CLIMATE CENTER
UNIVERSITY OF MICHIGAN
A CENTER OF THE GRAHAM SUSTAINABILITY INSTITUTE

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City Fact Sheet: Thunder Bay, Ontario

Geographic Location	Northwest Lake Superior
Population	108,359
Government Structure	City Manager
Per Capita Income	$31,182 (CAD)

Located on the north shore of Lake Superior, the City of Thunder Bay is a unique urban hub in an otherwise sparsely populated area. Mining and forestry are key economic drivers of the region. Over the past decade, the city has made strides to incorporate sustainability and climate mitigation into its corporate policies and since 2005, the EarthCare program has served as a collaboration between the Municipality and the community to move sustainability goals forward.

CLIMATE IMPACT

1.2°C Increase in Winter Temperatures (1981-2010)

79% Decrease in Ice Coverage on Lake Superior (1973-2010)

2.5°C Increase in Lake Superior Surface Water Temperatures (1979-2006)

7.2% Decrease in Annual Precipitation (1951-2010)

UNIQUE FACTS

- Due to increasing frequency of major rain events, the City of Thunder Bay is in the process of creating a 20-year Stormwater Master Plan.
- In 2014, City Council adopted the EarthCare 2014-2020 Sustainability Plan, which builds on the mitigation strategies of the 2008 Community Environmental Action Plan and adds an additional focus on climate resilience and adaptation.

OPPORTUNITIES

- There is strong municipal and community support for more climate adaptation planning.
- EarthCare carried out an in-depth vulnerability and risk assessment process in 2014 as part of its progress through ICLEI's Five Milestone Methodology.
- Thunder Bay is currently working on the development of the City's first ever Climate Adaptation Strategy.

CHALLENGES

- The demand for action to make Thunder Bay more climate resilient is so high that it often exceeds what the City is able to provide.
- Lawsuits have meant that City staff are less able to have productive conversations with the community on potential actions or changes because of concerns about how those discussions could be used against the City.

ADAPTATION PROJECT:

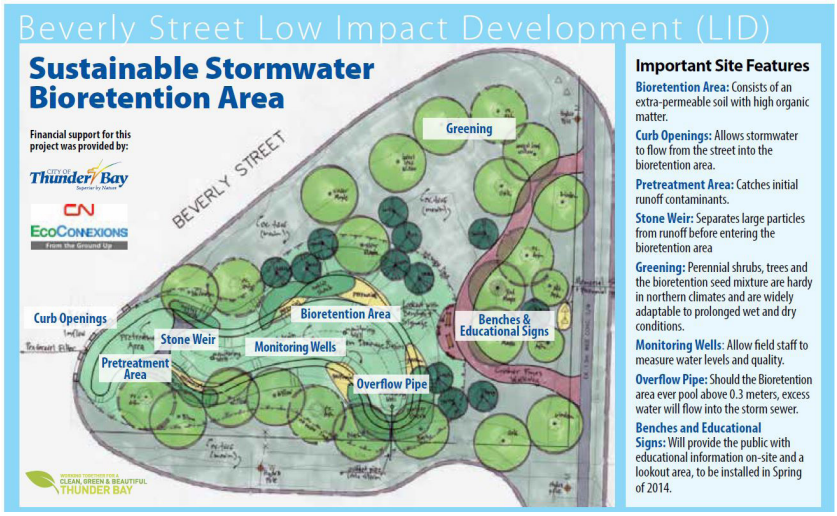
LOW IMPACT DEVELOPMENT (LID) TOUR

The practice of stormwater management uses natural or engineered systems to filter runoff and recharge groundwater supplies. Although the City of Thunder Bay has encountered some resistance for implementing LID, this project aimed to create education and outreach materials in order to communicate the benefits and utility of green infrastructure. The project resulted in the creation of a fact sheet and two tours showcasing the benefits of LID within the city. City staff were also featured in an interview with CBC Radio's "Superior Morning" for their stormwater project efforts. The City of Thunder Bay will continue to support the development of residential stormwater infiltration and encourage involvement of nearby residents in additional tree planting or rain garden installations to increase support for municipal green infrastructure efforts.

Municipal leaders and professionals participating in the Technical LID Tour

VULNERABILITY AND RISK ASSESSMENT PROCESS

Due to strong support from the Municipality and residents for more adaptation planning, EarthCare Thunder Bay carried out an in-depth vulnerability and risk assessment process to identify priority climate change impacts for the City of Thunder Bay. The process followed the ICLEI Local Governments for Sustainability "Building Adaptive and Resilient Communities" program and identified nine priority impact statements. These impact statements will be used to inform the development of the City's Climate Adaptation Strategy goals, objectives, and actions.



Participants in a City-run workshop help to identify priority impacts for Thunder Bay

GLAA-C
Great Lakes Adaptation Assessment for Cities

The Great Lakes Adaptation Assessment for Cities increased understanding about the challenges and opportunities municipalities face when adapting to climate change. This effort was supported by the Kresge Foundation and the University of Michigan's Graham Sustainability Institute, which fosters sustainability through knowledge, learning, and leadership. For more information on the project, see: www.graham.umich.edu/climate.

Resources related to the Climate Center's work with the City of Thunder Bay can be found at: graham.umich.edu/climate/adaptation/urban/thunder-bay

Cover phhoto courtesy of City of Thunder Bay: http://www.thunderbay.ca

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