

Request for Proposal

For

13 Island Lake Dam Replacement Design

In the Quinte Conservation Watershed



Requested by Quinte Conservation Authority
Jun 16, 2021

RFP Contact:
Mike Smith

msmith@quinteconservation.ca

Closing:
Wed, July 7th, 2021 at 12:00 pm

Quinte Conservation
RR#2
2061 Old Highway 2
Belleville, ON
K8N 4Z2

Introduction

Quinte Conservation (QC) comprises the Moira River, Napanee Region and Prince Edward Region watersheds and owns and operates approximately 40 dams within the jurisdiction. One such dam is the 13 Island Lake Dam. In 2018, dam operators, internal engineering inspections, and the public identified this structure as having an imminent risk of failure as evident by the unpredictable development of sinkholes within the structure. The structure is in poor condition and is need of repair or replacement.

The Quinte Conservation Authority (QCA) invites proposals from qualified firms for **Consulting Services to complete the Detailed Design for the Removal, Rehabilitation or Replacement of the 13 Island Lake Dam.**

Background

Thirteen Island Lake Dam is located at the outlet of Thirteen Island Lake in the Township of South Frontenac. The dam was constructed in 1975 to maintain optimal summer recreational water levels on Thirteen Island Lake. The dam is 1.83 meters high and contains four (4) corrugated steel culverts (each 1.22 meters in diameter), a concrete abutment and cutoff wall, a rock fill embankment, and removable panels which are used to adjust the water level in the lake. The embankment has a gravel crest which acts as a private roadway connecting Hamilton Lane to approximately twelve (12) lakefront properties. The dam is the only road access to the properties.

Significant deterioration of the steel culverts has been documented during annual engineering inspections. The culverts have rusted through in many locations, often near the water line. Water has been observed flowing through the holes of the culverts. In the past two years, sinkholes, with a 16" surface opening, have developed in the gravel road way on top of the structure. The sinkholes are located on the upstream side of the crest and they continue diagonally into the embankment downstream for 3'. Erosion has been noted on the downstream face of the embankment between the culvert outlets. The sinkholes develop unexpectedly and are often brought to the attention of Quinte Conservation by the local residents. The sinkholes pose a risk to the stability of the dam and a public safety concern as a result of insufficient access and egress for those relying on the dam for property access.

Scope of Work.

Consultants are responsible to scope the Project to determine appropriate additional investigations, additional analysis and documentation to ensure an appropriate design and approval at the end of the study. The Consultant shall complete, but not necessarily be limited to, the following activities:

- 1) Review the available background information and reports. Collect any necessary additional environmental and/or site data to complete any required additional analysis for detailed design. Conduct an environmental assessment if required.
- 2) Determine whether the dam could be repaired, replaced or removed. Provide a report, drawings, cost estimates and an implementation schedule for the different methods. Present findings to QC to select final method.

- 3) Provide a final detailed design report, tender drawings, tender documents, cost estimates and an implementation schedule including any property requirements for the final
- 4) Respond to inquiries and potential comments from Provincial Ministries and others as required;

Available Data

Quinte Conservation will make available all the documentation pertinent to the dams. To this end we have completed a preliminary review of the documents and find the reports listed below may be of some assistance. The consultant is directed to include an allocation of one day for an engineer to review our files to determine if any further engineering reports may be available.

Known Reports or Data

- Pre-Engineering Study – Totten Sims Hubicki Associates Ltd, 1971
- Original Construction Drawings – Ministry of Natural Resources, 2975
- Inspection Reports – 1989, 1997, 2013, 2017, 2018
- Dam Operation Manual – Napanee Region Conservation Authority, 1994
- Photos & Sketches – Various Dates
- Water Level Records – QC, 1982 to 2016

Deliverables

Format, size and quantities

Reports, charts, tables and other documents are to be provided in Microsoft Office format and in Adobe Acrobat portable document format (.pdf). Specifically, a PDF version of the complete report and a PDF version of the Executive Summary are required. Spreadsheets shall be provided in Microsoft Excel format.

All photographs documenting any field investigations shall be taken using a high resolution digital camera. All photographs are to be provided both in an original unedited form and annotated with the photo description. The reports shall contain colour copies of the annotated photographs. Copies shall be printed with no more than two (2) photographs per page.

All drawings submitted under this contract are to be prepared in AutoCAD and comply with owner approved standards and conventions for drawing size, surround, layering, line weights, etc. The final drawings are to be provided in hard copy bound with the report and electronically in AutoCAD and Adobe Acrobat portable document format (pdf).

The data and electronic version of the report are to be organized into appropriate directories and subdirectories, and a "README" file(s) included to assist the reader in locating and using the data. A copy of this CD-ROM or USB mass storage device is appended to each bound copy of the report.

Two, bound, hard copies of the reports OR a softcopy are to be provided.

Dam Drawings

Drawings to be provided in AutoCAD and PDF format.

Meetings

Meetings shall be held with QC at key points throughout the study. More specifically, meetings will be required at the following junctures.

1. A start-up meeting will be required to confirm the study methodology, schedule, etc.
2. A meeting will be required to present the various design options.
3. A meeting will be required at the end of the study to present the draft reports.

The consultant will be responsible for recording minutes of all meetings and distributing to QC in a timely fashion.

All meetings will be at a mutually agreed location (i.e. at the conservation authority office, dam site or at the consultant's office). The consultant will provide adequate meeting facilities and equipment if it is decided that the meeting is to be held at the offices of the consultant.

Schedule and Reporting

The consultant shall submit with their proposal a schedule demonstrating their ability to complete the project in a timely fashion.

The successful consultant will be notified within one week of tender closing.

Progress updates and invoices for the project must be submitted by:

- Sep 14, 2021 (Design Meeting Update and invoice)
- Nov 2, 2021 (draft report and invoice)
- Nov 30, 2021 (final report and invoice)

Proposal Requirements

The proposal shall meet the following requirements:

- not exceed seven (7) pages in length, excluding experience records and references
- detail the approach and methodology
- provide the primary contact person and phone number and people involved in the preparation of the proposal
- a list of key staff, their related experience in Ontario and role on this project
- gantt chart schedule showing activities, meetings, deliverable submission, etc.
- corporate experience on similar projects in Ontario and elsewhere
- sub-consultants to be used, their role, corporate experience in Ontario, key personnel, per diem rates

- Three (3) references and their contact information for similar projects
- estimated project cost for each component, the time commitment and hourly rate for each staff assigned to the project, any disbursement, the total time allocated to each task, the total time allocated to each staff, and the total cost excluding HST. Contingency items shall be reported separately.
- project consulting base fee and contingency fee to be used as a ceiling (upset) limit

Any questions regarding the Request for Proposal should be emailed to msmith@quinteconservation.ca with the subject "13 Island Lake Dam Design Questions" by 12:00pm on Monday, June 28, 2021. An addendum synthesizing all questions and the responses will be available on the Quinte Conservation website no later than Wednesday, Jun 30, 2021.

Quinte Conservation will not be liable nor reimburse any bidder for any costs incurred in the preparation of the proposal.

Proposals shall remain valid for at least 2 months from the Proposal closing date.

Those submitting a proposal must satisfy themselves of the conditions and requirements. There will be no consideration of any claim that there was a misunderstanding with respect to conditions and terms of reference.

Responses to this request will be treated confidentially.

Upon completion of evaluations, Quinte Conservation may select a consultant with whom it wishes to undertake negotiations regarding the work outlined in the Request for Proposal. Negotiations may take the form of adding, deleting, or modifying certain requirements based on that consultant's response to the Request for Proposal and adjusting pricing accordingly if required.

Proposal Closing

Two (2) copies of the proposal shall be submitted no later than Wed, July 7th, 2021 at 12:00 pm

Copies of the proposals shall be delivered to:

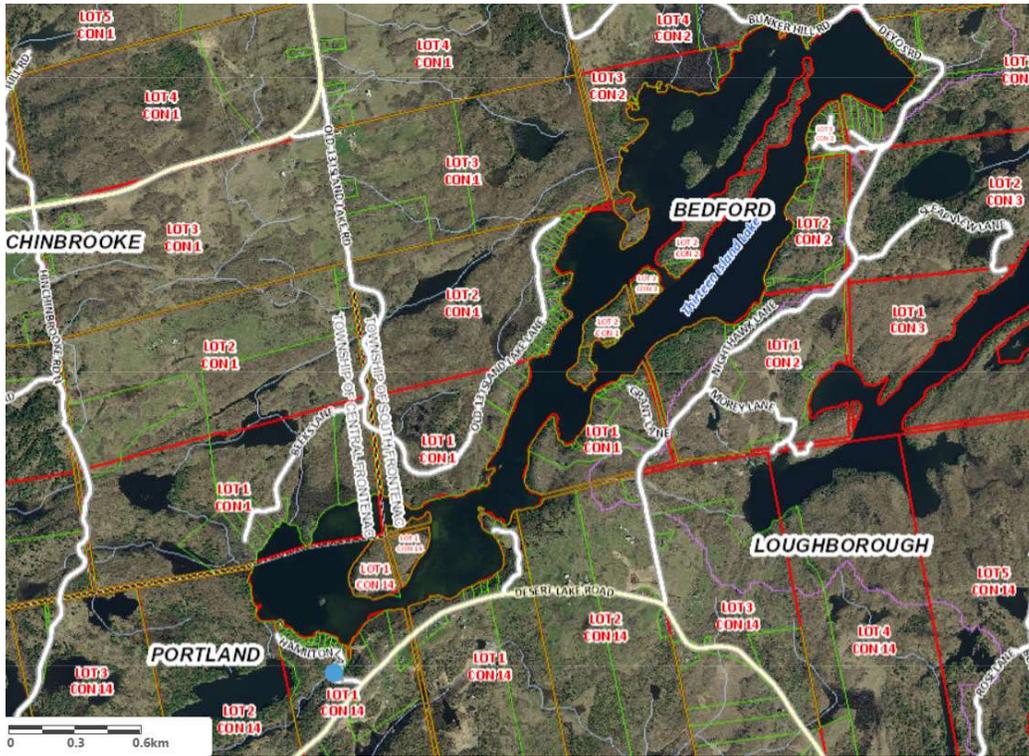
Attention: Mike Smith
Quinte Conservation
2061 Old Highway 2
RR2, Belleville, ON
K8N 4Z2

Selection Criteria

QC will select the successful consultant based on an assessment of the submitted proposals based on criteria such as meeting the project requirements, project team experience, project cost and relevant added value. The proposal with the lowest bid may not necessarily be accepted.

Prior to issuance of the contract a Certificate of Clearance from the Workplace Safety and Insurance Board and proof of \$2 million liability insurance is required.

Appendix A: Map of structure



Appendix B: Photos of structure

