

Reactive to Proactive

Disaster Risk Reduction
in Manitoba

Outline



**EMO Mitigation
Program Area**



Why now?

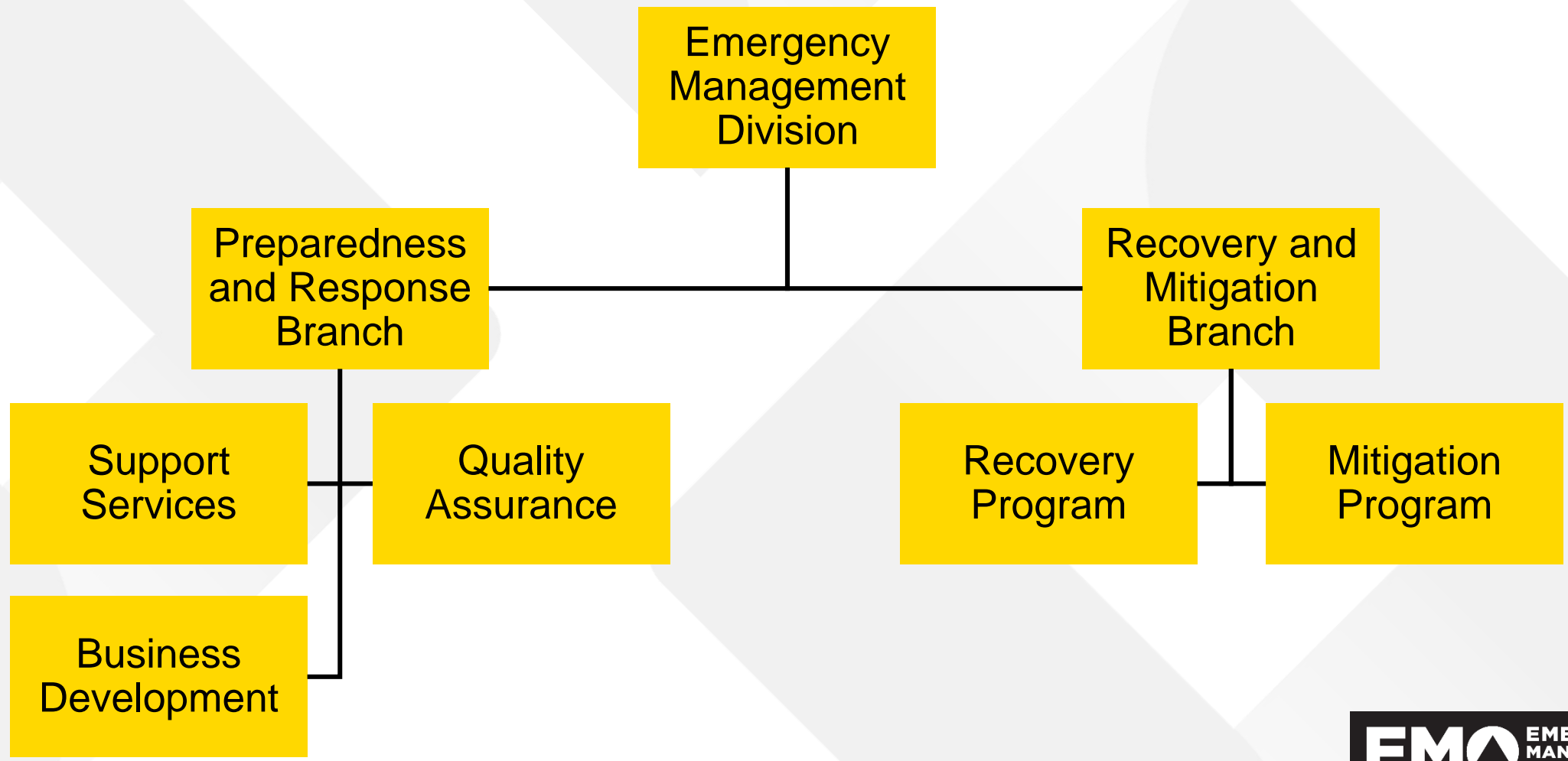


**Provincial
Initiatives**



**Federal
Initiatives**

Who We Are - EMO



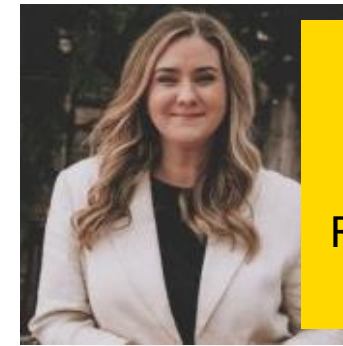
Who We Are



**ERIN
ROBBINS**
Strategic R&M
Initiatives
Lead



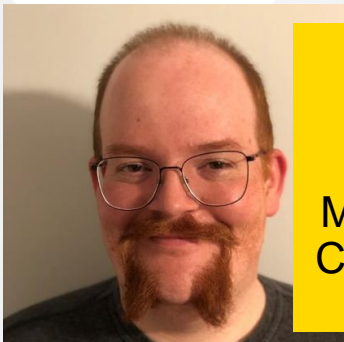
**STEPHANIE
WOLTMAN**
Manager of
Mitigation



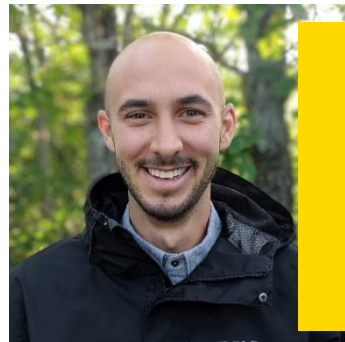
**CHRISTINE
STEVENS**
Director of
Recovery and
Mitigation



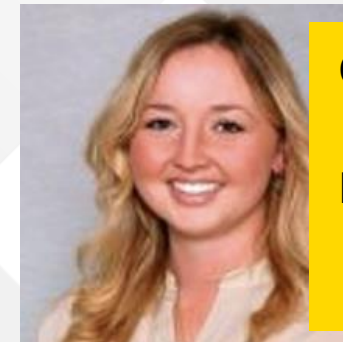
**CHRISTA
BROWN**
Manager of
Recovery



**EVAN
GRAHAM**
Senior
Mitigation and
Compensation
Analyst



**DANIEL
PHALEN**
Senior
Mitigation
Analyst

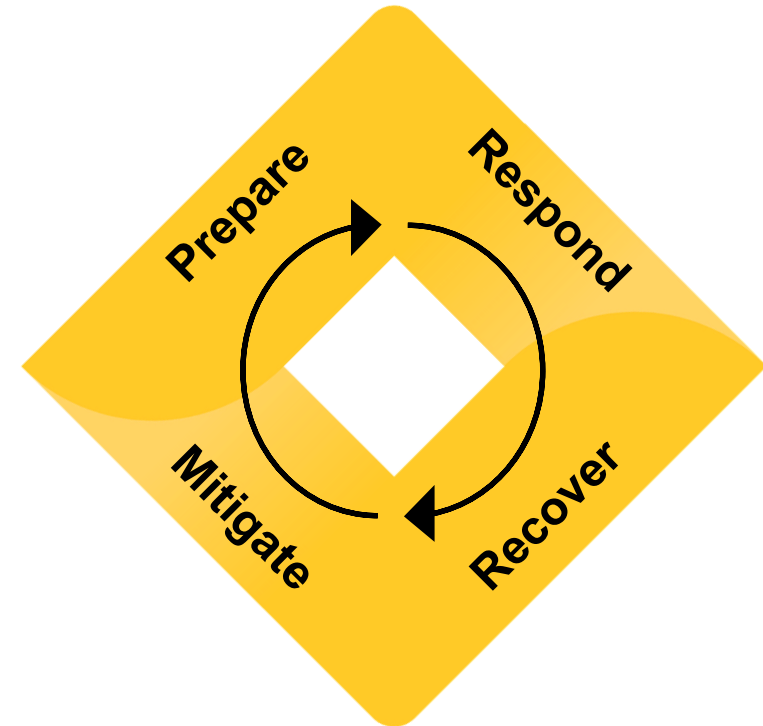


**CASSANDRA
KIERNICKI**
Recovery and
Mitigation
Specialist



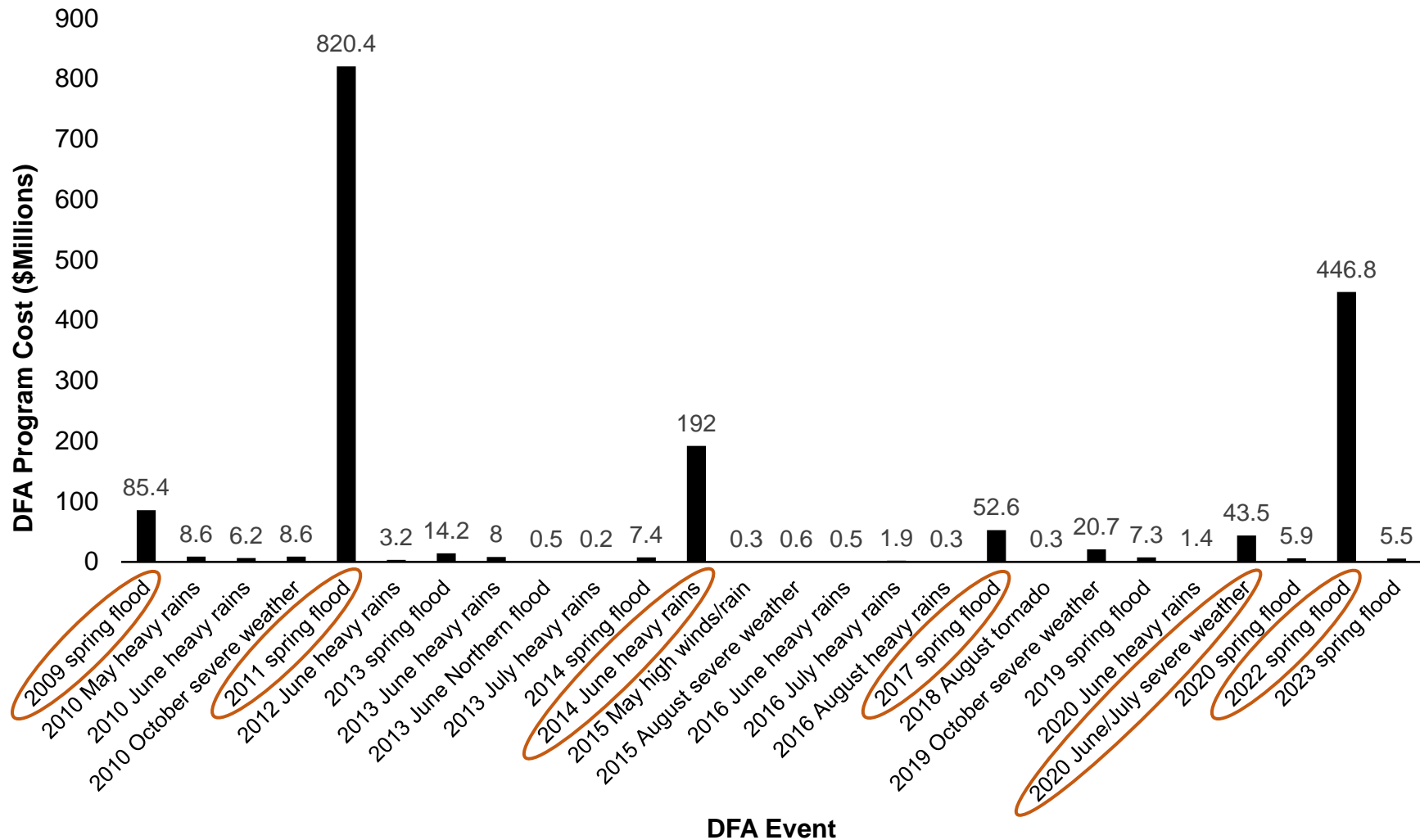
A Changing Landscape

- Manitoba EMO began work towards a mitigation program area in 2019
- Ensuring Manitoba EMO addresses all stages of emergency management
- The increasing scale and scope of disasters is causing a shift in focus towards mitigation provincially & nationally
- Reliance on existing programming & federal funding has not led to a resilient Manitoba



Disaster Financial Assistance (DFA)

TOTAL DFA COSTS 2009 TO 2023



The impacts of severe weather and flooding in Manitoba have been seen through **26** DFA programs since 2009

Damages to:

- Provincial infrastructure
- Municipal infrastructure
- Homes
- Farms
- Businesses

Damages have totalled **\$1.7 billion** over 14 years



Impacts Beyond DFA

Economic
impacts of road
closures

Psychosocial
impacts and
mental health

Disruption of
social activities

Soil erosion,
nutrient loss

Damage to habitat
and natural
infrastructure

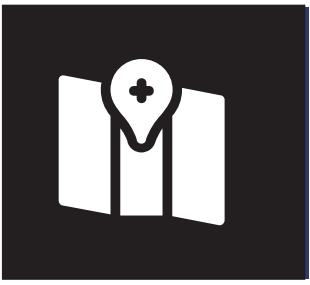
Shortened
growing season
(farms)

Evacuations and
loss of community
identity

Loss of
recreation and
cultural artifacts

Increasing Resiliency

Manitoba EMO



Mitigation and Preparedness Program (MPP)

The challenge!

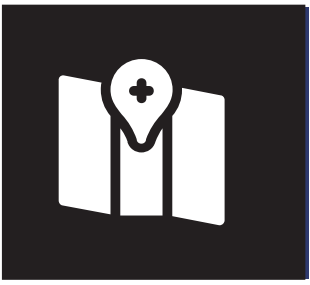
- In 2020, the Manitoba government announced that it would be modernizing the DFA program, including updating the cost-sharing formula with municipalities
- The updated cost-sharing formula ultimately meant higher **response** and **recovery** costs to municipalities

The new approach...

- Manitoba EMO put forward the idea of giving municipalities the option to either pay for response and recovery costs or invest in mitigation activities

Thinking more innovatively...

- Unlike the DFA program, the MPP amount does not have to be invested in a damaged site
- The MPP amount is meant to be **invested into anything** that will benefit disaster preparedness or mitigation in the municipality and is separate from DFA



Mitigation and Preparedness Program (MPP)

- The MPP is an optional program to assist municipalities to mitigate against future disasters by investing the value of the municipal share of their DFA claim into building resilience
- MPP builds local resiliency against natural disasters, extreme weather events, and the impacts of climate change
- Projects include:
 - Raising roads/increasing culvert capacity
 - Constructing new wells for firefighting response
 - Relocating municipal & private at-risk infrastructure
 - Water storage projects in partnerships with watershed districts
 - Municipal flood risk mapping and flood risk studies
 - Place funds into a reserve account

Improve safety by protecting transportation routes

Keep evacuation routes open during disasters

Reduce future disaster-related costs



Residential Flood Protection Subsidy

- Funding provided to install sump pumps, backwater valves, battery backup
- Currently only available to residential DFA claimants with basement damages in the 2022 Spring Flood Event program
- Program established to incentivize resiliency across Manitoba residences:
 - reduce homeowners' exposure to basement flooding
 - reduce future disaster recovery costs
 - strengthen community resiliency



Facilitating opportunities

Mitigation grant funding webpage

- Help municipalities find and access disaster mitigation funding programs
- key information (deadlines, fund info)
- filters to find programs relevant to the user.
- A mailing list subscription that allows users to be emailed information about new programs that are relevant to them (*coming soon*)

The screenshot shows the top of a webpage with a dark header. A yellow-bordered box contains the text "MITIGATION FUNDING". Below it is the EMO logo, which includes the text "EMO EMERGENCY MANAGEMENT ORGANIZATION" and "Manitoba" with a small arrow icon.

Mitigation Helps Communities Reduce The Risk Of Future Natural Disasters

The Emergency Management Organization strives to provide an updated list of funding sources for mitigation projects.

Type

Show entries Search:

- Flooding
- Infrastructure
- Drought
- Planning
- Buildings
- Wildfire
- Roads and Bridges
- Capacity Building
- Energy
- Asset Management

Applicant

- Municipality
- Northern Affairs
- Indigenous Community
- Businesses
- For-Profit Organization
- Indigenous Government
- Public Sector
- Individuals

[Clear Filters](#)

Conservation and Climate Fund

The Conservation and Climate Fund provides support to projects occurring in Manitoba that incorporate actions to address and adapt to a changing climate and protect the environment in alignment with the priorities and implementation of the Climate and Green Plan. Potential projects that overlap with these goals include flood forecasting, mitigation, and response.

[See Details](#)

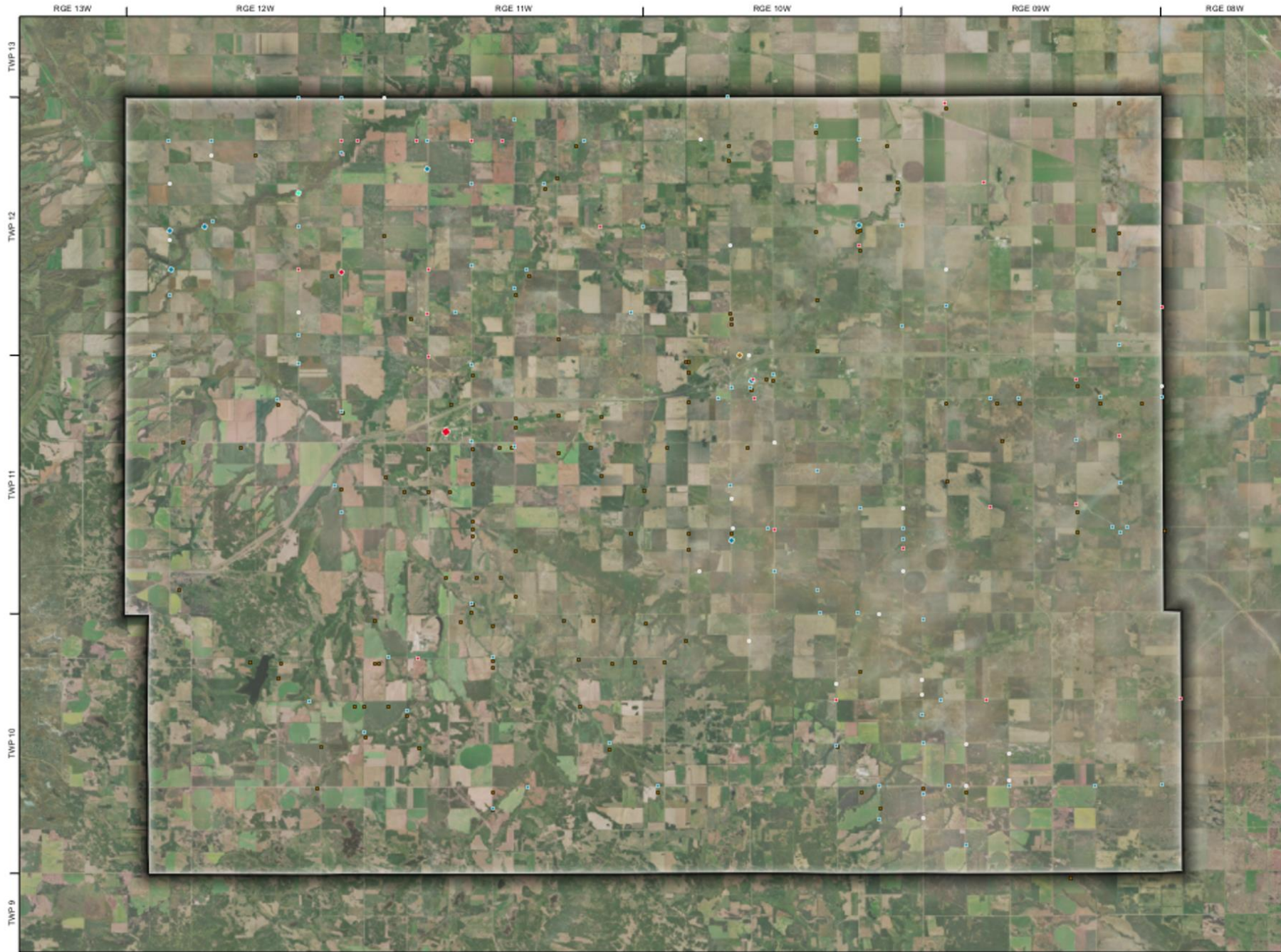
Conservation Trust

The \$102M Conservation Trust funds activities the promote conservation of natural resources. Potential projects include water retention or drought mitigation, wetlands, or interpretive areas with trails and education.

[See Details](#)

Building Sustainable Communities

The Building Sustainable Communities Program fosters thriving sustainable communities. Grant assistance in partnership with other funders, will leverage investments



- Road
- Bridge
- Culvert
- Ditch
- Dams & Dikes
- Building
- Sewer & Water Lines
- Undefined
- Black Outer Ring = Site Claim at \$0

Disaster Financial Assistance: 2011-2022

| | | | |
|---------------|-----------|--------------|-------------|
| Total Claims: | 100 | Claim Sum: | \$1,000,000 |
| Highest: | \$60,000 | Average: | \$10,000 |
| Roads: | \$50,000 | Dam/Dikes: | \$0 |
| Bridges: | \$99,000 | Buildings: | \$0 |
| Culverts: | \$500,000 | Sewer/Water: | \$0 |
| Ditches: | \$350,000 | Undefined: | \$1,000 |

About This Map
This map shows Disaster Financial Assistance (DFA) damage sites from the MUNICIPALITY OF NORTH NODPCL. If a local authority was amalgamated in 2015, then previous DFA damaged sites would still be shown on this map. Location information was gathered from individual Site Damage Reports produced by an engineering service provider (ESP). Damage costs only show DFA eligible expenses reimbursed by Manitoba Emergency Management Organization (EMO). DFA damage sites between 2011 and 2022, submitted to EMO before Oct. 2023, are shown on the map.

Please Note: This data is collected by Manitoba through an ESP on behalf of each local authority. Manitoba treats this data as confidential to each local authority. This map is intended to be owned by the local authority for which the displayed data was produced.

To display stacked points, the tool "Display Points" was used to allow for all points to be partially visible. Points are scaled by the value paid. The largest point represents all values above \$50K, while the smallest represents all values below \$2,500.

MORE INFORMATION

More information on this map can be obtained by contacting:
Recovery and Mitigation Branch
Emergency Management Organization
Manitoba Transportation & Infrastructure
1525-405 Broadway
Winnipeg MB R3C 3L6

Phone: (204) 945-3050
Toll Free: 1-888-267-8298
Fax: (204) 945-9029
EMOInfo@emot.gov.mb.ca

Limitations, Risk, and Liability
Although extensive effort has been made to produce error-free and complete data, all geographic information has limitations due to the scale, resolution, data source quality, and interpretation of the original source materials. The data may be subject to periodic change without prior notification. All of the data on this map are provided as is, without any warranty, including any guarantee as to the performance, merchantability, or fitness for any particular purpose. Any risk resulting from the use of the data on this map is assumed by the user.

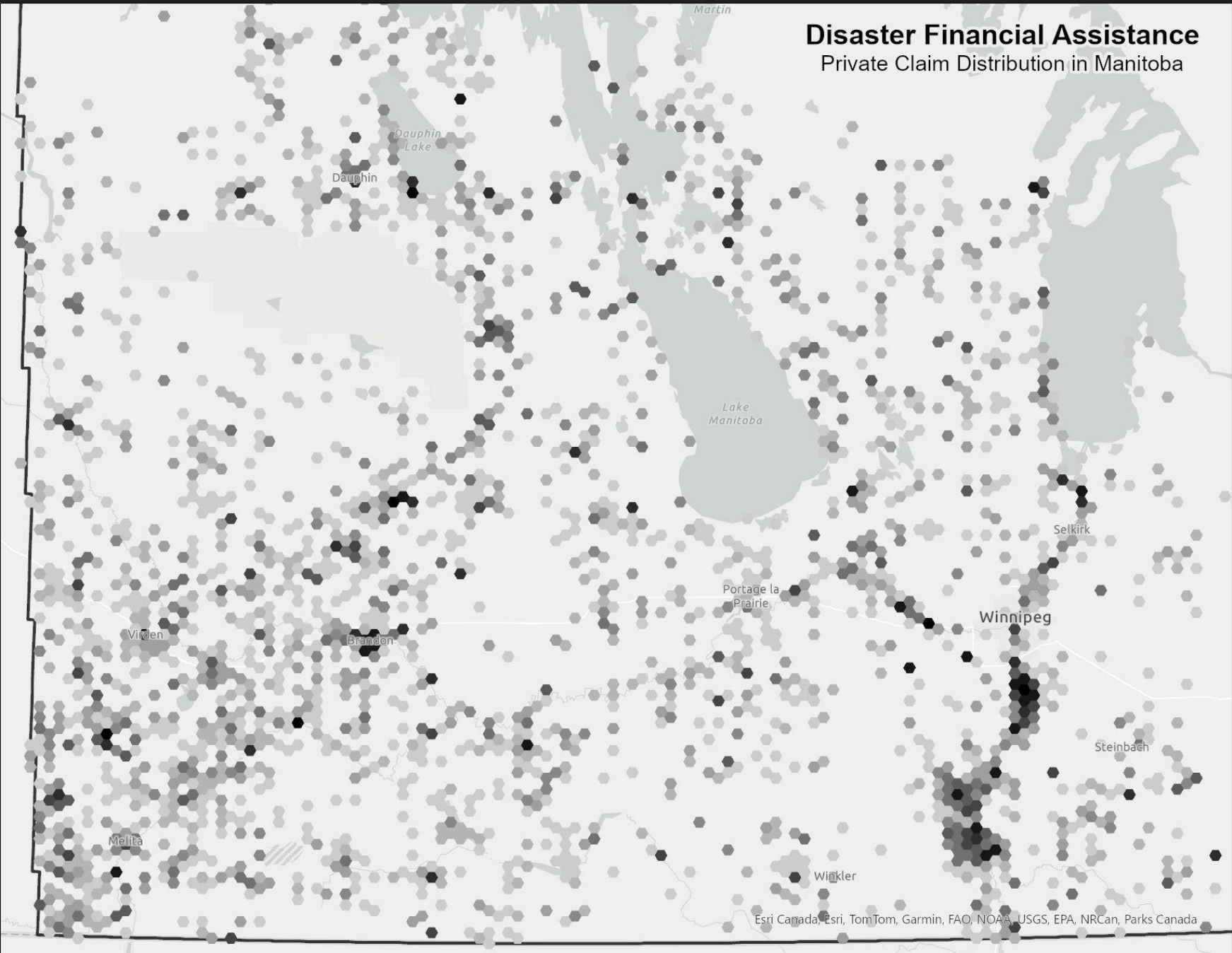
The Manitoba government is not responsible for any interpretation or conclusion based on the data and its use by those who acquire or use it. The Manitoba government shall not be liable for any direct, indirect, special, incidental, consequential, or consequential damages or third party claims resulting from the use of the data, even if the Manitoba government has been advised of the possibility of

Date Revisited: 2024-07-29
Data From: Manitoba Emergency Management Organization, Earth & Geoscience, Env. Tech. Serv. Centre, P.O. Box 1055, St. J. St. John, Manitoba, Canada.
Attribution: MANITOBA (2024) EMOT, EMO, 1525-405 BROADWAY, WINNIPEG MB R3C 3L6, AND THE 505 LINE COUNCILS BY EMO, 2023.



MUNICIPALITY OF MANITOBA
Public Sector Disaster Financial Assistance Claims

Disaster Financial Assistance Private Claim Distribution in Manitoba



Natural Disaster Preparation Residential Checklist



Who should consider these actions?

All Properties: At-Risk Properties: High-Risk Properties:

Flooding

- Raise and Slope land away from home
- Install a Backwater Valve
- Install and Maintain a Sump Pump
- Use Water-Resistant Building Materials for Flooring, Walls, and Insulation in Basements
- Identify Where Your Community Provides Sandbags
- Store Sandbags and Plastic Sheeting for Emergencies
- Elevate Washers, Dryers, and other Appliances on Platforms
- Elevate Water Heaters and HVAC
- Relocate Electrical Panel to Main Floor
- Plant Native Vegetation that can Withstand Flooding
- Create a Rain Garden for Flood Water
- Maintain Wetlands and Marshes which Absorb Excess Water
- Consider Installing a Ring Dike
- Consider Raising or Moving Your Home Above Flood Levels

Wildfire

- Choose Fire-Resistant Vegetation for Landscaping
- Cover Chimneys and Stovepipes with Spark Arresters
- Have Hoses that Reach Entire Property
- Create a "Firebreak" by Clearing Vegetation Around Your Home
- Enhance a Firebreak with Non-Flammable Materials like Gravel
- Use Ember-Resistant Vents / Screens
- In Rural or Remote Regions, Consider a Dedicated Water Supply for Firefighting such as a Well or Pond

Winter Storms

- Keep Snow and Ice Clearing Equipment within your Home
- Ensure Structure Roofs are Rated for Heavy Snow Loads
- Plant Shelterbelts to Decrease Blowing Snow Accumulation Around your Home

 Flip this Page for More Checklist Items!

For More Information

Visit [GetPrepared.gc.ca](https://www.getprepared.gc.ca) to learn how to build an emergency kit, create a household emergency plan, and understand the risks.



Natural Disaster Preparation Residential Checklist



Who should consider these actions?

All Properties: At-Risk Properties: High-Risk Properties:

Extreme Temperatures

- Use Weather Stripping on Windows and Doors
- Identify Local Heating and Cooling Centres in Case of Emergency
- Insulate Walls and Attics
- Maintain your HVAC systems

Extreme Heat

- Plant Trees for Shade
- Install Shade Structure like Awnings, Pergolas, or Canopies
- Use LED Lights which Produce Less Heat
- Use Energy-Efficient Appliances

Extreme Cold

- Allow Faucets to Drip to Prevent Freezing
- Have Extra Blankets and Sleeping Bags
- Insulate Pipes in External Walls
- Have an Alternative Power or Heating Source (Generator, Wood-Burning Stove)

Drought

- Check for and Repair Water Leaks
- Install Water Efficient Appliances, Faucets, and Shower Heads
- Use Rain Barrels for Lawn and Garden
- Avoid Watering Your Lawn, or Water Deeply, Infrequently, and Before 10 a.m.
- Plant Drought Tolerant Lawn and Garden Vegetation

Strong Wind

- Check for Loose or Damaged Shingles and Make Repairs
- Anchor Outdoor Furniture and Items
- Store Lightweight Items in a Secure Location
- Cut Down Dead Trees and Prune Dead Branches
- Choose Roofing Materials Resistant to High Winds like Metal Roofing
- Install Storm Shutters

For More Information

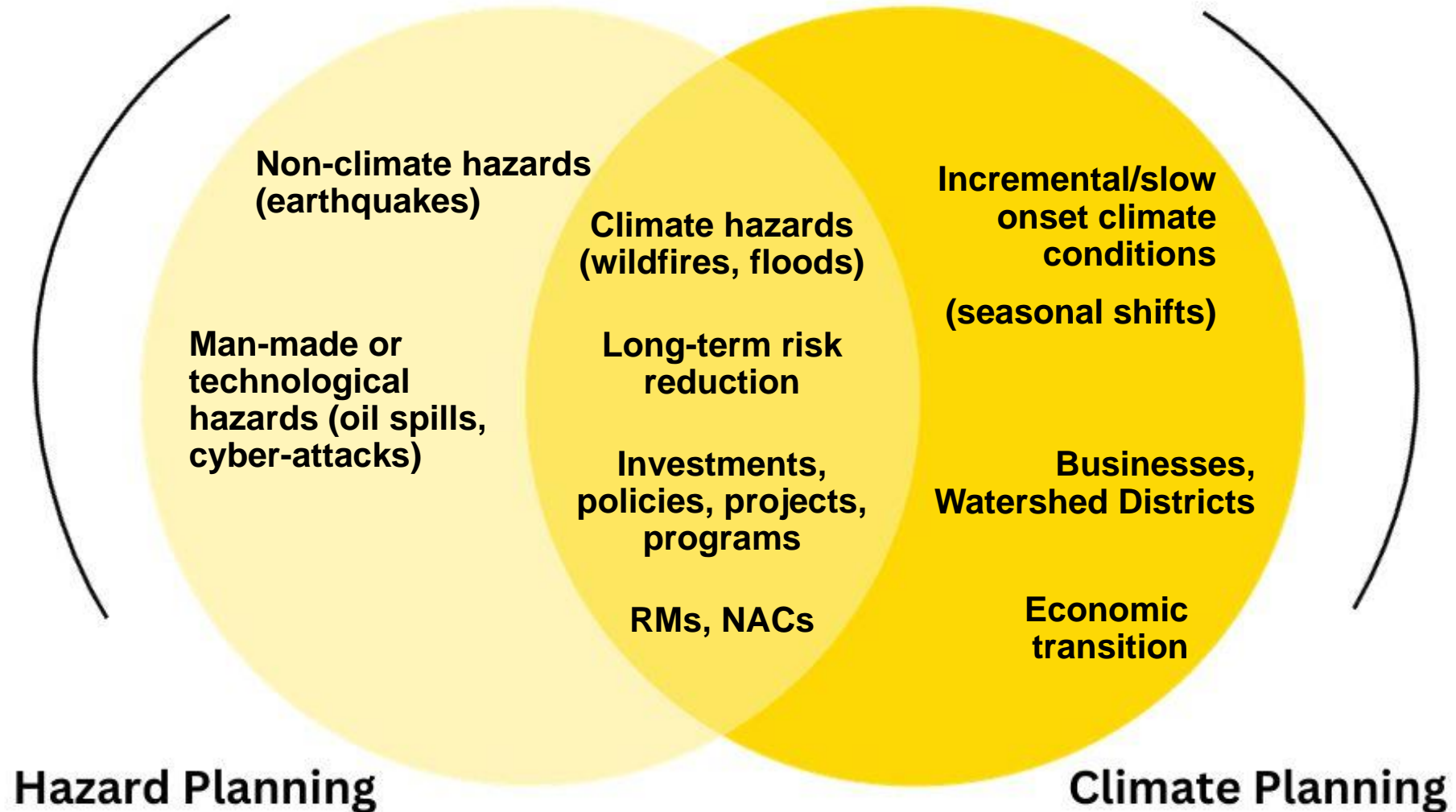
Visit [GetPrepared.gc.ca](https://www.getprepared.gc.ca) to learn how to build an emergency kit, create a household emergency plan, and understand the risks.



Ensure your plans speak to each other!

- Municipalities are responsible for undertaking several planning processes
 - Asset Management Plans
 - Emergency Plans
 - Hazard, Risk, and Vulnerability Assessments (HRVA)
 - Climate Assessments & Planning
 - Development Plans
 - Integrated Watershed Management Plans (IWMP)
- Look for opportunities to integrate information from one plan to another

Integration of Climate Adaptation and Hazard Mitigation Planning



Grant Opportunities



Disaster Mitigation and Adaptation Fund

Applies a climate lens to its program, including GHG mitigation assessment and a climate change resilience assessment

FCM's Green Municipal Fund

Requires climate change mitigation and adaptation plans to access grants, loans, innovative financing, leveraged investments, etc.



MB Conservation & Climate Fund

Funding to support projects that incorporate actions and adapt to a changing climate

Intact Insurance

Offers community grants to build climate resilience and support climate adaptation



Federal Changes

DFAA Modernization

Background

- Canada's Disaster Financial Assistance Arrangements (DFAA) sets the terms and conditions for cost-sharing natural disasters with provinces
- PTs develop their own provincial programs that generally align with the DFAA
- Current terms & conditions have been in place since 2008
- Recognition that the DFAA is outdated and needs to incentivize reducing disaster risks



Building Forward Together

Toward a more resilient Canada

Final report of the Expert Advisory Panel
on the Disaster Financial Assistance Arrangements

November 2022

Expert Advisory Panel

- Undertook a review of the DFAA and issued a report in Nov 2022. Recommendations include:
 - **Establish disaster resilience standards**
 - **Target funding to support disaster risk reduction, climate adaptation and support vulnerable populations**
 - **Disincentivize rebuilding in high-risk areas**
 - Ensure equal access to recovery for Indigenous populations
 - Increase flexibility/scope of DFAA funding to meet PT needs
 - Provide more technical assistance
 - Streamline and improve DFAA processes & provide timely funding

DFAA Modernization

Canada's Policy Direction



Target federal funding in building resilience, reducing risk, and supporting people



Create stronger incentives and more flexibility for risk reduction and mitigation



Enable climate resilient rebuilds and reduce incentives to develop in high-risk areas



Underlying all changes, a push to modernize processes and increase efficiencies

What's next?

Engage with Local
Authorities & the public
on DFAA 2.0



Developing
climate and
disaster-
resilient
guidelines

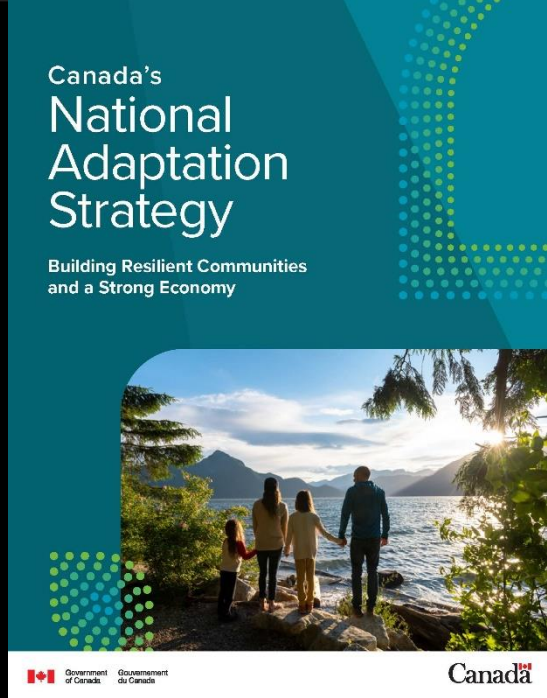
Developing
opportunities
to use
strategic
mitigation
funding

Climate-Resilient Guidelines

Knowledge and guidance such as: updated and future climate design engineering values, best practices, guidelines, standards, and research to inform updates to codes to support climate change adaptation and enhance the resilience of buildings and infrastructure.

- Climate resilient standards and codes
- Standards and guidelines to build “Climate Smart”
 - Floods, extreme heat, wildfire and permafrost





Strategic Mitigation

Pre-Disaster

- Opportunities to take proactive action on adaptation/disaster risk reduction exist through Canada's National Adaptation Strategy (NAS)
- \$2B in funding activities to implement the National Adaptation Strategy

Post-Disaster

- Strategic mitigation funding will be available post-disaster under DFAA 2.0
- Opportunities to collaborate to address similar risks (multiple projects across a watershed that address a similar risk)

National Flood Insurance

Overland Flood Insurance

- Insurance providers began offering overland flood coverage in 2015
- Many Manitobans cannot access because they are high risk or do not know that they should be purchasing it
 - Only 35% of qualified Manitobans have overland flood coverage

National Flood Insurance Proposal

- In January 2021, the federal government established a Flood Insurance and Relocation Task Force to:
 - Report on the viability of a low-cost national residential flood insurance program for high-risk properties
 - Inform a national action plan on potential relocation for residents at the highest risk of recurrent flooding.

Federal Task Force Findings



Adapting to Rising Flood Risk
An Analysis of Insurance Solutions for Canada
A Report by Canada's Task Force on Flood Insurance and Relocation
August 2022

 Government of Canada / Gouvernement du Canada





- In August 2022, the task force report and findings were released:
 - Total residential flood risk in Canada is estimated at approximately \$3 billion annually (\$105.3M in Manitoba)
 - A low-cost insurance program would cost approximately \$1 billion annually
 - Four different flood insurance models were examined

National Flood Insurance

- The Federal budget of 2023 committed to fund a low-cost flood insurance program
 - Aimed at protecting households with a high flood-risk and no access to adequate insurance
 - Some properties will remain un-insurable (highest risk properties)
- Addressing the highest risk properties
 - Manitoba continues to emphasize the need for proactive federal mitigation funding
 - Local development should ensure that new properties are not built in known at-risk areas



What's Next?

Continue to share mitigation funding opportunities across Manitoba

Facilitate opportunities to promote mitigation uptake

Better understand municipal mitigation needs

We are looking to hear from you!

Questions?

Stephanie Woltman
Manager of Mitigation, Manitoba EMO
Stephanie.Woltman@gov.mb.ca

Daniel Phalen
Senior Mitigation Analyst, Manitoba EMO
Daniel.Phalen@gov.mb.ca

Cassandra Kiernicki
Recovery and Mitigation Specialist, Manitoba EMO
Cassandra.Kiernicki@gov.mb.ca