

2026 CLIMATE ACTION STRATEGY

Safe. Healthy. Prosperous.

May 27, 2026

saskatoon.ca/climateaction





The Climate Action Strategy "... is a plan grounded in evidence, shaped by local voices, and focused on practical, achievable actions that align with our goals for economic resilience and quality of life..."

- Mayor Cynthia Block

LAND ACKNOWLEDGMENT

We acknowledge that the City of Saskatoon is located on **Treaty 6 Territory** and the **Traditional Homeland of the Métis**. Indigenous peoples have called this land home for thousands of years.

As we confront the challenges of climate change, we recognize that reconciliation is a critical part of climate action. We cannot understand the impacts of climate change in our community without also reckoning with the impacts of colonialism. Indigenous communities have stewarded this land since time immemorial, and their knowledge and leadership are essential to building a resilient and inclusive future.

The City of Saskatoon is committed to maintaining strong relationships through meaningful dialogue with Indigenous communities and organizations.



MESSAGE FROM THE MAYOR

This *Climate Action Strategy* reflects the commitment of City staff, community partners, and residents who understand that addressing climate change is not just an environmental imperative. It's a path to a safer, healthier, and more prosperous Saskatoon. It's a plan grounded in evidence, shaped by local voices, and focused on practical, achievable actions that align with our goals for economic resilience and quality of life.

We are already seeing the effects of a changing climate in our city from increased smoke and heavy rain events to extreme heat that is stressing our natural ecosystems. These impacts demand a coordinated response, one that includes collaboration within our community and strong leadership at the local level.

This plan is not about choosing between climate action, economic growth, or quality of life. It's about recognizing that all three go hand in hand. A sustainable Saskatoon is one that is prepared for the future, where our investments today create lasting benefits for generations to come.

- Mayor Cynthia Block





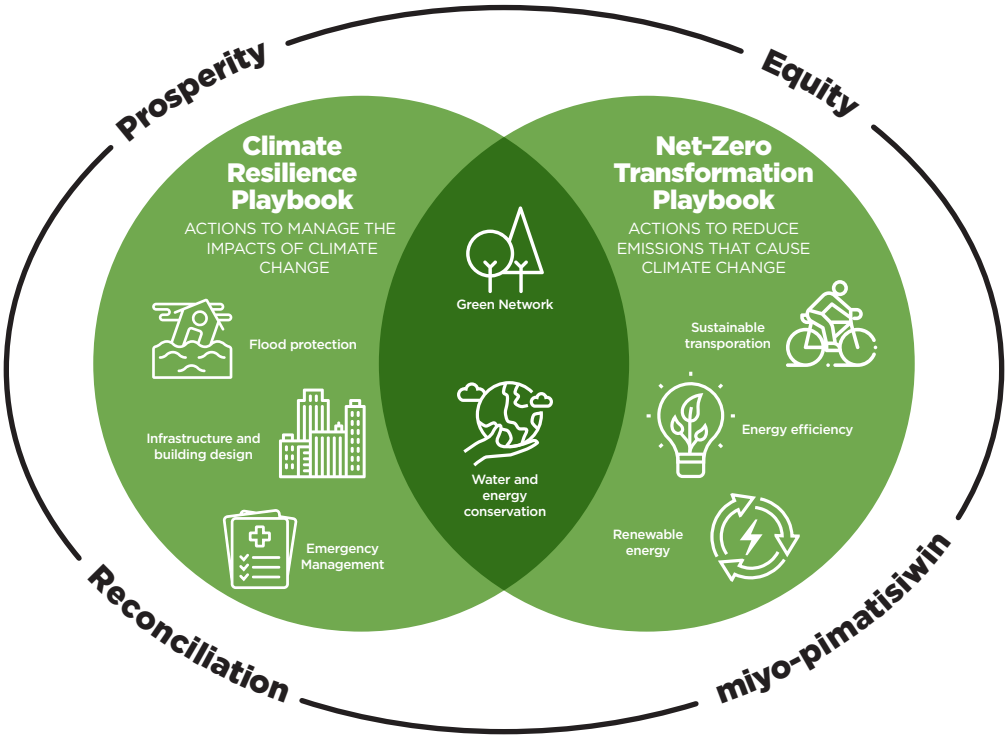
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WHAT IS THE CLIMATE ACTION STRATEGY?

The *Climate Action Strategy* presents a comprehensive approach for climate readiness that combines measures that reduce carbon pollution with efforts to prepare the City of Saskatoon (City) and community to address the impacts of a changing climate.

Through the *Net-Zero Transformation Playbook*, the *Climate Resilience Playbook*, and *Thrive - A Guide for a Just Transition*, the Strategy aims to cultivate a community where all residents and businesses thrive and the benefits of climate action are shared by all.



The *Climate Action Strategy* will guide the City’s approach to climate action over the next twenty-five years, through an iterative process guided by our vision. The *Climate Action Strategy* builds upon, and supersedes, *The Low Emissions Community Plan* and the *Corporate Climate Adaptation Strategy*.

Our Vision: Saskatoon is a net-zero and climate-resilient community where all residents and businesses can thrive. Guided by a commitment to equity, reconciliation, prosperity, and miyo-pimâtisiwin (the good life), we will transform our infrastructure, conserve our natural areas, and ensure the benefits of climate action are shared by all.

The Need for Climate Action

The impacts of climate change are being felt around the world and in Saskatoon. The International Panel on Climate Change (IPCC) has stated that the world must reduce carbon pollution to net-zero by 2050 to avoid the worst impacts of climate change. Limiting warming to 1.5°C, or even 2°C, will be beyond reach without immediate, large-scale reductions to carbon pollution.

Climate commitments have been made by all levels of government, as detailed in Appendix 2, including the City of Saskatoon's commitment to climate action outlined in the *City of Saskatoon's 2026-2029 Strategic Plan*:

“Greenhouse gases are reduced and actions to manage the impacts of the climate crisis have been implemented in a way that maximizes co-benefits for all.”

Failing to act locally will put pressure on resources, increase social inequalities, interrupt business activities, disrupt daily lives, and damage natural ecosystems. Decisive actions taken today support a prosperous future for Saskatoon.

Benefits of climate action include:

Safety

- Safety and comfort: homes, businesses, and public spaces that provide comfort and shelter from severe weather conditions.
- Emergency preparedness: supporting community preparedness and equitable access to services for equity-deserving populations.

Health

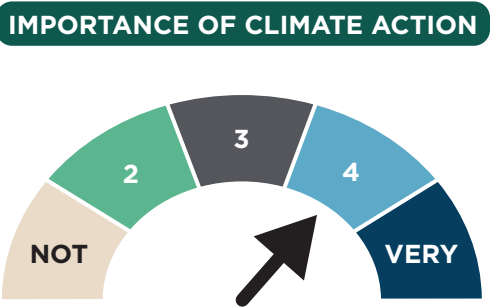
- Improved public health: clean air, active lifestyles, and green spaces contribute to overall community wellbeing.

Prosperity

- Job creation and economic growth: preventing business disruptions from weather events supports economic growth, and low carbon investment creates local jobs and opportunities.
- Reduced costs: energy efficiency and preventing damage from extreme weather reduce household, business, and municipal expenses, freeing resources for other priorities.

Public Support for Climate Action

Throughout 2024 and 2025, over 1,300 people and organizations participated in climate action engagement through surveys, workshops, information sessions, and stakeholder meetings. See the *Climate Action Strategy Engagement Summary and Report* for more details. The survey found that support for climate action is increasing as, on average, survey participants scored the importance of climate action 4 out of 5, which is higher than previous results.



Across all engagement activities, participants emphasized the following themes:

- Climate action is inseparable from affordability, housing, health, and infrastructure.
- The City is expected to lead visibly and target programs towards the biggest sources of emissions rather than expecting too much from individual behaviours.
- How actions are designed and communicated matters as much as what is chosen.
- Equity, transparency, and system-level thinking are essential for public trust.
- Overall, participants did support the City undertaking this work through the *Climate Action Strategy* and valued being engaged in the process.

Suggestions for implementation:

- **Lead with systems-level action** and clear City leadership.
- **Phase in actions** thoughtfully and **pair requirements with support**.
- Design programs with **equity and affordability at the forefront**.
- Enable community action through **incentives, partnerships and flexibility**.
- **Be transparent, adaptive and accountable** when implementing the actions.

The Effects of Climate Change in Saskatoon

Climate change is already being experienced in Saskatoon and is expected to increase over the coming decades. The severity depends on the amount of global carbon pollution released, as well as the effectiveness of global action to reduce carbon pollution.

The expected changes summarized here are based on climate projections, the outputs of climate models that predict global and local changes based on carbon pollution. Detailed projections for Saskatoon are available in the *Climate Change Projections and Hazards Report*. A risk assessment, based on climate projections and hazards, was also completed and is available in Appendix 3 along with more information on the impact on the South Saskatchewan River (Appendix 4).



As the climate changes, Saskatoon is expected to experience the following impacts:

Heat



- In spring, summer, and autumn, Saskatoon is expected to hotter temperatures, including:
- More very hot days. Saskatoon is projected to move from 7 days above 30°C every year (historically) to 21 days above 30°C by 2050 and 45 days above 30°C by 2080.
 - More frequent and longer heat waves.
 - Higher overnight temperatures, including more nights where the overnight low doesn't drop below 20°C.

Wildfire Smoke



Increased temperatures, reduced snowpack, and less consistent summer rain are very likely to continue to result in increasingly severe wildfires in Western Canada. In Saskatoon, this means high likelihood of more days with heavy wildfire smoke.

Rainfall



- Changing rainfall conditions increase both the likelihood of drought conditions and flooding, driven by changes in timing and how the rain occurs.
- Timing:** precipitation is expected to shift away from the summers, with more occurring in fall, winter, and spring.
- Storms:** rainfall is expected to occur in heavier downpours.

Extreme Weather



Increased extreme weather in all seasons, including storm hazards such as high winds, heavy rain or snowfall, hail, and flooding.

Weather Whiplash



Increased sudden changes between hot and cold days, such as a rainy February day followed by extreme cold.

Winter Conditions



- In winter, warming temperatures, changing precipitation patterns, and more weather variability are likely to bring increases in:
- Freezing rain and ice accumulation;
 - Winter thaw events; and
 - Shifts between warm and very cold.
- These changes also mean a *decrease* in the number of very cold days and winter snowpack.

Climate Impacts Observed in our Community

People in our community are noticing changes to our climate. We asked community members to share what impacts a changing climate is having on their lives. Here is what we heard:

Ice

- “The freeze thaw cycles throughout the winter make getting around really difficult: walking to work, driving to grocery store, etc.”
- “I have a lot of fear of falling on ice in winter. As the icy season has lengthened, every winter I consider moving somewhere else but I know there are climate impacts everywhere.”

Costs

- “My home insurance premium had its largest increase ever this year - with a zero claims history - and I know that this will get worse, even more so if I have claims.”
- “Last summer, my AC ran nonstop—skyrocketed the electric bill.”

Mental Health

- “I am struggling with the mental health impacts of losing precious outdoor summer days to wildfire smoke. We’ve had to change plans, cancel trips, and stay inside.”

Smoke and Heat

- “I’ve always considered myself a healthy person but the smoke has created new health challenges as I’ve spent less time outdoors being active, working in my yard and doing activities with friends.”
- “Our 6-year-old son with asthma misses out on activities and experiences because he can’t go outside on smoky days.”
- “Wildfire smoke and very hot days keep me inside instead of in my garden.”

Future Generations

- “I’m most concerned about the impacts on future generations and I believe that the work needs to start now, if we want to ensure that the world will be a good place to live for future generations.”

Community members are also taking steps to adapt to climate change:

- “I am trying to plan for a yard and garden that is more heat and drought tolerant.”
- “My job requires that I work outdoors during most of the summer. On smoky days I have to wear a respirator mask which is uncomfortable, but better than breathing in harmful particulates.”
- “My house is super-insulated, and I have good tree cover. These mitigate the effects that others are feeling indoors.”

The Costs of Inaction

Climate change imposes growing financial and operational burdens on municipalities, households, and local economies. The *Costs of Climate Change on the Prairies* (ClimateWest 2023) shows that, under a high emissions scenario, annual direct economic losses across the Prairie provinces will reach approximately \$15.7 billion by the 2050s and \$37.4 billion by the 2080s (in 2020 dollars), even before accounting for all cascading effects. Further, large catastrophic losses are increasing in frequency across Canada, including Saskatchewan.¹

Early action, through integration of climate risk into asset management, capital planning, and policy decisions, reduces long term financial exposure and protects residents and core services. More information on the costs of inaction can be found in Appendix 5.

How the City Drives Change

In developing climate solutions, the City must navigate a complex policy landscape with overlapping jurisdictions and ownership. The City relies on collaborative efforts with other levels of government and with community members, including businesses and organizations.

The *Net-Zero Transformation Playbook* and the *Climate Resilience Playbook* provide a list of actions, or municipal levers, that the City can use to drive change. A municipal lever is a tool or mechanism that a municipal government can use to influence, enable, or directly implement climate action within its jurisdiction. These levers (Figure 1) include outreach, incentives, community services, and regulatory tools that a municipality can use to guide climate action locally.

The Playbook actions are organized by municipal lever, as shown in Figure 1. The *Net-Zero Transformation Playbook* is further organized into Community actions and Leading by Example actions. Leading by Example actions are those that the City directly implements for its own operations, infrastructure, and people (employees). Pathway Planning and Data & Information are foundational actions that support the municipal levers and are also identified throughout the Playbooks.

Figure 1. Municipal Levers for Action on Climate Change



A phased timeline for implementing the Actions and Initiatives in the Playbooks is suggested here:
NOW: Current-2027 | **NEXT:** 2028-2029 | **AFTER:** 2030-2035 | **LATER:** After 2035

¹ Rol, Chris. (2023). *The Cost of Climate Change in Canada* Then and Now. Insurance Bureau of Canada



Lawson Civic Centre Hot Water Heating Boilers were upgraded in 2021 with new controls that provide variable heat output.



NET-ZERO TRANSFORMATION PLAYBOOK

The purpose of the *Net-Zero Transformation Playbook* is to guide Saskatoon towards net-zero carbon pollution by 2050. The Playbook is categorized into seven net-zero transformation goals to first reduce and, once all other measures have been implemented, remove carbon, as follows:

-  Enhance energy efficiency with **BETTER HOMES & BUILDINGS**
-  Expand low and zero-emission **ENERGY GENERATION**
-  Support diverse **ZERO-EMISSION TRANSPORTATION** options
-  Reduce landfill emissions through **WASTE REDUCTION**
-  **CONSERVE WATER** to reduce associated energy use
-  Conserve, enhance, and grow our **GREEN NETWORK**
- After all possible measures have been taken,
unavoidable emissions can be offset...

 Explore **CARBON REMOVAL**

Each of the seven goals of the Playbook includes a general summary of how improvements could be achieved, community objectives and key performance indicators. Leading by Example refers to City of Saskatoon corporate objectives and actions. Tables of net-zero transformation actions are itemized in the Community and Leading by Example sections, with the tables including detailed initiatives, action leaders, when the action would take place, and the status of each action.

Net-Zero Transformation Background

Targets

In 2023, City Council approved a greenhouse gas (GHG), or carbon reduction, target of net-zero GHG emissions by 2050. Achieving net-zero emissions means balancing emitted greenhouse gases with emissions removal. Table 1 summarizes the targets of this plan.

Table 1. GHG Reduction Targets

	2035 Interim Target	2050
Community	40% below 2014 levels	Net-Zero

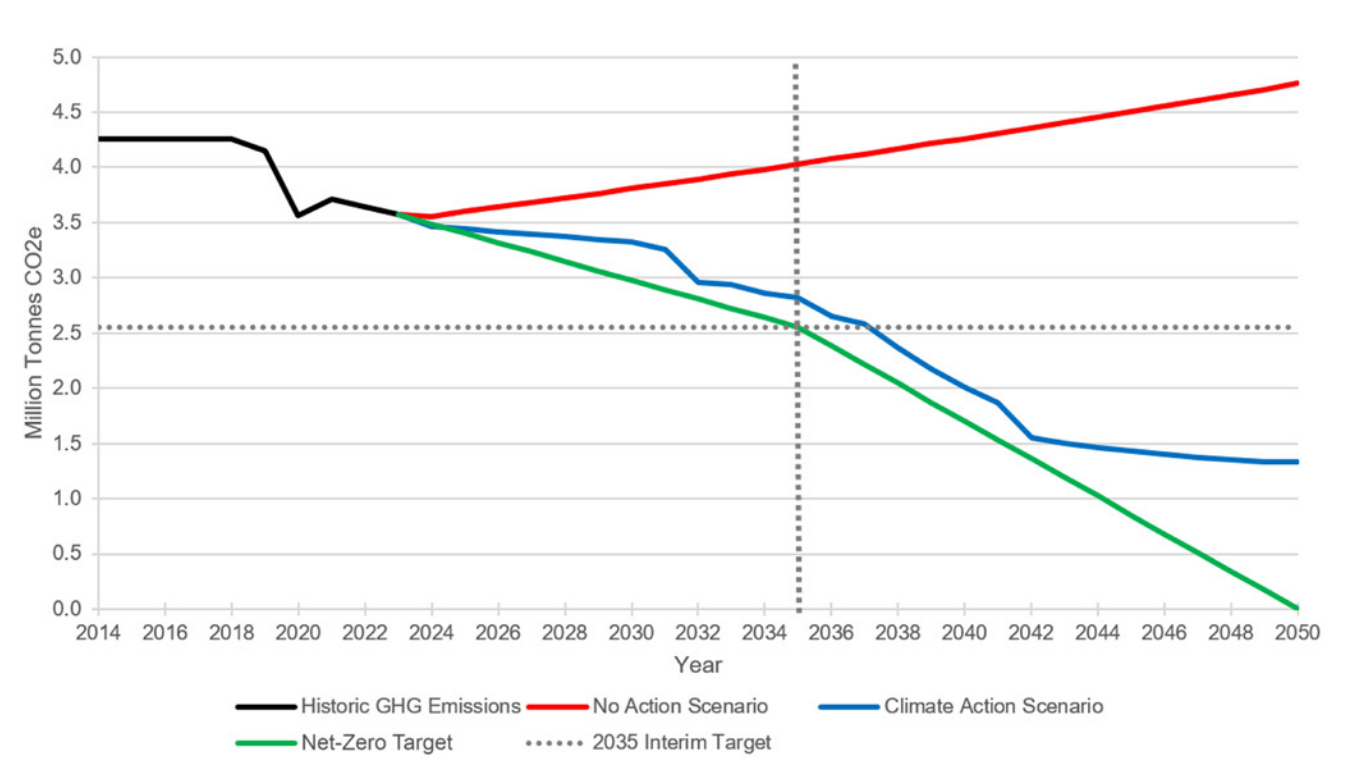
	2035 Interim Target	2050
Corporate	45% below 2014 levels	Net-Zero

GHG Modelling and Cost Analysis

GHG emissions modelling informs the Net-Zero Transformation Playbook and details can be found in Appendix 6. The modelling analysis projects how the City can achieve carbon pollution reduction by implementing the actions within this plan that have quantifiable GHG reductions. Modelling is not predictive but it is used to help prioritize actions and understand gaps for achieving targets.

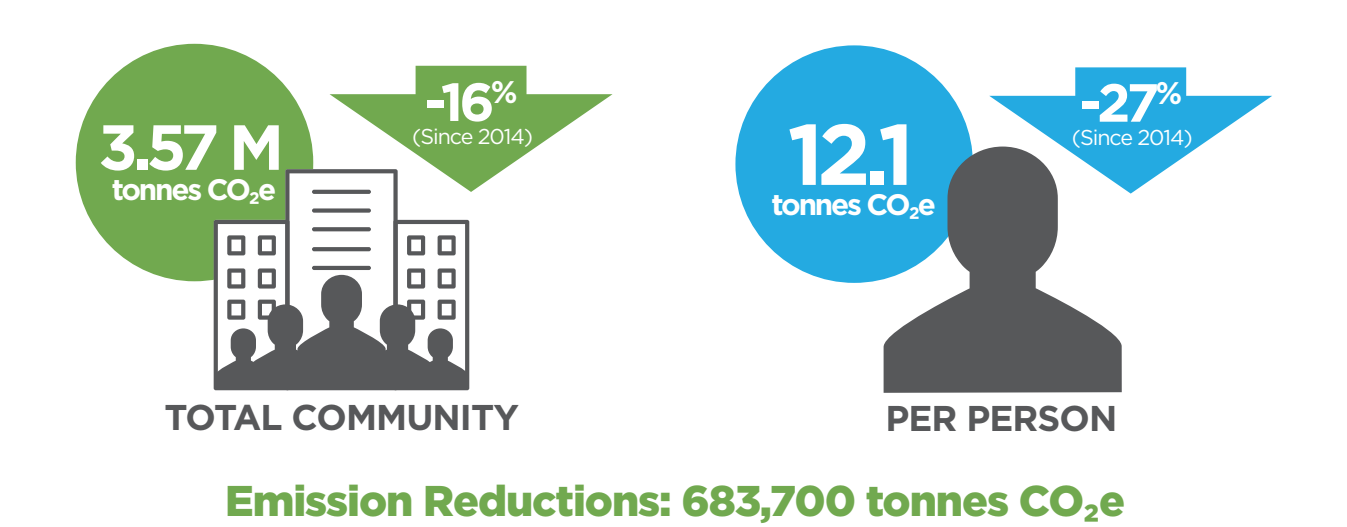
This modelling, summarized in Figure 2, shows that the requirements of the Net-Zero Transformation Playbook are not completely addressed with the actions in this Playbook and that future work to define and address the residual emissions will be carried out. However, near term actions are sufficiently understood and detailed to progress emission reduction priorities which are reflected in the seven Net-Zero Transformation goals.

Figure 2. Community GHG Emissions, 2014-2050



A marginal abatement cost analysis, which compares the relative cost-effectiveness of different types of carbon reduction measures, can be found in Appendix 7.

GHG Emission Reduction Progress to date (2023 data)



GHG Emission Sources in Saskatoon

The figures below summarize the sources of greenhouse gas emissions from the broader community (Figure 3) and the City as a corporation (Figure 4).

Figure 3. Community GHG Emissions (2023)

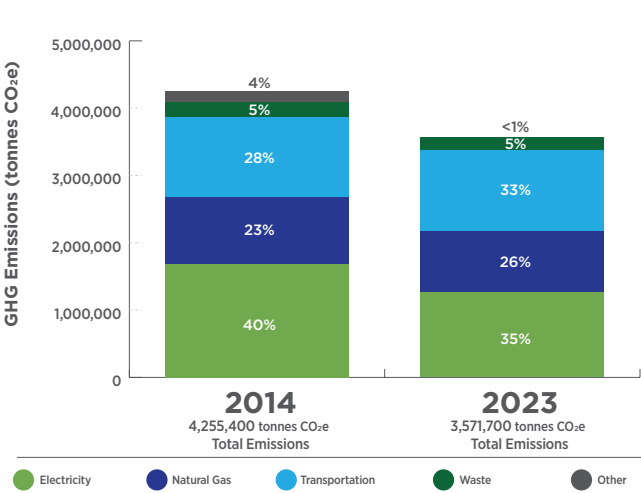
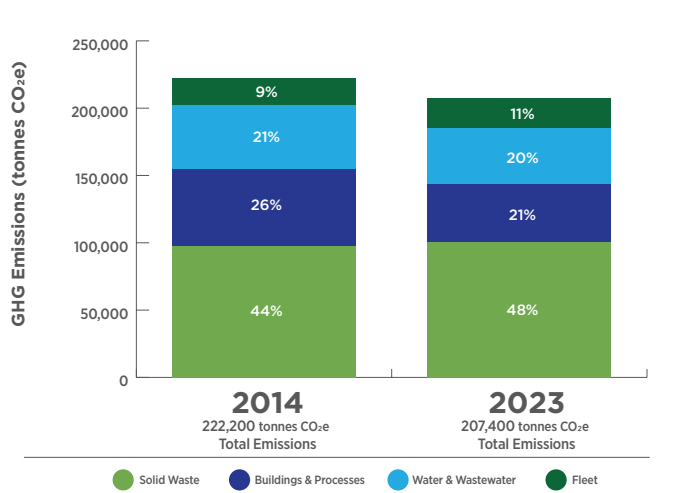


Figure 4. Corporate GHG Emissions (2023)





Enhance energy efficiency with **BETTER HOMES & BUILDINGS**

Homes, buildings, and industrial processes use natural gas for heating and electricity to power appliances, lights, and other systems, making up the largest source (61%) of carbon pollution in Saskatoon.

Homes and buildings in Saskatoon can be improved by the following measures:

- Update ventilation, heating, and cooling systems to be more energy efficient (furnaces, heat pumps, boilers, chillers, air handling units)
- Use energy efficient lighting and controls (daylighting, occupancy sensors)
- Improve insulation and building envelope (insulation in walls and roof, windows, sealing, and weather stripping)
- Install appliances and equipment that are energy efficient and use energy saving settings
- Train building operators to take an active role in building energy efficiency
- Adopt energy conservation behaviours at home and work
- Build compact neighbourhoods that require less space and resources per person

Community Objectives

- Reduce total energy use in buildings
- New construction is built net-zero ready
- Existing buildings are retrofitted to net-zero ready

Leading by Example Objectives

- Retrofit civic buildings to net-zero ready
- Build net-zero ready civic buildings
- Improve energy efficiency of civic operations and processes

2035	2050
30% reduction in emissions from 2014 from the building sector	All buildings in Saskatoon are net-zero ready by 2050

2035	2050
100% of civic building space is benchmarked	All civic buildings are net-zero ready
20% reduction in total energy consumption	Unavoidable emissions are offset

Key Performance Indicators

- Electricity and natural gas consumption for residential and ICI sectors

Key Performance Indicators

- Electricity and natural gas consumption for leisure centers, other buildings, outdoor uses, and Saskatoon Water

Community Actions

Action	Initiatives	Lead	When	Status
Outreach				
N1.1a Collaborate with community leaders to build capacity for net-zero ready approaches.	Coordinate an industry-led knowledge exchange on homes and buildings.	Sustainability	Next	Not started
	Support Indigenous-led energy efficiency and net-zero ready initiatives.	Sustainability / Indigenous Initiatives	Next	Not started
	Support direct investment in affordable housing energy efficiency and net-zero ready initiatives.	Planning / Sustainability	Now	Not started
	Pursue research or training collaborations with other organizations and educational institutions on net-zero ready design and construction in Saskatoon.	Sustainability / Planning / Building Standards	Now	Started
N1.1b Deliver energy efficiency and net-zero ready education initiatives.	Deliver energy efficiency and net-zero ready education through campaigns, resources, and an event team.	Sustainability	Now	Started
Incentives				
N1.2a Provide financing and incentives for energy efficiency and net-zero ready construction and retrofits.	Explore incentives, grants, or rebates that prioritize equity as funding opportunities arise.	Sustainability	Now	Continuous
	Continue offering the Home Energy Loan Program (residential) and begin offering the Community Energy Loan Program (commercial & multi-unit residential).	Sustainability	Now	Started
	Explore the need for industrial sector loan programs.	Sustainability	Next	Not started
	Explore additional incentives for builders to adopt net-zero ready ahead of regulatory requirements.	Saskatoon Land / Building Standards	Next	Not started
Community Service				
N1.3a Encourage energy efficiency through online utility bills and electricity rates.	Continue to promote and support SmartUTIL for customer insight into electrical consumption.	Saskatoon Light & Power	Now	Ongoing
	Review electricity rate structure to support equity and conservation goals.	Saskatoon Light & Power	Next	Not started
Regulatory				
N1.4a Adopt higher energy efficiency standards for new construction.*	Adopt higher tiers of the National Building Code (NBC) for residential construction.	Building Standards	TBD in the Better Homes & Buildings Roadmap	Started
	Adopt higher tiers of the National Energy Code of Canada for Buildings (NECB) for commercial construction.	Building Standards		Not started
	Explore mechanisms to support fuel switching readiness at lower tiers.	Sustainability		Not started

NOW: Current-2027 | NEXT: 2028-2029 | AFTER: 2030-2035 | LATER: After 2035

Action	Initiatives	Lead	When	Status
N1.4b Develop energy labelling and energy benchmarking programs for the residential and commercial sectors.	Establish point-of-sale disclosure for home energy labelling:			
	• Phase 1: Voluntary energy labelling program	Sustainability	Now	Started
	• Phase 2: Explore mandatory point-of-sale disclosure	Sustainability	After	After
	Establish disclosure requirements for energy benchmarking within the ICI sector:			
N1.4c Explore regulatory mechanisms that address the energy performance of existing buildings.	• Phase 1: Voluntary energy benchmarking, labelling, and disclosure program	Sustainability	Now	Started
	• Phase 2: Explore mandatory disclosure requirements for energy benchmarking	Sustainability	After	Not started
	Adopt the Alterations to Existing Buildings as part of the 2025 NBC.	Building Standards	Next	Not started
	Explore additional permit requirements for energy efficiency upgrades.	Building Standards	After	Not started
N1.4d A sustainable community that supports a net-zero vision is reflected in the Official Community Plan (OCP) and Zoning Bylaw.	Develop Building Performance Standards that build on ICI sector benchmarking.	Sustainability	Later	Not started
	Explore other mechanisms to support fuel switching readiness in existing homes.	Sustainability	Later	Not started
	Updates to the OCP incorporate net-zero ready community goals.	Planning	Next	Not started
	Review existing standards and regulations for barriers and opportunities to support net-zero ready design and construction.	Planning	Next	Not started
Pathway Planning	Monitor the development of net-zero ready community standards in other jurisdictions.	Sustainability	Now	Not started
N1.8a Develop A Better Homes & Buildings Roadmap.	Outline a clear, phased pathway for achieving higher energy efficiency for new and existing buildings.	Sustainability	Now	Started
Data & Information				
N1.9a Establish building energy performance data systems.	Improve building permit data tracking.	Building Standards	Now	Started
	Gather local industrial energy use information.	Sustainability	After	Not started

* The National Building Code (NBC) and National Energy Code of Canada for Buildings (NECB) outline a tiered pathway for regulating to net-zero new construction. Regulations for these tiers may be mandated by the Province or by the City (through the Building Bylaw). The forthcoming *Better Homes & Buildings Roadmap* will outline the timeline for introducing higher standards, considering carbon reduction targets and industry readiness.

NOW: Current-2027 | NEXT: 2028-2029 | AFTER: 2030-2035 | LATER: After 2035

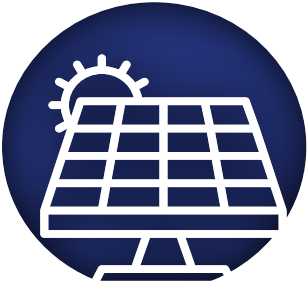
Leading by Example Actions

Action	Initiatives	Lead	When	Status
Operations				
N1.5a Adopt recognized building energy management best practices and standards.	Civic buildings participate in the ICI energy performance benchmarking and disclosure program.	Sustainability	Now	Started
	Pilot BOMA Best Certification for civic buildings.	Sustainability	Now	Started
	Adopt ISO Energy Management System.	Sustainability / Saskatoon Water	Next	Not started
	Implement BOMA Best Certification for all civic buildings.	Sustainability	After	Not started
N1.5b Integrate energy conservation objectives into existing building management processes, standards, and guidelines.	Integrate energy conservation objectives into: • Building automation • Building Condition Reporting • Facilities Asset Management Plan • CBCM fund criteria • Construction specifications	Facilities	Now	Started
	Incorporate energy conservation and management in Asset Management approaches.	Technical Services	Next	Not started
N1.5c Integrate energy efficiency criteria into procurement.	Establish procedures to identify high impact opportunities to incorporate energy efficiency into procurement.	Supply Chain Management / Sustainability	Next	Not started
Infrastructure				
N1.6a Conduct deep retrofits in existing buildings to reduce energy use and support net-zero readiness.	Establish a deep retrofit program to conserve energy and bring all civic building to a net-zero ready standard.	Facilities Management	Next	Continuous
	Explore financing approaches for deep retrofits through an investment and resourcing strategy.	Facilities Management	Next	Not started
	Explore co-generation, alternative fuel sources, and offsets for processes and systems that require natural gas.	Sustainability	Next	Continuous
N1.6b Upgrade utility infrastructure to conserve energy and reduce emissions.	Upgrade lift stations, pump stations, reservoirs, plant processes and facilities to reduce overall emissions.	Saskatoon Water	Now	Continuous
	Upgrade street lighting and facilities to reduce energy losses across the power grid.	Saskatoon Light & Power	Now	Continuous
N1.6c New civic buildings and major renovations are built to net-zero ready standards.	New construction and major renovations meet the criteria outlined in the High-Performance Civic Building Policy.	Technical Services / Facilities Management	Now	Continuous

NOW: Current-2027 | NEXT: 2028-2029 | AFTER: 2030-2035 | LATER: After 2035

Action	Initiatives	Lead	When	Status
N1.6d Monitor the development of low embodied carbon construction approaches.	Explore or pilot approaches for low embodied carbon construction.	Sustainability	After	Not started
People				
N1.7a Support energy conservation behaviors and awareness in civic buildings through engagement and education.	Leading Green delivers staff engagement initiatives on energy conservation.	Sustainability	Next	Not started
	Public engagement in civic buildings supports energy conservation awareness among patrons.	Sustainability	After	Not started
	Building operator training for energy efficiency builds operational capacity.	Sustainability	Now	Continuous
Pathway Planning				
N1.8b Implement the Integrated Civic Energy Management Plan.	Implement the Integrated Civic Energy Management Plan.	Sustainability	Now	Started
N1.8c Develop a Civic Building Deep-Retrofit Roadmap.	Develop a Civic Building Deep Retrofit roadmap for net-zero readiness.	Facilities Management	Next	Started
N1.8d Develop a Saskatoon Water Energy Management and Net-Zero Readiness Strategy.	Develop a Saskatoon Water Energy Management Strategy and Net-Zero Roadmap that lays out actions and projections for Saskatoon Water operations.	Saskatoon Water	Later	Started
Data & Information				
N1.9b Maintain and expand energy data management systems that track energy use.	Maintain a corporate utility data management system to monitor civic building energy use and support benchmarking.	Sustainability	Now	Continuous
	Maintain energy tracking for Saskatoon Water treatment and distribution systems and facilities.	Saskatoon Water	Now	Continuous
	Monitor grid losses across the Saskatoon Light and Power distribution network.	Saskatoon Light & Power	Now	Continuous
N1.9c Collect information on embodied emissions from civic construction projects.	Conduct an evaluation or preliminary inventory of embodied emissions.	Sustainability	After	Not started
	Explore approaches to incorporate embodied emissions reporting through suppliers.	Supply Chain Management / Sustainability	After	Not started

NOW: Current-2027 | NEXT: 2028-2029 | AFTER: 2030-2035 | LATER: After 2035



Expand low and zero-emission ENERGY GENERATION

Carbon pollution results when the electricity used to power our homes, businesses, and vehicles is generated from fossil fuels (coal and natural gas). This pollution makes up 35% of total greenhouse gas emissions in Saskatoon. To meet our climate goals, we will need to reduce reliance on fossil fuels to power Saskatoon’s electrical grid.

SaskPower generates and distributes electricity across Saskatchewan. Saskatoon Light and Power purchases that electricity and distributes it to some of Saskatoon (with limited generation). Electricity in Saskatchewan is generated from natural gas (41%), coal (25%), and renewables (34%)². The source of electricity determines the emissions from electricity consumed. SaskPower has committed to a net-zero grid by 2050.

Measures that can decarbonize Saskatoon’s electrical grid:

- Generate zero-emission electricity on-site or with small-scale installations (e.g., rooftop) on residences and businesses
- Increase the percentage of grid-supplied zero-emission electricity with utility-scale generation projects

Community Objectives

- Support small-scale renewable self-generation in Saskatoon
- Monitor as SaskPower leads the decarbonization of grid electricity
- Incorporate solar into new developments and construction

Leading by Example Objectives

- Install solar PV to support near-term electricity decarbonization
- Expand and optimize use of biogas and landfill gas (LFG) for energy generation
- Purchase clean electricity from community or Indigenous enterprises

2035	2050
10% of residential and commercial buildings have rooftop solar	Electricity in Saskatoon is decarbonized

2035	2050
50MW of solar is installed	Carbon pollution from civic electricity use is net-zero, through procurement, generation, and offsetting

Key Performance Indicators

- SaskPower grid emission factor
- Solar PV self-generation from residential and ICI sectors within Saskatoon Light & Power and local SaskPower service areas

Key Performance Indicators

- PV solar generated or purchased from PV roof-top solar, PV solar farm, Renewable Energy Credits (RECs) purchased
- Biogas used from generation from LFG and Wastewater Treatment Plant (WWTP), percentage and total

² SaskPower. (2026). Annual Report 2025–26.

Community Actions

Action	Initiatives	Lead	When	Status
Outreach				
N2.1a Collaborate with community groups to support energy equity through self-generation.	Support local Indigenous-led energy self-generation initiatives.	Sustainability	Next	Not started
	Support affordable housing energy self-generation initiatives.	Sustainability / Planning	Next	Not started
N2.1b Deliver energy self-generation education initiatives.	Provide tools and education to promote energy self-generation like solar maps, campaigns, and events.	Sustainability	Now	Continuous
Incentives				
N2.2a Provide incentives for self-generation.	Administer incentives that prioritize equity as funding opportunities arise.	Sustainability	Now	Not started
	Maintain the Home Energy Loan Program (residential) and the Community Energy Loan Program (commercial and multi-unit residential).	Sustainability	Now	Started
	Explore need for additional industrial sector loan programs.	Sustainability	Next	Not started
	Pilot builder incentives for solar installation on new construction.	Saskatoon Land / Building Standards	Next	Not started
Community Service				
N2.3a Maintain and enhance programs that support self-generation for SLP customers.	Maintain ongoing support for: • Net-Metering Program • Small Power Producer Program • Behind the Meter Program	Saskatoon Light & Power	Now	Continuous
	Implement recommendations from Solar Admin Review.	Saskatoon Light & Power	Next	Not started
N2.3b Maintain and enhance programs that enable customers to access renewable energy or credits.	Maintain ongoing support for Renewable Subscription Service.	Saskatoon Light & Power	Now	Continuous
Regulatory				
N2.4a Explore mandatory rooftop solar approaches.	Explore benefits, drawbacks, and mechanism to mandate roof-top solar or solar-ready infrastructure in new construction (residential and ICI).	Sustainability	Next	Not started
N2.4b Support solar orientation through land-use planning.	Pursue implementation of recommendations from solar orientation review.	Planning	Next	Started
Pathway Planning				
N2.8a Implement <i>Alternative Currents: A Plan for Saskatoon's Renewable and Low-Emissions Energy Transition</i> .	Renew the plan when further information is available about decarbonization of provincial grid.	Sustainability	Later	Not started

NOW: Current-2027 | NEXT: 2028-2029 | AFTER: 2030-2035 | LATER: After 2035

Action	Initiatives	Lead	When	Status
Data & Information				
N2.9a Monitor electrical grid decarbonization progress and implications.	Monitor provincial grid decarbonization progress and need for investment in City-led community-scale zero-emission electricity generation.	Saskatoon Light & Power	Now	Continuous
	Monitor need for smart grid technologies and explore how they might support a Smart City approach.	Saskatoon Light & Power	After	Not started



Leading by Example Actions

Action	Initiatives	Lead	When	Status
Operations				
N2.5a Maintain the production capacity of generating infrastructure.	Incorporate maintenance of production capacity of generating infrastructure into asset management planning.	Technical Services	Now	Continuous
N2.5b Explore the purchase of Renewable Energy Certificates.	Explore opportunities to support community and Indigenous-led generation projects by purchasing Renewable Energy Certificates through SaskPower to offset emissions from civic electricity.	Saskatoon Light & Power	Now	Started
N2.5c Monitor renewable natural gas developments.	Monitor the development of renewable natural gas markets and explore procurement options.	Sustainability	Later	Not started
Infrastructure				
N2.6a Install 50MW of solar generation capacity by 2035.	Investigate and install utility-scale solar projects: - Recovery Park Solar PV Farm - Wastewater Treatment site PV Farm	Saskatoon Light & Power	Now Now	Started Not started
	Add a requirement to install rooftop or site solar to the <i>High-Performance Civic Building Policy</i> .	Sustainability	Next	Not started
	Install rooftop or site solar on civic buildings.	Sustainability	Now	Started
N2.6b Explore other energy generation options for landfill and wastewater gas.	Explore use of LFG for thermal energy.	Water and Waste Operations	Later	Not started
	Explore expanded and alternative use for wastewater biogas, such as co-generation.	Saskatoon Water	After	Not started
N2.6c Explore opportunities for a zero-emission or renewable energy district energy system.	Explore feasibility of a zero-emission or renewable energy district energy system.	Technical Services / Facilities Management / Sustainability	Now	Started
N2.6d Explore waste to energy technologies.	Explore waste to energy options through a feasibility study.	Water and Waste Operations	Next	Not started
Pathway Planning				
N2.8b Implement <i>Alternative Currents: A Plan for Saskatoon's Renewable and Low-Emissions Energy Transition</i> .	Revisit plan when further information is available about decarbonization of provincial grid.	Sustainability	Later	Not started
Data & Information				
N2.9b Collect data to track energy generation.	Track rooftop solar generation.	Sustainability	Now	Continuous
	Track utility-scale solar and LFG electricity generation.	Saskatoon Light & Power	Now	Continuous
	Track use of biogas for thermal process energy.	Saskatoon Water	Now	Continuous

NOW: Current-2027 | NEXT: 2028-2029 | AFTER: 2030-2035 | LATER: After 2035





Support diverse **ZERO-EMISSION TRANSPORTATION** options

Transportation-related emissions make up 33% of carbon pollution in Saskatoon. Switching to sustainable transportation options reduces reliance on fossil fuels. Sustainable transportation includes public transit, active transport, and electric vehicles.

Measures that can reduce carbon pollution from transportation:

- Increase public use of sustainable transportation by increasing quality and convenience of transit, active transportation services, and infrastructure
- Support multi-modal trips, enabling users to combine sustainable transportation modes during their trip, such as public transit, biking, etc
- Design compact and mixed-use neighbourhoods that reduce commuting distances, reduce use of private vehicles, and support the use of sustainable transportation
- Transition privately-owned vehicles and commercial fleets to zero-emission vehicles (ZEV)

Community Objectives

- Enhance infrastructure and services for transit and active transportation
- Support the adoption of ZEVs by addressing barriers
- Support planning and development so the urban form supports sustainable connectivity

Leading by Example Objectives

- Electrify the City’s light duty vehicle and equipment fleet
- Monitor heavy duty, transit, and emergency ZEV alternatives
- Support sustainable commuting and transportation options for employees

2035	2050
30% mode share of sustainable transport options	100% mode share of sustainable transport options

2035	2050
100% of light duty vehicles electrified by 2040	100% of heavy duty vehicles are converted to zero-emission alternatives
30% staff commute mode share of sustainable transport options	100% staff commute mode share of sustainable transport options

Key Performance Indicators

- Fuel sales: retail, cardlock, and bulk
- Personal and commercial ZEV registrations
- Percentage of population within 500m of transportation corridors
- Mode share of sustainable transport (transit, active and micromobility, zero-emission vehicles, carpool)

Key Performance Indicators

- Percentage of light duty, light equipment, heavy duty, special vehicle, and transit fleets that are ZEV
- Civic fleet fuel consumption, electricity or hydrogen
- City staff mode share of sustainable transport (transit, active and micro mobility, zero-emission vehicles, carpool)

Community Actions

Action	Initiatives	Lead	When	Status
Outreach				
N3.1a Deliver education and awareness to support increased transit ridership.	Develop and deliver: - Transit information and communications - Promotional campaigns and events	Saskatoon Transit	Now	Continuous
N3.1b Deliver programs to support increased active transportation.	Develop and deliver: - Active transport wayfinding - Education and awareness - Marketing and communication	Transportation	Now	Continuous
N3.1c Deliver education and awareness to support adoption of EVs.	Develop and deliver: - EV Hub for individuals and businesses - Support for multi-unit buildings	Sustainability	Now	Started
N3.1d Explore partnerships for the public charging network.	Explore opportunities to partner with the private sector to offer public charging.	Sustainability	After	Started
Incentives				
N3.2a Provide financing or incentives that support the adoption of low and zero-emission transportation options.	Explore grants or rebates that prioritize equity, as funding opportunities arise.	Sustainability	Now	Continuous
	Maintain property-assessed financing programs for the residential and ICI sectors to support installation of EV charging.	Sustainability	Now	Started
	Explore and expand incentives, discounts, and events that support increased transit ridership.	Saskatoon Transit	Now	Continuous
	Explore incentives for electrification of vehicle for hire such as priority criteria or reduced fees.	Community Standards	Next	Not started
Community Service				
N3.3a Implement service enhancements that increase transit ridership and decarbonize the fleet.	Complete Link (BRT) and network redesign implementation.	Saskatoon Transit	Now	Started
	Zero Emission Transit Fleet transition and charging infrastructure.	Saskatoon Transit	Next	Not started
	Ongoing improved safety, reliability, and efficiency for users.	Saskatoon Transit	Now	Continuous
N3.3b Implement service enhancements that improve active transportation options.	Service enhancement for active transportation: Increased connectivity of active network	Transportation	Now	Continuous
	Improved safety, security, and accessibility	Transportation	Now	Continuous
	Support convenience, end-of-trip amenities, and year-round clearing	Roadways, Fleet and Support / Planning / Saskatoon transit	Now	Continuous

NOW: Current-2027 | NEXT: 2028-2029 | AFTER: 2030-2035 | LATER: After 2035

Action	Initiatives	Lead	When	Status
N3.3c Implement service enhancements that address barriers to EV charging and support EV adoption.	Undertake load forecasting studies and support load growth for electrification.	Saskatoon Light & Power	Now	Continuous
	Evaluate approach for charging services at civic facilities.	Sustainability	Now	Continuous
	Explore parking fee structure to support EVs or zero emission vehicles.	Community Standards	After	Not started
Regulatory				
N3.4a Establish requirements for the availability of EV charging and electric vehicles for hire.	Establish requirement for: - Multi-unit EV charging access - Commercial EV charging - Minimum number of EV chargers	Building Standards	Next	Not started
	Explore approaches for mandating EVs for vehicles for hire.	Sustainability	After	Not started
N3.4b Sustainability connectivity that supports a net-zero vision is reflected in the Official Community Plan and Zoning Bylaw.	Continue implementation of corridor planning to support sustainable density and connectivity.	Planning	Now	Continuous
	Integrate multi-modal level of service impact assessment into development review process.	Planning	Next	Not started
	Integrate bike micromobility parking criteria.	Planning	Now	Started
	Monitor development of regulatory approaches for the establishment of low emission zones.	Sustainability	After	Not started
Pathway Planning				
N3.8a The <i>Transportation Master Plan</i> .	Updates to the <i>Transportation Master Plan</i> integrate climate commitments.	Transportation	Now	Started
N3.8b The <i>Active Transportation Plan</i> .	Updates to the <i>Active Transportation Plan</i> integrate climate commitments.	Transportation	Now	Started
N3.8c The <i>Zero Emission Vehicle Roadmap</i> .	Implement the <i>Zero Emission Vehicle Roadmap</i> .	Sustainability	Now	Started
N3.8d The <i>Transit Fleet Renewal Strategy</i> .	Updates to <i>Transit Fleet Renewal Strategy</i> to integrate climate commitments.	Saskatoon Transit	Now	Started
Data and Information				
N3.9a Explore data collection and analytics for transportation emissions.	Gather more information on cardlock fuel use and local emission reduction planning for heavy-duty fleets.	Sustainability	Next	Not started
	Explore if Smart City data analytics could be used to support carbon reduction goals.	Sustainability	Next	Not started

NOW: Current-2027 | NEXT: 2028-2029 | AFTER: 2030-2035 | LATER: After 2035

Leading by Example Actions

Action	Initiatives	Lead	When	Status
Operations				
N3.5a Update fleet management procedures to support ZEVs.	Updates to fleet management operating procedures: • ZEV maintenance & training • EV charger maintenance and oversight • Safe EV battery disposal protocols • Fire suppression procedures	Roadways, Fleet and Support / Saskatoon Transit / Saskatoon Fire Department / Recreation / Parks	Now	Continuous
Infrastructure				
N3.6a Electrify the light duty vehicle and equipment fleet.	Explore electrification of light duty City vehicles, including designing and adding charging infrastructure and purchasing vehicles.	Roadways, Fleet, and Support / Sustainability	Now	Started
	Explore electrification, charging infrastructure, and storage for other equipment.	Sustainability / Parks / Saskatoon Fire / Recreation	Now	Started
	Initiate a corporate charging strategy.	Sustainability	Now	Started
N3.6b Monitor and pilot ZEV solutions for heavy duty, transit, special, and emergency vehicles.	Explore heavy-duty ZEV technology and pilots, including: • Hydrogen infrastructure systems • Hydrogen or battery retrofit pilots • Monitor alternative technologies	Roadways, Fleet and Support / Saskatoon Transit / Saskatoon Fire Department / Recreation / Parks	After	Not started
N3.6c Develop emissions criteria for procurement of ICE vehicles or equipment.	Develop emissions criteria for procurement of ICE vehicles or equipment.	Supply Chain Management / Sustainability	Next	Not started
N3.6d Monitor development of approaches for low embodied carbon construction for roadways and sidewalks.	Explore or pilot approaches for low embodied carbon roadway or sidewalk construction.	Sustainability	Later	Not started
People				
N3.7a Deliver staff engagement and support to encourage staff adoption of sustainable transportation.	Through Leading Green: • Develop procedure for use of sustainable transportation at work (i.e., attending meetings) • Explore staff incentives and barriers for adoption of sustainable commuting	Sustainability	Next	Not started
	Promote active transportation events among staff.	Transportation	Now	Continuous
Pathway Planning				
N3.8e Implement the Zero Emission Vehicle Roadmap and Transit Fleet Renewal Strategy.	Revisit the Zero Emission Vehicle Roadmap as new technologies become commercially available.	Sustainability	After	Not started
N3.8f Add climate commitments to the Transit Fleet Renewal Strategy.	Updates to transit planning to integrate climate commitments.	Saskatoon Transit	Now	Started

NOW: Current-2027 | NEXT: 2028-2029 | AFTER: 2030-2035 | LATER: After 2035

Action	Initiatives	Lead	When	Status
Data & Information				
N3.9b Update fleet data tracking for ZEVs.	Tracking kWh for charging in addition to fuel use and KMs travelled for civic fleet.	Roadways, Fleet and Support / Saskatoon Transit / Saskatoon Fire Department / Recreation / Parks	Now	Not started
	Tracking battery lifespan and maintenance requirements for EVs and equipment.		Now	Started
N3.9c Collect information on staff transportation for work.	Incorporate ZEV criteria in staff mileage car allowance data.	Human Resources	Next	Not started
	Conduct staff commuting and work transportation survey.	Sustainability	Next	Not started
N3.9d Collect information on Scope 3 emissions from civic roadways and sidewalk projects.	Conduct an evaluation or preliminary inventory.	Sustainability	Later	Not started
	Explore approaches to support Scope 3 emissions reporting through suppliers.	Supply Chain Management / Sustainability	After	Not started



NOW: Current-2027 | NEXT: 2028-2029 | AFTER: 2030-2035 | LATER: After 2035



Reduce landfill emissions through WASTE REDUCTION

Waste that decomposes in landfills produces methane, a greenhouse gas that is more potent than carbon dioxide in the atmosphere. This process takes many years, which means the waste in our landfill today will produce methane over many decades. Landfill emissions make up 5% of carbon pollution in Saskatoon.

Measures that can reduce emissions related to landfilling:

- Prevent waste by reducing consumption and designing more durable products
- Reuse or repair items that would otherwise be discarded
- Recycle to give materials a second life as a new product
- Compost food and yard waste to reduce the main source of landfill methane
- Capture landfill gas (LFG) and use it to generate energy

Community Objectives

- Support waste reduction across all sectors
- Deliver services that increase waste diversion from landfills
- Expand requirements and enforcement for waste diversion

Leading by Example Objectives

- Reduce waste generated by civic facilities and operations
- Seek innovative approaches to enhancing LFG capture
- Explore alternatives to landfilling

2035	2050
70% of waste is diverted from the City landfill	75% of waste is diverted from the City landfill
*Based on the current approved waste target. New targets maybe be forthcoming through the <i>Solid Waste Reduction and Diversion Plan</i> update.	

2035	2050
Waste from civic buildings is tracked and 70% of waste is diverted from the landfill	75% of waste from civic buildings is diverted from the landfill
65% of LFG is captured	100% of LFG is avoided, captured, or offset

Key Performance Indicators

- Tonnes of waste landfilled
- Tonnes of recoverable materials for residential, multi-unit and at the gate/other
- Tonnes of organics composted for residential, multi-unit and at the gate/other

Key Performance Indicators

- Tonnes of waste landfilled
- Total biogas captured at landfill and WWTP
- Percentage of biogas captured at landfill and WWTP

Community Actions

Action	Initiatives	Lead	When	Status
Outreach				
N4.1a Deliver waste reduction and diversion education and awareness initiatives.	Deliver annual education programing to: - Curbside and multi-unit residential - Industrial, commercial and institutional sector	Sustainability	Now	Continuous
N4.1b Collaborate with the community to build capacity for waste reduction and diversion.	Seek collaborations to support: - Food waste reduction program - Textile repair and reuse program	Sustainability	Next	Not started
N4.1c Support market development for recycling of divertible materials.	Support market development for: - Construction and demolition waste market development - Social enterprise waste diversion programs	Sustainability	Now	Started
Incentives				
N4.2a Provide incentives that encourage waste reduction and diversion.	Explore grants or rebates, that prioritize equity, as funding opportunities arise.	Sustainability	Now	Continuous
	Explore other financial incentives (deposit, user fees, rebates).	Sustainability	Next	Not started
Community Service				
N4.3a Optimize curbside residential collection services.	Transition recycling curbside blue cart to SK Recycles	Water and Waste Operations	Now	Started
	Continuous optimization of curbside programs: - Organic curbside green cart - Accessible collection programs - Variable price garbage curbside cart	Water and Waste Operations	Now	Continuous
N4.3b Optimize multi-unit residential collection service.	Transition multi-unit residential recycling to SK Recycles.	Water and Waste Operations	Now	Started
	Operate multi-unit organics collection program.	Water and Waste Operations	Now	Started
N4.3c Optimize community-wide waste services.	Material Recovery Center: Maintain collection of oils and anti-freeze, batteries, electronics, appliances, bikes, tires, metals, concrete, and brick.	Water and Waste Operations	Now	Continuous
	Material Recovery Center: Improve collection of Household Hazardous Waste, organic drop-off; mattresses, construction and demolition waste.	Sustainability	Now	Started
	New Organics Processing Facility replaces compost depot.	Water and Waste Operations	Now	Started
	Residential recycling depots transition to SK Recycles.	Water and Waste Operations	Next	Not started
N4.3d Explore expanded ICI waste services.	Assess the feasibility of an ICI organics collection service.	Water and Waste Operations	Next	Not started

NOW: Current-2027 | NEXT: 2028-2029 | AFTER: 2030-2035 | LATER: After 2035

Action	Initiatives	Lead	When	Status
Regulatory				
N4.4a Expand Waste Bylaw Requirements.	Expand Waste Bylaw requirements: - Public spaces and outdoors - Approaches to keep divertible materials out of landfill - Construction and demolition waste requirements	Sustainability	Now	Started
			Now	Started
			Next	Not started
Pathway Planning				
N4.8a Implement the <i>Solid Waste Reduction and Diversion Plan</i> .	Renew <i>Solid Waste Reduction and Diversion Plan</i> (SWRDP)	Sustainability	Now	Started
	Include and prioritize LFG and climate goals in SWRDP	Water and Waste Operations	Now	Started
Data and Information				
N4.9a Maintain and track community level waste diversion data.	Update waste diversion KPIs and data collection for community waste diversion programs.	Sustainability	Now	Started
	Conduct landfill waste stream audits.	Sustainability	Now	Continuous



NOW: Current-2027 | NEXT: 2028-2029 | AFTER: 2030-2035 | LATER: After 2035

Leading by Example Actions

Action	Initiatives	Lead	When	Status
Data and Information				
N4.5a Improve waste reduction and diversion in civic facilities and operations.	Identify and provide support for all divertible waste streams.	Sustainability	Next	Not started
	Develop procedures and roles for civic waste sorting and collection.	Sustainability	Next	Not started
	Incorporate waste sorting requirements into third party leased space agreements.	Recreation	Next	Not started
	Develop criteria and standards for public and outdoor spaces waste containers.	Sustainability	Now	Started
	Review facilities cross-charges for waste service to incorporate recycling and organics.	Facilities Management	Next	Not started
	Continued diversion management of wastewater biosolids for use as soil amendments.	Saskatoon Water	Now	Continuous
N4.5b Integrate waste reduction and diversion into procurement.	Establish procedures to identify high impact opportunities to incorporate waste reduction and diversion into procurement.	Supply Chain Management / Sustainability	Next	Not started
	Develop construction waste guidance and update Environmental Contractor Guidelines waste diversion guidance.	Sustainability	Now	Started
N4.5c Optimize landfill operations for LFG capture.	Update landfilling procedures to optimize LFG capture (capping smaller cells).	Water and Waste Operations	Next	Not started
Infrastructure				
N4.6a Explore additional advanced or innovative LFG capture systems.	Assess additional innovative approaches to increase LFG capture system.	Water and Waste Operations	Next	Not started
N4.6b Explore alternatives to landfilling.	Explore waste to energy or other alternatives to landfilling.	Sustainability	After	Not started
N4.6c Continue investment in wastewater biogas optimization.	Monitor opportunities for continued wastewater biogas capture expansion or optimization.	Saskatoon Water	After	Not started

Action	Initiatives	Lead	When	Status
People				
N4.7a Deliver staff engagement and support waste reduction and diversion behaviour.	Engage civic staff on waste reduction and diversion, through Leading Green.	Sustainability	Now	Started
	Conduct public awareness in civic buildings to encourage waste diversion behaviours amongst patrons.	Sustainability	Now	Started
	Offer building custodian training for waste diversion optimization.	Facilities Management	Next	Not started
	Offer construction waste diversion training for project managers.	Sustainability	Next	Not started
Pathway Planning				
N4.8b Expand waste reduction and diversion efforts in civic operations through the <i>Solid Waste Reduction and Diversion Plan</i>	Renew the <i>Solid Waste Reduction and Diversion Plan</i> to update actions to prevent, reduce, and divert waste in civic operations. • Include and prioritize LFG and climate goals.	Sustainability	Now	Started
Data & Information				
N4.9b Track waste diversion at civic facilities.	Conduct waste audit or characterizations of civic buildings.	Sustainability	Next	Not started
	Centralize contracts for waste and recycling service contracts.	Supply Chain Management	Now	Continuous
	Integrate waste collection data into the corporate utility data management system.	Sustainability	Now	Not started
N4.9c Monitor emissions from waste and wastewater operations.	Undertake monitoring studies and update modeling of LFG to refine estimates.	Water and Waste Operations	Next	Not started
	Monitor and track wastewater process emissions.	Saskatoon Water	Now	Continuous



CONSERVE WATER to reduce associated energy use

Water treatment and distribution require energy that results in carbon pollution. Decreasing the use of treated water indoors and outdoors reduces the overall demand on our water system, resulting in lower energy consumption and reduced carbon pollution. Many actions in the Better Homes & Buildings section also help conserve water.

Measures that can conserve water in Saskatoon:

- Adjust behaviours related to indoor and outdoor water use to limit overall consumption (watering frequency, appliance use, etc.)
- Landscape with hardy species, xeriscaping or passive rainwater use
- Use non-potable water sources for landscape watering (rainwater from rain barrels, irrigation from storm ponds)
- Install more efficient irrigation to control timing and duration of outdoor watering
- Repair and/or upgrade bathroom and kitchen fixtures, and appliances
- Upgrade once-through cooling systems in larger facilities for water efficiency

Community Objectives

- Support water conservation across all sectors
- Support rainwater and non-potable water use
- Reduce peak demand for potable water

Leading by Example Objectives

- Reduce indoor and outdoor potable water use in civic operations
- Use non-potable water to reduce treated water use
- Reduce distribution losses and non-billed water use

2035	2050
10% overall reduction in water consumption	30% reduction in indoor water use
	20% reduction in outdoor water use

2035	2050
15% overall reduction in water consumption	30% reduction in water use

Key Performance Indicators

- Indoor and outdoor residential potable water consumption
- ICI sector water consumption
- Peak potable water use

Key Performance Indicators

- Total billed indoor water use at civic buildings (leisure centres, offices, and other buildings)
- Total billed outdoor water use for parks irrigation, golf courses, spay pads and paddling pools, street cleaning, and bus washing
- Estimated unbilled potable water use

Community Actions

Action	Initiatives	Lead	When	Status
Outreach				
N5.1a Deliver water conservation education initiatives.	Deliver education programming: - Community-based social marketing campaigns - Water conservation education events team	Sustainability	Now	Continuous
N5.1b Collaborate with community to support water conservation.	Support community-led and Indigenous-led affordable housing initiatives to incorporate water conservation.	Sustainability	Next	Not started
	Explore partnerships to support commercial and industry-targeted water audits.	Sustainability	After	Not started
	Explore research partnerships with academic institutions or industry.	Sustainability	After	Not started
Incentives				
N5.2a Provide incentives to encourage water conservation.	Maintain the rain barrel rebate program.	Sustainability	Now	Continuous
	Pilot builder incentives for water wise home or landscapes.	Saskatoon Land	After	Not started
Community Service				
N5.3a Encourage water conservation through online utility bills and water rates.	Continue support and promotion of SmartUTIL dashboard for water consumption.	Saskatoon Water	Now	Continuous
	Review emergency water restrictions policy for conservation implications.	Saskatoon Water	Next	Not started
	Continue utility billing consumption tiers for water rates to encourage water conservation.	Saskatoon Water	Now	Continuous
Regulatory				
N5.4a Reduce watering needs through parks and green space standards and guidelines for City and developers.	Update Park Development Standards to integrate natural infrastructure and water efficiency into park design and re-design.	Parks	Now	Started
	Incorporate Low Impact Design into Landscape Development Guidelines.	Planning	Now	Continuous
N5.4b Explore if updates to Plumbing Bylaw could support water conservation.	Explore how water conservation could be enhanced through the Plumbing Bylaw.	Sustainability	Next	Not started
	Explore how non-potable water could be supported through the Plumbing Bylaw.	Sustainability	After	Not started
N5.4c Explore new regulatory mechanisms to support water conservation.	Explore mechanisms that could increase water conservation at existing sites.	Sustainability	Later	Not started

NOW: Current-2027 | NEXT: 2028-2029 | AFTER: 2030-2035 | LATER: After 2035

Action	Initiatives	Lead	When	Status
Pathway Planning				
N5.8a Implement the <i>Water Conservation Strategy</i> .	Implement the <i>Water Conservation Strategy</i> .	Sustainability	Now	Started
Data and Information				
N5.9a Track community-wide water use.	Monitor consumption and peak demand.	Saskatoon Water	Now	Continuous



NOW: Current-2027 | NEXT: 2028-2029 | AFTER: 2030-2035 | LATER: After 2035

Leading by Example Actions

Action	Initiatives	Lead	When	Status
Operations				
N5.5a Expand purple water and rainwater use.	Pilot and expand operational uses of purple water: • Tree and landscape watering • Bus washing • Street sweeping • Hydrovacing	Parks / Saskatoon Transit / Roadways, Fleet and Support	Now	Started
			Now	Started
			Next	Not started
			Next	Not started
N5.5b Update irrigation procedures to increase efficiency.	Actively manage irrigation efficiency: • Leak monitoring and detection • Precipitation-based monitoring • Service levels are updated • Irrigation training for staff	Parks	Now	Continuous
			Now	Started
			Now	Not started
			Now	Continuous
N5.5c Integrate water conservation into new and existing building management systems.	Consider and implement water conservation through: • Building automation • Building Condition Reporting • Facilities Asset Management Plan • CBCM fund criteria • Construction specifications Adopt ISO Water Efficiency Management System. Incorporate water conservation and management in Asset Management approaches.	Facilities	Now	Started
		Sustainability / Saskatoon Water	Next	Not started
		Technical Services	Next	Not started
N5.5d Integrate water efficiency criteria into procurement.	Establish procedures to identify high impact opportunities to incorporate water efficiency into procurement.	Supply Chain Management / Sustainability	Next	Not started
Infrastructure				
N5.6a Complete upgrades that improve water conservation in civic buildings.	Identify and undertake upgrades to plumbing fixtures, HVAC, and controls to conserve water.	Facilities Management	Now	Started
	Identify and undertake upgrades to pools and spray pads.	Facilities Management	Now	Started
N5.6b Complete upgrades that reduce leaks in the water distribution system.	Identify and upgrade: • Pumping stations • Water huts • Water mains	Saskatoon Water	Now	Started
N5.6c Complete upgrades to optimize all City irrigation systems.	Undertake improvements to: • Evapotranspiration sensors • Active non-potable water systems • Passive non-potable water systems	Parks / Recreation	Now	Started
N5.6d Explore opportunities to expand rain capture non-potable water systems.	Conduct feasibility study for rain capture non-potable water systems in civic operations.	Sustainability	After	Not started

NOW: Current-2027 | NEXT: 2028-2029 | AFTER: 2030-2035 | LATER: After 2035

Action	Initiatives	Lead	When	Status
People				
N5.7 Deliver engagement, education, and training to support water conservation behaviors and awareness in civic staff.	Engage civic staff on water conservation through Leading Green.	Sustainability	Next	Not started
	Conduct public education in civic buildings to support water conservation awareness among patrons.	Sustainability	After	Not started
	Conduct community and allotment garden user engagement on water conservation.	Parks	Next	Not started
	Deliver building operator training for water conservation to build operational capacity.	Facilities Management	After	Not started
Pathway Planning				
N5.8b Implement the Water Conservation strategy.	Renew and implement the <i>Water Conservation Strategy</i> .	Sustainability	Now	Started
Data & Information				
N5.9b Track corporate water use.	Monitor indoor and outdoor water use as part of corporate utility management system.	Sustainability	Now	Continuous
	Track irrigation water use and continuously improve weather sensors.	Parks	Now	Continuous
N5.9c Monitor leaks, water losses, and unbilled uses.	Conduct water loss auditing and leak monitoring.	Saskatoon Water	Now	Continuous

NOW: Current-2027 | NEXT: 2028-2029 | AFTER: 2030-2035 | LATER: After 2035



Conserve, enhance, and grow our GREEN NETWORK

Carbon is absorbed and stored in soils, roots, wetlands, grasslands, trees, and other plants. The process of removing carbon dioxide from the atmosphere is called sequestration and the total amount of carbon that has been absorbed is called carbon storage. Urban development and changes to land use can result in the loss of natural areas, green space, trees, and agricultural lands, which reduces stored carbon and lowers annual sequestration rates.

Measures that can support carbon storage and sequestration:

- Avoid the loss of natural carbon storage and their sequestration function by conserving key natural and naturalized areas
- Enhance carbon storage and sequestration by restoring, managing, and connecting natural areas, green spaces, wetlands, the urban forest, and other forms of natural infrastructure
- Create new sources of carbon storage and sequestration by adding and growing natural infrastructure in our urban landscape

Community Objectives

- Identify, conserve, and manage natural areas in land development
- Enhance the green network through policies and standards
- Support community-led initiatives for stewardship of natural and naturalized areas

Leading by Example Objectives

- Conserve natural areas and key habitat on City lands
- Restore and manage natural infrastructure on City lands
- Expand the urban forest and naturalized areas on City lands

2035	2050
Natural areas conservation target is established through policy	A 2050 natural areas conservation target is met

2035	2050
Overall tree canopy cover of 10%	Overall tree canopy cover of 17%

Key Performance Indicators

- Total hectares of natural area within City limits
- Estimated annual sequestration and stored carbon

Key Performance Indicators

- Trees managed by the City of Saskatoon
- Estimated annual sequestration and stored carbon

Community Actions

Action	Initiatives	Lead	When	Status
Outreach				
N6.1a Deliver green network education and awareness initiatives.	Deliver public awareness initiatives: - Green network awareness and education campaign - Natural areas education program - Signage in parks and natural spaces	Sustainability	Now	Continuous
N6.1b Collaborate with community partners to conserve, manage, and grow the green network.	Establish stewardship agreements for managing natural areas.	Sustainability	Next	Not started
	Establish Indigenous-led land use partnerships and reduce barriers to indigenous land use.	Sustainability	Next	Not started
	Explore research partnership on carbon storage of natural areas and green space.	Sustainability	Now	Started
	Collaborate with Meewasin and other community organizations supporting the green network.	Sustainability	Now	Continuous
Incentives				
N6.2a Provide incentives to conserve, grow, and manage the green network.	Administer incentives to green network growth or management.	Sustainability	Now	Continuous
	Explore incentives for the ICI sector, organizations, and residents.	Sustainability	Next	Not started
Community Service				
N6.3a Provide urban forestry services for boulevard trees.	Provide Request a Tree boulevard planting and maintenance services to citizens.	Parks	Now	Continuous
	Provide boulevard tree inspection services.	Parks	Now	Continuous
N6.3b Deliver public space gardening initiatives.	Deliver public space gardening programs: - Community Garden program - Allotment gardening - Boulevard gardening	Planning / Parks / Sustainability	Now	Continuous
Regulatory				
N6.4a Develop natural areas processes and policies that conserve the green network.	Integrate natural areas processes and policies into the Official Community Plan and Zoning Bylaw.	Planning	Now	Started
	Review and update Natural Area Screening and Environmental Reserve processes.	Planning	Next	Started
	Review existing standards, regulations, and bylaws for barriers and opportunities to conserve the green network.	Planning	Now	Started
	Implement the Wetland Policy through wetland compensation mechanisms and naturalized storm pond guidelines.	Sustainability	Now	Started

NOW: Current-2027 | NEXT: 2028-2029 | AFTER: 2030-2035 | LATER: After 2035

Action	Initiatives	Lead	When	Status
N6.4b Enforce regulations to protect the urban forest.	Enforce of Tree Protection Bylaw and continual improvement of Tree Permit process.	Parks	Now	Ongoing
	Enforce Dutch Elm Disease regulation.	Parks	Now	Ongoing
N6.4c Increase natural assets through parks and green space standards and guidelines.	Update Park Development Standards to integrate natural infrastructure into park design and re-design.	Parks	Now	Started
	Incorporate naturalization and Low Impact Design in Landscape Development Guidelines.	Community Standards	Now	Continuous
N6.4d Explore approaches that address losses to the green network.	Explore approaches to address losses to the green network and stored carbon.	Sustainability	After	Not started
Pathway Planning				
N6.8a Implement <i>Pathways for an Integrated Green Network</i> .	Renew and implement <i>Pathways for an Integrated Green Network</i> .	Sustainability	Next	Started
Data and Information				
N6.9a Track community level green network data.	Establish green network KPIs.	Sustainability	Now	Continuous
	Maintain data on the state of the green network.	Sustainability	Now	Continuous
	Explore options for public tree inventory and canopy assessment.	Parks	Now	Not started
	Track Environmental Reserve and Municipal Reserve that support natural areas.	Planning	Now	Continuous
N6.9b Develop community-level carbon storage and sequestration tracking procedures.	Establish methodologies to calculate carbon storage and annual sequestration for various types of habitats and land-use of natural infrastructure.	Sustainability	Next	Not started
	Establish procedures for tracking carbon storage and annual sequestration for community GHG inventories.	Sustainability	Next	Not started

NOW: Current-2027 | NEXT: 2028-2029 | AFTER: 2030-2035 | LATER: After 2035

Leading by Example Actions

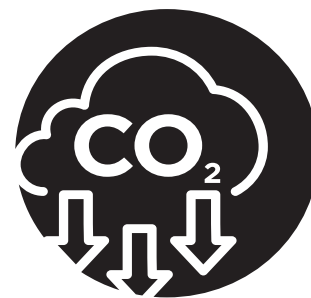
Action	Initiatives	Lead	When	Status
Operations				
N6.5a Incorporate natural infrastructure into Asset Management Plans.	Prepare Asset Management Plan(s) for City owned natural infrastructure: - Define desired levels of service for various types of natural infrastructure - Complete a risk assessment and risk mitigation plan for natural infrastructure - Define the life cycle management activities and associated lifecycle costs for natural infrastructure	Sustainability	Now	Started
N6.5b Maintain, renew, and grow the urban forest.	Continue implementing the Urban Forest Management program to conserve, renew, and grow the urban forest on City lands.	Parks	Now	Continuous
N6.5c Develop and operate site-specific management plans.	Prepare and operate plans for specific sites or assets.	Parks / Sustainability	Now	Started
Infrastructure				
N6.6a Undertake green network improvements.	Improvement Projects: - Natural area restoration, including wetlands - Park upgrades, including renewal and upgrades - Enhance naturalization and grow Naturalized Parks Program - Urban forest, tree planting	Sustainability	Now	Started
		Parks	Now	Started
		Parks / Sustainability	Now	Started
		Parks	Now	Started
N6.6b Prioritize natural infrastructure in City projects.	Incorporate Low Impact Development and naturalization into City projects.	Technical Services	Now	Continuous
People				
N6.7a Deliver education and awareness initiatives on the green network to civic staff.	Staff engagement and training: - Green network awareness - Training on green network asset management	Sustainability	Next	Continuous
Pathway Planning				
N6.8b Implement <i>Pathways for an Integrated Green Network</i> and <i>Pathway to a Sustainable Urban Forest Management Plan</i> .	Implement <i>Pathways for an Integrated Green Network</i> .	Sustainability	Now	Started
	Implement <i>Pathway to a Sustainable Urban Forest Management Plan</i> .	Parks	Now	Started

NOW: Current-2027 | NEXT: 2028-2029 | AFTER: 2030-2035 | LATER: After 2035

Action	Initiatives	Lead	When	Status
Data & Information				
N6.9c Track data about natural infrastructure on City lands.	Monitor and report green network KPIs and maintain data on the green network.	Sustainability	Now	Continuous
	Identify and track the current condition of natural infrastructure. Report on progress through a State of the Green Network report.	Sustainability	After	Continuous
	Maintain tree inventory of trees on City lands.	Parks	Now	Continuous
N6.9d Develop carbon storage and sequestration tracking procedures for city lands.	Define natural capital asset valuation of sequestration and carbon storage values for key sites.	Sustainability	Now	Started
	Establish a procedure for tracking carbon storage and annual sequestration and sequestration into corporate GHG inventories.	Sustainability	Next	Not started



NOW: Current-2027 | NEXT: 2028-2029 | AFTER: 2030-2035 | LATER: After 2035



Explore **CARBON REMOVAL**

It will not be possible to eliminate all sources of carbon pollution. Residual emissions refer to the carbon pollution that remains after all feasible reduction measures have been implemented. Carbon removal approaches can be considered to address anticipated residual carbon to reach net-zero.

What are some carbon removal approaches?

Passive carbon removal occurs as carbon is absorbed and stored in the soils, roots, and parts of plants that live in habitats across Saskatoon (wetlands, grasslands, urban forest, etc.).

Examples of active carbon removal approaches include:

- Biochar – is made by heating biomass (e.g., residual crop material), which captured carbon from the atmosphere during its growth, and storing it in a stable form
- Direct Air Capture – is a technology that uses chemical reactions to pull carbon dioxide out of the air and store it, often underground

Measures that could make use of carbon removal approaches:

- Captured carbon can be incorporated into construction materials such as concrete and wood, reducing the overall carbon footprint of the materials
- Captured carbon such as biochar can be incorporated into landscaping
- Cities can purchase carbon offsets, which are credits that certify quantifiable carbon reductions from a project that captures carbon elsewhere

Objectives:

- Monitor developments in municipal carbon offset policies
- Pilot negative carbon materials relevant to civic projects
- Explore research collaborations on municipal carbon removal

Carbon Removal Actions

Action	Initiatives	Lead	When	Status
Outreach				
N7.1a Explore research collaborations on municipal carbon removal concepts.	Identify potential partners and topics for collaboration on urban carbon removal concepts.	Sustainability	Later	Not started
Operations				
N7.5a Monitor developments in carbon removal policy and offset purchases.	Conduct reviews of carbon removal and offsetting policies and approaches emerging in other jurisdictions.	Sustainability	Later	Not started
Infrastructure				
N7.6a Pilot negative-carbon materials relevant to civic projects.	Pilot and monitor performance of construction materials that incorporate carbon capture technologies (e.g., concrete).	Sustainability	Later	Not started
	Pilot and monitor performance of biochar uses in landscaping soil.	Parks / Sustainability	Later	Not started
Data & Information				
N7.9a Monitor the scale of projected residual emissions through updated modelling.	Refresh modelling as carbon reduction progress is made and new information becomes available.	Sustainability	Later	Not started

NOW: Current-2027 | NEXT: 2028-2029 | AFTER: 2030-2035 | LATER: After 2035





CLIMATE RESILIENCE PLAYBOOK

The purpose of the **Climate Resilience Playbook** is to prepare the whole community for the impacts of a changing climate in Saskatoon. The Playbook outlines a broad set of actions to strengthen and address priorities to encourage climate-ready housing; prepare for and respond to extreme weather, heat, and smoke; support overall community resilience; increase reliability and resilience of natural and built infrastructure; and protect employee health and safety.

The Playbook is categorized into six goals as follows:



Build, upgrade, and protect **HOMES & BUILDINGS** to be safe and resilient



Reduce health risks from **HEAT & WILDFIRE SMOKE**



Provide **EMERGENCY RESPONSE** during extreme conditions



Support **PEOPLE, ORGANIZATIONS & COMMUNITIES** to be connected, resilient and prepared



Increase resilience of **NATURAL & BUILT INFRASTRUCTURE**



Protect **EMPLOYEE HEALTH & SAFETY**



Build, upgrade, and protect **HOMES & BUILDINGS** to be safe and resilient

Safe and resilient homes and buildings can withstand damage from hazards like storms and flooding and offer protection from increased summer temperatures and wildfire smoke. Without action, damage from climate hazards is likely to add to demand for housing, reducing affordability and availability, and put vulnerable populations at risk. All types of housing need to be adapted to future climate conditions, including affordable housing, rentals, multi-unit residential, and single-family homes.

Objectives:

1. Support homeowners, renters, housing providers, and businesses to retrofit for resilience.
2. Build new homes and buildings to be prepared for climate hazards.
3. Encourage natural infrastructure for stormwater management and heat mitigation on private property.
4. Add natural and built infrastructure like storm ponds and green spaces to protect neighbourhoods from flooding.

In addition to the actions listed in the table below, establishing climate resilient housing requires implementing actions in Housing Saskatoon: *The City of Saskatoon's Affordable Housing Strategy*.



Action	Initiatives	Lead	When	Status
Outreach				
R1.1a Add resilience content to energy efficiency education to improve home and building resilience.	Explore and implement coaching services to support residents and businesses in identifying and implementing resilience measures.	Sustainability	Now	Started
	Add resiliency content to energy efficiency education to support residents, housing providers, and businesses in making resilience upgrades to homes and buildings.	Sustainability	Now	Started
	Include natural infrastructure examples in public communications highlighting climate resilience action.	Sustainability / Planning / Building Standards	Now	Continuous
	Explore other mechanisms to support climate readiness in existing homes and buildings.	Sustainability / Planning / Building Standards	After	Not started
R1.1b Collaborate with other organizations to build industry capacity for upgrades and climate resilient construction.	Add climate resilience measures to industry-led knowledge exchange on homes and buildings.	Sustainability / Building Standards	Next	Not started
	Support Indigenous-led climate resilience initiatives, such as the Net-Zero Building Project by Saskatchewan Indian Institute of Technologies (SIIT), and look for opportunities for partnerships.	Sustainability	Next	Not started
	Pursue research or training collaborations with other organizations and educational institutions on climate resilient design, construction, and retrofits in Saskatoon.	Sustainability / Building Standards	Next	Not started
	Explore opportunities to support capacity building in local organizations and social enterprises in resilient construction and renovation.	Sustainability / Building Standards	Next	Not started
Incentives				
R1.2a Provide financing and incentives for climate resilience upgrades for homes, buildings, and site retrofits.	Integrate resilience into the Community Energy Loan Program for commercial/multi-unit residential.	Sustainability	Now	Started
	Explore the feasibility of adding resilience measures into the Home Energy Loan Program.	Sustainability	Now	Started
	Explore additional programs and incentives for resiliency measures that prioritize equity as funding opportunities arise.	Sustainability / Planning	After	Not started
	Continue with the stormwater credit program as part of the building permit review process.	Saskatoon Water	Now	Continuous
	Explore a tree rebate program.	Sustainability / Parks	Next	Not started

Action	Initiatives	Lead	When	Status
R1.2b Provide incentives for climate resilient new construction.	Explore incentives for builders to adopt climate resilience ahead of regulatory requirements.	Sustainability / Building Standards / Saskatoon Land	Next	Not started
R1.2c Incentivize climate resilience in new developments.	Explore incentives to encourage increased resilience in new developments.	Sustainability / Saskatoon Land	Next	Not started
Regulation				
R1.4a Review and update development design standards to reflect changing climate conditions for homes and buildings.	Explore amendments to the <i>Design and Development Standards Manual</i> to mitigate construction of basements below groundwater level and other risks.	Saskatoon Water	Now	Started
R1.4b Establish regulations to reduce risk to homes and buildings from climate hazards.	Explore amendments to the Zoning Bylaw and Building Bylaw to improve onsite stormwater management.	Building Standards	Next	Not started
	Integrate resilience requirements into planning standards and guidelines.	Planning	Next	Not started
R1.4c Develop mechanisms to disclose resilience information for housing.	Explore how to disclose resiliency information for homes and buildings (i.e., virtual labels, maps, or other tools).	Sustainability	Now	Started
	Explore mandatory resiliency disclosure for homes and buildings.	Sustainability	After	Not started
R1.4d Establish regulations that address climate resilience of new buildings.	Monitor updates to include resilience requirements in the NBC and NECB and adopt new requirements.	Sustainability / Building Standards	After	Not started
R1.4e Update requirements for new developments to include climate resilience measures.	Monitor the development of climate resilient standards in other jurisdictions.	Sustainability	Now	Continuous
	Undertake efforts to establish a clear and measurable conservation target for natural areas.	Sustainability / Planning	Later	Not started
	Integrate natural areas into new development in alignment with the OCP and the forthcoming Natural Area Policy.	Sustainability / Planning	Later	Not started

Action	Initiatives	Lead	When	Status
Infrastructure				
R1.6a Continue to implement the Flood Control Strategy and drainage improvement projects to protect neighbourhoods.	Complete storm pond and stormwater storage projects.	Saskatoon Water	Now	Started
	Finish Montgomery neighbourhood improvement project (phase 3 of 3).	Saskatoon Water	Now	Started
	Complete naturalized stormwater pond pilot in Brighton and recommend next steps from pilot results.	Saskatoon Water / Sustainability	Now	Started
	Continue design of stormwater retention ponds/wetlands in all new neighbourhoods using standards that have been updated for climate change impacts.	Saskatoon Water	Now	Started
R1.6b Increase permeability and storage capacity in City-owned spaces to mitigate stormwater runoff.	Pursue opportunities to integrate Low Impact Development and vegetated drainage systems as part of the City's storm water system.	Saskatoon Water / Parks	Now	Continuous
Pathway Planning				
R1.8a Integrate climate resilience into the <i>Better Homes & Buildings Roadmap</i> .	Outline a pathway for improving the resilience of homes and buildings through the <i>Better Homes & Buildings Roadmap</i> .	Sustainability / Building Standards	Now	Started
R1.8b Implement the <i>Housing Strategy</i> .	Implement climate resilience actions identified in the <i>Housing Strategy</i> .	Sustainability / Planning	Now	Started
Data & Information				
R1.9a Establish housing resilience baseline data.	Coordinate with SFD's <i>Hazard Risk Vulnerability Assessment</i> to assess climate risk to and vulnerability of existing housing stock.	Saskatoon Fire Department / Sustainability	Next	Not started

NOW: Current-2027 | **NEXT:** 2028-2029 | **AFTER:** 2030-2035 | **LATER:** After 2035





Reduce health risks from **HEAT & WILDFIRE SMOKE**

Climate change is increasing the number of very hot days and overnights that don't cool off. These conditions are causing high, unsafe indoor temperatures that persist for long periods of time.

At the same time, Saskatoon is seeing more days with very poor air quality from wildfire smoke and can expect to see even more. Smoke and extreme heat are a combined hazard for many residents, particularly those living without adequate housing or in homes without adequate cooling, people with underlying health conditions, and older individuals. However, wildfire smoke has health risks for all and causes cancelled outdoor recreation, social, and cultural events.

This section outlines actions that help prepare Saskatoon by offering services and built and natural infrastructure to improve health and safety, cool the city, and protect against wildfire smoke.

Objectives:

1. Improve services that reduce health and safety risks from heat and wildfire smoke.
2. Reduce the risk of unsafe indoor heat for those most at risk.
3. Reduce heat risks to those using transit and active transportation.
4. Cool the city with natural and built infrastructure.
5. Increase awareness of the impacts of extreme heat and wildfire smoke, and how to reduce risk.

Additional actions that reduce the indoor risk of extreme heat and wildfire smoke through regulations are included in the Homes & Buildings section of this plan.



Action	Initiatives	Lead	When	Status
Outreach				
R2.1a Work in partnership with subject matter expert organizations to increase City's understanding of cooling needs in multi-unit housing.	Partner with other organizations (e.g. SHA) to understand prevalence and locations of unsafe indoor heat and those most at risk from extreme heat indoors.	EMO / Sustainability	Now	Continuous
	Engage with housing providers and residents to understand barriers and best practices for cooling in multi-unit buildings.	EMO / Sustainability	Next	Not started
	Convene a working group on access to cooling in high-risk areas and multi-unit buildings.	EMO	Next	Not started
	Conduct studies or pilots to better understand barriers and opportunities to achieving safe temperatures in housing.	EMO / Sustainability	Next	Not started
	Host or support multi-unit pilot demonstration sites for heat mitigation in multi-unit housing units.	EMO / Planning / Building Standards	Next	Not started
R2.1b Collaborate with partner organizations to improve understanding of wildfire smoke impacts and coordinate responses.	Coordinate a knowledge exchange with organizations like SHA and Lung Saskatchewan to improve understanding of wildfire smoke impacts and mitigation measures.	EMO / Sustainability	Now	Not started
	Monitor research from third parties on short-term and long-term impacts of wildfire smoke.	EMO / Sustainability	Now	Not started
	Collaborate with industry and community organizations, such as First Nations Emergency Management and Lung Saskatchewan, on education and awareness.	EMO / Sustainability	Now	Not started
R2.1c Increase residents' and housing providers' understanding of extreme heat risks and the measures they can use to reduce risk.	Collaborate with other organizations on heat awareness.	EMO	Now	Continuous
	Deliver education and awareness programs to tenants, housing providers and owners, and the public.	EMO / Sustainability	Now	Not started
	Promote and support development of extreme heat plans in multi-unit residential buildings.	EMO / Sustainability	Now	Not started
R2.1d Deliver wildfire smoke education and public awareness.	Education campaigns on air quality risks and protective measures, in collaboration with SHA.	EMO / Sustainability	Now	Not started
	Explore other opportunities to support public awareness, such as Edmonton's air quality light displays.	Sustainability	Next	Not started

NOW: Current-2027 | **NEXT:** 2028-2029 | **AFTER:** 2030-2035 | **LATER:** After 2035

Action	Initiatives	Lead	When	Status
Community Services				
R2.3a Review existing City services that provide cooling benefits.	Review level of service for outdoor pools, spray pads, and paddling pools with new climate conditions in mind.	Recreation / Facilities	Next	Not started
	Explore changes to services at existing City facilities that could support cooling.	EMO	Now	Not started
R2.3b Improve air quality on public transit.	Explore opportunities for air quality upgrades on transit as technology improves.	Transit	Next	Not started
R2.3c Expand indoor recreation opportunities during wildfire smoke.	Review the impacts of wildfire smoke disruptions on recreation and community events and assess if indoor alternatives can be provided.	Recreation	Next	Continuous
Regulation				
R2.4a Regulate safe indoor air temperatures.	Explore regulation for maximum safe indoor air temperatures.	Sustainability	Now	Not started
	Explore alternatives or additions to regulating maximum indoor air temperatures, such as requiring on-site cooling spaces in multi-unit residential.	Sustainability	Next	Not started
R2.4b Regulate to require air quality standards in housing.	Explore regulatory options for air quality standards in housing.	Sustainability	Next	Not started
	Monitor the development of indoor air quality standards in other jurisdictions.	Sustainability	Next	Continuous
Operations				
R2.5a Assess equity of cooling and natural infrastructure distribution.	Tree canopy equity analysis.	Parks	Now	Not started
	Green space equity analysis.	Sustainability	Later	Not started
R2.5b Develop tools to support integrating equity considerations.	Develop a framework to prioritize heat reduction projects, such as shade structures or cooling spaces, for those most at risk of heat injury and least supported in accessing cooling, considering on-the-ground temperatures and equity criteria.	Sustainability / EMO / Parks / Transportation / Planning	Next	Not started
R2.5c Update City standards and guidelines to include heat mitigation in transportation and transit design.	Add requirements for shade to standards and guidelines for active transportation and transit shelters.	Parks / Transportation / Transit	Next	Not started
Infrastructure				
R2.6a Install shade to support transit use.	Install shade shelters or plant trees for shade at transit stops.	Transit / Parks	Now	Continuous
R2.6b Create a network of shaded, pedestrian-oriented streets.	Improve pedestrian environments along major corridors, including tree plantings.	Planning / Parks	Next	Not started
	Improve pedestrian environments downtown and in business improvement districts.	Planning / Parks	Next	Not started

NOW: Current-2027 | **NEXT:** 2028-2029 | **AFTER:** 2030-2035 | **LATER:** After 2035

Action	Initiatives	Lead	When	Status
R2.6c Add infrastructure to mitigate extreme heat along active transportation routes.	Integrate the active transportation network and green network.	Transportation / Sustainability	Next	Not started
	Plant trees and increase natural infrastructure and shade along active transportation routes where space permits.	Parks / Sustainability	Next	Not started
R2.6d Incorporate cooling features into outdoor public spaces.	Incorporate misting features into outdoor spaces such as spray pads and paddling pools.	Facilities / Sustainability / Parks / Recreation	Now	Started
	Explore the need for permanent or temporary misting features in other locations.	EMO / Facilities	Next	Not started
	Establish design requirements for including misting features in new spray pads and paddling pools, and when significant upgrades are completed.	Facilities / Sustainability	Next	Not started
R2.6e Increase shade and natural infrastructure in public space.	Use shade structures or trees to create areas of refuge for cooling.	Parks / Planning	Now	Continuous
	Increase shading of public and recreation spaces, such as parks, playgrounds, and public gathering spaces using trees or shade structures.	Parks / Facilities / Planning	Now	Continuous
	Establish requirements for shade in new construction or upgrades made to City facilities.	Technical Services / Sustainability / Facilities	Next	Not started
	Explore other opportunities to reduce heat in public outdoor spaces.	Sustainability / Planning / Parks	Next	Not started
R2.6f Improve access to public water fountains.	Identify areas with shortage of water access and higher need.	EMO	Now	Started
	Install public water fountains in public outdoor spaces.	Facilities	Now	Started
	Update standards to include provision of public water access in facility/park upgrades where water infrastructure is available.	Facilities	Next	Not started

Action	Initiatives	Lead	When	Status
R2.6g Develop resilience hubs to provide refuge from extreme weather hazards like heat and poor air quality, and space for community connections.	Continue to provide heating and cooling spaces in civic buildings and with partner organizations.	EMO	Now	Continuous
	Conduct a feasibility study for air quality upgrades.	Facilities / EMO / Sustainability	Next	Not started
	Upgrade civic buildings as needed to provide safe indoor air quality during heavy wildfire smoke.	Facilities / EMO	Next	Not started
	Partner with Saskatoon Public Library to perform air quality upgrades as needed in shared buildings.	Facilities / EMO	Next	Not started
	Review the sufficiency and equitability of access to heating, cooling, and other shelter from extreme weather and conditions and their distribution across the City.	Sustainability / Planning / EMO	Next	Not started
	Explore opportunities to embed resilience in navigation hub model in homelessness response.	Sustainability	Next	Not started
Data & Information				
R2.9a Establish baseline of air quality during smoke events in civic buildings.	Measure indoor air quality in civic buildings during periods of heavy wildfire smoke.	EMO / OHS / Sustainability	Now	Started
	Partner with Saskatoon Public Library to assess indoor air quality in shared buildings.	EMO / Sustainability	Next	Not started
	Monitor research from third parties on air quality and safe levels of wildfire smoke.	EMO / Sustainability	Now	Continuous
	Complete a needs assessment for increased monitoring of local outdoor air quality.	Sustainability / EMO	Next	Not started



Provide **EMERGENCY RESPONSE**
during extreme conditions

Saskatoon's Emergency Management Organization (EMO) works with emergency response agencies, critical infrastructure partners, and residents to respond to extreme heat, cold, smoke, and weather events that pose hazards in Saskatoon.

Objectives:

1. Plan for increasing demands and changing climate conditions.
2. Provide emergency shelter from heat, smoke, and extreme weather.
3. Support public preparedness for increasingly severe weather.

In addition to the actions in the table below, the *Saskatoon Extreme Heat & Air Quality Emergency Response Plan* establishes the City's response to extreme heat and poor air quality events, including wildfire smoke.



Action	Initatives	Lead	When	Status
Outreach				
R3.1a Work with partners to continue providing extreme weather response as extreme weather becomes more common.	Continue to work with partners to provide winter warming and extreme weather response.	EMO / Planning	Now	Continuous
	Review changing and increasing needs for shelter from extreme weather as climate changes and prepare to meet those needs.	EMO / Planning	Next	Not started
R3.1b Collaborate with partner organizations to meet community needs as extreme events increase.	Continue supporting the extreme weather task force.	EMO	Now	Continuous
	Convene discussions or coordinate learning opportunities and a knowledge exchange on changing needs driven by changing climate hazards.	EMO / Sustainability / Planning	Next	Not started
	Provide tools or resources to support climate risk assessments and climate resilience, based on input from partner organizations.	Sustainability	Next	Not started
R3.1c Partner to deliver education programs that support public preparedness for extreme weather.	Collaborate with partners to provide climate emergency preparedness and risk reduction training and education materials.	EMO / Sustainability	Now	Not started
Community Services				
R3.3a Prepare for increased evacuees hosted in Saskatoon.	Continue to provide services and evaluate changes as required.	EMO	Now	Continuous
Operations				
R3.5a Develop plans to address operating impacts of climate change.	Develop an extreme weather response plan for waste management.	Water & Waste Operations	Now	Not started
Pathway Planning				
R3.8a Integrate expected future climate conditions into emergency plans.	Review and update emergency plans for extreme weather events, including multi-event, cascading events, and implications of concurrent events in other jurisdictions.	EMO	Now	Continuous
R3.8b Review and update the <i>Saskatoon Extreme Heat & Air Quality Emergency Response Plan</i> .	Assess if additional measures are needed to provide safe air quality when the plan is activated and identify how to provide those measures.	EMO	Now	Continuous
Data & Information				
R3.9a Track and review data to understand trends in emergency services requirements and climate events.	Review trends in wildfire evacuation service demand in Saskatoon.	EMO / Sustainability	Now	Continuous
	Continue to monitor wildfire/ grassfire risk in and around Saskatoon.	Saskatoon Fire Department	Now	Continuous

NOW: Current-2027 | **NEXT:** 2028-2029 | **AFTER:** 2030-2035 | **LATER:** After 2035





Support **PEOPLE, ORGANIZATIONS & COMMUNITIES** to be connected, resilient and prepared

A climate resilient community is made up of people who are healthy, well, and connected. Adapting to climate change requires action from the whole community: individuals, households, businesses, organizations, and government. Connected neighbours support each other during and after extreme weather events, prepared businesses and organizations are able to quickly recover from shocks and return to providing service to the community, and individuals who are healthy and supported are better positioned to make proactive changes to prepare ahead of climate hazards. Climate resilient communities are better able to adapt to changes, withstand the shocks of severe weather, and recover after major events.

Objectives:

1. Support people, organizations, and communities to prepare for and recover from climate hazards.
2. Provide programs, services, and spaces that support overall health, safety, and wellbeing of people and community.
3. Reduce the impact of disruptions from climate hazards to recreation, culture, and community events.
4. Increase food security and local food production.

In addition to the actions listed in the table below, climate resilience is supported by programs, services, and spaces that support overall health, safety, and wellbeing of people and community through recreation, sport, social, culture, and community programs and services offered by Recreation and Community Development. This work is guided by the Community Safety and Well-being Framework, currently in development.



Action	Initiatives	Lead	When	Status
Outreach				
R4.1a Develop household and community climate readiness programs.	Partner with organizations like the Canadian Red Cross to deliver extreme weather readiness programs.	EMO / Sustainability	Next	Not started
	Deliver, or partner with organizations to deliver, education to support individuals and communities preparing for climate change.	Sustainability	Next	Not started
	Develop a community climate resilience program.	Sustainability	Next	Not started
R4.1b Work with partners to increase food security and local food production.	Continue delivering public space gardening programs, including Community Garden program, allotment gardening, and boulevard gardening.	Planning / Parks / Sustainability	Now	Continuous
	Encourage surplus food redistribution.	Sustainability	Next	Not started
R4.1c Encourage community action on climate resilience through storytelling and placemaking.	Collect and share lived experiences of climate change to increase City and community understanding and encourage collective action.	Sustainability	Now	Not started
	Celebrate and share examples of City and community action on climate change and resilience.	Sustainability	Now	Continuous
	Explore opportunities to support resilience through art and expression of lived climate realities and possible futures.	Sustainability / Planning	Next	Not started
R4.1d Collaborate with community leaders on climate resilience.	Coordinate a community-led knowledge exchange focused on climate resilience, including mitigating the disruptions to summer festivals and outdoor events from poor air quality.	Sustainability	Next	Not started
	Support Indigenous-led climate resilience initiatives.	Sustainability	Next	Not started
R4.1e Deliver climate resilience education initiatives for businesses and organizations.	Explore tools or training that can be provided to support small businesses and local organizations assessing their climate risks and implementing resilience measures.	Sustainability	Next	Not started

NOW: Current-2027 | **NEXT:** 2028-2029 | **AFTER:** 2030-2035 | **LATER:** After 2035

Action	Initiatives	Lead	When	Status
Incentives				
R4.2a Support community action through incentives.	Incorporate climate resilience into the City's environmental cash grant.	Sustainability	Now	Continuous
	Develop community incentives that supports climate resilience.	Sustainability	Next	Not started
	Explore the need for additional incentives for businesses and organizations providing community services and safe air quality spaces.	Sustainability	Next	Not started
Community Services				
R4.3a Develop and support spaces and programs that increase community connections.	Explore opportunities to increase spaces for community gathering in existing neighbourhoods, e.g., through Corridor Planning process or use of underutilized spaces.	Planning / Parks	Now	Started
	Acquire land to add gathering spaces into existing neighbourhoods, in coordination with efforts to add green space.	Sustainability / Saskatoon Land	Later	Not started
R4.3b Adjust service levels to account for the impacts of climate change, such as reduced outdoor opportunities in summer and increased isolation in winter.	Review service and consider increasing indoor recreation options where climate change impacts like heat, smoke, and winter ice impact outdoor recreation.	Recreation	Next	Not started
	Review whether increased indoor community spaces are needed.	Recreation	Next	Not started
	Review mobility needs and service levels with increasing winter storms and ice.	Transportation / Roadways, Fleet and Support Services / Transit	Next	Not started
Operations				
R4.5a Use social value procurement on projects under the <i>Climate Action Strategy</i> to increase value added in the community.	Explore social value procurement ³ opportunities in climate program.	Sustainability / Planning	Now	Not started
	Develop an internal policy for social value procurement in Sustainability.	Sustainability	Next	Not started
Pathway Planning				
R4.8a Develop and implement a Food Action Plan to address food insecurity.	Develop a food action plan.	Sustainability	Now	Not started
	Evaluate the result of the Food Forest demonstration sites and implement additional sites depending on results.	Sustainability	Next	Not started
	Implement the Food Action Plan.	Sustainability	After	Not started

³ Social value procurement adds social value considerations into existing purchasing to get the best value for money for the whole community. These considerations can include promoting employment opportunities for everyone, reinvesting money in the community, and advancing environmental goals (Buy Social Canada, What is social procurement?, www.buysocialcanada.com/learn/what-is-social-procurement). An example in Saskatoon is the Saskatoon Employment Enterprise Program (SWEEP), a collaborative initiative between the City and Quint Development Corporation that seeks to enhance community safety and provides employment opportunities for community members who are leaving a correctional life or who may face significant barriers to workforce entry. Examples of the work performed by SWEEP crews include trash removal, graffiti maintenance, and biological waste removal.

NOW: Current-2027 | **NEXT:** 2028-2029 | **AFTER:** 2030-2035 | **LATER:** After 2035



Increase resilience of **NATURAL & BUILT INFRASTRUCTURE**

City infrastructure and services, including natural infrastructure, may be impacted by severe storms, heavy rainfall, weather whiplash, and hotter summer temperatures, as well as increasing demands for water and electricity utilities. Maintaining long-term reliability requires integrating climate risk into asset management and decision-making, assessing priority buildings and infrastructure, and making upgrades where these assessments identify they are required.

The urban forest and green network both buffer the impacts of climate change and are vulnerable to a changing climate. They support wellbeing, biodiversity, and healthy ecosystems while reducing climate risk, protecting other infrastructure, mitigating extreme heat, cleaning air and water, and slowing and storing stormwater during heavy rain events.

Objectives:

1. Protect, grow, and maintain a thriving green network and urban forest.
2. Monitor and manage utility demands for water and power.
3. Upgrade City infrastructure to account for changing climate conditions and extreme weather.
4. Incorporate impacts of climate change into decision making and City operations.

The *Green Infrastructure Strategy* and *Urban Forest Management Plan* are the guiding documents that establish how the City will maintain, conserve, and grow the green network and urban forest. Implementing these two plans with climate change in mind is how we will successfully protect this essential natural infrastructure for years to come. In addition to the actions listed in the table below, implementing actions in the *Net-Zero Transformation Playbook* and the *Water Conservation Strategy* will help to increase the reliability and resilience of City infrastructure and services.

Action	Initiatives	Lead	When	Status
Operations				
R5.5a Implement measures to reduce climate change impacts on trees and other natural infrastructure.	Identify the impacts of new and increasing climate hazards, such as pests, early snowfall or freezing rain, severe storms, and heavy wind, on trees and other natural infrastructure.	Parks	Next	Not started
	Monitor measures implemented in other municipalities to mitigate climate impacts.	Parks / Sustainability	Next	Not started
R5.5b Integrate climate risk and adaptation into asset management processes and practices.	Include climate risk in asset management templates.	Technical Services	Now	Continuous
	Embed natural infrastructure in the City's asset management system.	Parks / Sustainability	Now	Started
	Pilot more detailed climate risk assessments in asset management plans with 1-2 business units.	Technical Services	Next	Not started
	Work with each business unit to improve maturity of climate risk integration.	Technical Services ⁴	Next	Not started
	Regularly review impacts of climate change on City assets to determine if upgrades are needed.	All departments	Next	Not started
R5.5c Undertake detailed climate risk and resilience assessments for facilities and infrastructure to identify and prioritize risk reduction opportunities.	Pilot the <i>Climate Hazards & Risks</i> and <i>Climate Planning & Vulnerabilities</i> sections of the BOMA Best 4.1 program at two civic buildings through the Integrated Civic Energy Management Program - Performance Standards for Existing Building capital project.	Sustainability / Facilities	Now	Started
	Develop list of priority assets and critical infrastructure needing detailed climate risk assessments.	Technical Services	Next	Not started
	Review training needs for detailed climate risk assessments.	Technical Services / Sustainability	Next	Not started
	Undertake detailed climate risk assessments for critical infrastructure and priority assets.	Technical Services & owning departments	After	Not started
	Develop guidance for climate-resilient retrofits for facilities to support tangible implementation of climate risk reduction measures.	Sustainability / Technical Services / Facilities	Next	Not started
R5.5d Require detailed consideration of climate change impacts for new City builds and renovations.	Incorporate resilience into High Performance Civic Building Administrative Procedure.	Sustainability / Technical Services	After	Not started

⁴ Corporate Asset Management, within Technical Services, provides frameworks and support. Integration of climate risk into asset management plans will be undertaken by departments responsible for life cycle activities in any asset area.

NOW: Current-2027 | **NEXT:** 2028-2029 | **AFTER:** 2030-2035 | **LATER:** After 2035

Action	Initiatives	Lead	When	Status
R5.5e Update City standards, guidelines, and policies to incorporate climate resilience.	Update <i>Parks Development Standard</i> to include climate resilience.	Parks	Now	Started
	Update the <i>Design and Development Standards Manual</i> to include climate resilience.	Construction and Design	Next	Not started
	Incorporate climate resilience as standards are reviewed and updated.	Project dependent	Now	Continuous
R5.5f Integrate climate risk into City budget deliberations.	Increase integration of climate risk and resilience in the Climate Budget, e.g., by implementing the Task Force on Climate-Related Disclosures framework or another similar framework.	Sustainability	Now	Continuous
	Monitor budget impacts of increasing climate change.	Sustainability	Now	Continuous
	Provide training and education to increase understanding of budget impacts of climate change.	Sustainability	Next	Not started
R5.5g Require all City projects to consider climate risk to the project and how greater resilience for the community can be achieved through project deliverables.	Continue implementing the <i>Triple Bottom Line Policy</i> .	Sustainability	Now	Started
	Explore other opportunities to integrate requirements for climate risk in City projects.	Sustainability	Next	Not started
	Develop a resilience policy for City projects and construction.	Sustainability	After	Not started
People				
R5.7a Provide training to City staff on climate change impacts, solutions, and integrating climate risk.	Staff engagement and training.	Sustainability	Now	Continuous
	Support external training or certification on climate risk and infrastructure for relevant staff.	Sustainability	Now	Not started
Pathway Planning				
R5.8a Manage, protect, and grow the urban forest to slow peak stormwater and provide shade.	Implement the <i>Urban Forest Management Plan</i> .	Parks	Times set in Pathways to a Sustainable Urban Forest	Started
R5.8b Conserve, restore, grow, and manage natural infrastructure to mitigate the impacts of climate hazards like heat and flooding.	Implement the <i>Green Infrastructure Strategy</i> .	Sustainability / Parks / Planning	Times set in Green Pathways	Started
	Adopt and implement the draft <i>Natural Area Policy</i> .	Sustainability / Planning	Now	Started

NOW: Current-2027 | **NEXT:** 2028-2029 | **AFTER:** 2030-2035 | **LATER:** After 2035

Action	Initiatives	Lead	When	Status
Data & Information				
R5.9a Monitor electricity demand for grid reliability during peak demand.	Continue to monitor electricity demand and plan for increasing demand with electrification and increasing summer temperatures.	Saskatoon Light & Power	Now	Continuous
	Review and monitor emergency power and redundancy availability.	Saskatoon Light & Power	Now	Continuous
R5.9b Monitor water supply and demand.	Continue to monitor water supply.	Saskatoon Water	Now	Continuous
	Continue to monitor and plan to meet water demand with an increasing population.	Saskatoon Water	Now	Continuous
R5.9c Monitor the impacts of climate change on the river.	Monitor river conditions to track impacts of climate change.	Sustainability	Now	Continuous
R5.9d Track costs of climate impacts and monitor for trends.	Review and compile available internal climate cost data.	Sustainability	Next	Not started
	Track civic building data to understand how climate change is impacting building operations, such as heating/cooling.	Sustainability	Next	Not started
	Implement climate event tagging to track costs of extreme weather events.	Sustainability	After	Not started
R5.9e Improve understanding of climate resilience benefits of natural infrastructure, such as cooling and stormwater management.	Conduct research to better understand the value of ecosystem services provided by different types of natural infrastructure.	Sustainability	Now	Started
R5.9f Review and update climate risk assessments regularly.	Review latest climate projections and update City risk assessment every 2 years.	Sustainability	Next	Not started

NOW: Current-2027 | **NEXT:** 2028-2029 | **AFTER:** 2030-2035 | **LATER:** After 2035





Protect EMPLOYEE HEALTH & SAFETY

Increasing extreme heat, storms, and wildfire smoke pose new and increasing hazards for outdoor and indoor workplaces. As an employer, the City will need to take steps to continue to provide a safe workplace.

Objectives:

1. Protect employee health and safety from increasing and changing climate hazards.
2. Support employee mental health in dealing with increased stressors from climate change.

Protection of employee health and safety is an established and ongoing area of work. While climate change introduces new hazards, the Occupational Health and Safety (OHS) processes that already exist will continue to be applied.



Action	Initiatives	Lead	When	Status
Operations				
R6.5a Review and complete plans to address worker safety and business continuity during climate events.	Ensure all departments with outdoor workers have procedures for working during outdoor weather events, including extreme heat and smoke ⁵ .	OHS ⁶	Now	Continuous
	Review direction for deployment related to extreme weather to determine if updates are needed to account for changing climate hazards.	OHS	Now	Started
	Review business continuity planning to determine if updates are needed to account for changing climate hazards.	EMO	Now	Not started
People				
R6.7a Provide training to employees on new and increasing climate hazards.	Implement Climate 101 training sessions.	Sustainability	Now	Started
	Implement training to address new workplace hazards driven by climate change.	OHS	Now	Continuous
R6.7b Provide support to employees on mental health impacts of climate change.	Implement initiatives that recognize the mental health impacts of climate change and provide supports.	OHS	Now	Continuous
	Continue to provide employee wellbeing supports and resources.	OHS	Now	Continuous
	Continue to provide Employee Family Assistance Program (EFAP).	EFAP Board	Now	Continuous
R6.7c Provide opportunities to employees to contribute to climate action and to consider the impacts of climate change on their work.	Greener Together pilots deliver staff engagement initiatives on climate resilience.	Sustainability	Now	Started
	Implement Climate Coffee Chats.	Sustainability	Now	Started
	Support review at department or work group level of climate impacts on operations and ongoing work.	Sustainability	Next	Not started
Data & Information				
R6.9a Establish baseline of air quality during smoke events in workspaces.	Measure air quality in office and workspaces during periods of heavy wildfire smoke.	EMO / OHS / Sustainability	Now	Started

5 Hazard identification is part of an established process for worker safety, including the impacts of weather hazards. This established work will continue to address new or changing hazards that arise from climate change.

6 OHS provides a corporate approach and supports departments. The specific actions will be implemented by all departments, with OHS support and monitoring.

NOW: Current-2027 | **NEXT:** 2028-2029 | **AFTER:** 2030-2035 | **LATER:** After 2035



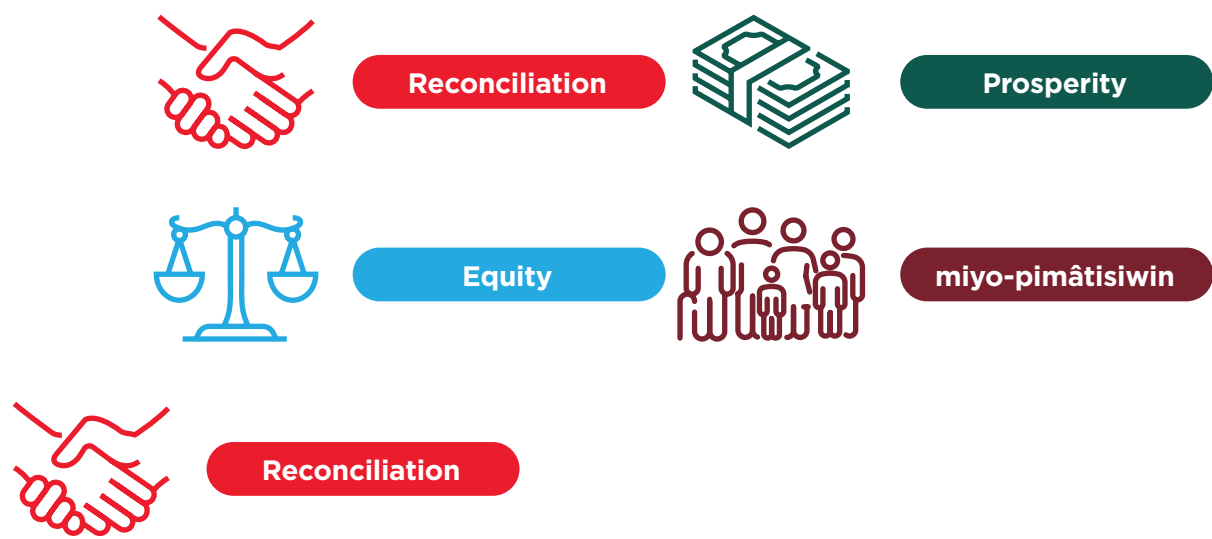


APPROACH TO IMPLEMENTATION

Thrive - A Guide for a Just Transition

Thrive - A Guide for a Just Transition supports the implementation of both the *Net-Zero Transformation Playbook* and the *Climate Resilience Playbook*. Its purpose is to outline how the actions in those playbooks can be designed to support the vision of a community where all residents and businesses can thrive so that the benefits of climate action are shared by all. This guide follows below.

The section has four guiding principles:



Climate action and reconciliation share a common goal to transform systems that perpetuate social and environmental harm and to restore and improve community relations, resilience, and wellbeing. The following actions can support reconciliation through climate action:

- Recognize the right to self-determination of Indigenous communities by supporting Indigenous climate leadership and strategies.
- Recognize the wisdom of other ways of knowing and seek opportunities to incorporate Indigenous knowledges into climate solutions, including observed changes in local climate.
- Support education, training, and capacity building related to transitions for climate change provided by Indigenous education, training, and community organizations.
- Invest directly into Indigenous-led affordable housing initiatives for energy efficiency and climate resilience upgrades.
- Support Indigenous enterprise through the purchase of Renewable Energy Certificates (e.g., through SaskPower) from Indigenous energy generation projects.
- Partner with Indigenous organizations for the development and delivery of climate initiatives.
- Work with Indigenous communities to identify and protect culturally significant areas.



Equity

Climate change disproportionately affects those who have contributed the least to the problem and may exacerbate systemic injustices. Achieving a climate resilient city requires prioritizing equity in climate action. The following actions can support an equitable and inclusive climate transition:

- Invest directly in community-led affordable housing initiatives for energy efficiency and climate resilience upgrades.
- Invest directly in community-building programs and services that increase overall individual and community wellbeing and resilience.
- Prioritize low-income households for grants, rebates, or other incentive programs and reduce barriers to program access.
- Prioritize projects and programs that are low barrier and equity focused.
- Reduce energy poverty by supporting initiatives that help lower utility bills through energy efficiency, water conservation, and solar generation; incorporate measures to ensure that the benefits of upgrades are passed on from building owners to occupants.
- Support initiatives that increase the climate resilience of homes and invest in climate-resilient infrastructure to reduce the household-level costs of damage from extreme weather, flooding, and heat.
- Prioritize heat-response initiatives to reduce risks to those most likely to suffer heat-related injury, including consideration of socio-economic metrics, distribution of natural infrastructure, and access to cooling opportunities.
- Invest in public transit services and active transportation infrastructure to provide affordable and accessible urban mobility.
- Take steps to ensure community engagement incorporates diverse perspectives to ensure initiatives will address the needs and challenges of the community.
- Use co-design approaches to ensure that climate initiatives are culturally relevant.
- Incorporate social value into climate related procurements.



Prosperity

A robust economy supports quality of life in Saskatoon. The following actions can support a resilient and low-carbon economy that is sustainable, competitive, and adaptable in the face of climate change:

- Support workers through training programs, job placement, and assistance to transition into sustainable industries.
- Support local businesses through grants and low-interest loans that enable small to medium-sized businesses to participate in climate action initiatives.
- Prevent business disruption and avoid stranded assets through investment in climate resilience and adaptive approaches.
- Seek out local expertise and emerging technologies to develop made for Saskatoon solutions.

- Support local business in meeting Environmental, Social, and Governance (ESG) goals by providing access to zero-emission electricity through the City's Renewable Subscription Service.

- Engage with local business as part of the development of individual initiatives to ensure the impacts and opportunities for local businesses are well understood and inform their design.



miyo-pimâtisiwin

miyo-pimâtisiwin means the good life. By supporting physical, mental, and emotional health, climate action can help us live in balance with the land, our community, and spirit. The following actions can support the good life in Saskatoon:

- Increase natural infrastructure in neighborhoods and prioritize areas with below average green spaces and tree canopy.
- Increase safety, accessibility, sustainability, and affordability of residential spaces by improving integration of City programs that support building improvements and serve multi-unit property managers and tenants.
- Prioritize affordable and safe shelter, food security, clean drinking water, and personal safety within the design of initiatives.
- Support individual and community health by considering mental, physical, emotional, and spiritual wellbeing during the design of climate solutions.
- Incorporate nature-based solutions to improve access to clean air, water, and green spaces, and reduce exposure to pollutants.
- Promote diversion programs for safe disposal of e-waste streams.

An Adaptive Approach

Climate action is complex and requires making decisions with many uncertainties and within a shifting context. To address this, future planning and implementation will make use of an adaptive implementation process that treats our climate plans as dynamic and flexible, rather than fixed. New actions will be identified to support the goals and objectives outlined in the Climate Action Strategy as work progresses.

Adaptive implementation helps long-term climate action remain responsive to new challenges and opportunities, rather than being constrained by outdated assumptions.

This approach consists of:

Scenario Planning: Explore multiple scenarios to prepare for multiple possible futures and build contingency plans for when conditions shift.

Phased Implementation: Start with pilots and short-term actions that deliver immediate benefits while laying the foundation for larger changes.

Progress Monitoring: Monitor progress toward climate targets and resilience objectives, using data to identify what works and what doesn't.

Flexible Implementation: Scale up successful initiatives and phase out ineffective measures based on initial findings.

Continuous Learning: Development of emerging technologies, best practices, new climate data, and policy at all levels of government are actively monitored, assessed, and integrated where valuable.

Unless significant changes in context occur, we expect that the:

- goals and objectives in this strategy will remain for 10-15 years;
- individual actions could be refreshed after 5-10 years; and
- initiative-level details would evolve continuously as part of work planning..

Funding Climate Action

Investment and multiple financing mechanisms are required to implement the actions in this strategy.

Leveraging Investment: Efforts from all levels of government, as well as the private sector, will be necessary to achieve the vision of this strategy. The City will continue to leverage available funding opportunities, seek partnerships and promote private investment in climate action.

City Budgets: Approval of this strategy does not include approval of funding for initiatives outlined within the strategy. Each initiative will be evaluated and brought forward through budget deliberations for funding consideration and approval. Supported by the Climate Budget, this document serves as a guiding framework, informing which initiatives to bring forward into each budget cycle.

Accountability and Transparency

The City is committed to transparency when reporting progress towards the objectives and actions outlined in the *Climate Action Strategy*. The following activities track progress against established goals, increasing accountability and ensuring stakeholders are informed about achievements and areas needing improvement:

Inventories: A greenhouse gas (GHG) inventory is a comprehensive accounting of all carbon sources for a given year. The City completes corporate (local government) and community inventories every second year to monitor progress towards its targets.

Land-based knowledge: The City will work closely and respectfully with local knowledge keepers to integrate traditional and land-based knowledge to complement scientific data to monitor local changes.

Progress reports: Climate action progress reports and an online climate dashboard summarize the steps taken by the City to reduce carbon pollution and improve climate resilience. Key performance indicators are tracked and reported on.

Climate budget: The climate budget integrates climate targets into the City's budget process by identifying and funding short-term actions needed to achieve long-term carbon pollution reduction and climate resilience goals.

CDP (formerly known as the Carbon Disclosure Project): CDP is a global disclosure system used to report climate change mitigation and adaptation progress. The City has been reporting through CDP since 2017.





CONCLUSION

The *Climate Action Strategy* introduces a pair of playbooks to shape a safer, healthier, and more prosperous future. To be successful, it will require ongoing learning, monitoring, and iterations as conditions, technologies, and priorities evolve. The strategy and playbooks will remain a living framework that guide us towards our goals.

Achieving these goals will not be easy, but we can bring the vision to life through sustained commitment and ongoing collaboration across governments, businesses, communities, and residents.

The implementation of the *Climate Action Strategy* will be guided by principles of reconciliation, equity, prosperity, and miyo-pimâtisiwin so that the actions support the vision of a community where all residents and businesses can thrive and the benefits of climate action are shared by all.

The Net-Zero Transformation Playbook prioritizes actions that have the largest impact on Saskatoon’s carbon emissions to progress City Council’s climate commitment. Through proven technology and behaviour improvements, we can retrofit our buildings, electrify transportation, reduce waste, conserve water, and grow the green network to achieve significant carbon pollution reductions. However, there are many uncertainties and shifting technologies, meaning the full pathway to meet Saskatoon’s ambitious targets is not fully known; future work to define and address the residual emissions is required.

The Climate Resilience Playbook outlines a long-term action plan for building a resilient Saskatoon, protecting infrastructure, housing, health and safety, and quality of life as the climate changes. Adapting to climate change is a whole-of-community effort; it requires action from all levels of government, community members, businesses, and organizations. Building resilience is a long-term commitment to ensure that Saskatoon is a place where all residents can thrive as our climate changes.



Appendix 1: Glossary

A Just Transition	A just transition refers to the concept of transitioning from a high-carbon, low-resilience economy to a sustainable economy in a way that is fair and inclusive. It emphasizes that climate action should not leave workers, communities, or vulnerable groups behind.
Adaptation	Adaption refers to the measures taken to prepare for the current and future climate change impacts, primarily with the aim to reduce harm to people and assets.
Alterations to Existing Buildings (AEB)	The Alterations to Existing Buildings (AEB) is a federal model code for existing buildings to help guide energy efficiency improvements when an existing building undergoes alterations or renovations.
Benchmarking, Labelling and Disclosure (BLD)	Benchmarking, labelling, and disclosure (BLD) are policies that measure a building’s energy and/or greenhouse gas performance, compare it to similar buildings or past performance, and then require this information to be publicly disclosed.
Building Performance Standards	Building Performance Standards are policies that require owners of existing buildings to meet specific, and increasingly stringent, energy or greenhouse gas emission performance targets over time.
Carbon Pollution	In this plan, the term carbon pollution refers to all greenhouse gases that contribute to climate change as reported in the City’s greenhouse gas inventories. Most of these emissions are from carbon dioxide (CO ₂), methane (CH ₄), and nitrous oxide (N ₂ O).
Carbon Sequestration and Storage	Carbon is absorbed and stored in soils, roots, wetlands, grasslands, trees, and other plants. The process of removing carbon dioxide from the atmosphere is called sequestration and the total amount of carbon that has been absorbed by a carbon sink is called carbon storage.
Clean Energy	Clean energy is power generated without emitting greenhouse gases, primarily through renewable sources like wind, solar, hydropower, and geothermal, as well as nuclear energy.
Climate Action	Climate action refers to both reducing carbon pollution and improving Saskatoon’s resilience to the impacts of a changing climate.
Climate Hazard	A climate change-related event or condition that could cause damage or disruption to people, assets, or ecosystems.
Co-generation	Co-generation, also known as Combined Heat and Power, is an efficient energy system that simultaneously produces electricity and useful heat from a single fuel source.
Corridor	The Corridor Planning Program is the City’s approach to guiding growth and development along the planned Link (rapid transit) routes, within the Corridor Growth Area. Corridors consist of communities along major corridors, supported by improved transit services and public realm improvements, and are supported by specialized corridor zoning districts to guide redevelopment near rapid transit.
Decarbonization	Decarbonization is the process of reducing or eliminating carbon by shifting from fossil fuels to clean energy sources like renewables.
District Energy System	District energy systems heat and/or cool multiple buildings from a single centrally located plant that produced hot or chilled water or steam for distribution throughout the system.
Energy Performance	Energy performance is a measure of how efficiently a building or system uses energy. It is improved through insulation, air sealing, equipment upgrades, and other measures.
Energy Poverty	Energy poverty occurs when households struggle to afford energy or utility costs alongside other basic needs. This issue disproportionately affects seniors, single-person households, racialized groups, renters, and other marginalized communities.
Green Network	The green network encompasses Saskatoon’s natural infrastructure including trees, parks, gardens, wetlands and other naturalized areas.
Grid Emissions Factor / Intensity	The average amount of CO ₂ or greenhouse gas emitted per unit (kilowatt-hour, kWh) of electricity generated for an entire power grid.
High Performance Civic Building Policy	The <i>High Performance Civic Building Policy</i> establishes standards for new civic buildings, including LEED Silver certification, Net-Zero Energy Ready performance and air tightness target, and requirements for water access and accessibility.
Home Energy Labelling	Home energy labelling provides a standardized rating of a home’s energy performance, similar to labels on appliances.

Industrial, Commercial, Institutional (ICI)	ICI stands for Industrial, Commercial, and Institutional. It encompasses all non-residential properties and buildings
Land-based Knowledge	Land-based knowledge refers to an understanding of our land and natural processes, held by Indigenous and local communities through generations of observation.
Landfill Gas (LFG)	Landfill gas is a natural gas produced from decomposing organic waste (food, paper, yard trimmings) in landfills. It is made up of methane and carbon dioxide, plus trace gases like sulfides and nitrogen.
Marginal Abatement Cost	The incremental cost of reducing one tonne of greenhouse gas emissions through implementation of a mitigation measure relative to a baseline scenario. For each measure, the MAC is calculated by dividing the total lifecycle cost premium relative to the baseline by the cumulative greenhouse gas emissions reductions achieved over the analysis period.
National Building Code (NBC)	The Government of Saskatchewan adopted the 2020 edition of the National Building Code (NBC), which came into effect on January 1, 2024. The code incorporates a tiered approach to energy performance, providing a framework to progressively advance buildings toward net-zero energy-ready. The NBC sets energy efficiency standards for houses and small buildings.
National Energy Code of Canada for Buildings (NECB)	The Government of Saskatchewan adopted the 2020 edition of the National Energy Code of Canada for Buildings (NECB), which came into effect on January 1, 2024. The code incorporates a tiered approach to energy performance, providing a framework to progressively advance buildings toward net-zero energy-ready. The NECB applies to medium and large buildings.
Net-Zero Ready	A Net-Zero Ready home is built to the highest energy efficiency standards, like a Net-Zero home, but it does not have a renewable energy system that supplies its energy needs. It is a home that can become Net-Zero when a zero-emission electricity source is supplied, whether through onsite installation, or a connection to a clean energy grid.
Renewable Energy Certificate (REC)	A Renewable Energy Certificate (REC) is a market-based instrument representing the rights to the environmental, social, and non-power attributes of one megawatt-hour (MWh) of renewable electricity generated.
Renewable Natural Gas	Renewable Natural Gas (RNG), or biomethane, is a low-carbon fuel made from decomposing organic waste (farms, landfills, sewage) that’s captured, cleaned, and injected into existing gas pipelines,
Residual Emissions	Residual emissions refer to the carbon pollution that remains after all feasible reduction measures have been implemented.
Sustainable Transportation	All transportation options outside of a conventional Single-Occupancy Vehicle (SOV) with an Internal Combustion Engine (ICE) are considered sustainable. This includes active transport, transit, carpooling, and micro-mobility.
Resilience	The capacity of a community, organization, or natural environment to prevent, withstand, respond to, and recover from climate related events.
Resilience Hub	A resilience hub is a community-serving facility upgraded to provide supports that address hazards from climate change, such as shelter from wildfire smoke and extreme heat or emergency support after disasters.
Social Value Procurement	Social value procurement adds social value considerations into existing purchasing to get the best value for money for the whole community. These considerations can include promoting employment opportunities for everyone, reinvesting money in the community, and advancing environmental goals.
Utility-scale	Utility-scale refers to large energy projects designed to generate significant power to feed directly into the main electricity grid for widespread distribution to homes and businesses, rather than for on-site use.
Weather Whiplash	Rapid transitions between two weather extremes. In winter, rapid temperature swings resulting in greater risk of winter thaw, freezing rain, and ice.

Appendix 2: Global and Local Climate Action

Climate action requires action from all sectors and levels of government. The following initiatives from other organizations are driving climate action in Saskatoon:

International Leadership

The United Nations' Sustainable Development Goals (SDGs) outline global sustainability commitments. [SDG 13](#) calls on national governments to take urgent action to combat climate change and its impacts.

Federal Leadership

The federal government's goal is to support Canadians to reduce their greenhouse gas emissions and ensure Canadians are well equipped and resilient to face the effects of climate change⁷. Key actions include:

- *Canada's 2030 Emissions Reduction Plan: Clean Air and a Strong Economy* lays out the steps to reaching Canada's 2030 and 2050 emissions reductions targets.
- *Canada's National Adaptation Strategy* presents a whole-of-society approach to reducing climate risk and building climate-resilient communities.

Provincial Leadership

Prairie Resilience: A Made-in-Saskatchewan Climate Change Strategy employs natural systems and technological innovation to reduce greenhouse gas emissions while protecting competitiveness, prioritizing affordability, and enhancing sustainable growth and development.

Through SaskPower, the provincial Crown power corporation, the province is aiming to achieve a net-zero electricity grid by 2050.

Indigenous Leadership

Indigenous Peoples' rights and knowledge systems are critical to developing solutions to the climate crisis and achieving climate justice. Locally, Indigenous governments, leaders, knowledge keepers, and land stewards are leading place-based climate initiatives. For example, the Federation of Sovereign Indigenous Nations (FSIN) Lands and Resources Secretariat hosted their inaugural First Nations Summit for Advancing Global Sustainable Futures in 2025 in Saskatoon.

Business Leadership

Locally, many businesses and organizations are leading on climate action. For example, the NSBA – Saskatoon's Business Association – is leading a decarbonization education initiative for businesses in Saskatoon as part of its core mission to serve, promote, and protect businesses throughout Saskatoon and beyond.

Community Leadership

Individually and collectively, community members in Saskatoon have been taking action to reduce their own emissions and encourage broader action. Local organizations are providing education, advising on initiatives like transit and active transportation, and supporting individuals in making changes towards a net-zero and resilient future.



City of Saskatoon Leadership

The City's mandate to act on climate change is grounded in our strategic plans and vision:

Saskatoon's Official Community Plan (OCP)

The OCP outlines a long-term vision that guides the city's physical, environmental, economic, social, and cultural development. It includes strategic goals that support climate action through commitments to environmental leadership and sustainable growth.

Strategic Plan (2026-2029)

A commitment to climate action is outlined in the *City of Saskatoon's 2026-2029 Strategic Plan*:

"Greenhouse gases are reduced and actions to manage the impacts of the climate crisis have been implemented in a way that maximizes co-benefits for all."

The *Climate Action Strategy* builds on over a decade of climate leadership from the City:

• Global Covenant of Mayors for Climate & Energy (2015)

The City signed onto the Global Covenant of Mayors for Climate & Energy in 2015. This international pact requires the City to act on both the causes and effects of climate change by reducing carbon pollution and building resiliency plans for our infrastructure and services.

• The Low Emissions Community Plan (2019)

The *Low Emissions Community (LEC) Plan* was completed in 2019 and modelled a path to 80% reduction in carbon pollution. The 2019 LEC Plan identified that an update to the plan should be completed in five-year intervals.

• Corporate Climate Adaptation Strategy (2019)

The *Corporate Climate Adaptation Strategy*, completed in 2019, identified anticipated climate impacts to the City's services, infrastructure, and programs and recommended adaptation actions to mitigate those impacts. A strategy to address community impacts was expected to follow.

• Tracking and Reporting (2019 - onwards)

Since 2019, the City has been reporting on climate action progress every two years. Climate action information has also been integrated into budget deliberations through the Climate Budget.

• Sector and Implementation Plans (2021-2026)

Implementation and further planning followed the 2019 climate action plans. Relevant plans included the:

- *Solid Waste Reduction and Diversion Plan* (2021)
- *Alternative Currents: An Implementation Plan for Saskatoon's Renewable and Low-Emission Energy Transition* (2022)
- *Water Conservation Strategy* (2022)
- *Pathways for an Integrated Green Network: An Implementation Plan for Saskatoon's Green Infrastructure Strategy* (2022)
- *Zero-Emission Vehicle Roadmap* (2025)
- *Active Transportation Plan* (to be updated in 2026)

• An Updated Target (2023)

In 2023, City Council approved a greenhouse gas reduction target of net-zero emissions by 2050. Net-zero means achieving net-zero greenhouse gas emissions by balancing emitted greenhouse gases with emissions removal.

⁷ Government of Canada. (n.d.). Climate action. Employment and Social Development Canada. <https://www.canada.ca/en/employment-social-development/programs/agenda-2030/climate-action.html>

Appendix 3: Climate Risk Assessment

This risk assessment considers the potential impacts of climate change in Saskatoon, including risks to the City of Saskatoon (City) as a corporation and to the community of Saskatoon as a whole. The risks are based on local climate projections, the expected changes Saskatoon will experience as our climate changes.

The risk assessment relies on the subject matter expertise and professional judgement of City employees across many departments. It is based on research into climate impacts, a third-party consultant report on expected climate changes and impacts in Saskatoon, and review of other climate risk assessments by municipal, provincial, and federal governments across Canada. 170 potential risks were discussed and rated in four internal risk assessment workshops using the risk matrix below, then consolidated to the risks presented in this report. Key risks were reviewed and verified by subject matter experts to confirm the risk ratings.

This summary first presents the highest risks, those rated 15 or higher, then presents all risks across five categories: Health, Safety and Wellbeing; Housing; Businesses; the Green Network; and Infrastructure and Services.

The risk assessment is the first step in developing an updated Climate Action Strategy. These risk ratings informed recommended actions for climate adaptation and resilience in Saskatoon.

Risk Matrix:

		Likelihood				
		1 (low - very unlikely)	2 (unlikely)	3 (moderate - realistic possibility)	4 (likely)	5 (high - very likely)
Impact	4 (critical)	4	8	12	16	20
	3 (major)	3	6	9	12	15
	2 (moderate)	2	4	6	8	10
	1 (minor or negligible)	1	2	3	4	5

- Risk ratings:**
- Four levels of risk are defined:
- Low: green, score 1-3
 - Medium: yellow, score 4-9
 - High: orange, score 10-14
 - Very high: red, score 15-20

Definitions:

- **Critical infrastructure:** “processes, systems, facilities, technologies, networks, assets and services essential to the health, safety, security or economic well-being of Canadians and the effective functioning of government.”⁸
- **Level of City control:** how much control the City has to directly or indirectly reduce the risk. In cases where the City has limited or no control of the main drivers, measures could still be taken to increase local resilience.
 - **Direct control:** the City can directly reduce the risk by changing practices or modifying infrastructure. For example, City infrastructure, services, and employee safety.
 - **Some control:** the City can reduce some of the risk, but there are other major contributions to the risk the City can't mitigate. For example, the City cannot control how many very hot days occur in Saskatoon, but can increase shading of homes and workplaces and encourage changes to housing to reduce indoor air temperatures during heat waves.
 - **Limited or no control:** the main risk drivers or infrastructure at risk are outside the City's control. The City may still be able to contribute to risk mitigation or can encourage others to reduce risks. For example, the City can provide safe indoor spaces during wildfire smoke events and increase education about the impacts of air quality, but cannot control how much wildfire smoke blows in to Saskatoon.
- **Weather whiplash:** rapid transitions between two extremes. In this case, referring to rapid temperature swings in winter, resulting in greater risk of winter thaw, freezing rain, and ice.

8 Public Safety Canada, n.d. Canada's Critical Infrastructure. <https://www.publicsafety.gc.ca/cnt/html-scr/crtcl-nfrstrctr/ci-iec-en.aspx>

Highest risks all categories

Risks rated 15 or above are included here. Complete lists of risks are provided in the following pages by category.

Risk	Impact Score	Likelihood Score	Rating	Category	Level of City Control to Mitigate Risk
Health risks from unsafe indoor air temperatures	4	5	20	Health and Wellbeing	Some control City infrastructure and services impact this risk and can mitigate it.
Damage to and loss of tree canopy - Tree canopy stands out from other natural infrastructure as uniquely at risk to loss and damage - Critical to heat response	4	5	20	Green Network	Direct control - Trees on City property Some control - Trees on private property Limited or no control - Even with mitigation measures, trees will remain susceptible to damage/loss.
Widespread loss of power utility Widespread: affects many sites or more than one critical site	4	5	20	Infrastructure and Services	Direct control Widespread losses tend to be caused by transmission lines damage or loss of supply. This can be mitigated by increasing capacity on lines.
Localized loss of power utility Localized: affects a limited number of sites or a small area	4	5	20	Infrastructure and Services	Direct control Can reduce the impact of storms through good vegetation management, pole replacement, etc.
Health and safety risks from severe winter weather Despite decreasing extreme cold, weather whiplash, freezing rain, and severe winter storms may increase risk to people without safe and adequate shelter	4	5	20	Health and Wellbeing	Some control
Access to housing further reduced by increasing physical damage and demand - Climate change adds to already significant housing challenges - Increasing damage to housing - Net migration to Saskatoon expected from climate change events (e.g. fires, floods elsewhere) which increases pressures on housing and other infrastructure	4	4	16	Housing	Some control

Risk	Impact Score	Likelihood Score	Rating	Category	Level of City Control to Mitigate Risk
Increasing food insecurity - Global climate events (e.g. crop failures, port closures) driving food shortages and increased costs - Climate change increases existing challenge	4	4	16	Health and Wellbeing	Some control - Driven by global events - City can take action to increase local food security
Temporary closures of service organizations following extreme weather events - Closures already happen during/after winter storms; increasing risk and frequency of closures with more storms of greater severity - Severity of impact is higher if closures happen in winter vs summer - Impacts other essential services, such as hospitals	4	4	16	Health and Wellbeing	Direct control - For City facilities Some control - City services such as road clearing can reduce some closures.
Increasing barriers to getting around Including impacts to Transit and Access Transit in extreme weather	4	4	16	Health and Wellbeing	Direct control
Increasing costs to individuals - Increasing costs include responding to extreme events, insurance, flood and storm damage, cooling, food, housing - Inequitable impact, large burden on low-income individuals - Adaptation solutions largely only available to those who can afford them - Costs increase with or without carbon charge	3	5	15	Health and Wellbeing	Some control Can influence some of the drivers of costs, not all
Health risks from wildfire smoke	3	5	15	Health and Wellbeing	Limited or no control - Can provide safe air spaces to mitigate some risk Direct control - City employees
Mental health and long-term impacts	3	5	15	Health and Wellbeing	Limited or no control - Saskatoon residents Some control - Supports for City employees
Increasing flood damage to infrastructure from heavy rainfall	3	5	15	Infrastructure and Services	Direct control Cannot control the hazard but can control how City infrastructure is designed/ functions

Risks by category

Health, Safety and Wellbeing

Risk	Impact Score	Likelihood Score	Rating	Level of City Control to Mitigate Risk
Health risks from unsafe indoor air temperatures At home and at work	4	5	20	Some control City infrastructure and services impact this risk and can mitigate it.
Health and safety risks from severe winter weather Despite decreasing extreme cold, weather whiplash, freezing rain, and severe winter storms may increase risk to people without safe and adequate shelter	4	5	20	Some control
Increasing food insecurity - Global climate events (e.g. crop failures, port closures) driving food shortages and costs - Climate change increases existing challenge	4	4	16	Some control - Driven by global events - City can take measures to increase local food security.
Temporary closures of service organizations following extreme weather events - Closures already happen during/ after winter storms; increasing risk and frequency of closures with more storms of greater severity - Severity of impact is higher if closures happen in winter vs summer - Impacts other essential services, such as hospitals	4	4	16	Direct control - For City facilities Some control - City services such as road clearing can reduce some closures.
Increasing barriers to getting around Including impacts to Transit and Access Transit in extreme weather	4	4	16	Direct control - Road clearing, transit for snow - Indirect or limited for hazards like heat, smoke
Increasing costs to individuals - Increasing costs include responding to extreme events, insurance, flood and storm damage, cooling, food, housing - Inequitable impact, large burden on low-income individuals - Adaptation solutions largely only available to those who can afford them	3	5	15	Some control Can control some of the drivers of costs, not all
Health risks from wildfire smoke	3	5	15	Limited or no control - Can provide safe air spaces to mitigate Direct control - City employees
Mental health and long-term impacts	3	5	15	Limited or no control - Saskatoon residents Some controls - Supports for City employees

Risk	Impact Score	Likelihood Score	Rating	Level of City Control to Mitigate Risk
Decreasing outdoor recreation, social, and cultural opportunities - Social/wellbeing impact due to limited free or low-cost opportunities. More severe for those without other options - Health impacts of reduced exercise and less time in nature - Caused by extreme heat, wildfire smoke, storms, and decreased river flow	3	4	12	Direct control - City facilities, e.g. reducing heat risk in outdoor spaces Some control - Can provide alternative recreation opportunities
Health and safety risks from weather whiplash in winter, including increased ice - Restricts emergency vehicle access - Limits people's ability to leave homes	3	4	12	Some control
Health risks from extreme heat outdoors While using transit, active transportation, recreation, working	2	5	10	Some control City design influences this risk
Health risks from increased and new vector borne diseases	3	3	9	Limited or no control
Health and safety risks to residents from extreme weather - Storms, flooding, large scale events - Includes workers outside (not limited to City employees) - Flooding of roadways, sidewalks, paths - Health risks from homes flooding	2	4	8	Some control
Health, safety, and wellness impacts on all City employees Including outdoor workers (heat, air quality, storms)	2	4	8	Direct control
Loss of access to important outdoor spaces Including culturally significant spaces	2	4	8	Limited or no control

Housing

Risk	Impact Score	Likelihood Score	Rating	Level of City Control to Mitigate Risk
Access to housing further reduced by increasing physical damage and demand - Climate change adds to already significant housing challenges - Increasing damage to housing - Net migration to Saskatoon expected from climate change events (e.g. fires, floods elsewhere) which increases pressures on housing and other infrastructure	4	4	16	Some control
Missed opportunity to build new housing and developments to new climate conditions - Heat and stormwater - Increasing pressures on infrastructure with increasing development and climate change combined (greenfield and infill development) - New buildings not built for future climate conditions	3	3	9	Some control
Damage to housing and private property Impacts to residents, including costs, from damage such as basement flooding, storm damage, ice build up	2	4	8	Some control

Businesses

Risk	Impact Score	Likelihood Score	Rating	Level of City Control to Mitigate Risk
Damage to businesses (buildings, assets)	2	5	10	Some control
Increasing costs on businesses	2	4	8	Some control

Green Network

Depending on the type of natural asset, there will be different risks and/or different levels of risk. For the purposes of this risk assessment, the Green Network has been categorized into: urban forest/trees; natural areas such as grasslands; parks and public green space; private yards and green space; and aquatic assets such as wetlands and the river.

Risk	Impact Score	Likelihood Score	Rating	Level of City Control to Mitigate Risk
Damage to and loss of tree canopy - Tree canopy stands out from other natural infrastructure as uniquely at risk to loss and damage - Trees (shade) are critical to heat response - Due to Saskatoon’s climate and natural ecosystem, trees are difficult to establish - Street trees and forested areas will experience different threats (e.g. street trees can experience poorer growing conditions, hotter temps) - Damage from storms, wind, freezing rain - Drought and heat stress - Increased pests, disease - Shifting ecosystems/new conditions - Weather whiplash, winter freeze-thaw - Flood/standing water risk	4	5	20	Direct control - Trees on City property Some control - Trees on private property Limited or no control - Even with mitigation measures, trees will remain susceptible to damage/loss
Damage to and loss of parks and public green space - Degraded green space and habitat for people and wildlife - Damage from storms and wind - Drought and heat stress - Weather whiplash, winter freeze-thaw - Flood and standing water risk - Increased weeds - Newly introduced invasive species - Reduced soil health	3	4	12	Direct control - City-owned spaces Some control - Developer install and establishment of park spaces
Damage to and loss of natural areas, such as grasslands - Loss of critical habitat for birds, insects and other wildlife - Biodiversity and species loss - Shifting ecosystems - Damage from storms and wind - Drought and heat stress - Weather whiplash, winter freeze-thaw - Damage from hail and freezing rain - Flood and standing water risk - Increased weeds, pests, diseases - Newly introduced invasive species	3	4	12	Direct control - In greenfield areas, City policies can increase conservation of existing natural areas Some control - City partners with Meewasin on decision making re: natural areas. Limited or no control - Natural areas on private land

Risk	Impact Score	Likelihood Score	Rating	Level of City Control to Mitigate Risk
Damage to and loss of wetlands • Loss of critical habitat • Loss of wetlands can impact water quality, cooling, carbon sequestration, and flood risks. Many areas of the city prone to overland flooding were historically part of large wetland complexes that have since been removed or filled. • Increasing temperatures and changing precipitation impacts water quality and quantity • Newly introduced invasive aquatic species • Pollution and contamination • Erosion and sedimentation, due to worsening soil conditions and vegetation health	3	4	12	Some control
Impacts on the river • Newly introduced invasive aquatic species • Erosion and sedimentation, due to worsening soil conditions and vegetation health • Increased temperatures Impacts to water supply are assessed in Infrastructure and Services.	2	4	8	Some control • City manages quality of water released from wastewater treatment plant, monitors storm water quality at river outflows, and can influence water quality of storm water runoff
Damage to private yards/property • Damage from storms, wind, freezing rain • Drought and heat stress • Weather whiplash, winter freeze-thaw • Weeds, pest damage	2	4	8	Some control

Infrastructure and Services

Risk	Impact Score	Likelihood Score	Rating	Level of City Control to Mitigate Risk
Widespread loss of power utility • Widespread: affects many sites or more than one critical site	4	5	20	Direct control • Widespread losses tend to be caused by transmission lines damage or loss of supply. This can be mitigated by increasing capacity on lines
Localized loss of power utility • Localized: affects a limited number of sites or a small area	4	5	20	Direct control • Can reduce the impact of storms through good vegetation management, pole replacement, etc.
Increasing flood damage to infrastructure from heavy rainfall	3	5	15	Direct control • City infrastructure • Cannot control the hazard but can control how our infrastructure is prepared
IT Outages • Network, communications platforms, remote access, and critical infrastructure systems (e.g. FDM, Notify Now, Trapeze, radio, cellular service)	3	4	12	Direct control • Redundant infrastructure upgrades • Business continuity plans • Increased maintenance and risk assessments Some control • Resilient contracts with vendors Limited or no control • Vendor supplied services and systems (e.g. cellular)
Widespread loss of transit services • Widespread: affects many sites or more than one critical site	4	3	12	Direct control
Increasing damage to transportation infrastructure, including roads, sidewalks, cycling facilities • Includes storms, winter thaw, freeze/thaw, ground water changes	3	4	12	Direct control
Interruptions in public access to municipal buildings, extreme weather events	3	4	12	Direct control
Damage to non-City owned infrastructure • We don't control but impacts City or residents - hospitals, highways, airport	4	3	12	Limited or no control
Damage to City buildings from extreme weather • Extreme heat, storms, high wind, hail • Freeze/thaw and winter thaw damage • Ground water level and frost line changes	2	5	10	Direct control
Increasing emergency response required • Includes risk of simultaneous events and expected chronic increase • Increasing budget pressure, need to forecast for more EMS resources • Risk of taking resources away from prevention and community outreach if not budgeted appropriately	2	5	10	Direct control

Risk	Impact Score	Likelihood Score	Rating	Level of City Control to Mitigate Risk
Localized loss of transit services Localized: affects a limited number of sites or a small area	2	5	10	Direct control
Localized loss of water utility Localized: affects a limited number of sites or a small area	2	5	10	Direct control
Localized loss of wastewater treatment Localized: affects a limited number of sites or a small area	2	5	10	Some control
Increasing demand on services and increasing costs to provide City services - Increasing evacuees hosted - Increasing civic water use - Increasing maintenance required for transportation infrastructure, including roads, sidewalks, cycling facilities (major snow events, ice) - Increasing outdoor workers required (many departments, heat/air quality necessitating breaks) - Increasing outdoor maintenance and operations, due to damage and longer seasons (grey and green infrastructure) - Increasing demand for cooling facilities/services (pools, air conditioned spaces) and indoor alternatives during smoke - Increasing absenteeism, lower staff productivity, health impacts	2	5	10	Some control
Supply chain disruptions Costs and ability to get required supplies	2	5	10	Some control City can adjust purchasing practices to mitigate impacts
Impacts to water supply and demand ⁹ - Increased overall and peak demand - Availability of water or too high of flow for water treatment and supply - River flow risks reduced by Gardiner Dam - Changing precipitation, reduced snow pack, and increased drought conditions impact river flows - Risks and uncertainty are increased by the multi-jurisdictional nature of the river and the large geographical area that can influence river flows; stewardship of the river is not fully within the City's jurisdiction	3	3	9	Some control Can influence demand and increase City infrastructure capacity
Widespread loss of water utility Widespread: affects many sites or more than one critical site	4	2	8	Direct control

Risk	Impact Score	Likelihood Score	Rating	Level of City Control to Mitigate Risk
Widespread loss of wastewater treatment Widespread: affects many sites or more than one critical site	4	2	8	Direct control
Damage to City buildings, bridges, and assets from high river flow or flooding - Includes scoring from river flow on bridge piers - Flooding of riverbank park areas and roadways - Backflow into City buildings - Damage to lift stations	4	2	8	Direct control
Damage to subsurface assets - Winter thaw events - Frost line changes, water level changes	2	4	8	Direct control
City buildings operating outside of conditions designed for - Changes required for heating/cooling - Wildfire smoke - Changed building climate zone	2	4	8	Direct control
Increased grass and bush fires within city Hot, dry conditions increase risk in river valley, park spaces	2	4	8	Some control
Urban interface wildfire Fires spreading from outside city impacting property and infrastructure within the city	2	3	6	Some control
Damage to City fleet from extreme weather Storms, high wind, hail	2	3	6	Direct control
Large quantities of waste and hazardous waste from disaster events Potential to accelerate timelines on landfill replacement	3	2	6	Some control
Disrupted City services (day to day services) - Disruptions during extreme weather events - Waste collection - Waste depots/processing	1	4	4	Direct control
Increasing electricity demand in extreme heat events: unable to meet demand	3	1	3	Some control - Can influence demand - Can prepare for expected increases

⁹ Putnam, Chris (2024). USask research: For water in Western Canada, forget the old normal. <https://news.usask.ca/articles/research/2024/usask-research-for-water-in-western-canada-forget-the-old-normal.php>

Appendix 4: The South Saskatchewan River

The South Saskatchewan River is central to life in Saskatoon, the source of the City’s drinking water, the home of critical ecosystems, and a place of connection for the community. In public engagement, we heard that understanding the impacts of climate change on the river was important to many residents.

Impacts of climate change

A changing climate will bring changes to the South Saskatchewan River, which is the single largest supplier of water for drinking, irrigation, industry, and recreation in the province.

The river begins in the Rocky Mountains in Alberta. The Oldman River, Bow River, and Red Deer River all combine to form the South Saskatchewan River just after crossing the Alberta-Saskatchewan border. In Saskatchewan, the river travels northeast to Lake Diefenbaker, where Gardiner Dam controls flow moving toward Saskatoon.

Downstream of the city, the South and North Saskatchewan Rivers join to form the Saskatchewan River. The river continues to the Delta near the Manitoba-Saskatchewan border, then through Lake Winnipeg and Nelson River into the Hudson Bay.

Water levels and flows are influenced by changing precipitation and higher temperatures in the headwaters and large watersheds that contribute to the river. Climate change is likely to bring greater variability in river levels, with impacts on recreation, ecosystems, and other water uses. The river may also see increased sedimentation, new invasive species, and warmer water temperatures.

The City, along with other communities and jurisdictions along the river, will continue to monitor these changes and adapt to the changing conditions.

Drinking water supply

The City relies on the South Saskatchewan River to provide high quality drinking water to residents and surrounding communities. The City’s water supply is protected by inter-provincial agreements, the Gardiner Dam reservoir, and water use permits. The reservoir, operated by the Saskatchewan Water Security Agency, provides a buffer against drought and flood, providing Saskatoon with a secure water supply even when water levels in the river are low. However, water flow along the entirety of the South Saskatchewan River is likely to be impacted by climate change and the City will continue to monitor any potential changes in water availability.

River stewardship

The South Saskatchewan River provides a critical service and we are involved in its stewardship. Saskatoon Water completes storm water quality monitoring at outfalls along the river, and the water and wastewater treatment plants draw from and return water to the river in compliance with regulations.

Other jurisdictions involved in river stewardship include: First Nations and Métis rightsholders, the Government of Canada, the Province of Saskatchewan, The University of Saskatchewan, and the Meewasin Valley Authority. All these jurisdictions together share in river stewardship and will continue to monitor conditions and collaborate as the climate, and river, change.

Appendix 5: The Costs of Inaction

Climate change imposes growing financial and operational burdens on municipalities, households, and local economies. The [Costs of Climate Change on the Prairies](#) (ClimateWest 2023) shows that, under a high emissions scenario, annual direct economic losses across the Prairie provinces will reach approximately \$15.7 billion by the 2050s and \$37.4 billion by the 2080s (in 2020 dollars), even before accounting for all cascading effects. Further, large catastrophic losses are increasing in frequency across Canada, including Saskatchewan.¹⁰

The costs from climate change extend beyond the direct costs of repair bills and clean-up after disasters encompassing losses from infrastructure damage, service disruptions, public health, and lost productivity.

On the other hand, according to the [Canadian Climate Institute](#), investing in proactive adaptation can cut costs from climate change in half, and when combined with global emissions reduction, climate costs are cut by three quarters.

Early action, through integration of climate risk into asset management, capital planning, and policy decisions, reduces long term financial exposure and protects residents and core services.

Infrastructure Damage

Changing weather patterns such as increased precipitation, freeze/thaw cycles, and high temperatures can lead to crumbling concrete, pothole formation, and damage to expansion joints. Prolonged wet conditions may also increase water infiltration, compromise substructure elements, and increase maintenance needs.

Once infrastructure is built to outdated standards, municipalities are effectively locked into more frequent repairs, shortened asset lifespans, and higher lifecycle costs. The [Canadian Climate Institute’s Prepare or Repair Report](#) shows that retrofitting after damage is far more expensive than building right the first time, particularly for roads, stormwater systems, and water treatment infrastructure.

Saskatoon Light and Power’s [2025 State of Saskatoon Electrical Infrastructure](#) reported that severe storms, especially in summer, are a significant cause of power outages. Overhead infrastructure is especially susceptible to rain and wind pushing branches into lines and lightning strikes on poles, transformers, and cables. Temperature-related damage is projected to be the costliest of climate impacts on transportation infrastructure, with 87% of total climate induced damage to roads across Canada related to extreme heat. Projections indicate that climate change-induced damage to road maintenance and repairs could cost governments across Canada an additional \$3.1 billion annually by 2050, or 20% more than they currently spend.¹¹

Conversely, savings from proactive investments have also been documented:

- Using climate-resilient materials when maintaining and replacing roads, such as asphalt mixes and bases that can withstand climate conditions over the next 20-30 years, can reduce climate change related damage costs by up to 98% (up to \$5 billion annual savings nationally over the next few decades).¹²
- The [Canadian Climate Institute’s Prepare or Repair Report](#) found that climate proofing public infrastructure requires investment of \$3 billion more per year which is approximately 2.5% above current investment, but avoids billions of dollars per year in damage, maintenance, and replacement costs nationwide.

¹⁰ Rol, Chris. (2023). *The Cost of Climate Change in Canada Then and Now*. Insurance Bureau of Canada

¹¹ Ness, R., Clark, D.G., Bourque, J., Coffman, D., & Beugin, D. (2021). *Under Water: The Costs of Climate Change for Canada’s Infrastructure*. Canadian Institute for Climate Choices.

¹² <https://climateinstitute.ca/reports/the-costs-of-climate-change/>

Service Disruptions and New Service Levels

Increased frequency of severe storms, changing levels of precipitation, and extreme heat put added strain on City services and budgets.

In Saskatoon, heavy snowfall events have resulted in significant costs:

- The 2020 snowstorm required grading and snow removal on all city streets, including residential neighborhoods, costing approximately \$14 million to restore mobility across the city.
- The 2024 heavy snowfall resulted in snow and ice management costs exceeding the budget by \$6.5 million, with substantial unplanned winter maintenance work completed in the winter of 2024-2025.

According to Saskatoon Light and Power’s [2025 State of Saskatoon Electrical Infrastructure](#) report, strained power generation in 2023 caused by extreme heat and drought could have led to rotating blackouts if conditions worsened.

Public Health & Productivity

ClimateWest (2023) estimates that public health impacts – especially from heat and air quality – represent the largest single category of economic loss. While municipalities in Canada aren’t directly responsible for health care costs, they face related increasing costs from higher emergency response and social service requirements and reduced economic activity.

Both national and prairie specific studies show that higher temperatures reduce labour productivity, especially in outdoor and physically demanding work such as construction, utilities, and transportation (Climate West 2023). For municipalities, this could mean higher project costs, lower delivery of capital programs, and increased health and safety risks for workers.

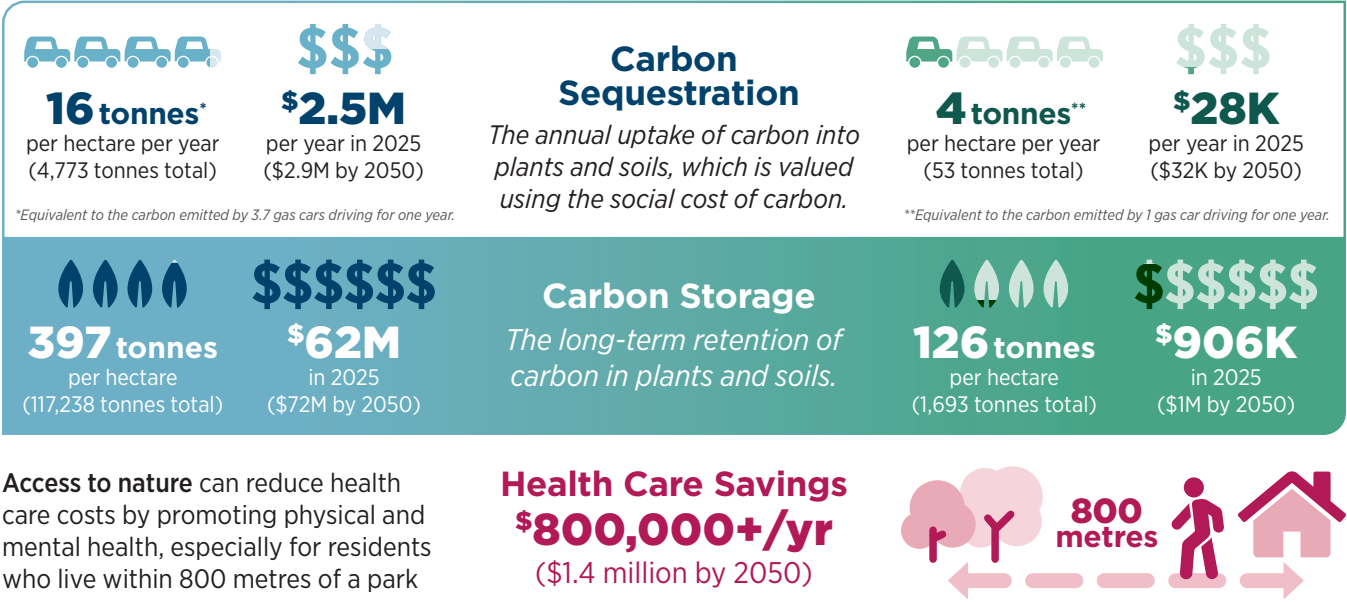
Projected direct annual economic impacts from excess heat-related hospitalizations attributable to climate change in Saskatchewan are estimated to be approximately \$5M by the 2050’s and \$82M by 2080 (in 2020 dollars) (ClimateWest 2023).

Cost of Inaction on Carbon Pollution Reduction

There is a tendency to postpone transformative actions and investments to reduce carbon pollution, as society is often resistant to change. There are two consequences of delay: more drastic and costly emissions reductions will likely be required in the future, and the community will forfeit economic, health, and other benefits associated with low-carbon investments and actions.

Nature Supports Climate Resilience

A 2026 Study¹³, found that natural areas like the Northeast Swale provide substantial climate resilience benefits, while being less expensive to maintain than constructed green spaces. For example, the Northeast Swale sequesters on average four times as much carbon per hectare as Briarwood Park. Constructed green spaces like Briarwood Park provide essential space for active recreation and community amenities, while still contributing to climate adaptation.



The City can maximize the benefits of both types of spaces by conserving priority natural areas during development, and by incorporating more natural vegetation into constructed green spaces.

13 Habitat. (2026). Economic value of natural assets in a changing prairie climate. Final report. Completed for the City of Saskatoon.

Appendix 6: Modelling the Path to Net-Zero

GHG Emissions Modelling¹⁴ informs the Net-Zero Transformation Playbook; it projects how well the City can achieve carbon pollution reduction by implementing the actions within this plan that have quantifiable GHG reductions. The modeling is not predictive but is used to help prioritize actions and understand gaps for achieving targets.

Scenarios

To complete the modelling, multiple scenarios were compared to understand emission reduction potential for both the community and the corporation:

- No Action:** Projected future emissions if no further climate action is realized, and emissions increase with growth alone.
- Business As Usual (BAU):** Projected future emissions if currently approved policies continue, with every level of government funding the same activities, services, and infrastructure in the same way, proportional to a population and economy that is growing.
- Climate Action:** Models emissions based on an assumption that the City follows through on the policy changes and actions outlined in this plan to reduce emissions. These are layered on top of the BAU scenario.

Grid Sensitivities

Because the carbon intensity of the electricity grid represents a critical factor in Saskatoon’s decarbonization, different grid sensitivities were also modeled to provide insight on a range of possible futures.

- Moderate Improvement:** The 2024 carbon intensity is assumed to stay constant until 2035. Starting in 2036, the carbon intensity of the grid follows the Canada Energy Regulator (CER) Current Measures Trajectory 2. This trajectory results in a 64% reduction in the carbon intensity of the grid by 2050.
- Decarbonized Grid:** The carbon intensity of the grid is assumed to stay constant at 2024 intensity until 2030. Starting in 2031, it is assumed that the carbon intensity of the grid follows the CER’s Canada Net-Zero Trajectory 3, which reaches a 96% reduction in carbon intensity by 2050

Community Modelling Results

Figure 5 shows the results of the Community Climate Action Scenario with Moderate Improvement to the electricity grid. In this scenario, once all the carbon reduction actions have been completed, projected emissions reduction relative to the 2014 baseline are:

- 2035: 22%
- 2050: 49%

Figure 5. Community - Climate Action Scenario - Moderate Grid Improvement

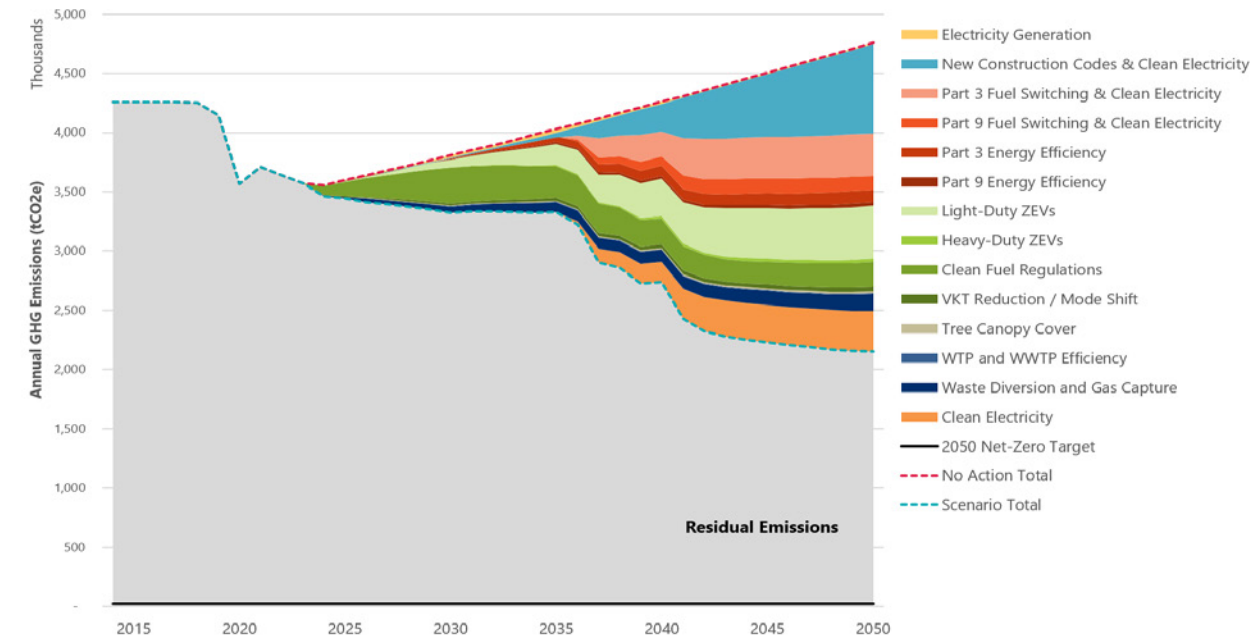
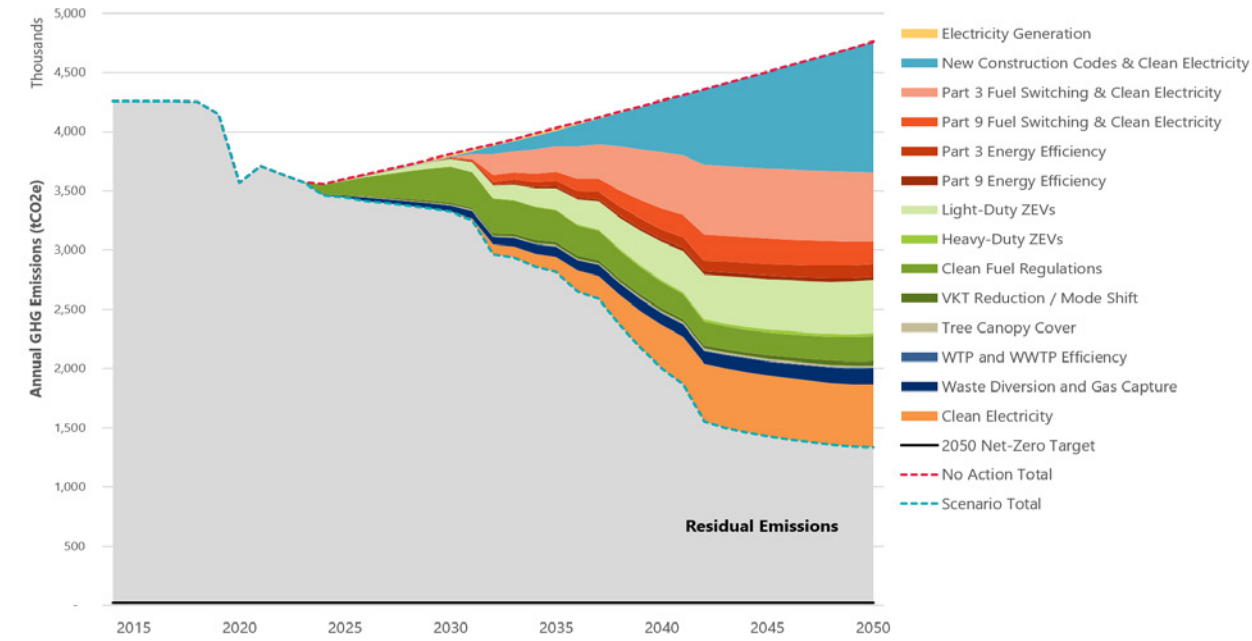


Figure 6 shows the results of the Community Climate Action Scenario with a Decarbonized Grid. In this scenario, once all of the carbon reduction actions have been completed, projected emissions reductions relative to the 2014 baseline are:

- 2035: 34% reduction
- 2050: 69% reduction

Figure 6. Community - Climate Action Scenario - Decarbonized Grid



Notably, the decarbonized grid is a major factor in progressing GHG reduction targets, with a 20% difference between the moderate and the decarbonized electricity grid. Residual emissions refer to the carbon pollution that remains after all reduction measures identified in this plan have been implemented. Table 3 provides a breakdown of these emissions.

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Table 3. Residual Emissions: Community - Climate Action Scenario – Decarbonized Grid

Emission Sector	% of Residual Emissions
Transport — Heavy Duty Vehicles	36%
Manufacturing Industries & Construction	21%
Existing Buildings (Part 3 & 9)	12%
Transport — Other (railway, waterborne, aviation)	12%
Waste	11%
New Construction (Part 3 & 9)	7%
Other	1%

Corporate Modelling Results

Figure 7 shows the results of the Corporate Climate Action Scenario with Moderate Improvement to the electricity grid. In this scenario, with full implementation of the Leading by Example, Community Waste Reduction, and Water Conservation actions. Projected emissions reductions relative to the 2014 baseline are:

- 2035: 35%
- 2050: 44%

Figure 7. Corporate - Climate Action Scenario - Moderate Grid Improvement

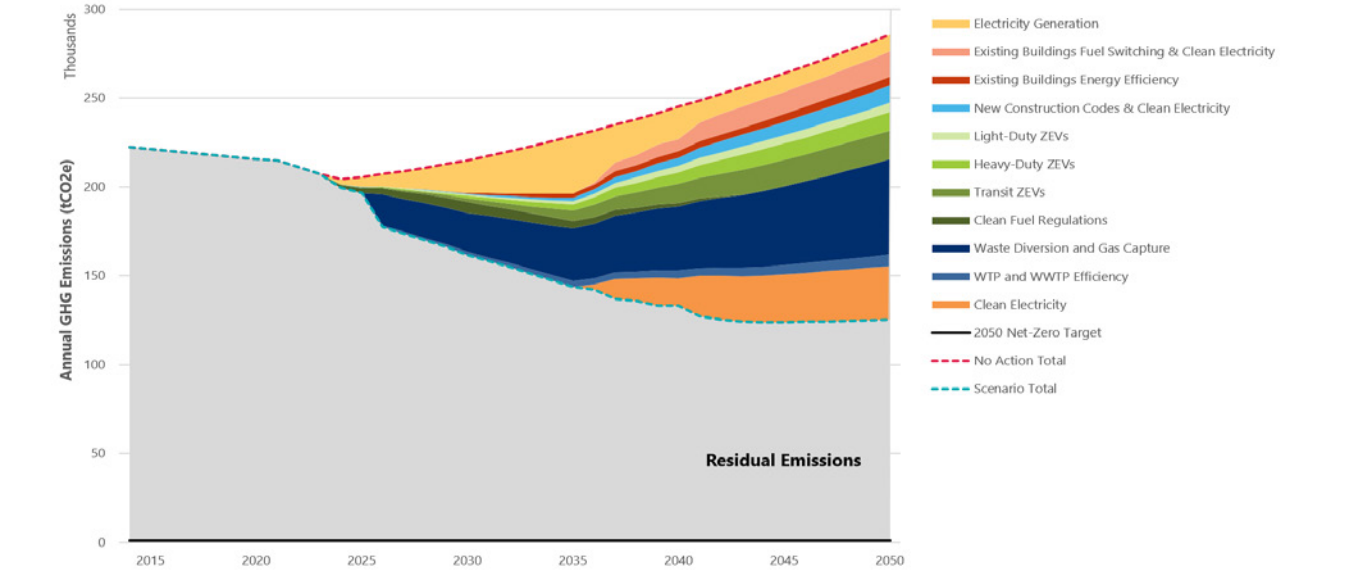
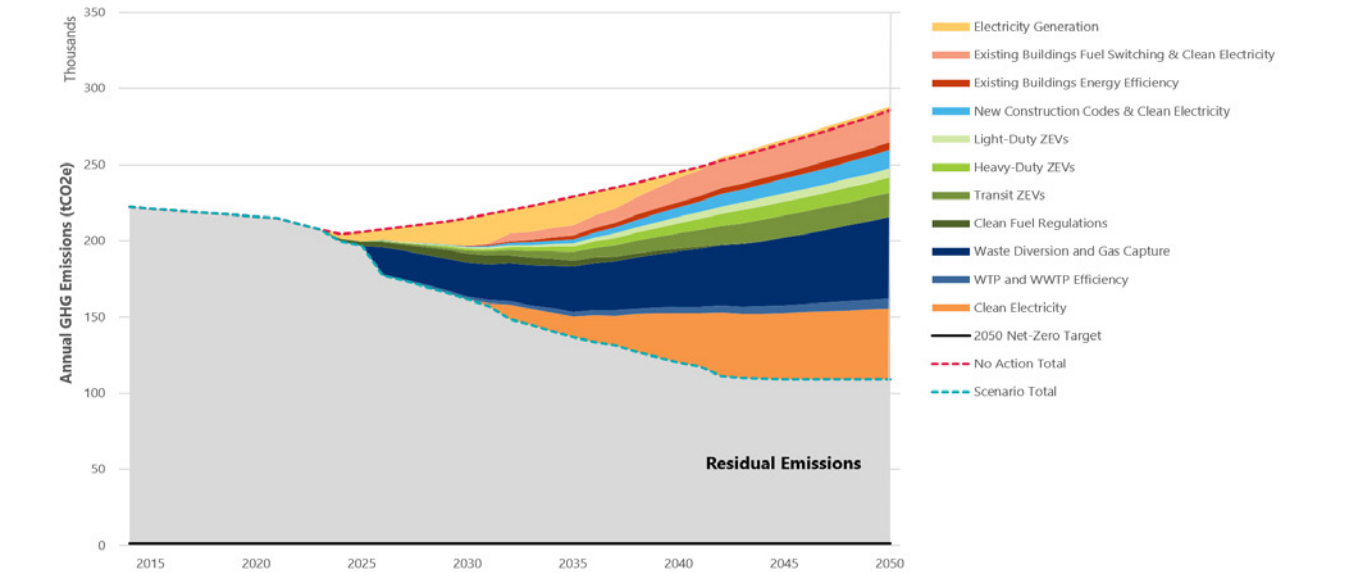


Figure 8 shows the results of the Climate Action Scenario with a Decarbonized Grid. In this scenario, projected emissions reductions resulting from full implementation of the Leading by Example actions and relative to the 2014 baseline are:

- 2035: 38% reduction
- 2050: 51% reduction

Figure 8. Corporate - Climate Action Scenario - Decarbonized Grid



As in the community modelling, residual emissions for corporate actions remain. Table 4 provides a breakdown of these emissions.

Table 4. Residual Emissions: Corporate - Climate Action Scenario – Decarbonized Grid

Emission Sector	% of Residual Emissions
Waste	87%
Existing Buildings	6%
Water and Wastewater	6%
Other	1%

The modeling demonstrates that the City’s net-zero emissions target by 2050 is not fully addressed with the actions included in this Strategy and future work to define and address the residual emissions is required. However, the actions in this Strategy are sufficiently understood and detailed to significantly progress emission reduction priorities planned for delivery over the next decade. Later actions can be more clearly and accurately established in future strategies, alongside technical advancements not available at this time.

Key Findings – Community and Corporate Climate Action Scenarios

This modelling informs the **key findings**, used to prioritize the Net-Zero Transformation Actions, including:

- Buildings account for the largest portion of total modelled reductions (59% for community and 46% for corporate). Preparing buildings now, for future fuel switching later, allows for reductions to be realized as the electricity grid becomes cleaner.
- Driven by the adoption of ZEVs, transit, and active transport, the transportation sector accounts for 21% of modeled community reductions and 18% of corporate emissions. Meanwhile, heavy-duty vehicles make up the largest source of residual community carbon.
- Waste accounts for 87% of residual corporate carbon and 11% of residual community emissions. Reducing waste throughout the community remains a priority. The City can also explore emerging waste management innovations such as waste to energy.
- The impact of incentives and education is small compared to regulatory actions.
- The carbon intensity of the electricity grid is an important and uncertain factor influencing outcomes.

Appendix 7: Marginal Abatement Cost Analysis

A marginal abatement cost analysis¹⁵ compares the relative cost-effectiveness of different types of carbon reduction measures. The abatement cost refers to the incremental cost of reducing one tonne of carbon pollution through implementation of a measure relative to a baseline scenario. The analysis compares measures across two scenarios: a Current Conditions scenario and a Low-Carbon scenario, that align with the modelled climate action scenario. Carbon reduction measures relevant to the actions in this plan were classified as either corporate or community measures based on implementation responsibility. The emissions reduction potential of each mitigation measure is assessed using the annualized emissions reduction metric (tCO₂e/year), calculated as the emissions reduction achieved by a measure relative to the baseline in a specific year.

Community Investment

Figures 9 and 10 provide an overview of the results of the Marginal Abatement Analysis of community investment measures.

Corporate Investment

Figures 11 and 12 provide overviews of the results of the Marginal Abatement Analysis of corporate investment measures.

Overview

The costs for implementing corporate measures would fall exclusively on the City. Meanwhile, the cost for implementing community abatement measures could fall onto residents and businesses, depending on how policies and programs are designed or what supports are made available. The timing of policies and programs that accelerate the adoption of these measures must consider the overall cost-effectiveness of each measure and how the cost-effectiveness changes with grid decarbonization. For example, fuel switching building systems today may increase overall emissions in some instances, but it becomes an important and cost-effective abatement measure as the electricity grid decarbonizes. Solar, on the other hand, is very cost-effective in current conditions but becomes a less effective carbon reduction measure with grid decarbonization. These insights will inform the timing of policies and programs to optimize cost and effectiveness.

Figure 9. Community Investment - Marginal Abatement Cost Curve – Current Conditions Scenario

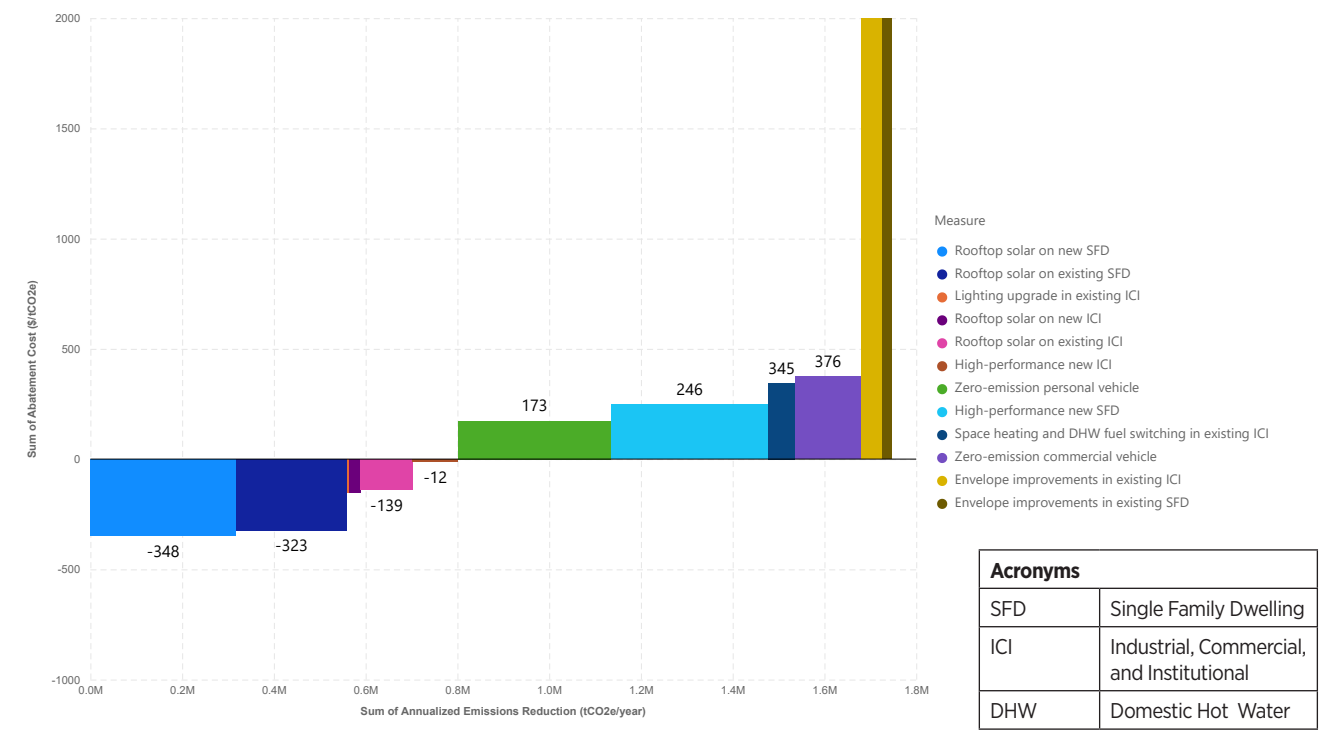
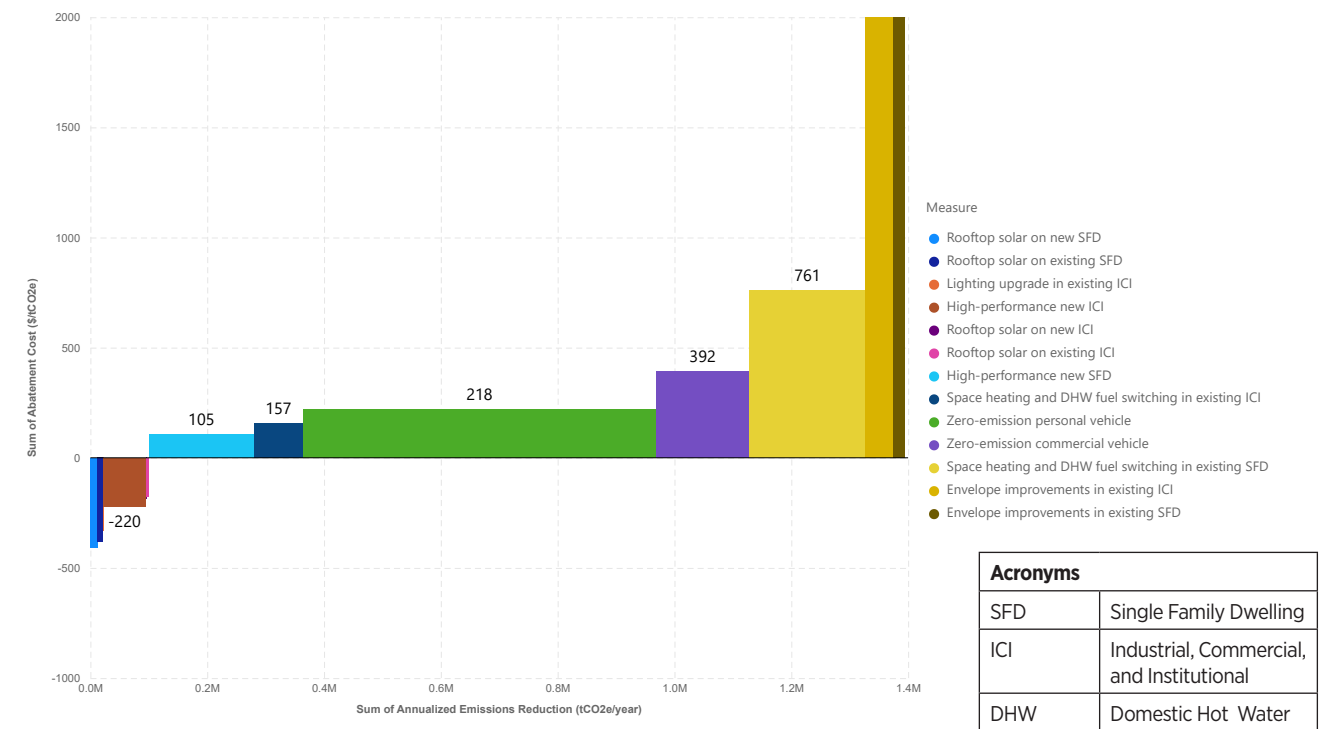


Figure 10. Community Investment - Marginal Abatement Cost Curve – Low-Carbon Scenario



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Figure 11. Corporate Investment - Marginal Abatement Cost Curve – Current Conditions Scenario

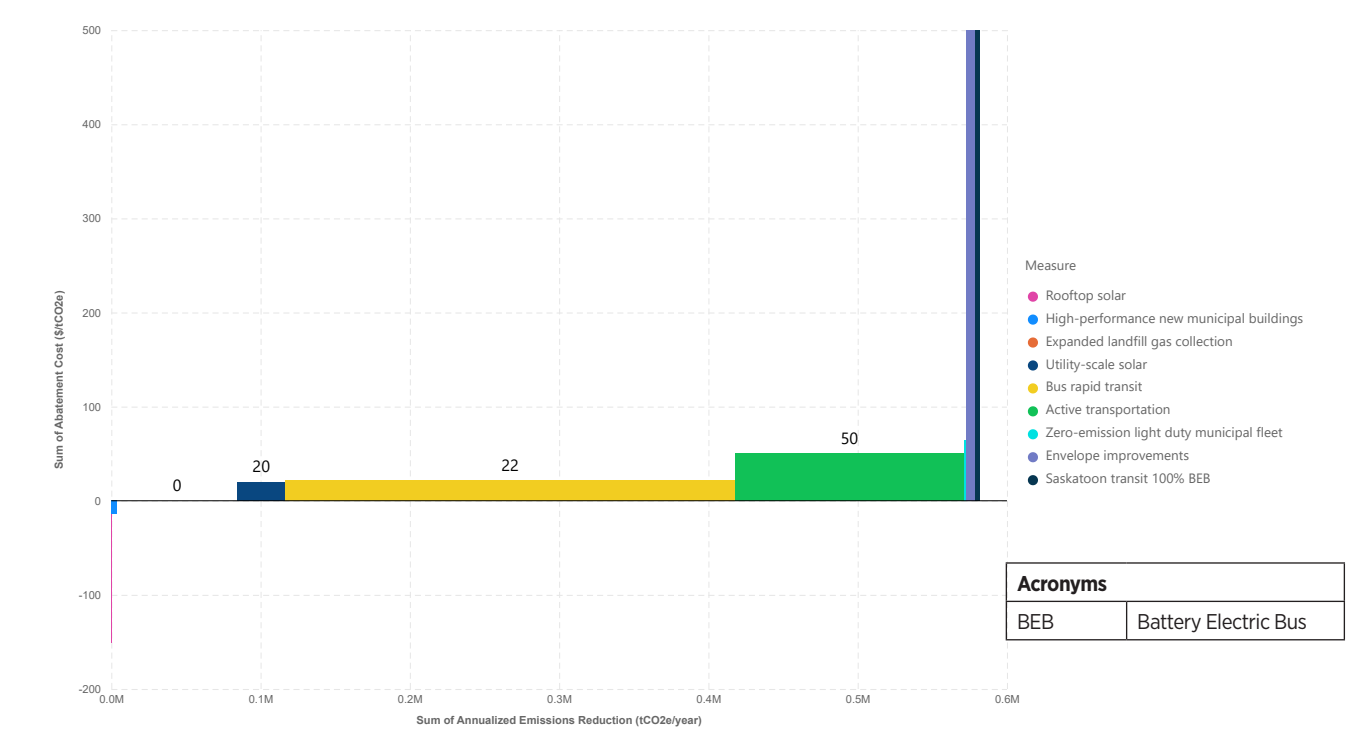
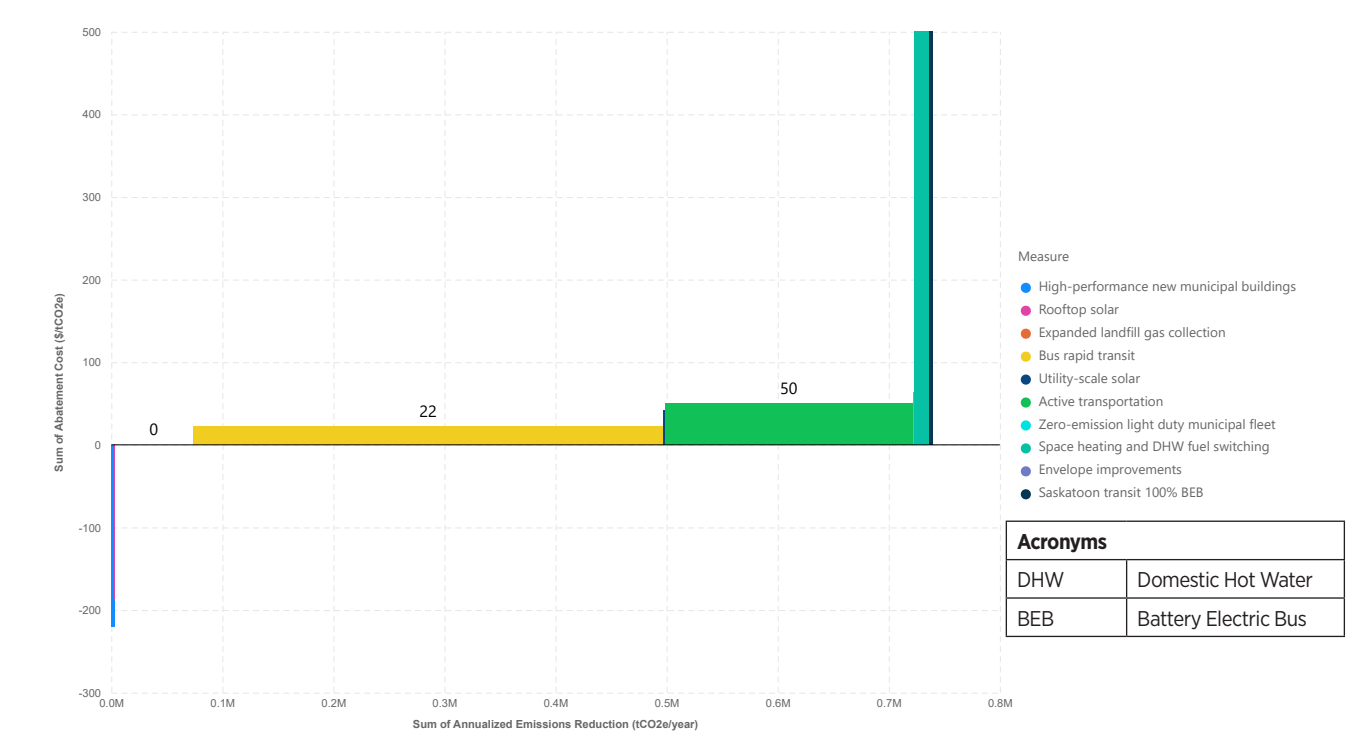


Figure 12. Corporate Investment - Marginal Abatement Cost Curve – Low-Carbon Scenario



Acknowledgments

The development of this strategy reflects the collective effort and expertise of teams across the organization. We extend our sincere thanks to the departments listed below for their valuable contributions, collaboration, and commitment throughout the strategy’s development.

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- Construction and Design
- Technical Services
- Saskatoon Light and Power
- Saskatoon Water
- Water and Waste Operations
- Sustainability
- Facilities Management
- Planning and Development
- Building Standards
- Parks
- Community Standards
- Recreation
- Saskatoon Fire and EMO
- Finance and Corporate Revenue
- Supply Chain Management
- Saskatoon Land
- Reconciliation, Equity, Diversity & Inclusion
- Indigenous Initiatives
- Communications and Public Engagement
- Business Transformation
- Digital Technology
- Human Resources



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