

# Disaster Mitigation and Adaptation Fund



Strengthening the  
**Resilience of  
Canadian Communities**

Applicant's Guide



Infrastructure  
Canada

Canada 

This publication is available upon request in accessible formats.

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## Introduction

Communities across Canada have experienced – and will continue to experience – significant weather-related events or disasters triggered by natural hazards. The impacts of climate change are evident, including observed changes in air temperature, precipitation, snow and ice cover, and others.

In response to these threats, through the Disaster Mitigation and Adaptation Fund (DMAF), the Government of Canada has committed to invest in public infrastructure that mitigates the potential economic, environmental and social impacts of climate change, and strengthens community resilience to disasters triggered by natural hazards and extreme weather events.

This Guide has been prepared to support your project application process. It contains information on types of eligible projects and costs; steps to follow to submit an application; and key requirements to be considered for federal funding under the DMAF.

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## 1.0 What is the DMAF?

The DMAF is a national, competitive, and merit-based contribution program intended to support infrastructure projects designed to mitigate current and future climate-related risks and disasters triggered by natural hazards, such as floods, wildland fires, droughts and seismic events.

The overall objective of the DMAF is to strengthen the resilience of Canadian communities at risk of infrastructure failure that could result in:

- threats to health and safety;
- threats to critical infrastructure, including interruptions in essential services;
- significant disruptions in economic activity; and/or
- increasingly high costs for recovery and replacement.



### 1.1 What types of projects does the DMAF fund?

Eligible infrastructure projects under the DMAF include new construction of public infrastructure and/or modification or reinforcement of existing public infrastructure including natural infrastructure that prevent, mitigate or protect against the impacts of climate change, disasters triggered by natural hazards, and extreme weather.

- Projects must have a minimum of \$1 million in total eligible costs to be considered for funding.

### 1.2 How much funding is available?

In 2018, the Government of Canada launched the DMAF, committing \$2 billion over 10 years to the program. In Budget 2021, an additional \$1.375 billion in federal funding over 12 years was announced to renew the DMAF. Of this, a minimum of \$138 million is allocated to Indigenous Recipients. As part of the National Adaptation Strategy, in November 2022, the DMAF received an additional \$489.1 million over 10 years in funding, which will further support communities across Canada.

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## 2.0 Who can apply?

### 2.1 Eligible Applicants

Eligible Applicants include:

- A province or territory; or a municipal or regional government established by – or under – provincial or territorial statute;
- A public sector body that is established by – or under – provincial or territorial statute or by regulation; or is wholly-owned by a province, territory, municipal or regional government;
- When working in collaboration with a municipality, a Canadian public or not-for-profit institution that is authorized, under the terms of a Canadian provincial, territorial or federal statute; or Royal Charter, to deliver post-secondary courses or programs that lead to recognized and transferable post-secondary credentials.
- A private sector body, including for-profit organizations and not-for-profit organizations. In the case of for-profit organizations, they will need to work in collaboration with one or more of the entities referred to above or an Indigenous Recipient listed below.

Eligible Indigenous Applicants, include:

- An Indigenous governing body\* including, but not limited to:
  - A band council within the meaning of Section 2 of the *Indian Act*;
  - A First Nation, Inuit or Métis government or authority established pursuant to a Self-Government Agreement or a Comprehensive Land Claim Agreement between His Majesty the King in right of Canada and an Indigenous Peoples of Canada, that has been approved, given effect and declared valid by federal legislation; or
  - A First Nation, Inuit or Métis government that is established by or under legislation whether federal, provincial or territorial legislation that incorporates a governance structure.
- An Indigenous Development Corporation\*\*; and
- A not-for-profit organization whose central mandate is to improve Indigenous outcomes.

\* “Indigenous governing body” means a council, government or other entity that is authorized to act on behalf of an Indigenous group, community or people that holds rights recognized and affirmed by section 35 of the *Constitution Act, 1982*. Indigenous peoples of Canada has the meaning assigned by the definition Aboriginal peoples of Canada in subsection 35(2) of the *Constitution Act, 1982*.

\*\*Indigenous Development Corporations are normally set-up by an Indigenous community organization/government. These corporations constitute the business/economic arm of Indigenous communities/governments and typically count the members of the community as their shareholders. Their primary role is to develop the economic activity of the

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Indigenous community that established them. Indigenous development corporations generally fall under two categories: for-profit and not-for-profit. The for-profit model however is unique in that profits are then re-invested in the community.

## 2.2 Ineligible Applicants

Federal entities, including federal Crown corporations, are not eligible for funding.



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## 3.0 What types of projects are eligible?

To be considered eligible, projects must be aimed at reducing the socio-economic, environmental and cultural impacts triggered by natural hazards and extreme weather events taking into consideration current and potential future impacts of climate change in communities and infrastructure at high risk.

Natural hazard and extreme weather events include but are not limited to:

- Avalanche
- Drought
- Earthquake
- Erosion
- Extreme Temperature
- Flood
- Hurricane
- Landslides
- Permafrost thaw
- Sea Level Rise
- Storm
- Tsunami
- Wildland Fire
- Other (If other, specification required)

Eligible infrastructure projects must involve new construction of public infrastructure and/or modification or reinforcement of existing public infrastructure including natural infrastructure that prevent, mitigate or protect against the impacts of climate change, disasters triggered by natural hazards, and extreme weather.

In cases where the Minister of Intergovernmental Affairs, Infrastructure, and Communities, in consultation with the Minister of Public Safety and Emergency Preparedness, has identified a specific area of concern due to urgent and emergent situations, projects could be considered outside of the competitive intake process.

## 3.1 Is grouping multiple projects allowed?

Eligible projects could include bundled sub-projects if it is demonstrated that each of the multiple mitigation/adaptation investments work systematically as a whole to reduce the same risk within the same time period.

## 3.2 What types of projects are ineligible?

Examples of ineligible projects are:

- All emergency and response services infrastructure (e.g., evacuations centres);
- Relocation of entire communities or properties associated with relocation;
- Purchase of any type of dwellings or buildings; and
- Equipment (unless it is part of the larger fixed infrastructure asset).

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## 4.0 What types of expenditures are eligible?

Expenditures directly related – and necessary – to the successful implementation of an eligible project will be considered as eligible, except those listed in [Section 6: \*What type of expenditures are ineligible?\*](#) Eligible expenditures could include, for example:

- Capital cost, design and planning;
- Expenditures related to meeting specific program requirements, such as climate change and resiliency assessments, creating community employment benefit plans, as well as federal environmental assessments and duty to consult requirements.

### 4.1 Is land acquisition an eligible expenditure?

Land acquisition for the development of natural infrastructure could be an eligible expenditure where it is not the sole project component. Land acquisition is conditional on an eligible Applicant submitting:

- A justification, as part of the project application, that is acceptable to Infrastructure Canada, for the need to acquire land as an integral aspect of the approved project;
- A demonstration, as part of the project application, of how the land would be used as natural infrastructure;
- A demonstration, as part of the Contribution Agreement for approved projects, of how the land would remain protected for 40 years by a provincial, territorial, municipal government, or Indigenous Recipients; and
- An attestation, once the land has been purchased, that the price is at, or below, fair market value.

## 5.0 What is the maximum federal contribution my project could benefit from?

When a project is selected for funding, the amount of the federal contribution will be determined based on:

- an assessment of the expenditure profile (including contingencies);
- the total eligible expenditures; and
- the federal share and stacking limits as outlined in [Section 5.1](#).

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## 5.1 Federal Share and Stacking Limits

The maximum federal contribution from all sources of the total eligible expenditures for a given project is based on asset ownership and is determined as follows:

- Up to 50% for provinces;
- Up to 40% for municipalities and not-for profit organizations in provinces;
- Up to 75% for territories;
- Up to 100% for Indigenous Recipients, provinces\*, territories\*, and municipalities\* for which projects primarily benefit Indigenous communities or Indigenous populations; and
- Up to 25% for for-profit private sector organizations.



\* In exceptional circumstances where projects are led by other levels of government but in partnership with Indigenous communities and primarily support infrastructure investments in those communities, a letter of support from Indigenous communities must be provided for the other level of government to receive up to 100% federal share.

## 5.2 How will federal share and stacking limits be applied for grouped projects?

For projects including bundled sub-projects, cost-sharing as detailed in [Section 5.1](#) will be applied based on the owner of the assets in each sub-project included in the bundled project.

## 5.3 Are non-competitive procurement processes (“Sole-Source” Contracts) allowed?

All contracts must be awarded in a way that is fair, transparent and competitive. When non-competitive contracts are necessary for the implementation of a project, Infrastructure Canada’s approval of the contract as an eligible expenditure is required before the signature of the contract.

The Minister of Intergovernmental Affairs, Infrastructure and Communities may approve projects involving non-competitive contracts that:

- have an estimated value below \$40,000 for construction or goods contracts, or \$100,000 for service contracts;
- are with a public sector entity;
- can only be performed by one person or entity; or
- are with an Indigenous organization and or governing body and there is a benefit to an Indigenous community.

Projects that require a non-competitive procurement process outside of the Minister’s delegation cited above will require Treasury Board of Canada approval.

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## 6.0 What types of expenditures are ineligible?

The following expenditures are ineligible:

- expenditures incurred before project approval\*, including expenditures associated with contracts signed prior to project approval, except for expenditures associated with Climate Lens assessments which are retroactively eligible up to 12 months prior to project approval;
- expenditures for feasibility studies and hazard risk assessments;
- expenditures incurred for cancelled projects;
- expenditures for relocating entire communities or properties associated with relocation;
- land acquisition not directly linked to the development of natural infrastructure;
- land acquisition in cases where it is the sole project component;
- costs associated with the acquisition of publicly-owned land;
- leasing land, buildings and other facilities; leasing equipment other than equipment directly related to the construction of the project; real estate fees and related costs;
- any overhead expenditures, including: salaries and other employment benefits of any employees; direct or indirect operating or administrative costs (e.g., planning, engineering, architecture, supervision, and management); and any other activities normally carried out by the Recipient, with the following exceptions:
  - the overhead costs for the purpose of Indigenous consultation/engagement activities; and
  - the incremental costs of employees of an eligible Recipient under the following conditions:
    - The eligible Recipient is able to demonstrate that it is not economically feasible to tender a contract; or
    - The arrangement is approved in advance and in writing by Infrastructure Canada.
- financing charges, legal fees, and loan interest payments including those related to easements (e.g., surveys);
- any goods and services costs which are received through donations or in-kind;
- provincial sales tax and Goods and Services tax/HST, for which the Recipient is eligible for a rebate, and any other costs eligible for rebates;
- expenditures associated with operating expenses and regularly scheduled maintenance work;
- expenditures related to furnishing and non-fixed assets which are not essential for the operation of the asset/project;

- all capital expenditures and costs, including site preparation and construction costs, until Infrastructure Canada is satisfied that the Environmental Assessment and Aboriginal consultation obligations have been met and continue to be met; and
- Expenditures related to all emergency services infrastructure.



\*Project approval is the date of the Approval-in-Principle letter signed by the Minister of Intergovernmental Affairs, Infrastructure and Communities and provided to the Recipient.



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## 7.0 How do I Apply?

### 7.1 Before you begin

You must ensure that all requirements below are met:



#### Minimum Eligibility Requirements

- ✓ the organization is an eligible Recipient under the DMAF;
- ✓ the organization owns or will own the asset(s) or it has or will have secured all necessary rights and interest in the asset(s) Infrastructure Canada funds;
- ✓ the submission is for a project to expand, improve or build new public infrastructure that prevent, mitigate or protect against the impacts of climate change on Canadian communities, with the exclusion of emergency services infrastructure and man-made disasters;
- ✓ the total eligible cost for the project is at least \$1M;
- ✓ the project is not solely for land acquisition; and
- ✓ the project will be substantially completed no later than December 31, 2032.

### 7.2 How does the application process work?

All interested Applicants are invited to apply to the DMAF by creating an Applicant Account on the [INFC Applicant Portal](#) located on the [DMAF website](#).

All Applicants must register for an Infrastructure Canada (INFC) Applicant Account to access the DMAF Application Form. Once registered,

- New Applicants will be required to create an organization profile. Once you have created your New Organization in the INFC Applicant Portal, please select it from the Existing Organization Name list.



For Applicants that have applied to the DMAF through previous intakes, your organization profile has already been created. You can find this profile by searching the Existing Organization Name list. In the event that your organization is not found, you can proceed to create a new organization profile.

If you are unable to finalize the application attestation, please ensure each section of the application is completed. Only an employee of the eligible organization, delegated by the primary contact, can attest to the project proposal. A third party cannot attest on behalf of the organization.

There are no limits to the number of applications that can be submitted by an eligible Applicant; however, a separate application is required for each project.



Find detailed instructions on how to complete an Application in [ANNEX B](#).

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Applicants do not need to complete their online application in one attempt. The application can be saved and returned to as many times as necessary before the submission deadline. Applicants will have access to support services during the application process.

Applicants who are unable to apply through the portal are asked to reach out to the DMAF Team:

[dmaf-faac@infc.gc.ca](mailto:dmaf-faac@infc.gc.ca)

## 7.3 How will my application be assessed?

The DMAF Application Form captures the information required to assess the proposed project against eligibility and merit criteria. It also supports Canada's determination of any requirements related to Indigenous consultations and environmental assessments.

After the submission deadline, all submitted applications will be assessed against eligibility and merit criteria. See [ANNEX B](#).

All Applicants will be notified of the outcome of their application.

Infrastructure Canada reserves the right to apply additional criteria in the selection of projects if the volume of applications is above the funding available under the DMAF.



Reliable sources to support the data included in the application are essential; especially for the hazard risk, resilience and return on investment criteria.

## 7.4 How will I know if my project has been selected for funding?

Once application eligibility and merit criteria assessments have been completed, Infrastructure Canada officials will prepare recommendations for approval by the Minister of Intergovernmental Affairs, Infrastructure and Communities of projects of up to \$50 million in federal share. Projects outside the Minister's delegated authority will require additional time and information to support obtaining the appropriate authorities by the Treasury Board of Canada.

The Minister of Intergovernmental Affairs, Infrastructure and Communities will provide an Approval-in-Principle (AIP) letter for successful projects, which will include conditions (i.e. securing funding, Indigenous consultations, environmental assessment, etc.). If a project is approved for funding, Infrastructure Canada will communicate with the project's primary contact and discuss next steps, including the development and signature of a Contribution Agreement.

## 8.0 Other Program Requirements

### 8.1 Environmental Assessment

Depending on project location, Applicants may be required to complete a federal Environmental Assessment (EA) prior to undertaking certain activities. Applicants are responsible for determining

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whether their project may require an EA under the federal [Impact Assessment Act](#) (IAA), Modern Treaties and Northern Regimes, and ensuring the assessment is completed.

For more information, you can consult your provincial/territorial government and the [Impact Assessment Agency of Canada's website](#).

## 8.2 Duty to Consult

Applicants may be required to consult with Indigenous groups if the project is located in an area where Indigenous communities have potential or established Aboriginal and/or Treaty rights and the project could adversely impact those rights. When Applicants indicate consultations have started, Infrastructure Canada will assess the projects to determine if consultation requirements are met or if additional consultation is required.

Applicants are expected to carry out certain procedural aspects of consultation, where appropriate. For example, this may include providing notification letters to, and organizing consultation sessions with, Indigenous communities that will be affected by the proposed project. Most costs associated with engagement and consultation are eligible expenditures and Applicants should plan to include these costs in their project estimates.

For more information on consultation policy and resources, review:

[Consultation with Indigenous Peoples](#)  
[Infrastructure Canada Consultation with Indigenous Peoples](#)  
[Aboriginal Consultation in Federal Environmental Assessment](#)



### IMPORTANT INFORMATION

The flowing of DMAF funds to a Recipient will be subject to the project meeting requirements (as applicable) under the IAA. If you need additional details please contact the DMAF team.

Given the competitive and merit-based nature of the DMAF, approved projects are expected to be completed as approved. However, if changes to the project scope are necessary, they will need to be approved by Infrastructure Canada as they could have an impact on the original Federal EA or legal duty to consult requirements.

## 8.3 Climate lens | Greenhouse gas mitigation assessment

The DMAF applies the [Climate Lens](#) to its programming.

To respond to the requirements of the Climate Lens, all approved DMAF projects are required to submit a project level Greenhouse Gas (GHG) Mitigation Assessment prior to Infrastructure Canada making payments.

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## 8.4 Community Employment Benefits

All approved DMAF projects will be required to report on Community Employment Benefits (CEB) to provide public reporting on the employment and procurement opportunities achieved with a range of target groups (e.g., apprentices, Indigenous peoples, women, persons with disabilities, veterans, youth, recent immigrants, small-sized, medium-sized and social enterprises).

See the [CEB Guidance](#) for more details.

## 8.5 Other Federal Requirements

All projects under the DMAF must meet the following requirements:

- meeting or exceeding the applicable energy efficiency standards for buildings outlined in the Pan-Canadian Framework (PCF) on Clean Growth and Climate Change;
- ensuring that the principles underlining the Federal Government's policies to promote linguistic duality and promote the development of official language minority communities are reflected;
- meeting or exceeding the requirement of the highest published accessibility standard in a jurisdiction, defined as the requirements in the Canadian Standards Association Technical Standard Accessible Design for the Built Environment (CAN/CSA B651-12 or newer), in addition to applicable provincial or territorial building codes, and relevant municipal by-laws; and
- compliance with the federal visibility requirements.

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## 9.0 What are my responsibilities as an Applicant?

Applicants are responsible for completing the application forms with true, accurate, and reliable information based on professional knowledge and the best available science.

Applicants are also responsible for ensuring the financial accuracy of the projects. The federal share and maximum contribution are established at project approval and cannot be increased afterwards. Successful Applicants will be responsible for any cost increase, cost overruns, ineligible expenditures and costs associated with canceled projects.

### 9.1 Reporting and Audit Requirements

All Recipients that are approved for DMAF funding will be required to provide regular reports to Infrastructure Canada. The terms of the reporting requirements will be set in project Contribution Agreements. These may include any of the following: annual and final reports, status and progress updates, financial reports and evaluation reports.

Reports will include, at minimum, information regarding the implementation progress of the project and financial management details.

Eligible Recipients will be required to report once a year on Community Employment Benefits. See [Section 8.4](#) for more information.

## 10.0 What can I expect from Infrastructure Canada?

Infrastructure Canada is responsible for the implementation of the DMAF program, including reimbursement of claimed expenditures incurred by Recipients, ensuring the proper use of federal funding, and monitoring the projects through individual Contribution Agreements, which includes project results and outcomes.

Infrastructure Canada's role is limited to making a financial contribution to the Recipient for a specific project. Infrastructure Canada is neither a decision-maker nor an administrator of a project, and consequently, will not be involved in project implementation and/or operations.

Infrastructure Canada will monitor approved projects to ensure that funds are used in accordance with the terms and conditions of the Contribution Agreement.

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## 11.0 What happens if my project is approved?

Once a project is approved, Infrastructure Canada will contact Recipients to discuss the conditions of approval, communication opportunities, and begin the negotiation of the Contribution Agreement.

## 12.0 What can the DMAF Team do for me?

If you have any questions or you would like to schedule a call with the DMAF Team to obtain clarity on program parameters or for help to navigate the application process, you can contact us at: [dmaf-faac@infc.gc.ca](mailto:dmaf-faac@infc.gc.ca). It will be our pleasure to support you during the intake process.

## 13.0 Contact Information



**DMAF General Inbox**  
[dmaf-faac@infc.gc.ca](mailto:dmaf-faac@infc.gc.ca)

For complete details about the program, including eligibility requirements, application guide and form, and deadlines, please visit the [DMAF Website](#).

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# 14.0 Privacy Notice Statement

The personal information you provide as part of the funding process is collected under the authority of Order in Council P.C. 2004-0325 for the purpose of administering the funding program. It may be used to evaluate, select and review applications under the program, monitor the progress of approved projects, and to coordinate administrative decisions with respective federal departments, provincial, territorial, and/or municipal counterparts/partners. Information may be shared with other federal government institutions for the purpose of assisting Infrastructure Canada with project review and evaluation, determining eligibility under other federal government programs, and confirming past federal funding sought by an Applicant.

Infrastructure Canada may also use and disclose the information to external experts (e.g., scientific, technical, financial, marketing or commercialization) hired by the Government of Canada under contract with confidentiality obligations, for the purpose of assisting Infrastructure Canada with project review and evaluation and/or determining eligibility under other federal government programs. Other possible uses and sharing of this personal information are described in the Grants and Contributions Initiatives personal information bank. Failure to provide this information may result in a delay in assessing funding. You have the right to the correction of, access to, and protection of your personal information under the Privacy Act and to file a complaint with the Privacy Commissioner of Canada over Infrastructure Canada’s handling of your information.



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# ANNEXES

## Annex A | Definitions

### A

Adaptation	Refers to actions and/or measures (e.g., changes in processes, practices, and/or structures) that reduce the negative impacts of climate change, while taking advantage of potential new opportunities.
Applicant Share	Refers to the balance of funds that needs to be secured by the Applicant which exceeds the maximum eligible amount granted by the federal share.
Asset Dependency	The reliance of an asset and/or asset system on an interaction(s) or requirement(s) that is beyond the asset and/or asset system itself in order to function properly.
Asset Interdependency	Mutual, shared or reciprocal Asset Dependency(ies).

### C

Co-benefits	Refers to the additional positive effects that a project might have aside from addressing the natural hazard risk. For example, a project could address multiple natural hazards; provide environmental value or greenhouse gas reduction, protect valuable cultural assets; offer sports or recreational value; and/or offer employment opportunities.
Climate Change	Refers to a statistically significant variation in either the mean state of the climate or in its variability, persisting for an extended period (typically decades or longer).
Critical Infrastructure	Includes processes, systems, facilities, technologies, networks, assets and services essential to the health, safety, security or economic well-being of Canadians and the effective functioning of government.

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Cultural Value	The value of a cultural heritage asset that has been recognized as such by the community and/or any order of government.
Class Estimates	<p>Approximate cost projections used for project budget planning and development through various phases.</p> <p>Class A Estimates made after bids for a project have been received, evaluated, verified, and a contract has been awarded. Contingency within 5% to 10%.</p> <p>Class B Estimates made at the “Detailed Design” stage, when the project is ready for tendering. Contingency within 10% to 15%.</p> <p>Class C Estimates at the “Preliminary Design” stage, and may be referred to as pre-tendering estimates. Contingency within 15% to 20%.</p> <p>Class D Estimates at the “Conceptual Design” stage. Contingency within 20% to 30%.</p>
Contingency	A financial reserve set aside to cover any unexpected costs, risks, and uncertainties, and, is not necessarily allocated to a specific area. The percent cost value accepted depends on the class estimates.
Community Employment Benefits (CEB)	<p>The CEB is a reporting requirement and not a procurement requirement. It allows for the reporting on employment opportunities for groups targeted by the CEB initiative, including: apprentices; Indigenous peoples; women; persons with disabilities; veterans; youth; recent immigrants; and small-sized, medium-sized and social enterprises. See the <a href="#">CEB Guidance</a> for more information on target groups.</p> <p>Apprentices An apprentice is a paid employee, registered with the regional apprenticeship authority, who works under the supervision of a certified journeyman to learn their skilled trade and fulfill all requirements established by their province or territory.</p> <p>Veterans Any former member of the Canadian Armed Forces who successfully underwent basic training and is honourably released.</p>

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Indigenous peoples	Self-identified.
Persons with disabilities	Self-identified.
Recent Immigrant	Person who obtained a landed immigrant or permanent resident status up to five years prior to a given census year. In the 2016 Census, this period is January 1, 2011, to May 10, 2016.
Youth	Based on each province/territory definition.
Women	Self-identified.
Small and Medium Enterprises	Small businesses are businesses with 1 to 99 employees; and medium-sized businesses are businesses with 100 to 499 employees.
Social Enterprises	Revenue-generating organizations whose objective is to have a social impact.

Costs for Recovery and Replacement    Costs eligible for disaster relief assistance from provincial and territorial governments.

## D

Disaster Mitigation    A measure taken to reduce the negative impact of a disaster in order to protect lives, property, the environment, and/or reduce economic disruption.

## E

Environmental Value    The value or worth a natural environment provides to a community or society that depends on that environment in one or more ways.

Essential Services    Services that contribute to the health, safety, security or economic well-being of Canadians and the effective functioning of government (e.g., roads, bridges, public transit, power systems, safety-related assets, water, and wastewater systems).

---

Expansion Involves an increase such as raising, lengthening or widening to the exterior dimensions or the production capacity of the infrastructure.

Extreme Weather Events Extreme weather includes unexpected, unusual, unpredictable severe or unseasonal weather at the extreme of historical distribution.

## F

Federal Share Total contribution from all federal sources towards the total eligible cost of a given project.

## G

Gender-based Analysis Plus (GBA+) GBA+ analysis is used to consider all the intersecting identify factors (e.g., language, education, culture, gender, age, sex, and income) of diverse groups of women, men and gender diverse people with the aim at being more inclusive when developing, delivering and evaluating initiatives. For more information on Government of Canada's approach on GBA+, see the [Women and Gender Equality Canada](#) website.

## H

Hazard Risk Transfer The process of intentionally or unintentionally shifting the risk of the natural hazard to a neighbouring area or community as a consequence of a given project's implementation. For example, the construction of a dyke that causes flooding in a neighbouring community.

## I

Impacts The effects of one or more Natural Hazard Risk on lives, livelihoods, health status, ecosystems, economic, social, and cultural assets, services (including environmental), and infrastructure due to the interaction of one or more hazard events occurring within a specific time period and the vulnerability of an exposed society or system.

Indicator A measurable value that demonstrates a change in a system over time.

Innovation Solutions and technology, including the use of natural infrastructure, that result in better ways to manage increasing risks, such as those related to climate change.

---

## K

**KML File** A file type that is designed specifically for the visualization of geographic data. It provides accurate and detailed representation of the project location and allows a variety of point, polygon, and line data to be spatially represented.

## L

**Likelihood** The chance of an event or an incident happening, whether defined, measured or determined quantitatively or qualitatively.

**Lifespan** The length of time the asset can reasonably be used to generate a benefit to the community. Also referred as the useful life of an asset.

## M

**Multi-hazards** Multiple, different major hazards for a particular location.

## N

**Natural Disaster** A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic or environmental losses and impacts.

**Natural Hazard Risk** A potentially damaging natural physical event or phenomenon that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation in a specific period of time.

**Natural Hazard Risk Assessment** The overall process of risk identification, risk analysis and risk evaluation.

**Natural Infrastructure** The use of naturally occurring resources or engineered use of natural resources to provide adaptation or mitigation services to the gradual and/or sudden impacts of climate change or natural hazards (e.g., using rain gardens to mitigate against extreme precipitation and flooding; or the use of shade trees to address heat waves and increasing temperatures).

---

New Construction	New physical works.
Non-Competitive Procurement	Also known as Sole-Source Contract. A contract entered into without a competitive process.

## P

Pan-Canadian Framework (PCF) on Clean Growth and Climate Change	The PCF on Clean Growth and Climate Change is the plan developed with the provinces and territories and in consultation with Indigenous peoples to meet emissions reduction targets; grow the economy; and build resilience to a changing climate. Visit the <a href="#">PCF on Clean Growth and Climate Change</a> website for more information.
Public Use or Benefit	Privately or publicly owned infrastructure that provides services and-or benefits essential to the health, safety, security or economic well-being of Canadians and the effective functioning of government.

## R

Rehabilitation	Increasing the capacity of the asset(s) by improving but not altering the purpose of the asset(s).
Resilience	Resilience refers to the ability of a system, community or society exposed to hazards to resist, absorb, accommodate to, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions through risk management.
Return on Investment (ROI)	A value that provides economic justification of the investment. The ROI measures the estimated disaster losses avoided within the asset life cycle related to the project eligible expenditures.

## S

Structural Assets	Includes man-made facilities such as dams, dikes, and other structures. Structural mitigation assets enable cities to be built along waterways and coastal areas.
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## T

**Total Eligible Cost**      The sum of eligible costs as determined under the terms and conditions of the DMAF.

**Total Estimated Cost of Damages**      The sum total of the dollar value of social, economic, environmental, and heritage and cultural damages for a given project.

**Total Project Cost**      The sum of both eligible and ineligible costs for a given project.

## V

**Vulnerability**      A condition or set of conditions determined by physical, social, economic and environmental factors or processes that increases the susceptibility of an asset or a community to the impact of hazards.



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# Annex B | The DMAF Application Form Guidance

## INTRODUCTION

The DMAF Application Form captures the information required to assess the proposed project against eligibility and merit criteria as well as any requirements related to Indigenous consultations and environmental assessments.

The DMAF applications are accepted online through the [INFC Applicant Portal](#). Applicants must register for an INFC Applicant Account.

Applicants who are unable to apply through the INFC Applicant Portal are asked to reach out to the DMAF Team: [dmaf-faac@infc.gc.ca](mailto:dmaf-faac@infc.gc.ca).

## Before you Begin

Before you begin the application process, please read the list below and be certain that your organization and project meets each of the minimum eligibility requirements. Projects that do not meet the criteria below will be ineligible.

- ✓ Our organization is an eligible recipient under the DMAF;
- ✓ Our organization owns or will own the asset(s) Canada funds, or it has or will have secured all necessary rights and interest in the asset(s) Canada funds;
- ✓ Our submission is for a Project to expand, improve or build new public infrastructure that prevent, mitigate or protect against the impacts of climate change on Canadian communities, with the exclusion of emergency services infrastructure and man-made disasters;
- ✓ The total eligible cost for our project is at least \$1M;
- ✓ Our project is not solely for land acquisition; and
- ✓ Our project will be substantially completed no later than December 31, 2032.

## Register for your INFC Applicant Account

1. Enter the INFC Applicant Portal here: <https://infrastructure-applicant.canada.ca/>.  
*Please use the most recent version of the following supported web browsers to access the INFC Applicant Portal.*

- Microsoft Edge
- Google Chrome
- Mozilla Firefox
- Apple Safari
- Internet Explorer (not recommended)

2. Once you arrive at the INFC Applicant Portal, click **New User**.

- 
3. Register for your account by:
    - providing a valid e-mail address
    - creating a username and password



Passwords must contain characters from at least three of the following four classes: uppercase, lowercase, digit, and non-alphanumeric.

## Create your organization profile

### Have you previously applied to the DMAF?

For Applicants who have applied to the DMAF through previous intakes, your organization profile has already been created utilizing information provided in previous applications. You can find your profile by searching the **Existing Organization Name List**. Once you find your organization's profile, review the information provided and ensure that it is up-to-date. Please edit your organization's profile if necessary. In the event that your organization is not found, you can proceed to create a **New Organization** profile.

### How do I edit my organization's profile?

You can edit your organization's profile once you have made an INFC Applicant Portal Account by clicking on **Profile**.

1. Once you enter your **Profile** page, click on Manage Organizations. Here, you will be able to locate your organization.
2. Edit as needed and click **Save**.

### Are you a New Applicant to the DMAF?

1. If you are a new Applicant to the DMAF, create your organization's account profile by clicking **New Organization**.
2. Fill in the required fields including:
  - the organization's full legal name
  - contact information
  - organization address
  - organization type
3. Click **Save**.
4. Once you have created your organization's profile, find your organization from the **Existing Organization Name** list.
5. Enter the name and contact information for your organization.
6. Click **Save**.

## Managing your INFC Applicant Account

Now that you have registered for your INFC Applicant Account within the INFC Applicant Portal, you are able to apply to the DMAF. The INFC Applicant Portal is the place to access your organization's dashboard, application forms, and online resources.

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## Managing Permissions

### Account Administrator/Owner

If you are the first person in your organization to register for an INFC Applicant Portal account, you will automatically be the primary contact for your organization's account and also be assigned the role of the Account Administrator/Owner.

As the Account Administrator/Owner you will be responsible for:

- Reviewing and approving (or declining) requests from other members of your organization to access the INFC Applicant Portal and the DMAF application form.
- Determining whether an approved team member(s) has “read only” capabilities or “update” (populating an application) capabilities.
- Determining whether or not an approved team member(s) can Attest to and/or Submit project applications. Only an employee of the organization can attest to the project proposal.
- Determining whether a team member(s) can be your “delegate”, which permits them to have the same account privileges as you and undertake the above noted actions on your behalf (as the team Account Administrator/Owner).

### How do members of my organization access the DMAF Application Form?

For other members of your organization to access the INFC Applicant Portal and work on the DMAF application, you must grant them permissions through your **Profile** page. It is only **after** you have made your INFC Portal Account that other members of your team can proceed to make their own INFC Applicant Portal Account and start an application.

First, have your team members create their own INFC Applicant Portal Account. When asked to identify the Lead Applicant Organization, ensure that they “attach” themselves to your organization by selecting it from the Existing Organization List. It is only through this process that they will be linked to your organization and be able to access your organization's DMAF application. Once your team members have created their account, you will receive an e-mail notification titled: “Your action required”.

Next, go to your **Profile** page. Click on **Manage Permissions**. Here, you will see a list of individuals who are requesting access to the INFC Applicant Portal and DMAF Application Form.

1. Click the search tool located next to their name and account information.
2. Answer the questions as prompted.
  - Enable Portal Access
  - User Account Role

Update	<ul style="list-style-type: none"><li>• Enable updating of application contents</li><li>• No ability to modify organization's contact and account information</li><li>• No ability to attestation and/or submit the application form</li></ul>
Read	<ul style="list-style-type: none"><li>• Read only mode</li></ul>

- 
- Can Attest
  - Can Submit
  - Assign as Delegate

Once you have assigned roles to your team members and saved this information, they will be able to see your DMAF Application Form in their own accounts under **My Dashboard**. Any changes that are made and saved to your application form by your team will be visible to all accounts linked to the application form.

## My Dashboard

Your dashboard will list your ongoing and completed application forms at Infrastructure Canada. Use the dashboard to navigate to your application form(s) and keep track of the progress and status of your application(s). You do not need to complete your online application in one attempt. The application can be saved and returned to as many times as necessary before the submission deadline.

## Apply for Funding

You will find the DMAF Application Form on the “Apply for Funding” page. While there is no limit on the number of applications that can be submitted by an eligible Applicant, each project requires its own application.

## Resources

The Resources page gives you access to additional online tools, including the Applicant Guide and its Annexes, to help you complete the DMAF Application Form.

## Release Notes

The Release Notes page is where Infrastructure Canada and/or the DMAF Team will make general announcements pertaining to the application process. Check back here from time to time to see if there are any news and/or updates.

# How to access the DMAF Application Form

After creating and confirming your organization account, access the DMAF Application Form by:

1. Click **Apply for Funding**.
2. Click **Apply** for the Disaster Mitigation and Adaptation Fund.

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To begin the DMAF application , identify the estimated total eligible costs for the project. Projects must have a minimum of \$1M in total eligible costs to be eligible.



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# Step-by-Step Guide to the DMAF Application Form

## Name your project

### Project Title

In 300 characters or less, provide a concise but meaningful title, including the asset system, the main natural hazard to be addressed, and the location of the project.

For example: Construction of a new flood wall to retain recurrent river flooding in [name of community], [name of jurisdiction].

### Total Eligible Project Cost

Enter the total eligible project cost of your project.

### Short Description

Provide a short description of the project that can be used in media stories and reports. You may wish to describe the main natural hazard to be addressed, the asset system, the location of the project, and the impact of your project.

For examples of the level of detail that should be included in this short description, see the [DMAF website](#).

## Tell us about your organization

### Lead Applicant Organization

#### Lead Applicant Organization

Use the search tool to find your organization. Once you select your organization from the search tool, your organization's profile and mailing address will be automatically filled in by the system. Please ensure that the information provided is correct.



#### **IMPORTANT INFORMATION**

If you are a lead applicant organization identifying as a:

1. Public or Not-for-Profit post-secondary institution, or
2. For-Profit of any organization type

you are required to partner with one or more eligible applicants listed for the DMAF and submit a letter of support from the partner organization. See [Section 2.0: Who can Apply?](#) of the Applicant Guide for more details.

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## Lead Applicant Contacts

### Primary Contact

Use the search tool to find your organization's primary contact.



If your organization's primary contact is different from the contact who will be leading your project, please create a new primary contact profile by clicking **New** in the search tool window. This will add an additional contact to your organization's profile. Once you have created this contact's profile, click **Submit**. Search the contact's name using the search tool.

### Secondary Contact

Click on the search tool, then **New**, to create a secondary contact for your project. Once you have created this profile, search the name using the search tool.

### Environmental Assessment and Duty to Consult Contact

Use the search tool to find your organization's Environmental Assessment and Duty to Consult contact, only if this contact is the same as the primary or secondary contact listed above.

If the Environmental Assessment and Duty to Consult contact is different from the primary and secondary contact for your project, click on the search tool, then **New**, to create a new Environmental Assessment and Duty to Consult contact profile. Once you have created this profile, search the name using the search tool.

## Affiliations

Indicate whether your project is:

- affiliated with an Indigenous Community(ies) and/or
- prioritized by or associated with one or more National Indigenous Organization(s)

Provide the name of the Indigenous Community(ies) and/or National Indigenous Organization(s) and its distinction-based group. If the distinction-based group is not listed, please click **Other**, and specify. Should your project be affiliated with an Indigenous Community, please describe the affiliation.

## Partnerships

### Are you partnering with other organization(s) to deliver this project?

Identify the partnerships that are in place to deliver this project. This includes the full legal name, address, contact information, and organization type of the partner organization.

---

## Mandate and Governance

As the lead applicant organization, answer the following questions to describe your organization's mandate/role, governance structure and how your organization is best placed to effectively deliver the proposed project:

- Do you have the mandate/role to lead the project?
- Is your organization best placed to lead/deliver the project?
- What structure/governance is in place to ensure you can effectively deliver this project?

## Letter(s) of Support

If you are a lead applicant organization identifying as a:

1. Public or Not-for-Profit post-secondary institution, or
2. For-Profit of any organization type

you are required to partner with one or more eligible applicants listed for the DMAF and submit a Letter of Support from the partner organization. See [Section 2.0: Who can apply?](#) for more details.

Upload your Letter(s) of Support. Please ensure that your documents are clearly named. For example, [Name of Lead Applicant Organization]-Letter of Support. **Please leave blank if not applicable.**



## Tips for a successful application

All eligible and complete DMAF applications will be assessed on a competitive basis, with projects being scored on select merit criteria. Please review the table below for more details. This program support material provides information about the eight (8) merit criteria that will be used in the DMAF application evaluation process.

SCREENING CRITERIA		DETAILS
1	<b>Eligibility</b>	A lead applicant organization and proposed project that does not meet the minimum eligibility requirements will not be considered for further assessment.
2	<b>Quality and Completeness</b>	An incomplete application form will not be considered for further assessment.

MERIT CRITERIA		DETAILS
1	<b>Natural Hazard Risk Assessment</b>	<p>Strong proposals consider the likelihood of the hazard risk and the socio-economic impacts of the hazard risk using four (4) key indicators:</p> <ul style="list-style-type: none"> <li>• loss of lives/missing people,</li> <li>• % people directly affected,</li> <li>• % local economic loss, and</li> <li>• % population without essential services.</li> </ul> <p>Applicants must provide quantitative data for these four (4) key indicators. Strong proposals also provide reliable evidence such as reports, studies, and Indigenous Traditional Knowledge to support the assumptions made.</p> <p>Note: The quantitative data provided in the Natural Hazard Risk Assessment and Community Resilience sections will provide the basis to assess the improved resilience provided by the project.</p>
2	<b>Community Resilience</b>	<p>Strong proposals demonstrate a substantial improvement to the asset resilience and decreased socio-economic impacts on the population(s) exposed to a natural hazard risk, including reduce critical infrastructure impacts such as essential services interruptions; reduce amount of at risk critical infrastructure; reduce impacts on health and safety of Canadians; reduce significant economic activity disruptions; reduce cost of recovery/replacement; and/or reduce impact on Canada's vulnerable regions.</p> <p>Applicants must provide quantitative data of the four (4) key indicators expected after project completion:</p> <ul style="list-style-type: none"> <li>• loss of lives/missing people,</li> <li>• % people directly affected,</li> <li>• % local economic loss, and</li> <li>• % population without essential services.</li> </ul> <p>Strong proposals also provide reliable evidence such as reports, studies, and Indigenous Traditional Knowledge to support the assumptions made.</p> <p>Note: The quantitative data provided in the Natural Hazard Risk Assessment and Community Resilience sections will provide the basis to assess the improved resilience provided by the project.</p>

MERIT CRITERIA		DETAILS
3	<b>Return on Investment (ROI)</b>	Strong proposals demonstrate the capacity of the asset to reduce or avoid losses due to future natural disaster(s). The ROI ratio measures the estimated disaster losses avoided within the asset life cycle.
4	<b>Project Rationale</b>	<p>Strong proposals demonstrate that the proposed project is the most effective infrastructure solution to reduce the socio-economic impacts of the main natural hazard risk.</p> <p>Applicants must describe why the proposed project is the best and most appropriate option of addressing the natural hazard risk. Applicants may provide an investment rationale which includes the options considered for their investment decision such as: 'do nothing'/status quo, innovation/natural infrastructure, ROI, and GHG reduction.</p>
5	<b>Innovation</b>	<p>Strong proposals consider innovative solutions that are proven to be effective in reducing the socio-economic impacts of the main natural hazard risk.</p> <p>Applicants may provide details on how innovative approaches are considered as part of their project including natural infrastructure, partnerships, replicability and scalability, knowledge transfer, and/or global best practices in the asset design, operations, and management processes to better cope with a particular natural hazard risk and the risks posed by the increasing exposure to severe climate events.</p>
6	<b>Natural Hazard Risk Transfer</b>	Strong proposals consider infrastructure solutions that address comprehensively and effectively the upstream and downstream impacts of the natural hazard risk.
7	<b>Strategic Alignment</b>	<p>Strong proposals align approved national and provincial/territorial/municipal adaptation and mitigation plans, strategies, frameworks, policies, related asset management plans and land-use plans.</p> <p>Projects that are non-compliant with legislation and regulations will not be considered. INFC will seek confirmation from provinces and territories on the required compliance.</p>
8	<b>Project Co-Benefits</b>	Strong proposals will offer infrastructure solutions that provide additional benefits to the community such as addressing multiple hazards, providing environmental value or GHG reduction, protecting valuable cultural assets, offering sports or recreational value, and/or offering employment opportunities.

---

# Tell us about the natural hazard and how it has impacted your community

## Primary Natural Hazard Type

Identify the main natural hazard the project is addressing. Primary natural hazard types include :

- |  |   |
|--|---|
| <input type="checkbox"/> Avalanche           | <input type="checkbox"/> Landslides                               |
| <input type="checkbox"/> Drought             | <input type="checkbox"/> Permafrost thaw                          |
| <input type="checkbox"/> Earthquake          | <input type="checkbox"/> Sea Level Rise                           |
| <input type="checkbox"/> Erosion             | <input type="checkbox"/> Storm                                    |
| <input type="checkbox"/> Extreme Temperature | <input type="checkbox"/> Tsunami                                  |
| <input type="checkbox"/> Flood               | <input type="checkbox"/> Wildland Fire                            |
| <input type="checkbox"/> Hurricane           | <input type="checkbox"/> Other (If Other, specification required) |

## Essential services impacted by the natural hazard

Indicate the essential services impacted by the natural hazard by choosing one or more of the following:

- |   |   |
|---|---|
| <input type="checkbox"/> Transportation | <input type="checkbox"/> Wastewater                               |
| <input type="checkbox"/> Power          | <input type="checkbox"/> Stormwater                               |
| <input type="checkbox"/> Waste Supply   | <input type="checkbox"/> Safety                                   |
|   | <input type="checkbox"/> Other (If Other, specification required) |

## Total Area Exposed

Provide the estimated area in **hectares** that would be impacted by the natural hazard.

1km<sup>2</sup> =100 Hectares.

## Provide .KML Files of the affected area (geographical boundaries)

Provide a map that specifies the geographical boundaries of the area exposed to the natural hazard and one for the project location(s) in a .KML file format.

### What is a .KML File?

A .KML file is a file type that is designed specifically for the visualization of geographic data. It provides accurate and detailed representation of the project location and allows a variety of point, polygon, and line data to be spatially represented.

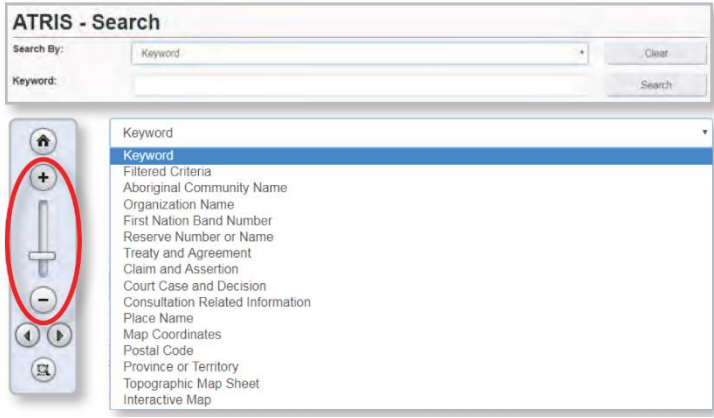


### How to Create a .KML file

A .KML file can be easily created by using either:






1. Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) publicly available Indigenous & Treaty Rights Information System (ATRIS web-based application) OR
2. Google Earth

## Creating a .KML File with ATRIS

Follow the steps below. You can learn more about ATRIS through [ATRIS training webinars](#).

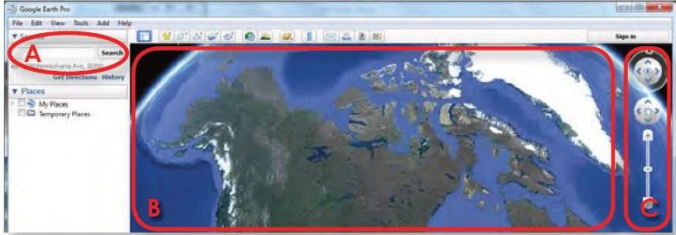


Creating a .KML File with ATRIS		
1	Go to CIRNAC ATRIS web-based application.	<a href="http://sidait-atris.aadnc-aandc.gc.ca/atris_online/Content/Search.aspx">http://sidait-atris.aadnc-aandc.gc.ca/atris_online/Content/Search.aspx</a>
2	Search the location in the map viewer by: <ul style="list-style-type: none"> <li>• Clicking</li> <li>• Dragging</li> <li>• Scrolling to zoom OR</li> <li>• Using search options in “Search By” drop down menu</li> </ul>	
3	Use the “Draw on map” tools located on the top right of the ATRIS interface to draw the project on the map.	
3a.	<b>How to use the “Draw on map” tool</b>	
	Line Search 	Use the Line Search for <b>linear project components</b> .  Examples of linear project components: roads, sewer lines, railways, pipelines, trails, transmission lines, etc.  Click as many times as necessary to create a line that represents the project feature. Double click to complete.

## Creating a .KML File with ATRIS

	Polygon Search		<p>Use the Polygon Search for a polygon project components. Examples of polygon project components: building footprints, vegetation cuts, sewer/wastewater lagoons, etc.</p> <p>Click as many times as necessary to create a closed polygon that represents the project feature. Double click to complete.</p>
	Circular Search		<p>Use the Circular Search for circular or point project components.</p> <p>Examples of circular or point project components: wells, outfalls, culverts, etc.</p> <p>Click on the map to automatically create a circle. To create a smaller circle similar to a point, zoom in as close as possible on the map before clicking. Alternatively, click and drag, then release to draw a circular project feature yourself.</p> <p>For more advanced users, the Circular Search option allows users to create circular polygons able to mimic points in terms of scale.</p>
3b.	<b>How to Erase</b>		
	Erase by Extent		<p>To delete specific areas.</p> <p>Click and drag to create a shape around what needs to be deleted. Anything intersecting the box will be deleted when the mouse is released.</p>
	Global Erase		<p>Click on Global Erase icon to erase everything on the map. Click OK when prompted to clear the map viewer and start fresh.</p>
4	Export and Save the .KML File		<p>The .KML file will download as 'SearchAreas.kml' (unless you have specified otherwise) to the location your browser is configured to save downloads to.</p> <p><b>Save the file using a file name that reflects the project name before sending to Infrastructure Canada.</b></p>
5	Attach the file in the DMAF Application Portal where applicable.	<p>Once saved, the .KML file is now ready to be uploaded to the DMAF Applicant Portal.</p>	

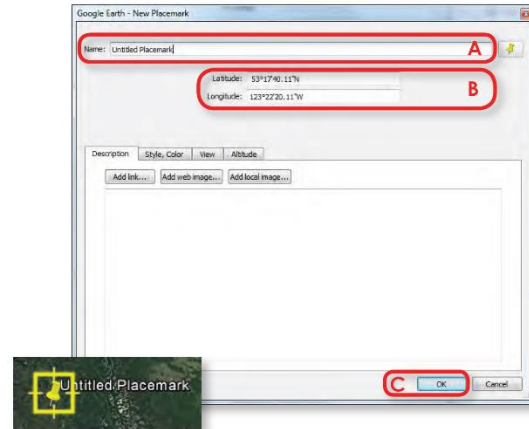
## Creating a .KML file using Google Earth

Follow the steps below to create a .KML file using Google Earth.

Creating a .KML File using Google Earth			
1	Install Google Earth on your desktop and open the application.	<a href="https://www.google.com/earth/desktop/">https://www.google.com/earth/desktop/</a>	
2	Search the project location in the map viewer by using the following options: <ul style="list-style-type: none"> <li>A. Typing an address or coordinates in the search bar</li> <li>B. Clicking, dragging, and scrolling in the map viewer</li> <li>C. Using the navigation tools</li> </ul>		
3	Draw the exact location of the project by using the placemark, polygon, and/or path tools shown on the left side of the Google Earth interface.  Applicants may draw as many components of varying types as necessary.		
3a.	<b>How to Draw on Google Earth</b>		
	Placemark		Use the Placemark tool to point project components.

## Creating a .KML File using Google Earth

This button will add a placemark to the map and open a corresponding dialogue box.



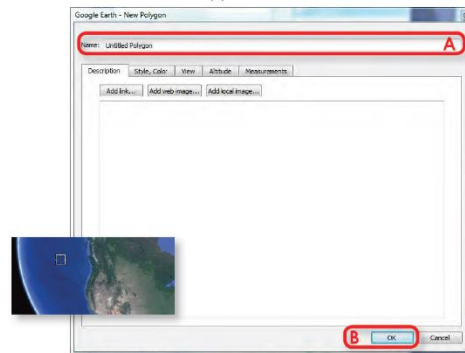
- A. To move the placemark:
- Click and drag the placemark pin to the desired location OR
  - Enter the desired latitude and longitude coordinates in the dialogue box (A)
- B. Rename the placemark pin by changing the entry in the “Name” field of the dialogue box (B)
- C. Click “OK” when complete (C)

Polygon


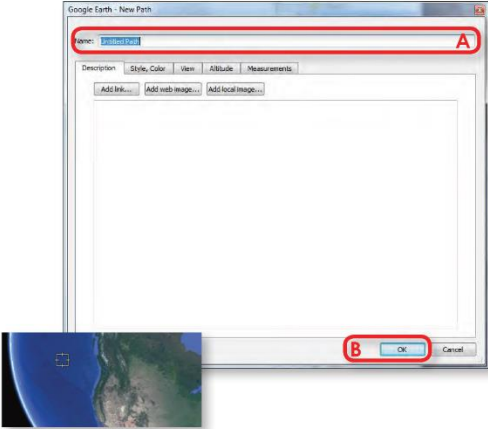
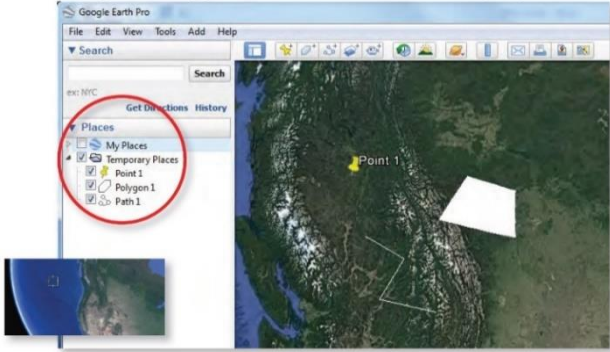


Use the Polygon tool to delineate project components that consists of an area of any shape. This button will open a dialogue box and a crosshair cursor.

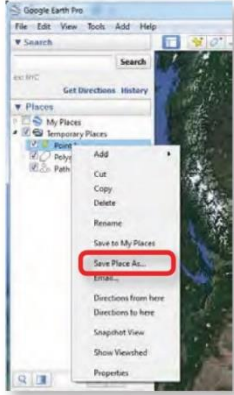
Click as many times a necessary to create a closed polygon that represents the project feature.



# Creating a .KML File using Google Earth

			<p>A. Rename the polygon by changing the entry in the “Name” field of the dialogue box (A)          B. Click “OK” when complete (B)</p>
3b.		<p><b>Viewing your drawings</b></p>	<p>All drawn components will appear in the “Places” sidebar under the “Temporary Places” folder.</p>
	<p>Path</p>		<p>Use the Path tool to mark linear project components. Examples of linear project components include roads, sewer lines, railways, pipelines, trails, transmission lines, etc.</p> <p>This button will bring up a dialogue box and a crosshair cursor. Click as many times as necessary to create a line that represents the project feature.</p>  <p>A. Rename the path by changing the entry in the “Name” field of the dialogue box (A)          B. Click “OK” when complete (B)</p>
			

## Creating a .KML File using Google Earth

4	<p>Export and Save the .KML File.</p>	<p><b>IMPORTANT INFORMATION</b></p> <p>If there are multiple shapes, it is necessary to export each shape as individual .KML files.</p>  <p>The screenshot shows the Google Earth Pro interface. The 'Places' sidebar is open, and a right-click context menu is displayed over a location. The 'Save Place As...' option is highlighted with a red circle. Other options in the menu include 'Add', 'Cut', 'Copy', 'Delete', 'Rename', 'Save to My Places', 'Print...', 'Directions from here', 'Directions to here', 'Snapshot View', 'Show Viewshed', and 'Properties'.</p> <ol style="list-style-type: none"> <li>1. Right click on the component in the “Places” sidebar and click “Save Place As...”.</li> <li>2. A “Save File” dialogue box will open. Change the type from .KMZ to .KML using the ‘Save as type:’ drop down menu.</li> <li>3. Choose the location where to save the file in the file browser.</li> <li>4. Click “Save” when complete.</li> <li>5. Repeat Steps 1-4 for each project component if there is more than one.</li> </ol> <p><b>Save the file using a file name that reflects the project name before sending to Infrastructure Canada.</b></p>
5	<p>Attach the file in the DMAF Application Portal where applicable.</p>	<p>Once saved, the .KML file is now ready to be uploaded to the DMAF Application Portal.</p>

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## Problem Statement

**In 1,500 characters or less, describe the main natural hazard and how the natural hazard has or will impact your community.**

You may choose to describe context, type, magnitude, intensity, and/or speed of onset and duration of the natural hazard, and how imminently a future event causing significant damages can be expected.

DESCRIPTION	EXAMPLE
Context	The threat(s) of concern and effect on community
Type	Climatological: extreme temperatures, drought and wildfires Geophysical: earthquakes, landslides, tsunamis Hydrological: avalanches and floods Meteorological: hurricanes and storms/wave surges
Magnitude	Rate: Richter Scale Intensity: Saffir-Simpson wind scale for hurricanes
Speed of onset	Flooding that breaches shoreline within one (1) day of onset
Duration	Years, seasons, weeks, days, hours, minutes

## Natural Hazard Risk Assessment

### Overview

The Natural Hazard Risk Assessment is aimed at understanding the impacts of the natural hazard on the community by measuring:

- the likelihood of the natural hazard risk (magnitude and frequency), and
- the socio-economic impacts on the community.

Socio-economic impacts are measured using four (4) key indicators:

- loss of lives/missing people,
- % people directly affected,
- % local economic loss, and
- % population without essential services.

Data provided in this section must be supported with a maximum of two (2) reliable quantitative and/or qualitative sources such as reports, studies, and/or Indigenous Traditional Knowledge to support the assumptions made.

It is encouraged that you assess the socio-economic impacts for both **before and after** the DMAF project, at this stage of the application. Data for the four (4) socio-economic impact indicators mentioned above will be asked again in the Community Resilience section of the application form to assess the change in these indicators as a consequence of the proposed project.

## Supporting Evidence for the Natural Hazard Risk Assessment

### Total population at risk

Specify the total population at risk in the area exposed to the natural hazard.

### Natural Hazard Risk Measurements

For each data point, quantify the **current** (before the DMAF project) impact of the natural hazard.



**Data fields that are left blank (no value entered) will be excluded from the assessment.**

INDICATOR		VALUE	DESCRIPTION
1	Likelihood of natural hazard occurrence	1 in [ ] Years	Indicate the likelihood of the specified natural hazard while considering the current and future climate change impacts in years. <b>THIS VALUE IS REQUIRED and is necessary for your project's Return on Investment calculations.</b>
2	Loss of lives and/or missing people	#	Indicate the number of lives lost and/or missing people due to the natural hazard.
3	Percentage of people directly affected	%	Indicate the percentage of people affected by the natural hazard as a percent of the total population in the affected area. This may include people that are displaced, ill, and/or injured.  For most disasters triggered by natural hazards, the number of people affected is significantly higher than the number of lives lost or missing people.  Example calculation:  $\% \text{ people directly affected} = \frac{\# \text{ of people affected}}{\text{Total Population in Affected Area}}$
4	Percentage of local economic loss	%	Indicate the expected local GDP loss based on total cost of the estimated damages.  Example calculation:

INDICATOR		VALUE	DESCRIPTION
			<p><math display="block">\% \text{ local economic loss} = \frac{\text{Total estimated damages}}{\text{Local GDP 2021}}</math></p> <p>The GDP measures economic activity that generates income through wages, profits, or the use of capital. It does not measure direct losses to wealth or assets, such as homes or vehicles, nor does it measure the impacts to critical infrastructure or private capital, but is nonetheless an important way to gauge local economic impact.</p> <p style="text-align: center;"><b>IMPORTANT INFORMATION</b></p> <p>The GDP is available through Statistics Canada's quarterly GDP figures at the census metropolitan area (CMA) level and nine (9) non-CMA regions within the country.</p> <p>For municipalities <b>not included</b> in these two Statistics Canada data sets, alternative indicators may be used to measure the economic impact such as provincial GDP or loss of property value (%) through changes in municipal asset inventory. For example:</p> <p><math display="block">\% \text{ local economic loss} = \frac{\text{Total estimated damages}}{\text{Municipal Asset Inventory 2021}}</math></p>
5	Percentage of population without essential services	%	<p>Indicate the estimated impact on critical infrastructure that provide essential services to the community.</p> <p>Example Calculation:</p> $\% \text{ population without essential services} = \frac{\# \text{ of people without essential services}}{\text{Total Population in Affected Area}}$

**Data Source**

For each value listed above you must provide supporting data sources. Up to two (2) data sources can be provided to support the values entered. In addition, you are required to justify why the data source(s) you have chosen is relevant to support the values entered for each indicator.

- Reliable sources to support the data included in the application are essential; especially for hazard risk, resilience and return on investment.
- 
- **All data sources should be available through hyperlinks or attached to the application, including any internal, unpublished sources.**

The following information must be provided for each data source:

INPUT	DESCRIPTION
Value Type	Indicated if the value is: <ul style="list-style-type: none"> <li>• Historic;</li> <li>• Projected; or</li> <li>• Both</li> </ul>
Sample Size	Indicate the sample size represented by the data source: <ul style="list-style-type: none"> <li>• Provincial/Territorial</li> <li>• Regional</li> <li>• Municipal</li> <li>• Indigenous Community</li> </ul>
Type of Data Source	Indicate the type of data source in which the value was extracted: <ul style="list-style-type: none"> <li>• Database</li> <li>• Report</li> <li>• Online Article</li> <li>• Research Article</li> <li>• Indigenous Knowledge</li> <li>• Other</li> </ul> If Other, specify and describe the data source.
Date of Publication	Indicate the publication date of the data source.
Page #	Specify the relevant page number(s) within the data source that describes the value of the indicator.
URL (if applicable)	If applicable, provide the website address of the data source.
Is the data source publicly available?	Indicate if the data source is publicly available.  If no, describe the data source and explain the data that supports the assumption made for the indicator. For example: <ul style="list-style-type: none"> <li>• Traditional Indigenous Knowledge including Traditional Ecological Knowledge</li> <li>• Unpublished assessments/reports internal to</li> </ul>

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INPUT	DESCRIPTION
	the organization
Upload document	Upload the data source for the indicator. Please ensure that your documents are clearly named. For example: [Name of Lead Applicant Organization]- Natural Hazard Risk-Economic Loss-Data source1.

---

## Tell us about your project

The aim of this section is to describe the proposed project and how it will mitigate or adapt to the identified natural hazard risk(s) while safeguarding adjacent communities and/or areas. Strong proposals will consider how the project aligns with relevant national, provincial/territorial and local mitigation and adaptation plans and asset management plans. Additionally, strong proposals will provide innovative approaches to project design, processes, and partnerships.

### Project Location

#### Province(s) and/or Territory(ies)

Select the province(s) or territory(ies) where the project would be located. If the project is in multiple jurisdictions, check all that apply.

#### Community(ies) and population(s) that the project serves

Use the search tool to find and select the community(ies) that the project serves. Specify the population of each community.



When using the search tool, an asterisk (\*) before any search term allows you to search for items using only partial text.

#### Nature of Project

Select the nature of the project as defined by the DMAF. Note: Each of the following options may include natural infrastructure.

New construction	New physical works.
Rehabilitation	Increasing the capacity of the asset by improving but not altering the purpose of the asset.
Expansion	Involves an increase such as raising, lengthening or widening to the exterior dimensions or the production capacity of the infrastructure.

### Land Ownership

Indicate the project land ownership by selecting all that apply:

- Federal
- Provincial/Territorial
- Municipal
- Private
- Other

If Other, provide the legal name of the owner.

---

**If the project is located on Federal Lands, specify the land administrator.**

Choose the federal owner/administrator from the follow options:

- Indian Reserve Lands – CIRNAC
- Indian Reserve Lands – First Nation
- National Park or Protected Area – Parks Canada
- Federal Agricultural lands – Prairie Farm Rehabilitation Administration
- Federal Airport lands – Airport Authority
- Federal Port lands – Port Authority
- Other

If Other, specify the name of the organization. For example, the National Capital Commission or the Department of National Defence.

**Provide .KML File(s) for the project location(s).**

Upload the .KML File that specify your project location(s). If your project involves multiple sites provide one (1) .KML file that includes all project locations. See [How to create a .KML File](#).

## Land Acquisition



### IMPORTANT INFORMATION

Land acquisition costs are eligible under the DMAF only for natural infrastructure. To ensure that land acquisition for your project is related to natural infrastructure, please review [Section 4.1: \*Is land acquisition an eligible expenditure?\*](#) of the Applicant Guide.

**Is land acquisition for natural infrastructure required?**

Indicate if land acquisition for natural infrastructure is necessary. If yes, specify a date for when the land is expected to be secured.

**Is the land acquisition the sole project component?**

Please note that land acquisition as the sole purpose of the project is considered ineligible.

**Is private land acquisition for natural infrastructure required?**

Indicate whether the land being acquired for the natural infrastructure is privately owned land. If yes, describe the natural infrastructure component of the project.

Only acquisition of privately owned land for the purpose of natural infrastructure is eligible, and it must not constitute the sole component of the project. Costs associated with any buildings and/or non-natural structures affixed to the land being acquired or relocated and the relocation of entire communities or properties are ineligible under the DMAF.

**What is the amount (\$) related to the land acquisition eligible under the DMAF?**

Provide the fair market dollar value of the land acquisition eligible under the DMAF.

---

## Non-competitive procurement

### Will non-competitive procurement be required for the project?

Indicate if non-competitive procurement (sole-source contracts) will be required for your project.

If non-competitive procurement is required, please specify all non-competitive procurement, regardless of municipal or provincial/territorial policies, including contracts where only one person or entity is capable of performing the work and small value contracts.

For each non-competitive procurement, provide the name of the company/consultant, the expected value of the contract (mandatory), and the nature of the work under each contract. In addition, an explanation must be provided as to why sole-source contracting will be used. You may wish to discuss the specific and unique level of expertise and/or the particular technology to address an important issue.

For more details on non-competitive procurement processes see Section 5.3: Are non-competitive procurement processes (“Sole-Source” Contracts) allowed? in the Applicant Guide.

## Asset Details

### Number of Assets/Asset Systems

Specify the asset(s) and/or asset system(s) for your project under the DMAF. A maximum of ten (10) assets/asset systems will be accepted. Please note that natural infrastructure assets must be identified separately.



For example, an asset system is a wastewater system that could include a treatment plant as well as the required pipes.

### For each asset, the following information will be required.



For all assets included in the project, you must provide a clear description for each asset/asset system.

### Is the asset considered critical infrastructure?

Indicate whether the asset is considered critical infrastructure.

Critical infrastructure refers to processes, systems, facilities, technologies, networks, assets and services essential to the health, safety, security or economic well-being of Canadians and the effective functioning of government.

### Asset/Asset System Name

Provide the name of the asset.

### Asset/Asset System Type

Choose the asset type from the following list:

- Structural

- Natural
- Both



### EXAMPLES OF STRUCTURAL AND NATURAL ASSET TYPES

- |            |  |
|------------|--|
| Structural | <ul style="list-style-type: none"> <li>• The enhancement of a bridge to increase its structural capacity to withstand earthquakes</li> <li>• A sea wall to protect against coastal erosion</li> <li>• A retention basin to prevent flooding</li> </ul> |
| Natural    | <ul style="list-style-type: none"> <li>• A natural wildfire barrier</li> <li>• Setback levees</li> </ul>   |

Under the DMAF, eligible infrastructure investments will support public infrastructure, defined as tangible capital assets, including natural infrastructure, primarily for public use or benefit.

#### Asset/Asset System Condition

Indicate whether the asset is a:

- New asset to be constructed
- Existing Asset to be rehabilitated or expanded

#### What essential service does/will the asset provide?

Indicate the essential service(s) the asset does/will provide. Select all that apply.

- |   |                                     |
|---|-------------------------------------|
| <input type="checkbox"/> Transportation | <input type="checkbox"/> Wastewater |
| <input type="checkbox"/> Power          | <input type="checkbox"/> Stormwater |
| <input type="checkbox"/> Waste Supply   | <input type="checkbox"/> Safety     |
|   | <input type="checkbox"/> Other      |

If Other, please describe.

#### Who does/will own the asset/asset system?

Identify the entity that does/will own the asset, including the legal name of the owner. If the asset is co-owned, please specify the entity(ies), including their legal name(s).

In the case where the asset(s) is privately owned (for-profit asset ownership), choose one or more of the following uses or benefits (at least one condition is necessary for asset eligibility):

- Benefits are direct and tangible to the community;
- Investments focus on essential services to Canadians (health, safety, security or economic);
- DMAF investments benefit all potential beneficiaries, and not particular individuals; and/or
- Public benefit surpasses private benefit.

#### Estimated eligible cost to build, rehabilitate, improve, or expand the asset

Provide the estimated eligible cost to build, rehabilitate, improve, or expand the asset.

---

### What is the anticipated lifespan of the asset after project completion?

Specify the asset lifespan to be achieved after project completion.

The lifespan of an asset is an estimation of the length of time the asset can reasonably be used to generate a benefit to the community. Useful lifespan of an asset may depend on the asset, more specifically:

- asset age
- the frequency of asset use
- the climate related impacts
- the asset's maintenance policy
- anticipated technological improvements
- changes in laws/regulations
- economic changes

### What are the asset vulnerabilities related to the risk of the natural hazard? Select all that apply.

Identify the key vulnerability(ies) to the asset:

- Location
- Structural
- Materials
- Age
- Poor performance
- Dependencies
- Interdependencies
- Lack of monitoring capacity
- Lack of compliance with a specific hazard related codes and regulations
- Other

## Project Rationale

### What is the Project's Objective/Aim?

Describe the main objective/aim of your project and how it aligns with the objectives of the DMAF.

### Describe any past activities/methods performed to mitigate the natural hazard risk.

Briefly describe what activities or methods have been performed in the past to mitigate or attempt to mitigate the natural hazard risk in your community.

### What is your current practice to mitigate the natural hazard risk?

Briefly describe what is your current practice to mitigate the natural hazard.

### What is/are the consequence(s) of continuing with the existing practice(s) to mitigate the natural hazard risk?

Briefly describe the consequences of continuing with the existing practice(s) to mitigate the natural hazard. For example, you may discuss disadvantages, challenges, barriers and issues that have been experienced or that may arise.

If there are no consequences of continuing the existing practice(s), please explain why.

---

**Describe up to two alternative option(s) that were considered to mitigate the natural hazard risk.**

Briefly describe up to two (2) alternative options that were considered for the project. You may address the activities and method of the alternative option(s) and its advantages and/or limitations. An alternative approach to flooding may include strategic retreat or limiting developments in floodplains.

**Describe the project and justify how it will mitigate the natural hazard risk.**

This is your opportunity to clearly outline the proposed project. You may wish to include details of the work to be completed, and the activities and methods that support the project design and implementation plan.

**Estimated number of jobs created for the implementation of this project.**

Indicate the estimated number of jobs that will be created during the implementation of your project under the DMAF.

## Community Engagement

**Have you engaged with community stakeholders about the project?**

Indicate if you have engaged with community stakeholders about your project.

If yes, describe how you engaged community stakeholders and how this engagement has shaped the design and/or implementation plans of the project.

If no community engagement has occurred, you must explain why and also indicate if any community engagement is planned.

*It is encouraged that key community stakeholders are engaged to promote discussions early in the planning and design stages of your project. Community stakeholders may include but are not limited to neighborhoods, community development groups, environmental organizations, development organizations, citizen associations, Indigenous organizations, and/or non-governmental organizations.*

## Project Financials

### Total Project Cost

Provide an estimate of the total project cost of your project. Round up to the nearest dollar value.

The total project cost includes both eligible and ineligible costs. Please review [Section 4.0](#) and [Section 6.0](#) of the Applicant Guide for more information.

Any cost increases or cost overruns will not be covered by Infrastructure Canada. It is important that you include in your budget all contingency amounts according to the stage of your project (i.e. conceptual, preliminary design, detailed design and ready to tender). See [Class Estimates](#) and [Contingency](#) for more information.

---

## Total Eligible Project Cost

Provide an estimate of the total eligible cost of your project. Round up to the nearest dollar value.

The total eligible cost may be lower than the total project costs because some costs are deemed ineligible and will not be reimbursed by Infrastructure Canada. Please review [Section 4.0](#) and [Section 6.0](#) of the Applicant Guide for more information.

## Federal Share of Total Eligible Cost

This is a calculated value that is automated by the portal system using your input in the federal share Cashflow section. See [Section 5.0](#) of the Applicant Guide for the federal share and stacking limits under the DMAF.



### IMPORTANT INFORMATION

In exceptional circumstances, where projects are led by other levels of government but in partnership with Indigenous communities and primarily support infrastructure investments in those communities, a **letter of support** from Indigenous communities benefiting from the project must be provided for the other level of government to receive up to 100% federal share.

## Federal Share vs. Applicant Share | Who is paying for what?

*Federal Share* and *Applicant Share* of funds are important concepts to understand and consider to ensure the success of your project.

The maximum Federal Share of the costs of your project under the DMAF is determined by your total eligible project costs, not by your total project costs. All eligible expenditures which exceed the maximum allowable federal contribution of the project and any ineligible costs under the DMAF are part of the Applicant Share. These costs are your responsibility and will not be eligible for federal reimbursement.

For example, a project could include the following costs, which includes contingency costs:

1. \$1.5M for project design and planning costs
2. \$1M for land acquisition for natural infrastructure
3. \$500K for salaries within your organization

The total project cost is the sum of the total eligible costs and the ineligible costs.

$$\begin{aligned}\text{Total Project Cost} &= \$1.5\text{M} + \$1\text{M} + \$500\text{K} \\ &= \$3\text{M}\end{aligned}$$

Under the DMAF, only the **1.** Project design and planning (\$1.5M) and **2.** land acquisition for natural infrastructure (\$1M) are eligible costs. Therefore,

$$\begin{aligned}\text{Total Eligible Cost} &= \$1.5\text{M} + \$1\text{M} \\ &= \$2.5\text{M}\end{aligned}$$

The remaining costs are ineligible (**3.** \$500K for salaries within your organization).

If the Federal Share is 40% of total eligible costs, then

$$\begin{aligned}\text{Federal Share} &= \text{Federal Share Percent} \times \text{Total Eligible Cost} \\ &= 40\% \times \$2.5\text{M} \\ &= \$1\text{M}\end{aligned}$$

The Applicant Share is the balance of funds that needs to be secured by your organization.

$$\begin{aligned}\text{Applicant Share} &= \text{Total Project Cost} - \text{Federal Share} \\ &= \$3\text{M} - \$1\text{M} \\ &= \$2\text{M}\end{aligned}$$

---

## Federal Share Cashflow

The Federal Share Cashflow represents the amount your organization will be claiming from Infrastructure Canada for a given fiscal year (April 1 to March 31). Provide a breakdown of the federal share of total eligible costs per fiscal year for 12 years. Round up to the nearest dollar.

Please note, the breakdown must be based on when expenditures will be submitted to Canada for reimbursement, not when they will be incurred. For example, if expenditures will be incurred in December 2022, but will not be claimed for reimbursement until April 2023, then these expenditures would be listed in the 2023-24 fiscal year.



### EXAMPLE CALCULATION

If you are planning on spending \$10 million in fiscal year 2021-22 and the federal share is 40%, then, it should be claimed within the same fiscal year, the Federal Share Cashflow for 2021-22 is \$4 million.

**Federal Share Cashflow for 2021** = Eligible Cost for fiscal year 2021-22 x Percent federal share  
= \$10M x 40%  
= \$4M

## Applicant's Share

Provide the dollar value for your share of the total project cost. Indicate whether the funding for your share has been secured.

## Other Contributor(s) Share of Total Project Cost

Provide the dollar value of the sum of any other contributor's shares of the total project cost. Select from the list of available contributors provided. If the contributor is not listed, then select "Other Contributor" and enter the name of the other contributor. Indicate whether this funding has been secured.

## Federal Share Letter of Support

Projects led by other levels of government but in partnership with Indigenous communities and primarily support infrastructure investments in those communities, a letter of support from Indigenous communities must be provided for the other level of government to receive up to 100% federal share.

**Upload Letter of Support.** Please ensure that your documents are clearly named. For example, [Name of Lead Applicant Organization]-Federal Share Letter of Support.

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## Class Estimates

Class estimates are cost projections used for your project budget planning that are provided at different steps of the design process. Class D estimates are generally estimates provided early in the design process, whereas Class A estimates can only be provided after all construction documents are verified and complete. Class estimates help you estimate your project costs and can inform on the level of project readiness. For more information refer to the definitions of class estimate [here](#).

Choose one of the four (4) options to indicate the estimates that were made for your project:



*Costs associated with contracts signed prior to project approval are ineligible costs under the DMAF.*

- |         |   |
|---------|---|
| Class A | Estimates made after bids for a project have been received, evaluated, verified, and a contract has been awarded. Contingency within 5% to 10%. |
| Class B | Estimates made at the “Detailed Design” stage, when the project is ready for tendering. Contingency within 10% to 15%.                          |
| Class C | Estimates at the “Preliminary Design” stage, and may be referred to as pre-tendering estimates. Contingency within 15% to 20%.                  |
| Class D | Estimates at the “Conceptual Design” stage. Contingency within 20% to 30%.  |

## Contingency

Contingency is an amount set aside to account for unexpected costs, risks and uncertainties, and is not necessarily allocated to a specific area. The percent cost value accepted depends on the class estimates for your project. For example, for a budget of \$10M, a contingency of \$1M would be expressed as 10%.

Indicate the percentage of project financial contingency included in the project estimates that are related to the total eligible expenditures. The class estimate indicated for your project and its contingency must align.

Class A	5%-10%
Class B	10%-15%
Class C	15%-20%
Class D	20%-30%

---

## Estimated Project Schedule

Provide an estimated construction start and end date for your project. The project must be substantially completed no later than December 31, 2032.

## Other Federal Funding

### **Has this project been submitted to another federal funding program?**

Indicate whether the project has been submitted to another federal funding program. If yes, provide the name of the funding program(s) and indicate whether the project was considered ineligible.

### **Has funding been received from one of the federally supported programs from the Federation of Canadian Municipality to support or plan the proposed project?**

If your project has received funding from the Federation of Canadian Municipalities, please select the funding program:

- Green Municipal Fund
- Municipalities for Climate Innovation Program
- Municipal Asset Management Program

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## Environmental Assessment and Indigenous Engagement

Information provided in this section will be used to assess potential requirements related to the *Impact Assessment Act* (IAA), Modern Treaties, Self-Government Agreements, or Northern EA Regimes, that may apply to the project. Information on Indigenous Engagement will inform Duty to Consult analysis. DMAF Applicants selected for further consideration may be required to provide additional Environmental Assessment (EA) and Indigenous Engagement requirements at a future date. See [Section 8.1 and 8.2](#) of the Applicant Guide for more details.

If there is uncertainty as to whether the project meets the threshold that would require a federal EA, submit the project description to the [Impact Assessment Agency](#) and they will confirm if the project has a requirement.

For projects that require a federal EA, it is encouraged to contact relevant federal departments or provincial ministries (e.g., Impact Assessment Agency of Canada, Fisheries & Oceans Canada, Environment Canada - Canadian Wildlife Service or Provincial Ministries of Environment). A proactive discussion with such agencies during the project-planning phase will assist in identifying potential impacts and necessary mitigation measures. In addition, starting federal EA early in the planning of a project will also assist the Government of Canada in discharging the legal duty to consult and, if appropriate, accommodate Indigenous peoples when the Crown contemplates conduct that might adversely impact established or potential Aboriginal or Treaty rights.

### **Has the project been assessed by the Impact Assessment Agency of Canada to determine if there is a federal EA requirement?**

Indicate whether the proposed project has been assessed by the Impact Assessment Agency of Canada. If yes, provide the response from the Impact Assessment Agency of Canada explaining their review.

### **Does the project have any requirements related to the *Impact Assessment Act* (IAA)?**

Detailed information on the IAA and regulations can be found at the [Impact Assessment Agency of Canada's website](#).

Note that projects that occur in a National Park, a Migratory Bird Sanctuary, National Wildlife Area, Marine Protected Area or on Indigenous Reserve lands could have federal EA requirements related to federal lands (section 82 of the IAA).

### **Is the project described on the Physical Activities Regulations of the IAA?**

Indicate whether the proposed project is described on the Physical Activities Regulations of the IAA.

Please consult the Physical Activities Regulations to confirm if your project may have a federal EA requirement. Find examples of projects that have a federal EA requirement listed on the [IAA Physical Activities Regulations](#).

---

### **Is the project located on federal lands?**

Indicate if the project is located on federal lands.

Projects that occur in a National Park, a Migratory Bird Sanctuary, National Wildlife Area, Marine Protected Area or on Indigenous Reserve lands could have federal EA requirements related to federal lands (section 82 of the IAA).

All projects that are located on federal lands may have a federal EA requirement related to section 82 of the IAA and are assessed in detail by INFC.

### **If yes, is the project taking place on Indian Reserve lands?**

If the project is located on federal lands, indicate whether the project is taking place on Indian Reserve lands. If yes, provide the name of the Indian Reserve or the land code if one exists for the Indian Reserve.

### **Does the project have any requirements related to a Modern Treaty, Self-Government Agreement, or Northern EA Regime?**

Indicate if the project has any requirement related to the Modern Treaty, Self-Government Agreement, or Northern EA Regime. If yes, identify the requirement and the treaty, agreement and/or regime.

### **Has there been engagement with Indigenous groups about the project?**

Indicate if there has been engagement with Indigenous groups about the project. If yes, list all groups that have been engaged, and upload any supporting documents such as records of consultation, meeting minutes, letters of support, a Band Council Resolution, and/or consultation transcripts. Clearly name your documents. For example: [Name of Lead Applicant Organization]-Record of Consultation with [name of Organization].

### **Have concerns been raised by Indigenous groups?**

Indicate whether concerns have been raised by Indigenous groups regarding the proposed project.

### **Does the applicant attest that all concerns have been addressed?**

Provide attestation that you have addressed all concerns raised by Indigenous groups and explain how the concern(s) and resolution(s) were addressed.

---

## Additional Considerations

### **Did you consider natural infrastructure as potential solution to mitigate the natural hazard?**

Indicate if you considered natural infrastructure as a potential solution. If yes, describe how natural infrastructure was considered in the project.

Natural Infrastructure refers to the use of naturally occurring resources or engineered use of natural resources, to provide adaptation or mitigation services to the gradual and/or sudden impacts of climate change or natural hazards.

### **Does your natural infrastructure project include the planting of trees?**

Indicate if the project involves the planting of trees. If yes, provide the estimated number of trees that will be planted as a result of the project.

### **Did you consider the impacts on diverse population groups and other socioeconomic factors or analysis in your project design? E.g. GBA+.**

Indicate if the project considers the impact of the natural hazard(s) on diverse population groups and other social, economic, and environmental factors or analysis. This may include Gender-Based Analysis Plus (GBA+) considerations such as equity-deserving groups that experience barriers to participating in society. For example, attitudinal, economic, environment, historic, and/or social barriers based on age, sex, ethnicity, disability, economic status, family status, race, sexual orientation, gender identity or expression, etc.

For more information on the Government of Canada approach to GBA+ visit the [Women and Gender Equality Canada website](#).

### **Describe any foreseeable project implementation challenges.**

This section is an opportunity to address any foreseeable project implementation challenges. You may wish to address items such as:

- cost overrun;
- human resource capacity and project governance constraints;
- availability of resources and materials within project region;
- land acquisition;
- remote or hard to access project location;
- public perception and/or political sensitivity;
- community stakeholder engagement;
- secured funding;
- project readiness such as completing the DMAF program requirement (Ex. environmental assessments and duty to consult requirements);
- legal challenges;
- obtaining permits.

### **Describe the mitigation strategy(ies) to address foreseeable project implementation challenges.**

Given any foreseeable project implementation challenges, describe any mitigation strategy(ies) that have been considered to address these challenges.

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## Natural Hazard Risk Transfer Management

**In 1,500 characters, describe the measure(s) (i.e. strategies and/or procedures) to be taken during the implementation phase of the project to avoid transferring the risk associated to the natural hazard to a nearby area and/or to another community.**

Identify any risks in the immediate area of the project, and describe how the project ensures that it does not transfer the risk to a neighbouring area or community (e.g., downstream effects of a flood protection project). This includes a description of any hazard risk transfer management strategies, guidelines or measures that will be adopted during the design and implementation of the proposed project.

A strong proposal considers infrastructure solutions that address comprehensively and effectively the upstream and downstream impacts of the natural hazard risk.

**How will affected communities be notified about the project's natural hazard risk transfer mitigation strategy?**

Describe how affected communities may be notified about your hazard risk transfer management strategy. If you foresee that no risks are to be transferred to neighboring areas and/or communities, please explain why.

## Strategic Alignment

Indicate if your project aligns with:

- municipal, provincial, and federal adaptation and mitigation resiliency plans and/or
- the highest available standards and codes.

This can include mitigation and adaptation plans, particular hazard strategic plans, climate change strategy or framework, and land-use plans at the municipal, provincial/territorial, and federal levels.

For each alignment, describe how your project supports existing plans, strategies, and frameworks. Upload supporting documentation and specify the page number and website address, if applicable. Please ensure that your documents are clearly named. For example, [Name of Lead Applicant Organization]-Strategic Alignment-[Name of Document].

If your project does not align with municipal, provincial/territorial, and federal plans and/or codes, please explain why.



### **IMPORTANT INFORMATION**

Projects that are non-compliant with legislation and regulations will not be considered. INFC will seek confirmation from provinces and territories on the required compliance.

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### **Is the asset(s) included in an asset management plan?**

Indicate if your project's asset(s) is, or will be, included in an asset management plan. If yes, provide supporting documentation by uploading the relevant document(s). Please provide the page number and website address, if applicable.

### **If no, does the project consider strategies to protect the asset?**

Indicate if your project considered strategies to protect the asset(s). If yes, describe the strategies in place to protect the asset.

### **Will the asset be included in an asset management plan?**

If the asset is not included in an asset management plan, indicate if the asset will be included in an asset management plan in the foreseeable future.

### **Are any of the asset locations prone to other natural disasters?**

Indicate if the any asset locations are prone to other natural disasters. If yes, describe strategies in place to protect the infrastructure/asset.

## **Innovation**

Under the DMAF, innovation is defined as solutions and technology, including the use of natural infrastructure, that result in better ways to manage increasing risks such as those related to climate change.

Indicate if your project adopts innovative approaches in project design, operation/management processes, partnerships, to replicate, scale-up, and/or disseminate knowledge and lessons learned, as applicable. For each innovative approach, describe the innovation and how it adds value to your project.



### **EXAMPLES OF INNOVATIVE APPROACHES**

Strategically designed and managed wetlands could absorb pollutants before they flow into waterways, and protect downstream water supplies by directing more clean water to cities, thus controlling water flows and preventing sediment buildup that would otherwise choke streams and rivers.

Conventional grey infrastructure could offer innovative solutions to mitigate the impact of natural disasters such as pervious surfaces which make transportation more resilient by decreasing ponding and runoff during rainstorms.

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# Tell us about the expected outcomes of your project

**In 1,500 characters or less, describe the expected outcomes of this project.**

Describe the expected outcomes of your project. A strong project proposal demonstrates a substantial improvement to the asset resilience, to decrease socio-economic impacts on the population(s) exposed to a natural hazard risk including reduce critical infrastructure impacts such as essential services interruptions, reduce amount of at risk critical infrastructure, reduce impacts on health and safety of Canadians, reduce significant economic activity disruptions, reduce cost of recovery/replacement, and reduce impact on Canada's vulnerable regions.

## Supporting Evidence for Community Resilience

### Overview

Community Resilience assesses the natural hazard risk reduction after the DMAF project using the same four (4) socio-economic impact indicators as described in the Natural Hazard Risk Assessment.

The quantitative data and supporting evidence provided in Natural Hazard Risk Assessment (before the DMAF project) and Community Resilience (after the DMAF project) provides the basis to assess the improved resilience provided by the DMAF projects.

### How to fill in the Community Resilience Assessment

This section repeats the same questions asked in the Natural Hazard Risk Assessment section. Please refer to the [Natural Hazard Risk Assessment](#) section for more details on the socio-economic impact indicators.

You are responsible for providing values for each socio-economic indicator and their data sources for “after the project”. The Application Portal will prefill your response from the Natural Hazard Risk Assessment (“before the project”) for comparison.



- Reliable sources to support the data included in the application are essential; especially for the hazard risk, resilience and return on investment criteria. Data sources and a strong explanation must be provided to support the value of an indicator, including indicators with a value of ‘zero’..
- Data fields that are left blank (no value entered) will be excluded from the assessment.
- All data sources should be hyperlinked or attached to the application, including any internal, unpublished sources

## Additional Project Co-Benefits

Additional Project Co-Benefits identifies whether your project offers additional benefits to Canadians alongside addressing the main natural hazard risk to increase community resilience. Please indicate if your project offers additional co-benefits, including:

- Multi-hazard solution(s)
- Environmental value or GHG reduction

- 
- Cultural value
  - Sports or recreational value
  - Employment opportunities

If yes, for each co-benefit, please explain how your project offers these additional benefits.

# Expected Return on Investment (ROI)

The ROI is a value that provides economic justification of the investment. It is a measurement of the benefits that can be expected from a project relative to the costs of its implementation.

## ROI Formula

$$\text{ROI} = \frac{\text{Cost of damages during the asset life cycle}}{\text{Total Eligible Project Cost}}$$

The ROI is a ratio that measures the estimated disaster losses avoided within the asset life cycle. For example, an ROI of 2:1 means that for every dollar spent under DMAF, at least two dollars are anticipated to be saved in future natural disaster losses.

## How to calculate the ROI

To calculate the ROI, there will be some values you will need to calculate, while for others you have already provided throughout the application form and will be prefilled automatically by the portal system.

Note: the ROI will be automatically calculated once the required data fields have been filled. You will be required to input only the necessary fields, as prompted.

The table below summarizes the inputs for the ROI calculation. See the [Methodology](#) section for detailed guidance on the ROI formula.

Input	Formula	Data Source
Total estimated cost of damages	The sum total of the Canadian dollar (CAD) value of social, economic, environmental, and heritage and cultural damages	<b>Calculation required.</b> See <a href="#">Methodology</a> and <a href="#">Table 1.0</a> for details.
Likelihood of the main natural hazard	Quantified value in years	Prefilled from value indicated in “Likelihood of the main natural hazard” located in Natural Hazard Risk Assessment section.
Remaining life span of the funded asset(s)	Quantified value in years	<b>Calculation required.</b> Provide the number of years of the remaining lifespan of the funded asset, which includes any life extension projected from your DMAF project.  For example, if the current lifespan of the asset is 30 years, and your DMAF project is

Input	Formula	Data Source
		<p>expected to increase its lifespan for an additional 20 years, the “remaining lifespan of the funded asset” is 50 years.</p> <p>If your project involves multiple assets, calculate the average lifespan of all project assets. <b>Use the average as the input value.</b></p> <p>Example:</p> <p>If the project involves Asset A, B, and C</p> <ul style="list-style-type: none"> <li>• Lifespan of Asset A= 25 years</li> <li>• Lifespan of Asset B= 100 years</li> <li>• Lifespan of Asset C= 25 years</li> </ul> <p>Average lifespan of Assets = (Sum of Lifespan of Asset A, B, C) ÷ 3</p> <p style="text-align: right;">= (25+100+25) ÷ 3</p> <p style="text-align: right;">= 50 Years</p>
Total Eligible Project Cost	Quantified value in CAD dollars (\$)	Prefilled from amount indicated in Project Financials section.

## Methodology

The ROI formula is as follows:

$$\text{ROI} = \frac{\text{Cost of damages during the asset life cycle}}{\text{Total Eligible Project Cost}}$$

How is the “Cost of damages during the asset life cycle” calculated?

$$\text{Cost of damages during the asset life cycle} = \text{Estimated damages on a yearly basis} \times \text{Remaining life span of the funded asset(s)}$$

**How is Estimated damages on a yearly basis calculated?**

$$\text{Estimated damages on a yearly basis} = \frac{\text{Total estimated cost of damages}}{\text{Likelihood of the main natural hazard}}$$

How is the “Total estimated cost of damages” calculated?

You will need to consider the estimated social, economic, environmental, and heritage/culture damages or losses that the project could prevent and the kinds and extent of damages that apply to your project in dollars, as of the year of the application. See [Table 1.0](#) for examples. Damages and losses caused by natural disaster can include direct, indirect, tangible and intangible costs. For each category, please describe how your estimates were determined.

Once you have determined the social, economic, environmental and heritage and cultural damages, input these values in the data fields indicated on the portal. An automatic calculation will appear in the “Total estimated cost of damages (\$)” field. This value is used in the ROI formula.



- Reliable sources to support the data included in the application are essential; especially for the hazard risk, resilience and return on investment criteria. Data sources and a strong explanation must be provided to support the value of an indicator, including indicators with a value of ‘zero’.
- Data fields that are left blank (no value entered) will be excluded from the assessment.
- All data sources should be hyperlinked or attached to the application, including any internal, unpublished sources.

- Applicants can use quantitative data from similar geographic areas/communities to demonstrate the impact of the hazard as long as it is justified how that would translate to their community.

**Table 1.0:** Examples of Economic, Social, Environmental, Heritage/Cultural damages by natural hazard(s).

<b>Economic</b>	
	Public infrastructure and utilities damages <ul style="list-style-type: none"> <li>• Bridges</li> <li>• Roads</li> <li>• Highways</li> <li>• Ports, airports, water and</li> <li>• Wastewater systems</li> </ul> Essential service interruption <ul style="list-style-type: none"> <li>• Power</li> <li>• Transportation</li> <li>• Water Supply</li> <li>• Communications</li> </ul> Commercial and institutional building and structure damages Housing damages Business losses Local GDP losses Agriculture damages and losses <ul style="list-style-type: none"> <li>• Livestock</li> <li>• Crops</li> <li>• Pastures/land</li> </ul> Emergency response cost
<b>Social</b>	
	Deaths and injury cost Displacement cost Employment, retention, and hiring losses Health cost <ul style="list-style-type: none"> <li>• Chronic diseases</li> <li>• Mental health</li> <li>• Drugs and alcohol</li> </ul> Community well-being losses Productive capacity losses Homelessness cost Violence and crime cost Water, soil, and air pollution cost
<b>Environmental</b>	

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Note: Natural disasters could produce mixed outcomes for the environment: benefits to some parts of the natural system and losses to others; both should be considered in estimating the net impact.

Bio-diversity losses

Natural ecosystems and related impact to wildlife

- Damages to plants, forests, wetlands, ground water, soils

**Heritage and Cultural**

Note: These can be difficult to calculate. Applicants may wish to consult national, provincial and/or municipal inventories to obtain estimates of the dollar value assigned to these types of assets.

Archeological and historical site losses

Cultural and historical asset losses

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## EXAMPLE CALCULATION OF ROI

The example below is provided to demonstrate how the ROI is calculated for projects under the DMAF.

### SCENARIO

The natural hazard is expected once in every 10 years with total estimated cost of damages of \$100 million. The asset has a remaining asset lifespan (which includes the potential extension of the lifespan due to the DMAF investment) of 40 years. The total eligible project cost is \$50 million.

#### Information provided by the prompt:

- Likelihood of the main natural hazard: 1 in 10 Years
- Total Estimated Cost of Damages: \$100 million
- Total Eligible Cost: \$50 million
- Remaining lifespan of funded assets: 40 years

1. Calculate the “Estimated damages on a yearly basis” using the formula:

$$\begin{aligned} \text{Estimated damages on a yearly basis} &= \frac{\text{Total estimated cost of damages}}{\text{Likelihood of the main natural hazard}} \\ &= \frac{\$100,000,000}{10 \text{ years}} \\ &= \$10,000,000 \text{ per year} \end{aligned}$$

2. Calculate the “Cost of damages during the asset lifecycle”:

$$\begin{aligned} \text{Cost of damages during the asset life cycle} &= \text{Estimated damages on a yearly basis} \times \text{Remaining life span of the funded asset(s)} \\ &= \$10,000,000 \text{ per year} \times 40 \text{ years} \\ &= \$400,000,000 \end{aligned}$$

3. Calculate the ROI:

$$\begin{aligned} \text{ROI} &= \frac{\text{Cost of damages during the asset life cycle}}{\text{Total Eligible Project Cost}} \\ &= \frac{\$400,000,000}{\$50,000,000} \\ &= 8 \end{aligned}$$

4. Answer:

$$\text{ROI} = 8 : 1$$

For every one (1) dollar invested, there is an expected savings of eight (8) dollars in damages and long term replacement costs.