

Community Emergency Preparedness Fund

Extreme Heat Risk Mapping, Assessment, and Planning

2022 Program & Application Guide

1. Introduction

The [Community Emergency Preparedness Fund](#) (CEPF) is a suite of funding programs intended to enhance the resilience 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).

As of May 2022, the funding streams include:

- Disaster risk reduction-climate adaptation: non-structural and small-scale projects
- Disaster risk reduction-climate adaptation: risk mapping, assessment, and planning
- Emergency operations centres and training
- Emergency support services
- Extreme heat risk mapping, assessment, and planning
- Indigenous cultural safety and cultural humility training
- Public notification and evacuation route planning
- Volunteer and composite fire departments equipment and training

Background

Extreme heat is a significant threat to communities across British Columbia. As the climate changes it is posing a growing risk to the health and wellbeing of community members, disrupting natural systems, and could lead to serious economic losses and infrastructure damages. It is important for communities to understand the risks associated with extreme heat, and how to prepare, adapt, and mitigate these risks.

The 2019 *Preliminary Strategic Climate Risk Assessment for British Columbia* identified a heat wave as one of the greatest risks to the province with the highest consequences related to public health and social functioning with lesser, but still substantial, impacts to wildlife and aquatic ecosystems, and agricultural productivity. In Canada, extreme heat events are the leading cause of weather-related deaths.

In June and July 2021 temperatures spiked to record high levels across BC, most notably from June 25 to July 1 when extended high temperatures created a heat dome phenomenon. During this period, the Village of Lytton experienced the highest temperatures in Canadian history three days in a row, creating circumstances that contributed to a devastating wildfire which destroyed the village and many structures of the Lytton First Nation. The BC Emergency Health Services identified 22 times as many heat-related emergency calls compared to the same timeframe in 2020. The BC Centre for Disease Control determined that BC suffered 740 heat-attributable deaths, producing mortality rates more than three times greater than average.

The majority of these deaths were suffered by the elderly and people living with disabilities, especially those in private residences and without strong social support structures. Beyond the health-related

consequences, agriculture, aquaculture, livestock, and infrastructure in BC were all negatively impacted by the heat dome.

An event like this, estimated to occur only once every 1000 years, on average, in today's climate would occur every 5 to 10 years, on average, in a future climate. This scenario (2°C of warming globally, from a pre-industrial baseline, or 1.2°C of warming globally from today) will be reached under even very ambitious greenhouse gas emissions targets and could be reached as early as the 2040s if global greenhouse gas emissions levels remain consistent with current levels.

Extreme Heat Risk Mapping, Assessment, and Planning Funding Stream

The intent of this funding stream is to support eligible applicants to ensure they have accurate knowledge of the risks associated with extreme heat and how these risks will change over time, and to develop effective response plans and strategies to prepare, mitigate, and adapt to those risks.

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

Extreme Heat Risk Mapping

Mapping extreme heat, populations disproportionately at risk, and adaptative responses allows a community to determine its vulnerabilities to extreme heat more accurately now and into the 2080s. This information may then be used in a risk assessment and/or planning activities. Eligible activities include risk and vulnerability mapping (e.g., heat islands and/or populations, structures, or assets at risk).

Risk Assessments

Risk assessments identify the social, economic, and environmental impacts of extreme heat events, and the potential slow onset risks heat may have on the community, including identifying urban heat islands, community and infrastructure vulnerabilities, and risk tolerance or "risk threshold."

Planning

Extreme Heat Response Plans

Extreme heat response plans build off the learnings from extreme heat mapping, risk assessments, community engagements, and other available data and translate this information into frameworks for action. Plans may include special considerations for heat-sensitive populations and targeted response actions to mitigate impacts. Developing an extreme heat response plan also offers an opportunity for communities to identify the co-benefits that can be synergistically achieved through heat response, such as improving air quality, enhancing health and wellbeing, improving mobility and connectivity, or reducing greenhouse gas emissions.

Extreme Heat Disaster Risk Reduction - Climate Adaptation Planning

Extreme heat disaster risk reduction and climate adaptation planning can help communities develop approaches to reduce the risks associated from extreme heat in the short and long-term. This is achieved through a series of comprehensive, complementary, and sustainable approaches that are either integrated into existing systems (e.g., policies, procedures) or are standalone plans.

If you would like one-on-one support for integrating climate change into risk assessments and/or disaster risk reduction - climate adaptation planning, please contact the Canadian Centre for Climate Services Support Desk at 1-833-517-0376 or [online](https://climate-change.canada.ca/support-desk/inquiry) at climate-change.canada.ca/support-desk/inquiry.

Approved applicants will be provided with a climate risk worksheet to help guide integrating climate change into decision making. Additional educational resources will also be made available.

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 intake, including regional applications or participation as a partnering applicant in a regional application.

3. Grant Maximum

The Extreme Heat Risk Mapping, Assessment and Planning funding stream can contribute a maximum of 100% of the cost of eligible activities to a maximum of \$30,000.00.

In order to ensure transparency and accountability in the expenditure of public funds, all other contributions for eligible portions of the project must be declared and, depending on the total value, may decrease the value of the funding. This includes any other grant funding and any revenue that is generated from activities that are funded by the Community Emergency Preparedness Fund.

4. Eligible Projects

To qualify for funding, projects must be:

- A new project (retroactive funding is not available), or a subsequent phase of an existing extreme heat risk reduction-related project.
- Capable of completion by the applicant within one year from the date of grant approval.
- Able to show that extreme heat risk assessments and disaster risk reduction-climate adaptation planning will consider climate change. This must include using emissions scenarios RCP 8.5 or SSP5_8.5 for return periods and extreme events with long return periods, and using scenarios until the end of the century (2080s). Examples of climate information sources:
 - [ClimateData.ca](https://climate.data.ca)
 - [Pacific Climate Impacts Consortium Climate Explorer](https://climate.pacificclimate.org/)
 - [Climate Atlas of Canada](https://climateatlas.ca/)

Regional Projects

Funding requests from two or more eligible applicants for regional projects may be submitted as a single application for eligible, collaborative projects. In this case, the maximum funding available would be based on the number of eligible applicants included in the application. It is expected that regional projects will demonstrate cost-efficiencies in the total grant request.

The primary applicant submitting the application for a regional project is required to submit a resolution as outlined in Section 7 of this guide. Each partnering applicant is required to submit a resolution or that clearly states their approval for the primary applicant to apply for, receive, and manage the grant funding on their behalf.

5. Requirements for Funding

As part of the approval agreement, approved projects must agree to the following requirements for funding:

- 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.
- Approved applicants will work with EMBC and GeoBC to support integration of Value-Added Products, derived products and methodology into the Provincial Data Repository and Web Mapping Platforms. This will include transferring knowledge to replicate the solutions created on proprietary mapping platforms managed by the applicants. GeoBC will work with all applicants to ensure an integrated and collaborative approach is taken to collect, capture, analyze, visualize,

and manage data and information based on consistent standards and data models to be used by all applicants.

- Please note that the two statements above do not apply to any product, data or information which may include Indigenous knowledge. EMBC and GeoBC respect the First Nations principles of OCAP®.
- Any in-person activities, meetings, or events must meet public health orders and/or guidance in relation to COVID-19.
- Activities must comply with all applicable privacy legislation under the *Freedom of Information and Protection of Privacy Act* in relation to the collection, use, or disclosure of personal information while conducting funded activities. Personal information is any recorded information about an identifiable individual other than their business contact information. This includes information that can be used to identify an individual through association or inference.

6. Eligible & Ineligible Costs & Activities

Eligible Costs & Activities

Eligible costs are direct costs that are approved for funding, 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 an Extreme Heat Risk Assessment (as described above);
- Completion of Extreme Heat Risk Map(s) (as described above);
- Completion of an Extreme Heat Response Plan (as described above);
- Integration of Extreme Heat Disaster Risk Reduction and Climate Adaptation Planning (as described above);
- Review of lessons learned from 2021 heat dome and best practices from other jurisdictions;
- Identification of community values through engagement. This includes seeking advice from Knowledge Holders and other experts (e.g., health authorities, biologists, etc.) and engaging the community (e.g., service organizations, equity-denied populations, Indigenous organizations), Indigenous Nations, local governments, agricultural sector, critical infrastructure owners, etc. Outcomes could include a summary of discussions or letters of support from different parties identifying preferred options going forward;
- Development of short and long-term extreme heat risk reduction goals, objectives, and strategies to meet these goals; developing adaptive options; evaluating, ranking and recommending options; and developing preliminary cost estimates;
- Presentation of extreme heat risk assessment, map(s), or plan(s) 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 extreme heat risk assessment, mapping, and planning.

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;
- Honoraria for equity-denied populations or service organizations that support equity-denied or heat-sensitive populations;

- Honoraria for cultural leaders, Elders, Indigenous knowledge keepers, and/or cultural keepers when they are scheduled to speak, present, or teach. Note: these honoraria should reflect the role of Indigenous Peoples as subject matter experts and be equitable to consultant rates.

Ineligible Costs & Activities

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

- Purchase of equipment and supplies;
- Routine or ongoing operating costs or activities (e.g., heating and lighting; security; software or service subscriptions, or membership fees);
- Routine or ongoing planning costs or planning activities that are not incremental to the project;
- Regular salaries and/or benefits of applicant staff or partners;
- Development or amendment of plans or maps primarily intended for wildfire risk reduction (refer to [FireSmart Community Funding & Supports](#));
- Duplication of existing information, maps, or imagery (e.g., LiDAR);
- Qualitative Hazard, Risk and Vulnerability Assessment (HRVA) activities not directly related to extreme heat risk assessments;
- Costs related to developing or submitting the application package.

7. Application Requirements & Process

Application Deadline

The application deadline is **June 24, 2022**. Applicants will be advised of the status of their application within 90 days of the application deadline.

Required Application Contents

All applicants are required to submit:

- 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 budget for each component identified in the application. This must clearly identify the CEPF funding request, applicant contribution, and/or other grant funding.
- For regional projects only: Local government Council or Board resolution, Band Council resolution, or Treaty First Nation resolution from each partnering applicant that clearly states their approval for the primary applicant to apply for, receive, and manage the grant funding on their behalf.

Resolutions or motions from partnering applicants must include the language above

Submission of Applications

Applications should be submitted as Word, Excel or PDF files. Total file size for email attachments cannot exceed 20 MB.

All applications should be submitted to Local Government Program Services, Union of BC Municipalities by e-mail: cepf@ubcm.ca.

Review of Applications

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

Following this, the CEPF Evaluation Committee will assess and score all eligible applications. Higher application review scores will be given to projects that:

- Demonstrate evidence of considering how the project will address the risks posed to heat-sensitive populations. This includes special consideration or response actions to support heat-vulnerable populations;
- Contribute to a comprehensive, cooperative, and regional approach to extreme heat risk reduction;
- Effectively engage community partners (e.g., equity organizations, agricultural sector, critical infrastructure owners) as appropriate to the project;
- Meaningfully consider and adapt to the impacts of climate change in the project methodology and deliverables;
- Increase understanding of the social, cultural, economic, and/or environmental impacts of extreme heat events to the community;
- Identify or achieve co-benefits (e.g., reducing greenhouse gas emissions, improving community health and wellbeing, enhancing biodiversity, etc.);
- Include in-kind or cash contributions to the project from the eligible applicant, community partners, or other grant funding;
- Are innovative;
- 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 Evaluation Committee will consider the provincial, regional, and urban/rural distribution of proposed projects. Recommendations will be made on a priority basis. All funding decisions will be made by UBCM.

All application materials will be shared with the Province of BC and First Nations' Emergency Services Society
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8. 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 within 30 days.

Grants are paid at the completion of the project and only when 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.

Progress Payments

To request a progress payment, approved applicants are required to submit:

- Description of activities completed to date;
- Description of funds expended to date; and
- Written rationale for receiving a progress payment.

Post Grant Approval Meeting

All approved applicants are encouraged to meet with Emergency Management BC and/or the Ministry of Health, Ministry of Environment and Climate Change Strategy (Climate Action Secretariat), 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 approved application, and grant funds are not transferable to other projects. Generally speaking, this means funds cannot be transferred to an activity that was not included in the approved application.

Approval from UBCM and/or the Evaluation Committee will be required for any variation from the approved project. Depending on the complexity of the proposed amendment, requests may take up to 90 days to review.

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

- Amended application package, including updated, signed application form, relevant worksheets, and an updated Council, Board, Band Council, or Treaty First Nation resolution;
- For regional projects only, evidence of support from partnering applicants for proposed amendments will be required; and
- Written rationale for proposed changes to activities and/or expenditures.

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 the time frame identified in the approval agreement and all extensions beyond this date must be requested in writing and be approved by UBCM. Extensions will not exceed one year from the date of the original final report deadline.

9. 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 with all required attachments;
- Detailed financial summary that indicates the actual expenditures from the Community Emergency Preparedness Fund and other sources (if applicable) and that aligns with the actual activities outlined in the final report form;
- Copy of Final Technical Report (consultant's report) including Risk Assessment, Maps, Response Plans, and/or Disaster Risk Reduction and Climate Adaptation planning, and/or any completed assessments, including reviews of lessons learned from the 2021 heat dome;
- 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 Airborne LiDAR for the Province of British Columbia](#);
- Optional: photos and/or media directly related to the funded project.

Submission of Final Reports

Final reports should be submitted as Word, Excel or PDF files. Total file size for email attachments cannot exceed 20 MB.

All applications should be submitted to Local Government Program Services, Union of BC Municipalities by e-mail: cepf@ubcm.ca.

Review of Final Reports

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

Following this, all complete final reports and deliverables will be reviewed by Emergency Management BC to ensure appropriate climate change considerations in risk assessment methodology and/or disaster risk reduction – climate adaptation options have been included.

All final report materials will be shared with the Province of BC and the First Nations' Emergency Services Society

10. 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