

# City of Terrace

Request for Proposals  
Kitsumkalum River Flood Mitigation Plan  
Issue Date: November 2, 2021



**Closing Date: December 6, 2021**

City of Terrace  
5003 Graham Avenue  
Terrace, BC V8G 1B3

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# CONTENTS

1. INTRODUCTION.....	2
2. STUDY AREA.....	2
3. PROJECT DETAILS.....	4
a) Overview.....	4
b) Budget.....	4
c) Objectives.....	4
d) Meetings and Project Updates.....	5
e) Field Work and Remote Assessment.....	5
f) Review Past Work.....	5
g) Mapping & Concept Designs.....	6
4. DELIVERABLES.....	6
5. PROJECT SCHEDULE.....	7
6. REQUEST FOR PROPOSALS PROCESS.....	7
a) Enquiries.....	7
b) Closing Date.....	7
c) Proposal Requirements.....	8
d) Proposal Specifications.....	8
7. SPECIAL CONDITIONS.....	8
a) Acceptance of Proposals and Award of Contract.....	8
b) Liability for Errors.....	9
c) Ownership of RFPs and Freedom of Information.....	9
d) Use of Request for Proposals.....	9
e) Confidentiality of Information.....	9
f) Indemnity.....	9
g) Insurance.....	9

## 1. INTRODUCTION

The City of Terrace (the City) is seeking submissions from qualified professional consulting firms with proven experience to create a “Kitsumkalum River Flood Mitigation Plan”. Terrace is a vibrant and growing community of approximately 12,000 people, located in Northwest British Columbia. The City of Terrace exists on unceded Tsimshian Territories that have been occupied for thousands of years. The City is adjacent to the Kitselas and Kitsumkalum First Nations communities.

In the summer of 2017, staff were made aware of a significant slope failure on the City’s western boundary adjacent the Kitsumkalum River. The existing erosion activity has raised concern of potential impact to property, land, and public infrastructure due to the result of changing river flow patterns and migration of the river’s main channel, increase in channel velocity and high flood waters.

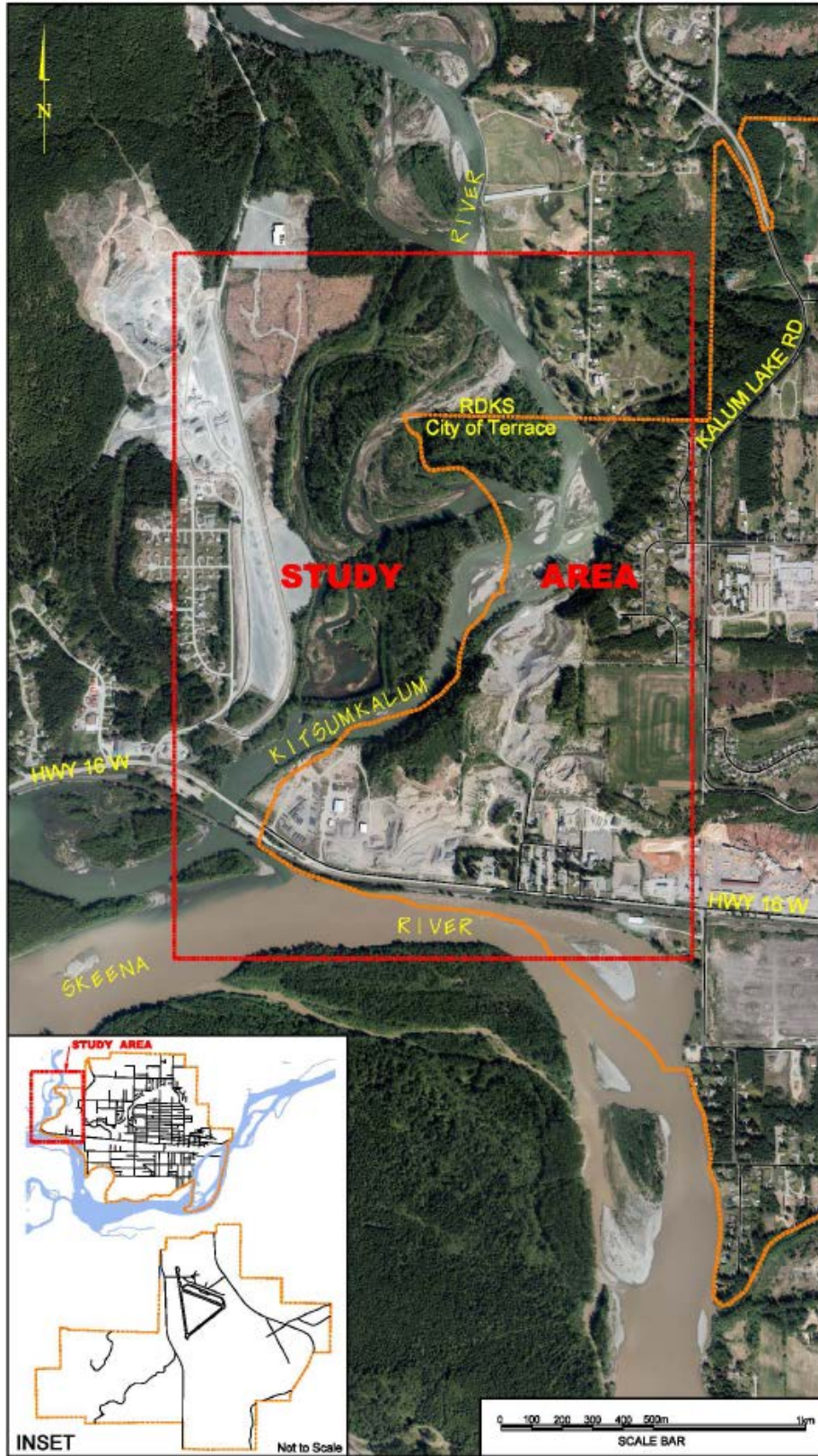
This project intends to have a Qualified Professional (hydrogeologist, fluvial morphologist; geoscientist with expertise on steep slope processes, including hazard and risk assessments, slope stability, mass movement processes of soil or rock; hydrologist; hydrotechnical engineer and geoscientist with expertise in hazard assessment and engineering hydrology, calculations of peak flows and flow return periods; or other qualified professional) complete further risk assessment for ongoing bank erosion activity through conducting a hydro-technical analysis, recommending constructable and practical mitigation options, and cost estimates in a Flood Mitigation Plan. The scope would require assessment of the potential impacts each mitigation option might have on the river movement and potential for further downstream and upstream impacts and effects to important aquatic habitat. Multi-disciplinary firms with Registered Biologists would be considered an asset. Mitigations proposed should be practical and constructable.

## 2. STUDY AREA

The urbanized area of the City is bound on the south by the Skeena River and on the west by the Kitsumkalum River. The proposed project study area for this application includes all municipal lands adjacent to the Kitsumkalum River, from its confluence with the Skeena River to the south, following approximately 2.3 Kilometers north and east towards Kalum Lake Road (as shown in the ‘Study Area Map’ below). There are a mix of land uses at the west side of the municipality including, industrial and commercial lands, resource extraction activity, residential areas located above the valley escarpment and natural and open space lands.

The study area also includes the Kitsumkalum Indian Reserve #1, the principal galts’ap (village) for Kitsumkalum members located on the west bank of the Kitsumkalum River. It is a historic village site and according to the Kitsumkalum Community Land Use Plan, a favourite fall camp/ fishing spot and home to 330 residents.

### Study Area Map



### 3. PROJECT DETAILS

#### a) *Overview*

The City of Terrace has received a grant of \$150,000 from the Union of BC Municipalities (UBCM) Community Emergency Preparedness Fund (CEPF) to be used for flood mitigation planning and risk assessment in the City's western boundary along the Kitsumkalum River (Study Area). To use these grant funds, the City is requesting Proposals from qualified professionals possessing appropriate education, training, and experience to complete a mitigation report of the study area.

The western boundary of the city has been experiencing slope stability issues due to erosion caused by changing river flow patterns and migration of the river's main channel, increase in channel velocity and high flood waters. The Regional District of Kitimat Stikine (RDKS) completed a Flood Hazard Assessment for the lower Kalum River to the confluence of the Skeena River in 2020. This study provides the first detailed assessment completed for the lower reaches of the Kitsumkalum River adjacent to the City. This report identified the study area as one of four areas of concern: including, a bank erosion event on the east side of the Kitsumkalum River near Dutch Valley and Spring Creek impacting lands within the City of Terrace. This report recommends that "... additional review be completed..." prior to implementing proposed mitigation works. In addition to this existing bank erosion event found within the study area, the City desires to have further hazard assessment to be undertaken to identify the potential for additional bank erosion and slope instability activity for the protection of lands and infrastructure.

#### b) *Budget*

The budget for the Project has been established at **\$150,000 (excluding taxes)**. The Proponent shall provide a detailed breakdown of tasks, as well as a work plan, for the completion of all deliverables, phases, and milestones for the project.

The City will support the successful proponent with in-kind staff time. Expenses related to the project for meeting room rentals and audio-visual equipment will be the responsibility of the City of Terrace and are outside the established budget. The City will print materials and plot and mount any presentation panels prepared by the successful proponent for the project if required for any public meetings or presentations to Council.

#### c) *Objectives*

The following objectives of the Project should guide Proponents in the creation of their proposed project work plan.

- Collect and review relevant background information previously completed and include a summary report of information reviewed.
- Conduct field work and remote assessments to evaluate the study area.

- Mapping of the study area including hydraulic modelling.
- Participate in collaborative engagement with project stakeholders.
- Recommend structural or non-structural mitigation options, management strategies, remediation policies, and development guidelines to protect the slope stability, within the study area.
- Include high-level cost estimates for completion of the proposed works for each scenario.
- Explain methods of data collection and site evaluation.
- Assess impacts structural mitigation works may have on the nearby area and to salmon habitat.
- Develop presentations to staff, Council, stakeholders, and the public.

**d) Meetings and Project Updates**

The successful proponent will be expected to meet regularly with City staff to report on progress and discuss report directions of the draft report. The proponent will also be responsible for facilitating and summarizing their work to Council in a final presentation. City of Terrace staff will provide support organizing all meetings; however, the delivery of presentations will be primarily performed by the proponent.

**e) Field Work and Remote Assessment**

The successful proponent will be expected to create a workplan to be approved by City staff that outlines dates and strategies to perform field work, conduct remote assessments, and draft the report.

**f) Review Past Work**

The following documents and information will be made available to the successful Proponent and should inform the creation of the Project.

- Westrek Geotechnical Services Ltd. "Preliminary Landslide Assessment, 5414 McConnell Crescent, Terrace, BC." December 8, 2020.
- Regional District of Kitimat Stikine - Skeena and Lower Kitsumkalum Rivers Channel Management Program Reports, associated maps and data, including: "Flood Mapping and Flood Hazard Mapping for the Skeena River and the Lower Kitsumkalum River near Terrace" Prepared by McElhanney, June 15, 2021; "Flood Mitigation: Remediation Options of High Priority Areas" Prepared by McElhanney Consulting, Sept 17, 2020; "Skeena River Channel Management Phase II – Fisheries Values Assessment" Prepared by McElhanney, Sept 18, 2020.
- Regional District of Kitimat Stikine Flood Plain Management Bylaw No. 656, 2015.
- City of Terrace Zoning Bylaw 2069 - 2014.
- City of Terrace Official Community Plan Bylaw 2142 - 2018.

- City of Terrace “Channel Stability Assessment: Skeena and Kitsumkalum Rivers in the Vicinity of Terrace” prepared by M. Miles and Associates Ltd. (2009).
- Kitsumkalum First Nation “Kitsumkalum Community Land Use Plan” (2018).
- Kalum Land and Resource Management Plan (2002).
- Kitsumkalum First Nation “Floodplain Mapping for Kitsumkalum and Skeena Rivers” prepared by Northwest Hydraulic Consultants Ltd. (2020).

**g) Mapping & Concept Designs**

The City of Terrace GIS Department can provide the successful Proponent with digital base maps and spatial data to support the project, including LiDAR data for the study area.

## **4. DELIVERABLES**

The successful Proponent shall provide, as a minimum, the following deliverables to the City of Terrace through the course of the project:

1. Initial project information review and methodology meeting with the City, Kitsumkalum First Nation and other Government Agencies as identified by the City.
2. Interim meeting with the City, Kitsumkalum First Nation and other Government Agencies as seen needed by the City.
3. Draft Report, including identification and evaluation of the Study Area’s hydrology, scenario modelling (including climate change scenarios), assessment of the potential impacts each mitigation option might have on the river movement and potential for further downstream impacts.
4. Public Meeting with residents and interested parties to present report findings.
5. Final Report, including hydro-technical analysis and recommending mitigation options stand-alone 75% design drawing and specifications of the preferred option and Class D cost estimates in a Mitigation Plan.

Digital PDF copies of the final deliverables, drafts, and supporting research must all be submitted to the City of Terrace.

## 5. PROJECT SCHEDULE

It is expected that the successful Proponent will commence work January 2, 2022, following award of the contract. The successful Proponent is required to specify a work schedule with a completion date to be no later than July 29, 2022, as per UBCM CEPF Grant Award Letter.

**Key dates are proposed below:**

<b>KEY DATES</b>	<b>DATE</b>
<i>RFP Circulation</i>	<i>November 2, 2021</i>
<i>Closing Date</i>	<i>December 6, 2021</i>
<i>Proposal Evaluation</i>	<i>December 7 - December 31, 2021</i>
<i>Proposed Contract Award</i>	<i>January 4, 2022</i>
<i>Final Deliverables</i>	<i>July 29, 2022</i>

## 6. REQUEST FOR PROPOSALS PROCESS

### a) Enquiries

All enquiries related to this Request for Proposals are to be directed, by email or phone, to the following:

**Jennifer MacIntyre**, Planner III

Telephone: (250) 615-4032

Email: [jmacintyre@terrace.ca](mailto:jmacintyre@terrace.ca)

**David Block**, Director of Development Services

Telephone: (250) 615-4028

Email: [dblock@terrace.ca](mailto:dblock@terrace.ca)

Information obtained from any other source is not official and should not be relied upon. Enquiries and responses will be recorded and may be distributed to all Proponents at the City of Terrace's discretion.

### b) Closing Date

Proposals to be considered by the City of Terrace must be received by **12:00 p.m. PST on December 6, 2021**

**Proposals are to be submitted via email to [jmacintyre@terrace.ca](mailto:jmacintyre@terrace.ca), to the attention of Jennifer MacIntyre, Planner III.**



**c) Proposal Requirements**

Evaluation of proposals can be completed most efficiently and fairly when the Proponents respond in a similarly structured manner. Proposals must be submitted with the following information:

- i. A **work plan**, which provides a clear description of the tasks to fulfill the project's deliverables. Each task should include the expected level of time commitment for all project team members. An indication of **what level of commitment by the City of Terrace staff will be expected** to complete each task should also be included in the work plan.
- ii. A **schedule** for the completion of all tasks, milestones, phases, and meetings. Dates for regular city staff meetings, as well as the progress report and final presentation to Council must be included.
- iii. A **total upset fee to complete the assignment** as outlined above and any additional services deemed necessary by the Proponent, including disbursements.
- iv. **Confirmation of each member of the project team complete with resumes.** A schedule of hourly rates for all personnel who might be utilized on the project must be included.
- v. **At least one sample of similar work** must be included with all proposals, preferably completed within the past 1-3 years.

**d) Proposal Specifications**

- i. Proposals should be delivered in an electronic format (PDF file format preferred).
- ii. Addenda may be issued during the proposal period. All addenda items will be provided to each Proponent via their primary contact email.
- iii. Amendments to the submitted proposals will be accepted, if received prior to the closing date.
- iv. Proponents are advised that all taxes relating to the services shown herein will be excluded in the stipulated pricing.
- v. Proponents are requested to submit information in the order requested. This will assist the evaluation team in their review.
- vi. Proponents shall be solely responsible for the delivery of their proposals in the manner and time prescribed.

## **7. SPECIAL CONDITIONS**

**a) Acceptance of Proposals and Award of Contract**

Proposals will remain open to acceptance for a period of thirty (30) days after the closing date. The City is not bound to accept the lowest fee, or any proposal of those submitted. Notice sent to a Proponent confirming the acceptance of its proposal by the City and the subsequent full execution of a written award letter or agreement will constitute a contract for service. No Proponent will acquire any legal or equitable rights or privileges relative to the service until the occurrence of both such events. Any contract resulting from this request for proposals will be

governed by and will be construed and interpreted in accordance with any federal, provincial, or municipal statutes, regulations and/or bylaws. After the selection process, the City will advise all Proponents of its selection prior to entering into a contract.

**b) *Liability for Errors***

While the City of Terrace has made efforts to ensure an accurate representation of information in this Request for Proposals, the information contained in this document is supplied solely as a guideline for Proponents. The information is not guaranteed or warranted to be accurate by the City of Terrace, nor is it necessarily comprehensive or exhaustive. Nothing in this Request for Proposals is intended to relieve Proponents from forming their own opinions and conclusions with respect to the matters addressed in this request for proposals.

**c) *Ownership of RFPs and Freedom of Information***

All proposal documents submitted to the City of Terrace for the purposes expressed in this request for proposal shall become the property of the City of Terrace. They will be received and held in confidence by the City, subject to the provisions of the Freedom of Information and Protection of Privacy Act.

**d) *Use of Request for Proposals***

This document, or any portion thereof, may not be used for any purpose other than the submission of proposals.

**e) *Confidentiality of Information***

Information pertaining to the City of Terrace obtained by the Proponent as a result of participation in this project is confidential and must not be disclosed without the written authorization from the City of Terrace.

**f) *Indemnity***

The Proponent must indemnify, save, and hold harmless the City from and against all claims, actions and loss; including, injury, death, and economic loss, damage, expense, and costs; including, legal fees and disbursements on a solicitor-client basis, whatsoever in law or equity, made by any person, arising directly or indirectly and whether by reason of negligence of the contractor in the performance of requested work under the terms of this agreement.

**g) *Insurance***

The Proponent must, without limiting its obligations or liabilities and at its own expense, provide and maintain throughout the contract term, Comprehensive General Liability in an amount not less than \$3,000,000 inclusive per occurrence insuring against bodily injury, personal injury and property damage and including liability assumed under contract in the forms and amounts acceptable to the City of Terrace. If, in the opinion of the City, the project contains added risks,

the City reserves the right to increase the limit required. All required insurance will be endorsed to provide the City of Terrace with 30 days advance written notice of cancellation or material change. The Proponent will provide the City of Terrace with evidence of the required insurance, in the form of a completed Certificate of Insurance, immediately following execution and delivery of the contract. The City of Terrace is to be added as Additional Named Insured.

