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# Advancing climate adaptation through asset management

## Climate-ready communities assessment tool tip sheet

**Climate change has significantly affected municipalities across Canada,** putting buildings, roads, natural assets, and other infrastructure at risk and resulting in substantial costs to those managing these risks.

As climate changes, so too do the environments in which our infrastructure operates, making it harder for municipalities to deliver the expected level of service. This requires us to **revisit the decisions we make about how we manage our assets. It's important to align asset management, climate adaptation and Reconciliation and anti-racism, equity and inclusion initiatives. The alignment will help communities achieve objectives for maintaining sustainable service delivery and strengthening community resilience.**

This tip sheet aims to help your community:

- Make connections between your asset management progress and climate adaptation.
- Identify actions you can take to further advance your asset management through projects focused on climate adaptation.
- Identify resources to delve into these topics more deeply.

Aligning Reconciliation and anti-racism, equity and inclusion with climate adaptation ensures *everyone* in the community receives quality services and is not disproportionately affected by climate impacts.

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# USING THIS TIP SHEET

Use this tip sheet by following the process below.

## Step 1

Identify which of the following activities are priorities for your municipality to build or improve your asset management program:

- a. developing an asset management policy
- b. improving data on assets and service delivery
- c. defining levels of service
- d. conducting a risk assessment
- e. developing an asset management plan
- f. developing or updating a long-term financial plan

## Step 2

For each of the asset management activities you identified, refer to the corresponding section of this tip sheet.

## Step 3

Review the relevant sections to understand how the asset management activity connects to climate adaptation, and review the examples of how you can continue to build or improve your asset management program through climate adaptation initiatives.

## Step 4

Act on what you've learned. Across portfolios of municipal assets, even small changes can have large impacts over time. Start with one or two high-priority actions to build momentum.



a

**My community is developing or updating our asset management policy”**



Updating an asset management policy

## Connection to climate adaptation

Addressing climate impacts requires organizations to work together and plan ahead. Adding a climate lens to your asset management policy helps your council understand how climate change affects municipal services for roads, water and parks. It also encourages everyone in the organization to consider climate change in asset management practices.

## Related resources

Learn how Reconciliation and anti-racism, equity and inclusion help to strengthen your community: Read FCM's [Factsheet: Why equity matters in municipal climate adaptation](#) | Green Municipal Fund.

To understand more about the roles and responsibilities of staff and council in asset management, read FCM's [Asset management insights: People and leadership](#) | FCM.

## Actions to advance asset management through climate adaptation

Develop or update an asset management policy to include:

- relevant objectives related to climate action and Reconciliation, anti-racism, equity and inclusion
  - For example, consider how climate risks disproportionately affect vulnerable populations, such as seniors or low-income residents and include a commitment to prioritizing actions that protect these groups.
- principles related to climate change and asset management
- roles and responsibilities



b

**My community is working on improving data on assets and services”**



### **Connection to climate adaptation**

Climate change directly impacts assets used in the delivery of services. Having an inventory of assets and their condition helps monitor how climate change is impacting them.

Additionally, understanding who uses the service, where, and how helps you identify who is most vulnerable to changes in the level of service.

### **Actions to advance asset management through climate adaptation**

As part of a climate adaptation planning project, prepare for the climate risk assessment with these asset management actions:

- Compile a consolidated asset inventory. Start by identifying your most critical assets (e.g., water treatment plants, main roads), particularly in areas vulnerable to climate risks like flooding or wildfires.
- Assess the condition of critical community assets.
- Identify who is most affected by services that use assets (and use this to develop risk impact statements in the risk assessment).

### **Related resources**

To learn more about terms like “asset inventory,” “critical asset” and more, read FCM’s resource [Asset management concepts](#).

To see how communities across Canada are using data to inform their infrastructure decisions, read FCM’s [Asset management insights: Data and information](#).





c

**My community is working on defining levels of service”**



Water Treatment Plant, Peachland, British Columbia

## Connection to climate adaptation

Climate change impacts the levels of service a municipality is delivering. Knowing the current and desired service levels sets a baseline for identifying how climate change will impact services.

Climate change can make it more expensive to provide services, which can make it hard to maintain the existing level of service in the future. Knowing how climate, service levels and costs are connected can help you see where you may need to adjust funding or service levels in the future.

For example, if your community experiences more frequent flooding, you might need to increase the level of service for stormwater drainage to prevent road closures and property damage.

## Actions to advance asset management through climate adaptation

As part of a climate adaptation planning project, prepare for the risk assessment with these asset management actions:

- Define current and desired levels of service.
- Consider how climate hazards impact your organization's ability to deliver desired levels of service and write impact statements. For example, a wildfire in your community's watershed may contaminate your water source, impacting your ability to deliver clean drinking water.

## Related resources

For support on integrating climate resilience into service delivery planning, check out FCM's [Integrating Climate Considerations: Service delivery planning](#).

To get started on or to continue your work to document levels of service, use FCM's toolkit [Resources: How to document and maintain municipal levels of service](#).

For examples of how climate may impact services, take a look at the factsheets found in [Tools: Operations and Maintenance for Climate Resilience](#).

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**My community is working on conducting an asset portfolio risk assessment”**



Flooding of the Bow River, Alberta

### **Connection to climate adaptation**

Climate change may change the likelihood and/or impact of hazards in your community. For example, increasing rainfall intensity can accelerate a culvert’s deterioration, leading to poor condition and potential failure. Undertaking comprehensive risk assessments can help you identify the greatest concerns and decide which risks to address first.

### **Actions to advance asset management through climate adaptation**

Update existing asset risk assessments or conduct asset risk assessments that incorporate climate change into likelihood and impact scoring. For example, update the risk of sewer overflows due to increasing rainfall intensity or the risk of pavement deterioration due to increased freeze-thaw cycles.

Ensure that the risk assessment considers how impacts may vary across populations.

Use your updated risk information to inform the development of your community’s adaptation plan.



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**My community is working on developing or updating an asset management plan”**



Aging culverts

## Connection to climate adaptation

Climate change impacts the lifecycle activities required to deliver services and manage risk. Developing asset management plans help you:

- Identify what needs to be done to maintain your assets.
- Plan how to pay for these activities.
- Manage risks in a way that fits your budget.

Consider how climate change will influence levels of service, and work to strike the right balance between what you can provide your community, the costs you can shoulder and the risks of inaction.

## Actions to advance asset management through climate adaptation

Develop or update asset management plans to incorporate the results of climate risk assessment and identify the lifecycle activities and associated funding requirements. For example, based on insights from your community’s climate risk assessment, you may decide to reduce the assumed lifespan of culverts or increase the frequency of crack sealing in your roads.

## Related resources

Learn more about asset management plans in FCM’s [Asset management insights: Planning and decision-making](#).

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**My community is working on long-term financial planning”**



Cracked pavement

### Connection to climate adaptation

Climate change can make it more expensive to run and maintain services because of more frequent and severe weather events. It also means you may need to upgrade infrastructure to withstand these events. Long-term financial planning should consider how climate change will impact the cost of service delivery and the associated funding required.

### Related resources

Use the resources in FCM’s toolkit [Long-term financial planning for sustainable service delivery](#) to learn more about the benefits of a long-term financial plan and how to develop one.

### Actions to advance asset management through climate adaptation

Create or update a long-term financial plan to reflect the capital and operational costs of adapting to climate change. If you have not yet identified specific adaptation actions, make documented assumptions about the impact of climate change on asset useful life, replacement costs and operational costs. This way, you can start to see how these costs may change due to climate change.

For example, if you know that your community will experience an increased frequency of freeze-thaw cycles, you can assume you will see a reduced pavement lifespan. As a result, you might choose to test a five percent or 15 percent reduction in lifespan to understand the impacts on your financial plan. These scenarios can help raise awareness of local climate change impacts so your municipality can start planning funding strategies.





## FURTHER YOUR LEARNING

Together, asset management and climate adaptation are part of the foundation for delivering sustainable, equitable and affordable services. Understanding the connections between these topics can help you to create policies, plans and processes that are effective and efficient.

Learn more about how climate action and asset management fit together in FCM's [Course: Building climate resilience with asset management](#).