

Community Emergency Preparedness Fund

Flood Risk Assessment, Flood Mapping & Flood Mitigation Planning

2020 Program & Application Guide (Updated December 2019)

1. Introduction

The [Community Emergency Preparedness Fund](#) (CEPF) is a suite of funding programs intended to enhance the resiliency of local governments, First Nations and communities in responding to emergencies. Funding is provided by the Province of BC and is administered by Union of BC Municipalities (UBCM).

Starting in May 2019, the funding streams include:

- Indigenous cultural safety and cultural humility training
- Emergency operations centres and training
- Emergency support services
- Evacuation route planning
- Flood risk assessment, flood mapping and flood mitigation planning
- Structural flood mitigation
- Volunteer and composite fire departments equipment and training

Background

Flooding is a significant natural hazard in BC that can damage important infrastructure, cause serious economic losses, and create social disruption. Flooding in BC is often due to:

- Climatic conditions – intense rainfall, rain on snow, ice jams, rapid snowmelt, storm surges, etc.
- Geomorphic processes – debris flows, tsunamis, landslides
- Structural failures – dike failure, dam failure, culvert failure

Additionally, climate change will impact the frequency and magnitude of flooding in BC through changes to precipitation patterns and sea level rise. It is estimated that sea levels along the coastline will increase by approximately 1m by the year 2100 (Ausenco Sandwell 2010).

Therefore, it is important for communities to understand the flood hazards they face and how to adapt to these risks.

Flood Risk Assessment, Flood Mapping & Flood Mitigation Planning Funding Stream

The intent of this funding stream is to support eligible applicants to ensure they have accurate knowledge of the flood hazards they face and to develop effective strategies to mitigate and prepare for those risks.

One or more of the following components may be developed through this funding stream:

Risk Assessments

Risk assessments identify the social, economic and environmental impacts that flood events will have on the community, including identifying the specific flood hazards, compounding hazards, community and infrastructure vulnerabilities, risk tolerance or “risk threshold” and the overall flood risk profile for a community.

Flood Mapping

Flood mapping allows a community to more accurately determine its vulnerabilities in relation to flood risks that have been identified by a risk assessment.

Mitigation Planning

Mitigation plans address flood risk through a series of comprehensive, complementary and sustainable mitigation solutions. This includes identifying broad mitigation goals, objectives and strategies to meet those goals, and key planning activities including developing mitigation options (structural and non-structural), and developing preliminary cost estimates for these options.

2. Eligible Applicants

All local governments (municipalities and regional districts) and all First Nations (bands and Treaty First Nations) in BC are eligible to apply.

Eligible applicants can submit one application per funding stream per intake.

3. Eligible Projects

In order to qualify for funding, applications must demonstrate the need to develop a Flood Risk Assessment, a Flood Map, and/or a Flood Mitigation Plan. Applicants may apply to complete one or more of these components in a single application.

In addition, to qualify for funding, projects must be:

- A new project (retroactive funding is not available), or a subsequent phase of an existing non-structural flood mitigation project.
- Capable of completion by the applicant within one year from the date of grant approval.
- Completed by a qualified professional (for further information, see [Guidance for Selection of Qualified Professionals and Preparation of Flood Hazard Assessment Reports.](#))
- Where applicable, completed to acceptable provincial and federal guidelines, including:
 - [Provincial Flood Hazard Area Land Use Management Guidelines](#)
 - [Professional Practice Guidelines – Legislated Flood Assessments in a Changing Climate in BC](#)
 - [Flood Mapping in BC: APEGBC Professional Practice Guidelines V 1.0](#)
 - [Specifications for LiDAR for the Province of British Columbia](#)
 - [Federal Flood Mapping Guideline Series](#)

Updated December 2019 – Approved applicants are required to grant the Province of British Columbia free and clear access and distribution rights, specifically a perpetual, royalty-free, non-exclusive, worldwide license to use, reproduce, modify and distribute, any and all of the spatial data products acquired/produced using CEPF funding.

4. Eligible & Ineligible Costs & Activities

Eligible Costs & Activities

Eligible costs are direct costs that are approved by the CEPF Evaluation Committee, properly and reasonably incurred, and paid by the applicant to carry out eligible activities. Eligible costs can only be incurred from the date of application submission until the final report is submitted.

Eligible activities must be cost-effective and may include:

- Completion of a Flood Risk Assessment, including:
 - Updating the flood component of a Hazard, Risk, and Vulnerability Assessment
 - Completion of [Risk Assessment Information Templates \(RAITs\)](#)
- Developing or modernizing flood maps to address flood risk identified by a risk assessment, including:
 - Acquisition of ground elevation data, bathymetry and mapping
 - Plotting of historical flood data and inundation mapping
 - Hydrologic analysis including climate change forecasting and subsequent hydraulic modelling of several design flood scenarios (i.e. Q200, Q500, etc.) to calculate design flood elevations, extents, hazards and risks (as applicable)
 - Geospatial mapping and modelling activities including producing mapping of forecasted design flood extents, hazards, risks and flood construction elevations (as applicable)
 - Identifying locations of structures, people and assets that might be affected by flooding
- Completion of a Flood Mitigation Plan, including:
 - Inundation, hazard, and/or risk mapping
 - Planning and feasibility activities for mitigation investments including development of suitable mitigation options (structural and non-structural); evaluation, ranking and recommendation of options; and development of preliminary cost estimates for options
 - Engaging the community, local stakeholders or other First Nations and/or local governments to reflect on identified risks to make more effective planning decisions. Outcomes could include letters of support from stakeholders identifying preferred options going forward
 - Gathering information to develop floodplain bylaws as identified in the [Provincial Flood Hazard Area Land Use Management Guidelines](#)
- Preparation of maps, spatial data, and metadata (must meet Section 3.4 of [Flood Mapping in BC: APEGBC Professional Practice Guidelines V 1.0](#) and/or [Specifications for LiDAR for the Province of British Columbia](#))
- Hydrometric and/or geotechnical data collection and analysis
- *Updated December 2019:* Creation of a local Hazard/Risk Atlas. A hazard/risk atlas is a series of maps that outline the hazards and risks in a given community. Information contained within an atlas can inform decision making in areas such as, but not limited to, community planning, emergency planning, and mitigation. This product is especially useful when carrying out modelling of various flood scenarios, such as with coastal flood mapping and tsunami inundation assessments.
- Presentation of the Flood Risk Assessment, Flood Map and/or Flood Mitigation Plan to Council, Board, Band Council or Treaty First Nation government, community organizations, etc.
- Amendments to relevant plans, bylaws and policies that are specific to the Flood Risk Assessment, Flood Map and/or Flood Mitigation Plan (e.g. land use, engineering and public works bylaws and policies)

The following expenditures are also eligible provided they relate directly to the eligible activities identified above:

- Consultant costs
- Incremental applicant staff and administration costs
- Public information costs

Ineligible Costs & Activities

Any activity that is not outlined above or is not directly connected to activities approved in the application by the CEPF Evaluation Committee is not eligible for grant funding. This includes:

- Routine or on-going planning costs
- Duplication of existing information, maps or imagery (e.g. LiDAR)
- Costs related to developing or submitting the application package

5. Grant Maximum

The Flood Risk Assessment, Flood Mapping & Flood Mitigation Planning funding stream can contribute a maximum of 100% of the cost of eligible activities to a maximum of \$150,000.00.

In order to ensure transparency and accountability in the expenditure of public funds, all other grant contributions for eligible portions of the project must be declared and, depending on the total value, may decrease the value of the grant.

6. Application Requirements & Process

Application Deadline

The application deadline is **January 24, 2020**. Applicants will be advised of the status of their application within 90 days of the application deadline.

Required Application Contents

- Completed Application Form
- Local government Council or Board resolution, Band Council resolution or Treaty First Nation resolution, indicating support for the current proposed activities and willingness to provide overall grant management.
- Detailed work plan and budget for each component identified in the application. This must include a breakdown of work activities, tasks, deliverables or products, resources, timelines (start and end dates), and other considerations or comments. The budget must clearly identify the CEPF funding request, applicant contribution, and/or other grant funding.
- Map indicating the location of the proposed project.
- If applicable, copies of any relevant documents that support the rationale for this project must be included with this application. E.g. Mitigation planning applications should be supported by flood mapping and/or risk assessments for the proposed area. For risk assessments it is encouraged that proponents utilize the National Disaster Mitigation Program RAIT methodology and provide the complete RAIT with the application.

Submission of Applications

Applications should be submitted as Word or PDF files. If you choose to submit your application by e-mail, hard copies do not need to follow.

All applications should be submitted to:

Local Government Program Services, Union of BC Municipalities

E-mail: cepf@ubcm.ca

Mail: 525 Government Street, Victoria, BC, V8V 0A8

Review of Applications

UBCM will perform a preliminary review of applications to ensure the required application elements (identified above) have been submitted and to ensure that basic eligibility criteria have been met. Only complete application packages will be reviewed.

Following this, Emergency Management BC will assess and score all eligible applications as part of a technical review process. Higher application review scores will be given to projects that:

- Were not funded as part of the 2017 or 2019 Flood Risk Assessment, Flood Mapping & Flood Mitigation Planning intake
- Demonstrate evidence of local flood hazard and/or seismic vulnerability (e.g. as identified in the Emergency Response Plan or flood mapping); threat levels (e.g. as identified in completed flood risk assessments) and recent flood history (e.g. evacuation order and/or disaster financial assistance)
- Support the applicant in meeting [Provincial Flood Hazard Area Land Use Management Guidelines](#)
- Contribute to a comprehensive, cooperative and regional approach to flood mitigation
- Effectively engage other stakeholders, as appropriate to the project
- Consider and adapt to the impacts of climate change in the project methodology and deliverables
- Increase understanding of the social and economic impacts of flood events to the community
- Include in-kind or cash contributions to the project from the eligible applicant, community partners or other grant funding
- Are cost-effective

Point values and weighting have been established within each of these scoring criteria. Only those applications that meet a minimum threshold point value will be considered for funding. The CEPF Evaluation Committee will consider the provincial and regional distribution of all proposed projects. Funding decisions will be made on a provincial priority basis.

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| All application materials will be shared with the Province of BC. |
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7. Grant Management & Applicant Responsibilities

Grants are awarded to eligible applicants only and, as such, the applicant is responsible for completion of the project as approved and for meeting reporting requirements.

Applicants are also responsible for proper fiscal management, including maintaining acceptable accounting records for the project. UBCM reserves the right to audit these records.

Notice of Funding Decision & Initial Payments

All applicants will receive written notice of funding decisions. Approved applicants will receive an Approval Agreement, which will include the terms and conditions of any grant that is awarded, and that is required to be signed and returned to UBCM.

Grants are awarded in two payments: 50% when the signed Approval Agreement has been returned to UBCM and 50% when the project is complete and the final reporting requirements have been met.

Please note that in cases where revisions are required to an application, or an application has been approved in principle only, the applicant has 30 days from the date of the written notice of the status of the application to complete the application requirements. Applications that are not completed within 30 days may be closed.

Post Grant Approval Meeting

As a condition of grant approval, all approved applicants may be required to meet with Emergency Management BC and/or the Ministry of Forests, Lands, Natural Resource Operations and Rural Development (e.g., GeoBC, Deputy Inspector of Dikes for the region), or designate, to discuss the project prior to commencing work.

Changes to Approved Projects

Approved grants are specific to the project as identified in the application, and grant funds are not transferable to other projects. Approval from CEPF Evaluation Committee will be required for any significant variation from the approved project.

To propose changes to an approved project, approved applicants are required to submit:

- Revised application package, including updated, signed application form, updated budget and an updated resolution
- Written rationale for proposed changes to activities and/or expenditures

The revised application package will then be reviewed by the CEPF Evaluation Committee at the next scheduled meeting.

Applicants are responsible for any costs above the approved grant unless a revised application is submitted and approved prior to work being undertaken.

Extensions to Project End Date

All approved activities are required to be completed within one year of approval. Under exceptional circumstances, an extension beyond this date may be requested in writing and is subject to approval by the CEPF Evaluation Committee.

8. Final Report Requirements & Process

All funded activities must be completed within one year of notification of funding approval and the final reports are due within 30 days of project completion.

Applicants are required to submit an electronic copy of the complete final report, including the following:

- Completed final report form
- Financial summary
- Copy of Final Technical Report (consultant's report) including Flood Risk Assessment and RAIT, Flood Maps and/or Flood Atlas, Flood Mitigation Plan, and/or any completed assessments
- Full size PDF copies of all maps created as result of the project
- Spatial data and metadata for all maps identified above. LiDAR and orthoimagery products data and derivative products acquired/produced with CEPF funding must meet [Specifications for LiDAR for the Province of British Columbia](#)
- Optional: photos and/or media directly related to the funded project

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Submission of Final Reports

All final reports should be submitted to:

Local Government Program Services, Union of BC Municipalities

E-mail: cepf@ubcm.ca

Mail: 525 Government Street, Victoria, BC, V8V 0A8

Review of Final Reports

UBCM will perform a preliminary review of all final reports to ensure the required report elements (identified above) have been submitted.

Following this, all complete final reports & deliverables will be reviewed by Emergency Management BC.

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| All final report materials will be shared with the Province of BC. |
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9. Additional Information

For enquiries about the application process or general enquiries about the program, please contact:

Union of BC Municipalities

525 Government Street

Victoria, BC, V8V 0A8

E-mail: cepf@ubcm.ca

Phone: (250) 387-4470