

Dieppe Five-year Green Plan 2007-2012

Presented to Dieppe City Council
March 2007

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March 26th, 2007

City of Dieppe
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Your Worship Mayor Maillet and Members of Dieppe City Council,

We are pleased and proud to present the first Five-year Green Plan for the City of Dieppe. The Green Plan is the result of more than seven months of work by a dynamic committee of citizens, municipal employees and consultants who are passionate about environmental protection, sustainable development and quality of life for Dieppe citizens and those who live in the surrounding areas.

Input for the Green Plan was also obtained from more than 100 people who participated in public consultations in November 2006 and February 2007. Participants provided the committee with detailed comments as to how Dieppe could become a green city of which citizens will truly be proud of.

In order to achieve this objective, the Five-year Green Plan proposes a new ecological view that will allow Dieppe to be a champion in environmental protection and sustainable development. The Green Plan contains 17 recommendations and 86 specific actions to guide the municipality in its efforts to protect natural green spaces, watercourses, air quality and drinking water sources. The Green Plan also looks at the future needs of the municipality with regards to energy supplies and public transit. It also contains suggestions on sustainable buying policies and municipal rules and regulations. Each proposed action will help reduce environmental impacts thereby offering Dieppe residents the opportunity to continue quality lifestyles.

Dieppe's Green Plan is ambitious and yet realistic, requiring investments of more than 11 million dollars over a five-year period. Here are but a few examples: measures to ban the use of cosmetic pesticides in Dieppe by 2008; rules and regulations on using wood stoves; proposed reductions in energy consumption; establishment of a trail system linking all Dieppe neighbourhoods; increased promotion of public transit use; increased natural green spaces in the municipality from 5% to 15% of total area over a five-year period; plans for protection of local marshes; promotion of watercourses and the Petitcodiac River; development of community gardens; establishment of a vast water conservation program and water meters; extension of the garbage separation program to businesses and apartment buildings; promotion of clotheslines and many more actions of this nature.

Implementing these actions will provide Dieppe with the necessary tools to adequately manage the phenomenal growth the municipality has witnessed since the 1990's. Important environmental impacts have resulted from this growth, particularly with regards to the loss of forest cover and increased carbon dioxide emissions in the city. However, it must be noted that decision makers dispose of a relatively short period of time in which to act and control some of the key ecological components in Dieppe. The Green Plan should be adopted and implemented relatively quickly because, in our view, any significant delay will require difficult and expensive upgrades in the future.

Our hope is that City Council endorses the vision proposed in the Green Plan thereby responding to the unique opportunity of making Dieppe a truly green city, both for present and future generations.

Sincerely yours,

The members of the Green Plan interim Steering Committee

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FOREWORD

The City of Dieppe's first Five-year Green Plan is the result of more than seven months of work by two consultants and an interim Steering Committee of eight citizens, two municipal employees and one city councillor. The Steering Committee was established in November 2006 after the City of Dieppe and the Economic Development Corporation of the City of Dieppe, sponsor of this initiative, indicated their desire to integrate sustainable development perspectives in economic development.

The Five-year Green Plan is an urban and environmental planning guide that is detailed, easy to understand and flexible. The plan proposes a vision for the municipality's future and ecological principles to guide the City of Dieppe in decisions concerning all aspects of municipal administration. Finally, the Green Plan contains 17 recommendations and 86 actions to achieve the desired results.

The structure and content of the Green Plan will allow Dieppe to protect its natural heritage, anchor future development according to sustainable development principles, reduce environmental impact and increase the quality of life of its citizens.

ACKNOWLEDGEMENTS

The members of the Steering Committee would like to thank the following individuals and organizations for their important contribution to the City of Dieppe's first Five-year Green Plan: Daniel LeBlanc, Green Plan coordinator who initiated the project in 2006 and wrote this report; Mathieu D'Astous for his research work which benefited both the Dieppe and Bouctouche Green Plan initiatives; Charles LeGresley for the audiovisual presentations during public consultations; Marc LeBlanc for invaluable advice throughout the process; the Economic Development Corporation of the City of Dieppe and Petitcodiac Riverkeeper for their administrative support; Achille Maillet, the Mayor of Dieppe and municipal councillors for their on-going support and confidence and Dieppe City Manager Gérard Belliveau and his staff for their enthusiasm and contributions towards the project's success. Special thanks are also extended to all the citizens of the City of Dieppe who participated in this initiative with their comments, opinions and expectations for the development of their community

The Steering Committee would also like to acknowledge the important financial support of the Environmental Trust Fund of the government of New Brunswick. This funding allowed the Green Plan project to become what it is today. Finally, we would like to recognize the key role played by the Town of Bouctouche, first New Brunswick municipality to develop a Green Plan and the research work done by the *Médias Verts* organization to promote the sustainable cities concept in our region. These efforts inspired this project and several of the components contained in the Green Plan.

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1.0 INTRODUCTION

The Green Plan proposal stems from a desire to position future development in Dieppe within the principles of sustainable development. This report proposes a vision and a series of recommendations that will allow Dieppe to protect its natural heritage, anchor future development with sustainable development principles, reduce environmental impact and increase quality of life for Dieppe citizens.

1.1 Background

Since the early 1990's, the City of Dieppe has witnessed phenomenal development and growth. In 1996, the City had a population of 12,500 citizens and ten years later, in 2006, the population was 19,000 citizens. Such rapid development implies that natural habitat is continually sought to make way for residential and commercial development projects. While it is true that approximately 20 years ago Dieppe undertook some projects to protect natural green space, it is important to ask ourselves if those initiatives are sufficient today to protect the ecological integrity of Dieppe's ecosystems.

A comparison of the changes that have occurred in Dieppe between 1996 and 2006 demonstrates that a large section of the municipality's forest cover has disappeared. Aerial photos taken in 1996 and 2006 show that almost 50% of the forest cover has been replaced by new streets, subdivisions and other types of development located within the Business Park. Such rapid disintegration of the forest cover is without precedent in the history of the municipality and the region.

With a population increase of more than 50% in ten years and increased traffic at the Greater Moncton International Airport (located in Dieppe), it is highly probable that carbon pollution and green house gas emissions in the municipality have increased considerably in Dieppe, probably close to 50% in ten years. This is a situation which needs to be examined as it could impact, on a short and medium-term basis, on the quality of air in the municipality and the quality of life of Dieppe residents.

After a decade of unprecedented growth, the City of Dieppe decided in the fall of 2006 to balance its future development with an environmentally friendly strategy to protect its ecological infrastructure for the benefit of future generations. This draft Five-year Green Plan results from this initiative.

1.2 Methodology

The City of Dieppe's first Five-year Green Plan is the result of more than seven months of work by two consultants (Daniel LeBlanc, formerly Petitcodiac Riverkeeper and Mathieu D'Astous, formerly Green Plan coordinator for Bouctouche) and an interim Steering Committee of eight citizens, two municipal employees and one city councillor. The Steering Committee was established in November 2006 after the City of Dieppe and the Economic Development Corporation of the City of Dieppe, sponsor of this initiative, indicated their desire to integrate sustainable development perspectives in economic development.

The two consultant team began research for the Green Plan in September 2006. Three public consultations were held on November 21st, 22nd and 23rd to explain different aspects of existing environmental protection in Dieppe and to examine certain avenues

that could be pursued under a Green Plan. More than 90 people participated in the public consultations and they offered written recommendations for possible inclusion in a Green Plan. An overview of the meetings and minutes of the proceedings are available on line at the City of Dieppe's Web site (click on the Green Plan banner at www.dieppe.ca).

A Green Plan draft was then written between mid-December 2006 and mid-February 2007 and presented during a final public consultation on February 28th 2007. A ten-day comment period followed in which more than 30 people participated by submitting detailed suggestions. Finally, the final Green Plan report was presented to City Council on March 26th 2007.

1.3 Green Plan Structure

The City of Dieppe's first Five-Year Green Plan provides a vision statement with values, guiding principles and overall objectives to orient future Green Plan initiatives.

In order to attain the stated objective of making Dieppe a Green City in 2012, eight key sectors are identified as well as 17 recommendations and 86 actions. The eight key sectors are:

1. Ecological infrastructure (natural habitat, watercourses and wetlands)
2. Critical needs (drinking water, air quality, access to food, energy)
3. Transportation infrastructure (trail system, public transit)
4. Sustainable economic development
5. City hall management
6. Communications
7. Community recreation services
8. Implementation (financing, human resources, evaluation)

Appendix A contains an overview of the 17 recommendations and 86 actions as well as proposed scheduling, the municipal departments responsible for implementing each action as well as preliminary budget estimates. Please note that budget estimates are indeed preliminary and are included mainly to illustrate the scale of investment required for each action.

Finally, Appendix B contains the scope of the recommendations within the context of a concise Action Plan for 2007 ("Quick start-up" actions for 2007).

2.0 GREEN PLAN VISION

One of the first responsibilities of the Steering Committee was to develop a vision statement for the City of Dieppe's first Five-year Green Plan. This vision statement provides values, guiding principles and overall objectives to orient future Green Plan initiatives.

When the members of the Steering Committee realized the scope of actions needed in making Dieppe a sustainable community, they agreed on a realistic vision that would foster community participation. Environmental protection is a major challenge faced by society today. However, when the responsibility for environmental protection is viewed as a stewardship (shared responsibilities), this can inspire a sense of pride and create the ideal conditions that guarantee its success.

The following vision statement, prepared by the Steering Committee to guide the City of Dieppe's first Five-year Green Plan, was therefore developed with community participation in mind. Implementation would start in 2007 and be completed by 2012.

2.1 Vision Statement

Dieppe: Green City* in 2012 and Healthy Community, committed to the protection of the environment and sustainable development

*see Section 2.3 for the guiding principles that define the "green city" concept, as developed by the Steering Committee.

2.2 Slogan

Working together towards a Green City in 2012.

2.3 Guiding Principles

In a green city, growth is managed following sustainable development principles that protect and respect the environment while encouraging quality of life for citizens, both today and in the future. A green city (or sustainable city) also plans development in a just and proper manner, both socially and ecologically. In order to define the concept of a green city that guided the vision for the first Five-year Green Plan, eight guiding principles were developed by the Steering Committee.

The eight guiding principles of the Green Plan vision are:

1. Environmentally infrastructure (watercourses, marshes, groundwater and vegetation cover) is an essential part of Dieppe's make-up and must be managed so as to ensure quality of life for citizens. Natural spaces and green corridors are also essential in maintaining biodiversity.
2. Future developments in the City will be undertaken according to sustainable development and smart growth principles. This means that high density development projects, subdivisions, homes and office developments will respect environmentally friendly principles.

3. The quality of the air and the water, access to food supplies and renewable energy sources are essential basic human requirements that are enhanced in Dieppe and are accessible to all citizens.
4. Adaptation to climate change impacts and the reduction of green house gases constitute priority local actions undertaken by the municipality to participate in the global effort on climate change.
5. Efficient trail systems and public transit services are the cornerstones of sustainable transport infrastructure in the City of Dieppe.
6. The City of Dieppe, public institutions, businesses, developers, industry as well as the residents of Dieppe are collectively responsible for the municipality's green vision and actively participate in implementing its components.
7. Dieppe's municipal plan, by-laws and policies are in accordance with and support the Green Plan vision.
8. Financial and human resources towards attaining the goals of the Green Plan are committed by the municipality. Green Plan implementation actions are subjected to a public consultation and an evaluative process each year.

3.0 ECOLOGICAL INFRASTRUCTURE

Ecological or green infrastructure refers to a city's natural attributes such as forest and vegetative cover (plants and trees); watercourses and wetlands (marshes); agricultural lands; parks, natural green spaces and groundwater. Each of these natural components plays a role in a city and a region's character, in their efficient functioning and in the well-being of citizens.

Ecological infrastructure plays a key role, for example, by purifying the air we breathe and the water we drink. In cities, trees have both an aesthetic and environmentally friendly role. They create distinctive and attractive ambiances when planted near streets, sidewalks and trails and they also filter noise and car pollution.

Finally, natural habitat in communities provides citizens with the opportunity to connect with the different species that inhabit their area – such as birds, animals, fish and insects – and to derive great pleasure from their presence.

3.1 Natural Habitat, Trees and Green Corridors

Natural habitats and green corridors in cities are essential elements in maintaining biodiversity. Dieppe's natural biodiversity is particularly rich along the Petitcodiac River with its significant marshlands, shoreline and creeks, as well as in other areas where sufficient forest cover remains.

However, as mentioned earlier, Dieppe's forest cover has dwindled substantially over the past 15 years because of substantial growth and development. Continued rapid loss of this type of habitat could imperil the ecological integrity of different ecosystems in Dieppe, more specifically watercourses and migration corridors that wildlife has depended on for thousands of years.

In order to protect the different components of Dieppe's ecological infrastructure for existing and future generations, we recommend that the City undertake the following initiatives:

1.	Develop a vast network of natural sites and green corridors in Dieppe, with the objective of protecting watercourses, wetlands, distinctive natural sites and biodiversity in the municipality.
	Action
a.	Establish (reactivate) a <u>sub-committee on green spaces and trails</u> , with representation from citizens, employees and experts (if needed). The mandate would be to implement a strategy for the development of a network of natural sites and green corridors and the protection of biodiversity in Dieppe.
b.	Establish Chartersville marsh limits, obtain provincial recognition, prohibit any new development in the <u>Chartersville marsh</u> , obtain municipal plan designation as open space (OS) or floodplain.

c.	Complete and send to Council for adoption the proposed <u>tree policy</u> . This policy would include <u>a by-law on tree cutting</u> in the municipality, guidelines to encourage contractors to conserve trees during subdivision developments as well as a <u>major reforestation measures program</u> .
d.	Complete an <u>inventory</u> and develop <u>a protection strategy for green spaces</u> with the objective of designating 15% of City territory as green space by 2010. The goal is to protect Dieppe's existing ecosystems (brooks and streams, marshes, exceptional forest sites, migratory corridors, river shoreline, etc); encourage creation of neighbourhood parks and create at least one major natural park in the City or close to municipal boundaries (bike accessible).
e.	Designate the entire <u>Saint-Anselme marsh as a natural park</u> .
f.	Establish a major <u>greening program</u> (reforestation) with the citizens for both private and public properties (residential and commercial lots, parks, Chartersville cemetery, boulevards, etc.) with the objective of planting several thousand trees each year.
g.	Implement an <u>acquisition strategy for lands located in Chartersville and Fox Creek marshes</u> and subsequently designate them natural parks.
h.	Implement a <u>strategy for the protection of natural spaces beginning in 2008</u> (see 1d. above).

3.2 Watercourses and Surface Runoff

Buffer zones and lands located near rivers and creeks play an essential role in the protection of ecological zones. These areas provide unique habitat for wildlife species and rare plants. Trees that grow on creek banks provide shade and help keep water temperatures cool for fish that inhabit there. Root systems of trees and other vegetation on river and creek banks help prevent erosion and act as filters, thereby protecting rivers from surface runoff caused by human activities.

Rain water and surface runoff from streets, construction sites and residential and commercial properties can sometimes be important sources of pollution for watercourses. Surface runoff, collected by catch basin systems in streets, also contains many varied elements that humans have placed on or in the ground (fertilizers, pesticides, detergents, atmospheric fall-out, solid wastes, traffic pollution, winter salting, sediment from construction sites, etc.) Development near or in watercourses can upset ecosystems by destroying habitat and creating obstacles for the unimpeded migration of wildlife and aquatic species. Development can also increase the flow of water in creeks and rivers.

The effects of climate change are also beginning to be noticed in our region and in Dieppe, mainly in terms of more abundant rainfall and higher sea levels. The majority of scientific researchers agree that the effects of climate change will continue and will increase during the next few decades. We therefore need to introduce adaptive measures.

In an effort to protect the ecological integrity of Dieppe's watercourses and in an effort to adapt to climate change, we recommend the following initiatives:

2.	Manage all surface runoff waters (new and older subdivisions) to ensure the health of all watercourses in Dieppe and to ensure adaptation to climate change.
a.	Establish, in the municipal plan, a <u>30 meter restriction zone</u> (open space - OS) surrounding all Dieppe watercourses and in which all development will be prohibited.
b.	Identify <u>natural boundary lines for all watercourses</u> based on physical features (floodplains, topography) and undertake subsequent review of existing protection zones in the municipal plan.
c.	Implement a <u>sub-committee on surface water quality</u> with representation from citizens, employees and experts (if needed). The mandate is to develop and implement a policy on managing surface waters and protecting watercourses in Dieppe. The cooperation of non-governmental organizations (NGO) is required in this component.
d.	Plan future road and street construction to avoid or minimize the need to <u>build over</u> waterways.
e.	Require that significant new developments incorporate <u>hydrocarbon filtration systems</u> in parking lots and encourage existing businesses to do likewise.
f.	Develop and implement an <u>awareness campaign</u> on the effects of cosmetic <u>pesticides</u> and promote ecological alternatives to lawn care.
g.	Develop and adopt a <u>municipal by-law banning cosmetic pesticide use</u> in Dieppe in 2008.
h.	Complete and implement a strategy for managing all <u>surface waters</u> , curbing <u>erosion</u> and discharge of <u>toxic substances</u> in Dieppe watercourses. This strategy includes an <u>adjustment plan</u> that would incorporate climate change effects on these environments (abundant rains, flooding).
i.	Develop and implement an <u>identification program (signage)</u> for watercourses, marshes and floodplains in Dieppe. This program should also identify and work to designate <u>geographical names</u> for watercourses and tributaries that are not presently identified.
j.	Establish an <u>annual public spring clean-up campaign</u> of watercourses and municipal neighbourhoods.
k.	Develop a <u>three-year recovery plan</u> to re-establish water quality in Babineau, Fox Creek and Grindstone watercourses.
l.	Develop a strategy to promote <u>green roofs</u> in commercial zones.

3.3 Petitcodiac River

The Petitcodiac River and the tidal bore are essential elements of Dieppe's natural and historic heritage. For many years, the people who lived in this area used the river as a means of transportation but also as a food source (fish) and for entertainment purposes

(watching the tidal bore). The upcoming restoration of the Petitcodiac River means that Dieppe is in an enviable position to once again enjoy this unique ecosystem.

However, before citizens can once again enjoy the river, structures have to be provided for better access. A part of what was formerly known as “the Bend” is located in Dieppe between Champlain Street and the Petitcodiac River. This area is an ideal spot to enjoy the river and watch the tidal bore roll in. However, water quality is a concern because wastewater from the treatment plant flows directly into the river. This question must be addressed before small crafts (canoes, kayaks, small sailboats, surf boards, etc.) can safely manoeuvre on the river thereby allowing the development of an eco-tourism industry.

We recommend that the following initiatives be taken for the protection and enjoyment of the Petitcodiac River:

3.	Actively participate in the restoration and enhancement of the Petitcodiac River.
Action	
a.	Create, in the municipal plan, a <u>new zone designated riverfront development</u> comprised of all lands located between Champlain St. and the Petitcodiac River (formerly the “Bend”). Future zone uses would be limited to developments that enhance cultural, heritage and ecotourism endeavours along the Petitcodiac River (hotels, patios, boutiques, tourist attractions, marina and other community oriented developments).
b.	Work with the Greater Moncton Sewerage Commission (GMSC) so that the water treatment plant offers <u>secondary treatment by 2012</u> and <u>tertiary treatment by 2017</u> .
c.	Develop and implement an enhancement plan for <u>the Petitcodiac River</u> such as a permanent infrastructure for tidal bore observations, access to the river for navigational purposes and development of an ecotourism industry.

4.0 CRITICAL NEEDS

Communities depend on drinking water, pure air, food and energy sources for survival and socio-economic growth. For this reason, the Steering Committee felt it was necessary to examine the manner in which these four essential elements are managed and protected in Dieppe.

4.1 Drinking Water

The future of communities depends, first and foremost, on access to and use of clean drinking water. Water conservation and protecting water supply sources are the best ways of attaining this objective. In order to protect the City of Dieppe's water supply sources, the committee recommends the following initiatives:

4.	Provide sustainable sources of drinking water in the municipality.
	Action
a.	Designate the entire Lakeville catchment area as <u>natural green space</u> .
b.	Develop a sustainable <u>forestry management plan</u> for the entire Lakeville catchment area where clear cutting has occurred.
c.	Develop a <u>global conservation and management plan for municipal water requirements</u> according to best management practices as well as a <u>plan to install water meters</u> .
d.	Provide <u>water quality results</u> to Dieppe citizens.
e.	Establish a by-law on <u>septic tank maintenance</u> (once every two years).

4.2 Air Quality

Many different human activities have the potential of influencing the quality of air in a community and by extension the health of its residents. The emission of pollutants in far-away regions can affect air quality in our area mainly through atmospheric pollution (acid rain, for example).

However, local human activities also affect a region's air quality (dust and fine particles from wood-burning stoves, development activities, emissions from cars, trucks and airplanes). These are the types of pollution sources that can negatively affect the health of residents (pulmonary diseases, skin diseases, etc.) as well as the health of forests and fresh water ecosystems in the municipality. It is therefore important that the City determine which initiatives can be undertaken at this level.

In an effort to protect Dieppe's air quality, we recommend that the following actions be undertaken:

5.	Provide quality air in the municipality.
	Action
a.	Implement an <u>awareness campaign on the effects of smoke</u> coming from wood-burning stoves and on efficient burning practices.

b.	Develop and implement a <u>monitoring program on air quality</u> in cooperation with the provincial Environment Department and surrounding municipalities.
c.	Develop and adopt a <u>by-law regulating the installation and use of fire places and non-certified wood stoves</u> and ensure that outdoor fires will be either regulated or banned.
d.	Develop a strategy to encourage owners to <u>replace existing non-certified wood stoves with high efficiency models</u> .
e.	Review and adopt a policy to regulate development activities in the municipality (street construction, etc.) to <u>minimize dust</u> .

4.3 Access to Food Supplies

In any community, it is vitally important that residents are able to easily access food supply sources. Of course, some foods can be produced by individuals themselves but generally, citizens buy them in different types of stores (supermarkets, local markets, bakeries, corner stores) that either produce their items or buy them from local, regional, national and international suppliers. In cities where careful planning has taken place, food stores are located within ten to fifteen minutes walk from the majority of residents' homes.

Buying locally-made food items ("*terroir*" products produced within an hour's drive, for example) stimulates regional economic development, reduces environmental impact (transportation over thousands of kilometres, for example) and also contributes to enhancing food safety and security in a community.

Food safety and security as well as quality of life are also enhanced by protecting and developing arable lands (agricultural lands). The following actions are suggested as means of improving citizens' access to food supplies:

6.	Protect arable lands and enable each neighbourhood in the municipality to easily access food supplies.
	Action
a.	Establish a <u>sub-committee on community gardening</u> with representation mainly from citizens, with the following mandate: conduct an inventory, protect older arable lands with heritage value, develop a working plan for community gardens and a compost service in Dieppe.
b.	Finish the <u>inventory on arable lands</u> , community gardens and food supply centers in Dieppe.
c.	Orient future municipal development in such a manner so that each neighbourhood has <u>direct access to food supplies</u> (mixed development concept, smart growth, 10 to 15 minute walking access to grocery stores).
d.	Develop, jointly with the Dieppe Market, a communications strategy to <u>promote local produce and products</u> .
e.	Develop the <u>necessary infrastructure</u> for establishing community gardens (land acquisition, other equipment).

4.4 Energy

Energy conservation measures offer numerous advantages: short and long-term economic savings; increased business competitiveness; development of concrete climate change initiatives and a positive and dynamic image of the municipality.

Reducing municipal energy consumption (city, homes and businesses) is possible through energy efficient actions such as raising awareness, revising construction building standards for homes, office buildings and new developments and undertaking feasibility studies on renewal energy sources. The following actions could be undertaken to increase Dieppe's energy efficiency:

7.	Actively participate in energy conservation efforts, develop and promote renewable energy resources within the municipality.
	Action
a.	Establish an <u>awareness campaign</u> aimed at <u>promoting energy conservation</u> in Dieppe homes and businesses.
b.	Develop a policy and/or by-law to promote the use of <u>clotheslines</u> in the municipality.
c.	Develop a policy to promote the development of <u>subdivisions that rely in part on passive solar energy</u> .
d.	Adopt a by-law to encourage and regulate the <u>use of renewable energy resources</u> by individuals in the municipality (passive solar energy, solar panels, wind power, geothermal power, etc.).
e.	Develop and adopt a <u>building code</u> to encourage future construction of "healthy" homes, commercial and industrial buildings that meet the most stringent <u>energy conservation requirements</u> (R2000, LEED, etc.).
f.	Complete a <u>feasibility study</u> on the potential for reducing greenhouse gas emissions in Dieppe (measures to <u>limit the idling of vehicles</u> , traffic lights regulated for off peak hours, traffic circle engineering, incentives to reduce use of drive-thru services, etc.), push lawn mowers, etc.
g.	Complete a <u>feasibility study</u> on the potential for renewal energy in Dieppe (wind, geothermal, solar, etc.).

5.0 TRANSPORTATION INFRASTRUCTURE

In the context of this Green Plan, transportation infrastructure is defined as a transportation system that allows movement of people within the municipality or beyond its boundaries for educational and work purposes and daily social and recreational activities. Two types of transportation infrastructure are normally favoured within a context of reducing environmental impact: a complete network of trails (or bicycle paths) and an efficient public transit system.

5.1 Trail system

Walking and biking are not only healthy activities (active transportation), they also contribute significantly to reducing greenhouse gas emissions in a community. A network of trails or bicycle paths in any city offers sustainable and cheap transportation for people of all ages. A trail network is also an attractive component in tourism initiatives.

Almost 20 years ago, Dieppe began developing a trail network. In 1999, a section of the Trans Canada Trail was linked to the City of Moncton but the connection to the Village of Memramcook has never been built. As well, certain sections of the network (Dieppe's Linear Park) exist in several Dieppe neighbourhoods but some connecting links still haven't been built. We recommend that the following actions be taken so that citizens can more fully benefit from active transportation:

8.	Establish a complete network of trail and bicycle paths to promote active transportation within and without municipal boundaries.
	Action
a.	Update Dieppe's <u>master plan for a trail system</u> .
b.	Complete the construction of Dieppe's <u>trail system</u> by 2010, linking all neighbourhoods (trails, asphalted sections, toilets, benches, shelters, signage, garbage bins, bike racks, bike rentals, etc.).
c.	<u>Link Dieppe's trail system</u> to surrounding municipalities (Moncton and Memramcook).
d.	Implement an <u>awareness campaign</u> to promote active transportation.
e.	Complete a study on parking and adopt a municipal by-law <u>on downtown parking</u> in Dieppe (number of parking spots, cost) so as to promote car pooling, public transit and active transportation modes.

5.2 Public Transit

Public transit services can be significantly improved so that more citizens will be willing to use the public transit system. Different measures could be introduced to ensure a more efficient and faster service, enabling more people to use the bus system instead of relying on private vehicles, currently the favourite transportation mode in Dieppe.

We recommend that the following actions be taken to enhance and develop the public transit system in the municipality:

9.	Develop and actively promote public transit services in the municipality.
	Action
a.	Update Dieppe's <u>public transit service plan</u> .
b.	<u>Increase the capacity of the public transit system</u> (new buses, scheduling adjustments, Sunday service, Saturday morning service – Dieppe Market, fast shuttles) and offer free service to children and students in the municipality.
c.	Feasibility study and construction of <u>express lanes</u> to allow the public transit system to avoid congested traffic flow.
d.	Implement an <u>awareness campaign</u> to encourage residents, students and workers to use the public transit system.
e.	Complete a study on parking and adopt a municipal by-law on <u>downtown parking</u> (number of parking spots, cost) so as to promote car pooling, public transit and active transportation modes.

6.0 SUSTAINABLE DEVELOPMENT

Sustainable development is defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Within a municipal context, sustainable development can be applied to almost all the sectors and the concepts that have been developed in this Green Plan. More specifically, sustainable development principles indicate the best manner in which a municipality should be managed on a daily basis and in the long-term.

6.1 Smart Growth and Green Economy

Two interesting concepts are available for managing a municipality's growth within a sustainable development perspective; smart growth (see Appendix C for more background) and the development of a green economy.

A smart growth approach to urban planning respects both populations and environments. Key principles guide planners in achieving more efficient urban development, reducing tax burdens for local governments, developing new infrastructure and increasing quality of life for residents.

A green economy or a climate-friendly economy is one in which activities respect the environment, human rights and social and cultural developments. Very often, organic produce and renewable energy initiatives fall within this niche. We recommend that the following actions be taken to create a green economy "culture" in Dieppe:

10.	Insure Dieppe's development according to basic principles of sustainable economic development and smart growth.
	Action
a.	Adopt a resolution to the effect that future development in the City (road systems, subdivisions) will be done according to sustainable development and <u>smart growth</u> principles thereby encouraging high density development and mixed zones.
b.	Develop a <u>policy or guidelines</u> that will determine which smart growth principles the City wishes to apply. The policy should limit geographic expansion of the municipality, control urban sprawl, define the concepts of "light, medium and heavy" industry by establishing environmental regulations, allow a mix of residential and commercial development projects with pedestrian access to services, prioritize and contain development along certain axes of development, etc.
c.	Develop a <u>green economy</u> in Dieppe (green energy, research and development in environmental matters, biological produce sector, etc.).

7.0 CITY HALL MANAGEMENT

A municipality can reduce its environmental impact by managing its operations, purchasing and facilities according to sustainable development principles. When a municipality adopts more efficient environmental management practices, accountability for the full cost factors of purchases can be calculated, which in turn reduces medium and long-term operational costs. As well, municipalities who adopt proactive environmental strategies serve as model examples for citizens and encourage the development of sustainable economies.

7.1 City Management

City management is defined as the management of personnel, facilities, purchasing or any other internal operations of the municipality. For example, for purchasing purposes, environmental criteria includes product durability, recycling potential, energy efficiencies, material composition (renewable resources, non-toxic and recyclable materials) and global impact on the environment (pollution, transportation costs, etc.).

A good example of purchasing following sustainable development principles was Dieppe’s decision to build a new City Hall according to the Leadership in Energy and Environmental Design (LEED) certification standards. LEED, which was developed by the U.S. Green Building Council, is an eco-construction standardization system that contains criteria such as energy, water and heating efficiencies and use of locally-made products and surpluses. However, other initiatives could also be undertaken to ensure better efficiencies within Dieppe City management. The following actions are proposed:

11.	Integrate sustainable development principles within City management, municipal facilities and municipal affairs.
	Action
a.	Develop and adopt a policy to encourage participation of <u>elected officials and municipal employees</u> in Green Plan objectives.
b.	Develop, adopt and apply a policy regarding <u>acquisition of products and services</u> by the municipality (recycled fibre paper, ecologically friendly cleaners, measures to encourage use of local green products, “green” receptions, etc).
c.	Continually invest in <u>energy conservation</u> to improve all municipal infrastructure efficiencies (buildings, lighting, traffic lights) and to evaluate the potential for <u>renewable energy</u> sources in Dieppe.
d.	Develop and adopt a policy on the construction of all <u>new municipal buildings</u> (materials, energy performance) so that new structures meet the most stringent requirements in energy conservation and use of passive solar energy (LEED certification, for example).

7.2 Municipal Vehicle Pool

Certain initiatives can be undertaken to reduce the environmental impact created by Dieppe’s vehicle pool (vehicles, heavy-duty equipment) and their use (snow removal, salt applications, etc.) We recommend the following actions:

12.	Manage the municipal vehicle pool to minimize environmental impacts.
	Action
a.	Adopt a policy on <u>reducing vehicle idling</u> within municipal vehicle pool.
b.	Develop, adopt and apply a purchasing policy aimed at <u>renewing the vehicle pool</u> with low-emission vehicles.
c.	Develop, adopt and apply a policy on <u>snow removal</u> (streets and sidewalks), disposal of and treatment of waste snow as well as sidewalk and municipal parking lot <u>de-icing</u> . The goal of this policy would be to eliminate or significantly reduce harmful product use (e.g., salt during the winter), manage waste snow and promote active transportation during the winter.

7.3 Residual Materials

Finally, different actions can be taken to reduce the volume of garbage that currently ends up in recycling facilities or landfills. These actions are aimed at reducing, recuperating or recycling residual materials used by the municipality, residents and businesses. We recommend the following actions:

13.	Reduce, retrieve and recycle residual materials in the municipality.
	Action
a.	Revise and adopt a policy on <u>reducing, retrieving, recycling and burying</u> all residual materials and solid garbage produced by the municipality and municipal facilities.
b.	Develop a strategy, in cooperation with the Westmorland-Albert Solid Waste Commission to extend the garbage separation program to <u>commercial and institutional sectors</u> and apartment buildings of more than five units.

8.0 LEISURE SERVICES

An increasing number of citizens wish to be involved in nature activities and to participate in collective efforts towards protecting our planet for the benefit of existing and future generations. Over the course of a year, several activities are organized to celebrate the environment and recognize the seasonal cycles of Mother Nature (Earth Day, Tree Day, summer solstice, Harvest feasts, etc.).

Municipalities who wish to create an imprint as sustainable development communities where citizens enjoy living can develop community activities to enhance a community's natural heritage. For example, activities where residents participate in special events or ecological festivals are useful in demonstrating that environmental protection enhances a community both culturally and socio-economically.

By integrating green programming in activities scheduling, municipalities create closer links with citizens and encourage them to act more responsibly for their community and environment.

8.1 Green Programming

The City of Dieppe's Community Recreation Department offers a wide variety of programming activities for children, adults and senior citizens. By integrating green programming in its activities schedule, the Community Recreation Department would join the international network active in celebrating the Earth and actively participate in establishing the Green Plan (activities to encourage active transportation for example, which allows citizens to live healthier lives by exercising on a daily basis, activities related to neighbourhood and watercourse clean-ups, etc.). We recommend that the Community Recreation Department adopt the following initiatives within a Green Plan perspective:

14.	Incorporate green living activities in the Community Recreation Department programming.
	Action
a.	Develop a <u>calendar of green activities</u> for Dieppe and integrate the activities within regular programming (Earth Day – April 22 nd , Tree Day or Week in May, Canadian Environment Week- June, etc.)
b.	Develop, after citizen consultation, a more elaborate <u>calendar of green activities</u> (active transportation for young people, mothers and senior citizens, walk to school and/walk to work programs, e.g., the Active and Safe Routes to Schools program and other special events with environmental components).
c.	Develop and implement's Dieppe's first <u>green programming</u> schedule in the Community Recreation Department.

9.0 COMMUNICATIONS

It is essential that municipalities be able to fully communicate their policies to citizens. The general public is increasingly preoccupied with environmental matters and is receptive to initiatives that help reduce environmental impact and increase quality of life.

Therefore, increased awareness of the importance of sustainable development principles and of the types of behaviour that residents, developers and businesses can adopt in enhancing their community's environmental quality are useful tools in insuring the success of any Green Plan.

9.1 Communications Strategy

The City of Dieppe already has a wide variety of communication tools to keep citizens informed on upcoming activities and new information: Web site, community bulletins (DieppeMag), signage or billboards in municipal facilities, newspapers and other communication or advertising venues. However, the implementation of the first Five-year Green Plan will require a sustained communication effort to insure that citizens are fully aware of the recommendations of the Green Plan and subsequently integrate Green Plan initiatives to their daily live.

We recommend that the following actions be undertaken to allow each and every Dieppe citizen to become involved in this important undertaking:

15.	Implement a communications strategy to insure Green Plan success.
	Action
a.	Develop, adopt and implement <u>a communications strategy</u> so that Green Plan principles become an integral part of life for Dieppe residents, developers and businesses (Dieppe Web site, community bulletins, promotional activities). The strategy would also target schools and colleges in the municipality.

10.0 IMPLEMENTATION

Successful implementation of the City of Dieppe's first Five-year Green Plan requires the coordination of several factors: the involvement of citizens, businesses, employees and elected officials as well as the necessary human and financial resources to achieve the multiple actions suggested. It is also important to measure the success of the initiative. This can be done by measuring the progress and impact of Green Plan implementation on the quality of the environment and the quality of life of citizens in the municipality.

10.1 Implementation and financing

The implementation of Dieppe's first Five-year Green Plan will require important financial and human resources investments from the City. Budget estimates in Appendix A suggest the scale of investment needed and the amounts necessary for each proposed action (a total of 11 million dollars over five years).

A percentage of the required investment is already accounted for as this was done during the financial planning process in the fall of 2006. However, the involvement of the provincial and federal governments, the Canadian Federation of Municipalities and the private sector will need to be looked at in terms of their participation in the proposed actions. Finally, any other amounts required will have to be obtained from the tax base.

It is important to note that almost all the expenses relating to Green Plan implementation actions will need to be undertaken, now or in the future, by the municipality (construction of the trail system, green space, road infrastructure, water meters, etc.). Without presuming Dieppe's future economic conjuncture, it is conceivable that even if these investments are delayed this will not necessarily mean savings for the municipality, businesses and residents (mainly because of the increase in construction and energy costs). For these reasons, we wish to encourage City Council to start as soon as possible the procedures that will lead to the implementation of the Green Plan. We recommend that the following actions be taken:

16.	Ensure the Green Plan is implemented.
	Action
a.	<u>Adopt the Green Plan.</u>
b.	<u>Adopt a first operating budget (2007/2008) for the Green Plan.</u>
c.	<u>Hire a director</u> to oversee the implementation of the Green Plan. This employee would report to the City Manager.
d.	Create a <u>permanent steering committee</u> to oversee Green Plan implementation.
e.	Adopt, within the <u>municipal plan, a governing principle</u> that all developments must meet Green Plan requirements.
f.	Develop and adopt a <u>financing strategy</u> to ensure development of Green Plan activities (existing municipal financing, new municipal financing, provincial and federal funds, strategic partnerships, human resources, etc.).

g.	Create <u>partnerships</u> with the <i>Université de Moncton</i> , local environmental organizations and other agencies susceptible of promoting Green Plan objectives.
h.	Hire a <u>part-time GIS technician</u> responsible for mapping green spaces, parks, trails/bicycle paths and natural green space. Maps on new water lines, culverts and drainage could also be this employee's responsibility.
i.	Develop and adopt a series of <u>incentives</u> to encourage implementation of green projects in Dieppe (funding programs for businesses and citizens, etc.)
j.	Examine the advantages (efficiencies, savings, etc.) and disadvantages (costs, duplication of services) of establishing a <u>new municipal department</u> responsible for the environment and Green Plan implementation (green spaces, trails and other environmental initiatives).
k.	Hire a <u>by-law enforcement officer</u> to ensure that all Dieppe municipal by-laws are respected.

10.2 Evaluation and follow-up

There are different methods and accreditation systems to measure and/or evaluate the success of the implementation of the City of Dieppe's first Five-year Green Plan. We recommend that the following actions be taken:

17.	Evaluate Green Plan success.
	Action
a.	Develop and adopt an <u>evaluation method</u> to measure <u>Green Plan progress</u> (kms of trails remaining, size of natural space requiring protection, CO ² measures, etc) and impact of Green Plan implementation on <u>natural environments</u> (water quality in waterways, species inventory, air quality, etc.) and <u>quality of life</u> for citizens (participation in green initiatives, satisfaction, etc.).
b.	Develop and adopt a <u>merit or certification program</u> for recognizing green initiatives in Dieppe.
c.	Develop and adopt an evaluation method to <u>measure global economic benefits</u> as well as direct impacts of Green Plan implementation on municipal finances (expenditures, efficiencies and new revenues).
d.	Evaluate recognized methodologies (e.g., <u>ISO standards, Agenda 21 and others</u>) for an annual environmental audit.
e.	Prepare an <u>annual report</u> on green initiatives based on the Green Plan, hold <u>annual public consultations</u> and adjust the Green Plan accordingly.

CONCLUSION

After a decade of unprecedented growth, a new ecological vision is being proposed in Dieppe to ensure that future municipal growth will follow sustainable development principles.

This first Five-year Green Plan is an ambitious and equitable vision that allows for simultaneous environmental protection and municipal growth. In our view, this vision is both necessary and desirable for Dieppe: one needs only look at the impact recent growth has had on natural habitat within the municipality (loss of 50% of the forest cover in 10 years) and increased greenhouse emissions (an increase of more than 50% in 10 years).

In the absence of swift action to implement the Green Plan for Dieppe, the Steering Committee is concerned that delays will only lead to difficult and expensive upgrades in the future. We therefore encourage decision makers to act with a certain sense of urgency in this matter so that the City of Dieppe can protect its environment, reduce its environmental impact, position future economic growth according to sustainable development principles while continuing to offer citizens a healthy way of life.

The Steering Committee believes that the Green Plan is a realistic vision that will lead to these objectives being attained. Several success factors, outlined below, need to be in place:

- **Political will:** City Council must provide its unconditional support if the numerous recommendations and actions contained in the Green Plan are to be successful. The municipality has an important role to play in protecting the environment on its territory and City Council support is critical to the project's success.
- **Citizen and business involvement:** The Green Plan recommends that several committees be established and that citizens and businesses be involved in implementing the proposed actions. Public consultations have shown that Dieppe citizens are more than willing to get involved and to participate in environmental protection measures. Let's put their interest to everyone's advantage!
- **The Green Plan is a complete package:** To create a green city, many things need to be done: protect drinking water sources, air quality and ecological infrastructure; encourage active transportation; plan development according to smart growth principles and make decisions concerning ecological purchasing. The Green Plan for Dieppe is a complete package and should not be viewed as a shopping list. It is imperative that all proposed initiatives be integrated if the Green Plan vision is to become a reality.
- **Establishment of measurable objectives:** Green Plan implementation will require, from the start, the establishment of measurable objectives to allow the municipality to determine Green Plan progress and its impact on the natural environment and the quality of life of the citizens of Dieppe.

Last but not least, the members of the Steering Committee hope that the municipality, citizens and businesses will welcome the vision presented in the Green Plan so that we can create a truly green city in Dieppe for the benefit of present and future generations.

APPENDIX C – Principles of Smart Growth

(ref. Smart Growth Network, International City/County Management Association – www.smartgrowth.org)

In communities across the nation, there is a growing concern that current development patterns, dominated by what some call "sprawl", are no longer in the long-term interest of our cities, existing suburbs, small towns, rural communities, or wilderness areas. Though supportive of growth, communities are questioning the economic costs of abandoning infrastructure in the city, only to rebuild it further out.

Spurring the smart growth movement are demographic shifts, a strong environmental ethic, increased fiscal concerns, and more nuanced views of growth. The result is both a new demand and a new opportunity for smart growth.

The features that distinguish smart growth in a community vary from place to place. In general, smart growth invests time, attention, and resources in restoring community and vitality to center cities and older suburbs. New smart growth is more town-centered, is transit and pedestrian oriented, and has a greater mix of housing, commercial and retail uses. It also preserves open space and many other environmental amenities.

The Smart Growth Principles and Issues below describe in greater details the various aspects of planning and development that make up smart growth.

Ten Smart Growth Principles:

1. Create Range of Housing Opportunities and Choices
2. Create Walkable Neighborhoods
3. Encourage Community and Stakeholder Collaboration
4. Foster Distinctive, Attractive Communities with a Strong Sense of Place
5. Make Development Decisions Predictable, Fair and Cost Effective
6. Mix Land Uses
7. Preserve Open Space, Farmland, Natural Beauty and Critical Environmental Areas
8. Provide a Variety of Transportation Choices
9. Strengthen and Direct Development Towards Existing Communities
10. Take Advantage of Compact Building Design

Seven Smart Growth Issues:

1. Community Quality of Life
2. Design
3. Economics
4. Environment
5. Health
6. Housing
7. Transportation