

City of Thunder Bay Climate Adaptation Strategy: Indicators Matrix (2016 Baseline Data)

Indicator	Trend	Data Source	Notes	2016
Overarching Indicators				
# of Environment Canada warnings per annum	Level of impact of extreme weather on the community	Environment Canada	2 Winter Storm Warnings, 1 Snowfall Warning, 1 Rainfall Warning, 2 Severe Thunderstorm Warnings, 2 Extreme Cold Warnings, and 1 Heat Warning	9
# of instances and # of days on flood watch and flood warning	Threat that flooding poses to the community	LRCA		0
# of weeks in declared low water condition	Drought warning	LRCA	May 13-June 23	5
% of impervious area within City limits	Risks associated with peak flows and urban flooding	City of Thunder Bay	Tracked every 3-5 years with new aerial surveys .	9%
Goal 1: Integrate climate change adaptation into operational procedures as well as land-use, financial, and strategic planning.				
% of annual expenditures that are directly attributed to adaptation	Degree to which resources are being allocated to climate change adaptation; reflects the level of priority which the City is placing on adaptation	City of Thunder Bay		\$ 590, 680 0.00336%
% of Corporate Reports that include climate adaptation in support of the Climate Adaptation Strategy	Degree to which the City is embedding adaptation in its activities	City of Thunder Bay	8 out of 182 corporate reports made at least one reference to climate adaptation and/or the Climate Adaptation Strategy in 2016. as well as 2 attachments to corporate reports.	4%
Goal 2: Respond and recover effectively from sustained and/or multiple extreme events in the region.				
# of times and # of days Municipal Emergency Control Group (MECG) response is triggered in response to weather-related events	Changing climate and its impact on the community	City of Thunder Bay		0 times 0 days
# of times and # of days fire response is triggered in response to weather-related events	Level of service required to address weather-related issues	City of Thunder Bay Fire Database		1 day 64 Responses
# of hours of power failures per customer are triggered in response to weather-related events	Impact of climate change on critical infrastructure	Thunder Bay Hydro Hydro Database		1320.4 hours
Goal 3: Support the community in preparing for, responding to, and recovering from extreme weather events.				
# of people engaged in activities through EarthCare related to climate change adaptation	Effort and success of the City's outreach activities	City of Thunder Bay Climate Adaptation		586

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# of hits on climate change adaptation section of the City's website	Level of interest amongst citizens	City of Thunder Bay Climate Adaptation		10615
Goal 4: Consider climate change impacts in the design, construction, and maintenance of physical infrastructure while considering affordability and co-benefits.				
# of weather-related by-pass events at the Water Pollution and Control Plant	Ability of the City's infrastructure to address the changing climate	City of Thunder Bay Environment	By-pass or spill does not necessarily mean that the effluent was not treated to at least some degree.	8 by-pass events
# of days Bare Point Water Treatment Plant operated >90% and >100% capacity	Capacity of the system to respond to extreme weather	City of Thunder Bay Environment	Highest value seen was 76% of rated capacity.	>90% = 0 >100% = 0
% of design Average Annual Flow Capacity Utilized	Sufficiency of the waste water treatment plant capacity	City of Thunder Bay Environment	Average flow above plant rated capacity due to exceptionally wet weather experienced (27% above previous 5 yr average) (highest level of annual precipitation since 1982). Plant effluent continued to meet all regulatory limits.	100.70%
# of frozen water services	Capacity of the system to respond to extreme temperatures	City of Thunder Bay Environment		0
Hectares of catchment areas of Low Impact Development sites	How much stormwater is treated through LIDs before being released into the waterways	City of Thunder Bay Low Impact Development		7.5 hectares
# of days the Neebing-McIntyre Floodway diverted flow	Capacity of the floodway to respond to extreme precipitation / snow melt events	LRCA		12
Goal 5: Foster resiliency of the City's natural landscape to ongoing changes in climate.				
% of municipality with tree canopy coverage	Resilience of the City to climate change and the ability of the City to increase the forest cover	City of Thunder Bay Parks	Last tracked in 2008 . % is within urban City limits.	25%
% of municipality dedicated to parkland	Ability of the City to maintain natural ecosystems which in turn provide a wide range of co-benefits in responding to a changing climate	City of Thunder Bay Parks	5.7% for entire municipality. Parkland and Open Space 8.5% within urban limits. Additional info: the overall riparian integrity is 86% (defined as the % of riparian corridor, 30m on each side of the watercourse, which has native vegetation cover).	5.70%