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TIPS ON MAXIMIZING THE CLIMATE RESILIENCE BENEFITS OF TREE PLANTING PROJECTS

Planting the right trees in the right spaces enhances community resilience to climate change. When residents have access to trees and other green spaces, they are less vulnerable to the impacts of heat waves, flooding and other extreme weather events. Trees also offer social and economic benefits, helping communities become healthier and more liveable.

This tip sheet outlines strategies you can use to maximize the climate resilience benefits of your tree planting projects and provides examples of how to effectively communicate these benefits. These strategies will help you present a business case to council, communicate with residents and other stakeholders and prepare high-quality tree planting project proposals and funding applications.

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WHAT ALL TREE PLANTING PROJECTS SHOULD INCLUDE

No matter the size or type of project, all tree planting projects can contribute to community climate resilience in some way. Carefully choose where and what you will plant to ensure that you maximize your planting project's benefits to the community.

Below are some examples of how to consider community climate resilience in your tree planting projects.

HIGH-QUALITY PROJECTS OFTEN:

- Focus on sites or neighbourhoods with **low or no tree cover**. They use canopy cover assessments and tree inventory data to identify disparities in tree cover and inform decision-making.
- Choose planting sites that are **accessible to the public** (e.g., near schools, public transit corridors or areas with high pedestrian traffic) to maximize community benefits.
- Conduct research and collect data to ensure planting sites **support equity-deserving or climate-vulnerable populations**. This information might come from census data, public health data, community engagement or other equity-related research.
- Assess **current and future climate conditions** to determine how to select sites and species. They rely on data analysis and mapping to identify risks from heat, drought, flooding or other extreme weather events and choose tree species accordingly (see Figure 1).

FIGURE 1



Urban heat island mapping and regional temperature data can be used to prioritize planting in locations more vulnerable to extreme heat. Trees planted in these locations should be resistant to drought conditions.



Flood risk maps and data can be used to prioritize planting near shorelines of lakes and rivers to reduce the impacts of flooding. Trees planted in these locations should be flood resistant.



Climate projections for your region can be used to prioritize planting in sites that may become more vulnerable to extreme weather in the future. Trees planted in these locations should be able to tolerate both current and future conditions.



Air quality and vehicular traffic data can be used to prioritize planting in locations with poor air quality. Trees planted near major roadways and other areas with heavy traffic should be resistant to stressors like salt and other soil or water pollutants that are often present in these locations.

HIGH-QUALITY PROJECTS SOMETIMES:

- **Restore or replace** trees that were damaged or lost due to extreme weather or other natural disasters.
- Use feedback from **community engagement** activities to inform site selection.
- Establish connections to existing climate or sustainability **plans and policies**.
- Convert turf (non-grassland) or paved areas to **naturalized areas**.

A well-designed tree planting project ensures that trees are distributed equitably across communities. **Equitable tree planting** leads to a more even distribution of trees across neighbourhoods and prioritizes areas and people that are more vulnerable to climate impacts, either due to geographic factors (e.g., proximity to flood zones) or social and economic factors (e.g., income, racial or ethnic background, health status, etc.).

To learn more about how tree planting can support equity-deserving groups, review our factsheet on [tree equity](#).

HOW TO DESCRIBE COMMUNITY CLIMATE RESILIENCE BENEFITS

When describing the climate resilience benefits of your tree planting project, be sure to provide **clear and specific** explanations of how various characteristics of your project will lead to desired outcomes.

Below is an example of how these benefits might be described in presentations, reports or funding applications.

EXAMPLE: PRIORITIZING SITES BASED ON TREE COVER AND HEAT MAPPING

If your project will plant trees in sites with low or no tree cover, describe how you selected your sites and species, and how your project will affect nearby residents. Include information about any data used, including links where relevant, and your criteria for prioritizing sites.

“Our data sources include urban heat island mapping data accessed through a [federal government dataset](#) and a municipal canopy

cover assessment performed by staff in 2023. Using these data, we have prioritized planting in neighbourhoods that have lower than average canopy cover (at least five percent less) and significantly higher than average summer temperatures (by more than two degrees Celsius) due to the urban heat island effect. All the sites selected (three sites total) for this project are in neighbourhoods that meet these criteria, supporting equitable planting in our municipality.

Site one is a park that currently has mostly lawn cover and very little tree cover. By increasing the number of trees on that site by 40, we will provide park users with the shade and cooling effect of trees, allowing them refuge during summer heat waves while still being able to enjoy time outdoors. To ensure these benefits are more immediately accessible, we are planting large-caliper deciduous trees (>50mm) to provide shade on our site. These include native red maple and hackberry trees, which are drought tolerant.

The park is across the street from an elementary school and a high school. It sees high use from the local community both before and after school hours, meaning our project will especially benefit children, who are more vulnerable to the effects of climate change, including higher average temperatures and extreme weather events.

Site two will involve planting along the streets of our downtown neighbourhood...”

ADDITIONAL RESOURCES

- **HealthyPlan.City**

A mapping tool used to highlight intersections between equity, health and well-being in communities across Canada.

- **Green Shores for Shoreline Development, Stewardship Centre for British Columbia**

Guidance on how to design tree planting or naturalization projects to maintain healthy shorelines, reduce pollution and mitigate erosion and flooding.

- **Municipal Flood Risk Check-Up, Intact Centre on Climate Adaptation**

A tool to help Canadian municipalities assess potential flood hazards and implement actions to reduce flood risk.

- **Urban heat island tools and resources, Health Canada**

Information and resources about the urban heat island effect and related negative health outcomes.

- **Compendium of Best Urban Forest Management Practices, Tree Canada**

See chapters 17, 18 and 21, among others, for practices and resources related to planting and managing trees in order to adapt to extreme weather and climate change.

Submitting funding applications

When providing information in funding applications about community climate resilience benefits, be sure to:

- Emphasize climate resilience benefits throughout the application. While there may be specific questions about climate resilience or community benefits, also draw links to and include information in other parts of the application such as project preparation, species selection and monitoring plans.
- Keep your description of your project's climate resilience benefits consistent across application materials (e.g., application forms, planting plans, other supporting resources).
- Thoroughly review the application guide and other materials, including evaluation criteria, to understand how community climate resilience will be considered when your application is assessed.

The **Growing Canada's Community Canopies** (GCCC) initiative provides funding for tree planting projects, including those that prioritize community climate resilience. To learn more about available funding, **visit our website**.

This resource was created in partnership by Tree Canada and FCM's Green Municipal Fund for the Growing Canada's Community Canopies initiative, which is delivered by the Federation of Canadian Municipalities and funded by the Government of Canada.