

Community Emergency Preparedness Fund

Disaster Risk Reduction – Climate Adaptation

2022/23 Application Form

Funding permitting, two application deadlines are scheduled for 2022/2023: September 30, 2022 and February 24, 2023. Applicants will be advised of the status of their application within 90 days of the application deadline.

Please complete and return the application form in advance of the deadline. All questions must be answered by typing directly in this form. If you have any questions, contact cepf@ubcm.ca or (250) 387-4470.

SECTION 1: Applicant Information	AP _____ <i>(for administrative use only)</i>
Name of Local Government or First Nation: City of Victoria	Date of Application: September 30, 2022
Contact Person*: Tanya Patterson	Position: Emergency Program Coordinator
Phone: 250-888-3594	E-mail: tpatterson@victoria.ca

* *Contact person must be an authorized representative of the applicant.*

SECTION 2: For <u>Regional Projects Only</u>
1. Identification of Partnering Applicants. For all regional projects, please list all of the partnering eligible applicants included in this application. Refer to Section 2 in the <i>Program & Application Guide</i> for eligibility.
2. Rationale for Regional Projects. Please provide a rationale for submitting a regional application and describe how this approach will support cost-efficiencies in the total grant request.

SECTION 3: Project Summary
3. Name of the Project: Small-Scale Structural Project (Category 3) Public Cooling Infrastructure: Misting Stations

4. Type of Project. Please identify each component you are applying for:

- ☐ Category 1: Foundational activities (risk mapping, risk assessments, planning)
- ☐ Category 2: Non-structural activities (non-physical such as land use planning, community education, purchase of eligible equipment)
- ☒ Category 3: Small scale structural activities (refer to Appendix 1 in Program Guide)

5. Project Summary. Please provide a summary of your project in 150 words or less.

The City of Victoria is proposing to design and build public cooling infrastructure in the form of misting stations. Misting stations will be installed in strategic locations across the City in order to mitigate risk and provide accessible cooling areas for all those in need during extreme heat events. The stations will be located in areas easily accessible to vulnerable populations. This project aligns with the eligible expenditures described under Appendix A/1: Small-Scale Structural Project Eligibility (Category 3) of the grant program guide.

6. Project Cost & Grant Request:

Total project cost: \$81,900.00

Category 1: \$0.00

Category 2: \$0.00

Category 3: \$81,900.00

Total project funding request: \$65,000.00

Have you applied for or received funding for this project from other sources (e.g., Adaptation, Resilience Disaster Mitigation Program - Green Infrastructure, Natural Infrastructure Fund – Small Projects)? If yes, please provide details below.

No

SECTION 4: Category 1: Detailed Project Information

Only complete this section if you are applying for a project under Category 1: Foundational Activities (risk mapping, risk assessments, planning)

If this project includes flood mapping, confirm that you have contacted EMBC in advance of submitting the application and provide the date and contact person:

☐ We have contacted EMBC:

N/A.

7. Project Area.

- a. Describe the proposed project area(s) (location, size, total number of people benefiting from this project, land use, etc.).

Map(s) indicating the location of the proposed project must be included with this application along with GPS coordinates

- b. Does the proposed project(s) build on other recent projects in your region? If yes, please explain. If referencing reports, please include the relevant page number(s).

8. Proposed Activities.

- a. What specific activities will be undertaken as part of the proposed project? Please refer to Section 6 of the Program & Application Guide for eligibility and note that activities must align with the required workplan and budget.

9. **Rationale.** What is the rationale and evidence for undertaking this project? This may include evidence of how the local natural hazard and/or climate risk is being assessed; threat levels (e.g., as identified in completed risk assessments), projected climate risks and/or recent history (e.g., evacuation order, disaster financial assistance).

Copies or extracts of the available evidence is required to be submitted with the application.

10. Engagement & Collaboration

- a. In addition to Section 2 (if applicable), describe how the proposed project will contribute to a comprehensive, cooperative and regional approach to disaster risk reduction-climate adaptation.
- b. Describe how the proposed project will include engagement with First Nations, local governments and other with impacted and affected parties (e.g., equity-denied populations, critical infrastructure owners).
- c. How will diverse populations, including equity-denied populations, be involved or benefit from this project (e.g., engagement considers non-English speaking populations, DRR-CA measures benefit equity-denied populations, opportunities for youth employment, etc.)

11. Proposed Deliverables & Outcomes

- a. What specific deliverables will result from this project?
- b. Describe how the proposed project considers climate change in the project methodology and adapts to the impacts of climate change through the final deliverables.

- c. How will the proposed project lead to increased understanding of the social, cultural, and/or environmental impacts of natural hazards and/or climate-related risks?
- d. Will the project identify or achieve co-benefits (e.g., assessing multiple hazards, protecting valuable cultural assets, reducing greenhouse gas emissions, improving community health and wellbeing, enhancing biodiversity, etc.)?
- e. If applicable, how does this project address and/or inform existing or future amendments to local plans, policies, building codes, floodplain zoning bylaws, and/or public awareness/education?

12. Monitoring & Performance Measures. Describe how the project will be monitored and what performance measurements will be used (e.g. work progress reports, timeline review, resource planning, procurement plan and roll out, etc.).

13. Qualified Professionals. Disaster risk reduction-climate adaptation activities can require specialized technical knowledge and experience to provide meaningful results to your community. If applicable, please outline your procurement process to engage the necessary subject matter expertise (Qualified Professionals) required for this work and the criteria you will use to make the selection.

SECTION 5: Category 2: Detailed Project Information

Only complete this section if you are applying for a project under Category 2: Non-Structural Projects Non-structural activities (land use planning, community education, purchase of eligible equipment)

14. Project Area.

- a. Describe the proposed project area(s) (location, size, total number of people benefiting from this project, land use, etc.).

Map(s) indicating the location of the proposed project must be included with this application along with GPS coordinates

- b. Does the proposed project(s) build on other recent projects in your region? If yes, please explain.

15. Proposed Activities. What specific activities will be undertaken as part of the proposed project? Please refer to Section 6 of the Program & Application Guide for eligibility and note that activities must align with the required workplan and budget.

16. Rationale. What is the rationale and evidence for undertaking this project? This may include evidence of how the local natural hazard and/or climate risk(s) is being assessed; threat levels (e.g., as identified in completed risk assessments), projected climate risks and/or recent history (e.g., evacuation order, disaster financial assistance).

Copies or extracts of the available evidence is required to be submitted with the application.

17. Engagement & Collaboration

- a. In addition to Section 2 (if applicable), describe how the proposed project will contribute to a comprehensive, cooperative and regional approach to disaster risk reduction-climate adaptation.
- b. Describe how the proposed project will include engagement with First Nations, local governments and other impacted and affected parties (e.g., equity-denied populations, critical infrastructure owners).
- c. How will diverse populations, including equity-denied populations, be involved or benefit from this project (e.g., engagement considers non-English speaking populations, DRR-CA measures benefit equity-denied populations, opportunities for youth employment, etc.)

18. Proposed Deliverables & Outcomes

- a. What specific deliverables will result from this project?
- b. Describe how the proposed project considers climate change in the project methodology and adapts to the impacts of climate change through the final deliverables.
- c. How will the proposed project lead to increased understanding of the social, cultural, and/or environmental impacts of natural hazards and/or climate-related risks?
- d. Will the project identify or achieve co-benefits (e.g., assessing multiple hazards, protecting valuable cultural assets, reducing greenhouse gas emissions, improving community health and wellbeing, enhancing biodiversity, etc.)?

- e. If applicable, how does this project address and/or inform existing or future amendments to local plans, policies, building codes, floodplain zoning bylaws, and/or public awareness/education?

19. Monitoring & Performance Measures. Describe how the project will be monitored and what performance measurements will be used (e.g. work progress reports, timeline review, resource planning, procurement plan and roll out, etc.).

20. Qualified Professionals. Disaster risk reduction-climate adaptation activities can require specialized technical knowledge and experience to provide meaningful results to your community. If applicable, please outline your procurement process to engage the necessary subject matter expertise (Qualified Professionals) required for this work and the criteria you will use to make the selection.



SECTION 6: Category 3: Detailed Project Information

Only complete this section if you are applying for a project under Category 3: Small-Scale Structural Projects

21. Project Area.

- a. Describe the proposed project area(s) (location, size, total number of people benefitting from this project, land use, etc.).

Map(s) indicating the location of the proposed project must be included with this application along with GPS coordinates

This project covers the entire City of Victoria. The city has a population of 91,867. Victoria is a popular tourism destination as well as a central hub for services for vulnerable populations and businesses and therefore the population greatly increases in the summer months. The misting stations are accessible to all those that live, work, or play/visit the City of Victoria. (see attached map)

- b. Does the proposed project(s) build on other recent projects in your region? If yes, please explain.

Yes. This is just one portion of the City's extreme heat response plan and climate adaptation planning. This project focusses more on the response side of things, and other concurrent projects focus on planning, preparedness, and mitigation. Please see attached Extreme Heat Response Plan, Heat HRVA, and City of Victoria Climate Adaptation plan.

- c. Are there previous emergency response costs that this project is designed to mitigate?

There were costs associated with fixing and replacing the damaged misters and their nozzles that were built in house for summer 2022. There was also risk to the public associated with them being easily tampered with and damaged.

22. Proposed Activities.

- a. What specific activities will be undertaken as part of the proposed project? Include key activities and steps that will be taken to complete the project.

Refer to Section 6 of the Program & Application Guide for eligibility, and note that activities should align with the required work plan and budget.

Design, build, and installation of 12 misting stations and water bottle filling stations, to be activated in strategic locations throughout the City of Victoria during extreme heat events, as per the BC HARS pilot 2022 guidelines and recommendations.

- b. Describe how the proposed project considers climate change in the project methodology (e.g. design life) and adapts to the impacts of climate change through the final deliverables.

Due to changes in the climate, we are experiencing an increase in annual summer temperatures and extremely hot days. Extreme heat events are dangerous for the health and wellbeing of our communities and can cause illness and death. In response to the increase in frequency and severity of extreme heat events, the City is developing an extreme heat specific HRVA and developed and implemented an extreme heat response plan this past summer of 2022 which included the activation of response resources such as misting stations and cooling centres. This is only part of the City's heat mitigation and response efforts. The emergency management team is working closely with the City's Climate Team on extreme heat assessment, planning, and mitigation for a holistic approach which involves planning, mitigation, and response initiatives.

This is one component of an overall holistic plan. Other planning and mitigation initiatives will address and inform amendments to local plans, policies, building codes, etc. The misting stations will be part of our public awareness/education for extreme heat events. See attached media release with public awareness messaging from July 27, 2022.

- c. Will the project identify or achieve co-benefits (e.g., assessing multiple hazards, protecting valuable cultural assets, reducing greenhouse gas emissions, improving community health and wellbeing, enhancing biodiversity, etc.)?

An understanding of social, cultural and environmental impacts will come from the HRVA project as well as the regional heat risk assessment and mapping project. All hazards, risks, and vulnerabilities will be analyzed through a disaster risk reduction and climate adaptation lens. The installation of misters in priority strategic areas will address social, cultural and environmental impacts. Water use was measured this past year during the activation of misting stations during heat events and was minimal compared to the adverse impacts on health and safety of the heat. The misters will be designed to have the lowest impact and water use possible to serve the intended purpose of reducing negative impacts on health and safety from extreme heat events.

This one aspect of the project will only address community health and wellbeing during extreme heat events. Having a water bottle filling station on the misters will reduce the use of single use plastic water bottles.

- d. Have discussions taken place with applicable agencies to prepare for all required permits and regulatory approvals? Have the required approvals, authorizations and permits to complete the proposed project been applied for or received?

Yes

- e. How do you intend to ensure the project is completed to provincial and federal standards?

We ensure all our plans align with the Emergency Program Act, Sendai Framework for disaster risk reduction, and are following the recommendations of Island Health, Health Emergency Management BC, and First Nations Health Authority (see attached letter). As a Local Government we adhere to strict policies and procedures and standards.

- f. List any potential implementation risks that may impact your ability to deliver on the project, and explain what mitigation measures are in place to address them (e.g., staff capacity, procurement, severe weather, permitting (DMA, WSA, DFO), in-stream works fishery window, Land Right of Way requirements, etc.).

The only implementation risk that exists with this project would be if we were unable to procure the necessary parts needed to build the misting stations. This is highly unlikely given the fact we have spoken with the City of Vancouver on their design as well as potential nozzle vendors who have the supplies in stock.

- g. How will the project be developed and constructed to ensure that project risk is not increased, or transferred, to any parties or to the environment (e.g. transfer of flood risk downstream, destruction of fish habitat, introduction of pollutants to the environment, etc.).

Water use will be monitored, Occupational health and safety procedures will be followed, and a legionella control plan is in place.

23. Rationale.

- a. What is the rationale and evidence for undertaking this project? This may include completed risk maps, assessments or plans, environmental impact analysis, design drawings or details, record of engagement with First Nations, asset management plan (including natural assets where applicable), projected climate risks, recent history (e.g., evacuation order, disaster financial assistance), and/or letters of support (from provincial ministries, etc.).

Due to changes in the climate, British Columbia is experiencing an increase in annual summer temperatures and extremely hot days. On average, Canada is warming at about double the magnitude of global warming, and British Columbia is warming faster than many parts of Canada. Episodes of very hot weather, also known as heatwaves, are dangerous for the health and wellbeing of our communities and can cause illness and death. In response to the increase in frequency and severity of extreme heat events, a BC HARS (Pilot 2022) was developed which was intended to alert the public about the risks of heat, facilitate the development of a community response to help people at highest risk, and provide

individuals with information and other resources to help them take protective actions before and during extreme heat events.

In response to the increased risk of heat events and heat related illness and death, the City of Victoria developed an extreme heat response plan. This plan was developed through collaboration with stakeholder organizations and experts such as Environment Canada and Climate Change, Emergency Management BC, Island Health, Health Emergency Management BC, etc. The plan was activated this past summer of 2022 with the activation of 11 temporary misting stations and 3 cooling centres. The misting stations were built in-house by City Public Works and Engineering staff and were very successful at their intended purpose of cooling the public, but were easily tampered with and broken. Due to their success, and after action reviews the City recognizes the need for more robust public cooling misting stations.

A letter was distributed to municipalities by Island Health, Health Emergency Management BC, and First Nations Health Authority which provided information on extreme heat events, those most vulnerable to extreme heat (elderly people who live alone, socially isolated people, people who use substances, people who are materially and socially deprived, and people who are insecurely housed). This letter also outlined signs of heat related illness, potential actions to prepare for heat events, and actions during an extreme heat emergency. The City takes an all-hazards approach and a multi-pronged approach to Disaster Risk Reduction and Climate Adaptation and therefore has and continues to implement these recommendations. The misting stations are just one prong of this holistic approach. Recommendations in the letter include the following, which align with the misting station plan:

- setting up outdoor cooling stations in close proximity to highly vulnerable client populations
- distributing water to at-risk populations outdoors (e.g. portable water stations)

See attached letter

- b. Describe the options assessment (e.g., benefit cost analysis) and engagement process that was utilized to determine the proposed project:

The City of Victoria's Public Works and engineering department built misters that hook onto fire hydrants that were used during extreme heat events over the summer of 2022. We conducted lessons learned and after action reviews and determined that more robust misting stations are required as the ones deployed this year were easily tampered with and broken and required continuous maintenance and replacement. Owning robust misting stations will reduce and eliminate in some cases the need for the City of Victoria to submit Expenditure Authorization Forms (EAF's) to EMBC for reimbursement of rentals or purchase of cooling resources. See image of mister.

Copies or extracts of the available evidence is required to be submitted with the application. Please ensure the application clearly explains where to find supporting documentation (e.g., report page number)

24. Engagement & Collaboration

- a. In addition to Section 2 (if applicable), describe how the proposed project will contribute to a comprehensive, cooperative and regional approach to disaster risk reduction-climate adaptation.

The City of Victoria is a regional hub for tourism, shopping, workplaces, social services, and many more activities. The City's misting stations and cooling centres are accessible to all those that live, work, or play in the City of Victoria and therefore all citizens in the region benefit from their implementation and activation. The City of Victoria works closely with local governments in the region to share communications and resources during extreme heat events.

- b. Describe how the proposed project will include engagement with First Nations, local governments, and other impacted and affected populations (e.g. equity-denied populations, critical infrastructure owners).

As per the extreme weather response plan, the City of Victoria will engage with those impacted and affected parties in advance of extreme heat events in order to collaborate and determine the most suitable locations for misting stations and cooling centres, and identify additional resources to support the community. The City will engage and communicate with affected parties before, during and after extreme heat events for an effective community response that supports all community members including and particularly vulnerable populations. The misting stations are strategically located in areas that are most accessible to vulnerable populations and areas at highest risk of heat related illness.

Engagement and collaboration has occurred with diverse populations, including equity-denied populations throughout the development and activation of the City's extreme heat response plan. Engagement and collaboration will continue on an ongoing basis in order to ensure equity-denied populations are involved and benefit from the project. This has included a hazard, risk, and vulnerability analysis (HRVA) for extreme heat and engagement with those most at risk. Collaboration and engagement occurred with Our Place Society, Salvation Army, James Bay New Horizons seniors outreach, Beacon services, the Coalition to End Homelessness, Aids Vancouver Island, and many other organizations and NGO's involved with vulnerable populations, to ensure that vulnerable populations were able to access cooling resources. We also work closely with the Intercultural association, the Disability resource centre, and Khalsa aid.

- 25. Asset Management.** Project sustainability and lifecycle costing are important considerations for structural mitigation projects. Many organizations have implemented asset management practices consistent with [Asset Management for Sustainable Service Delivery: A BC Framework](#).

Outline any ongoing asset management / lifecycle maintenance considerations for the project, and how these will be addressed as part of your organization's asset management framework (at a minimum please include details on ownership, lifetime, operation and maintenance and budgets).

The misting stations will be owned and operated by the City of Victoria and are expected to last a minimum of 15 years. They will be maintained by the City's Public Works and Engineering department. They will be activated during the warmer seasons and will be shut off and stored safely when not required during winter months to increase their sustainability. These maintenance and activation costs will become part of the City's ongoing operating budget.

26. Proposed Outcomes. For each of the following, please describe the extent to which the proposed project will:

- a. Prevent, eliminate or reduce the impacts of hazards through construction of disaster risk reduction-climate adaptation works.

The misting stations will reduce the impact of extreme heat events on those who live, work, and play in the City of Victoria. They offer a cool area for people who are negatively impacted by the extreme heat - particularly vulnerable populations who have no other means of cooling.

- b. Reduce disaster-related financial liabilities (e.g., history or likelihood of future Disaster Financial Assistance (DFA) claims).

This small scale project does not reduce disaster related financial liabilities or DFA claims, but the impacts that cause the activation of misting stations and cooling centres are not eligible for DFA claims. If the City of Victoria owns misting stations then this will reduce and eliminate in some cases the need for the City of Victoria to submit Expenditure Authorization Forms (EAF's) to EMBC for reimbursement of rentals or purchase of cooling resources.

27. Disaster Risk Reduction – Climate Adaptation Measures. In the area of the proposed project, have policies been implemented that reduce disaster risk, or will be implemented as a result of this project (e.g., floodplain zoning bylaws or land use planning updates)?

This is one component of an overall holistic plan. Other planning and mitigation initiatives will address and inform amendments to local plans, policies, building codes, etc. The misting stations will be part of our public awareness/education for extreme heat events. See attached media release with public awareness messaging from July 27, 2022.

28. Monitoring & Performance Measures. Describe how the project will be monitored and what performance measurements will be used (e.g. work progress reports, timeline review, resource planning, procurement plan and roll out, etc.).

Staff will track the use of the misting stations, including how many people and pets visited the misting station, how much water was used, how many resources were handed out, and any other data that is of use for future planning. After each activation, lessons learned and after action reviews will be conducted which will inform future plans and allow continuous growth and improvement.

29. Qualified Professionals. Small-scale structural disaster risk reduction-climate adaptation activities require specialized technical knowledge and experience to provide meaningful results to your community. Outline your procurement process to engage the necessary subject matter expertise (Qualified Professionals) required for this work and the criteria you will use to make the selection.

The City's Emergency management division, Engagement, Public Works & Engineering, Climate team, parks, and Fire department will work together to determine the best locations for the misters and design, build, and install the misters. If any outside qualified professionals are required for parts, equipment, fabrication or any other components of the misters the City will follow it's procurement process and purchasing policy (see attached).

SECTION 7: Required Application Materials

Only complete applications will be considered for funding.

The following separate attachments are required to be submitted as part of the application:

- In progress*
- ☒ Local government Council or Board resolution, Band Council resolution, or First Nation resolution, indicating support for the current proposed activities and willingness to provide overall grant management.
 - ☒ Detailed work plan and budget for each category 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(s) indicating the location of the proposed project(s).
 - ☒ If applicable, copies of any relevant documents that support the rationale for this project must be included with this application. (e.g., Small-Scale Structural applications must be supported by risk assessments, options analysis, etc.).
 - ☒ If undertaking a flood risk assessment it is encouraged that proponents utilize the [Risk Assessment Information Templates \(RAITs\)](#). *see HRvA 3 Heat Plan*
 - N/A* ☐ 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.

SECTION 8: Signature

I certify that: (1) to the best of my knowledge, all information is accurate and (2) the area covered by the proposed project is within our local authority's jurisdiction (or appropriate approvals are in place).

Name: Tanya Patterson	Title: Emergency Program Coordinator
Signature:  An electronic or original signature is required.	Date: September 29, 2022

* Signatory must be an authorized representative of the applicant (i.e. staff member or elected official).

Submit applications to Local Government Program Services, Union of BC Municipalities

E-mail: cepf@ubcm.ca

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

