SUSTAINABLE WINNIPEG:
A Comprehensive Environmental Strategy
# TABLE OF CONTENTS

**Letter from the Mayor** ii  
**Letter from Chair of Civic Environmental Committee** iii  
**Executive Summary** iv  
**Introduction** v  
**Mandate** 5  
**Consultation and Communication** 5  
**Environmental Policy Solutions** 6  
**Challenges** 6  
**Implementation** 6  
**Setting Targets: A Critical & Necessary Task** 6  
**Key Principles** 6  
**Vision for a Sustainable Winnipeg** 7  
**Decision Making and Management** 8  
**Sustainable Governance and Corporate Management** 8  
**Fiscal Policy and Sustainable Budgeting** 9  
**Partnerships** 10  
**Environmental Education** 11  
**Climate Change and Air Quality** 12  
**Energy Conservation** 12  
**Decision Making and Management** 12  
**Sustainable Urban Energy** 13  
**Fiscal Policy and Sustainable Budgeting** 13  
**Climate Change and Air Quality** 13  
**Environmental Education** 14  
**Decision Making and Management** 14  
**Sustainable Urban Energy** 14  
**Fiscal Policy and Sustainable Budgeting** 14  
**Climate Change and Air Quality** 14  
**Environmental Education** 15  
**Sustainable Water and Wastewater Management** 15  
**Water Management and Conservation** 15  
**Solid Waste and Materials Management** 16  
**Solid Waste and Materials Management** 16  
**Sustainable Water and Wastewater Management** 16  
**Water Management and Conservation** 16  
**Solid Waste and Materials Management** 16  
**Sustainable Transportation** 22  
**Transportation Demand Management** 22  
**Public Transportation** 23  
**Active Transportation** 24  
**Sustainable Transportation** 24  
**Transportation Demand Management** 24  
**Public Transportation** 25  
**Active Transportation** 25  
**Solid Waste and Materials Management** 25  
**Household Solid and Hazardous Waste Minimization** 25  
**Industrial Commercial and Institutional (ICI) Waste Minimization** 26  
**Sustainable Land Use and Development** 26  
**Guiding Land Use Through Sustainable Urban Growth** 26  
**Parks, Open Spaces and Natural Areas** 27  
**Managing the Urban Forest** 27  
**Sustainable Land Use and Development** 27  
**Guiding Land Use Through Sustainable Urban Growth** 27  
**Parks, Open Spaces and Natural Areas** 27  
**Managing the Urban Forest** 27  
**Pesticides in the Urban Environment** 30  
**Insecticides and Larvicides** 30  
**Herbicides and Fungicides** 30  
**Glossary** 32  
**Acknowledgements and Contributors** 37  
**Bibliography** 39
Winnipeg is a jewel in the Prairies. This oasis in a sea of wheat (or sometimes snow) is poised to once again join Canada’s top tier of cities. Winnipeg has always been diverse, dynamic and determined. Now as the pace of development quickens, we must focus on a clean and sustainable environment.

Just over three years ago I presented Towards a Sustainable Winnipeg: an environmental agenda to the citizens of Winnipeg. Together with Plan Winnipeg 2020 Vision, these two documents chart a course for our city that will ensure economic success does not come at the price of environmental degradation. The Civic Environmental Committee has succeeded in engaging the community and complemented the environmental initiatives of the City Administration.

Our urban environment reflects our past, our present and our future. We engaged the community in producing this report. They have identified the issues, reported on the current state of the city and provided a wide-range of options. We wish to thank the members of the Civic Environmental Committee for their work in producing this report. They have identified the issues, reported on the current state of the city and provided a wide-range of options.

The recommendations included in this document will guide the City for future generations. The Civic Environmental Committee has succeeded in engaging the community and complemented the environmental initiatives of the City Administration.

Our urban environment reflects our past, our present and our future. The recommendations included in this document will guide the City for future generations. I wish to thank the members of the Civic Environmental Committee for their work in producing this report.

The Civic Environmental Committee has succeeded in engaging the community and complemented the environmental initiatives of the City Administration.

Just over three years ago I presented Towards a Sustainable Winnipeg: an environmental agenda to the citizens of Winnipeg. Together with Plan Winnipeg 2020 Vision, these two documents chart a course for our city that will ensure economic success does not come at the price of environmental degradation. The Civic Environmental Committee has succeeded in engaging the community and provided a wide-range of options. We wish to thank the members of the Civic Environmental Committee for their work in producing this report. They have identified the issues, reported on the current state of the city and provided a wide-range of options.

The recommendations included in this document will guide the City for future generations. I wish to thank the members of the Civic Environmental Committee for their work in producing this report. They have identified the issues, reported on the current state of the city and provided a wide-range of options.
Dear Citizens,

It is with great pride and pleasure that the Civic Environmental Committee presents, to the Council and citizens of Winnipeg, Sustainable Winnipeg: a Comprehensive Environmental Strategy. This document is designed to make our home more environmentally, economically, and socially sustainable. Through extensive research and consultation, we believe that we have produced a document that accurately addresses the specific areas of influence that promote our built and natural environments and speak to the importance of sustainability.

Sustainable Winnipeg: a Comprehensive Environmental Strategy was an extension of Plan Winnipeg 2020, the vision document for the City of Winnipeg. In the strategy, we address the specific areas of influence that promote our built and natural environments and speak to the importance of sustainability. It is our hope that this document will form the basis for all environmental programs at the City of Winnipeg and that it will provide a base reference for our administration, city officials, and citizens as they live, work, and play in our city. The strategy should be seen as an extension of Plan Winnipeg 2020, the vision document for the City of Winnipeg.

It is our hope that this document will form the basis for all environmental programs at the City of Winnipeg. Working together, we can make our community more environmentally, economically, and socially sustainable. The strategies and initiatives outlined in this document are designed to make our community more environmentally, economically, and socially sustainable.

Sustainable Winnipeg: a Comprehensive Environmental Strategy was developed in consultation with representatives from environmental organizations, businesses, and citizens. The document is designed to make our community more environmentally, economically, and socially sustainable. The strategies and initiatives outlined in this document are designed to make our community more environmentally, economically, and socially sustainable.

I send sincere thanks to our City administration and to the citizens of Winnipeg for their feedback, support, and hard work. As a result of the committee’s work, the City of Winnipeg will be a greener and more sustainable place to live.

Councillor Gord Steeves
Chair, Civic Environmental Committee
EXECUTIVE SUMMARY

Cities require a great amount of energy and water and produce an enormous amount of waste. This document reflects many of the areas of citizen concern. Furthermore, the strategy documents the City of Winnipeg’s current policy on many interconnected issues including:

1. Decision Making and Management
2. Climate Change and Air Quality
3. Urban Energy
4. Sustainable Land Use and Development
5. Urban Water and Water Management
6. Solid Waste and Materials Management
7. Sustainable Transport
8. Economic, Social and Environmental Impacts
9. Climate Change and Air Quality
10. Decision Making and Management

The strategy documents the City of Winnipeg’s current policy on many interconnected issues and provides a framework for addressing these issues.

In Winnipeg, civic departments have been focusing on many of these issues for several years. They have developed excellent strategies and programs to mediate environmental concerns while providing a high quality of life for all residents.

Addressing these interconnected issues is no longer the responsibility of any one department. It requires a comprehensive approach to sustainability. The City recognizes that the needs of our environment and economy are interdependent. Our economic prosperity depends on our ability to protect and preserve our environment.

We all want an economically, socially, and environmentally robust city. We have learned that the future of our home depends on strengthening and diversifying all parts of our civic framework, including Fiscal Policy.

A city’s clean environment attracts short term visitors such as tourists, but also sends a strong message to investors and employees they wish to attract and retain. A city that demonstrates its concern for the future of its environment is also illustrating an acute awareness of the long term fiscal value attached to protecting their environmental future.

Through the creation of the Civic Environmental Committee (CEC) in 2001, Winnipeg’s City Councillors took a laudable and crucial first step in protecting their City’s future. By assigning the CEC the task of producing a comprehensive environmental strategy, Council showed its appreciation and concern for the environment.

The Civic Environmental Committee applauds City Council for directing them to produce this document. The Draft Comprehensive Environmental Strategy was released for public consultation in May 2003. A series of town hall sessions were held to stimulate discussion on several issues in the report. Public feedback is an important factor in the development of environmental policy.

Environmental issues are often controversial. In producing Sustainable Winnipeg: a Comprehensive Environmental Strategy, the Civic Environmental Committee aims to find a balanced approach to sustainability in the city. Through the referral of the document to the administration, the committee will have provided feedback on key environmental issues and policies. A balanced approach to sustainability is the goal of the City through the referral of the document to the administration.

The administration will in turn guide the development of environmental policy by the City.

We all want an economically, socially, and environmentally robust city. We have learned that the future of our home depends on strengthening and diversifying all parts of our civic framework, including Fiscal Policy. If we want to protect and preserve our environment and that the future of our home depends on strengthening and diversifying all parts of our civic framework, including Fiscal Policy. If we want to protect and preserve our environment and that the future of our home depends on strengthening and diversifying all parts of our civic framework, including Fiscal Policy. If we want to protect and preserve our environment and that the future of our home depends on strengthening and diversifying all parts of our civic framework, including Fiscal Policy. If we want to protect and preserve our environment and that the future of our home depends on strengthening and diversifying all parts of our civic framework, including Fiscal Policy.
INTRODUCTION

MANDATE

Sustainability is identified in Plan Winnipeg 2020 as the first of six principles intended to address the challenges facing our city. Sustainability is described as "making certain that the decisions we make today do not impair the ability of future generations to meet their needs."

Formed in December of 2001, the Civic Environmental Committee (CEC) is a citizen advisory committee that provides advice to city officials and the public. The committee’s mandate is to advise city officials on environmental matters and to assist the Environment Committee with their work. The committee is made up of volunteers who are appointed by the mayor and city council.

As one of its first tasks, the CEC was directed to develop a long-term Comprehensive Environmental Strategy for the City of Winnipeg. The strategy has been developed to address many complex and cross-cutting environmental issues across council committees and departments.

CONSULTATION AND COMMUNICATION

In developing the strategy, many community stakeholders were consulted. Winnipeggers were provided with a draft of the strategy and were given an opportunity to provide feedback. A live web chat session was held to allow members of the public to share their thoughts on the strategy.

Priority plans on specific environmental issues will be addressed in greater detail through the development of Priority Plans and Strategic Environmental Management Plans. These plans will be developed in accordance with the priorities identified in the Comprehensive Environmental Strategy and will be developed over a multi-year time frame.

This diagram illustrates the Priority Plans and Strategic Environmental Management Plans that will be developed in accordance with the Comprehensive Environmental Strategy.
ENVIRONMENTAL POLICY SOLUTIONS

The recommendations in this document have been presented to identify policy and program options to find long-term solutions to environmental issues. Assembled from research and best practice across North America, the recommendations were developed based on input from municipalities on the recommendations, and key stakeholders in Winnipeg.

The City of Winnipeg is responsible for operating services that influence both the environment and human health. However, it is not only our policy decisions, but also our consumer choices that have an impact on the quality of our air, land, and water. It is essential that the long-term environmental implications of public policy are properly accounted for and that future generations are not burdened by the policy decisions made today. The objectives will not be easy to achieve. Lack of awareness and understanding in working toward environmental sustainability, and the barriers to long-term sustainability are significant institutional and cultural barriers. These barriers must be addressed. Public education must be ramped up. Our challenge as a city is to move away from policies that promote unsustainable practices and toward policies that promote sustainability within readily achievable, financially sustainable, and realistic parameters.

CHALLENGES

The environmental initiatives currently being undertaken by the City departments must not be overlooked. Many civic departments are involved in projects that aim to increase the sustainability of their operations. Despite these efforts, there is a need to increase the sustainability of their operations and to ensure that the long-term environmental implications of public policy are properly accounted for. The City of Winnipeg recognizes the importance of setting targets to achieve environmental sustainability. The City of Winnipeg’s Environmental Strategy is designed to be consistent with the principles established in the Plan Winnipeg 2020, which were approved under the Plan Winnipeg by-law. The plans, strategies, and implementation associated with the Comprehensive Environmental Strategy should not, in any way, limit individual City of Winnipeg departments from taking initiative and promoting opportunities that encourage the City’s administration to use the strategy as a framework to guide financially viable, long-term goals.

SECRETARY'S REPORT:

The issue of setting realistic and achievable targets was often raised by those consulted, including key stakeholders. The setting of real and achievable targets that address the broad physical, social, economic and environmental conditions that affect our city is an important step in creating a plan that can be implemented in the long term. The City of Winnipeg establishes targets in a comprehensive and systematic manner, ensuring that the targets are appropriate, measurable, and achievable. The City of Winnipeg recognizes the importance of setting targets to achieve environmental sustainability. The City of Winnipeg’s Environmental Strategy is designed to be consistent with the principles established in the Plan Winnipeg 2020, which were approved under the Plan Winnipeg by-law. The plans, strategies, and implementation associated with the Comprehensive Environmental Strategy should not, in any way, limit individual City of Winnipeg departments from taking initiative and promoting opportunities that encourage the City’s administration to use the strategy as a framework to guide financially viable, long-term goals.

SECRETARY’S REPORT:

The issue of setting realistic and achievable targets was often raised by those consulted, including key stakeholders. The setting of real and achievable targets that address the broad physical, social, economic and environmental conditions that affect our city is an important step in creating a plan that can be implemented in the long term. The City of Winnipeg establishes targets in a comprehensive and systematic manner, ensuring that the targets are appropriate, measurable, and achievable. The City of Winnipeg recognizes the importance of setting targets to achieve environmental sustainability. The City of Winnipeg’s Environmental Strategy is designed to be consistent with the principles established in the Plan Winnipeg 2020, which were approved under the Plan Winnipeg by-law. The plans, strategies, and implementation associated with the Comprehensive Environmental Strategy should not, in any way, limit individual City of Winnipeg departments from taking initiative and promoting opportunities that encourage the City’s administration to use the strategy as a framework to guide financially viable, long-term goals.
FISCAL AND ENVIRONMENTAL SUSTAINABILITY:
Aligning fiscal policy tools with other policy tools that affect the environment so that economic and environmental objectives can be achieved simultaneously.

THE PRECAUTIONARY PRINCIPLE:
Taking into account that when an activity raises significant potential threats to human health or the environment, actions that err on the side of precaution should be taken even if direct causality is not proven. In these cases, precautionary actions should include an assessment of costs and benefits (environmental, health, social, and fiscal) of action or inaction.

POLLUTER PAY:
Requiring that users of publicly provided services are responsible for the full cost of these services, including the costs to the environment; a result being that environmentally responsible citizens do not subsidize unsustainable practices of others.

INTERGENERATIONAL EQUITY:
Ensuring that the policies and decisions made today do not have adverse effects on, nor compromise, the ability of future generations to succeed.

DEMAND SIDE MANAGEMENT:
Implementing policies or measures that manage or influence the demand for a service or resource, with an emphasis on decreasing demand for services or the conservation of resources rather than increasing supply.

CO-OPERATION AND COMMUNITY EMPowerMENT:
Ensuring that communities and stakeholders have opportunities to participate in the decision-making process, providing tools and training that will empower communities to develop community-based environmental programs, and cooperating with other levels of government on inter-jurisdictional environmental issues.

LEADING BY EXAMPLE THROUGH INNOVATION:
Utilizing municipal facilities and operations as public education tools that showcase the fiscal and environmental benefits of sustainable operations and that demonstrate the civic administration’s commitment to sustainable practices. This will be done by developing models for community-based programming by providing citizens with educational programs, environmental outreach services, and opportunities to participate in innovative environmental programs.

ECONOMIC EQUITY:
Ensuring that economic policies and programs are inclusive, comprehensive, and financially sustainable.

VISION FOR A SUSTAINABLE WINNIPEG:
Winnipeg will embrace its character as a prairie city, integrating environmental policy with economic objectives to become one of the world’s healthiest urban centers. The civic administration will set targets for sustainability and will work with other levels of government and the environmental community to develop sustainable decision-making processes that will be inclusive, comprehensive, and financially sustainable.

RURAL AND ENVIRONMENTAL SUSTAINABILITY:
Aligning rural policy tools with other policy tools that affect the environment so that economic and environmental objectives can be achieved simultaneously.
WHAT IS THE ISSUE?

City policies and management decisions have significant implications for environmental quality. In the past, decisions have sometimes been made in isolation of potential environmental consequences and unforeseen unintended consequences. By making these decisions, government programs encourage unsustainable behaviors, while penalizing those who adopt sustainable practices.

WHERE ARE WE NOW?

Winnipeg is well positioned to embrace a framework of governance that is capable of developing policies based on principles as outlined in the introduction to this document. In adopting the Plan Winnipeg document, Council recognized the need to enhance the sustainability of our municipal operations, and citizens voiced their desire for a "shift from attempting to manage pollution to focusing on a more proactive and preventative approach."

POLICY OBJECTIVE

The City of Winnipeg will develop and implement a comprehensive framework for sustainable decision-making within its municipal government and corporate administration.

KEY STRATEGIES

The following items are presented as suggestions towards developing a priority plan on sustainable governance and corporate management. These suggestions should not limit Council from exploring other options but do provide Council with key solutions for success.

The following recommendations are presented as suggestions towards developing a priority plan on sustainable governance and corporate management for the City of Winnipeg. These suggestions should develop a priority plan on sustainable governance and corporate management for the City of Winnipeg, which can be adopted by other organizations.

THE CITY OF WINNIPEG COULD MAKE ITS OPERATIONS MORE SUSTAINABLE BY CONSIDERING THE FOLLOWING OPTIONS:

1. Ensuring fiscal and environmental sustainability within City operations;
2. Anticipating and preventing environmental problems before they occur;
3. Adopting a code of corporate environmental responsibility and an environmental code of conduct for City employees, and ensuring that staff members have adequate environmental education and training;
4. Exploring the implementation of environmental audit criteria and a corporate-wide environmental management system based on an internationally recognized standard;
5. Requiring that the principle of Demand Side Management, an approach emphasizing conservation over infrastructure expansion, is carried out to the fullest extent possible;
6. Focusing policies toward the objective of Smart Growth;
7. Integrating innovative environmental policies and strategies within City operations;
8. Developing structures of governance that encourage sustainable decision-making and innovation among elected representatives;
9. Ensuring that policies do not compromise community sustainability objectives;
10. Ensuring the policies do not compromise community sustainability objectives.

THE CITY OF WINNIPEG COULD HELP TO FOSTER SUSTAINABLE BEHAVIOR AMONG ITS CITIZENS AND WITHIN ITS COMMUNITIES BY CONSIDERING THE FOLLOWING OPTIONS:

11. Ensuring that policies do not compromise community sustainability objectives;
12. Educating citizens on the tools available to them and empowering communities to use resources efficiently and minimize pollution;
13. Advancing the notion of polluter pay, so that environmentally responsible citizens do not subsidize the unbalanced policies of others;
14. Ensuring the policies do not compromise community sustainability objectives.

WHERE ARE WE NOW?

What are the issues?
FISCAL POLICY AND SUSTAINABLE BUDGETING

WHAT IS THE ISSUE?
Fiscal policy is very important in supporting environmental stewardship and sustainability. Fiscal policy determines an organization's financial systems and practices, including budgeting, reporting, financing, purchasing, risk management, and decision-support.

Recent experience makes clear that financial planning must be integrated with environmental priorities to provide a sustainable future. The challenge, therefore, is not only balancing the budget but also persuading producers to increase energy efficiency, utilize environmentally-friendly inputs, and foster sustainable behaviour.

An approach that integrates financial, and economic, planning is consistent with the City's financial planning framework. As Mayor Glen Murray observed in his introduction to the City's Financial Management Plan, approved by Council in 2001, "The City’s Financial Management Plan (adopted by Council April 25, 2001) is... an approach to the integration of economic and environmental planning that reflects the City’s commitment to... fiscal responsibility and sustainable development."

WHERE ARE WE NOW?
Under the Province of Manitoba’s new Sustainable Development Act, all levels of government must develop a sustainable plan for the City of Winnipeg, like most public sector organizations, has limited financial resources. Financial sustainability is, and will continue to be, a major issue for the City’s financial planning.

The City of Winnipeg could help to foster sustainable behaviour among its citizens and communities by considering the following options:

THE CITY OF WINNIPEG COULD MAKE ITS OPERATIONS MORE SUSTAINABLE BY CONSIDERING THE FOLLOWING OPTIONS:

- Examining perverse subsidies resulting from existing municipal budgets and reporting on the environmental implications of existing fiscal policies;
- Educating City employees on green procurement;
- Developing a protocol for full-cost accounting and working towards cost-based municipal pricing;
- Establishing green procurement as a mandatory requirement for all City employees.
- Cooperating with other levels of government to ensure the provincial and federal policies do not undermine the City’s sustainability initiatives.
- Ensuring that the financial planning process is environmentally sustainable, including the identification and evaluation of environmental impacts of proposed policies and programs.

THE FOLLOWING OPTIONS

THE CITY OF WINNIPEG COULD HELP TO FOSTER SUSTAINABLE BEHAVIOUR AMONG ITS CITIZENS AND COMMUNITIES BY CONSIDERING THE FOLLOWING OPTIONS:

- Shifting taxes to promote equity and environmental sustainability;
- Educating citizens on the concept of green budgeting, including tax shifting, perverse subsidies, full-cost accounting, and green procurement;
- Ensuring that green budgeting tools are fair and equitable among citizens and to future generations.

POLICY OBJECTIVE
The City of Winnipeg will explore the use of fiscal tools that foster sustainable behaviour within its organization, among citizens, corporations, business, and industry.

KEY STRATEGIES
The following strategies are presented as suggestions towards developing a priority plan on fiscal policy and sustainable development.

- Cooperating with other levels of government to ensure the provincial and federal policies do not undermine the City’s sustainability initiatives.
- Ensuring that the financial planning process is environmentally sustainable, including the identification and evaluation of environmental impacts of proposed policies and programs.

THE CITY OF WINNIPEG COULD MAKE ITS OPERATIONS MORE SUSTAINABLE BY CONSIDERING THE FOLLOWING OPTIONS:

- Examining perverse subsidies resulting from existing municipal budgets and reporting on the environmental implications of existing fiscal policies;
- Educating City employees on green procurement;
- Developing a protocol for full-cost accounting and working towards cost-based municipal pricing;
- Establishing green procurement as a mandatory requirement for all City employees.
- Cooperating with other levels of government to ensure the provincial and federal policies do not undermine the City’s sustainability initiatives.
- Ensuring that the financial planning process is environmentally sustainable, including the identification and evaluation of environmental impacts of proposed policies and programs.

THE FOLLOWING OPTIONS

THE CITY OF WINNIPEG COULD HELP TO FOSTER SUSTAINABLE BEHAVIOUR AMONG ITS CITIZENS AND COMMUNITIES BY CONSIDERING THE FOLLOWING OPTIONS:

- Shifting taxes to promote equity and environmental sustainability;
- Educating citizens on the concept of green budgeting, including tax shifting, perverse subsidies, full-cost accounting, and green procurement;
- Ensuring that green budgeting tools are fair and equitable among citizens and to future generations.

POLICY OBJECTIVE
The City of Winnipeg will explore the use of fiscal tools that foster sustainable behaviour within its organization, among citizens, corporations, business, and industry.

KEY STRATEGIES
The following strategies are presented as suggestions towards developing a priority plan on fiscal policy and sustainable development.

- Cooperating with other levels of government to ensure the provincial and federal policies do not undermine the City’s sustainability initiatives.
- Ensuring that the financial planning process is environmentally sustainable, including the identification and evaluation of environmental impacts of proposed policies and programs.

THE CITY OF WINNIPEG COULD MAKE ITS OPERATIONS MORE SUSTAINABLE BY CONSIDERING THE FOLLOWING OPTIONS:

- Examining perverse subsidies resulting from existing municipal budgets and reporting on the environmental implications of existing fiscal policies;
- Educating City employees on green procurement;
- Developing a protocol for full-cost accounting and working towards cost-based municipal pricing;
- Establishing green procurement as a mandatory requirement for all City employees.
- Cooperating with other levels of government to ensure the provincial and federal policies do not undermine the City’s sustainability initiatives.
- Ensuring that the financial planning process is environmentally sustainable, including the identification and evaluation of environmental impacts of proposed policies and programs.

THE FOLLOWING OPTIONS

THE CITY OF WINNIPEG COULD HELP TO FOSTER SUSTAINABLE BEHAVIOUR AMONG ITS CITIZENS AND COMMUNITIES BY CONSIDERING THE FOLLOWING OPTIONS:

- Shifting taxes to promote equity and environmental sustainability;
- Educating citizens on the concept of green budgeting, including tax shifting, perverse subsidies, full-cost accounting, and green procurement;
- Ensuring that green budgeting tools are fair and equitable among citizens and to future generations.
Policy Objectives:

1. Promote and enhance existing and identify potential partnering opportunities
2. Foster collaboration to develop a comprehensive environmental strategy
3. Enhance the environmental education and awareness
4. Promote programs with stakeholders on community-based initiatives
5. Encourage the involvement of all levels of government in environmental initiatives
6. Enhance communication and collaboration among City departments on environmental initiatives within the City's corporate plan
7. Develop key environmental strategies to enhance the understanding of the City

Opportunities:

- Economic opportunities of the City
- Economic development opportunities for the City
- Enhancing the City's economic potential
- Enhancing the City's economic competitiveness
- Enhancing the City's economic sustainability

Key Strategies:

- Identifying key environmental partnership opportunities and ensuring that all stakeholders are consulted on decisions regarding the environment
- Working with other levels of government to coordinate policy and priorities on the environment
- Promoting cooperation among City departments on environmental initiatives within the City's corporate plan
- Enhancing the City's economic potential
- Enhancing the City's economic competitiveness
- Enhancing the City's economic sustainability

What is the issue?

Environment in itself is not a municipal jurisdiction. Environmental regulation is primarily an interjurisdictional matter that requires cooperation at the local, regional, national, and international level. A large number of environmental policies require partnerships between and among all levels of government and all community stakeholders.

The Committee also heard from the business community, through the Winnipeg Chamber of Commerce and the Manitoba Environmental Industries Association. It is clear that Winnipeg's business community recognizes the importance of partnerships and is interested in finding sustainable solutions to environmental issues.

Where are we now?

One of Winnipeg's strengths comes from partnerships with the private sector and local NGOs. Successful partnerships have led to the development of several initiatives that have addressed environmental concerns. However, more needs to be done to ensure that the business community is actively involved in environmental initiatives.

Sustainable Winnipeg: A Comprehensive Environmental Strategy 10

Sustainable partnerships can lead to economic opportunities and enhance the City's economic potential. They can also contribute to the development of green initiatives and sustainable development projects. However, partnerships require collaboration and coordination among all levels of government and all community stakeholders.
The City of Winnipeg could make its operations more sustainable by considering the following options:

- Identifying key environmental education and training requirements and opportunities;
- Partnering with local ENGOs, professional organizations, and other levels of government to coordinate policy and priorities on environmental education;
- Promoting cooperation among City departments on environmental education initiatives within the City's corporate plan;
- Producing an environmental code of practice for all City employees; and
- Encouraging employee participation and education through newsletters, lunchtime lecture series, additional training programs and awards programs.

The City of Winnipeg could help to foster sustainable behaviour among its citizens and within its communities by considering the following options:

- Developing a comprehensive environmental education program by appointing an Environmental Education Coordinator to work with key stakeholders and community groups;
- Partnering with local ENGOs, professional organizations, and other levels of government to coordinate policy and priorities on environmental education;
- Promoting cooperation among City departments on environmental education initiatives within the City's corporate plan;
- Producing an environmentally friendly report to assess levels of concern and assess issues to target with educational campaigns.
2-1 CLIMATE CHANGE

WHAT IS THE ISSUE?

Climate change is the result of the accumulation of pollutants and greenhouse gases (GHGs) in the atmosphere. It is recognized as one of our most serious global environmental problems. A 1998 study by the City of Winnipeg cited increased surface runoff from intense rain events could potentially overload the City's combined sewer overflows.

The recent ratification of the Kyoto protocol by the Government of Canada will require the City of Winnipeg to begin adopting and addressing policies and programs that can have a ... proactive policies will also serve to reduce greenhouse gas emissions, thereby addressing the issue of climate change.

WHERE ARE WE NOW?

The Manitoba Climate Change Task Force predicts that the average annual temperature in Manitoba will increase 4-6°C by the ... City departments including Transportation, Water and Waste, Solid Waste, Planning Property and Development, Public Works, and Community Services are undertaking initiatives that will lead to lowering the City's corporate emissions. In 1998 the City of Winnipeg became a member of the Partners for Climate Change program and has completed the first stage of the organization’s five-stage program. The PCP allows municipalities to model their emissions so that emissions can be measured and monitored over time to report on trends in increasing or decreasing emissions.

The 2002 opinion poll, commissioned by the City of Winnipeg Civic Environmental Committee, 64% of individuals polled indicated that they could have a positive impact on limiting their contribution to global climate change. In a separate question, 42% indicated that they are more concerned about climate change today than they were two years ago.

POLICY OBJECTIVE

The City of Winnipeg will become a leader in developing clear policies towards reducing greenhouse gas emissions so that emissions can be measured and monitored over time to report on trends in increasing or decreasing emissions.

KEY STRATEGIES

The City of Winnipeg could make its operations more sustainable by considering the following options:

a. Ensuring that GHG reductions are integrated into policy and decision making.
b. Meeting local emissions targets as established by the Province as Climat Change Policy.
c. Measuring local emissions targets as established by the Province as Climat Change Policy.
d. Setting local emissions targets as established by the Province as Climat Change Policy.
e. Ensuring that local emissions targets are integrated into policy and decision making.

SUSTAINABLE WINNIPEG: A COMPREHENSIVE ENVIRONMENTAL STRATEGY
WHAT IS THE ISSUE?

Winnipeg generally enjoys excellent air quality compared to other Canadian cities of similar size. Air quality concerns are often localized, such as the presence of odours or other air pollutants from sources such as industry, vehicles, and agriculture. Issues related to air quality fall under provincial jurisdiction, but the City of Winnipeg is involved in initiatives to help reduce the local and global effects of air pollution. Some of these initiatives include:

- Working with industry and other groups to mitigate nuisance odours that impact residents;
- Implementing measures to reduce vehicle emissions;
- Exploring the use of alternative fuels for fleet vehicles;
- Ensuring that City operations do not produce undue nuisance odours.

WHERE ARE WE NOW?

The City of Winnipeg could make its operations more sustainable by considering the following options:

- Integrating gas/electric hybrid vehicles into its existing fleet;
- Exploring the use of alternative fuels for fleet vehicles;
- Exploring the effects of City-owned equipment on air quality (for example, machinery operating on two-stroke engines);
- Ensuring that City operations do not produce undue nuisance odours.

POLICY OBJECTIVE

The City of Winnipeg will continue to seek ways to mitigate its contribution to air pollution and will work with citizens and industry to support initiatives that help reduce air pollution. Some of these initiatives include:

- Working with industry and other groups to mitigate nuisance odours that impact residents;
- Implementing measures to reduce vehicle emissions;
- Exploring the use of alternative fuels for fleet vehicles;
- Ensuring that City operations do not produce undue nuisance odours.

KEY STRATEGIES

The following items are presented as suggestions towards developing a priority plan on air quality for the City of Winnipeg. These suggestions should not limit the Council from exploring other options that could provide further benefits:

THE CITY OF WINNIPEG COULD MAKE ITS OPERATIONS MORE SUSTAINABLE BY CONSIDERING THE FOLLOWING OPTIONS:

a. Integrating gas/electric hybrid vehicles into its existing fleet;
b. Exploring the use of alternative fuels for fleet vehicles;
c. Exploring the effects of City-owned equipment on air quality (for example, machinery operating on two-stroke engines);
d. Ensuring that City operations do not produce undue nuisance odours.

THE CITY OF WINNIPEG COULD HELP TO FOSTER SUSTAINABLE BEHAVIOUR AMONG ITS CITIZENS AND WITHIN ITS COMMUNITIES BY CONSIDERING THE FOLLOWING OPTIONS:

e. Working with industry and other groups to mitigate nuisance odours that impact residents;

WHERE ARE WE NOW?

The City of Winnipeg could make its operations more sustainable by considering the following options:

a. Integrating gas/electric hybrid vehicles into its existing fleet;
b. Exploring the use of alternative fuels for fleet vehicles;
c. Exploring the effects of City-owned equipment on air quality (for example, machinery operating on two-stroke engines);
d. Ensuring that City operations do not produce undue nuisance odours.

THE FOLLOWING OPTIONS:

The City of Winnipeg could make its operations more sustainable by considering the following options:

a. Integrating gas/electric hybrid vehicles into its existing fleet;
b. Exploring the use of alternative fuels for fleet vehicles;
c. Exploring the effects of City-owned equipment on air quality (for example, machinery operating on two-stroke engines);
d. Ensuring that City operations do not produce undue nuisance odours.

WHERE ARE WE NOW?

The City of Winnipeg could make its operations more sustainable by considering the following options:

a. Integrating gas/electric hybrid vehicles into its existing fleet;
b. Exploring the use of alternative fuels for fleet vehicles;
c. Exploring the effects of City-owned equipment on air quality (for example, machinery operating on two-stroke engines);
d. Ensuring that City operations do not produce undue nuisance odours.
3-1 ENERGY CONSERVATION

KEY STRATEGIES

The following items are presented as suggestions towards developing a priority plan on Energy Conservation for the City of Winnipeg. These suggestions should not limit Council from exploring other options but do provide Council with key solutions for success.

THE CITY OF WINNIPEG COULD MAKE ITS OPERATIONS MORE SUSTAINABLE BY CONSIDERING THE FOLLOWING OPTIONS:

- a. Continuing with demand side management energy reduction programs, and adopting appropriate energy efficiency standards in the construction and retrofitting of civic buildings;
- b. Including energy efficiency criteria in the procurement of machinery and equipment, as well as the leasing of facilities for use by the City;
- c. Ensuring that future land use and development initiatives consider energy efficiency criteria.

THE CITY OF WINNIPEG COULD HELP TO FOSTER SUSTAINABLE BEHAVIOR AMONG ITS CITIZENS AND WITHIN ITS COMMUNITIES BY CONSIDERING THE FOLLOWING OPTIONS:

- d. Educating citizens on home energy efficiency;
- e. Providing tools to citizens to develop community-operated home energy efficiency programs;
- f. Ensuring that City tax assistance programs (for example, the Home Renovation Tax Assistance Program) emphasize eco-efficiency upgrades;
- g. Working with the province to shift the tax burden away from energy efficiency improvements in the home;
- h. Providing tools to citizens to develop community-operated home energy efficiency programs;
- i. Working with the province to shift the tax burden away from energy efficiency improvements in the home;
- j. Working with the province to shift the tax burden away from energy efficiency improvements in the home;
- k. Working with the province to shift the tax burden away from energy efficiency improvements in the home;

SUSTAINABLE WINNIPEG: A COMPREHENSIVE ENVIRONMENTAL STRATEGY

WHAT IS THE ISSUE?

In Canada, per-capita energy consumption is 320 GJ (Giga Joules) per year, while energy consumption in other developed nations such as Japan (153 GJ), Germany (165 GJ), England (166 GJ), Austria (129 GJ) and France (169 GJ) remain significantly lower. While programs to reduce energy consumption are ongoing, the rate of energy conservation is not as high as it could be. The City of Winnipeg could make its operations more sustainable by considering the following options:

- a. Continuing with demand side management energy reduction programs, and adopting appropriate energy efficiency standards in the construction and retrofitting of civic buildings;
- b. Including energy efficiency criteria in the procurement of machinery and equipment, as well as the leasing of facilities for use by the City;
- c. Ensuring that future land use and development initiatives consider energy efficiency criteria.

WHERE ARE WE NOW?

The bulk of Winnipeg’s energy consumption is from non-renewable resources. The City of Winnipeg has developed a number of energy efficiency programs, including a program to reduce energy consumption in commercial buildings, a program to reduce energy consumption in industrial and residential buildings, and a program to reduce energy consumption in transportation. The City of Winnipeg has also developed a number of energy efficiency programs, including a program to reduce energy consumption in commercial buildings, a program to reduce energy consumption in industrial and residential buildings, and a program to reduce energy consumption in transportation.

POLICY OBJECTIVE

The City of Winnipeg will continue to undertake a broad range of energy conservation initiatives within its own operations and will provide citizens and communities with the tools to do the same.

In a November 2002 opinion poll commissioned by the Civic Environmental Committee, 89% of Winnipeggers polled indicated that they were in favour of tax incentives focused on improving energy efficiency in commercial buildings, industrial and residential buildings. The City of Winnipeg has developed a number of energy efficiency programs, including a program to reduce energy consumption in commercial buildings, a program to reduce energy consumption in industrial and residential buildings, and a program to reduce energy consumption in transportation. The City of Winnipeg has also developed a number of energy efficiency programs, including a program to reduce energy consumption in commercial buildings, a program to reduce energy consumption in industrial and residential buildings, and a program to reduce energy consumption in transportation.
KEY STRATEGIES

The following items are presented as suggestions towards developing a priority plan on Sustainable Energy for the City of Winnipeg. These suggestions should not limit Council from exploring other options and should provide Council with key solutions for success. Winnipeggers themselves should be encouraged to think outside the box and develop a plan on sustainable energy for the City of Winnipeg.

The following items are presented as suggestions towards developing a plan on sustainable energy for the City of Winnipeg:

a. Purchasing from sources of sustainable energy;

b. Producing sustainable energy at City buildings (for example, geothermal heat pumps and photovoltaic energy cells);

c. Developing sustainable energy at City buildings (for example, geothermal heat pumps and photovoltaic energy cells);

d. Continuing to develop partnerships in the development of energy efficient infrastructure and sustainable energy production.

THE CITY OF WINNIPEG COULD HELP TO FOSTER SUSTAINABLE BEHAVIOR AMONG ITS CITIZENS AND WITHIN ITS COMMUNITIES BY CONSIDERING THE FOLLOWING OPTIONS:

f. Working with Manitoba Hydro to develop programs geared towards providing sustainable power to Winnipeggers;

g. Education citizens on sustainable energy sources;

h. Cooperating with the Federal Government in order to shift subsidies away from non-renewable energy sources such as natural gas.

URBAN ENERGY

WHAT IS THE ISSUE?

Sustainable energy systems produce energy without depleting natural resources, altering ecosystems, or compromising future generations' access to energy resources. Sustainable energy can be used to provide heating, cooling or electrical power, and can be used in conjunction with conventional energy sources such as natural gas.

Examples of sustainable energy include:

• wind generated electricity
• solar generated electricity and water heating
• geothermal energy
• biomass resources

WHERE ARE WE NOW?

In Canada, there are only five electricity companies that provide consumers with the option to purchase sustainable energy. These include: West Kootenay Power (BC), Enmax/Epcor (AB), SaskPower (SK), and Toronto Hydro (ON). The City of Winnipeg has partnered with the University of Manitoba in a number of initiatives to develop a prototype design for a solar powered bus shelter. The photoshelter is located at the University's Fort Garry campus.

POLICY OBJECTIVE

The City of Winnipeg will work with Federal and Provincial governments, Manitoba Hydro, and the private sector towards the long-term goal of becoming a leading municipal producer and consumer of sustainable energy.
Guiding Land Use Through Sustainable Urban Growth

**What is the Issue?**

Higher urban population densities reduce the costs associated with the delivery of municipal services and infrastructure. There is a growing concern that outward expansion of urban areas reduces the economic and environmental sustainability of communities, and leads to negative outcomes for citizens. Winnipeg has experienced significant outward expansion in recent years, which has raised concerns about the long-term sustainability of urban growth in the region. This challenge has spurred what has become known as the “SmartGrowth” or “Sustainable Growth” movement.

**Where are we now?**

Historically, Winnipeg has consumed more land per capita than many other Canadian cities. Between 1966 and 1986, Winnipeg’s population increased by 87%, while the city’s land area increased by 144%. Indigenous communities were affected by these trends as well. The city’s population growth has continued in recent years, but the rate of growth has slowed. In 2020, the City of Winnipeg had a population of 721,300, with the majority of residents living in the city centre and surrounding areas. The city has seen a number of challenges related to sustainable growth, including housing affordability, transportation, and environmental sustainability.

**Policy Objective**

The City of Winnipeg will continue its policy of sustainable urban growth through the use of Plan Winnipeg to ensure the development of vibrant, sustainable communities that lead to positive cultural, environmental, and economic outcomes. In addition, the city will work with other levels of government and neighboring municipalities to develop consistent policy and planning frameworks.

**Key Strategies**

- Promoting public transportation as a key element in smart growth.
- Encouraging mixed-use developments that maximize land use and reduce the need for new infrastructure.
- Developing green spaces and parks to enhance urban environments.
- Supporting the creation of walkable, transit-accessible neighborhoods.
- Working with other levels of government and neighboring municipalities to develop consistent policy and planning frameworks.

The City of Winnipeg could make its operations more sustainable by considering the following options:

- Working towards a sustainable urban growth policy for the City of Winnipeg including issues such as downtown housing, mixed land use, urban densification, and integrated transportation opportunities.
- Educating City employees on sustainable growth alternatives to urban sprawl.
- Working cooperatively with the Province and developers toward creating guidelines for future sustainable communities.
- Committing to the principle of fiscal and environmental sustainability by examining the equity of existing development policies.
- Considering demand-side management policies that prioritize infrastructure renewal over expansion.
- Consulting with the public and developers on the City’s sustainable urban growth policies.
- Consulting with other levels of government and neighboring municipalities on the development of local sustainable urban growth policies.
- Educating the public and developers on the benefits of sustainable urban growth and the problems associated with it.
- Consulting with the public and developers on the development of a more detailed Land Development Plan.
- Ensuring that new developments benefit the whole community and the environment.
- Creating incentives for designing more sustainable neighbourhoods.
- Working with other levels of government and neighboring municipalities to develop consistent policy and planning frameworks.

The City of Winnipeg could help to foster sustainable behaviour among its citizens and within its communities by considering the following options:

- Educating the public and developers on the benefits of sustainable urban growth and the problems associated with it.
- Consulting with the public and with stakeholder groups on the City of Winnipeg’s sustainable urban growth policies.
- Consulting with the public and with stakeholders on the development of local sustainable urban growth policies.
- Consulting with the public and with stakeholders on the development of local sustainable urban growth policies.
- Consulting with the public and with stakeholders on the development of local sustainable urban growth policies.
- Consulting with the public and with stakeholders on the development of local sustainable urban growth policies.

**Where are we now?**

Historically, Winnipeg has consumed more land per capita than many other Canadian cities. Between 1966 and 1986, Winnipeg’s population increased by 87%, while the city’s land area increased by 144%. Indigenous communities were affected by these trends as well. The city’s population growth has continued in recent years, but the rate of growth has slowed. In 2020, the City of Winnipeg had a population of 721,300, with the majority of residents living in the city centre and surrounding areas. The city has seen a number of challenges related to sustainable growth, including housing affordability, transportation, and environmental sustainability.

**What is the Issue?**

Higher urban population densities reduce the costs associated with the delivery of municipal services and infrastructure. There is a growing concern that outward expansion of urban areas reduces the economic and environmental sustainability of communities, and leads to negative outcomes for citizens. Winnipeg has experienced significant outward expansion in recent years, which has raised concerns about the long-term sustainability of urban growth in the region. This challenge has spurred what has become known as the “SmartGrowth” or “Sustainable Growth” movement.
WHAT IS THE ISSUE?

Winnipeg is in many ways an island habitat. Though there are many non-native plants, the City serves as a vessel for native species. However, native plants are not always suited to urban conditions, and floodplains are beneficial for migrating animals because they connect natural habitats used as corridors. Settlement of the Winnipeg area resulted in the introduction of non-native plant and animal species. As rich ecosystems have been replaced with less biologically diverse ones, urbanization has led to Dutch elm disease, cankerworms, forest tent caterpillars, and the invasion of weed species into natural habitats.

Parks, open spaces, and natural areas make a significant contribution to the attractiveness of the city and to its quality of life. In addition to their environmental benefits, these areas provide positive economic benefits such as increased recreation, healthier citizens, and enhanced tourism opportunities.

WHERE ARE WE NOW?

The City of Winnipeg currently has a Sensitive Lands Plan. The City Naturalist has developed an inventory of sensitive lands and floodplains. These two studies will identify issues and solutions associated with City parks and facilities.

The City of Winnipeg could help to foster sustainable behavior among its citizens and within its communities by considering the following options:

a. Using native plant species on prominent City properties (for example, City Hall);

b. Fostering biodiversity to the extent possible on City-owned lands;

c. Rehabilitating endangered environments, protecting sensitive habitat, and reintroducing natural species on City-owned lands;

d. Continuing to educate City employees involved in landscape design, planning and maintenance on the value of natural spaces and stewardship.

The following options:

a. Educating the public on the value of a biologically diverse urban landscape;

b. Providing public education on naturalization techniques;

c. Encouraging the public to provide input on the importance of preserving habitat on private property and in surrounding areas;

d. Coordinating with other levels of government to ensure the protection of sensitive lands under their ownership;

e. Providing incentives for preserving and naturalizing habitat on privately owned property.

In addition, the City should:

- Educating the public on the importance of preserving habitat on private property and in surrounding areas;
- Coordinating with other levels of government to ensure the protection of sensitive lands under their ownership;
- Providing incentives for preserving and naturalizing habitat on privately owned property.

POLICY OBJECTIVE

The City of Winnipeg will preserve, protect and enhance its open spaces and natural areas, and will empower citizens to undertake naturalization and rehabilitation projects within their communities.

KEY STRATEGIES

Parks, open spaces, and natural areas make a significant contribution to the attractiveness of the city and to its quality of life. In addition to their environmental benefits, these areas provide positive economic benefits such as increased recreation, healthier citizens, and enhanced tourism opportunities.

Policy Objective

The City of Winnipeg is currently working on a Sensitive Lands Plan. The City Naturalist has developed an inventory of sensitive lands and floodplains. These two studies will identify issues and solutions associated with City parks and facilities.

When asked to indicate what they value most about Winnipeg, citizens ranked “scenery, green space and open space” as the sixth most valuable City feature on a list of 14 choices (2001 poll commissioned by the CAO Secretariat).

The City of Winnipeg could help to foster sustainable behavior among its citizens and within its communities by considering the following options:

h. Educating the public on the value of a biologically diverse urban landscape;

i. Providing public education on naturalization techniques;

j. Encouraging the public to provide input on the importance of preserving habitat on private property and in surrounding areas;

k. Coordinating with other levels of government to ensure the protection of sensitive lands under their ownership;

l. Providing incentives for preserving and naturalizing habitat on privately owned property.

The following options:

a. Using native plant species on prominent City properties (for example, City Hall);

b. Fostering biodiversity to the extent possible on City-owned lands;

c. Rehabilitating endangered environments, protecting sensitive habitat, and reintroducing natural species on City-owned lands;

d. Continuing to educate City employees involved in landscape design, planning and maintenance on the value of natural spaces and stewardship.

The following options:

a. Educating the public on the value of a biologically diverse urban landscape;

b. Providing public education on naturalization techniques;

c. Encouraging the public to provide input on the importance of preserving habitat on private property and in surrounding areas;

d. Coordinating with other levels of government to ensure the protection of sensitive lands under their ownership;

e. Providing incentives for preserving and naturalizing habitat on privately owned property.

The City of Winnipeg could help to foster sustainable behavior among its citizens and within its communities by considering the following options:

h. Educating the public on the value of a biologically diverse urban landscape;

i. Providing public education on naturalization techniques;

j. Encouraging the public to provide input on the importance of preserving habitat on private property and in surrounding areas;

k. Coordinating with other levels of government to ensure the protection of sensitive lands under their ownership;

l. Providing incentives for preserving and naturalizing habitat on privately owned property.
**4-3 DEVELOPING BROWNFIELD SITES**

**Key Strategies**

The following items are presented as suggestions towards developing a priority plan on developing brownfield sites for the City of Winnipeg. These suggestions should not limit Council from exploring other options but do provide Council with key solutions of Winnipeg’s brownfield issues.

**The City of Winnipeg Could Help to Foster Sustainable Behaviour Among Its Citizens and Within Its Communities by Considering the Following Options:**

- Educating citizens, communities, and developers about the benefits associated with developing brownfield sites;
- Developing appropriate incentives to encourage the private sector to develop brownfield sites;
- Ensuring that brownfield remediation is represented within the City’s policy regarding land use and development; and
- Considering the recommendations as outlined in the National Roundtable on the Environment and Economy (NRTEE) brownfield redevelopment strategy (2003).

**The City of Winnipeg Could Make Its Operations More Sustainable by Considering the Following Options:**

- Implementing fiscal tools for the remediation of brownfield sites (for example, a dedicated brownfield remediation reserve fund);
- Utilizing brownfield sites in managing the demand for undeveloped greenfield sites;
- Ensuring that brownfield remediation is represented within the City’s policy regarding land use and development; and
- Cooperating with other levels of government in the development of sustainable fiscal tools for the remediation of brownfield sites.

**What is the Issue?**

Brownfields are industrial, commercial or residential sites that have not been redeveloped. Often this is because of actual or perceived liabilities associated with environmental contamination. Potential liabilities magnify the fiscal stress, low property values and acceleration of urban sprawl result from a lack of brownfield development.

The benefits of developing brownfield sites include: job creation, financial return on under-utilized property, community economic development opportunities, increased tax revenues, improved quality of life, elimination of blight, development of urban corridors, or within established urban areas, thereby maximizing existing infrastructure and opportunities for brownfield development.

**Where Are We Now?**

The City acquires brownfield sites through purchase or tax sale. The City’s Land Operating Reserve Account was established with the approval of improving property to a saleable condition for the specific purpose of land development. The estimated cost of development varies with land use and has not been finalized.

**Policy Objective**

The City of Winnipeg will work with communities, developers, and other levels of government to develop sustainable, fiscal and policy tools that will make brownfield site redevelopment projects attractive to private sector interests.
KEY STRATEGIES

The following items are presented as preliminary suggestions towards developing a priority plan on trails and greenways for the City of Winnipeg. These suggestions should not limit Council from exploring other options but do provide Council with key solutions.

The City of Winnipeg could make its operations more sustainable by considering the following options:

a. Integrating cycling and active transportation facilities such as bike racks, lockers, and showers within City workplaces;

b. Emphasizing the recreational, commuting, and health benefits of trail and greenway systems among City employees;

c. Studying all potential sites for trail and greenway development;

and
d. Prioritizing opportunities for trail and greenway development and

c. Studying all potential sites for trail and greenway development.

The City of Winnipeg could help to foster sustainable behaviour among its citizens and within its communities by considering the following options:

a. Cooperating with the private sector and other levels of government to encourage the donation or use of private land to be used in trail and greenway development;

b. Undertaking cooperative initiatives with organizations that promote community health and active living in order to encourage government to engage in the development of active land use policies and other levels of government to promote community health and active living;

c. Undertaking cooperative initiatives with organizations that promote community health and active living in order to encourage government to engage in the development of active land use policies and other levels of government to promote community health and active living;

d. Engaging in the recreational, commuting, and health benefits of trail and greenway systems.

WHERE ARE WE NOW?

The City of Winnipeg could make its operations more sustainable by considering the following options:

The City of Winnipeg could make its operations more sustainable by considering the following options:

a. Integrating cycling and active transportation facilities such as bike racks, lockers, and showers within City workplaces;

b. Emphasizing the recreational, commuting, and health benefits of trail and greenway systems among City employees;

c. Studying all potential sites for trail and greenway development;

and
d. Prioritizing opportunities for trail and greenway development and

c. Studying all potential sites for trail and greenway development.

The City of Winnipeg could help to foster sustainable behaviour among its citizens and within its communities by considering the following options:

a. Cooperating with the private sector and other levels of government to encourage the donation or use of private land to be used in trail and greenway development;

b. Undertaking cooperative initiatives with organizations that promote community health and active living in order to encourage government to engage in the development of active land use policies and other levels of government to promote community health and active living;

c. Undertaking cooperative initiatives with organizations that promote community health and active living in order to encourage government to engage in the development of active land use policies and other levels of government to promote community health and active living;

d. Engaging in the recreational, commuting, and health benefits of trail and greenway systems.

WHERE ARE WE NOW?

The City of Winnipeg could make its operations more sustainable by considering the following options:

The City of Winnipeg could make its operations more sustainable by considering the following options:

a. Integrating cycling and active transportation facilities such as bike racks, lockers, and showers within City workplaces;

b. Emphasizing the recreational, commuting, and health benefits of trail and greenway systems among City employees;

c. Studying all potential sites for trail and greenway development;

and
d. Prioritizing opportunities for trail and greenway development and

c. Studying all potential sites for trail and greenway development.

The City of Winnipeg could help to foster sustainable behaviour among its citizens and within its communities by considering the following options:

a. Cooperating with the private sector and other levels of government to encourage the donation or use of private land to be used in trail and greenway development;

b. Undertaking cooperative initiatives with organizations that promote community health and active living in order to encourage government to engage in the development of active land use policies and other levels of government to promote community health and active living;

c. Undertaking cooperative initiatives with organizations that promote community health and active living in order to encourage government to engage in the development of active land use policies and other levels of government to promote community health and active living;

d. Engaging in the recreational, commuting, and health benefits of trail and greenway systems.

WHERE ARE WE NOW?

The City of Winnipeg could make its operations more sustainable by considering the following options:

The City of Winnipeg could make its operations more sustainable by considering the following options:

a. Integrating cycling and active transportation facilities such as bike racks, lockers, and showers within City workplaces;

b. Emphasizing the recreational, commuting, and health benefits of trail and greenway systems among City employees;

c. Studying all potential sites for trail and greenway development;

and
d. Prioritizing opportunities for trail and greenway development and

c. Studying all potential sites for trail and greenway development.

The City of Winnipeg could help to foster sustainable behaviour among its citizens and within its communities by considering the following options:

a. Cooperating with the private sector and other levels of government to encourage the donation or use of private land to be used in trail and greenway development;

b. Undertaking cooperative initiatives with organizations that promote community health and active living in order to encourage government to engage in the development of active land use policies and other levels of government to promote community health and active living;

c. Undertaking cooperative initiatives with organizations that promote community health and active living in order to encourage government to engage in the development of active land use policies and other levels of government to promote community health and active living;

d. Engaging in the recreational, commuting, and health benefits of trail and greenway systems.

WHERE ARE WE NOW?

The City of Winnipeg could make its operations more sustainable by considering the following options:

The City of Winnipeg could make its operations more sustainable by considering the following options:

a. Integrating cycling and active transportation facilities such as bike racks, lockers, and showers within City workplaces;

b. Emphasizing the recreational, commuting, and health benefits of trail and greenway systems among City employees;

c. Studying all potential sites for trail and greenway development;

and
d. Prioritizing opportunities for trail and greenway development and

c. Studying all potential sites for trail and greenway development.

The City of Winnipeg could help to foster sustainable behaviour among its citizens and within its communities by considering the following options:

a. Cooperating with the private sector and other levels of government to encourage the donation or use of private land to be used in trail and greenway development;

b. Undertaking cooperative initiatives with organizations that promote community health and active living in order to encourage government to engage in the development of active land use policies and other levels of government to promote community health and active living;

c. Undertaking cooperative initiatives with organizations that promote community health and active living in order to encourage government to engage in the development of active land use policies and other levels of government to promote community health and active living;

d. Engaging in the recreational, commuting, and health benefits of trail and greenway systems.

WHERE ARE WE NOW?

The City of Winnipeg could make its operations more sustainable by considering the following options:

The City of Winnipeg could make its operations more sustainable by considering the following options:

a. Integrating cycling and active transportation facilities such as bike racks, lockers, and showers within City workplaces;

b. Emphasizing the recreational, commuting, and health benefits of trail and greenway systems among City employees;

c. Studying all potential sites for trail and greenway development;

and
d. Prioritizing opportunities for trail and greenway development and

c. Studying all potential sites for trail and greenway development.

The City of Winnipeg could help to foster sustainable behaviour among its citizens and within its communities by considering the following options:

a. Cooperating with the private sector and other levels of government to encourage the donation or use of private land to be used in trail and greenway development;

b. Undertaking cooperative initiatives with organizations that promote community health and active living in order to encourage government to engage in the development of active land use policies and other levels of government to promote community health and active living;

c. Undertaking cooperative initiatives with organizations that promote community health and active living in order to encourage government to engage in the development of active land use policies and other levels of government to promote community health and active living;

d. Engaging in the recreational, commuting, and health benefits of trail and greenway systems.

WHERE ARE WE NOW?

The City of Winnipeg could make its operations more sustainable by considering the following options:

The City of Winnipeg could make its operations more sustainable by considering the following options:

a. Integrating cycling and active transportation facilities such as bike racks, lockers, and showers within City workplaces;

b. Emphasizing the recreational, commuting, and health benefits of trail and greenway systems among City employees;

c. Studying all potential sites for trail and greenway development;

and
d. Prioritizing opportunities for trail and greenway development and

c. Studying all potential sites for trail and greenway development.
4-5 GREEN BUILDING

WHAT IS THE ISSUE?

Many of the environmental challenges facing urban areas such as Winnipeg are directly related to poor building performance. Buildings consume a significant amount of energy, water, and materials. Poorly designed buildings that lack an integrated approach to energy and water management can drastically increase the demand for energy and resources placed on municipal services and infrastructure.

Rather than squeezing energy-efficient features into tight construction budgets, green building requires an integrated approach to project budgeting, where items such as resource efficiency, water conservation, and sustainable materials can be factored into the design process. By designing buildings that are more efficient, developers can reduce the overall cost of construction and operation, leading to long-term savings.

WHERE ARE WE NOW?

North American cities are beginning to adopt green building guidelines. Natural Resources Canada’s C2000 program and the Leadership in Energy and Environmental Design (LEED) are examples of voluntary standards that are being implemented to encourage the design and construction of sustainable buildings.

In Winnipeg, Red River College’s Princess Street Campus was designed to meet C2000 standards. Similarly, the Mountain Equipment Co-op building was designed to meet LEED standards. The City of Winnipeg is also working to incorporate green building principles into new construction projects and building retrofits.

POLICY OBJECTIVE

The City of Winnipeg will incorporate principles of green building into new construction projects and building retrofits and will develop programs and policies that encourage green building within the private sector.

KEY STRATEGIES

The following items are presented as suggestions towards developing a priority plan on Green Buildings for the City of Winnipeg. These suggestions should not limit Council from exploring other options but do provide Council with key solutions for success.

THE CITY OF WINNIPEG COULD MAKE ITS OPERATIONS MORE SUSTAINABLE BY CONSIDERING THE FOLLOWING OPTIONS:

a. Adopting an appropriate green building standard for new city buildings, retrofit projects, landscape design projects, and becoming a member of the Canadian Green Building Council;

b. Providing education opportunities for city employees to become LEED certified;

c. Phasing in green design standards for externally-tendered projects;

d. Cooperating with other levels of government and non-governmental organizations to develop green building partnerships;

e. Providing education and awareness opportunities to city employees to become LEED certified;

THE CITY OF WINNIPEG COULD HELP TO FOSTER SUSTAINABLE BEHAVIOUR AMONG ITS CITIZENS AND WITHIN ITS COMMUNITIES BY CONSIDERING THE FOLLOWING OPTIONS:

f. Educating citizens on the benefits of green building;

g. Providing tools that empower citizens, private corporations, and local governments to help them achieve LEED certification;

k. Helping to facilitate the dissemination of green building research among public sector, academic, and professional organizations.

WHERE ARE WE NOW?

The City of Winnipeg has made significant progress in adopting green building practices. The City has adopted the Canadian Green Building Council’s LEED standard for new city buildings and is working to incorporate green building principles into future projects.

The City of Winnipeg has also been working to provide education and awareness opportunities to city employees to become LEED certified. By promoting green building principles, the City aims to encourage sustainable practices among its citizens and within its communities.

THE FOLLOWING OPTIONS:

a. Adopting an appropriate green building standard for new city buildings, retrofit projects, landscape design projects, and becoming a member of the Canadian Green Building Council;

b. Providing education opportunities for city employees to become LEED certified;

c. Phasing in green design standards for externally-tendered projects;

d. Cooperating with other levels of government and non-governmental organizations to develop green building partnerships;

e. Providing education and awareness opportunities to city employees to become LEED certified;

THE CITY OF WINNIPEG COULD HELP TO FOSTER SUSTAINABLE BEHAVIOUR AMONG ITS CITIZENS AND WITHIN ITS COMMUNITIES BY CONSIDERING THE FOLLOWING OPTIONS:

f. Educating citizens on the benefits of green building;

g. Providing tools that empower citizens, private corporations, and local governments to help them achieve LEED certification;

k. Helping to facilitate the dissemination of green building research among public sector, academic, and professional organizations.
WHAT IS THE ISSUE?

The urban forest is comprised of all trees growing within the City of Winnipeg limits. The urban forest can be divided into publicly-owned and privately owned trees. Public trees are owned by the City of Winnipeg and planted in parks, transportation corridors, school grounds, and other public spaces. These trees are managed by the Forestry Branch. Private trees are owned by private landowners, and grow on residential and industrial property, riverbanks, and natural areas.

Planted trees and natural forested areas make a significant contribution to the attractiveness of the city and to its quality of life. They are an intrinsic part of making a city liveable, providing shade, improving air quality, reducing noise, increasing recreation, and enhancing tourism opportunities. Therefore, their maintenance and replacement should be a priority.

At present, the benefits of trees in Winnipeg are not maximized because of poor maintenance practices and vacant planting sites. Moreover, potential new pests (such as Emerald Ash Borer) are threatening Winnipeg's urban forest, thus requiring specialized management techniques.

WHERE ARE WE NOW?

The City of Winnipeg Forestry Branch manages the Forestry and Dutch Elm Disease (DED) programs. The Forestry Branch also continues to work with various stakeholders and partners, including the Coalition to Save the Elms, to address the issue of Dutch Elm Disease (DED) and its impact on the urban forest.

In order to address the aforementioned issues and concerns, the Forestry Branch intends to prepare a report entitled, “An Urban Forest Management Strategy for the City of Winnipeg.” This report will identify a plan and the resources needed to manage the urban forest in Winnipeg. The report will focus on creating a framework that ensures the long-term health of the urban forest in Winnipeg.

SUSTAINABLE LAND USE AND DEVELOPMENT

POLICY OBJECTIVE

The City of Winnipeg will preserve, protect and enhance its urban forest by planting more trees, adopting high standards of tree maintenance, diversifying its urban forest, and encouraging other levels of government and the public to become involved.

KEY STRATEGIES

The following key strategies are suggested toward developing a priority plan on managing urban forests.

- Planting more trees through community and volunteer efforts.
- Coordinating with other levels of government and community partners.
- Increasing public involvement and creating key partnerships from the private, public and voluntary sectors.
- Encouraging others to become involved in planning and the care of trees on private lands.
- Educating the public on the benefits of the urban forest.

THE CITY OF WINNIPEG COULD HELP TO FOSTER SUSTAINABLE BEHAVIOR AMONG ITS CITIZENS BY CONSIDERING THE FOLLOWING OPTIONS:

- Educating the public on the benefits of the urban forest;
- Increasing public involvement and/or recruiting key organizations from the public, private and voluntary sectors;
- Preserving natural areas within the city and requiring developers to retain existing trees wherever possible;
- Diversifying the types and sizes of urban trees through canopy analysis;
- Establishing higher standards of tree maintenance and replacement of trees affected by disease, in particular Dutch elm disease;
- Preserving natural forested areas within the city and requiring developers to retain existing trees wherever possible;
- Encouraging new planting programs, diversifying the variety of new trees and adopting high standards of tree maintenance;
- Providing public education programs that promote tree care.

THE CITY OF WINNIPEG COULD MAKE ITS OPERATIONS MORE SUSTAINABLE BY CONSIDERING THE FOLLOWING OPTIONS:

- Increasing the stock of trees through new planting programs, adopting high standards of tree maintenance, diversifying the variety of new trees and adopting high standards of tree maintenance;
- Establishing higher standards of tree maintenance and replacing trees affected by disease, in particular Dutch elm disease;
- Preserving natural forested areas within the city and requiring developers to retain existing trees wherever possible;
- Diversifying the types and sizes of urban trees through canopy analysis;
- Establishing higher standards of tree maintenance.

THE FOLLOWING OPTIONS:

- Planting more trees through community and volunteer efforts.
- Coordinating with other levels of government and community partners.
- Increasing public involvement and creating key partnerships from the private, public and voluntary sectors.
- Educating the public on the benefits of the urban forest.

THE CITY OF WINNIPEG’S URBAN FOREST IS BY-PRODUCT OF ITS PAST ENVIRONMENTAL STRUGGLES AND ITS FUTURE SUSTAINABILITY.

- Planting more trees through community and volunteer efforts.
- Coordinating with other levels of government and community partners.
- Increasing public involvement and creating key partnerships from the private, public and voluntary sectors.
- Educating the public on the benefits of the urban forest.

The City of Winnipeg’s urban forest is a by-product of its past environmental struggles and its future sustainability. It is a testament to the city’s commitment to preserving, protecting and enhancing its natural environment. The city is working to ensure that the urban forest is a vital part of its identity and a source of pride for its residents.

The urban forest is comprised of all trees growing within the city limits. It includes both planted and natural forested areas, as well as trees on private property. The urban forest is managed by the Forestry Branch of the City of Winnipeg. The branch is responsible for planting and maintaining trees, as well as addressing pest and disease issues. The urban forest is a vital component of the city’s environmental strategy and is an important source of recreation and tourism.
KEY STRATEGIES

The following items are presented as suggestions towards developing a priority plan on Transportation Demand Management for the City of Winnipeg. These suggestions should not limit Council from exploring other options but do provide Council with keysolutions for success.

THE CITY OF WINNIPEG COULD LEAD BY EXAMPLE AND MAKE ITS OPERATIONS MORE SUSTAINABLE BY CONSIDERING THE FOLLOWING OPTIONS:

a. Managing the demands for automobile infrastructure rather than expanding supply;
b. Adopting policies towards telecommuting and flex time to reduce demands on transportation infrastructure;
c. Implementing an employee parking policy that supports car-pooling and discourages single occupancy vehicles.

WHERE ARE WE NOW?

In recent decades, the number of people made use of automobiles in Winnipeg has grown much faster than the rate of growth in population. Winnipeg’s automobile dependency is one of the highest in Canada, with 79% of all trips being made by automobile. This trend is expected to continue as Winnipeg has a strong economy and a growing population.

WHAT IS THE ISSUE?

The objective of conventional transportation management has been to move vehicles, primarily automobiles, in and around communities as rapidly as possible. However, it has been a continual challenge for governments to fund transportation infrastructure projects. The City of Winnipeg is no exception. In the November 2002 poll commissioned by the City of Winnipeg Civic Environmental Committee, citizens ranked their concern over traffic congestion higher than any other environmental issue. 51% of those polled indicated that they are more concerned about traffic congestion today than they were two years ago. The City of Winnipeg will work with other community groups, NGOs, the business community and other levels of government towards the development of a comprehensive TDM strategy for Winnipeg.

POLICY OBJECTIVE

They are more concerned about traffic congestion today than they were two years ago. The City of Winnipeg will work with other community groups, NGOs, the business community and other levels of government towards the development of a comprehensive TDM strategy for Winnipeg.

THE CITY OF WINNIPEG COULD HELP TO FOSTER SUSTAINABLE BEHAVIOR AMONG ITS CITIZENS AND WITHIN ITS COMMUNITIES BY CONSIDERING THE FOLLOWING OPTIONS:

d. Working cooperatively with the Province to develop a comprehensive transportation management strategy for the City of Winnipeg.

e. Working with the Province to shift tax payer support away from automobile infrastructure and towards environmentally friendly transportation options.

In recent decades, the number of people made use of automobiles in Winnipeg has grown much faster than the rate of growth in population. Winnipeg’s automobile dependency is one of the highest in Canada, with 79% of all trips being made by automobile. This trend is expected to continue as Winnipeg has a strong economy and a growing population.

WHERE ARE WE NOW?

In recent decades, the number of people made use of automobiles in Winnipeg has grown much faster than the rate of growth in population. Winnipeg’s automobile dependency is one of the highest in Canada, with 79% of all trips being made by automobile. This trend is expected to continue as Winnipeg has a strong economy and a growing population.

WHAT IS THE ISSUE?

The objective of conventional transportation management has been to move vehicles, primarily automobiles, in and around communities as rapidly as possible. However, it has been a continual challenge for governments to fund transportation infrastructure projects. The City of Winnipeg is no exception. In the November 2002 poll commissioned by the City of Winnipeg Civic Environmental Committee, citizens ranked their concern over traffic congestion higher than any other environmental issue. 51% of those polled indicated that they are more concerned about traffic congestion today than they were two years ago. The City of Winnipeg will work with other community groups, NGOs, the business community and other levels of government towards the development of a comprehensive TDM strategy for Winnipeg.

POLICY OBJECTIVE

They are more concerned about traffic congestion today than they were two years ago. The City of Winnipeg will work with other community groups, NGOs, the business community and other levels of government towards the development of a comprehensive TDM strategy for Winnipeg.

THE CITY OF WINNIPEG COULD HELP TO FOSTER SUSTAINABLE BEHAVIOR AMONG ITS CITIZENS AND WITHIN ITS COMMUNITIES BY CONSIDERING THE FOLLOWING OPTIONS:

d. Working cooperatively with the Province to develop a comprehensive transportation management strategy for the City of Winnipeg.

e. Working with the Province to shift tax payer support away from automobile infrastructure and towards environmentally friendly transportation options.
5-2 PUBLIC TRANSPORTATION

The following items are presented as suggestions towards developing a priority plan on Public Transportation for the City of Winnipeg. These suggestions should not limit Council from exploring other options but do provide Council with key solutions for success.

**THE CITY OF WINNIPEG COULD MAKE ITS OPERATIONS MORE SUSTAINABLE BY CONSIDERING THE FOLLOWING OPTIONS:**

- a. Implementing innovative programmes to encourage employees to use public transit (e.g. Eco-pass);
- b. Educating city employees on the benefits, including economic benefits, of using transit; and
- c. Shifting mileage and parking subsidies away from the use of automobiles.

**THE CITY OF WINNIPEG COULD HELP TO FOSTER SUSTAINABLE BEHAVIOUR AMONG ITS CITIZENS AND WITHIN ITS COMMUNITIES BY CONSIDERING THE FOLLOWING OPTIONS:**

- d. Continuing to implement the recommendations in Direction to the Future;
- e. Ensuring that future Smart Growth developments are sufficiently oriented toward public transportation, and that transit can be easily accessed from these developments.
- f. Continuously improving transportation initiatives in direction to the following options:
- g. The City of Winnipeg could help to foster sustainable transportation by considering the following options:
- h. Providing new parking initiatives to communities that show support for sustainable transportation;
- i. Working with other levels of government to develop public sector initiatives;
- j. Promoting the “Eco-pass” program to major employers in Winnipeg and persuading the federal government to make employers in government and other levels of government pay for the cost of providing employees with public transit subsidies.

**POLICY OBJECTIVE:**

The City of Winnipeg will work with citizens, the business community, and other levels of government towards the development of a sustainable public transportation system.

In the November 2002 poll commissioned by the City of Winnipeg Civic Environmental Committee, 56% of respondents indicated they would be willing to reduce their automobile use by taking public transportation to work. This figure has since increased significantly.

The convenience and affordability of sustainable public transportation should be emphasized through the City’s efforts to promote transit. Winnipeg Transit’s commitment to innovation, its understanding of the barriers to public transportation, coupled with public willingness to utilize transit should lead to increased rides in the long run. Winnipeg’s commitment to innovation is an important part of the City’s plan to develop supportive conditions for public transit. Winnipeg Transit’s commitment to innovation is underscored in its development of the Urban Transportation Showcase Program, which has already identified and launched several initiatives, including the “Eco-pass” program, that have shown promising results.

In contrast, the current expansion of automobile infrastructure stimulates decentralized patterns of urban growth. This type of growth, or sprawl, increases the geographic area that public transportation networks must cover...
WHAT IS THE ISSUE?
The Federation of Canadian Municipalities defines “active transportation” as “choosing to walk, cycle or use some other physical activity to get where you need to go.” By including the emphasis on physical activity, the definition encompasses a broad range of practical transportation methods that can be applied in urban planning.

Good transportation solutions must work hand in hand with the community. Bicycle and pedestrian friendly communities have higher housing values, generate more local business, reduce emissions and improve health outcomes. “Active transportation is about more than fixed modes of transportation.”

Nationally, Calgary and Toronto have integrated walking and cycling plans. In three years, the Greater Vancouver Transport Authority will invest over $15 million for cycling initiatives.

WHERE ARE WE NOW?
In 2003, Winnipeg won the Commuter Challenge for cities between 499,999 and 999,999 people. The Commuter Challenge is a provincial initiative to encourage and promote active and environmentally friendly commuting strategies.

Between 1993 and 2003, the City of Winnipeg commissioned various studies into bicycle and pedestrian infrastructure. In 2003, a detailed analysis of active transportation at the planning stage of policy and project development in Winnipeg was undertaken by Allison Cook, Active Transportation Planner for London Ontario, and University of Manitoba City Planning graduate.

SUSTAINABLE WINNIPEG: A COMPREHENSIVE ENVIRONMENTAL STRATEGY 24
In 2003, a detailed analysis of active transportation at the planning stage of policy and project development in Winnipeg was undertaken by Allison Cook, Active Transportation Planner for London Ontario, and University of Manitoba City Planning graduate.

In 2003, a detailed analysis of active transportation at the planning stage of policy and project development in Winnipeg was undertaken by Allison Cook, Active Transportation Planner for London Ontario, and University of Manitoba City Planning graduate.

Key strategies for Winnipeg:
- Providing safe and accessible streets for all users;
- Developing and implementing active transportation plans and initiatives;
- Providing education and awareness campaigns on walking and cycling;
- Examining the development of cycling and pedestrian infrastructure;
- Working with the Province to develop walking and cycling policies;
- Examining the development of cycling and pedestrian infrastructure;
- Examining the development of cycling and pedestrian infrastructure;
- Examining the development of cycling and pedestrian infrastructure;
- Examining the development of cycling and pedestrian infrastructure;
- Examining the development of cycling and pedestrian infrastructure.

The City of Winnipeg could help to foster sustainable behaviour among its citizens by considering the following options:
- Partnering with local NGOs, community groups and other levels of government to support active transportation;
- Working with the Province to develop walking and cycling policies;
- Examining the development of cycling and pedestrian infrastructure;
- Examining the development of cycling and pedestrian infrastructure.

The following options make active transportation more sustainable by considering the City of Winnipeg’s community features and social conditions:
- Partnering with local NGOs, community groups and other levels of government to support active transportation;
- Working with the Province to develop walking and cycling policies;
- Examining the development of cycling and pedestrian infrastructure;
- Examining the development of cycling and pedestrian infrastructure.

WHERE ARE WE NOW?
In 2003, Winnipeg won the Commuter Challenge for cities between 499,999 and 999,999 people. The Commuter Challenge is a provincial initiative to encourage and promote active and environmentally friendly commuting strategies.

The following options make active transportation more sustainable by considering the City of Winnipeg’s community features and social conditions:
- Partnering with local NGOs, community groups and other levels of government to support active transportation;
- Working with the Province to develop walking and cycling policies;
- Examining the development of cycling and pedestrian infrastructure;
- Examining the development of cycling and pedestrian infrastructure.

The following options make active transportation more sustainable by considering the City of Winnipeg’s community features and social conditions:
- Partnering with local NGOs, community groups and other levels of government to support active transportation;
- Working with the Province to develop walking and cycling policies;
- Examining the development of cycling and pedestrian infrastructure;
- Examining the development of cycling and pedestrian infrastructure.
WHAT IS THE ISSUE?

By-products of residential consumption include organic kitchen and yard waste, packaging waste, post consumer waste, and household hazardous waste (HHW). Residential solid waste makes up a significant portion of solid waste produced in Winnipeg. Problems related to landfills and waste production include: surface and groundwater contamination, methane gas, land consumption, concentration of HHW, and the loss of landfill capacity. 

WHERE ARE WE NOW?

Winnipeg residents currently divert approximately 50% of recyclables away from landfill. In May 2001, City Council passed the Waste Minimization Strategy. This strategy includes provision for recycling in public spaces, recycling in apartments and condominiums, and a pilot program for the collection of yard waste.

Both the Province of Manitoba and the City of Winnipeg have recognized the need to provide effective and efficient HHW collection services. The following options are presented as suggestions towards developing a priority plan on Household Solid and Hazardous Waste...
The following items are presented as suggestions towards developing a priority plan on Industrial, Commercial, and Institutional Waste for the City of Winnipeg. These suggestions should not limit Council from exploring other options but do provide Council with keysolutions for success.

THE CITY OF WINNIPEG COULD MAKE ITS OPERATIONS MORE SUSTAINABLE BY CONSIDERING THE FOLLOWING OPTIONS:

a. Enhancing existing recycling programs at City-organized festivals and events;

b. Developing waste minimization plans for City offices, departments, and operations;

c. Ensuring that construction and demolition projects have taken the appropriate steps toward minimizing waste;

d. Demonstrating innovation by exploring methods of increasing the scope of materials recycled from City operations.

THE CITY OF WINNIPEG COULD HELP TO FOSTER SUSTAINABLE BEHAVIOUR AMONG ITS CITIZENS AND WITHIN ITS COMMUNITIES BY CONSIDERING THE FOLLOWING OPTIONS:

e. Ensuring shared responsibility by requiring that construction and demolition projects have appropriate waste minimization plans;

e. Ensuring fiscal and environmental sustainability by requesting that the Province of Manitoba review competitive practices among landfill sites within the Manitoba capital region and revise tipping fees to encourage waste reduction;

g. Exploring sustainable financing methods for ICI waste diversion (for example, requesting that the Province of Manitoba enhance legislation and policies related to extended producer responsibility).

THE CITY OF WINNIPEG COULD HELP TO FOSTER SUSTAINABLE BEHAVIOUR AMONG ITS CITIZENS AND WITHIN ITS COMMUNITIES BY CONSIDERING THE FOLLOWING OPTIONS:

a. Enhancing existing recycling programs at City-organized festivals and events;

b. Developing waste minimization plans for City offices, departments, and operations;

c. Ensuring that construction and demolition projects have taken the appropriate steps toward minimizing waste;

d. Demonstrating innovation by exploring methods of increasing the scope of materials recycled from City operations.

WHERE ARE WE NOW?

As part of the City of Winnipeg’s initiatives to reduce ICI waste, the adaptive reuse of buildings has been encouraged. The City has adopted policy on the preservation of historic buildings and provides funding through the Heritage Conservation/Heritage Conservation Program. By preserving its built heritage, the City diverts needless demolition waste from landfills.

In the November 2002 poll commissioned by the City of Winnipeg Civic Environmental Committee, 69% of respondents were supportive of providing tax incentives to encourage the adaptive reuse of existing buildings.

POLICY OBJECTIVE

The City of Winnipeg will work with the Province of Manitoba and ICI waste producers towards enhancing systems and policies where reducing the amount of ICI waste diverted to landfills. The adaptive re-use of buildings and other materials will continue to be encouraged and policies aimed at reducing the amount of ICI waste diverted to landfills. The adaptive re-use of buildings and other materials will continue to be encouraged.

WHAT IS THE ISSUE?

ICI waste is comprised of non-residential refuse including by-products of production and manufacturing, commercial and institutional, and municipal solid waste. Most of this waste is transported to landfills.

Extended Producer Responsibility (EPR) is the most significant tool used to limit ICI waste. EPR programs broaden the responsibility of producers to include managing waste once discarded by the consumer. Making producers responsible for their products and the waste they produce encourages the industry to incorporate a broader range of environmental considerations into product design and material selection.

WHERE ARE WE NOW?

It is estimated that 70% of the City’s ICI waste is diverted away from Winnipeg’s landfills.

SUSTAINABLE WINNIPEG: A COMPREHENSIVE ENVIRONMENTAL STRATEGY 26
**The City of Winnipeg could make its operations more sustainable by considering the following options:**

- Incorporating innovative demonstration projects that demonstrate the City’s commitment to demand-side management.
- Continuing to implement water conservation demonstration projects at city-owned facilities and properties, including parks and golf courses, using drought-tolerant plants on city-owned properties.
- Storing rainwater for irrigation on City gardens.

**The City of Winnipeg could help to foster sustainable behavior among its citizens and within its communities by considering the following options:**

- Promoting demand-side management in conjunction with biodiversity (for example, providing drought-tolerant prairie landscape design education and rebates on prairie plants).
- Empowering citizens and communities to develop water conservation plans and report on progress toward meeting community conservation efforts (for example, promoting the purchase of low-flow toilets and dual-flush toilets).
- Working with the Province of Manitoba to change building codes for new homes to specify 3/6 litre dual-flush toilets.
- Ensuring that existing sewer and water rate structures are consistent with the principle of demand-side management.

**What is the issue?**

Freshwater is a fundamental natural resource. Well-designed water conservation programs provide fiscal and infrastructure advantages, reduce pressure on wastewater treatment plants, and reduce pollutant discharges into the waterways. The City of Winnipeg could postpone the need to expand the Shoal Lake aqueduct by reducing its water consumption. Owing to the global scarcity and uneven distribution of this resource, the City of Winnipeg recognizes the need to conserve its freshwater supply as much as possible. Compared to other Canadian cities, Winnipeg’s per capita water consumption is lower. In global terms, however, Winnipeg’s per capita consumption is among the highest in the world. Winnipeg’s water consumption is comparable to that of other cities in the world. However, Winnipeg’s population is still growing, and the City of Winnipeg must take action to conserve its natural resources. The City is exploring various strategies to reduce water consumption, and one of the most effective is to promote water conservation through education and awareness campaigns.

**Where are we now?**

Winnipeg obtains its drinking water via aquaduct from Shoal Lake. The City has 20 days of water stored in the Deacon Dam. The Water and Waste Department is focusing future conservation efforts on reducing average annual demands. Between 1995 and 2001, Winnipeg’s water consumption was reduced by 27.5%. In 1995, it was 238 MLd, and in 2001, it was 175 MLd. The City is working to reduce its water consumption even further. The Water and Waste Department is focused on increasing public awareness of the importance of water conservation and encouraging residents to reduce their water usage. The City is also exploring ways to improve its water treatment facilities and reduce the amount of water lost through leaks. The City is working with the Province of Manitoba to change building codes for new homes to specify 3/6 litre dual-flush toilets.

**Policy objectives**

The City of Winnipeg will continue to work towards an environmentally sustainable and fiscally sustainable water distribution system that will continue to provide a safe and clean water supply for the citizens of Winnipeg. The City will continue to conserve its natural resources and promote water conservation through education and awareness campaigns.
WHAT IS THE ISSUE?

The City of Winnipeg has an extensive wastewater collection and treatment system to ensure a healthy aquatic environment in the local rivers and to provide protection of public health and the environment. The City’s wastewater collection and treatment system consists of 1,034 kilometres of combined sewers, 1,182 kilometres of wastewater pipes, 76 pumping stations, 3 treatment facilities, and 76 storm water retention basins. The City’s wastewater collection system serves the South End and West End Water Pollution Control Centres (NEWPCC) and complies with Provincial Water Pollution Control Centre regulations.

In 1978, the City’s wastewater collection system was 20 years old, and the City’s population had doubled. Since that time, the City has spent in excess of $200 million to upgrade its wastewater treatment facilities to comply with Provincial Water Pollution Control Centre regulations. The plan to improve Winnipeg’s wastewater treatment system was approved by the City Council in 2002. The plan includes:

- Completion of disinfection facilities at the NEWPCC to comply with microbiological objectives.
- Development of ammonia control facilities at the NEWPCC.
- Anticipating the potential requirement to reduce nutrient concentrations (nitrogen and phosphorus) from treated wastewater effluents.
- Undertaking structural modifications to the combined sewer system to reduce the number of overflows from an average of 18 events to 4 events per recreation season. The City is committed to working with the Province to develop a nutrient management strategy for the Lake Winnipeg watershed.

WHERE ARE WE NOW?

Winnipeg’s wastewater collection and treatment system is being monitored and evaluated to ensure that it continues to meet the City’s environmental and public health objectives. The City’s wastewater collection system serves the South End and West End Water Pollution Control Centres.离婚

The City has undertaken site-specific toxicity studies to define the requirements to protect local aquatic species. The City’s discharges can be acutely or chronically toxic to aquatic life. The City has undertaken specific toxicity studies to define the requirements to protect local aquatic species.

SUSTAINABLE WINNIPEG: A COMPREHENSIVE ENVIRONMENTAL STRATEGY

- The City of Winnipeg is committed to developing and implementing state-of-the-art and cost-effective wastewater treatment technologies that will be undertaken in accordance with a financial plan that recognizes competing priorities.
- The plan includes:
  - Developing innovative wastewater management demonstration projects within city operations (such as greywater recycling, rainwater harvesting, and dual flush toilets);
  - Encouraging citizens and communities to decrease the use of household cleansers; and
  - Exploring the use of incentives for using environmentally friendly products.

POLICY OBJECTIVE

The City of Winnipeg is committed to developing and implementing state-of-the-art and cost-effective wastewater treatment technologies that will be undertaken in accordance with a financial plan that recognizes competing priorities. The City will continue to develop a nutrient management strategy for the Lake Winnipeg watershed.

KEY STRATEGIES

The following items are presented as suggestions towards developing and implementing state-of-the-art and cost-effective wastewater treatment methods to reduce the environmental impact of wastewater discharges:

- Developing innovative wastewater management demonstration projects within city operations (such as greywater recycling, rainwater harvesting, and dual flush toilets);
- Encouraging citizens and communities to reduce the use of household cleansers; and
- Exploring the use of incentives for using environmentally friendly products.

7-2 THE CITY OF WINNIPEG COULD HELP TO FOSTER SUSTAINABLE BEHAVIOUR AMONG ITS CITIZENS AND HOUSEHOLDS BY CONSIDERING THE FOLLOWING OPTIONS:

- Providing information on proper disposal of hazardous household waste;
- Encouraging citizens to use less water by taking shorter showers and flushing toilets less frequently;
- Exploring the use of incentives for using environmentally friendly products.

THE FOLLOWING OPTIONS COULD HELP THE CITY OF WINNIPEG TO MAKE ITS OPERATIONS MORE SUSTAINABLE BY CONSIDERING THE FOLLOWING OPTIONS:

- Developing innovative wastewater management demonstration projects within city operations (such as greywater recycling, rainwater harvesting, and dual flush toilets);
- Encouraging citizens and communities to reduce the use of household cleansers; and
- Exploring the use of incentives for using environmentally friendly products.

THE CITY OF WINNIPEG COULD MAKE ITS OPERATIONS MORE SUSTAINABLE BY CONSIDERING THE FOLLOWING OPTIONS:

- Developing innovative wastewater management demonstration projects within city operations (such as greywater recycling, rainwater harvesting, and dual flush toilets);
- Encouraging citizens and communities to reduce the use of household cleansers; and
- Exploring the use of incentives for using environmentally friendly products.

THE CITY OF WINNIPEG COULD HELP TO FOSTER SUSTAINABLE BEHAVIOUR AMONG ITS CITIZENS AND HOUSEHOLDS BY CONSIDERING THE FOLLOWING OPTIONS:

- Providing information on proper disposal of hazardous household waste;
- Encouraging citizens to use less water by taking shorter showers and flushing toilets less frequently;
- Exploring the use of incentives for using environmentally friendly products.

THE FOLLOWING OPTIONS COULD HELP THE CITY OF WINNIPEG TO MAKE ITS OPERATIONS MORE SUSTAINABLE BY CONSIDERING THE FOLLOWING OPTIONS:

- Developing innovative wastewater management demonstration projects within city operations (such as greywater recycling, rainwater harvesting, and dual flush toilets);
- Encouraging citizens and communities to reduce the use of household cleansers; and
- Exploring the use of incentives for using environmentally friendly products.

THE CITY OF WINNIPEG COULD HELP TO FOSTER SUSTAINABLE BEHAVIOUR AMONG ITS CITIZENS AND HOUSEHOLDS BY CONSIDERING THE FOLLOWING OPTIONS:

- Providing information on proper disposal of hazardous household waste;
- Encouraging citizens to use less water by taking shorter showers and flushing toilets less frequently;
- Exploring the use of incentives for using environmentally friendly products.
WHAT IS THE ISSUE?

Winnipeg’s waterways have a significant impact on the health of its citizens, its economy, the ecological health of the city, and the quality of the urban environment. Most of the landscape around the city is now directed into a land drainage system that consists of sewer pipes, ditches, drains, and stormwater retention ponds.

Runoff is the movement of water, usually from precipitation, across the earth’s surface toward stream channels, lakes, wetlands, and other surface depressions. Shoreline vegetation traps and filters runoff, providing habitat for many species. All of Winnipeg’s major rivers and creeks have been modified, making high-quality riparian habitat rare.

The responsibility for waterways, shoreline habitat, and surface water runoff is shared among all levels of government. The federal government is responsible for waterway navigation aids and they have expressed their intention to assess the effect of surfacedrainage discharges on river water quality.

WHERE ARE WE NOW?

Approximately 45% of all waterfront property is owned by the City of Winnipeg. The City employs a riverbank management engineer and convenes a Riverbank Management Committee. The Water and Waste Department regulates land drainage discharges and enforces the City of Winnipeg’s policy on water quality. The City is committed to preserving high-quality riparian habitat and naturalizing disturbed riparian areas. The City of Winnipeg could help to foster sustainable behaviour among its citizens and within its communities by considering the following options:

- Provides citizens and communities with the resources to manage ecologically sensitive riparian areas;
- Develop education and coordination toward the implementation of sustainable water management; and
- Provide citizens with the resources to manage ecologically sensitive riparian areas.

POLICY OBJECTIVE

The City of Winnipeg is committed to preserving high-quality riparian habitat and naturalizing disturbed riparian areas. The City has developed policies and guidelines that focus on enhancing the ecological and economic importance of protecting and enhancing riparian areas.

KEY STRATEGIES

The following items are presented as suggestions toward developing a priority plan on waterways, shoreline habitat, and surface water runoff. These suggestions should not limit Council from exploring other options but do provide Council with key solutions for success.

- Rehabilitating streams and studying the use of vegetated swales where applicable as a means of controlling runoff
- Exploring alternative options to provide Council with key solutions for success
- Expanding riparian riparian vegetation in stormwater management areas
- Providing citizens and communities with the resources to manage ecologically sensitive riparian areas

THE CITY OF WINNIPEG COULD MAKE ITS OPERATIONS MORE SUSTAINABLE BY CONSIDERING THE FOLLOWING OPTIONS:

- Rehabilitating streams and studying the use of vegetated swales where applicable as a means of controlling runoff
- Situating walking and cycling trails adjacent to riparian areas and integrating riparian areas into the city’s network of trails and greenways
- Providing citizens and communities with the resources to manage ecologically sensitive riparian areas
- Developing education and coordination toward the implementation of sustainable water management protocols
- Providing citizens with the resources to manage ecologically sensitive riparian areas

The City of Winnipeg could help to foster sustainable behaviour among its citizens and within its communities by considering the following options:

- Providing citizens and communities with the resources to manage ecologically sensitive riparian areas;
- Developing education and coordination toward the implementation of sustainable water management protocols; and
- Providing citizens with the resources to manage ecologically sensitive riparian areas.
The City of Winnipeg could make its operations more sustainable by considering the following options:

a. Phasing out chemical pesticides as environmentally friendly alternatives become available, and using cultural practices to reduce insect pest habitat on City-owned properties;

b. Adopting the precautionary principle with respect to chemical and biological insect pest controls;

c. Ensuring that the use of chemical insecticides and larvicides does not have an adverse effect on biodiversity within the city;

d. Demonstrating innovation in pest management programs (for example, by increasing habitat on City-owned properties for species of animals that prey on pests), researching new methods, and establishing Winnipeg as a Centre for Excellence in environmentally and environmentally-friendly mosquito control;

e. Working toward environmental sustainability by setting pesticide reduction targets and reporting annually on results.

The City of Winnipeg could help to foster sustainable behaviour among its citizens and within its communities by considering the following options:

f. Empowering citizens and communities by providing programmes and educational support to help them reduce and eventually eliminate insecticides and larvicides from use on private property;

g. Working towards the elimination of pesticides from privately owned properties;

h. Encouraging the use of residential attached screened porches and detached screened enclosures as a safe and effective method of mosquito protection.

WHERE ARE WE NOW?

In 2002, the City of Winnipeg conducted a poll to measure public opinion on the use of chemical pest control. The poll indicated that 89% of respondents are supportive of civic investment in environmentally friendly methods of pest control.

The City of Winnipeg will work toward the development and implementation of cost-effective and environmentally sustainable pest control methods.

WHAT IS THE ISSUE?

Insecticides and larvicides are chemical substances designed to kill insects (insecticides) and insect larvae (larvicides). They are primarily used to control mosquito populations. Since the 1930s, the City of Winnipeg has been practicing a comprehensive integrated mosquito control strategy, including the use of chemical pesticides and larvicides. The matter has prompted a great deal of debate in the City of Winnipeg.

WHERE ARE WE NOW?

In the November 2002 poll commissioned by the City of Winnipeg Civic Environmental Committee, 89% of respondents indicated that they support the use of chemical pesticides and larvicides as part of a comprehensive strategy to control mosquito populations. The poll also indicated that 44% of those polled indicated that they are more concerned about the use of chemicals now than they were two years ago. The poll results were consistent with the need for sustainability and the need to reduce the use of chemicals.

POLICY OBJECTIVE

The City of Winnipeg will work toward the development and implementation of cost-effective and environmentally sustainable pest control methods.

KEY STRATEGIES

a. Phasing out chemical pesticides as environmentally friendly alternatives become available, and using cultural practices to reduce insect pest habitat on City-owned properties;

b. Adopting the precautionary principle with respect to chemical and biological insect pest controls;

c. Ensuring that the use of chemical insecticides and larvicides does not have an adverse effect on biodiversity within the city;

d. Demonstrating innovation in pest management programs (for example, by increasing habitat on City-owned properties for species of animals that prey on pests), researching new methods, and establishing Winnipeg as a Centre for Excellence in environmentally and environmentally-friendly mosquito control;

e. Working toward environmental sustainability by setting pesticide reduction targets and reporting annually on results.

The City of Winnipeg could help to foster sustainable behaviour among its citizens and within its communities by considering the following options:

f. Empowering citizens and communities by providing programmes and educational support to help them reduce and eventually eliminate insecticides and larvicides from use on private property;

g. Working towards the elimination of pesticides from privately owned properties;

h. Encouraging the use of residential attached screened porches and detached screened enclosures as a safe and effective method of mosquito protection.

WHERE ARE WE NOW?

In 2002, the City of Winnipeg conducted a poll to measure public opinion on the use of chemical pest control. The poll indicated that 89% of respondents are supportive of civic investment in environmentally friendly methods of pest control.

The City of Winnipeg will work toward the development and implementation of cost-effective and environmentally sustainable pest control methods.

WHAT IS THE ISSUE?

Insecticides and larvicides are chemical substances designed to kill insects (insecticides) and insect larvae (larvicides). They are primarily used to control mosquito populations. Since the 1930s, the City of Winnipeg has been practicing a comprehensive integrated mosquito control strategy, including the use of chemical pesticides and larvicides. The matter has prompted a great deal of debate in the City of Winnipeg.

WHERE ARE WE NOW?

In the November 2002 poll commissioned by the City of Winnipeg Civic Environmental Committee, 89% of respondents indicated that they support the use of chemical pesticides and larvicides as part of a comprehensive strategy to control mosquito populations. The poll also indicated that 44% of those polled indicated that they are more concerned about the use of chemicals now than they were two years ago. The poll results were consistent with the need for sustainability and the need to reduce the use of chemicals.

POLICY OBJECTIVE

The City of Winnipeg will work toward the development and implementation of cost-effective and environmentally sustainable pest control methods.

KEY STRATEGIES

a. Phasing out chemical pesticides as environmentally friendly alternatives become available, and using cultural practices to reduce insect pest habitat on City-owned properties;

b. Adopting the precautionary principle with respect to chemical and biological insect pest controls;

c. Ensuring that the use of chemical insecticides and larvicides does not have an adverse effect on biodiversity within the city;

d. Demonstrating innovation in pest management programs (for example, by increasing habitat on City-owned properties for species of animals that prey on pests), researching new methods, and establishing Winnipeg as a Centre for Excellence in environmentally and environmentally-friendly mosquito control;

e. Working toward environmental sustainability by setting pesticide reduction targets and reporting annually on results.

The City of Winnipeg could help to foster sustainable behaviour among its citizens and within its communities by considering the following options:

f. Empowering citizens and communities by providing programmes and educational support to help them reduce and eventually eliminate insecticides and larvicides from use on private property;

g. Working towards the elimination of pesticides from privately owned properties;

h. Encouraging the use of residential attached screened porches and detached screened enclosures as a safe and effective method of mosquito protection.
The City of Winnipeg will work towards the development and implementation of cost-effective and environmentally friendly methods of weed control. The City will also work to educate citizens and communities on the need for public education on weed control and the health and environmental risks associated with herbicides.

**What is the Issue?**

Herbicides and fungicides are chemical substances designed to kill plants (herbicides) and fungi (fungicides). They belong to the family of chemicals known as "pesticides." Increased habitat disturbance, accidental introduction, and overuse are significant threats to our economy and human health. In addition, some invasive species pose a threat to native flora and fauna. Most plants, including non-native plant species, and the effects of global climate change have contributed to the loss of plant biodiversity in Winnipeg. While some invasive species pose a threat to native flora, some plants, such as the bur reed, can provide valuable ecosystem services.

**Where Are We Now?**

The Parks and Open Space Division of the City of Winnipeg has adopted an Integrated Pest Management (IPM) strategy, which includes limiting spraying for nonstructural weeds, moving from liquid to dry products, and using selective herbicides and fungi. The City's Integrated Pest Management program is designed to demonstrate innovation by researching non-chemical methods of pest control, using alternative pest control strategies, and evaluating the results of these trials.

**The City of Winnipeg Could Help to Foster Sustainable Behaviour Among Its Citizens and Within Its Communities by Considering the Following Options:**

- Empowering citizens and communities by providing educational opportunities and support to help them reduce and eventually eliminate the use of herbicides.
- Educating the public on the health impacts of pesticides and the environmental benefits of cultural and biological weed control methods.

**The City of Winnipeg Could Make Its Operations More Sustainable by Considering the Following Options:**

- Phasing out chemical herbicides and fungicides as environmentally friendly alternatives become available and eliminating the cosmetic use of chemical pesticides on private property.
- Reporting annually on the effectiveness of the City's Integrated Pest Management program.

**WHERE ARE WE NOW?**

The Weed Central Advisory Committee undertook a survey of citizens to explore public attitudes and practices regarding weed control. This survey found that 53.7% of those who used lawn chemicals did so on an annual basis. The survey underscored the need for public education on weed control and the health and environmental risks associated with herbicides.

**What is the Issue?**

Herbicides and fungicides are chemical substances designed to kill plants (herbicides) and fungi (fungicides). They belong to the family of chemicals known as "pesticides." Increased habitat disturbance, accidental introduction, and overuse are significant threats to our economy and human health. In addition, some invasive species pose a threat to native flora and fauna. Most plants, including non-native plant species, and the effects of global climate change have contributed to the loss of plant biodiversity in Winnipeg. While some invasive species pose a threat to native flora, some plants, such as the bur reed, can provide valuable ecosystem services.

**Where Are We Now?**

The Parks and Open Space Division of the City of Winnipeg has adopted an Integrated Pest Management (IPM) strategy, which includes limiting spraying for nonstructural weeds, moving from liquid to dry products, and using selective herbicides and fungi. The City's Integrated Pest Management program is designed to demonstrate innovation by researching non-chemical methods of pest control, using alternative pest control strategies, and evaluating the results of these trials.

**The City of Winnipeg Could Help to Foster Sustainable Behaviour Among Its Citizens and Within Its Communities by Considering the Following Options:**

- Empowering citizens and communities by providing educational opportunities and support to help them reduce and eventually eliminate the use of herbicides.
- Educating the public on the health impacts of pesticides and the environmental benefits of cultural and biological weed control methods.

**The City of Winnipeg Could Make Its Operations More Sustainable by Considering the Following Options:**

- Phasing out chemical herbicides and fungicides as environmentally friendly alternatives become available and eliminating the cosmetic use of chemical pesticides on private property.
- Reporting annually on the effectiveness of the City's Integrated Pest Management program.
2,4-D: introduced in 1946, this member of the phenoxy family of herbicides was the first successful selective herbicide developed. It rapidly became the most widely used herbicide in the world.

AQUIFER: a geologic formation that contains sufficient saturated materials to be capable of storing water and transmitting water in usable quantities to a well or spring; see other aquifer-related details at http://www.epa.gov/superfund/resources/hrstrain/htmain/8defs.htm

BASEMENT FLOODING PROTECTION PROGRAM: a City of Winnipeg initiative that sets out guidelines for the protection of property against flooding; see details at http://www.winnipeg.ca/cao/media/news/nr_2002/nr_20020604.stm or http://winnipeg.ca/waterandwaste

BIOMASS RESOURCES: refers specifically, in this context, to the renewable resource of methane gas captured from landfill sites. Residual energy in the form of anaerobic biogas is produced from the fermentation of organic waste materials; see details about composting in Winnipeg at http://winnipeg.ca/waterandwaste/pdfs/composting.pdf

CAR-POOLING: the practice of using private vehicles to transport multiple people (per vehicle) to shared destinations in order to reduce the total number of private vehicles on the road at any given time.

CIVIC ENVIRONMENTAL COMMITTEE (CEC): a citizen advisory committee that provides advice and reports to Council on environmental and sustainable development issues; see http://www.winnipeg.ca/wmwaterwaste/pdfs/composting.pdf for details on its mandate, membership, structure and activities.

COMPOSTING TOILETS: self-contained, waterless units designed to facilitate the local decomposition of human waste and render it safe for subsurface soil application. See details about composting toilets at http://www.coadinc.org/Straw/COADWPdraft-Dec-2001.html

COMPOST: the product resulting from the controlled biological decomposition of organic materials such as fruit and vegetable scraps, leaves, and wood chips; see details about composting in Winnipeg at http://winnipeg.ca/waterandwaste/pdfs/composting.pdf

COMBINED SEWER OVERFLOW (CSO): an event that occurs approximately 18 times during the recreation season (May 1 to September 30) on which the capacity of the Winnipeg waste water treatment facilities are exceeded by the volume of waste water and storm water entering the systems. The Winnipeg sewer building committee ordered in 1995 to explore the controlled sewage discharge overflows (CSO) into the Red and Assiniboine rivers by creating a 2.4-D basin. In 1996, this number of the phosphorus family of herbicides was the first successful introduction in Canada.
ECO-PASS PROGRAM: a program to encourage the use of public transit in which companies that offer bus passes to their employees at a discount are given a rebate by Winnipeg Transit; see details at http://winnipegtransit.com/main/ecopass.jsp

ECOSYSTEMS: ecological systems of interacting biotic (living) and abiotic (non-living) components through which nutrients cycle and energy flows.

ENVIRONMENTAL AUDIT: a management tool comprising a systematic, documented, periodic, and objective evaluation of how well a project, organization or equipment is performing with the aim of helping to safeguard the environment. It involves the development of environmental objectives, the establishment of management control of environmental practices and the assessment of performance against policy objectives and regulatory requirements.

EROSION: the removal and/or transportation of surface material, such as soil, by running water, moving ice or wind.

EXTENDED PRODUCER RESPONSIBILITY (EPR): the principle behind programs that broaden the responsibility of producers to include managing waste products once discarded by the consumer. 

FOSSIL FUELS: effectively non-renewable energy resources, such as oil, coal, and natural gas, which are produced through the decay of plant and animal matter.

FULL COST ACCOUNTING: a method of accounting for goods produced throughout their life cycle, including costs such as salvage, refurbishing, and disposal.

GEOTHERMAL ENERGY: heat accumulated in the earth from solar energy (heat from the sun).

GEOTHERMAL HEATING AND COOLING SYSTEM: work by moving heat out of or back into the earth instead of making heat by burning fossil fuel or conversion to electric energy. Geothermal units can be installed in both residential and commercial buildings and can be connected to the earth through high-performance geothermal wells.

GREENFIELD: an undeveloped site of land that has never contained buildings or infrastructure.

GREEN ROOF SYSTEMS: components of gardens and the building components that directly support them. The practice of designing and constructing green roofs is gaining momentum as a way to reduce urban heat islands and improve stormwater management.

GREEN Procurement Policies: policies that take environmental aspects into consideration in public and institutional tenders.

GREEN ROOFING POLICIES: policies that take environmental aspects into consideration in the design and construction of new buildings and the renovation of existing buildings.

GROUNDWATER: water contained in an aquifer or any voids, cracks, or other pore spaces in clay, silt, sand, gravel, or rock within the saturated zone; such water is only available to wells and springs that contain aquifers in an aquifer or any voids, cracks, or other pore spaces in clay, silt, sand, gravel, or rock.
Heritage Buildings:
Winnipeg buildings of outstanding architectural and historical merit which are to be preserved in perpetuity according to the guidelines of the City of Winnipeg Historical Buildings By-law and/or the Province of Manitoba Heritage Resources Act; see heritage building lists and details at http://www.winnipeg.ca/ppd/historic/historic.stm

HHW:
refers to “household waste.”

ICI:
refers to ‘industrial commercial and institutional’; ICI waste consists of all non-residential refuse including by-products of production and manufacturing, commercial activities and institutions.

INSECTICIDES:
chemical or biological substances belonging to the pesticide family of chemicals specifically designed to control (usually kill) insects.

INTEGRATED PLANNING MODEL:
an overall approach to civic planning that achieves consistency and coordination among constituent land use planning, transportation planning and infrastructure planning according to a single but inclusive vision of intended urban development; see details at http://www.winnipeg.ca/interhom/about_winnipeg/inside/org_plan_perf.stm

INTERGENERATIONAL EQUITY:
the practice of ensuring that the policies and decisions made today will not compromise the ability of future generations to succeed.

INTEGRATED PEST MANAGEMENT (IPM):
An approach to managing pests that combines biological, cultural, physical, and chemical tools in a way that minimizes economic, health, and environmental risks.

INTERNAL ADMINISTRATIVE COORDINATING COMMITTEE (IACC):
a City of Winnipeg committee comprised of representatives from all departments with the mandate to assist the Civic Environmental Committee in the development and a City of Winnipeg committee comprised of representatives from all departments with

INTERNAL ADMINISTRATIVE COORDINATING COMMITTEE (IACC):
a City of Winnipeg committee comprised of representatives from all departments with

INTERNAL ADMINISTRATIVE COORDINATING COMMITTEE (IACC):
a City of Winnipeg committee comprised of representatives from all departments with

INTERATIONAL EQUITY:

LAFRANCE:
Implementation of proposed environmental policies.

LAW COST:
fuel power purchase agreement.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.

LCC:
chemical or biological substances specifically designed to kill insects hereafter.
PESTICIDES: chemicals or any other substances used for preventing, repelling, destroying or otherwise controlling or mitigating any pest; for a more extensive definition go to http://www.pestmanagement.co.uk/expert/ecotox/pcide_def.shtml

PLAN WINNIPEG 2020: City Council’s long-range policy document intended to guide Winnipeg in the twenty-first century by addressing the broad physical, social, economic and environmental conditions within Winnipeg. For more information see details at http://winnipeg.ca/interhom/about_winnipeg/inside/plan_winnipeg/default.stm

POLLUTER PAY: a practice in which users of publicly provided services are responsible for the full cost of these services, including the cost to the environment.

PRECAUTIONARY PRINCIPLE: a principle of conduct requiring that when an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically.

RIPARIAN HABITAT: includes the physical structure and associated vegetation of the areas associated with a watercourse which are commonly characterized by alluvial soils and which are inundated or flooded to an extent and with a frequency to support vegetation of species with a composition and physical structure distinct from those of adjacent land areas.

RUNOFF: the movement of water, usually from precipitation, across the earth’s surface towards stream channels, lakes and other surface depressions.

SENSITIVE LANDS PLAN: a plan by the City of Winnipeg to inventory important natural habitat areas within Winnipeg and develop tools and processes to ensure that sensitive lands are properly managed as a part of the City of Winnipeg’s commitment to maintain important natural habitat areas within Winnipeg.

SMART GROWTH: urban growth guided by policies that capitalize on resources by considering issues related to community quality of life, urban design, economic, development, health, housing and transportation, and that encourage efficient transportation planning including strategies to reduce the number of vehicles generated by providing transportation options such as cycling and walking. More information can be found at www.smartgrowth.org

SUSTAINABILITY: refers to the management of development in a manner that meets the needs of the present generation without compromising the ability of future generations to meet their own needs; in practice, it results in development that is safe, healthy, environmentally sound and efficient, and that meets the social, cultural and economic needs of present and future people and generations.

SWALES: elongated, heavily vegetated depressions in the land surface that direct storm water to flow into primary drainage channels while allowing some of the storm water to infiltrate into the ground. These depressions are designed to remove sediment and minimize erosion of stream banks.

TELECOMMUTING: business and human capital, located near green areas, such as parks and recreation areas, is made possible by the practice of working from a remote location, usually one’s home, made possible by the development of communication and transportation technologies.

TAX SHIFTING: a traditional place of work, such as an office, is no longer a primary place of work, due in part to telecommuting and remote work environments, and an economic component to a workforce commuting to and from the place of working from a remote location instead of a home made possible by the practice of working from a remote location.

TRANSPORTATION DEMAND MANAGEMENT (TDM): any strategy that encourages efficient transportation planning including strategies to reduce the number of vehicles generated by providing transportation options such as cycling and walking. More information can be found at www.vtpi.org

US GREEN BUILDING COUNCIL: a coalition of leaders from across the building industry working to promote buildings that are environmentally responsible, profitable and healthy places to live and work.

WASTEWATER EFFLUENT: water that flows from a treatment plant after it has been treated.

WATERSHED MANAGEMENT: the protection and restoration of the natural environment upon which people and communities depend. It includes development that maximizes or enhances economic opportunity and community well-being while promoting the protection of the environment by regulating land development to meet human needs. To do this requires the management of development in ways that meet the needs of the present generation without compromising the ability of future generations to meet their own needs.
The Chair extends his thanks to the following for their contribution to the strategy:

**The Civic Environmental Committee (past and present members):**
Bob Foster
Douglas Johnson
Michelle Kading
Ken Klassen
Kelly Kuryk
Rodney McDonald
Ken McKinnon
Toby Maloney
Shannon Stunden Bower
Terri Willard
Tony Zienkiewicz.

**Staff:**
James Allum, Interim Environmental Coordinator
Andrew Cowan (Chief, Environmental Coordinator, E&SR Ward)
Neil Cunningham, Policy Assistant
Andrew Cowan, Environmental Coordinator
James Allum, Chief Environment Coordinator

**Stakeholder contributions:**
Campaign for Pesticide Reduction (CPR)
Coalition to Save the Elms
Concerned Residents of Winnipeg
 Manitoba Association of Landscape Architects
 Manitoba Conservation
 Manitoba EcoNetwork, including:
 Chemical Sensitivities Manitoba
 Council of Women of Winnipeg
 Concerned Residents of Winnipeg
 Concerned Residents of Landscape Architects (MALA)
 Concerned Residents of Winnipeg (CROW)
 Campaign to Save the Elms
 Campaign for Reduced Pesticide (CPRI)

Thank you to Donald Bennett and Sheldon McLeod for copy editing assistance.


Winnipeg Bicycling Facilities Study. Final Report City of Winnipeg Streets and Transportation Department and Marr Consulting and Communications. February 2003

Winnipeg Blooding Feasibility Study. Final Report City of Winnipeg Streets and Transportation Department and Marr Consulting and Communications. February 2003

Winnipeg Transplan 2010: Moving Toward Solutions. City of Winnipeg. 1998

Transportation Canada, 2002.