing the Phase One and Phase Two proposals.

- Phase One - Submit one (1) bound original plus three (3) bound copies of the proposal
- Phase Two - Submit one (1) bound original plus three (3) bound copies of the proposal
- Paper size should be - 216mm x 279mm (8.5" x 11")
- Minimum font size - 11 point Times or equal
- Minimum margins - 12 mm left, right, top, and bottom
- Double-sided submissions are preferred
- One (1) 'page' means one side of a 216mm x 279mm (8.5" x 11") sheet of paper
- 279mm x 432 mm (11" x 17") fold-out sheets for spreadsheets, organization charts etc. will be counted as two pages.
- The order of the proposals should follow the order established in the Request for Proposal SRE section

## 2.2 Phase One Specific Requirements for Proposal Format

The maximum number of pages (including text and graphics) to be submitted for the Rated Requirements under SRE 3.2 is [twenty (20)] pages.

The following are not part of the page limitation mentioned above;

- Covering letter
- Consultant Team Identification (Appendix A)
- Declaration/Certifications Form (Appendix B)
- Integrity Provisions - Associated Information

***Consequence of non-compliance: any pages which extend beyond the above page limitation and any other attachments will be extracted from the proposal and will not be forwarded to the PWGSC Evaluation Board members for evaluation.***

## 2.3 Phase Two Specific Requirements for Proposal Format

The maximum number of pages (including text and graphics) to be submitted for the Rated Requirements under SRE 4.2 is [thirty (30)] pages.

The following are not part of the page limitation mentioned above;

- Covering letter
- Consultant Team Verification
- Front page of the RFP
- Front page of revision(s) to the RFP
- Price Proposal Form (Appendix C)

***Consequence of non-compliance: any pages which extend beyond the above page limitation and any other attachments will be extracted from the proposal and will not be forwarded to the PWGSC Evaluation Board members for evaluation.***

## SRE 3 PHASE ONE SUBMISSION REQUIREMENTS AND EVALUATION

*Intent: The intent of Phase One evaluation activities is to verify that the submissions meet the mandatory screening requirements and to evaluate and rate the proposed teams.*

### 3.1 MANDATORY REQUIREMENTS

Failure to meet the mandatory requirements will render the proposal as non-responsive and no further evaluation will be carried out.

#### 3.1.1 Licensing, Certification or Authorization

The proponent shall be a Professional Engineer in British Columbia qualified in dam safety analysis (a Qualified Professional) able to provide the necessary professional services to the full extent that may be required.

### **3.1.2 Consultant Team Identification**

During Phase One only the prime consultant and key sub-consultants and specialists are identified. During Phase Two other sub-consultants or specialists may be identified. Those sub-consultants identified at Phase Two are those considered to play a lesser role in the entire project context.

The consultant team to be identified at this time must include the following:

- Geotechnical engineer(s)
- Civil/Hyrotechnical engineer(s)
- Structural engineer(s)
- Mechanical engineer(s)
- Electrical engineer(s)

Information required - name of firm, key personnel to be assigned to the project. For the prime consultant indicate current license and/or how you intend to meet the provincial or territorial licensing requirements. In the case of a joint venture identify the existing or proposed legal form of the joint venture (refer to R1110T General Instructions to Proponents, GI9 Limitation of Submissions).

Proponents will be required to carry over the consultant team identified in Phase One to Phase Two.

An example of an acceptable format (typical) for submission of the team identification information is provided in Appendix A.

### **3.1.3 Declaration/Certifications Form**

Proponents must complete, sign and submit the following:

- Appendix B, Declaration/Certifications Form as required

### **3.1.4 Integrity Provisions – List of Names**

Proponents who are incorporated, including those bidding as a joint venture, must provide a complete list of names of all individuals who are currently directors of the Proponent. Proponents bidding as sole proprietorship, as well as those bidding as a joint venture, must provide the name of the owner(s). Proponents bidding as societies, firms, or partnerships do not need to provide lists of names. If the required list of names has not been received by the time the evaluation of bids is completed, Canada will inform the Proponent of a time frame within which to provide the information. Failure to provide the names within the time frame specified will render the bid non-responsive. Providing the required names is a mandatory requirement for contract award.

### 3.2 RATED REQUIREMENTS

The evaluation criteria for the Phase One proposal addresses only the previous achievements and experiences of the proposed Consultant Team. No material is to be prepared or presented on the subject project itself. The Phase One proposal provides the opportunity for proponents to present their past work in the context of the proposed project. It is at this time that interested firms submit to PWGSC a history of their accomplishments in order to establish the capabilities of their teams and lead designers as well as other key team members.

#### 3.2.1 Achievements of Proponent on Projects

Describe the Proponent's accomplishments, achievements and experience as prime consultant on DSR projects.

Select a **maximum** of 3 projects undertaken within the last 10 years. Joint venture submissions are not to exceed the maximum number of projects. Only the first 3 projects listed in sequence will receive consideration and any others will receive none as though not included.

##### Information that should be supplied:

- clearly indicate how this project is comparable/relevant to the requested project.
- brief project description and intent. Narratives should include a discussion of design philosophy / approach to meet the intent, design challenges and resolutions.
- budget control and management - i.e. contract price & final construction cost - explain variation
- project schedule control and management - i.e. initial schedule and revised schedule - explain variation
- client references - name, address, phone and fax of client contact at working level - references may be checked
- names of key personnel responsible for project delivery
- awards received

The Proponent (as defined in R1110T General Instructions to Proponents, GI2 Definitions) must possess the knowledge on the above projects. Past project experience from entities other than the Proponent will not be considered in the evaluation unless these entities form part of a joint venture Proponent.

Please indicate those projects which were carried out in joint venture and the responsibilities of each of the involved entities in each project.

#### 3.2.2 Achievements of Key Sub-consultants and Specialists on Projects

Describe the accomplishments, achievements and experience either as prime consultant or in a sub-consultant capacity on projects. If the Proponent proposes to provide multi-disciplinary services which might otherwise be performed by a sub-consultant, this should be reflected here.

Select a **maximum** of 3 projects undertaken within the last 10 years per key sub consultant or specialist. Only the first 3 projects listed in sequence (per key subconsultant or specialist) will receive consideration and any others will receive none as though not included.

**Information that should be supplied:**

- clearly indicate how this project is comparable/relevant to the requested project.
- brief project description and intent. Narratives should include a discussion of design philosophy / approach to meet the intent, design challenges and resolutions.
- budget control and management
- project schedule control and management
- client references - name, address, phone and fax of client contact at working level - references may be checked
- names of key personnel responsible for project delivery
- awards received

**3.2.3 Achievements of Key Personnel on Projects**

Describe the experience and performance of key personnel to be assigned to this project regardless of their past association with the current proponent firm. This is the opportunity to emphasize the strengths of the individuals on the team, to recognize their past responsibilities, commitments and achievements.

**Information that should be supplied for each key personnel:**

- professional accreditation
- accomplishments/achievements/awards
- relevant experience, expertise, number of years experience
- role, responsibility and degree of involvement of individual in past projects

**3.3 EVALUATION AND RATING**

Past experience of the Proponent and the consultant team will be evaluated at the Phase One submission stage and the scores for this evaluation will be carried over to the Phase Two submission.

Phase One proposals which are responsive will be reviewed, evaluated and rated by a PWGSC Evaluation Board in accordance with the following:

Criterion	Weight Factor	Rating	Weighted Rating
Achievements of Proponent	4.0	0 - 10	0 - 40
Achievements of Key Sub-consultants / Specialists	3.0	0 - 10	0 - 30
Achievements of Key Personnel on Projects	3.0	0 - 10	0 - 30
Phase One Rating	10.0		0 - 100

The Phase One rating which is assigned to each responsive proposal in accordance with the procedure outlined in the General Instructions to Proponents is the total weighted rating assigned to the Phase One proposal in accordance with the above table. The Phase One rating is recorded for subsequent inclusion as a percentage of the total score to be established following the evaluation and rating of Phase Two proposals.

### Generic Evaluation Table

PWGSC Evaluation Board members will evaluate the strengths and weaknesses of the Proponent's response to the evaluation criteria and will rate each criterion with even numbers (0, 2, 4, 6, 8 or 10) using the generic evaluation table below:

	INADEQUATE	WEAK	ADEQUATE	FULLY SATISFACTORY	STRONG
0 point	2 points	4 points	6 points	8 points	10 points
Did not submit information which could be evaluated	Lacks complete or almost complete understanding of the requirements.	Has some understanding of the requirements but lacks adequate understanding in some areas of the requirements	Demonstrates a good understanding of the requirements.	Demonstrates a very good understanding of the requirements.	Demonstrates an excellent understanding of the requirements
	Weaknesses cannot be corrected	Generally doubtful that weaknesses can be corrected	Weaknesses can be corrected	No significant weaknesses	No apparent weaknesses
	Proponent do not possess qualifications and experience	Proponent lacks qualifications and experience	Proponent has an acceptable level of qualifications and experience	Proponent is qualified and experienced	Proponent is highly qualified and experienced
	Team proposed is not likely able to meet requirements	Team does not cover all components or overall experience is weak	Team covers most components and will likely meet requirements	Team covers all components - some members have worked successfully together	Strong team - has worked successfully together on comparable projects

	Sample projects not related to this requirement	Sample projects generally not related to this requirement	Sample projects generally related to this requirement	Sample projects directly related to this requirement	Leads in sample projects directly related to this requirement
	Extremely poor, insufficient to meet performance requirements	Little capability to meet performance requirements	Acceptable capability, should ensure adequate results	Satisfactory capability, should ensure effective results	Superior capability, should ensure very effective results

#### **SRE 4 PHASE TWO SUBMISSION REQUIREMENTS AND EVALUATION**

*Intent: The intent of Phase Two evaluation activity is to verify that the submissions meet the mandatory screening requirements, to evaluate and rate the proposals and to recommend contract award to the Proponent with the highest total score.*

##### **4.1 MANDATORY REQUIREMENTS**

Only those submissions from proponents that have met the following requirements will be evaluated and rated by a PWGSC Evaluation Board:

4.1.1 Having submitted a responsive Phase One proposal

4.1.2 Consultant Team Verification submittal of a statement indicating the Consultant Team identified in Phase One is being carried over to Phase Two.

##### **4.2 RATED REQUIREMENTS**

*Intent: The evaluation criteria for the Phase Two proposal addresses the Consultant Team's "understanding of the project" i.e. technical, schedule and estimate requirements, "scope of services" "management of services" and "design philosophy/approach" based on the requirements described in the Project Brief. Past achievements and experience of the Proponent and Key Sub-Consultants are evaluated in Phase One and will not be re-evaluated in Phase Two. The Phase Two Proposal gives the proponents the opportunity to describe what they intend to offer PWGSC in terms of their understanding of the project, scope of services and management of the project.*

The following requirements will be evaluated and rated by a PWGSC Evaluation Board. The price proposal of each Proponent may or may not be opened.



#### **4.2.1 Understanding of the Project:**

The proponent should demonstrate understanding of the goals of the project, the functional/technical requirements, the constraints and the issues that will shape the end product.

##### Information that should be supplied:

- The functional and technical requirements
- Significant issues, challenges and constraints
- Project schedule and cost. Review schedule and cost information and assess risk management elements that may affect the project

#### **4.2.2 Scope of Services:**

The proponent should demonstrate capability to perform the services and meet project challenges and to provide a plan of action.

##### Information that should be supplied:

- Scope of Services - detailed list of services
- Work Plan - detailed breakdown of work tasks and deliverables
- Project schedule - proposed major milestone schedule
- Risk management strategy

#### **4.2.3 Management of Services:**

The Proponent should describe how he /she proposes to perform the services and meet the constraints; how the services will be managed to ensure continuing and consistent control as well as production and communication efficiency; how the team will be organized and how it will fit in the existing structure of the firms; to describe how the team will be managed. The proponent is also to identify sub-consultant disciplines and specialists required to complete the consultant team.

If the Proponent proposes to provide multi-disciplinary services which might otherwise be performed by a sub-consultant, this should be reflected here.

##### Information that should be supplied:

- Confirm the makeup of the full project team including the names of the consultant sub-consultants and specialists personnel and their role on the project.
- Organization chart with position titles and names (Consultant team). Joint Venture business plan, team structure and responsibilities, if applicable
- What back-up will be committed
- Profiles of the key positions (specific assignments and responsibilities)
- Outline of an action plan of the services with implementation strategies and sequence of main activities
- Reporting relationships
- Communication strategies
- Response time: demonstrate how the response time requirements will be met

#### 4.2.4 DSR Philosophy / Approach / Methodology

The proponent should elaborate on aspects of the project considered to be a major challenge which will illustrate design philosophy / approach / methodology. This is the opportunity for the Proponent to state the overall design philosophy of the team as well as their approach of resolving design issues and in particular to focus on the unique aspects of the current project.

Information that should be supplied:

- DSR Philosophy / Approach / Methodology
- Describe the major challenges and how your team approach will be applied to those particular challenges.

#### 4.3 EVALUATION AND RATING

##### 4.3.1 Technical Rating

Phase Two proposals that are responsive (i.e. which meet all the mandatory requirements set out in the RFP) will be reviewed, evaluated and rated by a PWGSC Evaluation Board. In the first instance, price envelopes will remain sealed and only the technical components of the Phase Two proposal will be evaluated in accordance with the following to establish Technical Ratings:

Criterion	Weight Factor	Rating	Weighted Rating
Understanding of the Project - technical, schedule & cost	3.0	0 - 10	0 - 30
Scope of Services	2.0	0 - 10	0 - 20
Management of Services	3.0	0 - 10	0 - 30
Design Philosophy/Approach/Methodology	2.0	0 - 10	0 - 20
Phase Two Technical Rating	10.0		0 - 100

##### Generic Evaluation Table

PWGSC Evaluation Board members will evaluate the strengths and weaknesses of the Proponent's response to the evaluation criteria and will rate each criterion with even numbers (0, 2, 4, 6, 8 or 10) using the generic evaluation table found in the above section 3.3 Evaluation and Rating.

##### 4.3.2 Combined Technical Rating

The Phase One Rating and Phase Two Technical Rating will be combined to establish a Combined Technical Score:

Combined Rating	Possible Range	% of Total Score	Score (Points)
Phase One Rating	0 - 100	30	0 - 30
Phase Two Technical Rating	0 - 100	60	0 - 60
Combined Technical Score		90	0 - 90

To be considered further, proponents **must** achieve a minimum Combined Technical Score of forty-five (45) points out of the ninety (90) points available as specified above.

**No further consideration will be given to proponents not achieving the pass mark of forty-five (45) points.**

## SRE 5 PRICE OF SERVICES

All price proposal envelopes corresponding to responsive proposals which have achieved the pass mark of forty-five (45) points will be opened upon completion of the technical evaluation. An average price is determined by adding all the price proposals together and dividing the total by the number of price proposals being opened.

All price proposals which are greater than twenty-five percent (25%) above the average price will be set aside and receive no further consideration.

The remaining price proposals are rated as follows:

- A. The lowest price proposal receives a Price Rating of 100
- B. The second, third, fourth and fifth lowest prices receive Price Ratings of 80, 60, 40, and 20 respectively. All other price proposals receive a Price Rating of 0.
- C. On the rare occasions where two (or more) price proposals are identical, the matching price proposals receive the same rating and the corresponding number of following ratings are skipped.

The Price Rating is multiplied by the applicable percentage to establish the Price Score.

## SRE 6 TOTAL SCORE

Total Scores will be established in accordance with the following:

Rating	Possible Range	% of Total Score	Score (Points)
Phase One Rating	0 - 100	30	0 - 30
Phase Two Technical Rating	0 - 100	60	0 - 60
Price Rating	0 - 100	10	0 - 10
Total Score		100	0 - 100

The Proponent receiving the highest Total Score is the first entity that the Evaluation Board will recommend for the provision of the required services. In the case of a tie, the proponent submitting the lower price for the services will be selected.

## **SRE 7 SUBMISSION REQUIREMENTS - CHECKLIST**

The following list of documents and forms is provided with the intention of assisting the Proponent in ensuring a complete submission. The Proponent is responsible for meeting all submission requirements.

Please follow detailed instructions in R1110T General Instructions to Proponents, GI16 Submission of Proposal. Proponents may choose to introduce their submissions with a cover letter.

### **PHASE ONE:**

- Team Identification - see typical format in Appendix A
- Declaration/Certifications Form - completed and signed - form provided in Appendix B
- Proposal - one (1) original plus five (3) bound copies
- Integrity Provisions - list of directors / owners
- Integrity Provisions - declaration form (as applicable, pursuant to subsection Declaration of Convicted Offences, of section 01 of the General Instructions)

### **PHASE TWO:**

- Verification of Team - confirmed Phase One team identification information
- Proposal - one (1) original plus five (3) bound copies
- Front page of RFP
- Front page(s) of any solicitation amendment

In a separate envelope:

- Price Proposal Form - one (1) completed and submitted in a separate envelope

Solicitation No. - N° de l'invitation  
F1700-150449/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
tpv026

Client Ref. No. - N° de réf. du client  
F1700-150449

File No. - N° du dossier  
TPV-5-38120

CCC No./N° CCC - FMS No./N° VME

---

## **PROJECT BRIEF**

### **DESCRIPTION OF PROJECT**

- PD 1 Project Information
- PD 2 Project Identification
- PD 3 Project Background
- PD 4 Existing Documentation
- PD 5 Project Objectives
- PD 6 Consultant Services

### **Description of Services**

- PA 1 Project Administration

### **Required Services**

- RS 1 DSR & OMS Development

## PD 1 PROJECT INFORMATION

Public Works and Government Services Canada (PWGSC) intends to retain a firm of geotechnical, civil, structural, mechanical, and electrical engineers for the provision of the services required for this project.

1.1 PWGSC Project Title:  
Fulton Lake Dam Safety Review

1.2 Location of the Project:  
The Fulton Lake Dam is located on the Fulton River Spawning Channel grounds, between Granisle and Topley in Northern British Columbia.

Fulton River Spawning Channel:

Address: PO Box 9, Granisle, BC

Lat/Long: 54.8157684,-126.1674854

Directions: From Highway 16 turn onto Highway 118 North for 40km. Destination is on the right.

1.3 Client / User:  
Fisheries and Oceans Canada (DFO) – Pacific Region Technical Support Group

1.4 DFO Project Manager/Departmental Representative:  
*Provided at Contract Award*

## PD 2 PROJECT IDENTIFICATION

Fisheries and Oceans Canada (DFO) is requesting submissions from experienced and qualified firms to conduct a comprehensive Dam Safety Review (DSR) on the following dam in 2015/2016:

- Fulton Lake Dam – A high consequence concrete gravity dam located between Topley and Granisle in British Columbia.

The DSR must meet the requirements of the BC Dam Safety Regulation and follow the APEGBC Professional Practice Guidelines for Legislated Dam Safety Reviews in BC. The Qualified Professional should utilize the Canadian Dam Association Dam Safety Guidelines (2013 Edition) as the principle source of standard engineering practice for dam safety.

2.1 Description  
The goal of this Dam Safety Review is to evaluate the current safety and management of Fulton Lake Dam, considering its design, construction, operation, maintenance, and surveillance activities compared to current standards and practices.

This Project will be separated into three (3) tasks:

Task 1 – Comprehensive Dam Safety Review of Fulton Lake Dam

Task 2 – Review and update Dam Operation, Maintenance and Emergency Procedures Manual

### Task 3 – Final report signed and sealed by professional engineer (hard and digital format)

The DSR is to cover the following components (detailed description of the components and their locations can be found in **Section 2.0** of the *2010 Dam Operation, Maintenance and Emergency Procedures Manual*):

- Dam Structure
  - Dam
  - Spillway
- Dam Outlet Works
  - Upper and lower Gates and hoist
  - Trash racks
- Intake Regulating Works
  - Service gate and hoist
  - Control Gates
  - Bulkhead Gates
  - Monorail Hoist
  - Bypass intake pipe
  - Bypass slide gate and hoist
  - Trash racks
- Regulating Tunnel and Outlet
  - Regulating tunnel
  - Cone Valves
- Water Supply Tunnel, Pipeline and Valves
  - Tunnel
  - Pipeline
  - Valves
  - Pipeline trestle

In addition to a comprehensive (mechanical, electrical, visual) investigation of the above components the DSR is to include, but is not limited to, the following investigations and analysis:

- Geotechnical Assessment
  - The stability analysis for static, flood and seismic loading condition needs to be refined further to meet the requirements of the Dam Safety Guidelines (2013 Edition)
- Pipeline Alignment Assessment
  - Conduct a baseline survey of the trestle supported section of the water supply pipeline;
  - Evaluate the structural design of the trestle to determine stability under seismic loading and the potential for lateral displacement

### 3.1 Scope of Work

#### **Phase 1 – Review of Available Information and Data**

The project will commence with a start-up meeting (teleconferencing is possible) to verify the particular areas to be covered by the DSR and the roles and responsibilities of the owner and the Qualified Professional.

The DSR Engineer (and other Engineering support) is expected to:

- Review the available information and data. Documents to be reviewed include but may not be limited to:
  - Design and/or As-built Drawings
  - Operation, Maintenance & Surveillance (OMS) Manual;
  - Emergency Preparedness and/or Emergency Response Plans;
  - Surveillance reports and memos;
  - Dam Safety Review Reports;
  - Hydrological and Flow records;
- Review past reports and studies to ensure that all past recommendations and issues have been properly documented and addressed.
- Determine where the gaps in available information are. Prioritize the missing information and determine whether additional effort needs to be made to obtain some of the missing information.
- Review the failure consequence classification to determine if it appears to be appropriate. Identify performance expectations, including flood and earthquake criteria (based on failure consequence classification).
- Identify all possible hazards and their associated failure modes of the dam, based on an examination of available information. Discuss the chosen hazards and failure modes methodology with the Departmental Representative. From the understanding of hazards and associated failure modes, the existing safety management of the dam shall be evaluated in terms of its adequacy and currency against a set of pre-defined principles.

At the end of Phase 1, the Qualified Professional is expected to:

- Have acquired sufficient knowledge and understanding of the dam to identify the hazards and failure modes applicable to the dam in question and to draft a "Hazards and Failures Modes Matrix" (or equivalent) specific to the dam, documenting the reasons why certain hazards and failure modes would not apply;
- Be ready to conduct technical review meetings with the Departmental Representative.
- Identify and discuss with the dam owner any changes to the scope of the DSR that need to be made as a result of this phase of work.



## **Phase 2 – Field Review**

- Carry out field review(s) of the dam, the reservoir, and the portions of the river both upstream and downstream of the dam and reservoir to understand the condition of the dam and appurtenances, the flow control equipment, the instrumentation, the reservoir environment, upstream hydrological impacts, and the development downstream of the dam.
- The Qualified Professional and other personnel conducting the field review are expected to provide all of their own safety equipment (including hard hat, steel-toed boots, safety glasses, reflective vest and if required, fall protection harness) for the field review, unless specified in the proposal.
- Interview the operating personnel who: conduct routine surveillance and inspections; read the instrumentation; test the outlet facilities, spillway gates and other mechanical components; and maintain the dam.
- Audit the documentation that should be at site (e.g., OMS, EPP, operation and maintenance records, and perhaps others).
- Witness the testing of the flow control equipment or if the flow control equipment is routinely and regularly used, satisfy himself/herself that the equipment is in good working order.
- Identify and discuss with the dam owner any changes to the scope of the DSR that need to be made as a result of this phase of work.

## **Phase 3 – Investigation & Evaluation**

- Conduct any field and/or laboratory investigation or modelling analysis that was included in the original scope of work, or was added to the scope of the work as a result of the work done in Phases 1 & 2.
- Confirm that the failure consequence classification is correct or revise accordingly.
- Determine the dam safety expectations that this dam is expected to meet. (See “Dam Safety Expectations & Definitions of Deficiencies and Non-Conformances” on our website).
- Based on these expectations determine the actual and potential deficiencies and non-conformances that prevent these expectations from being met. Perform any stability, seepage or other analyses required to make these determinations. The DSR Report should be comprehensive and indicate whether or not the dam conforms to each applicable dam safety expectation.
- Summarize and prioritize the dam safety deficiencies and non-conformances. If the available information is not adequate to draw such a conclusion, then the inadequacy of information should be noted.

- Identify any additional dam safety requirements needed to enhance risk management and lower the risks to as low as reasonably possible.
- Make significant progress in the review and revision of the Fulton River Dam Operations, Maintenance and Emergency Action Plan Manual
- Make significant progress in the preparation of a Draft Report. In addition to addressing the foregoing requirements, the report should also include recommendations for dam safety improvements, further investigation of deficiencies, further studies to correct information gaps, and any other appropriate actions to improve dam safety.

At the end of Phase 3, the Qualified Professional is expected to:

- Have obtained all the information required to complete the DSR Report.
- Have completed 90% of the Draft Report and the Operations, Maintenance, and Emergency Action Plan Manual
- Made a verbal presentation, summarizing findings, to the Departmental Representative.

#### **Phase 4 – Finalize Report and Manual**

In Phase 4, the Qualified Professional is expected to:

- Complete the Draft Report;
- Complete the revisions of the Operations, Maintenance, and Emergency Action Plan Manual;
- Within 3 weeks of making the verbal presentation submit one hard copies and/or one electronic copy of the Draft Report and Manual to the Departmental Representative for review;
- Address all of the Departmental Representatives comments when preparing the Final Report and Manual;
- Within 4 weeks of receiving the Departmental Representatives comments complete the DSR's deliverables;
- Provide comments, if any, on improvements to the owner's DSR process.

#### **Deliverables**

The Qualified Professional shall submit:

- Hard Copies
  - o 2 bound copies of the final DSR report & the Dam Safety Review Assurance Statement
  - o 2 bound copies of the Operations, Maintenance, and Emergency Action Plan Manual

- An unbound original of the final DSR report and the Dam Safety Review Assurance Statement.
- Electronic Copy
  - One, copiable, complete electronic copy of the final DSR report including all figures, drawings, appendices and the Dam Safety Review Assurance Statement.
  - One, copiable, complete electronic copy of the final Operations, Maintenance, and Emergency Action Plan Manual including all figures, drawings, appendices.
  - All electronic files shall be submitted, with appropriate "readme" files.
  - Return all documents borrowed for the DSR study to the Departmental Representative

Quality assurance of the final DSR report will be the responsibility of the Qualified Professional and their associated consulting firm.

All calculations and assumptions shall be presented in sufficient detail that they be fully reviewed and then relied upon by the next DSR Qualified Professional so that they do not need to be redone.

## 2.3 Schedule

- .1 This service contract will run until December 1st, 2016.
- .2 It is expected that the DSR will be carried out in phases as shown in the following table.

**Table 1 – Approximate Schedules of the Dam Safety Review(s)\***

Phase	Description	Fulton Dam
1	Review of Available Information and Data	<i>August 2015</i>
2	Field Review	<i>August 2015 to August 2016**</i>
3	Investigation and Evaluation	<i>September 2015 to June 2016**</i>
	Present Findings to Owner	<i>July 2016</i>
4	Finalize Report	<i>October 2016</i>

\* Alternative schedules proposals may be considered.

\*\* Site visits timing requires coordination with the Departmental Representative. Certain investigation and evaluation components are dependent on water levels. Redundancy has been built in the schedule to accommodate.

### **PD 3 PROJECT BACKGROUND**

The Fulton Lake dam was constructed in 1968 to store water for the Fulton River Spawning Channel facility operated by DFO. The Fulton River spawning Channel is the largest man-made spawning channel in the world. Producing a large number of sockeye fry for the Babine Lake system. The 17m high concrete dam allows for a regulated water supply to the downstream channels, with a live storage volume of 9,400 hectare-metres. A detailed description of the components and their locations can be found in **Section 2.0** of the 2010 Dam Operation, Maintenance and Emergency Procedures Manual.

The dam has been the subject of previous investigations and dam safety reviews, most recently in 2007/2008 and prior to that 1997. The documentation of the most recent reviews is available on request. The background documentation will be provided for general information only. It is not to be copied and must be returned to the Departmental Representative by the closing date of this RFP.

### **PD 4 EXISTING DOCUMENTATION**

#### **4.1 Access to documentation for Proponents**

Reports constituting the 2007/2008 DSR:

1. Fulton Dam Inspection – Issued to DFO February 2008 by EBA Engineering
2. Water Supply Tunnels & Related Facilities Inspection – Issued to DFO January 2008 by EBA Engineering
3. Mechanical and Electrical Equipment Inspection – Issued to DFO January 2009 by Klohn Crippen Berger
4. Hydrotechnical Assessment – Issued to DFO March 2009 by Hay & Company Consultants

O&M Manuals:

1. Fulton Lake Dam Operations, Maintenance and Emergency Procedures Manual – Revised August 2010 by DFO

### **PD 5 PROJECT OBJECTIVES**

Provincial legislation requires that DSRs be carried out by a Professional Engineer in British Columbia qualified in dam safety analysis (a Qualified Professional). The legislation also requires that the Qualified Professional conclude the DSR by providing their professional opinion regarding the safety of the dam.

A dam safety review involves a systematic review and evaluation of all aspects of the design, construction, operation, maintenance, processes and systems affecting a dam's safety, including the dam safety management system. The evaluation of the safety of the dam system for the dam safety review must use the current knowledge and standards for dam engineering. The Qualified Professional should carry out the dam safety review in sufficient detail that the

conclusions reached and recommendations arising out of the dam safety review can be made with the necessary degree of confidence.

The DSR must meet the requirements of the BC Dam Safety Regulation and follow the APEGBC Professional Practice Guidelines for Legislated Dam Safety Reviews in BC. The Qualified Professional should utilize the Canadian Dam Association Dam Safety Guidelines (2013 Edition) as the principle source of standard engineering practice for dam safety.

The final products of the DSR are a comprehensive:

- revision of the Fulton River Dam Operations, Maintenance and Emergency Action Plan Manual
- report and a Dam Safety Review Assurance Statement which provides the Qualified Professional's opinion regarding the safety of the dam

The Dam Safety Review Assurance Statement will state either:

- The dam is reasonably safe and that the dam safety review did not reveal any unsafe or unacceptable conditions in relation to the design, construction, maintenance and operation of the dam; or
- The DSR revealed deficiencies or non-conformances. In this case the Assurance Statement will need to conclude whether the dam is reasonably safe or not safe. It will also need to identify any urgent actions that are required.

Any deficiencies or non-conformances revealed are to be documented in the DSR report.

## 5.1 Quality

### 5.1.1 Design Principles – General

The Department expects the Consultant to maintain a high standard of engineering design, based upon recognized contemporary design principles. All design elements, planning, and engineering, must be fully co-ordinated, and consistent in adherence to good design principles.

The department expects the Dam Safety Review be carried out by an individual Qualified Professional or by a team of people under the direction of a Lead Qualified Professional:

- The role of the Qualified Professional in this DSR is laid out in Section 2.2.2 of the APEGBC DSR Professional Practice Guidelines for Dam Safety Reviews.
- The Qualified Professional must have the education, training, experience and professional registration as laid out in Section 5.0 of the APEGBC Professional Practice Guidelines.
- The Qualified Professional must not have participated in the design, construction or safety management (including surveillance, inspections, deficiency investigations and/or capital improvement projects) of this dam. Note that it may be appropriate for the same

company to do the DSR as has done previous work connected to the dam, but the Qualified Professional must not have participated in that work.

The Qualified Professional is expected to direct, and be involved throughout, all phases of the Dam Safety Review process.

If additional support, such as technical specialist consultation, quality assurance and word processing from others is required, these shall be indicated in the Proposal.

Include the CV of the Qualified Professional, and the CV's of all other key personnel that will work on this DSR.

**5.2 Code Compliance**

Codes, regulations, by laws and decisions of "authorities having jurisdiction" will be observed. In cases of overlap, the most stringent will apply. The Consultant shall identify other jurisdictions appropriate to the project.

**5.3 Risk Management**

A risk management strategy is crucial for PWGSC Project Management and integrates project planning into procurement planning. All the stakeholders of a project will be an integral part of the risk management strategy, culminating in an integrated product team. Specific services required for project delivery are outlined in Required Services.

**5.4 Health and Safety**

Public Works and Government Services Canada (PWGSC), recognizes the responsibility to ensure the health and safety of all persons on Crown construction projects and the entitlement of both federal employees and private sector workers to the full protection afforded them by occupational health and safety regulations.

In keeping with the responsibility and in order to enhance health and safety protection for all individuals on federal construction sites, PWGSC will voluntarily comply with the applicable provincial/territorial construction health and safety acts and regulations, in addition to the related Canada Occupational Safety and Health Regulations.

**PD 6 CONSULTANT SERVICES**

The consultant team for this project must be capable of providing the following services:

- geotechnical engineering
- structural engineering
- civil engineering
- mechanical engineering
- electrical engineering
- risk management

## DESCRIPTION OF SERVICES

### PA 1 PROJECT ADMINISTRATION INTENT

The following administrative requirements apply during all phases of project delivery.

#### 1.1 PWGSC Project Management

The Project Manager assigned to the project is the Departmental Representative.

The Project Manager is the Departmental officer directly concerned with the project and responsible for its progress. The Project Manager is the liaison between the Consultant, Public Works and Government Services Canada and the Client Departments.

DFO administers the project and exercises continuing control over the Consultant's work during all phases of development. Unless directed otherwise by the Project Manager, the Consultant obtains all Federal requirements and approvals necessary for the work.

#### 1.2 General Project Deliverables

Where deliverables and submissions include summaries, reports, drawings, plans or schedules, two (2) hard copies shall be provided plus one (1) copy shall be provided in electronic format unless otherwise specified.

#### 1.3 Lines of Communication

Unless otherwise arranged with Project Manager, the Consultant shall communicate with the Project Manager only. There shall be no direct official contact between client departments and the Consultant.

During construction tender call, Public Works and Government Services Canada conducts all correspondence with bidders and makes the contract award.

#### 1.4 Media

The consultant shall not respond to requests for project related information or questions from the media. Such inquiries are to be directed to the Project Manager.

#### 1.5 Meetings

The Project Manager shall arrange meetings throughout the entire project development period, for all members of project team, including representatives from:

- Department of Fisheries and Oceans  
Consultants
- The Consultant shall attend the meetings, record the issues and decisions and prepare and distribute minutes within 72 hours of the meeting.

#### 1.6 Project Response Time

It is a requirement of this project that the key personnel of the successful proponent and sub consultant or specialist firms be personally available to attend meeting or respond to inquiries within 3 days.

## **RS 1 DSR & OMS DEVELOPMENT**

### **1. INTENT**

The goal of this Dam Safety Review is to evaluate the current safety and management of Fulton Lake Dam, considering its design, construction, operation, maintenance, and surveillance activities compared to current standards and practices.

### **2. GENERAL**

The Consultant is responsible for the following tasks:

#### **Phase 1 – Review of Available Information and Data**

The project will commence with a start-up meeting (teleconferencing is possible) to verify the particular areas to be covered by the DSR and the roles and responsibilities of the owner and the Qualified Professional.

The DSR Engineer (and other Engineering support) is expected to:

- Review the available information and data. Documents to be reviewed include but may not be limited to:
  - o Design and/or As-built Drawings
  - o Operation, Maintenance & Surveillance (OMS) Manual;
  - o Emergency Preparedness and/or Emergency Response Plans;
  - o Surveillance reports and memos;
  - o Dam Safety Review Reports;
  - o Hydrological and Flow records;
- Review past reports and studies to ensure that all past recommendations and issues have been properly documented and addressed.
- Determine where the gaps in available information are. Prioritize the missing information and determine whether additional effort needs to be made to obtain some of the missing information.
- Review the failure consequence classification to determine if it appears to be appropriate. Identify performance expectations, including flood and earthquake criteria (based on failure consequence classification).
- Identify all possible hazards and their associated failure modes of the dam, based on an examination of available information. Discuss the chosen hazards and failure modes methodology with the Departmental Representative. From the understanding of hazards and associated failure modes, the existing safety management of the dam shall be evaluated in terms of its adequacy and currency against a set of pre-defined principles.

At the end of Phase 1, the Qualified Professional is expected to:

- Have acquired sufficient knowledge and understanding of the dam to identify the hazards and failure modes applicable to the dam in question and to draft a “Hazards and Failures Modes Matrix” (or equivalent) specific to the dam, documenting the reasons why certain hazards and failure modes would not apply;
- Be ready to conduct technical review meetings with the Departmental Representative.



- Identify and discuss with the dam owner any changes to the scope of the DSR that need to be made as a result of this phase of work.

## **Phase 2 – Field Review**

- Carry out field review(s) of the dam, the reservoir, and the portions of the river both upstream and downstream of the dam and reservoir to understand the condition of the dam and appurtenances, the flow control equipment, the instrumentation, the reservoir environment, upstream hydrological impacts, and the development downstream of the dam.
- The Qualified Professional and other personnel conducting the field review are expected to provide all of their own safety equipment (including hard hat, steel-toed boots, safety glasses, reflective vest and if required, fall protection harness) for the field review, unless specified in the proposal.
- Interview the operating personnel who: conduct routine surveillance and inspections; read the instrumentation; test the outlet facilities, spillway gates and other mechanical components; and maintain the dam.
- Audit the documentation that should be at site (e.g., OMS, EPP, operation and maintenance records, and perhaps others).
- Witness the testing of the flow control equipment or if the flow control equipment is routinely and regularly used, satisfy himself/herself that the equipment is in good working order.
- Identify and discuss with the dam owner any changes to the scope of the DSR that need to be made as a result of this phase of work.

## **Phase 3 – Investigation & Evaluation**

- Conduct any field and/or laboratory investigation or modelling analysis that was included in the original scope of work, or was added to the scope of the work as a result of the work done in Phases 1 & 2.
- Confirm that the failure consequence classification is correct or revise accordingly.
- Determine the dam safety expectations that this dam is expected to meet. (See “Dam Safety Expectations & Definitions of Deficiencies and Non-Conformances” on our website).
- Based on these expectations determine the actual and potential deficiencies and non-conformances that prevent these expectations from being met. Perform any stability, seepage or other analyses required to make these determinations. The DSR Report should be comprehensive and indicate whether or not the dam conforms to each applicable dam safety expectation.

- Summarize and prioritize the dam safety deficiencies and non-conformances. If the available information is not adequate to draw such a conclusion, then the inadequacy of information should be noted.
- Identify any additional dam safety requirements needed to enhance risk management and lower the risks to as low as reasonably possible.
- Make significant progress in the review and revision of the Fulton River Dam Operations, Maintenance and Emergency Action Plan Manual
- Make significant progress in the preparation of a Draft Report. In addition to addressing the foregoing requirements, the report should also include recommendations for dam safety improvements, further investigation of deficiencies, further studies to correct information gaps, and any other appropriate actions to improve dam safety.

At the end of Phase 3, the Qualified Professional is expected to:

- Have obtained all the information required to complete the DSR Report.
- Have completed 90% of the Draft Report and the Operations, Maintenance, and Emergency Action Plan Manual
- Made a verbal presentation, summarizing findings, to the Departmental Representative.

#### **Phase 4 – Finalize Report and Manual**

In Phase 4, the Qualified Professional is expected to:

- Complete the Draft Report;
- Complete the revisions of the Operations, Maintenance, and Emergency Action Plan Manual;
- Within 3 weeks of making the verbal presentation submit one hard copies and/or one electronic copy of the Draft Report and Manual to the Departmental Representative for review;
- Address all of the Departmental Representatives comments when preparing the Final Report and Manual;
- Within 4 weeks of receiving the Departmental Representatives comments complete the DSR's deliverables;
- Provide comments, if any, on improvements to the owner's DSR process.

## **Deliverables**

The Qualified Professional shall submit:

- Hard Copies
  - 2 bound copies of the final DSR report & the Dam Safety Review Assurance Statement
  - 2 bound copies of the Operations, Maintenance, and Emergency Action Plan Manual
  - An unbound original of the final DSR report and the Dam Safety Review Assurance Statement.
- Electronic Copy
  - One, copiable, complete electronic copy of the final DSR report including all figures, drawings, appendices and the Dam Safety Review Assurance Statement.
  - One, copiable, complete electronic copy of the final Operations, Maintenance, and Emergency Action Plan Manual including all figures, drawings, appendices.
- All electronic files shall be submitted, with appropriate “readme” files.
- Return all documents borrowed for the DSR study to the Departmental Representative

Quality assurance of the final DSR report will be the responsibility of the Qualified Professional and their associated consulting firm.

All calculations and assumptions shall be presented in sufficient detail that they be fully reviewed and then relied upon by the next DSR Qualified Professional so that they do not need to be redone.