

# Implementing Asset Management by Becoming More Climate Resilient

## What are Climate Vulnerabilities?

Climate vulnerabilities are our inability to cope with impacts and stresses from changes and extremes in our climate (i.e. climate hazards).

## Why are they important to understand?

- ▶ Our community services and systems (infrastructure and ecosystems) are affected by climate hazards
- ▶ Most existing infrastructure was built to perform in a climate that no longer exists
- ▶ Outcomes of climate risks are often significant and irreversible
- ▶ Past experiences can't be used to predict the future; however, we have valuable knowledge that can help guide our future decisions

## NWT's Common Climate Change Hazards

**Hazards** are any source of potential damage, harm or adverse health effects on something.

**Risk** is the chance that something or someone will be harmed if exposed to a hazard.



Source: NWTAC 2018 Climate Change Forum and Charrette

In recent years there have been more extreme wildfires than ever seen before. There have been record highs and lows for water levels, resulting in both flooding and drought. Permafrost is thawing, and there has been heavier, wetter snow. As a result, the stability of our community buildings and infrastructure is a concern. The coastline is eroding and so are rivers, affecting where we live and how we travel. The ecology is changing, and distressing our native food sources. There have been more tornados, and an increase in storm surges. There is also less sea ice. We're expecting these trends to continue at an alarming rate.

## Can we help with your Asset Management Program?

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# What is a Climate Vulnerability Assessment?

A Climate Vulnerability (or Risk) Assessment is a tool for understanding our community's weaknesses and creating a plan for adapting to reduce or eliminate them; in other words, how our community can reduce its exposure to, or risks from, local climate change impacts.

Key steps include:

- ▶ Understanding the local climate change situation, and in particular the hazards your community experiences
- ▶ Evaluating how the infrastructure systems or services could be affected, and to what degree
- ▶ Determining what measures have, or can be, put into place to reduce the potential impact from each hazard
- ▶ Preparing and implementing a plan for taking action to reduce your community's climate vulnerabilities

A worksheet has been prepared to support communities in undertaking a climate vulnerability assessment.

## 1. Collective Knowledge

This step involves identifying a group of people who collectively bring knowledge about your community's services, infrastructure, challenges and needs. Engaging decision makers as well as operators and community knowledge holders will provide the greatest depth of discussion and also result in a higher likelihood that action can be taken.

Participants:

## 2. Local Climate Change Data

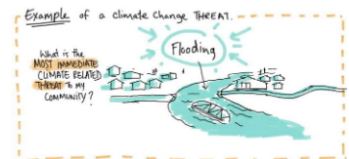
This step involves understanding the local situation, and in particular the climate hazards your community experiences.

Documents available to understand the local climate situation:

- ☐ Climate change report (note: each community has a climate change profile which can be accessed here: [Climate Change Toolkit \(nwtac.com\)](https://climate-change-toolkit.nwtac.com/))
- ☐ Northern Communities Guide on Integrating Climate Change Measures into Municipal Planning and Decision Making (note: pages 12-14 of which is part of NWTAC's climate change toolkit and can be accessed here: [climate-change-toolkit.pdf \(toolkit.nwtac.com\)](https://climate-change-toolkit.nwtac.com/))
- ☐ Other \_\_\_\_\_

Climate threats/hazards relevant to your community:

- ☐ Permafrost Thaw
- ☐ Heavier Snow
- ☐ Extreme Weather
- ☐ Flooding
- ☐ Drought
- ☐ Lower Water Levels
- ☐ Coastal or River Erosion
- ☐ Sea Level Rise
- ☐ Storm Surges
- ☐ Wildfires
- ☐ Plateau Shrinkage
- ☐ Species Migration
- ☐ Thinner Ice
- ☐ Other \_\_\_\_\_



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## Actioning a Change

Considering climate change within our asset management program provides an avenue, or tool, for becoming more resilient.

It enables us to set a path forward so we can continue delivering services sustainably to future generations.

Image source: NWTAC's 2022 Climate Change and Asset Management Conference

