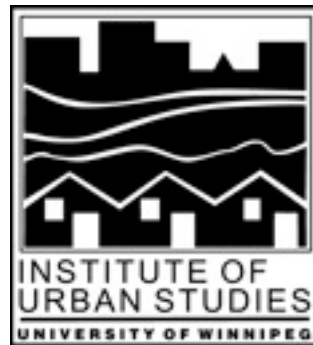


Sustainable CHURCHILL

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Sustainable Churchill Discussion Paper



The Town of Churchill Local Steering Committee

and

The Institute of Urban Studies,

University of Winnipeg

August 24th 2009

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About the Institute of Urban Studies, University of Winnipeg

Since its inception in 1969, the Institute of Urban Studies has acted as an innovative, non-partisan research and educational facility with an action-research orientation. Originally dedicated to addressing the problems and concerns of the inner city, the scope of the Institute's research mandate has developed considerably over the years, to now encompass the social, demographic, physical, economic and environmental well-being of Canadian communities and cities. Projects undertaken by the Institute may be on behalf of, or in partnership with, government, the private sector or community-based organizations. Research specialties include housing, neighbourhood analysis, urban Aboriginal issues, sustainable urban development and urban poverty, to name a few. With extensive experience in project design, implementation, analysis and evaluation, the Institute is a centre of excellence in urban research.

1.0	Introduction: Towards a Sustainable Churchill.....	5
1.1	What is a Sustainability Plan?.....	5
1.2	Background.....	5
1.3	What Would a Sustainability Plan Do?.....	7
1.4	Purpose of the Visioning Exercise.....	8
1.5	What is “Sustainability”?.....	9
1.5.1	Models of Sustainable Development.....	10
2.0	What is the Statutory Context for Planning?.....	13
2.1	How Would a Sustainability Plan be Implemented?.....	17
2.2	Nature of the Plan.....	19
3.0	Background: Churchill Socio-demographic Profile.....	19
3.1	Population and Demographics.....	20
4.0	Churchill’s Priorities for Sustainability.....	26
4.1	Economic Sustainability – Vision.....	28
4.1.1	Areas of Interest.....	28
4.2	Environmental Sustainability - Vision.....	35
4.2.1	Areas of Interest.....	37
4.3	Social Sustainability - Vision.....	45
4.3.1	Areas of Interest.....	46
4.4	Conclusions.....	53
5.0	What Would the Consultation Involve?.....	54
5.1	What’s Next?.....	55
6.0	Conclusions and Recommendations.....	56
	Sources.....	60
	Appendix 1: Churchill Development Plan.....	64
	Appendix 2: Demographic Data.....	68

1.0 INTRODUCTION: TOWARDS A SUSTAINABLE CHURCHILL

This Discussion Paper introduces the Sustainable Churchill initiative between the Town of Churchill and the University of Winnipeg. It provides an overview of major concepts, including what is meant by community sustainability, with the intention that area residents will be better able to participate at the upcoming “Community Visioning” and other engagement sessions from August 31st to September 2nd, 2009.

The Discussion Paper is intended to help generate a more effective partnership between the residents of the Town and the University of Winnipeg, by giving all parties a starting point for discussion and planning. It will help set the foundation for **Churchill’s Sustainability Plan**.

1.1 What is a Sustainability Plan?

Every municipality in Manitoba has an official Development Plan and accompanying Zoning by-law detailing how the community is to be physically organized and built; Churchill’s was prepared in 1999 and is overdue for revision. However, the existing Development Plan is concerned only with land use and the built environment and not with other important parts of a community’s quality of life, such as social, economic, aesthetic and ecological factors. The *Churchill Sustainability Plan* would seek to provide these missing pieces by developing a holistic perspective on the Town. It would ask, how can the Town be planned in such a way as to provide the highest quality of life for all of its residents, and for the long term?

1.2 Background

Launched in August 2008, this initiative is a collaboration between the Town of Churchill and the University of Winnipeg, with funding provided by Omnitrac Inc.. It is overseen by a steering committee of Churchill residents and University of Winnipeg faculty and staff. It is being managed by the staff of the Institute of

Urban Studies at the University of Winnipeg.

The Town of Churchill and the University of Winnipeg signed a Memorandum of Understanding to create a Sustainable Development Plan on September 22, 2008. This is 11 years since the development of Churchill's first Sustainable Development Strategy (1997).

The Sustainability Plan under development will identify ways to enhance the quality of life in the town by improving the ecological, economic and social conditions of Churchill.

Between the summer of 2008 and summer 2009, the partnership primarily involved researchers and students reviewing existing plans and scientific studies, visiting the community, meeting with residents and conducting informal interviews.

Now, this Discussion Paper marks the beginning of wider-scale public consultation. Local residents, businesses and the Town's administration will work with the students and researchers from the University of Winnipeg to articulate a vision for a sustainable Churchill, a vision oriented to addressing community issues and meeting local needs.

The intended outcome of the Sustainable Development Plan is:

- To enable the people of Churchill to make positive changes to the ecological, social, and economic aspects of their community
- To provide learning opportunities for both the residents of Churchill and faculty and students of the University of Winnipeg
- To contribute to the long term goal of moving conceptual elements of the Project toward implementation

The goals of the initiative are to produce a Sustainability Plan that:

- represents the aspirations of Churchill residents;
- is practical and feasible, and can lead to fundable initiatives;
- is based on sound scientific and policy research;
- will contribute substantially to the revision of the Town's official Development Plan; and
- can serve as a model for other Arctic communities.

1.3 What Would a Sustainability Plan Do?

A Sustainability Plan for Churchill would be a roadmap for sustainability. It seeks to identify and address the causes and symptoms of unsustainable communities, and the wider social behaviours, attitudes and practices which contribute to environmental degradation. Such a broad, holistic approach can encompass almost every aspect of the community. Accordingly, a sustainability Plan should encourage the creation and maintenance of a *culture* of sustainability.

It is important for sustainability Plans to consider issues and strategies as interrelated and dependent on each other. If we were to think of community sustainability as a tree, we see that there is a difference between applying solutions to each branch and leaf, as opposed to concentrating at the root of the tree to ensure that every part of the tree receives equal attention. The easiest way to accomplish this is by having each strategy work backwards from a central definition on what the community's principles and dimensions of sustainability are.

1.4 Purpose of the Visioning Exercise

Because members of the community are the best sources of information on the capacity and characteristics of the community, the Churchill Sustainability Plan will incorporate significant input of the community throughout.

A Sustainability Plan would need to articulate:

- **Churchill's community values:** What is important to residents? What do they value in their community? What would they like to preserve? What would they like to build or create?
- **Churchill's sustainability principles:** What would a sustainable community mean to Churchill's residents? What would a sustainable Churchill look like in the future?

These questions will form the basis of the public consultations.

Any kind of planning for the future of a community depends in large part on the aspirations, attitudes and characteristics of members in that community. In order to obtain and maintain the community's support it is necessary for planners to not simply consult residents and other stakeholders but involve them at every step of the way, and keep them updated on the status of the plan's construction, the actions being taken and the success of these action.

For the purposes of developing a Sustainability Plan, this level of transparency will be accomplished through the distribution of newsletters, public websites and reports which will allow the community to view the status of the Plan's construction, download the final version of the Plan and offer constructive feedback and comments.

But first we need to learn:

- What would a sustainable Churchill look like 5, 10, 20 years into the future?
- What measures, improvements and changes will help realize that vision?
- What values should guide the journey towards sustainability?
- How should progress be measured?

1.5 What is “Sustainability”?

Sustainable development is defined as a process, rather than a state of affairs, referring to meeting the needs of the present without compromising the ability of future generations to meet their own needs. A sustainable livelihood includes the assets, capabilities, and activities required for a means of living, and cope with shocks, maintain or enhance capabilities or assets and provide sustainable livelihood opportunities for the next generation (Newton, 2000).

Commonly cited dimensions of a sustainable community include :

- minimized energy consumption and the use of renewable energy;
- compact development minimizing the consumption of land;
- a reduced need for transportation;
- preserved agricultural lands and habitats;
- minimized waste streams and the use of wastes for other processes through what is called an “industrial ecology” model;
- the conservation of water and utilization of natural hydrologic cycles; and the preservation of biological diversity.

The first element of any Sustainability Plan is of course concerned with understanding what is meant by sustainability. The most commonly used method to outline these principles is The Natural Step (TNS). Using the laws which govern the health of the ecosphere as its guide, TNS states that true sustainability occurs when communities: reduce wasteful dependence on fossil fuels, underground metals and minerals, reduce wasteful dependence upon chemicals and un-natural substances, reduce encroachment upon nature and meet human needs fairly and efficiently.

1.5.1 Models of Sustainable Development

The Olds, Alberta Sustainability Plan describes sustainability simply as living the best of life today without compromising the ability of future generations to meet their own needs. Using these principles as its foundation, the second task is to outline the dimensions of what a sustainable community is based on the input of community stakeholders.

An essential element of sustainability is the maintenance of social equity and justice in planning decisions, so that efforts to improve the sustainability of the physical and economic functioning of the city do not harm or diminish the quality of life of its most vulnerable populations. It emphasizes the creation of a high quality of life for all by ensuring that the benefits of development are shared equally by everyone. Socially sustainable development creates opportunities for citizens to fulfill their potential and to be more self-reliant, both as individuals and as a society.

The development of planning principles can be informed by some existing models for sustainability planning.

Indian and Northern Affairs Canada - Comprehensive Community Planning for First Nations

This model takes a holistic approach that facilitates a community process of building a roadmap to sustainability, self-sufficiency and improved governance capacity. Rather than steered by government or a committee the process is steered by community.

All planning areas are addressed within this framework with the goal of achieving positive change and are interrelated and interdependent on each other. These areas include health, governance, economy, culture, social, infrastructure development, land and resources. (For more on an Aboriginal framework, please see page 37, [Section 4.2.1] below).

Five Milestone Framework

Many Canadian communities have also used the Five Milestone Framework to guide their sustainability planning. This Framework is offered through the Partners for Climate Protection (PCP) program, which is Canada's contribution to the international Cities for Climate Protection (CCP) network. The network comprises more than 800 communities around the world through Local Governments for Sustainability¹, known as ICLEI. PCP is a partnership between ICLEI and the Federation of Canadian Municipalities (FCM) (through its Green Municipal Fund).

The widespread use of the Five Milestone Framework by municipalities is due in large to the fact that it helps streamline the actions needed to be taken in the creation of a sustainability plan. Municipalities begin the process of using the framework by signing a declaration to the PCP stating their intention of creating a sustainability plan, implementing the plan and creating a monitoring program to ensure the plan's goals are being met. By signing the declaration, municipalities are eligible for technical and financial assistance by the Federation of Canadian Municipalities (FCM). Municipalities can receive grants of 50% of the cost (to a maximum of \$350,000) towards the construction of their sustainability plan and field and test studies. They may also receive a grant worth 80% of the cost (to a maximum of \$400,000) for projects concerned

¹See <http://www.iclei.org/>

with the remediation of brownfields and projects related to improving the sustainability of buildings and waste water, green building, sustainable transportation and solid waste projects. The Federation also suggests that municipalities become members of the Local Governments for Sustainability group to increase the opportunities to receive grants and technical knowledge about sustainability projects from other municipalities around the world. (For more on the Five Milestone Framework, see Part 6, Conclusions and Recommendations).

The Natural Step

The Natural Step framework was created in Sweden as an effort to help facilitate sustainability through scientific means. The process focuses on looking at the “big picture”. This involves looking at how the issues interact with each other, rather than tackling each issue separately. Trends involving global depletion of natural resources and the increased consumption of these resources by humans construct the underlying concepts for the framework. These concepts informed the development of four system conditions that are necessary in a sustainable society:

1. In the sustainable society, nature is not subject to systematically increasing concentrations of substances extracted from the Earth’s crust.
2. In the sustainable society, nature is not subject to systematically increasing concentrations of substances produced by society.
3. In the sustainable society, nature is not subject to systematically increasing degradation by physical means.
4. In the sustainable society, human needs are met worldwide. (James and Lahti, 2004, p. 6-8)

These four system conditions describe the goals of the framework. In order to reach these goals, policies and practices need to be developed that will (1) reduce or eliminate the community’s dependence on fossil fuels, scarce metals and minerals, (2) eliminate dependence on chemicals and synthetic substances, (3) eliminate

encroachment on nature and (4) meet human needs fairly and efficiently. The methods for reaching these objectives differ between communities. With these objectives in mind, however, policies that meet the system conditions will be sure to conform to sustainable practices.

The Natural Step framework is not something that can be taken on by separate departments within the government alone. Municipalities must adopt the Natural Step framework at the highest level to make sure that all departments are consistently following the policies. With this shared set of objectives, communities will avoid conflicts between departments and create policies that work for all departments.

2.0 WHAT IS THE STATUTORY CONTEXT FOR PLANNING?

In order for a municipality to be sustainable, all branches of government and the community must be aware of what is required. Without a comprehensive framework, some of the initiatives that are put in place by one branch of government may interfere with the operation of another branch. Confusion and conflict between departments prevents many initiatives from being successful.

Land use and development at the provincial level is based in the department of Intergovernmental Affairs, and is regarded as a partnership between the provincial and local governments, and their citizens. Land use planning is important for managing future growth in a community, and ensuring all interests are represented and balanced effectively. The province regards land use planning as a hierarchy, beginning at the broadest level with the provincial sustainability framework, as outlined in the Sustainable Development Act. At a lower level, planning is guided by Manitoba's provincial planning act, the principles of which are outlined in the provincial land use policies (PLUPs). Finally, individual municipalities such as Churchill design their development plans to be consistent with the PLUPs.

Hierarchy:

The Sustainable Development Act

Provincial Planning Act

Provincial Land Use Policies

Churchill's Municipal Development Plan

The Sustainable Development Act

The Sustainable Development Act was adopted on July 1, 1998. The Manitoba Round Table for Sustainable Development was created when the act was adopted, and serves to promote sustainable development in Manitoba and to provide advice and recommendations to government in accordance with the Sustainable Development Act (Province of Manitoba, 1997).

The Planning Act

The Planning Act is a document that outlines legislation for planning on private land in Manitoba, outside of the City of Winnipeg. The Planning Act was adopted in 1916, and was most recently amended in 2006. The Planning Act includes four regulations: the provincial land use policies, the subdivision regulation, the northern Manitoba planning by-laws regulation, and the planning districts regulation (Manitoba Intergovernmental Affairs, Land Use and Development Section, nd).

The Act empowers "*council[s of] municipalities] for the adoption, administration and enforcement of the development plan by-law, zoning by-law and all other by-laws respecting land use and development for the municipality.*" Part 3, Division 1, 13

Provincial Land Use Policies

Provincial Land Use Policies (PLUPs) “set out the Province’s interest in land and resources, and guide local and provincial authorities in preparing land use plans and making sustainable land use and development decisions” (Manitoba Intergovernmental Affairs, Land Use and Development Section, 2009). Manitoba’s PLUPs were originally adopted in 1980, amended in 1994, and are currently being revised.

“The Provincial Land Use Policies Regulation state what the provincial government’s interests are in the use and development of land, resources and infrastructure. The Provincial Land Use Policies are used by the Manitoba Government and local authorities to prepare, amend and review local development plans, which must be generally consistent with the Provincial Land Use Policies” (Manitoba Intergovernmental Affairs, 2009).

According to the Planning Act, Manitoba’s Provincial Land Use Policies deal with

“(a) urban, rural and regional development in the province, including residential, agricultural, commercial, industrial, institutional and recreational development;

(b) the protection and enhancement of

(i) the environment, including water sources, sensitive lands, renewable resources and areas of natural or historic significance,

(ii) the transportation system and other infrastructure, and

(iii) mineral development” (Planning Act, Part 2 4.3)

Since the provincial land use policies were first adopted in 1980, they have been amended only twice: in 1994 to incorporate sustainable development principles, and again in 2005 to incorporate livestock operations policies. Because there have been considerable changes in legislation and new issues have emerged since 2005, the PLUPs are currently undergoing a full review and rewrite. The final version is expected in the fall of 2009 (Manitoba Intergovernmental Affairs, 2009).

The Churchill Development Plan

Because the town of Churchill does not belong to a planning district, the municipal council is responsible for land use planning. The PLUPs are typically used as guides for local development plans. A development plan is defined as “a by-law which outlines the long term vision and goals of a community and is used to guide development within the planning area of a municipality of planning district” (Manitoba Intergovernmental Affairs, Land Use and Development Section, nd). Churchill’s most current development plan was drafted in 1999. It is required in the Planning Act for all municipalities to have adopted a development plan by January 1, 2008. The plan must set policies and plans relating to the municipality’s physical, social, environmental and economic objectives, direct sustainable land use and development, and describe measures for implementing the plan. Once a development plan has been adopted, it replaces the PLUPs. For this reason, all development plans must be consistent with the PLUPs.

Development plans should be reviewed every five years. The process of renewal should include consultations with citizens and a “comprehensive examination” of the plan (Manitoba Intergovernmental Affairs, Land Use and Development Section, nd). This is a major factor driving the present Consultations.

In order to ensure that their growth is managed in a responsible and economic efficient manner, most provinces require that all municipalities, towns and cities create long term master plans. While these plans set out to manage how most aspects of a community (transportation, zoning, parks, social programs etc.) are developed, these strategies have been increasingly scrutinized for their promotion of unsustainable growth. To address this critical short coming, many Canadian communities are constructing sustainability plans to not only reduce their carbon footprint, but to ensure that they develop along the principles of sustainable growth. In doing so however, communities inadvertently create two plans whose development strategies are in conflict with each other.

To resolve this conflict, communities have resorted to a number of different strategies. The first strategy is to use the sustainability plan as a guiding document for the master plan. The City of Iqaluit employs this strategy and states in its local action plan that

“The long-term goals set out in this report propose that measures be taken to ensure that the recommendations of the Local Action Plan are supported by City of Iqaluit’s General Plan, plans for existing and future infrastructure, and operational policies for staff.”

In essence, the sustainability plan is below the master plan in the hierarchy of documents which guide the city’s development. While this method may resolve the conflict occurring between the two plans, the ‘secondary’ status of the sustainability plan leaves room for the city to ignore its recommendations and develop in an un-sustainable fashion.

The most common method however is to integrate the principles of sustainable development into the overall master plan. Both Sudbury and Olds were explicit in stating that the recommendations and more importantly the principles of sustainable development would be incorporated into their respective master plans. As a result any new developments would not only be examined for their economic returns, but also their environmental impacts in terms of loss of natural habitat, suitability for active and passive transportation and social equality (i.e. does a residential subdivision ensure a mixture of varying income groups). Should any of these requirements not be met to their expected level as documented in the sustainable master plan, developers are required to make the necessary changes or face the reality of not constructing their proposal.

2.1 How Would a Sustainability Plan be Implemented?

Since the goal of each sustainable plan is to create a long term, flexible and proactive strategy for the community, it needs to become a document which guides the community’s planning activities. This would

allow the Town to adjust investments and priorities until the vision of sustainability is realized.

To do so, it helps if the Town can put in place a system for monitoring the progress of the plan's strategic initiatives and determine whether or not the community is moving towards or away from its vision of sustainability. Monitoring the progress of the plan requires typically involves three steps:

- setting short and long terms goals for each strategy;
- describing the conditions under which each strategy is considered to be successful; and
- identifying a set of indicators to track its performance in reaching these conditions and goals.

This chain of accountability is reflective of the holistic nature of the plan which seeks to address the sources of un-sustainable behaviour and views these sources as being interconnected with one another.

To use the Whistler Plan as an example, the dimension of "Protecting the Environment" has five success indicators: Greenhouse Gas Emissions, Material Use, Water Use, Energy Use and Development Footprint.

While each of these The success of these indicators is in turn governed by the success of six related strategies (Built Environment, Energy, Materials & Solid Waste, Natural Areas, Transportation and Water), each of which have their own separate indicators and conditions for success.

The third and final recommendation is to create an organization or method by corrective actions can be created, implemented and monitored. The Whistler Plan for example created sixteen task forces, one for each strategy, to review the results of previously proposed actions; assess current trends, issues and baseline inventories; and to propose and prioritize strategic actions for upcoming years to address the gaps between the objectives to be met by 2020 and its current state. The results and proposed actions from each task force are given to the Whistler 2020 Team for evaluation before proceeding to town council.

2.2 Nature of the Plan

While some of the plans refer themselves as being “living documents,” that is being flexible and open to change, this title is misleading primarily due to the primary objectives of these plans. These objectives are primarily aimed at formulating the community’s vision of sustainability looks like and how it should be approached. The frameworks and strategies created during this process are therefore considered a foundation in reaching these goals and are therefore un-amendable.

What is considered living however, are the Local Action Plans used to propel the community towards their vision of sustainability. These plans, which are used to outline the specific steps needed to reach the community’s vision of sustainability, are generally amended on an annual basis to ensure that it is meeting the needs of the sustainability plan, its partners and the general community. If needed, adjustments can be made to reflect changes in local environmental conditions, community priorities, knowledge gained and technological and scientific advances made.

3.0 BACKGROUND: CHURCHILL SOCIO-DEMOGRAPHIC PROFILE

Churchill is a town of 923 people, situated at approximately 58°46’N and 094°10’W. The region has a long history of human occupation, including ancestors of the Inuit, Dene, Cree and Métis (Goulet, 1997; Churchill Ladies Club, 2002; CNSC, 2009). From the 1600s, the site served as one of the Hudson Bay trading posts (Boyens, 2007). The modern townsite was laid out circa 1931 and in the twentieth century, the economic focused primarily on the military industry, as the community acted a focal point for northern defence. Churchill’s economy is significantly dependent on the shipping and tourism industries, and employment focuses on the service industry (including tourism and transportation). The major private sector employers are The Hudson Bay Port, Calm Air, and the Northern Store, while the top public sector employers include

the Churchill Regional Health Authority, the Town of Churchill, the Duke of Marlborough School and Parks Canada (Government of Manitoba, 2007). This industrial portfolio led Newton (1997) to divide recent economic development into four sectors: transportation, tourism business and social development (P.35).

3.1 Population and Demographics

At the height of the town’s use as a military base, the population of Churchill was greater than 10,000. Following the closure of the base in 1980, the population contracted, and the economic portfolio began to focus on the tourist and shipping industries (facilitated through the port, railway and airport). As of 2006, the population of the town is slowly decreasing from previous census data and sits at 923 people, over one-half of which is Aboriginal. The median age of the community is 34 (male – 36 and female – 33). The population has decreased since 2001 (see Table 2.1, below) and features a large portion of middle-aged cohorts (see Figure 1).

Characteristics	Total
Population in 1965	7000
Population in 1971	1604
Population in 1986	1217
Population in 1991	1143
Population in 2006	923
Population in 2001	963
2001 to 2006 population change (%)	-4.2
Land area (square km)	53.9625

Table 1: Characteristics of Churchill, Manitoba (Newton, 1999, in addition to Statistics Canada 2006)

With more than 64.2% of its 2006 population below the age of 45, the town of Churchill can be considered to be a fairly young town. While over 24% of the town is below the age of 14, the majority (43%) are between the ages of 15 and 44. Despite its youth, nearly a quarter of the town’s residents are between the ages of 45

and 64 while only 7% are 65 years of age and older. Since 1996 however, the overall age of Churchill has been increasing with the town’s median age increasing from 29 to 33.8 in 2006. Accordingly, during this ten year period the number of children and young adults decreased by 12% as the number of mid and old adults increased.

Despite having a median age five years lower than the provincial average, the town of Churchill is the oldest of northern Manitoba’s communities. Flin Flon, Leaf Rapids, Gillam and Lynn Lake all have median ages lower than Churchill ranging from less than a year to more than four. For more complete data comparisons, please see Appendix 2.

Figure 1: Population Pyramid, Churchill

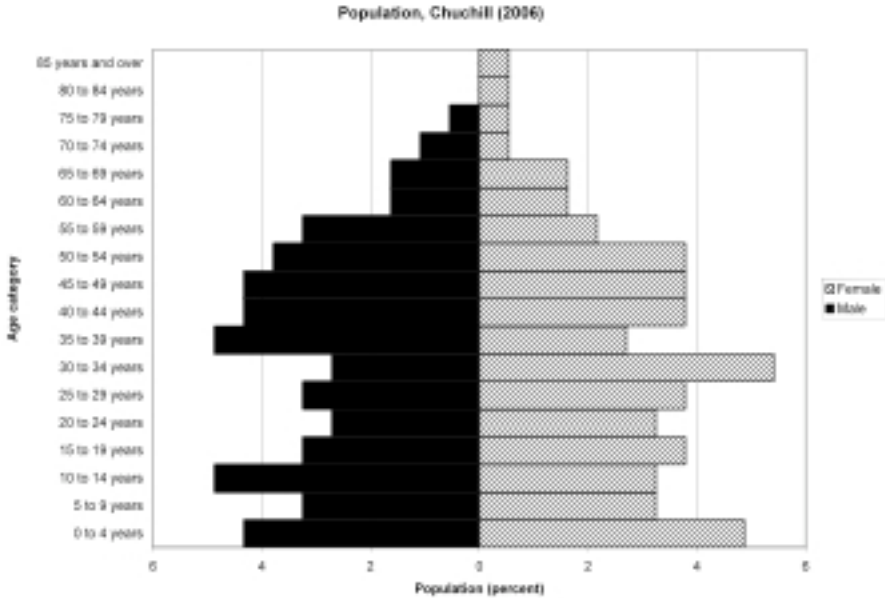
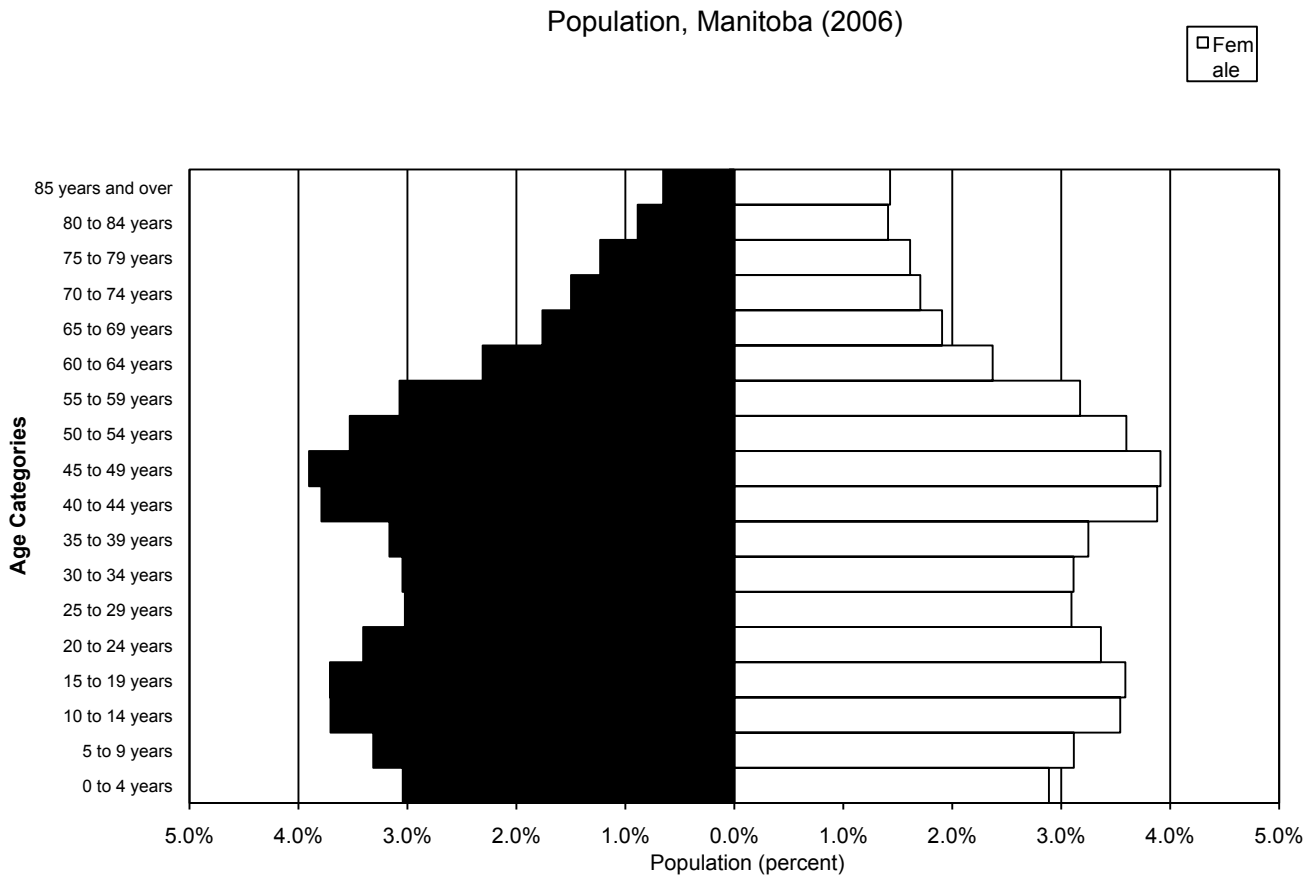


Figure 2: Population Pyramid, Manitoba



Ancestry

Like most northern communities, Churchill remains relatively homogenous in its racial composition. Although the number of visible minorities increased nearly 200% from 2001 to 2006, the population of this group stands at only 45. The ancestry of this group of individuals is split between those of Asian and Black descent.

Although the overall population of Churchill is decreasing the proportion and subsequent number of Aboriginals residing in the town increases. In 1996, with a population of 505, Aboriginals composed over 48% of the town's population. Ten years later in 2006 the overall number and proportion of Aboriginals within Churchill increased to 550 or nearly 60% of the population. This trend in population composition is one found throughout the north with Gillam, Flin Flon, Lynn Lake and Leaf Rapids all

experiencing a similar situation. Such a trend suggests that when northern communities including Churchill, experience population loss, Caucasians leave with much higher frequency and in much higher numbers when compared to Aboriginals.

Education

When compared to four other northern Manitoban towns, Churchill's rates of educational attainment rank in the middle of the field. With approximately 42% of the town's adults aged 15 and older without a high school diploma or equivalent degree, this number is significantly higher than Gillam's 30.9% but much lower than Leaf Rapids rate of 51%. While Churchill ranks third in the number of high school graduates (17%) it ranks last in the proportion of residents who have acquired a post-secondary education.

When compared to the provincial average, Churchill's rates of educational attainment are significantly lower for those have not completed high school, acquired a high school certificate or a college / non-university degree and a university degree. The only educational category which had a higher figure than the provincial average was the number of town's residents who were in or had completed an accreditation program in trades.

It should be noted that these numbers will be skewed slightly, as – like in any community – there are 15-20 year olds that are following the standard high school curriculum and have not graduated.

Income

According to the 2006 Census, in 2005 the median income for all persons 25 years of age and over in Churchill was \$32,121.00, an increase of 18% from the 2001 Census. The majority of personal income in Churchill (85.6%) is generated through earnings associated with employment while 11.3% of residents receive their income via government assistance. The remaining 3% receive their income through other forms. Since 2001, the number of people depending on government assistance as their primary form of income has increased slightly by 0.9% while the number of people earning their income through employment or other forms dropped by 1.2% and 0.4% respectively.

The same data indicated, that of northern Manitoba's four towns, only Gillam had a higher median income. Lynn Lake and Leaf Rapids each had median incomes which were almost 70% lower than Churchill's. This is not surprising given that Gillam's rate of government assistance is much lower than Churchill's while Lynn Lake and Leaf Rapids rates' are substantially higher. On a much wider scale, it was found that Churchill's median income is 31% higher than the provincial average. This difference is explained primarily by the higher number of people depending on government assistance and other forms as the source of their income on a provincial wide scale.

The high median income found in Churchill is somewhat surprising given that its unemployment rate was 14.5% in the 2006 Census, a rate nearly 9% higher than the provincial median. However, upon closer inspection it appears that the high-unemployment rate is offset by an above average participation rate. In fact, of all the northern communities examined, Churchill has the highest participation rate, nearly 3% higher than Gillam's, the second highest rate found in the north. Churchill also managed to exceed the provincial rate by more than 20%. The extremely high participation rate suggests that a significant portion of town residents receive their income on a seasonal basis and cause the unemployment rate to fluctuate greatly throughout the year.

Transportation Modes to Work

According to the 2006 Census, more than 48% of Churchill's residents identified that their primary mode of transportation to work was by either bicycling or walking. Accordingly, the second most popular mode of transportation was the private vehicle (38%) while 10% of residents indicated that they were passengers in these vehicles. The remaining 2% of respondents stated that they used 'Other Methods' to reach work. It is interesting to note that since 2001, the number of people using private vehicles to commute in Churchill has decreased while bicycle use or walking has increased. Additionally, it should also be noted that choice in transportation is in part determined by gender. While 57% of males chose private vehicles to commute to work (an increase of 11% from 2001) only 19.1% of females used private vehicles (a decrease of 9% from 2001). As a

result, while fewer males walked, biked or rode as a passenger to work in 2006, the number of females walking or bicycling to work increased dramatically by 18% during the period.

Despite a slight increase in private vehicle use from 2001 to 2006, Churchill still has one of the lowest rates of auto use for any northern settlement. Only Lynn Lake, where 37.2% of residents used private vehicles for their commute had a lower rate. Gillam and Leaf Rapids each had higher rates of use with 48% and 64% of respective residents using cars. On a provincial scale however, the differences become much more drastic. In 2006 more than 77% of Manitobans indicated that they drove their car to work on a daily basis, a difference of 39% from Churchill's stats. In addition, more than 48% of Churchill's residents walked or bicycled to work, only 9% of Manitobans used the same form of transportation.

Dwellings

Unlike most Manitoba communities, the majority of Churchill's private residential structures are not owned by their occupants. According to the 2006, only 38% of Churchill's housing stock is owner-occupied while the rest (62%) is occupied by renters, the vast majority of whom live in the 338 units owned and managed by Manitoba Housing. From the data, it appears that this unique situation is a result of relatively low number of single detached houses (38% of the total housing stock) and the high occurrence of semi-detached, row housing and apartments in the town. As to why such high numbers of rental properties occur in Churchill remains unexplained as rates for government assistance are the second lowest of the examined northern communities and nearly one percent lower than the provincial rate. Finally, the high cost of housing may play a part in reducing the overall number of owner-occupied residences.

With 16.8% of its dwellings requiring major repair, Churchill's housing stock is considered to be in poorer shape than most northern communities and the province. In fact, Gillam, Lynn Lake and the province each had lower incidences of houses needing major repair than Churchill. Only Leaf Rapids had a higher number of residential structures needing major repair (38%) than Churchill.

The rationale for Churchill's housing stock being in relative disrepair may be due to a number of causes. It is certainly plausible that the harsh climate of the area places more stress on a housing stock of which 93% was constructed before 1986. In addition, the incidence of crowding (where more than one person per room share a room) is much higher in Churchill than in any other northern community or the province and may produce additional wear and tear than a non-crowded residence.

4.0 CHURCHILL'S PRIORITIES FOR SUSTAINABILITY

In order to identify issues and priorities in the areas of economic, environmental and social sustainability the Local Committee met a number of times between October 2008 and early June 2009. The Committee explored topic areas and how they applied to the Churchill situation. Not all topics under each category received in-depth discussion.

From these brainstorming sessions key topics and issues emerged that resulted in discussion in greater detail. Generally speaking they are marked with two stars (** Issues/Follow-Up).

The role of this section is to:

- Outline a vision of a "sustainable" Churchill and identify issues of concern.
- Assist the University of Winnipeg / Town of Churchill Sustainable Development Committee to identify priorities and issues requiring public feedback from the community.
- Indicate gaps in factual information including "indicators of sustainability" that may be necessary to complete a Sustainable Development Plan (and subsequent Community Action Plan).

Members of the Local Committee

Appointed by Mayor and Council:

Michael Goodyear, Chair

Lorraine Brandson

Georgina Oman

Wes Stevens

Derry Martens (alternate Michel Petit)

Terry Stover

Gerald Azure (resigned May 09)

Note: Albert Meijering (CAO Town of Churchill) attended most meetings.

LOCAL COMMITTEE VISION FOR A SUSTAINABLE DEVELOPMENT PLAN

To create a Community Action Plan that balances the economic, environmental and social needs of the community.

To create a sustainable development plan that considers both long-term and short-term planning.

To create a plan that incorporates the diverse views of the community and contains an intergenerational perspective of future needs and how to meet them.

To create a plan that acknowledges the role of each citizen in being accountable for decisions and actions that sustain the economy, environment, health, and social well-being of Churchill.

To build up a vital and healthy community that will retain the existing residents; attract new residents to the town, especially families; and increase the length of residency of the skilled transient population (from 1-2 years to 3 to 5 years+).

To set up a regular reporting mechanism (e.g. Annual State of the Town report) that monitors progress and is publicly accountable for a Sustainable Development Plan (with measurable indicators to demonstrate progress, incentives to improve, and accolades for improved practices in the Town and community of Churchill).

4.1 Economic Sustainability – Vision

The community of Churchill recognizes that economic sustainability is built when new activities are investigated and implemented, and existing activities are supported and promoted.

The Town of Churchill recognizes the significant economic input generated by the transportation sector, health care delivery system, tourism and service sector, and increased research activities.

Plans for economic sustainability recognize that a community is more likely to be able to adapt and succeed when there is a diverse range of economic activities.

Proposed new economic activities should serve the common good. Proposed activities should consider in advance the consequences to the human and social dimension of the community. They should result in minimal impacts on the natural environment and be efficient in their consumption of resources.

4.1.1 Areas of Interest

Recognition of the importance of all economic sectors

There are a number of key sectors that comprise the Churchill economy:

- Transportation (including The Port of Churchill)
- Health Care Delivery
- Services – public and private
- Tourism and Heritage
- Research

*** Issues / Follow-up:*

- a. The loss of any major component of an individual sector potentially has major implications for the other sectors.
- b. Media attention often promotes the viability of Churchill based mainly on one sector (tourism) or the loss of another (“the Port”).
- c. We must ensure that as a community we speak positively about all the vital aspects of our economy and ensure public policy decisions are made recognizing the importance of the inter-relationships between the 5 sectors for the continued viability of the community.

Employment and Income

Churchill has a large seasonal employment base, especially in the transportation and tourism sectors. A good portion of this workforce comes from outside the community, although many do have longstanding ties and relationships with Churchill.

- Full time employment
- Part time
- Outside workforce
- Unemployment issues
- Level of income
- How to create a pool of skilled workers

Key Indicators: percentage of households with incomes below the Low Income Cut-off; annual average (or median) household or individual income; percentage of Employment Insurance beneficiaries as a percentage of the total population; middle income earners as a percentage of total population; real average weekly earnings; number of people requiring food bank services or Christmas Cheer Board hampers.

*** Issues / Follow-up:*

- a. The Port of Churchill has both a local source of employees and an outside pool of workers. How many positions currently filled by those from out of town are within reach of local residents with some educational upgrading?
- b. Is there a potential pool of new workers from local school graduates and what are training or formation needs?

Training and Education (*see Social Sustainability)

Entrepreneurship

Like many northern communities, Churchill faces significant challenges in keeping young people in the community.

Entrepreneur support systems

Young entrepreneur support systems

*** Issues / Follow-up:*

- a. What assistance is available to young entrepreneurs? What local agencies communicate this to the community?

Availability of Basic Services

Public services:

Churchill Town Centre Complex

Public Works

Private Services:

Banking

Communication, including high-speed internet / wireless internet

Office and retail space

Hair services

*** Issues / Follow-up:*

- a. The Churchill Town Centre Complex was designed to accommodate the health care, educational and recreational needs of the community, as well as providing a base for municipal government. There have been studies/committees in the past that proposed the potential of commercial activities in the Town Centre Complex in order to provide revenues for its continued operation.
- b. Is this something that should be examined again? What are appropriate commercial activities that take into consideration a) “non-competition with the main street” and b) respect for the existing recreational and other public uses?

Availability of Commercially Zoned Land

*** Issues / Follow-up:*

- a. Is property available to those wishing to establish local businesses?

Northern Cost Factors

Churchill is often described as the “accessible Arctic” due to the well-established air, rail and marine transportation routes. Consequently, the costs of goods in Churchill, while higher than in Winnipeg, are much lower than communities to the north.

*** Issues / Follow-up:*

- a. Cost of airfare. Churchill to Winnipeg airfares have escalated over the past few years affecting both the community and the promotion of tourism promotion (identified in Province of Manitoba / Churchill tourism workshops held in the winter of 2007).

- b. The uneven service and unreliability of the rail line affects every facet of daily life in Churchill.
- c. Residents with no isolated post benefits must face high food prices. Churchill doesn't qualify for the food mail program. *note:* the Churchill RHA keeps food basket data

Local Tax Base, and Annual Operating and Capital Budgets

Historically the Town of Churchill does not receive sufficient local tax revenues to operate. The financial input of the Province of Manitoba (Local Government Services) is a critical source of funding and technical support for town operations. What percentage of the annual budget is derived from the local tax base?

*** Issues / Follow-up:*

- a. Replacement of municipal infrastructure (waste management, water and sewage, power plant in the Town Centre Complex) is going to require significant dollars in the next few years. Provincial and potentially federal sources of funding are being investigated.
- b. The polar bear tourism activity is an important revenue generator in the community. Some government administrators feel that the Province of Manitoba and The Town of Churchill are bearing the extra costs of this intense commercial activity (2 months) without getting direct monetary benefits. One option that has been proposed in the past and rejected is the surcharge model of adding year-round hotel fees. This does not have general support in the community because a) hotels already pay a much higher rate of taxes than other commercial entities in town, and b) there is a growing sense in the community that too many entities are trying to "gouge" the visitor; that this is one more local "tax grab".
- c. How do we recoup some of these increased costs to the Town (e.g. garbage pick-up) for these two months through appropriate means – fees, surcharges, etc? The Province is already consulting with stakeholders on some kind of fee structure for the Wildlife Management Area tourism activity.
- d. As a cumulative result of these actions, are we "killing the goose that lays the golden egg"?

Transportation Services

The Port of Churchill is an international seaport and an important re-supply hub for the Kivalliq district of Nunavut.

Passenger / Freight

Air / Rail travel

Shipping Networks: Churchill can play a significant part in the future of Winnipeg's CentrePort. The CentrePort project defines its mandate as a one-stop shop for business-investment decisions with incentives for investment with 20,000 acres of shovel ready industrial land in Winnipeg with an inter-modal transportation system seamlessly connected to all modes of air, road, rail and sea. It is connected by rail to ports in Prince Rupert, Vancouver, Churchill and Thunder Bay, providing new opportunities for manufacturing, distribution, warehousing and logistics. CentrePort is supported by an educated labor force.

Airport: Proposal to enhance the capacity of the airport to qualify as an emergency support designation for international air routes could lead to potential synergies with RHA EMS / EMO, the local volunteer fire department, Port Security, and Customs activities.

Northern Road Initiative: will link northern Manitoba to the Kivalliq district of Nunavut. The route selection study was completed in December 2007. "With the completion of the Route Selection Study, a minimum five-year road development period is estimated for detailed route mapping, environmental assessment, permitting, functional and detailed engineering." (Kivalliq Inuit Association)

*** Issues / Follow-up:*

- a. What is the current status of progress on repairs to the Hudson Bay Railway (2008-2009 train slowdowns, derailments, scheduling)?
- b. What are the long-term implications of rail disruptions to the future of tourism in Churchill?

- c. How does “CentrePort” fit in the future role of the Port of Churchill?
- d. What are the perceived local benefits of the Kivalliq road? Who is looking out for the wildlife and natural surroundings?

Research Activity Providing Economic Spin-offs

There is increasing recognition of the economic spin-offs from research activity in the Churchill region, including the area of Wapusk National Park. Each year several hundred researchers and their students visit the area to conduct work in the physical, biological, and social sciences.

note: CNSC keeps some records that the Churchill Chamber of Commerce member of the CSNC Board of Directors reports to the Chamber on a regular basis.

Identify New Sustainable Economic Business Opportunities / Attract Investment

There has been interest expressed by Saku Investments (Rankin Inlet based Kivalliq Inuit beneficiary organization) in investing in Churchill; marine tank farm, potentially in training initiatives (A. Meijering).

*** Issues / Follow-up*

- a. Potential for additional automotive repair capacity
- b. Increased trades capacity (plumbing, electrical, etc.)
- c. After hours convenience store / Laundromat?

Requirement for a Tourism Coordinator / (Economic Development Officer?)

There is a need for a point person to assist and build on the synergies of the various parties involved in tourism (marketing and communication) and provide community host support for VIP tours. The need for a full-time position such as this has been voiced various times through the Chamber, Town of Churchill and Destination Churchill.

*** Issues / Follow-up:*

- a. Presently not a streamlined and consistent response to visitor inquiries to The Town of Churchill, Churchill Chamber of Commerce, Destination Churchill (member based only), Travel Manitoba or other related agencies - The person would need to be up-to-date on accommodation availability, activity availability, etc.
- b. Discussions to create a full-time staff position and how it would effectively work require a consultation with all the affected stakeholders in order to respect the role and mandate of each of these agencies in promoting their interests
- c. The position should be Churchill-based. Office location in town?
- d. Maybe the positions should hold some flexibility for the Town / Chamber to delegate support activities for economic development initiative projects?
- e. Position operating under what authority / funding source for core operating?

Membership Based Organizations in Churchill Promoting Economic Development

Churchill Chamber of Commerce

Destination Churchill

Economic Development Agencies

Churchill Community Development Corporation

Churchill Economic Development Agency

4.2 Environmental Sustainability - Vision

The community of Churchill recognizes the connection between environmental quality, social, cultural and spiritual wellness, and economic vitality. It will work to protect the natural beauty and ecological diversity of Churchill for future generations.

The Town of Churchill strives to facilitate citizen participation in town policy decisions and encourages everyone to take personal and collective responsibility for actions that may adversely impact the environment. The Town of Churchill will consider cumulative and long term impacts to the environment in decision making.

The community of Churchill recognizes the region's unique environmental context. The Town of Churchill takes responsibility to protect areas within its legal jurisdiction and actively participates in land use planning for the immediate region.

The Town of Churchill supports the management objectives of the Churchill Wildlife Management Area and Wapusk National Park.

The community of Churchill recognizes its unique role in facilitating the establishment and operation of the Churchill Northern Studies Centre (CNSC). Established in 1976, the CNSC is an independent non-profit research and education facility 23 km east of Churchill. The Centre provides logistic support to researchers and educational opportunities for the public of all ages. The Committee It supports the goals and objectives of the Centre and looks forward to the completion of a new green LEED accredited facility (2010) that will become a source of pride for the community.

The community of Churchill recognizes its role to act locally to reduce adverse global impacts such as ozone depletion. It will support and implement innovative programs that maintain and demonstrate Churchill's leadership as a sustainable town.

Reduce, Reuse, Recycle – can we commit to this as a community?

4.2.1 Areas of Interest

Energy Use:

Electricity
Heating
Water
Air
Alternate energy

Key Indicators: energy consumption per household; energy consumption by sector; municipal water consumption per capita (total, residential commercial, other); percentage of households serviced by sewage treatment (e.g., by level: none, primary, secondary, tertiary) Town, The Flats, Goose Creek, Churchill Northern Studies Centre, remote residences; urban air quality (e.g. bear season / winter idling of vehicles, local citizens see occasional emissions from the operation of RHA incinerator); ambient levels and incidences for ground-level ozone, PM10, CO, NO, SO2, benzene.

*** Issues / Follow-up:*

- a. Water and sewage distribution system – outdated (30 years+), needs to be replaced due to unreliability and high operating costs (approx \$1M annually); excessive time allocated for Public Works employees due to failing system.
- b. Water source: current system pumps water from the Churchill River approximately 18 km to town; a secondary pump house heats it again and it is brought to a Water treatment plant for final distribution to town. Town of Churchill is developing a RFP to have an engineering firm recommend changes to the water and sewage system.

Questions to be asked:

- should the town look at other water sources (i.e. desalinization from the Bay? We need to look at different filtration systems used by other communities and the potential of alternate systems to heat water to transfer it to town (would geothermal work in Churchill? - need to heat the water to 7.5C)
 - what are other options for sewage treatment?
- c. Air quality issues – follow up anti-idling program and posters; follow-up – validity of concerns, re Churchill RHA incinerator emissions

Waste Management and Minimization: [Topic of high interest]

Current practices and Waste Disposal Alternatives

Solid Waste

Recyclables – Reduce, Re-use, Recycle

Hazardous Material

Key Indicators: Waste generation and disposal (total and per capita); recycling and composting participation rates; the meeting of high standards rather than minimum compliance; implement waste prevention and management plan; increase diversion of waste for reuse or recycling; reduce waste production

History: Decommissioning of the main dump near the airport occurred in 2004 and its replacement has been problematic. The cost to send waste material to the Mystery Lake site in Thompson is prohibitive – tipping fees currently \$120 per metric ton + the costs for sending the trailers to Thompson on the rail. The backload of material stored in L-5 building (1-2 years?)

Waste Management Options: [A matrix of options was presented to the public in the fall of 2008 including food composting, transfer station, incinerator, Re-sop Gasifier, Preseco Composter, Landfill: under various

categories including capital cost, operating costs, technical expertise needed to operate and Technology proven]

Goal - to have a waste management system that will be reliable, viable, including stable costs, and will be a showcase for tourists (Report Earthbound Environmental Dec 2008)

Status July 2009 Transfer Station/Composting/Landfill Combination preferred recommendation - Town of Churchill

Recycling – there will be focus on plastic and aluminum; the community is buying a baler; recycled material will go to the Thompson Recycling center. There will be no subsidy. It will be “price per ton recovered only” according to A Meijering.

Composting – Bay 1 of the Waste Transfer Station; to gather organic waste separately and compost it into useable soil [food and restaurant garbage, cardboard and paper products, grain dust from the port, etc.]

Landfill location – consulting firm is looking into this. In the plan proposed to the engineering firm by the Town: the goal is to have this tie into the removal of material for use by the airport in resurfacing of the runway. They are looking at removing 180,000 tonnes of material. This process will leave behind a suitable excavated area for the Town to use for landfill. Landfill costs projected at \$30 per ton versus Thompson landfill \$120 per ton plus shipping. (Info from A. Meijering 2009)

Proposed advantages of this option (Earthbound Environmental Dec 2008):

- Manages all waste materials
- Minimizes Polar bear / tourism issues by using L-5 during Polar bear season

- Transfer as part of the option (e.g. steel, HHW, recyclables)
- Compost material is value-added for community
- Manageable Capital Costs (subject to federal/provincial assistance)
- Lowest operating cost option
- Acceptable to the Province of Manitoba
- Transport Canada willing to consider Metal Dump Site
- The whole integrated system can be showcased to tourists

Incinerator (option ruled out): The information provided by the consultant seems to have eliminated incineration as a viable option – mainly due to operational costs, staff expertise required, and questionable proven technology on some models.

The Solid Waste Alaska Network that promotes the best sustainable practices for waste management provides examples of systems that are used in their northern communities. (see Appendix 2) The community of Skagway with a small population like Churchill and heavy seasonal tourism (much heavier than ours) has installed an incineration system that is available in Canada. Appendix 2 has information on Skagway's system and a job description for the operator.

*** Issues / Follow-up:*

- a. Is recycling only going to be cans and plastic for the foreseeable future? Will we be continuing to burn cardboard at the old Scrap metal dump? Will cardboard/paper still be collected as a recyclable? Will any other potential future recyclables be collected? or temporarily stored?
- b. The Public education program for Recycling (2005 to 2007) was an honest attempt and first step but it lacked clarity and direction. We asked 5 different people in town what they thought they were supposed to put in their recycle bag and got 4 different answers. The Public Education Program developed by Annapolis Royal (their Mayor John Kinsella is

- a former resident of Churchill) demonstrates what can be done in this area.
- c. If opening a new Landfill is part of the new Waste Management System what measures will be taken to limit the amount of material we need to place in it
 - d. There is a lingering sense in the community that all options for an incinerator have not been explored (i.e just the ones the consultant presented). Do other northern communities have some experience and expertise that could benefit us?

Land Use Planning

Town: Town appointed committee looking at identified issues in The Flats and Akudlik area.

Provincial: The Province has released a new document (Review of Provincial Land Use Policies: Draft for Consultation, March 2009, Intergovernmental Affairs).

Federal: town has membership on the federal national park (Wapusk).

*** Issues / Follow-Up:*

- a. The Town has many regulations and policies relating to its own jurisdictional land use. There could be some value in drawing them together into a referenced layman's policy manual for internal and public purposes.
- b. Can one assume that if the Province is currently finalizing public Land Use Policy documents that they would be encouraging or requiring the municipalities to be undertaking the same process in the future? Is there merit in establishing a review process of existing policies that might identify new concerns or consolidate existing policies and practices?

Sustainable Development Practices

Businesses / agencies

Individuals

Local awareness of Environment and Environmental issues

*** Issues / Follow-up:*

- a. Rejuvenate the local anti-idling initiative
- b. Best practices by local residents and businesses – what are they (e.g. Tundra Inn); how do we communicate them in a meaningful way to the rest of the community?
- c. Engagement of youth
- d. Water, Sewage, Waste management issues (as above)

Conservation and Biodiversity

Conservation and Enhancement – co-operate with jurisdictions responsible to maintain the ecological processes, biological diversity, and life-support systems of the Churchill

region; support the harvesting of renewable resources on a sustainable yield basis

Species at risk

Special Protected Areas

Key Indicators: Green space as a percentage of total land area in town; total area of environmentally sensitive habitat and percentage of area protected from development (i.e. protected area or covenanted land); number of species at risk; population trends of species at risk; population trends of keystone species

The Town of Churchill actively supports and collaborates with provincial (Wildlife Management Area, Polar Bear Alert program) and federal (Wapusk National Park) conservation programs.

Resource Use

Resources harvested in the region (caribou, moose, geese, fish, berries)

Harvest of renewable resources on a sustained yield basis (present activities – no issues were indicated)

Rehabilitation and Reclamation

Restoration of damaged or degraded environments / removal of derelict buildings and equipment

Consider requirements for rehabilitation and reclamation in future decisions and actions.

*** Issues / Follow-up:*

- a. Churchill Research (Rocket) Range clean up (Province of Manitoba?)
- b. Scrap metal dump future?
- c. Status of Akudlik buildings
- d. Navy Base demolition – will it ever happen?
- e. National Harbours Board staff house demolition
- f. old Institute for Arctic Ecophysiology buildings future use?
- g. derelict vehicles and by-law enforcement

Incorporating Aboriginal Perspectives in Sustainability /Conservation Management

*** Issues / Follow-up:*

- a. What are some of the more local perspectives in the Cree, Metis, Dene and Inuit population concerning sustainability?

The Province of Manitoba uses this perspective:

The Creator as a Life Giving Force: There is a Creator or being that is depicted as a living spiritual entity that gives life.

Laws of Nature: There is a time and season for all life-sustaining activities. e.g. animals were not killed during their reproductive cycles.

Four life-sustaining elements of the world:

- *Air* is the essential element of human and all life forms. Air or the breath of life is also the means by which one thinks and speaks.
- *The earth* provides food and many other life-sustaining materials and resources.
- *Fire* provides heat and light. The sun is fire.
- *Water* cools and nurtures, makes life and growth possible.

Interrelationships and Interconnectedness: Everyone and everything has a role and a place. One should not take any person, animal, or thing for granted. Gratitude is a life giving force.

(adapted from Manitoba Sustainable Development Plan p. 37)

Climate Change Issues

Green house gas emission reduction strategies.

Churchill as a destination that practices sustainable development and understands climate change issues.

*** Issues / Follow-up:*

- a. Tourism perspective: Destination Churchill is preparing a document on Climate Change and Tourism in order to promote good practices and market Churchill as a destination concerned with sustainable development and climate change. Projected completion - September 2009; what recommendations can be incorporated in the Sustainable Development Plan?

Scientific and Technological Innovation

Research best practices

Research, develop, test and implement technologies essential to further environmental quality

*** Issues / Follow-up:*

- a. Follow progress of the Churchill Northern Studies Centre new building LEED process for ideas that other entities may use in the future
- b. Follow progress of Nestor II Parks Canada project – waste/water treatment plant as a model for outpost camps; some aspects of it may be incorporated in the Cape Churchill bear viewing operation camp

4.3 Social Sustainability - Vision

Social sustainability is based on meeting basic needs, promoting personal development, ensuring social equity, and taking part in responsible citizenship. It is achieved when individuals in a society are able to:

- achieve and maintain personal health (physical, mental, emotional and spiritual)
- feed themselves adequately
- provide adequate and appropriate shelter for themselves
- have opportunities for gainful and meaningful employment
- improve their knowledge and understanding of the world around them
- find opportunities to express creativity and engage in activities that promote personal health objectives
- enjoy a sense of belonging
- express a sense of identity through heritage, art and culture
- have the availability of services when they are more vulnerable members of the society – such

as elders, and people with mental and physical challenges

- be assured of mutual social support from their community and be motivated to contribute to providing that social support in the workplace and through volunteerism
- enjoy freedom from discrimination
- enjoy freedom from fear, and security of person
- participate in decision-making of the society through civic and community affairs

(adapted from The British Columbia Round Table (1993))

4.3.1 Areas of Interest

Governance and Accountability

Municipal

Percent of population voting in municipal elections

Provincial and Federal

Representation of community on boards in and out of town

Public Participation – facilitate forums which encourage and provide opportunity for consultation and meaningful participation in decision making processes; endeavours to provide due process, prior notification, and appropriate and timely redress for those adversely affected by decisions and actions; and strives to achieve consensus among citizens with regard to decisions affecting them.

*** Issues / Follow-up:*

- a. Issues around enforcement of local by-laws relating to derelict structures and equipment?
Funding available? Lots of good landscaping and signs, etc. have been done but other structures / equipment negate some of the good work the Town has done.

- b. While recognizing the important successes of the 1997 Sustainable Development Plan analyze the barriers to its full achievement (see Appendix 1)

Education for a Sustainable Future

Elementary and High School – Duke of Marlborough School (Frontier School Division)

Post secondary opportunities – Keewatin Community College (adult education upgrading;

Skills training - medical terminology, day care workers, heavy vehicle operation, etc;

university possibilities); Churchill Northern Studies Centre (youth and post-secondary)

Trades and apprentice opportunities

Continuing Education

Literacy

Key Indicators: Education levels (as a percent of population over 15 years of age; < grade 9, grades 9–13, post secondary); Percentage of youths aged 15–18 attending school; literacy rate.

*** Issues / Follow-up:*

- a. What are the facts for the Indicators?
- b. Status of the 2008 High school trades survey? A need was expressed to bring together various parties, Frontier School Division, Manitoba Labour, and Education to develop more training in the trades. Successful initiative in Cranberry Portage School needs to be examined. (T. Stover)
- c. How to engage youth and the school in considering sustainability issues (see Appendix 3)
- d. York Factory band will be looking at a Business Administration certification (with 30 people expressing interest). Churchill is being promoted as one location to provide training. (G. Oman)
- e. Status of Town of Churchill / Red River College initiative to develop a regional Trades school.

- f. Integration into high-school curriculum – Appendix 3 - **Topics for the Integration of Sustainability Issues**. Source: Education for a Sustainable Future: A Resource for Curriculum Developers, Teachers, and Administrators. p.37, Wpg: MB Education and Training, 2000.
- g. Strategic Plan – Keewatin Community College May 2009 session. Find out the status and direction of this plan. Skills training - medical terminology, day care workers, heavy vehicle operation, etc.
- h. Customer service workshops / training programs. Available to all business sectors – not just focusing on tourism / hospitality sectors
 - basic courtesies in the workplace with the public, hospitality
 - work ethics – reliability, taking initiative, etc.

Housing

Public housing: Unlike other parts of the Province where housing is designated only for low-income Manitoba residents the leases in Churchill are available on a broader basis: Priority is given for low income families/individual residents of Churchill. Other qualifying applicants are higher income employed residents or new residents moving to the town with employment, and seasonal workers/companies.

of rental units _____

(1 bedroom; 2 bedroom, 3 bedroom, 4 bedroom) regularly rented

of units – condemned _____

of units – not rented - in poor shape _____

Private housing:

of private dwellings (tax payers) _____

Private Lots – many empty lots (number ?) not developed – why?

Key Indicators: average waiting time for those in need of subsidized housing; affordability (percent of households spending 30% or more of income on housing); adequacy (percent of housing stock below adequacy standard); suitability (percent of households below national occupancy standard for number of people per bedroom; average price of serviced residential lots (total and as a percent of average price of house); % of total housing stock made up of social housing units; vacancy rates, by price and housing type; supply of serviced residential land coming on stream to meet future demand.

*** Issues / Follow-up:*

- a. What are the facts for the indicators?
- b. It is assumed that private housing creates more commitment in a community. How to increase the private housing ratio in Churchill without displacing the legitimate needs facilitated by public housing ?
- c. Are the unused private lots actually up for sale? Why have they not been bought?
- d. New town lots need development prior to sale (e.g. municipal utilities, service connection, roads, pads, etc.). Would the proposed engineering study commissioned by the Town of Churchill include consideration of utility infrastructure for new lot developments (e.g. Fox St.) in order to make the purchase of Town lots more attractive?
- e. Condemned Manitoba Housing – What is the status and timeline re: fixing or demolishing and turning back lots?
- f. Need to support Public Housing management to
 - i) maintain flexibility of availability for season workers – Port of Churchill, tourism related
 - ii) maintain flexibility for special initiatives like a trade school, large construction project in town
 - iii) maintain flexibility to relocate tenants in emergencies (e.g. water and sewage problems)

- iv) ensure that the Manitoba Housing Authority is not used as a cheaper facility for tourism based operations or researchers when hotel space, bed and breakfast places or the Churchill Northern Studies Centre is the most appropriate facility to accommodate that purpose.
- g. What is the status of DOT Hill? Treaty Land Entitlement – York Factory First Nation

Promoting Wellness and Strong Families Through Good Health Services

Churchill RHA Services:

- Primary and Acute Care Services
- (Emergency, Clinic, Inpatient Clinic, Specialists and referral services, Long Term Care, Diagnostic Services, Pharmacy, Dental Clinic, health Information Services, MB Telehealth, health Links)
- Community Services Programs
- (Mental health Community Wellness, Addictions Programs (drugs, alcohol, gambling), Children's Centre, Child & family Services Agency, Probation Programs)
- Public Health/Home Care Programs
- Communicable Disease control, health promotion, Family First/Healthy Baby, Palliative Care Program, Home Care Program)

*** Issues / Follow-up:*

- a. How could strategies or initiatives outlined in the revised RHA Strategic Plan (2005-2010) be supported? See Appendix 4

Food Security and Health

*** Issues / Follow-up:*

- a. Food availability (reliable and predictable transportation, especially for fresh products) and costs

- b. Legacy of the traditional knowledge gathered by a local couple in developing and operating a local greenhouse enterprise (Boreal Gardens Research) since the 1970s
- c. North feeding the North – to increase local greenhouse interest. A documentary film is currently being made about Wabowden's community gardens. Are community gardens / a community greenhouse something that would work in Churchill?

Support for Children and Youth

- Children's Centre (day care in Churchill RHA facility)
- Families-R-Us
- Drop-In (Town Centre Complex)

Services for the Elderly

- Home care program
- Palliative care program
- Other activities?

***Issues / Follow-up:*

- a. Desire in the community for a stand-alone Assisted Living facility in Churchill; in association with the Churchill RHA?
- b. Broader definition of an elder as a "respected voice".
- c. Developing other activities for the elderly.

Spiritual Services and Support

- Three Christian traditions (Anglican, Roman Catholic, Alliance)
- Aboriginal spirituality – sweat-lodge activities

Public and Legal Services

Crime

Juvenile crime

Crime Prevention

Access to legal services / court

Key Indicators: accident rates (by type); crimes against persons (offences per 1 000 population); crimes against property (offences per 1 000 population); number of charges laid (by victim and by police) in domestic violence incidents reported to police (also as percentage of all incidents)

*** Issues / Follow-up:*

- a) Status of Community sentencing / community service projects?
- b) timeliness of court proceedings, remands, etc.

Recreational and Fitness Opportunities

*** Issues / Follow-up:*

- a. Designating some adult only opportunities (gym, etc.)

Supporting Cultural Diversity and Heritage

Promotion of culture and heritage

Celebrate local traditions and culture

How to Support and Increase Volunteerism

Individual volunteerism

Service organization membership

Supporting our non-profit entities

*** Issues / Follow-up:*

- a. Develop an effective communication vehicle outlining community needs that can be easily updated and located for maximum exposure (physically and in cyberspace?)

Importance of Community Unifying Events / Activities

Canada Day

Aurora Fest

Hudson Bay Quest

Christmas Flurries, etc.

Supporting our Local Non-profit Entities, Service Clubs, Organizations

(e.g. Royal Canadian Legion, Churchill Northern Studies Centre, Eskimo Museum, Manitoba Metis Hall, Churchill Ladies Club, Joint Group Committee, School Fiddle Club, etc.)

Recognition of their role in the community

Promote volunteerism, donations and funding support

Manitoba Hydro Mitigation Fund – by application

4.4 Conclusions

These are the primary concerns that the Local Committee has identified; now, the residents of Churchill will be able to have their say on these and other issues at upcoming consultations.

5.0 WHAT WOULD THE CONSULTATION INVOLVE?

The evening of **Monday, August 31st**: Opening Night – Introduction to “Sustainable Churchill” with speakers from the Town of Churchill and the University of Winnipeg. University student will present their findings. And mingle and meet everyone involved at the reception afterwards!

On **Tuesday, September 1st**, an all-day open house will take place at the Town Centre. A series of tables/ displays will focus on:

1. Arts, Culture & Heritage
2. The Natural and Built Environment (including housing)
3. Education, Training & the Economy
4. Energy & Solid Waste
5. Health & Social Sustainability (including food security)
6. Transportation
7. Water quality & security
8. Recreation, Tourism & Leisure

Wednesday September 2nd: A walking tour in the morning

Wednesday evening: Vision Exercise:

The Community Visioning exercise will be built around the principles of sustainability and how they can be applied to the community’s everyday operations. This will involve

1. discussing the principles and dimensions of sustainability,

2. creating an assessment of the current situation by listing all current flows and practices which might be unsustainable as well as considering all the assets that are in place to deal with the problems,
3. generating and listing possible solutions and innovations for the future consistent with the principles and dimensions of sustainability and
4. prioritizing the actions needed to be taken.

Furthermore, we will need to consider if these proposed solutions are flexible; provide an adequate return on investment to seed future investments; and most importantly, does it move the community in a more sustainable direction?

5.1 What's Next?

Consulting the public does not end upon implementing the plan. Residents will be encouraged to express their opinion on the actions of the Town, which will hold several panel discussions in the following year concerning different topics to evaluate the Town's current actions and propose how they could be improved. Likewise, residents may be able to participate in **task groups** relating to each strategy outlined in the Town's sustainability plan. Approval to participate in each task force is based on the individual's skills, experience and knowledge or the area of interest and familiarity with the plan and process.

To maintain momentum, transparency and accountability, the sustainability plan will need the support of a Citizens' Advisory Board (CAB). Members of the board, which would likely consist of elected officials, members of municipal staff, community groups and individuals, are strategically selected for their technical knowledge of the community's operations as well as their connections and affiliations with existing community groups. Members of the board are picked by municipal council or by the plan's organizing committee based on the prospective member's knowledge of the town's operations and their connections

and affiliation with community groups. For example, Sudbury's CAB consisted of city staff from numerous departments in addition to 38 different community groups who committed themselves to the creation of the plan by signing a 'Declaration of Community Partners.'

The purpose of the CAB is to represent and gather the community's knowledge, influence and resources and identify the problems preventing sustainability in addition to the actions needed to correct them through community consultations. After the CAB has finished community consultations, its findings and recommendations are incorporated into the plan which is then forwarded to council to approve.

Another way to encourage informed discussion of the Sustainability plan might involve more grassroots means. For example, the town of Whistler distributed sustainability "tool kits" to schools, businesses and households to educate them about the benefits of sustainability and the objectives of Whistler 2020. The tool kits also include a questionnaire which allows members of the community to examine whether or not their actions and behaviours are unsustainable.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Using the inputs gathered during the public consultations, the research team at the Institute of Urban Studies and the Churchill Steering Committee will move on to the next stage, which will be to begin drafting a sustainability plan which will assist in revising the town's Development plan. This will be supplemented by an additional publication – a series of background reports prepared in large part by University of Winnipeg students.

What is essential in turning ideas and plans into actionable outcomes is identifying funding sources.

A significant source referred to earlier in the report (see page 11) is the funding available through the *Partners for Climate Protection Program*, offered in part through the Federation of Canadian Municipalities' Green Municipal Fund.

After signing a declaration of intent to create a sustainability plan, most municipalities begin by initiating *Step One*, the creation of a greenhouse gas (GHG) emissions inventory and forecast. The inventory is of particular value as it helps identify the amount of energy consumed and solid waste generated by the community (institutional, commercial, industrial, transportation and residential sectors) and the municipality (street lighting, buildings, water, municipal fleet etc.) Emissions measured by the inventory include carbon dioxide, nitrous oxide and methane as they represent the three most common types produced by Canadian municipalities. In addition, the inventory also collects more detailed data pertaining to energy use, including electricity and fossil fuels; transportation practices such as vehicle kilometres travelled, types of fuel consumed; and waste composition, volume and disposal methods. The data collected by the GHG emissions inventory is also used to help estimate future emissions by the community and corporate sectors of the municipality based on assumptions about population, economic growth and the types of fuels consumed.

After completing the inventory and forecast, the *Second Step* is to create an emissions reduction target. This target, a goal which is usually expressed as a percentage reduction below the quantity of emissions released of a baseline year, is created through the input of citizens, community stakeholders, non-governmental organizations and the private sector. Typically, most municipalities have adopted a reduction target of 20 percent in GHG emissions for their municipal operations within 10 years and a six percent reduction in GHG emissions for the community within 10 years. It should be noted however that these targets and the timeline in which they can be met are quite flexible. For example, the city of Calgary adopted a rather aggressive target to reduce corporate emissions by 50 percent below 1990 levels by 2012 while the city of Prince George adopted a less aggressive target of a 10 percent reduction in corporate emissions below 2002 levels by 2012.

The *Third Step* of the framework is the creation of a strategic sustainability plan to outline how a municipality will achieve its GHG emissions reduction target. After reviewing a number of sustainability plans from across Canada it was apparent that the majority of plan's divided their recommendations for those directed at municipal operations and those of the general community. By creating a separate set of recommendations for both sectors, the municipality is able to demonstrate leadership and provide an example for the rest of the community to follow.

After creating the sustainability plan, the *Fourth Step* is for municipalities to implement the recommendations outlined in the plan. Key items which constitute the implementation process include the financing and budgeting details for each project, the project timeline and community involvement. Details which are examined include: payback periods, which measures can be incorporated into existing projects/expenditures and which ones will require new expenditures, potential savings over the lifetime of the improvement, available funding in the existing municipal budget, alternative funding sources and, each project's life cycle costs.

The *Fifth and final Step* of the framework involves monitoring and reporting the progress of the plan's recommendations in reaching its GHG reduction goals. A typical monitoring program involves quantifying the reduction (or subsequent increase) in energy consumed or waste generated for each of the plan's actions, updating the inventory to determine whether or not community and corporate reduction targets can be met and reporting these results to the community stakeholders and the Federation of Canadian Municipalities. The latter is needed to ensure consistency among PCP members and to report on the achievements made through participation in the framework program. It should be noted that one of the most important aspects of the monitoring program is to allow stakeholders to participate in reviewing the success of each plan's various strategies.

Finally, the Town of Churchill should strive to create a unified, integrated Sustainability Plan that also revises its official Development Plan, rather than having two potentially conflicting plans.

The Institute of Urban Studies and the University of Winnipeg remain committed to their continued partnership with the Town of Churchill, to ensure that the work undertaken to date translates into a practical plan and, ultimately, a more sustainable Churchill.

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APPENDIX 1: CHURCHILL DEVELOPMENT PLAN

Plan Format

Churchill's most recent development plan was adopted in 2000. While the province of Manitoba typically calls for development plans to be reviewed every five years (see section 26 of The Planning Act), there is not always pressure to do so.

The purpose of Churchill's current Development Plan is to provide the town with direction for future development (both short-term and long-term), as well as to identify "issues of government concern" which may affect development within the community, and to align the policies within the plan with the provincial land use policies. Additionally, the plan identifies policies that are to be enforced by the zoning by-law (Town of Churchill, 2000). The Development Plan consists of nine sections: introduction, general development, residential development, commercial development, industrial development, limited development, regional development, the environment, and administration.

A mission statement is included in the first section of the plan, which guides the direction of the policies in the plan:

The Council of the Town of Churchill, through its employees, is committed to providing a good government to its citizens which incorporates its unique traditions and values, while continuing to progress towards the future through planned social, educational and economic growth.

The Council will implement with efficiency and fiscal responsibility through its by-laws the necessary guidelines and procedures in order to enable a smooth delivery of community services, as well as providing the financial, educational and other administrative support services to its citizens (Town of Churchill, 2000, p. 1).

The objectives of the plan include streamlining the administrative process, the development of a comprehensive 5-year operational, infrastructure, maintenance and budget plan, to initiate a program of aesthetic rehabilitation of the town, to increase communications to the citizens of the town and to town staff, and to assess the recreational needs and requirements of the town (Town of Churchill, 2000, p. 4).

While the plan is mainly focused on the developed portion of the townsite (along the Hudson Bay), it also includes areas to the south and east of the townsite that contains some development. Although removed from the central area of town, these areas are still within the official boundaries of the Town of Churchill. In addition, the plan also considers lands outside of the townsite, noting that it is “in the community’s best interest to ensure that development is compatible with the community’s interests” (Town of Churchill, 2000, p. 4).

Each of sections two through eight are organized into three categories: concerns, objectives, and policies. Concerns lists basic issues surrounding the section in question, and objectives lists the aims of any policies that are created. The policies themselves are written as directives; for example, “Environmental considerations shall be a part of the review process for development and land use proposals” (Town of Churchill, 2000, p. 15).

The final section of the Development Plan, administration, outlines the process for implementation of the plan’s policies, and the purpose of the zoning by-law. It also discusses development agreements, land acquisition, subdivision regulations, building regulations, statutory authorities and public works, and review and amendment.

Summary of Policies

The policies developed to guide general development stipulate that Crown Lands must be used in the town's best interests. Additionally, it is stipulated that any new development to occur in the vicinity of a "transportation facility" (such as the Port of Churchill) must not be detrimental to the operation of that facility. The plan also calls for the protection of heritage sites through a by-law (Town of Churchill, 2000, p. 5).

Residential development policies emphasize the importance of attracting new residents, and the logical development of new residential space. Policies state that residential development shall include permanent, seasonal, and mobile home development, and that owners of underdeveloped lots will be encouraged to make them available to those wishing to build. Residents of the area "southwest of the community, south of the railway line" (Town of Churchill, 2000, p. 7) will be encouraged to redevelop their properties to municipal standards. There is also a policy encouraging council to meet with Manitoba Housing in order to establish ways of selling housing to private owners.

The section on commercial development emphasizes the maintenance and enhancement of existing commercial development as well as the "beautification" of the downtown area. Policies also encourage new development to locate in the downtown area, to minimize servicing costs.

Policies relating to industrial development state that industrial uses must remain within the designated industrial areas, that future industrial development have access to major roads while minimizing effects on residents, and that buffers be provided between industrial areas and other areas that may be adversely affected by noise, dust, etc. Additionally, those industrial uses currently not located in industrial areas will be encouraged to relocate.

The limited development section states that predominant uses shall be recreation and tourism, and that natural areas should be maintained for the use of the public whenever possible. Further study of resources for the tourism industry will be encouraged, and crown agencies will be encouraged to consult with the residents in all decisions.

Regional development policies emphasize that the federal and provincial governments not undertake any initiatives without consultation with the Town of Churchill. The town shall continue to be represented on the Management Board of Wapusk National Park, and shall remain close with representatives of the Kivalliq Region in terms of initiatives that could be beneficial to both communities. The province will be requested to prepare an official land use plan for the crown lands in Churchill and region. In addition, the policies call for council approval of any extraction projects, and for Manitoba Conservation to “aggressively monitor” the area to ensure these objectives are met (Town of Churchill, 2000, p.12).

Section eight, which deals with the environment, says that environmental consideration shall be part of the review process for all development, and that council shall consult with Manitoba Environment on those proposals that may compromise the environment. Recycling shall continue to be supported, as will other environmental initiatives that may be brought forward.

APPENDIX 2: DEMOGRAPHIC DATA

	1996	2001	2006
Total Population	1,089	963	923
<i>Percentage Change</i>	-4.7	-11.6	-4.2
Age Characteristics	1996	2001	2006
Children (0-14)	285	245	225
Young Adults (15-44)	575	445	400
Mid Adults (45-64)	175	215	235
Old Adults (65-85+)	50	45	70
Median Age	29	32.7	33.8
Age Characteristic Proportions	1996	2001	2006
Children (0-14)	26.6%	25.8%	24.2%
Young Adults (15-44)	53.0%	46.8%	43.0%
Mid Adults (45-64)	16.1%	22.6%	25.3%
Old Adults (65-85+)	4.6%	4.7%	7.5%

Education - Highest Level of Schooling	1996	2001	2006
Total population 15 years and over	N/A	718	735
No certificate, diploma or degree	N/A	294	310
High school certificate or equivalent	N/A	120	140
Apprenticeship or trades certificate or diploma	N/A	115	125
College or other non-university certificate or diploma	N/A	105	90
University certificate, diploma or degree	N/A	72	70

Income	1996	2001	2006
Median Income of persons 25 years of age and over	\$25,366	\$26,325	\$32,121

Composition of total income	1996	2001	2006
Earnings - % of income	N/A	86.4%	85.6%
Government transfers	N/A	10.4%	11.3%
Other money	N/A	3.4%	3.0%

Family Characteristics	1996	2001	2006
Total number of families	N/A	250	
Number of married couple families	N/A	125	
<i>Average number of persons in married-couple families</i>	N/A	3.2	
Number of common-law couple	N/A	70	
<i>Average number of persons in common-law families</i>	N/A	3.1	
Number of lone-parent families	N/A	55	
<i>Average number of persons in lone-parent families</i>	N/A	2.6	
Median family income, 2000	N/A	52,864	76,000

Dwellings	1996	2001	2006
Private dwellings occupied by residents	N/A	N/A	
Single detached as a % of total occupied private dwellings	N/A	N/A	
Semi-detached	N/A	N/A	5.1
Row-houses	N/A	N/A	32.1
Apartments	N/A	N/A	
Number of owned	N/A	N/A	
Number of rented	N/A	N/A	
Constructed before 1986	N/A	N/A	
# constructed between 1986 and 2006	N/A	N/A	
Dwellings requiring major repair	N/A	N/A	16.1
Dwellings with more than one person per room	N/A	N/A	5.1
Average Dwelling value	N/A	\$77,610	\$112,000

Aboriginal Population	1996	2001	2006
Total Aboriginal Population	505	485	550
Percentage of Total Pop	48.37%	50.36%	59.58%
Visible Minority Status	1996	2001	2006
<i>Visible Minority population</i>	N/A	15	45
<i>Chinese</i>	0	20	25
<i>Black</i>	0	0	20

Unpaid work	1996	2001	2006
Persons reporting hours of unpaid work	N/A	645	680
Persons reporting hours of unpaid housework	N/A	630	645
Persons reporting hours looking after children, without pay	N/A	315	370
Persons reporting hours of unpaid care or assistance to seniors	N/A	115	160

Labour force indicators	1996	2001	2006
Participation rate	81.0%	84.4%	80.2%
Employment rate	63.9%	73.0%	67.8%
Unemployment rate	20.3%	13.4%	14.5%

Occupation	1996	2001	2006
Total - Experienced labour force	660	585	570
Management	85	75	85
Business, finance and administrative	75	75	45
Natural and applied sciences and related	25	10	15
Health occupations	55	45	25
Social science, education, government service and religion	45	45	55
Art, culture, recreation and sport	10	20	15
Sales and service	195	155	210
Trades, transport and equipment operators and related	160	145	100
Occupations unique to primary industry	10	10	10

Mobility Status	1996	2001	2006
Total Population 5 years and over	965	870	905
Lived at same address 5 years ago	400	360	490
Changed address in same census subdivision	195	430	250
Changed address within census subdivision	90	80	135
Lived in a different province/territory or country 5 years ago	N/A	N/A	30
Immigration Characteristics	1996	2001	2006
Canadian born	N/A	920	940
Foreign born	N/A	35	35
Immigrated before 1991	N/A	30	15
Immigrated between 1991 and 2001	N/A	10	0
Immigrated between 2001 and 2006	N/A	0	20

Mode of Transportation to Work	2001	2006	Prop. of total pop 2001	Prop. of total pop 2006
Total - All Modes	490	485	100%	100%
Car, truck, van, as driver	180	185	36.7%	38.2%
Car, truck, van, as passenger	70	50	14.3%	10.3%
Public Transit	0	0	0.0%	0.0%
Walked or bicycled	220	235	44.9%	48.5%
Other method	20	10	4.1%	2.0%

Mode of Transportation to Work Based on Gender	Male (2001)	Male (2006)	Proportion of Male pop 2001	Proportion of Male pop 2006
Total - All Modes	270	245	100%	100%
Car, truck, van, as driver	115	140	46.0%	57.1%
Car, truck, van, as passenger	40	20	14.8%	8.6%
Public Transit	0	0	0.0%	0.0%
Walked or bicycled	95	80	35.2%	32.7%
Other method	10	10	3.7%	4.1%

Mode of Transportation to Work Based on Gender	Female (2001)	Female (2006)	Proportion of Female Pop 2001	Proportion of Female Pop 2006
Total - All Modes	250	235	100%	100%
Car, truck, van, as driver	70	45	28.0%	19.1%
Car, truck, van, as passenger	35	30	14.0%	12.8%
Public Transit	0	0	0.0%	0.0%
Walked or bicycled	125	160	50.0%	68.1%
Other method	10	0	4.0%	0.0%