



Adapting to a Changing Climate: Perspectives and Initiatives

Prepare Today, Prosper Tomorrow

**MMA-AMM Municipal Adaptation
Planning Engagement Session**

March 5, 2024

1:00 PM – 2:00 PM

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Manitoba's Adaptation Objectives

- Make Manitoba a safe and desirable place to live and invest in under a changing climate
- Invest in an informed public and a skilled work force to provide Manitobans with the training and information to make the best decisions and investments moving forward.
- Capture the substantial work occurring and document for the best uptake and value add by others
- Increase provincial capacity to identify, measure and report on growth in adaptation & resiliency
- Consider policy and programs that support broader adaptation efforts (and avoid maladaptation)

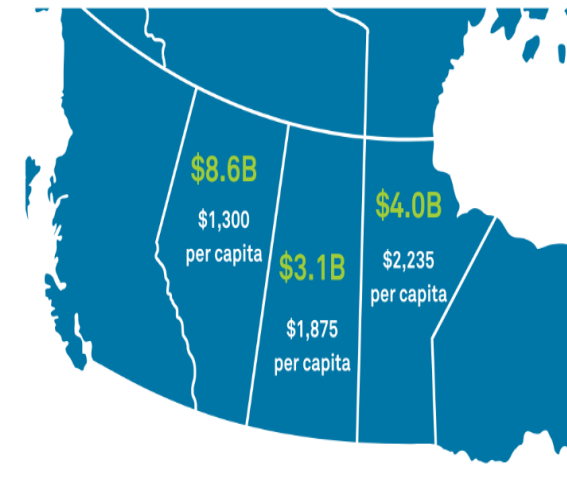


Incentives for Municipalities to Take Action

Taking action yields benefits:

- Resilient infrastructure creates a reliable community to work, live and do business
- Reduces the costs of damages associated with extreme climate events.
 - Adaptation benefits provide benefits for local priorities
 - \$1 invested in adaptation saves up to \$15 in costs across the economy
- Thinking in advance of vulnerabilities risks and mitigation means municipalities are ready for funding call- outs
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Projected total annual costs across the
Prairie provinces (2050s)



= \$15.7B

economic losses
attributable to climate
change across all
three provinces, based
on a high emissions
scenario

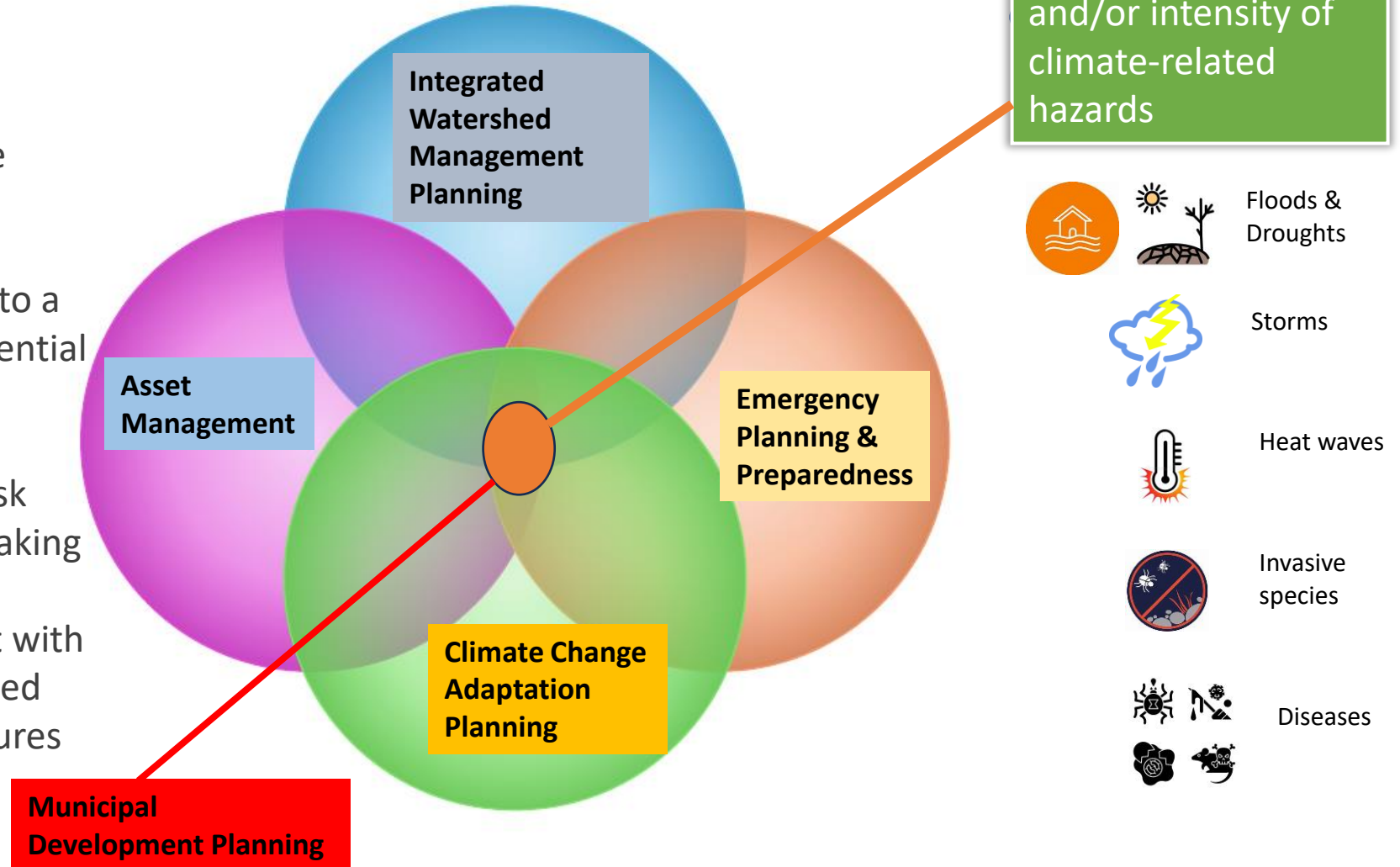
Read the full report: climatewest.ca/publications

- *Average Annual Payouts: \$405M (1983-2008) to over \$1B (2009 to 2020)*
- *In 2023, the cost of severe weather in insured damage was \$3.1B, the fourth worst year for insured losses in Canada*

Improving Synergies:

Climate Change Adaptation Planning and Community Planning Processes

- Being proactive to avoid hazards/impacts caused by climate events
- Resiliency is achieved by adapting to a changing climate or mitigating potential threats
- Understanding vulnerability and risk improves planning and decision making
- Advancing adaptation is consistent with provincial land use policy, Watershed Districts Act and Emergency Measures Act



Government Supporting Excellence – Key Resources



MANITOBA CLIMATE
RESILIENCE TRAINING



Prairie
Climate Centre

From Risk to Resilience



- ✓ Manitoba Conservation Trust
- ✓ Growing Outcomes in Watersheds (GROW)
- ✓ Conservation and Climate Fund

Climate Forecast Cards

Data for Vulnerability and Risk Assessments (VRA)

- Prepared for all municipalities (funded by Environment & Climate Change)
- It is the basic data needed to start a VRA
- Provides 3 Carbon (GHG) Scenarios low to high
- Two Timeframes 2021-2050 & 2051-2080
- Provides a narrative on how climate will change weather in severity and frequency and seasons
- This is our first edition
- Please provide feedback on what information you would like added in future or what is not very straight forward.

Selkirk and Climate Change
The climate determines almost everything about how we design, build, and live in our communities. As the climate changes, the safety and prosperity of our cities is at risk. Climate change is a challenge that requires us to work together, locally, nationally, and globally. With technical know-how, political will, targeted investments, and collective commitment, we can mitigate the severity of climate change and build resilience to its hazards/impacts.

Climate Change and Health
High temperatures can be hazardous, especially for the elderly, the chronically ill, and those without air conditioning. High and prolonged heat can also impact air quality, facilitate the spread of harmful diseases, inhibit outdoor activities, and cause stress and anxiety. We can adapt with measures such as shaded areas, green roofs, and supports for those who need help during heat waves.

Climate Change and Extreme Weather
A warmer climate may increase the chance of more extreme weather, including high winds, flash floods, hail, lightning, tornadoes, drought, and wildfires. Communities must improve their planning and engineering, emergency preparedness, and water management to build resilience.

Climate Change and Infrastructure
Climate change may threaten the integrity of infrastructure such as roads, bridges, water supply, and telecommunications, most of which have not been built to withstand current and future extremes. Emergency preparedness, planning, and construction practices for repairs and new development that take the new climate reality into account can increase our adaptive capacity. Acting now will reduce economic risk and save on the rapidly increasing long-term damages and costs associated with climate change.

High-Carbon Climate Change Projections*

Change	Recent Past	Low scenario	2051-2080 Mean	High scenario
Typical hottest summer day	33.6 °C	34.9 °C	38.8 °C	42.7 °C
Typical coldest winter day	-26.9 °C	-24.6 °C	-28.9 °C	-23.3 °C
Number of >37 °C days per year	12	21	47	71
Spring precipitation	114 mm	72 mm	132 mm	204 mm
Summer precipitation	227 mm	120 mm	221 mm	343 mm
Number of below-freeze days per year	187	127	149	169
Number of >37 °C nights per year	2	5	21	39

*See back page for details and source of climate model data.

Climate Change and Manitoba's Communities | climateatlas.ca

Preparing today to foster tomorrow
As the climate continues to change, temperature conditions south of us are projected to shift northward. In other words, climates that we generally know to be quite different are heading our way. A climate analogue map is a useful tool to visualize this thermal climate shift.

Answering the question "What places currently have the climate that my community is projected to have in the future?" can help us understand what climate to expect and, by looking to those places for examples, how to prepare for it.

The analogue map below shows the places that currently have the same summer average maximum temperatures that Selkirk is projected to have for several future time periods. As the time periods reach later into the century, the places with matching temperatures are located further and further south.

What places currently have the climate that my community is projected to have in the future?

taking immediate action to prepare for climate change will have long-term benefits. For every dollar that is spent on climate change adaptation measures, it is estimated that \$13-\$15 will be saved in the long run through preventing or reducing the direct and indirect impacts caused by climate change. Building a resilient community starts by taking action today to prepare for tomorrow.

For additional maps and variables, as well as information on how the maps are made, visit the Climate Analogues page on the Climate Atlas of Canada. www.climateatlas.ca/analogues

Summer Average Maximum Temperature

Analogue Years (Average Temp)

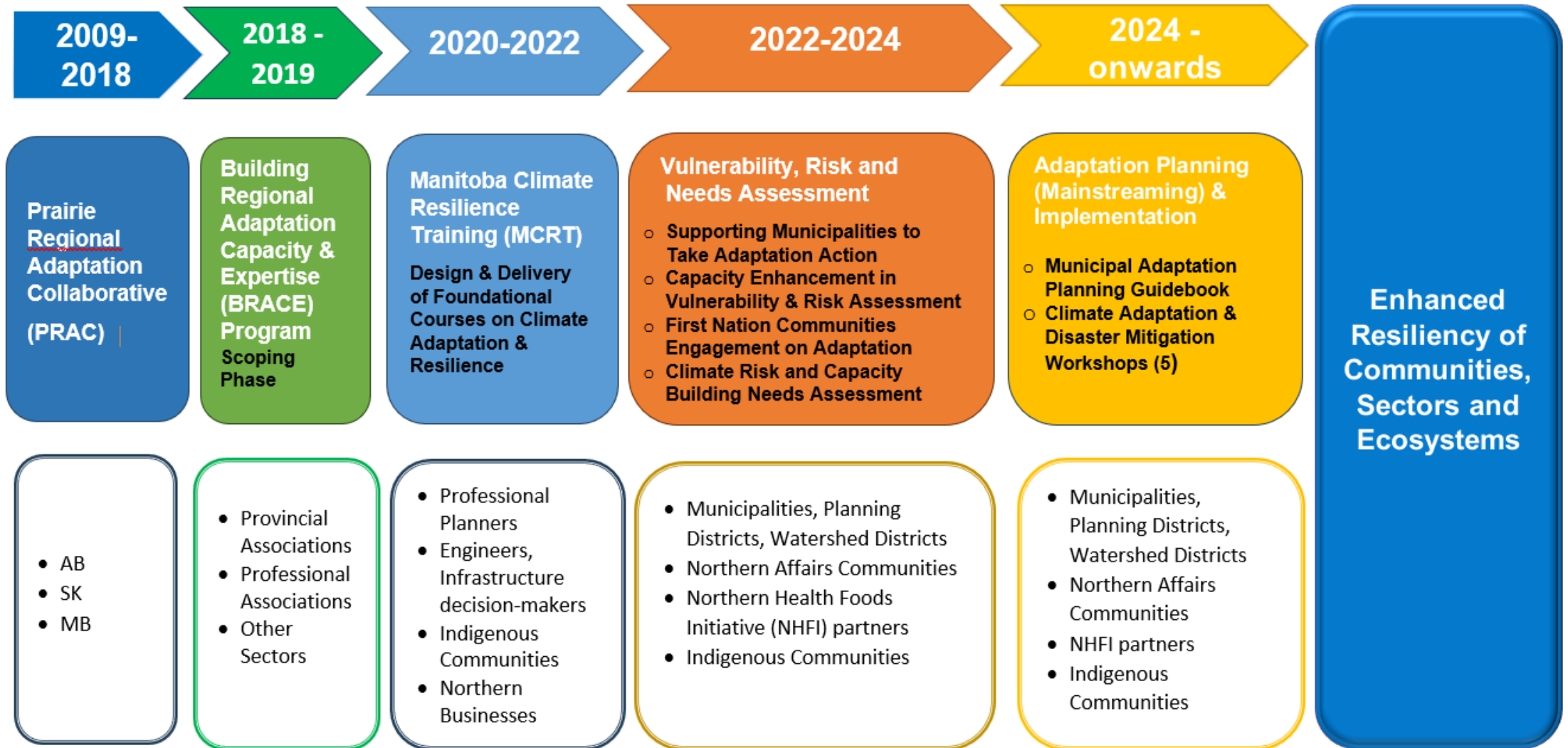
- 1991 - 2005 (24.6° C)
- 2006 - 2020 (25.3° C)
- 2021 - 2035 (26.2° C)
- 2036 - 2050 (27.1° C)
- 2051 - 2065 (28.3° C)
- 2066 - 2080 (29.7° C)
- 2081 - 2095 (30.9° C)

These are American stations whose 2006-2020 average summer maximum temperatures are within 0.5°C of the temperatures projected for Selkirk in these 15-year periods.

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Manitoba Climate Adaptation Initiatives

Climate Adaptation and Disaster Mitigation Workshops



Adapted and Resilient Manitoba

An Integrated and Collaborative Approach

Connect

- Everyone should understand their roles and responsibilities in adaptation planning and actions
- Coordinate adaptation planning with broader government strategies
- Showcase provincial priorities so that other governments, businesses and the public know what adaptation actions to build on

Partnerships

- Support knowledge across all sectors
- Remove barriers between and within governments
- Continue to build a broader dialogue to understand how others are affected
- Provide accurate and timely data and information to make everyone a better partner

Planning

- Understand the local climate and its potential impacts/hazards
- Build flexibility into organizational processes
- Iterative decision making and corresponding action
- Use best practices to manage uncertainty

“We are only as resilient as the weakest link”

THANK YOU!

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