Markham's
greenprint
Sustainability Plan

Environmental Health
Social & Cultural Well-Being
Economic Vitality

MARKHAM

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Markham's

greenprint

Sustainability
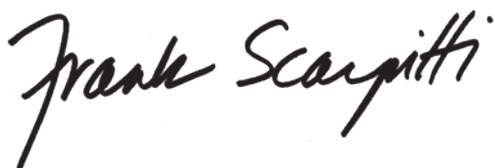Plan

A Message from Mayor Frank Scarpitti

During my inaugural speech when I was elected Mayor in 2006, I announced the creation of the Greenprint as part of Building Markham's Future Together. It is my pleasure to present the Greenprint, Markham's Sustainability Plan – our commitment to transforming Markham into one of the most sustainable cities in North America. The plan will support and guide the future decisions we make to ensure that Markham remains a great place for live, work and play for generations to come.

We enjoy a high quality of life and standard of living in Markham. Vibrant neighbourhoods and great community services offer our diverse residents many opportunities to be happy and successful. We must continue to support this success through our governance, investments, and partnerships. Together we are stronger. We must balance social, economic, and environmental considerations as Markham continues to grow and prosper. This plan gives us a framework to meet the opportunities and challenges that lay ahead.

Thank you to the many business leaders, government officials, non-profit organizations and, most importantly, residents of Markham who have generously contributed their time to help create this Greenprint. This is your plan. Together we can all move Markham toward becoming a more sustainable community.

Now that the plan is complete, the work begins. We need to implement the recommendations in a fair and equitable way. Your participation needs to continue to ensure the vision is realized. I encourage everyone to stay informed, to be involved and to help Markham evolve into a community where our children, and their children, can flourish in a caring, compassionate and sustainable Markham filled with opportunity and hope.

Frank Scarpitti

A Message from the Greenprint Steering Committee Chair

I am delighted to present the Greenprint, Markham's Sustainability Plan.

This plan provides a framework for the vision and priorities of Markham, and a way to deliver positive change and improve our quality of life over the next fifty to one hundred years. It covers a wide range of important aspects from education and skills, to innovative jobs and opportunities for a new economy, as well as food security, clean air and water for future generations, and a healthy environment for all living species.

To develop this vision and priorities, we've held public meetings across the community where hundreds of people attended to express their views. The Greenprint brought together key community stakeholders which included residents, health service providers, residents associations, other public services, voluntary and community groups, faith communities, businesses and Markham Council. The Greenprint reflects the aspirations and needs of our residents and of the people who work and invest in the community. The consultations re-enforced many of Markham's positive features – our great diversity, the wealth of opportunities and our strong communities.

Markham residents and businesses are proud of our community, and are ready to embrace the immense challenges facing us. Everyone should realize their full potential in Markham. Everyone has ambitions and we want to increase opportunities. The Greenprint gives us a plan for building resilience, strengthening cohesion and making sure the community continues to live together in harmony.

Most of all, the Greenprint is about recognizing that we all have a part to play in making this a reality. While the challenges ahead are significant, so are the opportunities.

The aims of this Sustainability Plan are very ambitious because the residents and businesses of Markham deserve the very best. We will continue to aim high and seize opportunities. Of course, a plan itself won't change Markham – only its delivery can.

I am looking forward to working with all of you to make the Greenprint work for Markham.

Valerie Burke

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Sustainability Vision

The Greenprint vision is:

Markham: leading the way together to liveable neighbourhoods, healthy people and continuing prosperity.

The vision is supported by the following commitment to The Natural Step principles.

In a sustainable Markham:

- We rely on materials, goods and services that are created, harvested and processed in keeping with natural cycles—we do not dig things up too fast

- We rely on materials, goods, and services that break down easily in nature, are used up by nature and are abundant in nature—we do not produce waste

- We value and restore the natural environment and protect biodiversity, natural capital and ecosystem services

- We meet people's needs

Executive Summary

The Greenprint, Markham's Sustainability Plan is a 50- to 100-year plan created by the Markham community. It is an overarching plan to achieve an environmentally, economically, socially and culturally vibrant community, containing a vision, priorities, a governance framework and a funding framework to create a healthy, vibrant and sustainable community. The plan includes dynamic strategies to involve community members and collaborate with partners, other levels of government and others.

The Greenprint serves as an umbrella document for integrating Markham municipal planning and decision making. Other municipal plans may be of a shorter duration and do not necessarily integrate decision making across all aspects of community planning. With a focus on the long term, the Greenprint aligns the other initiatives, plans, programs, policies and decision-making frameworks—such as the Official Plan, the Diversity Action Plan, the Integrated Leisure Master Plan, the Growth Management Strategy, the Transportation Master Plan and the Vision 2020 Economic Development Strategy—with the vision of a sustainable Markham. This integration reduces redundancy and makes use of efficiencies by identifying projects that yield value in multiple areas throughout the municipality.

The process for developing the Greenprint began with an examination of the global forces that are changing Markham and how our community is connected to the rest of the world. Residents and other stakeholders discussed how interrelated and complex problems like climate change, peak oil, decreased biodiversity and other issues will impact the well-being of our community for generations to come. It was noted that climate change alone would threaten the health and safety of hundreds of millions of people around the world. Access to clean water and sufficient food, habitat loss, flooding, and economic instability are all risks associated with an unsustainable society.

At the foundation of the Greenprint are the three pillars of sustainability: society, economy and environment. The Greenprint expands the idea of the three pillars to a system containing twelve integrated sustainability priorities that reflect Markham's unique context. Each of the twelve sustainability priorities is described by one or more objectives, resulting in a total of 23 objectives that the community will work towards to meet its vision of sustainability. The sustainability priorities and associated objectives are:

1 - Social Equity
Objective: Reduce the impact of household poverty

Objective: Greater resident involvement in community stewardship

Objective: Promote greater youth involvement in decision making and participation

2 - Identity and Culture
Objective: Promote and celebrate all that makes Markham great

3 - Individual Health
Objective: Promote and support the physical and mental health of Markham citizens

4 - Shelter
Objective: Develop an Affordable Housing Strategy

Objective: Regenerate existing neighbourhoods through sensitive evolution

Objective: Plan, design, and construct high-performance new neighbourhoods

5 - Food Security
Objective: Support education and engagement in the local food system

Objective: Significantly increase food production opportunities

Objective: Significantly increase the viability of local commercial food growing and processing

6 - Access and Mobility
Objective: Create a culture of walking, cycling, and transit usage

Objective: Create roads for all users

Objective: Connect communities

7 - Education and Skills
Objective: Facilitate lifelong learning and skills development

8 - Economic Vibrancy

Objective: Facilitate and support Markham's existing businesses

Objective: Promote green business development and business greening strategies for existing and new employers

9 - Materials Management

Objective: Achieve zero material waste

10 - Water Efficiency

Objective: Develop a water systems plan that integrates all water functions

11 - Ecosystem Integrity

Objective: Increase biodiversity

Objective: Reach 30% tree canopy and vegetation coverage Town-wide

Objective: Develop and support wildlife habitat

12 - Energy and Climate

Objective: Net-zero energy, water, waste and emissions by 2050

Implementation

Each objective has been developed with initial recommendations to "kick start" actions. The full set of recommendations is listed in the Implementation Chapter of this document. The timeframe for achieving the recommendations is varied, creating three implementation categories:

Foundation for Success: Short-Term Focus (2010–2015)

This is a period for developing strong support within the community and with all levels of government for positive, sustainable change.

Traction and Innovation: Medium-Term Focus (2015–2025)

This is a period when many projects are actively underway or completed. Community members not only see what is meant by "sustainability" but they experience all the direct and indirect benefits.

Adaptive and Resilient: Long-Term Focus (2025+)

The community's sustained focus and hard work means that Markham is finally approaching its desired level of sustainability performance.

Governance Framework

To realize the Greenprint, ongoing community engagement is critical. This will ensure that the plan is not reduced to only an operational exercise performed by municipal staff but rather that it remains a meaningful, community effort. This requires a governance framework that clearly identifies roles and responsibilities over the duration of the plan and a cohesive community engagement strategy. Decisions will be made based on the work of input committees and working groups that include stakeholders and residents, ensuring that both the municipality and the Markham community:

- Have an in-depth understanding of community issues

- Can identify the most valuable actions to pursue as a community within our given resources and capacities

- Have the ability to effectively implement the chosen actions to achieve results

By working together, influence is optimized, better use is made of limited resources, trust is built among organizations and credibility grows within the community. The committees and working groups will share the responsibility of ensuring that the sustainability priorities and recommended actions are integrated into regular Town business. They will support and encourage a culture of innovation and leadership and will monitor the results of implementing the Greenprint.

Financial Framework

The Greenprint timeframe of 50- to 100- years is an opportunity to make strategic and integrated investments. The Greenprint will support Markham as it seeks Gas Tax funding from the federal government and additional funding sources from other levels of government. The Greenprint also identifies the importance of partnerships, cost sharing and the need for measuring the success of investment decisions.

Financial recommendations include:

- Establishing a revolving fund to be used to implement the Greenprint vision

- Developing a collaborative and integrated approach for pursuing grants from different levels of government and non-governmental, business and philanthropic organizations

- Leveraging new financial tools and opportunities resulting from renewable energy production, energy and water conservation and carbon pricing

- Building collaborations and partnerships to create efficiencies around purchasing, financing and borrowing

- Effective use of limited financial resources is essential to the success of implementing the Greenprint Sustainability Plan.

Introduction to the Greenprint

What is a Community Sustainability Plan?

Community Sustainability Plans provide direction for the community to achieve environmental, cultural, social and economic sustainability objectives. The Greenprint, Markham's Sustainability Plan, is a comprehensive community-driven strategy to create one of the most liveable and sustainable places in North America. Set in a 50- to 100-year time frame, the Greenprint will require the full participation and commitment of the community over the long term to enhance cultural vibrancy and social well-being, environmental health and economic vitality in Markham.

The Greenprint is an overarching plan containing a vision, civic engagement, education and communication strategies, policies, strategies and actions and a governance and funding framework to create a healthy, vibrant and sustainable community. The Greenprint will help to ensure Markham has a long-term, coordinated approach to achieving community sustainability; it will link with other municipal plans and will identify planning and financial tools that contribute to sustainability objectives. In addition, the Greenprint includes dynamic strategies to actively involve community members and collaborate with partners, other municipalities and other levels of government.

What is the Purpose of the Greenprint?

The Greenprint is a plan for protecting and enhancing the natural environment, maintaining a high quality of life for Markham residents and providing fulfilling employment, life-long learning opportunities

and affordable access to basic needs. Working towards this future will strengthen the freedom and autonomy of all residents, and contribute to social inclusion, solidarity and democracy.

The Greenprint is a call to action for Markham residents to work together to create a community that will thrive. All members of the community will be called upon to help overcome the physical, social and institutional barriers that can limit people's choices and to make a commitment to a healthy, efficient and sustainable community. Barriers and challenges at both global and local levels can be seen as opportunities for positive change. This change will be stimulated by collaboration, partnerships and the innovation that results when individuals and organizations work together and learn from each other. As the Greenprint is implemented, it will be imperative that there be champions in the community—from all sectors—to take up the challenge and move the sustainability agenda forward. Hopefully other communities will be inspired to do the same.

How Do We Move the Greenprint Forward?

It is hoped that the Markham community—residents, stakeholders, and businesses—will use the Greenprint to learn about and contribute to a sustainable future. The Greenprint describes the vision and sustainability objectives that the community has itself identified as necessary for shaping a desired future, as well as the recommended actions for how to achieve it. The Greenprint also provides initial recommendations to help align actions, both personal and professional, with the community's vision of success and sustainability.

Implementing this vision is important for maintaining the current quality of life in Markham while ensuring that future generations can meet their needs. During the creation of the Greenprint, Markham community members contributed to the priorities, objectives and recommendations to move Markham towards a common vision of sustainability. Community members must now get involved with the implementation of the Greenprint to help shape policies, build and operate community infrastructure and make investments in the community's future.

The Greenprint is a flexible, living document composed of specific actions necessary for Markham to become a more sustainable community. As the social, economic and environmental context changes within and around Markham, recommended actions will be revisited and updated to meet the most current challenges and opportunities. A comprehensive public review of priorities and recommendations will occur every five years to ensure that Markham is moving toward its sustainability vision. Indicators will be reviewed every two to five years to determine if Markham is moving in a desirable direction or whether changes to the plan need to occur.

To learn more about Markham sustainability performance and opportunities for getting involved, please visit: www.markham.ca/sustainability...

How to Use this Plan

The chapters that follow will provide some background on how the Greenprint originated, the process used to generate the plan and the specific approach used to understand sustainability and address its issues. The Greenprint also describes frameworks for governance and finance that identify responsibility for the plan and guide decision making.

To assist community members in taking action for a sustainable future, the main body of the Greenprint describes the sustainability priorities and the recommended actions identified by the community to address these priorities. Individuals, community volunteer groups, organizations, businesses and Markham itself will discover actions each can take to build a desired, common future. The recommendations in the Implementation Chapter provide additional detail, listing all the actions, their timelines and who has responsibility for moving each action forward.
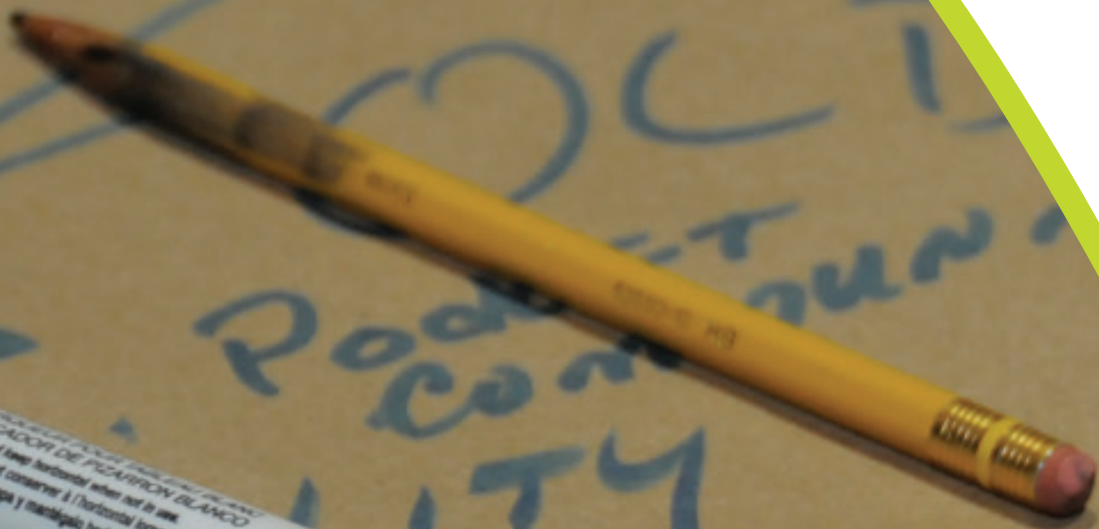
Background

Issues Facing Markham

There has never been a more critical time to work together for the common good of the community. Markham, like the rest of the world, is at a crossroad. A series of interrelated and complex problems—including climate change, peak oil and economic instability—are impacting countries around the world and will do so for generations to come. As Markham evolves within this global context, it must transform into a community based on a low-carbon economy. Such an economy is significantly less reliant on those energy sources that generate greenhouse gases. The low-carbon economy will be necessary as a result of increased competition for diminishing sources of fossil fuels and senior-level government strategies to reduce greenhouse gas emissions.

Early on, this transformation will cause increasing pressures on transportation, other municipal infrastructure, social equity, inclusiveness and land and food resources. The way we eat will be impacted by the higher cost of fossil-fuel-based fertilizer and the higher costs of processing and shipping food. The increasing cost of cleaning and conveying potable (drinking) water will increase the price of water for residences and businesses. As a result of these higher fuel, food and water costs, it will be necessary to pursue more local food production, water conservation, local energy generation and less consumption. There will be substantial changes in the built form of our community as the efficiencies of new and existing buildings are increased and travel distances reduced for meeting basic needs. The Greenprint provides guidance for ensuring Markham is successful in this new low-carbon economy.

The attractions that have historically drawn people to Markham—such as clean air, green spaces, safe neighbourhoods and good jobs—must remain desirable in the future. As it grows, Markham will continue to develop social, cultural, economic and environmental assets to support the evolving community. Markham residents will enjoy and benefit from cultural heritage, natural environment and its many high-quality employers. Markham must remain flexible, resilient and adaptable to ensure that community assets are sustained and enhanced over time to maintain a high quality of life for residents.

A Need for Proactive Planning and Partnerships

Now is the time to shape the future of Markham. It is time to make a commitment to balancing social, economic and environmental priorities when making decisions. This must be done to ensure that Markham remains competitive in a global economy by attracting and supporting creative and innovative people while benefiting the environment and maintaining the wealth and prosperity of all residents.

Markham can leverage the knowledge and experiences of residents and other stakeholder groups to meet the challenges ahead and benefit from the local opportunities that arise. As part of Canada's most diverse community, some residents have come from places and cultures where they are familiar with some of the actions described in the Greenprint. They have the knowledge to grow food in small urban lots. They already know the value of conserving water and energy and using transit, walking or cycling to get to destinations. These residents can become entrepreneurs to offer the goods and services necessary in a low-carbon economy.

The Greenprint also builds on current partnerships and suggests creating new ones. Many aspects of the sustainability priorities in this plan are the shared responsibility of other levels of government or other service providers. In financially constrained circumstances that may result from increasing energy and operating costs, it will be important to use limited resources more efficiently. By partnering with others to reduce duplication and align objectives, organizations facing financial challenges may continue to be viable.

Integrating the Greenprint Plan with Other Initiatives

The Greenprint serves as an umbrella document for integrating Markham municipal planning and decision making. The time frame for realizing the community vision is from 50 to 100 years. Other municipal plans are of a shorter duration and do not necessarily integrate decision making across all aspects of community planning. As such, the Greenprint aligns the other initiatives, plans, programs, policies and decision-making frameworks—such as the Official Plan, the Diversity Action Plan, the Integrated Leisure Master Plan, the Growth Management Strategy, the Transportation Master Plan, the Vision 2020 Economic Development Strategy—with the vision of a sustainable Markham. This integration reduces redundancy and makes use of efficiencies by identifying projects that yield value in multiple areas throughout the municipality.

Municipal Requirements

In the 2005 federal budget, the Government of Canada created the New Deal for Cities and Communities to assist progress toward sustainability. The New Deal uses revenue from the Gas Tax Fund to fund community sustainability and infrastructure projects. In order to access these funds, municipalities are required to have a Community Sustainability Plan as indicated in Schedule G of the Gas Tax funding agreement.

The creation of the Greenprint has been funded in large part by Gas Tax revenue. In addition, Markham's share of the Gas Tax has contributed significantly to Markham District Energy Inc's growth, pedestrian pathways and trails implementation and other infrastructure projects. Gas Tax funds will continue to help the community realize its sustainable future.

Climate Action Plan

The Greenprint is a Climate Action Plan—a local action plan for climate change—and meets the criteria for Milestones 2 and 3 of the Partners for Climate Protection program. The Partners for Climate Protection program

is a network of municipal governments that have committed to reducing greenhouse gases and acting on climate change. The five milestones of the Partners for Climate Protection program are:

1. Creating a greenhouse gas emissions inventory and forecast

2. Setting an emissions reductions target

3. Developing a local action plan

4. Implementing the local action plan or a set of activities

5. Monitoring progress and reporting results

Partners for Climate Protection defines a local action plan as one covering both municipal operations and the larger community and requires:

- Input from the public

- Results of an emissions baseline inventory, forecast and reduction targets

- Current, new, or proposed actions

- Implementation strategies

These requirements are embedded within the Greenprint. The Greenprint underwent extensive public consultation. The reduction target to achieve net zero energy, water, waste and emissions by 2050 is one of the Greenprint's Objectives and meets Milestone 2. Located within each of the Greenprint's twelve sustainability priorities are recommendations that include actions to mitigate and adapt to climate change.

Recommendations also suggest that the community continue with work currently underway and that proposed new actions be undertaken in the short, medium or long term as is most effective. The implementation strategies, included in the Governance Framework, Financial Framework and the Implementation Matrix (Implementation Chapter), provide details on costs, responsibilities, schedules and funding sources. The indicators embedded within each sustainability priority will provide methods to

monitor progress towards emission reduction targets. The integrative approach taken by the Greenprint will ensure that actions to mitigate and adapt to climate change will relate to every aspect of the community and will be the shared responsibility of the municipality, residents and others.

Process

The process for developing the Greenprint began with an examination of the global forces that are changing Markham and how our community is connected to the rest of the world. Residents and other stakeholders discussed how interrelated, complex problems like climate change, peak oil, decreased biodiversity and other issues will impact the well-being of the community for generations to come. It was noted that climate change alone will threaten the health and safety of hundreds of millions of people around the world. Access to clean water and sufficient food will be at risk and a many will suffer from habitat loss, flooding and economic deprivation.

It was mentioned that the United Kingdom's Stern Review estimates that without action the overall costs and risks of climate change will be equivalent to losing at least 5% of global gross domestic product (GDP) each year, now and forever. If a wider range of risks and impacts is taken into account, the estimates of damage could rise to 20% or more of global GDP.[1] As a result of these changes, Markham will experience increasing pressures related to transportation, infrastructure, social equity, inclusiveness and land and food resources.

As a result of this conversation, a vision for a more sustainable Markham was created by the community. The vision is supported by twelve sustainability priorities that will support the health and prosperity of all community members.

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1   Nicholas Stern, "Stern Review: The Economics of Climate Change, Summary of Conclusions," http://webarchive.nationalarchives.gov.uk/+/http://www.hm-treasury.gov.uk/d/CLOSED_SHORT_executive_summary.pdf.

The Greenprint and Markham's Sustainability Office

The creation of the Greenprint has been coordinated by Markham's Sustainability Office, established in 2008, under the Chief Administrative Office. The Sustainability Office supports the Greenprint by bringing together resources, overseeing initiatives and building collaborative partnerships. The recommendations and indicators in the plan will be monitored and updated by the Sustainability Office throughout the implementation process.

Data Collection

To begin developing the Greenprint, the Sustainability Office collected information on best practices in sustainability planning from around the world. This research process included engagement activities such as the Social Sustainability Workshop, conducted in partnership with York University in June 2008. This workshop had professors from York University describe different aspects of the sustainability journey to Markham Council and senior staff and highlight the importance of integrating social and cultural considerations in the Greenprint. Funding for the planning process was secured from the federal Gas Tax and the Federation of Canadian Municipalities.

Youth Engagement

The first major public engagement related to the Greenprint was held in the fall of 2008, focused on hearing from Markham's youth. The "Quest for the Best Markham" website and contest challenged Markham youth to share their ideas on how to make Markham a great community. Over 2,000 ideas were shared by Markham youth on what they would like to see in their neighbourhood. Ideas included: more tree plantings; better public transit; more public recycling bins; community-based energy conservation and generation; more bike lanes, trails and sidewalks, and; a local music venue.

World Café

In February 2008, a world café event was held to generate ideas on what the wider community and stakeholders would like to see in Markham's future. The world café provided small tables to allow collaborative dialogue, sharing knowledge and discovering new opportunities for action through conversations.[2] The outcome of the world café session was a vision for Markham based on the ideas of complete communities, celebrating diversity, a healthy environment, a greater spectrum of transportation options and seeing Markham as a destination of choice.

Sustainability Fair

In 2009, the sustainability fair provided an opportunity for residents and stakeholders to discuss in greater detail and provide feedback on the twelve sustainability priorities that had been distilled from the public engagement process up until this point. Participants were asked to provide insight and ideas and to answer three questions: "How do you think Markham is performing?" "What should Markham be aiming for over the long term?" and "What changes should Markham implement to get there?"

Stakeholder Workshops

A series of resident and stakeholder workshops were held from late in 2009 to early 2010. On December 3, 2009, more than 100 local and regional stakeholders participated in a workshop to review Markham's twelve sustainability priorities and to develop strategies for how each priority could be achieved. The draft strategies were then reviewed in more detail during workshops in April 2010 by five separate stakeholder groups: Developers, Businesses, Non-Governmental Organizations, Other Government Jurisdictions and Committees and Ratepayers' Associations.

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2   Juanita Brown et. al., "The World Café: Shaping Our Futures Through Conversations that Matter," (San Francisco: Berrett-Koehler, 2005).

Draft for Consultation

A draft of the Greenprint was prepared and launched for extensive community consultation in June 2010 at the Unionville Festival. A rigorous consultation process followed that included 27 community meetings and events in addition to consulting all commissions and departments at Markham via 32 staff meetings. This process was complemented with an online presence that included the Markham Sustainability Blog, Facebook and Twitter. A second sustainability fair called "Sustain-a-licious!" was held in November 2010. Sustain-a-licious! was based on the theme of food security and had over 200 attendees. This event closed the period of public consultation on the draft document.

An Approach to Sustainability Planning

Thinking in Systems

The Greenprint seeks to be among the best of sustainability plans in North America. The plan goes far beyond any single issue to instead consider how all aspects of the community work together as a system. The three pillars of environmental health, economic vitality and social and cultural well-being are tied closely together and must be understood as components of this larger system. This means that in order to effectively address any of the priorities identified in the Greenprint, recommendations for action must be integrated across all three pillars of sustainability and across all priorities.

The benefits of this systems approach are many. If the interrelationships between parts of the community system are well understood, actions can be chosen that will have the most benefit across many issues. When a positive action is taken in one area of the system, such as protecting biodiversity through habitat conservation, the action ripples through the rest of the system to help conserve cultural landscapes, protect water resources, sequester carbon, clean the air and provide recreational amenities. Additionally, actions that affect many parts of a system gain broad support from the many diverse individuals and groups that care about different issues. This leads to new partnerships across sectors, often between groups that may not have thought they share common goals. This holistic approach to addressing community priorities strengthens relationships between people, places and positive change.

Three Pillars of Sustainability

The Greenprint is founded on the three pillars of sustainability; society, economy and environment. The Greenprint defines these three pillars in a Markham-specific context and builds upon them with twelve integrated sustainability priorities.

Pillar 1: Social and Cultural Well-being

This is a focus on developing healthy social relationships and partnerships to achieve common goals and meet individual and community needs like health and well-being, nutrition, shelter, education and cultural expression.

Pillar 2: Economic Vitality

This is a focus on promoting opportunities in Markham that will provide good quality jobs now and in the future, opportunities for learning and skills development, re-skilling and community development to meet the demands of a low-carbon economy.

Pillar 3: Environmental Health

This is a focus on protecting, enhancing or creating the conditions that provide ecosystem services that maintain biodiversity, provide water, sequester carbon, provide oxygen and contribute to the well-being of humans, flora and fauna.

From the three pillars flow a series of sustainability priorities. Each priority has a "home base" in one of the pillars, but is strongly connected to the other priorities across all pillars. The sustainability priorities are:

FOOD SECURITY
ACCESS AND MOBILITY
MATERIALS MANAGEMENT
WATER EFFICIENCY

SHELTER
ECOSYSTEM INTEGRITY

INDIVIDUAL HEALTH
ENERGY AND CLIMATE

Environmental Health
Social & Cultural Well-Being
Economic Vitality

IDENTITY AND CULTURE
SOCIAL EQUITY
ECONOMIC VIBRANCY
EDUCATION AND SKILLS

Sustainability Priorities

The following twelve sections discuss each of Markham's sustainability priorities in detail. Each is described using the following format:

Definition — offers an introduction to each of the priority areas, describing what it is about and the importance of including it as part of the Greenprint Sustainability Plan.

Global Context — provides an overview of what is happening on a global and national scale, including examples of specific issues that have emerged in recent years. This section is designed to help readers think about the global issues and how they relate to what is happening in Markham neighbourhoods, and, in turn, how Markham may be contributing to such global issues.

Local Context — brings the discussion of each priority closer to home, covering the specific trends that have been observed at the provincial, regional and municipal levels. This section complements the following section by offering a descriptive exploration to contrast the more quantitative sustainability indicators.

How Do We Measure Up? — includes the baseline sustainability indicators for the plan. Indicators are a measure of where we are now, which are useful for measuring how things change over time. These indicators are a baseline or starting point since this is the first time that such information has been collected. The Sustainability Office will monitor these indicators over time to track progress toward community sustainability goals and will report the results. The measurements that make up the baseline are limited to the most recent information available and unless otherwise specified the indicators measure the baseline for the geographic boundary of Markham.

Taking Action — describes the recommended actions and is organized by audience. Each sustainability priority will discuss specific roles and actions for Markham in addition to contributions that other stakeholders can make to implement the Greenprint. These stakeholder audiences include other levels of government, businesses, organizations, community volunteer groups and individuals. There is a focus on the role of partnerships as essential to the successful implementation of the plan.

Systems Thinking — illustrates an integrated approach to the many recommended actions. This section shows the relationships between the sustainability priority being discussed and the 11 other sustainability priorities. The intent is to demonstrate that for Markham to achieve the Greenprint vision all twelve priorities must be strongly supported since they are closely interrelated with each other.

Social Equity

A Community Where All People Can Thrive

Definition

Social equity ensures that residents have equal opportunities and rights regardless of age, gender, sexual orientation, religion, ethnicity, income level, health and physical or mental ability. In a socially equitable society, individuals or groups that require more support to realize their potential are able to do so. As the community continues to grow and change it is important to promote opportunities for residents to lead fulfilling lives and experience a strong sense of belonging.

Global Context

Numerous inequities exist within populations, stemming from cultural, historical, and economic origins. These inequalities can be expressed in a number of ways: economic exclusion, violence, discrimination, imprisonment and war. Canadians have experienced ongoing improvements to the opportunities available for all residents, particularly with social welfare programs initiated after World War II and the Canadian Charter of Rights and Freedoms adopted in the early 1980s.

Social equity issues continue to require attention as demographics continue to change. For example, globally there is an increasing gap between the rich and poor and Canada is not exempt from this trend of growing

disparity.[3] Between 2000 and 2005, median earnings for the one-fifth of Canadian families at the bottom of the earnings distribution declined by 9.1% to $14,176 while the median earnings for the one-fifth of families at the top of the distribution increased by 5.1% to $140,905.[4] As well, the population in developed countries is aging due to the large number of baby boomers born after World War II, longer life expectancies and recent declines in birthrates. In Canada, the number of seniors is expected to more than double by 2036.[5]

Canada is a net recipient of global migrants, for reasons that include economic, family and refugee status. Current federal immigration policy and Ontario's growth policy suggest that Markham will continue to accommodate new residents from around the world who face a variety of social and economic circumstances.

Demographic changes, like the examples of income, aging and immigration, have an impact on the opportunities and rights available to residents. These global and national changes will require all levels of government, businesses, and organizations to continue to adjust their services, products and practices to ensure that all residents can reach their full potential.

Local Context

Incomes for the top 10% of Ontario families rose by 40% between 1976

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3   United Nations Development Program, Human Development Report 2010, "The Real Wealth of Nations: Pathways to Human Development," http://hdr.undp.org/en/media/HDR_2010_EN_Complete_reprint.pdf, 72-3.

4   Statistics Canada, "Earnings and Incomes of Canadians Over the Past Quarter Century, 2006 Census: Family Earnings," http://www12.statcan.ca/census-recensement/2006/as-sa/97-563/p19-eng.cfm.

5   Statistics Canada, "A Portrait of Seniors in Canada," http://www.statcan.gc.ca/pub/89-519-x/2006001/4122092-eng.htm.

and 2004, while incomes fell by 60% for the bottom 10% of families.[6] In Markham, the median income for households in 2005 was $79,924 while the provincial median was $60,455.[7] The population in Ontario is aging; the number of seniors aged 65 and over is projected to more than double from 1.8 million residents (13.7% of the population in 2009) to 4.2 million residents (23.4% in 2036).[8]

Markham is a community that prides itself on its cultural diversity. There are opportunities in Markham to support new immigrants and enable the wealth of skills, knowledge and cultural richness that new residents offer to the community. Markham can promote social equity by creating and maintaining opportunities for all residents to enjoy all that Markham has to offer. Some individuals and groups will require increased levels of support and Markham can work to improve affordability for lower income residents and to eliminate barriers to participation and civic engagement.

How do we measure up?

Low-Income Households and Persons

Indicator
Low income is measured using the after-tax Low Income Cut-Off (LICO), an income threshold below which a family will likely devote a larger share of its income to food, shelter and clothing than the average family. Statistics Canada conducts the calculation for the LICO.

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6   Armine Yalnizyan, "Ontario's Growing Gap: Time for Leadership," http://www. policyalternatives.ca/sites/default/files/uploads/publications/Ontario_Office_ Pubs/2007/ontariogrowinggap.pdf.

7   Statistics Canada, "Community Profile, Markham 2006," http://www12.statcan.ca/ census-recensement/2006/dp-pd/prof/92-591/details/Page.cfm?Lang=E&Geo1=CSD &Code1=3519036&Geo2=PR&Code2=35&Data=Count&SearchText=markham&Sear chType=Begins&SearchPR=01&B1=All&Custom=.

8   Government of Ontario, "Ontario Population Projections Update," http://www.fin. gov.on.ca/en/economy/demographics/projections/.

Performance

In 2005, of the 68,525 households in Markham, 11.4% were low-income households. This compares to 9.8% for York Region, 15.6% in the Toronto CMA (census metropolitan area) and 8.6% in Ontario as a whole. Of Markham's 260,420 residents, 12.6% were low-income individuals.

Source: Statistics Canada, 2006 Census, Prevalence of low income after tax.

Child Poverty

Indicator

Child poverty is a function of household income and spending. Poverty has an effect on child well-being and affects the ability to be healthy, participate in sports and even perform well in school. Child poverty is a calculation prepared by the Children's Aid Society.

Performance

20% of Markham's residents 18 years of age and under are living in poverty. In 1995 this figure was 8%. Only Toronto (32%), Hamilton (24%) and Mississauga (21%) had higher rates of child poverty.

Source: Children's Aid Society, Greater Trouble in Greater Toronto: Child Poverty in the GTA, December 2008.

Child Poverty Rates 1990 & 2005 - Selected GTA Communities

(Reproduced from Children Aid Society's Report Greater Trouble in Greater Toronto: Child Poverty in the GTA, Dec 2008.)
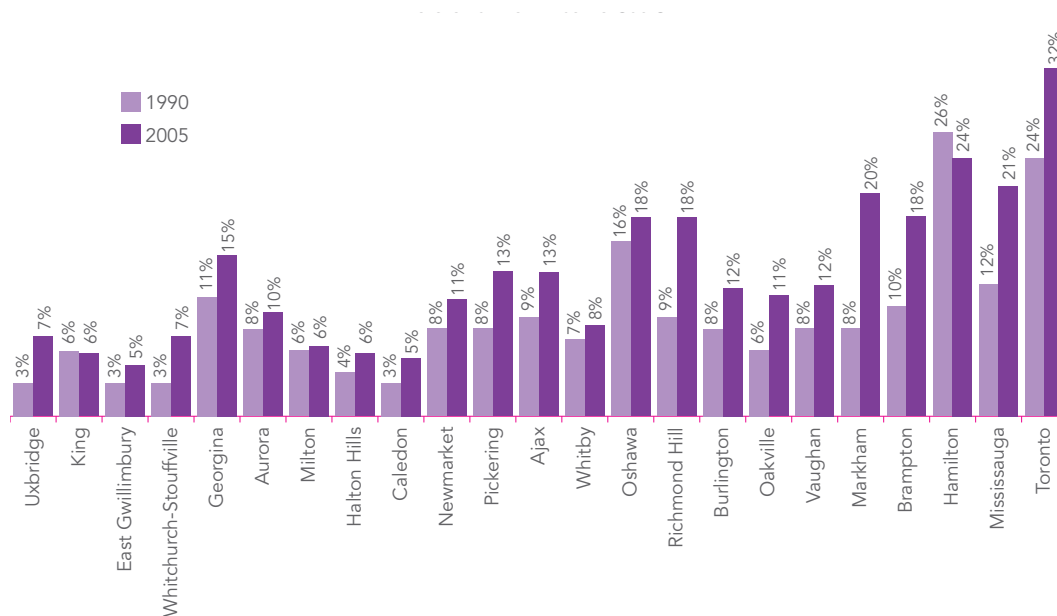

Legend:
- 1990
- 2005

Data (1990 / 2005):
- Uxbridge: 3% / 7%
- King: 6% / 6%
- East Gwillimbury: 3% / 5%
- Whitchurch-Stouffville: 3% / 7%
- Georgina: 11% / 15%
- Aurora: 8% / 10%
- Milton: 6% / 6%
- Halton Hills: 4% / 6%
- Caledon: 3% / 5%
- Newmarket: 8% / 11%
- Pickering: 8% / 13%
- Ajax: 9% / 13%
- Whitby: 7% / 8%
- Oshawa: 16% / 18%
- Richmond Hill: 9% / 18%
- Burlington: 8% / 12%
- Oakville: 6% / 11%
- Vaughan: 8% / 12%
- Markham: 8% / 20%
- Brampton: 10% / 18%
- Hamilton: 26% / 24%
- Mississauga: 12% / 21%
- Toronto: 24% / 32%

Figure 4.0

Low-Income Seniors

Indicator

Poverty among seniors is a challenge, especially in urban areas where most live. Generally, poverty in this group is most common among seniors living alone, women over the age of 80, visible minorities and immigrants. Low income is measured using the after-tax Low Income Cut-Off (LICO) for persons over 65.

Performance

In 2006, there were 26,950 people over the age of 65 in Markham. Of these, 6.9% or 1,860 people over the age of 65 were under the Low Income Cut-Off.

Source: Statistics Canada, 2006 Census, Prevalence of low income after tax.

Youth Participation in Programs

Indicator

Participation in extracurricular activity can be an important source of positive influence in the lives of youth, inspiring ambition and self-confidence. Positive settings also offer opportunities to resist the lure of problematic behaviours like truancy, violence, substance abuse and other forms of crime.

Performance

While there are broad opportunities for youth to participate in meaningful activities in the community, only Town programs and services have been measured. In organized and drop-in youth programs, 20,242 youth participants were registered or counted in 2008. This represents 0.3 trips per youth (for 0–19 years old) or 0.23 trips per youth (for 0–24 years old).

Source: Town of Markham. This figure includes total Registered General Programs / Direct Services (2,821), Registered Camp Programs (577) and drop-in youth programs (16,844).

People with Disabilities

Indicator

Knowing the size of this resident group and their specific needs will ensure that their needs are met.

Performance

This indicator has not been measured for this reporting period. There are no known databases recording this information in Markham or York Region.

Sense of Community Index

Indicator

Sense of community is defined as a feeling members have of belonging, a feeling that members matter to one another and to the group and a shared sense that peoples' needs will be met through their commitment to be together. It is measured using a survey in which a series of questions are asked, such as "When I travel, am I proud to tell others where I live?" and "Do I like living in this city?"

Performance

This indicator has not been measured for this reporting period but can be measured through upcoming Town surveys.

Taking Action

(For the full list of Social Equity recommendations, please see the Implementation Matrix in the Implementation Chapter.)

Objective: Reduce the impact of household poverty

Initial Recommendations:

Municipality

Markham can continue to improve support to lower-income residents in a number of ways. It can work with regional and senior governments to facilitate an affordable housing and transportation strategy and can proactively design a range of housing and transportation options that can be accessed by all. Markham can offer geared-to-income options for its full range of programs and services and promote a welcoming, accessible and inclusive environment in all municipal facilities, parks and public spaces. Compact, complete neighbourhood development will enhance opportunities to live, work and play in every neighbourhood. Markham can also enhance its social planning capacity by integrating social activities and services not currently being delivered.

Organizations and Businesses

Organizations and businesses can work in partnership with Markham to help create 10,000 new jobs, focusing on local economic development activities specifically aimed at reducing poverty. Working with local and higher levels of government, organizations can consider creating microfinance options, business incubators and other supportive opportunities to establish and promote new jobs and businesses (Markham Small Business Centre, Markham Convergence Centre, ventureLAB (formerly Innovation Synergy Centre in Markham), etc.). Alliances and coalitions with other social movements can promote additional non-work opportunities for all to be engaged, empowered and successful.

Individuals and Community Volunteer Groups

Individuals and community groups can help to create resource centres in schools, libraries, and community centres where goods and services can be exchanged, reclaimed or recycled by residents. Groups can also help to establish needed programs, committees, and organizations for seniors, women, and minorities, providing welcoming space for such individuals to find support, formulate ideas and build social networks. Individuals who have land to share can offer space for growing food, or can work with neighbourhood associations and other groups to assist with do-it-yourself projects.

Objective: Greater resident involvement in community stewardship

Initial Recommendations:
Municipality

Markham can develop a community engagement policy that encourages the participation of all demographic groups in decision making and can provide classes to residents about how a municipal government functions and how to get involved in the decision-making process. Staff can continue to be provided with training to help them successfully engage diverse audiences. Overall, Markham can enhance its social planning capacity to coordinate and integrate service delivery within neighbourhoods.

Organizations and Businesses

Organizations can review and redefine their mandates to ensure that issues of concern for women, seniors, and minorities are addressed and businesses can get involved with community events and programs that support these groups. Organizations and businesses can also offer volunteer opportunities and provide volunteer assistance to encourage greater community involvement and assist others.

Individuals and Community Volunteer Groups

Community groups can help recruit and support individuals to participate in Town committees of high demographic diversity. Neighbourhood associations enable local decision making for program and service delivery.

Objective: Promote greater youth involvement in decision making and participation

Initial Recommendations:
Municipality

Markham can enhance spaces and programs for youth at community centres and the Civic Centre and engage Markham's youth in planning and other decisions that shape the community. Developing a social media strategy will assist communication with youth. Markham can also build upon the Mayor's Youth Task Force, such as by coordinating a shadow youth council where members of council and staff serve as mentors to engage interested youth in the political process. Markham can explore funding sources and compensation mechanisms to assist those youth who want to pursue service in elected government.

Organizations and Businesses

Organizations and businesses can mentor Markham youth with peer-to-peer and adult-to-youth programs. Organizations can also offer targeted services and opportunities to engage at-risk youth.

Individuals and Community Volunteer Groups

Individuals and groups can help to set up youth-driven committees, programs and initiatives that encourage youth to celebrate the community and their neighbourhoods with festivals and events.

Partnerships

Partnerships are essential to the promotion of social equity. Potential partners include:

- York Region, to ensure their programs and services meet the needs of all residents

- Social agencies (United Way, York Community Foundation, new immigrant services), to promote social equity with their programs

- Province of Ontario, to improve the social safety net to ensure that program participants do not need to rely on emergency services (shelters, food banks)

- Developers, to offer a range of housing options that meet the needs of all members of the community, and to design communities with welcoming and inclusive public spaces and facilities

- Businesses and employers, to harness the skills of new immigrants, youth and low-income residents through progressive hiring practices, mentoring and apprenticeship programs and a commitment to corporate social responsibility

System Thinking

Priorities	Connections
Social Equity:	N/A
Identity and Culture:	Equal access and opportunities to cultural facilities allows for cultural heritage, religious practice and Markham's diversity in all its forms to be celebrated.
Individual Health:	New and existing programs, along with access to Town facilities and services, support the needs of residents.
Shelter:	A range of housing types is needed for residents of all income levels, ages and lifestyles.
Food Security:	Continuing access is needed to food that is healthy, affordable, locally grown and processed and culturally appropriate.
Access and Mobility:	Fast, efficient, safe, and affordable alternatives to the private vehicle are needed to reduce the costs of living and serve all residents.
Education and Skills:	All residents need access to education and foreign-trained workers need transitional assistance programs.
Economic Vibrancy:	A diverse range of businesses and employment opportunities allows all residents to contribute to the community and generate an income.
Materials Management:	Zero waste programs and community sharing or swapping of goods involves all residents in managing materials and waste.
Water Efficiency:	Water rates and educational programs help to reduce consumption, and support is provided to low-income households.
Ecosystem Integrity:	Opportunities in every neighbourhood allow all residents to visit parks and natural areas and to participate in ecosystem restoration.
Energy and Climate:	Energy rates help to reduce power consumption and support is provided to help low-income households with rising energy costs.

Identity and Culture

Unique Sense of Place, Culturally Vibrant and Inclusive

Definition

In addition to the attitudes, values, goals and practices that residents share, a community's identity and culture are the aspects that make it a unique and desirable place to live.[9] Community identity includes the physical features of the community, from natural and built heritage (old buildings, main streets, cultural landscapes) to the designs of new public realm developments (parks, streets, bridges, public buildings). Identity also includes less tangible aspects of a community like reputation (accomplishments, track record) and sense of community (connections, neighbourliness, sense of belonging). Culture includes the artistic, musical, literary, culinary, political and social elements that are representative of a community.[10]

Global Context

Identity and culture have been the source of many great accomplishments and achievements as well as many global conflicts. Non-standard forms of communication, such as visual art, poetry, music, theatre and dance can

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9 Wikipedia, "Culture," http://en.wikipedia.org/wiki/Culture.

10 United Nations Educations, Scientific and Cultural Organization, "Cultural Diversity," http://portal.unesco.org/culture/en/ev.php-URL_ID=34321&URL_DO=DO_TOPIC&URL_SECTION=201.html.

help initiate fluency in cross-cultural or intracultural experiences. This can be conducive to a wider dialogue and interaction.[11]

Canada is a nation built on immigration and as a result has diverse cultures representing all parts of the world. It has embraced a policy of multiculturalism, which means that immigrants and others are encouraged to preserve their cultures and interact peacefully within one nation. As globalization and media technology have advanced, concerns about maintaining cultural identity have been raised. In Canada, a number of federal regulations on Canadian content (such as the Canadian Radio-television and Telecommunications Commission's (CRTC) requirements) and investments by all levels of government (including the Canadian Heritage Department and Ontario's Ministry of Tourism and Culture) have ensured that the cultural communities of Canada can continue to express themselves, that this expression be shared between cultural communities and it can find international audiences.[12]

A thriving community with a unique and attractive identity and vibrant cultural attractions will help cities in North America compete for residents. The social character of city-regions has been found to be directly related to their economic success and competitiveness. In particular, places that offer a high quality of life and best accommodate diversity enjoy the greatest success in attracting and retaining talent.[13]

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11 Amanda Fortier, "Culture and Conflict: Introduction," http://www.powerofculture.nl/en/specials/culture-and-conflict/Introduction.

12 Canadian Radio-television and Telecommunications Commission, "Statutes and regulations," http://www.crtc.gc.ca/eng/statutes-lois.htm; Canadian Heritage, "The Department," http://www.pch.gc.ca/eng/1266237377392/1266193946168; Ontario Ministry of Tourism and Culture, "Funding and Awards," http://www.mtc.gov.on.ca/en/awards_funding/awards_funding.shtml.

13 Richard Florida, "Who's Your City: How the Creative Economy is Making Where to Live the Most Important Decision of Your Life," (New York: Basic Books, 2008); Richard Florida et. al., "Competing on Creativity: Placing Ontario's Cities in North American Context," http://www.investinginchildren.on.ca/Communications/articles/Competing%20on%20Creativity.pdf.

Local Context

In Markham, the community with the most visible minorities in Canada,[14] multiculturalism is essential to the well-being of the entire community. One of Markham's great strengths is that it is "a community of communities" where both diversity and cultural interaction are celebrated. Markham can continue to support identity and culture by creating opportunities for the community to celebrate heritage, creativity and diversity.

While acknowledging our diversity, Markham can also celebrate what is shared by the whole community to enhance the Markham identity. Community achievements in the areas of climate change, environment, social equity and economic vitality will serve to create community pride and a common understanding of what it means to be a resident of Markham.

How do we measure up?

Mosaic Index

Indicator
The Mosaic Index, which measures the number of foreign-born citizens in a community, is recognized as an indicator of openness and diversity.

Performance
In 2005, 57% of residents in Markham were foreign-born. Markham's Mosaic Index compares to York Region at 43% and Ontario at 35%.

Source: Statistics Canada, 2006 Census, Total population by immigrant status and place of birth, immigrants.

Representation of Diversity on Council, Committees, and Boards

Indicator
Visible minority representation at the political and leadership level "sends

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14 Statistics Canada, "Community Profile, Markham 2006."

a message about the accessibility of power in the political system and has significant implications for social inclusion as well as the development of policies that meet the needs of diverse citizens."[15] Given Markham's demographic makeup, representation at the political and committee level is critical for ensuring an inclusive community.

Performance

Among the five most diverse communities in the Greater Toronto Area (GTA), Markham scored the highest for visible minorities represented on Council (in the 2007 election) with 25% of councillors. In 2009, this changed after a by-election result to 17%.

Source: DiverseCity Counts: A Snapshot of Diversity in the Greater Toronto Area, The Diversity Institute in Management and Technology, Ted Rogers School of Management, Ryerson University, 2009.

Major Cultural Establishments

Indicator

Cultural facilities in any community are valued for offering opportunities for residents to engage in learning and creative pursuits. Cultural facilities also play a role in attracting tourists and contribute to the local economy in many ways.

Performance

Markham has four formal cultural facilities for programming and services: Markham Museum, Markham Theatre, Varley Art Gallery and the Markham District Historical Museum. There are 1.5 formal facilities available per 100,000 residents (2009). When factoring in community centres and libraries (18 in total) offering cultural programming, this ratio changes considerably to 8.5 facilities per 100,000 residents.

Source: Town of Markham.

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15 The Diversity Institute, " DiverseCity Counts: A Snapshot of Diversity in the Greater Toronto Area," http://maytree.com/PDF_Files/DiversecityCounts/ DiverseCityCountsReportFinal.pdf, 9.

Taking Action

(For the full list of Identity and Culture recommendations, please see the Implementation Matrix in the Implementation Chapter.)

Objective: Promote and celebrate all that makes Markham great

Initial Recommendations:
Municipality

Markham can support and enhance the community's heritage, natural setting and cultural diversity by building on and promoting urban design and place-making guidelines for all new Markham development. It can build on and implement a public art policy that encourages public art in commercial and large residential projects and requires it in all new construction and retrofit projects. Markham can support festivals, community events and engagement exercises that aim to foster cross-cultural understanding and experiences. Markham can double the floor area of cultural venues by the year 2030, implement Markham's Integrated Leisure Master Plan and create a sustainable tourism strategy in partnership with York Region and others.

Organizations and Businesses
Organizations and businesses can capitalize on Markham's history, natural heritage and diversity for marketing and branding purposes. They can contribute to the local economy and community spirit by providing a range of authentic cultural, heritage and arts opportunities that are meaningful, accessible and financially affordable to residents and visitors.

Individuals and Community Volunteer Groups
New residents can be encouraged to retain traditional arts and cultural practices, and community groups can help develop a broad range of programs and community events that celebrate and explore those aspects of Markham that all cultures share (food celebration, stories of settlement, music, etc.).

Partnerships

Partnerships are essential to the promotion of identity and culture. Potential partners include:

- Arts communities, to create, practice, teach and share a range of art forms that enhance and reflect the identity of Markham

- Ethnic organizations (representing Chinese, South Asian, Tamil and other ethnicities of residents), to promote cultural heritage throughout the community in a manner that fosters multiculturalism and co-operation

- Heritage and environmental groups, to protect and advocate for the physical identity of Markham

- School boards, to ensure that cultural and artistic education is rich and linked to the community

System Thinking

Priorities	Connections
Social Equity:	Community diversity provides opportunity for personal growth and belonging.
Identity and Culture:	N/A
Individual Health:	Arts and cultural activities can help reduce isolation.
Shelter:	Unique living spaces and facilities reflect the Markham identity.
Food Security:	Preservation of agricultural heritage land enhances and allows for local food growing.
Access and Mobility:	Access to all cultural facilities is available to all residents, in all neighbourhoods.
Education and Skills:	Languages and customs are retained and shared.
Economic Vibrancy:	The development of cultural tourism attracts visitors to Markham.
Materials Management:	A "zero waste" culture promotes the use of local and reused materials in the production of buildings, roads and other improvements.
Water Efficiency:	Local watercourses are celebrated with the creation of attractive bridges and conveyance systems.
Ecosystem Integrity:	Heritage landscapes are conserved and celebrated.
Energy and Climate:	A culture of energy conservation is actively promoted and supported.

Individual Health

A Community That Facilitates Wellness

Definition

Good health is essential to human welfare and to the social, cultural, environmental and economic functioning of the community. Individual health includes physical, mental, social and spiritual well-being. The World Health Organization (WHO) identifies the fundamental conditions and resources for health as: peace, shelter, education, food, income, a stable ecosystem, sustainable resources, social equity and justice.[16]

Communities play a significant role in health promotion. Health promotion is the process of enabling people to increase their control over and improve their health. It moves beyond a focus on individual behaviour towards a wide range of social, economic and environmental interventions.[17] The broad scope of health promotion requires partnerships between the health sector (public health, doctors, hospitals, etc.), all levels of government, businesses, developers and community groups.

Global Context

The health concerns faced by Canadians are part of a global trend in

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16 World Health Organization, "Milestones in Health Promotion: Statements from Global Conferences," http://www.who.int/healthpromotion/Milestones_Health_Promotion_05022010.pdf.

17 World Health Organization, "Milestones in Health Promotion: Statements from Global Conferences."

developed countries. Cardiovascular disease, chronic respiratory disease, diabetes and cancer are the main causes of poor physical health and death primarily due to not enough physical activity, diets high in processed and refined foods and toxins from our environment.[18] Four out of five Canadians possess one modifiable risk factor for chronic disease; these risk factors include smoking, alcohol consumption, poor nutrition, physical inactivity and obesity.[19]

An estimated 20% of Canadians will personally experience mental illness during their lifetime, potentially in the form of anxiety disorders, bipolar disorders, schizophrenia, major depression, personality disorders, eating disorders or suicidal behaviour. Mental illness is caused by a complex interplay of genetic, biological, personality and environmental factors and can be closely related to physical health.[20] While gains have been made in understanding and treating mental illness, there is still a stigma attached to having a mental illness that must be overcome.

There have been many major gains made in Canadian health. Life expectancy has increased, smoking rates have significantly decreased, many illnesses can be managed or cured with new treatments (cancers, anxieties, diabetes, etc.) and many health hazards in our environment have been removed, reduced or managed (DDT, lead, asbestos).[21]

Local Context

Twelve factors have been identified as social determinants of health. These

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18 World Health Organization, "Milestones in Health Promotion: Statements from Global Conferences."
19 Public Health Agency of Canada, "Chronic Disease InfoBase Cubes," http://204.187.39.30/surveillance/.
20 Canadian Metal Health Association, et. al., "A Report on Mental Illnesses in Canada," http://www.cmha.ca/data/1/rec_docs/171_full_report_mic.pdf.
21 Statistics Canada, "Life Expectancy at Birth, By Sex, By Province," http://www40.statcan.ca/l01/cst01/health26-eng.htm; Statistics Canada, "Report on Smoking Prevalence in Canada: Chronological Index," http://www.statcan.gc.ca/bsolc/olc-cel/olc-cel?catno=82F0077X&lang=eng&chropg=1.

factors are encountered at the local level by residents in their communities: Aboriginal status, early life, education, employment and working conditions, food security, gender, health care services, housing, income and its distribution, social safety net, social exclusion and unemployment and employment security. Markham can support individual health by addressing these factors.

How do we measure up?

Diabetes and Respiratory Disease

Indicator
Chronic diseases and the conditions that predispose individuals to these outcomes, such as hypertension and diabetes, pose a tremendous economic burden and high utilization of the health care system in Ontario, including York Region. Living with disease reduces quality of life, life expectancy, and social productivity.

Performance
In 2007, 6% of the York Region adult population age 20 and over had diabetes. In the same population, the incidence rate of respiratory disease was 32.0 per 100,000 residents, compared to Ontario at 42.2 per 100,000 residents.

Source: Balanced Scorecard 2007, Public Health Branch Community and Health Services Department, The Regional Municipality of York.

Adult Obesity

Indicator
Obesity in Ontario is now considered an epidemic; almost one out of every two adults in Ontario is overweight or obese. According to the Chief Medical Officer of Health, the Ontario population has lost the balance between the energy taken in and the energy expended, which is key to healthy weight.

Performance

The percentage of overweight or obese adults aged 18 and over is 45.8% in York Region, which compares well to Ontario's rate of 49.9%.

Source: Balanced Scorecard 2007, Public Health Branch Community and Health Services Department, The Regional Municipality of York.

Life Expectancy

Indicator

Life expectancy is an indicator that measures the length of life but not the quality of life or the amount of life spent in good health. Considering premature mortality and other health indicators, a health-adjusted life expectancy indicator can be measured. In York Region this is termed Disability-Free Life Expectancy; this indicator represents the average number of years a person can expect to live in good health.

Performance

When last measured in 1999, general life expectancy in York Region was 81.8 years compared to an average in Ontario of 79.3 years. For the same period, York Region's Disability-Free Life Expectancy was 71.1 years, higher than Ontario's 68.0 years.

Source: Health Status Report, 2002, The Regional Municipality of York.

Participation Counts at Town Recreation Facilities

Indicator

Markham regularly conducts "people counts" at all recreational facilities and some libraries. As an indicator, "people count" tallies attendance but does not consider the activity that was undertaken during the visit. It is nonetheless useful for gauging how frequently residents participate in recreational activities.

Performance

In 2008, 7,033,413 trips to Town recreation facilities were recorded. On a per capita basis this represents an average of 27 trips per person to a community recreation facility.

Source: Town of Markham, 2009.

Taking Action

(For the full list of Individual Health recommendations, please see the Implementation Matrix in the Implementation Chapter.)

Objective: Promote and support the physical and mental health of Markham citizens

Initial Recommendations:
Municipality

Markham can build on and continue to provide an accessible and safe public realm that encourages residents to use active transportation modes and to gather and connect with neighbours year-round. It can provide access to all public facilities and programs for Markham residents regardless of means or ability and can use such facilities to assist residents in times of need. Markham can also implement non-smoking and healthy food policies at municipal facilities and increase its social planning capacity by integrating new social activities not currently being offered.

Organizations and Businesses

Organizations and businesses can further enhance their support of the community by developing and delivering programs promoting health and well-being and providing residents with education and re-skilling opportunities. Schools can become flexible community resources, offering space to the broader community for recreation, leisure, programs and events. Organizations and businesses can work to supply needed child care and to create spaces offering residents the chance to participate in community life and contribute to their own well-being.

Individuals and Community Volunteer Groups

Individuals can continue to participate in and help to form community groups such as neighbourhood organizations responsible for fostering interaction and neighbourhood pride and interfaith and intergenerational committees and programs to proactively connect individuals and distinct groups with the larger community. Groups can also establish walking school bus programs and other safe and healthy neighbourhood-based programs.

Partnerships

Partnerships are essential to the promotion of individual health. Potential and existing partners include:

- The health sector (including York Region Public Health, Markham-Stouffville Hospital, and doctors), to provide high-quality preventative, curative and palliative care to meet the needs of all residents

- Social agencies (United Way, York Community Foundation), to keep focus on the social determinants of health

- Developers, to design healthy new or retrofit communities and buildings

- School boards, to use facilities for health promotion programs

System Thinking

Priorities	Connections
Social Equity:	Age, gender, culture, income, physical or mental ability impacts individual health.
Identity and Culture:	Healthy people contribute to identity and cultural vitality.
Individual Health:	N/A
Shelter:	Shelter is a basic requirement of human health.
Food Security:	Access to healthy food helps prevent illness.
Access and Mobility:	Active transportation modes provide opportunities for regular physical activity.
Education and Skills:	Higher levels of education contribute to better health.
Economic Vibrancy:	A healthy workforce is more productive.
Materials Management:	Reductions in pollution and toxic substances in the environment contribute to ecological and individual health.
Water:	Water is necessary for biological function, sanitation and food preparation.
Ecosystem Integrity:	Access to nature promotes a sense of well-being and provides the foundation for healthy food production.
Energy and Climate:	Changing climate requires consideration of new disease vectors and preparedness for extreme weather events.

Shelter

Housing Choice for All Residents

Definition

Shelter refers to the housing options available to residents. An appropriate and adequate range of housing choices including diversity of housing type, tenure and affordability level, help to create more complete neighbourhoods that meet the needs of all residents regardless of age, income level, ability, culture and family composition. Housing type may include single-family houses, townhouses, condominiums, apartments, seniors residences, student residences, special needs housing, subsidized housing and emergency shelters. Addressing the housing needs of current residents is as important as planning for the housing needs of future residents and a changing community demographic.

Global Context

There is not enough affordable housing to meet the global needs of all people.[22] In North America, the housing market has been dominated by single-family detached houses, which is the historical consequence of rising incomes, technological changes, low travel costs and high travel speeds.[23]

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22 Valerie J. Brown, "Give Me Shelter: The Global Housing Crisis – Focus," http://findarticles.com/p/articles/mi_m0CYP/is_2_111/ai_99185877/?tag=content;col1.

23 Reid H. Ewing, "Characteristics, Causes, and Effects of Sprawl: A Literature Review," Environmental and Urban Studies, vol. 21(2):1–15.

The result has been neighbourhoods where the housing is dominated by a single housing type, with very few other options available.

Housing is one of the main consumers of energy and contributors to global warming. Energy conservation programs have been implemented in Canada and Ontario in recent years to encourage individuals to retrofit their homes. There are also increasing concerns about the health impacts of the building materials that have been used for housing in North America.[24] Healthier building materials are being introduced into the market that will reduce off-gassing and moulds that have negative impacts on the health of residents.

Local Context

Markham has experienced rapid growth and this has placed a great deal of upward pressure on land values and the price of housing. Younger residents will face increasing challenges with affordability in Markham where the rental market is limited, there are few multi-unit developments on the market and starter homes may be unaffordable. The needs of seniors include being able to downsize to smaller homes or condominiums or to find greater assistance in seniors residences or nursing homes. Markham can address these housing needs by providing appropriate housing to all residents at all stages of their lives.

How do we measure up?

Housing Type Diversity

Indicator
Housing Type Diversity reveals the mix of housing types. Measured on a scale of 0-1, the index indicates no diversity with a value of 0 and high diversity with a value of 1. While there is no right number, it is generally accepted that a housing diversity index between 0.8 and 1 will support a

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24 Valerie J. Brown, "Give Me Shelter: The Global Housing Crisis – Focus."

greater diversity of ethnicity, family composition and income levels across the community. Greater housing diversity also implies that more homes can be located closer to services, jobs and amenities, thus decreasing travel distances and costs. Housing diversity also allows for aging in place.

Performance

Markham's Housing Type Diversity is 0.64. This is made up of 53% single-detached (single-family housing), 15% semi-detached (duplex housing), 18% townhouse and 14% apartment housing.
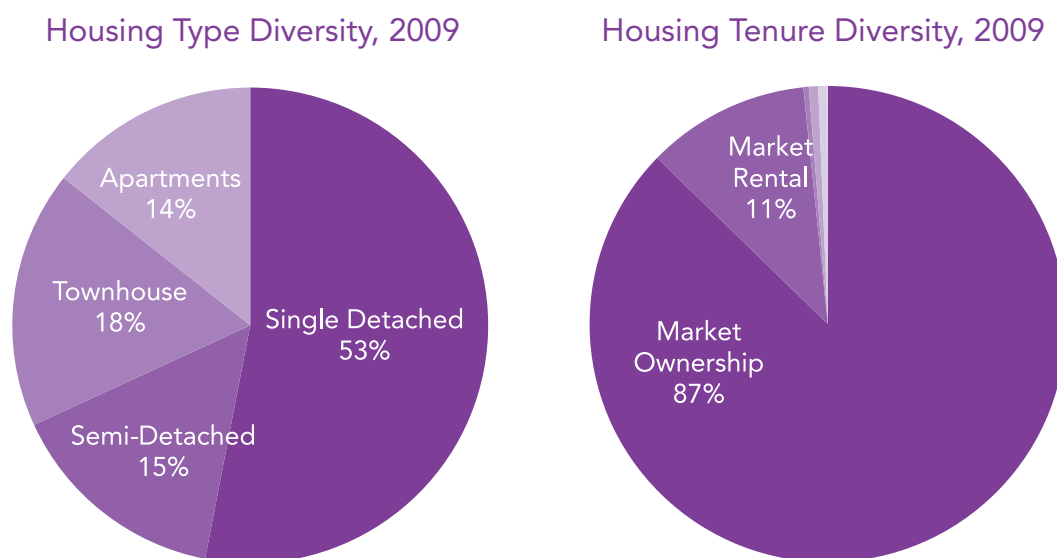
Source: Town of Markham, 2009.

Housing Type Diversity, 2009

Housing Tenure Diversity, 2009

Figure 4.1

Housing Tenure Diversity

Indicator

Housing Tenure Diversity reveals the mix of housing tenures available to individuals or families. Measured on a scale of 0-1, the index indicates no diversity with a value of 0 and high diversity with a value of 1. Greater diversity in tenure implies there is a broader range of affordable options.

Performance

Markham's Housing Tenure Diversity in 2006 was 0.23, in which the vast majority of homes were owned; 87.7% ownership, 11.2% rental, 0.9% for special needs and rental (geared-to-income) and 0.2% for emergency shelter housing.

Source: Statistics Canada, 2006.

Households Paying More than 30% on Housing

Indicator

A common affordability threshold is defined as spending less than 30% of household income on housing costs. Spending more than this can make it difficult to pay for necessities such as food, clothing, education and transportation.

Performance

In Markham, 30% of homeowners spend more than 30% on housing, whereas 52% of renters in Markham spend more than 30% of their income on housing.

Source: Statistics Canada, 2006.

Households in Core Need Housing

Indicator

Households in "core need" housing refers to those who currently reside in housing that is in need of major repair, does not have enough bedrooms for the size and makeup of the household, or costs 30% or more of their total income. Core need households are also unable to rent an alternative housing unit that meets these standards without paying 30% or more of their income.

Performance

Forthcoming via the Affordable Housing Strategy.

Source: Town of Markham, 2009.

At-Risk Homeless

Indicator

A common threshold for being at risk of becoming homeless is when households spend more than 50% of household income on housing.

Performance

Forthcoming via the Affordable Housing Strategy.

Source: Town of Markham, 2009.

Taking Action

(For the full list of Shelter recommendations, please see the Implementation Matrix in the Implementation Chapter.)

Objective: Develop an Affordable Housing Strategy

Initial Recommendations:
Municipality

Markham can adopt annual housing targets for new development according to the Markham Preferred Growth Alternative: 27% single-detached or semi-detached houses, 19% townhouses and 54% apartments for new residential units to 2031. This target helps to accommodate households experiencing increased affordability challenges, especially singles, youth, seniors and new residents. Markham can also adopt strategies to promote rental accommodation in new and existing housing developments. Providing incentives and considering innovative funding methods may help Markham to meet its affordable housing and special needs targets.

Organizations and Businesses

Developers, contractors and the businesses that support home construction can design and build a diversity of housing forms including small lot single-detached houses, stacked townhouses, linked homes, apartment buildings, live-work spaces and other innovative housing options that range in price. The development community can work with Markham to supply

alternative ownership options such as rent-to-own and home ownership co-operatives. Organizations can coordinate partnerships to increase the supply of subsidized and social housing, special needs housing and emergency shelters.

Individuals and Community Volunteer Groups

Community groups can partner with local and regional governments and housing service providers to prepare an education and awareness program highlighting the economic and social advantages of affordable and special needs housing in Markham. Individuals can work with the new Welcome Centres and other immigrant-support service providers to provide housing and related information to new residents.

Objective: Regenerate existing neighbourhoods through sensitive evolution

Initial Recommendations:
Municipality

Markham can use a place-based approach to regenerate existing neighbourhoods, focusing on walkable distances and friendly pedestrian environments from homes to shops and services, access to transit, gradual increases in residential density, mixed-use areas in neighbourhood centres and along main streets and adequate employment opportunities in each neighbourhood. Markham can also focus on sensitive neighbourhood redevelopment and "place making" to define neighbourhood units within the larger community, responding to socio-cultural aspects of neighbourhoods, architectural character guidelines and public engagement needs. In addition, regeneration of neighbourhoods should include water and energy efficiency retrofits to improve conservation and opportunities to reclaim materials to assist with materials management.

Organizations and Businesses

New businesses can locate in previously underutilized areas such auto-oriented retail spaces, strip malls, large-format retail sites and undeveloped sites in and around existing neighbourhoods. Together with increases in residential densities, these areas can support transit service

and become neighbourhood centres. Organizations can support public realm improvements, including heritage preservation, to establish strong neighbourhood identities that draw pedestrians and potential shoppers.

Individuals and Community Volunteer Groups

Community groups can work with residents to create vibrant neighbourhoods by supporting local greening and beautifying efforts that celebrate the uniqueness of the neighbourhood. Individuals can participate in community engagement activities to help guide place-based planning and regenerative development.

Objective: Plan, design, and construct high-performance new neighbourhoods

Initial Recommendations:
Municipality

Markham can continue to prioritize compact, mixed use development that integrates business, industry and residential development at appropriate locations. Such development also ensures that residential densities and other land uses support pedestrian-oriented activities and transit, and integrate parks and open spaces to promote community gathering. New development can be designed to maintain the health and quality of soils and to preserve native vegetation, improve stormwater management and maintain water quality. New neighbourhoods can be designed using appropriate modelling and analytical tools, including asset mapping, that optimize minimum water and energy consumption, greenhouse gas reductions and also respond to socio-cultural needs. Markham can use policy and regulatory tools as well as pursue partnerships and government funding to provide diverse housing options.

Organizations and Businesses

Businesses and organizations can be supported in new developments with plans that identify key elements of the public realm and social assets (galleries, recreation centres, libraries, parks, plazas, public and private services, and goods providers) and how they will be made accessible to residents.

Individuals and Community Volunteer Groups

Individuals and community groups can support high-performance neighbourhoods by advocating for sustainable building practices, attending public engagement events for new developments being planned and retrofitting individual properties (when feasible).

Partnerships

Partnerships are essential to addressing the shelter priority. Potential partners include:

- York Region, to ensure Markham residents have access to services ranging from emergency shelters to social housing, to other poverty-reducing services

- Social agencies (United Way, York Community Foundation), to continue to assist residents through provision of services and advocacy for housing to serve the range of needs throughout the community

- The Province, to improve policies and funding for social service recipients to improve quality of life and the affordability of living in Markham

- Developers, to supply a diversity of housing types with varying affordability levels and environmentally friendly features

System Thinking

Priorities	Connections
Social Equity:	Greater housing diversity in built form and ownership type allows people of all means to have access to housing that meets their needs.
Identity and Culture:	Housing that meets the needs of diverse groups fosters pride, identity, and creates a sense of belonging.
Individual Health:	Affordable and suitable housing that meets standards and regulations are safer and healthier environments for residents.
Shelter:	N/A
Food Security:	Development intensification that includes infill housing in existing urban areas reduces pressure on farmland in non-developed areas of Markham.
Access and Mobility:	Greater housing diversity results in more compact and mixed use development, allowing more homes to be located closer to services, jobs, and amenities, thereby decreasing travel distances and costs.
Education and Skills:	Providing suitable housing for lower-income residents can increase their participation and capability in learning and skills development, thereby improving employability.
Economic Vibrancy:	Individuals and households can better support the local economy if they are able to reduce their housing costs.
Materials Management:	Waste diversion is easier to manage in compact developments where more opportunities exist in close proximity.
Water Efficiency:	High-density and compact housing developments allow for the central collection and treatment of waste water.
Ecosystem Integrity:	Housing diversity and compact development has less impact on the natural ecosystem compared to typical homogeneous, sprawling suburban neighbourhoods.
Energy and Climate:	Higher-density multi-unit housing is more energy efficient than lower-density single-detached housing.

Food Security

Safe, Accessible, and Healthy Food for All

Definition

Food security refers to the ability of community members to access food that is safe, culturally appropriate, affordable and healthy. Access to food occurs within a larger food system that includes production, processing, transportation, distribution, retail, consumption, celebration and nutrient recovery. Local, vibrant food systems help make communities more resilient to global fluctuations in food prices and decrease concerns about food safety. A community's food system can offer opportunities to improve social, cultural, environmental and economic well-being.

Global Context

The food system functions on a global and industrial scale. The average North American's dinner may travel thousands of kilometres before reaching the dinner plate. It is not uncommon for Canadians to see strawberries from California, apples from New Zealand, garlic from China and coffee from Africa. While the diversity of foods available to Canadians has never been greater, environmental impacts, food safety and other vulnerabilities of a global food system are a growing concern for many Canadians. Environmental concerns include climate change, soil erosion and pesticide

residues, especially with food grown in other countries.[25] Food safety incidents including contaminants, food-borne illness, microbes and allergens have heightened concerns about food safety and traceability.[26] The global food system is vulnerable to reliance on fossil fuels, weather-related crop loss and declines in both the number of farmers and the amount of arable land.

Within Canada there are a number of connected issues in the food system. Not all Canadians are able to afford the food they need to sustain themselves. Even with a social safety net in place, poverty still exists and manifests in the reliance by many on emergency food services like food banks and meal programs. At the same time, Canadians spend only a very small percentage of income on food, making it difficult for farmers to make a living.[27] When Canadians can afford food, they are not always making healthy food choices. Canadian diets are high in processed and prepared foods due to the convenience of these items and a lack of food literacy. This results in diets higher in sodium, saturated and trans fats and simple carbohydrates, which all have a negative impact on health.[28]

Food waste makes up a large portion of the waste stream in developed countries. In Canada, an estimated 40% of produce is sent to landfills by retailers because it did not sell and 25% of household food ends up as waste.[29]

25 Wayne Roberts, "The No-Nonsense Guide to World Food" (Toronto: Between the Lines, 2008), 133-4.

26 For examples, see Food Safety Network, http://www.foodsafetynetwork.ca/ or Global Agricultural Information Network, "Canada Retail Sector World Report," http://www.foodretailworld.com/DLReports/Canada.pdf.

27 United States Department of Agriculture Economic Research Service, "Food CPI and Expenditures: 2009 Table 97," http://www.ers.usda.gov/Briefing/CPIFoodAndExpenditures/Data/Table_97/2009table97.htm.

28 Didier Garriguet, "Overview of Canadians' Eating Habits, 2004," http://www.statcan.gc.ca/pub/82-620-m/82-620-m2006002-eng.pdf; Didier Garriguet, "Sodium Consumption at All Ages," http://www.statcan.gc.ca/pub/82-003-x/2006004/article/sodium/9608-eng.pdf.

29 Nancy Macdonald, "What a Waste," http://www2.macleans.ca/2009/11/09/what-a-waste/.

Local Context

The food grown, processed, sold and disposed of in Markham is closely linked to the global food system. Farmers in Markham, like farmers in Ontario and the rest of Canada, face a number of challenges producing food for the local and regional market. Regional agriculture may be impacted by a number of global, long-term challenges including a less predictable climate, higher energy costs and resource shortages. The recent Agricultural Assessment revealed a number of local issues as well, including competition with non-farming uses, short-term leases, high costs of land, reduced farm infrastructure both on and off the farm and conflicts with re-naturalization programs. But there are also a number of opportunities, including some of the best growing conditions (soil and climate) in Canada, close proximity to a large and diverse market and a strong agricultural heritage.[30] Food processing is one of Ontario's largest economic sectors and in 2007 the food manufacturing sector was one of only a few manufacturing sectors in that were growing in Markham.[31]

Food security is a priority in Markham because not all residents are able to access adequate or appropriate food. York Region has experienced a jump of 27% in food bank use between 2008 and 2009, with almost 10,000 food bank clients in Markham in 2009.[32] Another concern is that in 2005 only about 40% of York Region residents over the age of 12 were getting five or more daily servings of fruits and vegetables.[33] In Markham there are a greater number of fast food restaurants and convenience stores than there are supermarkets, produce stores and farmers' markets.

Food waste makes up 35% of curb-side waste, which is shipped to facilities

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30 Town of Markham, "Agricultural Assessment."

31 Town of Markham, "Economic Sector Analysis"; Government of Ontario, "Food Processing," http://www.sse.gov.on.ca/medt/investinontario/en/Pages/OS_food.aspx.

32 York Region Food Network, "Report on Hunger, 2009," http://www.yrfn.ca/pdf/2009_Report_on_Hunger.pdf.

33 2005 was the last year the Canadian Community Health Survey measured fruit and vegetables. Regional Municipality of York, "Balanced Scorecard, 2007."

to be processed.[34] There is the opportunity to compost more of this waste locally in backyards, at community gardens, or at neighbourhood-scale facilities.

How do we measure up?

Farmed Land

Indicator

Commercial agricultural land is an essential component of a food system and Markham is fortunate to have working farmland. Protecting or even expanding production land supports food security and the local agricultural economy. Monitoring changes in the ratio of farmed land to total land in Markham sheds light on whether this valuable and finite resource is being protected or eroded.

Performance

A total of 6,335 hectares of farmed land was recorded in 2009; this represents 30% of Markham. This total includes only farmed land and therefore excludes natural open space within farms. Sixty-six percent of the land outside of the Urban Area Boundary was farmed compared to 6% of land within the Urban Area Boundary.

Source: Town of Markham.

Community Garden Plots and Community Kitchens

Indicator

This measure indicates the degree to which local, sustainable food is incorporated into neighbourhoods. Urban agriculture, such as community gardens, increases the accessibility and affordability of food, helps build community, beautifies neighbourhoods, increases safety through "eyes

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34 Town of Markham, "Green Bin," http://www.markham.ca/Markham/Departments/ WstMgt/MsnGrn/.

on the street," provides local food options, and reduces greenhouse gas emissions associated with the transportation of food. Community kitchens provide opportunities for food processing and preparation, thereby building skills and community capacity.

Performance

In 2005, 90 community gardening plots were in use for 260,760 residents. There were no recorded community kitchens. This represents 3.5 plots (and 0 kitchens) per 10,000 residents.

Source: Town of Markham.

Food Bank Usage

Indicator

Food banks are an important part of community food security as they provide emergency food services to individuals and families who need them. However, high food bank use rates indicate that a significant proportion of the population requires emergency access to food. Monitoring the increase and decrease in food bank usage provides some indication of food security and poverty issues in Markham.

Performance

In 2007 approximately 5,100 users were recorded using the local food bank in Markham.

Source: 2008 Report on Hunger, York Region Food Network.
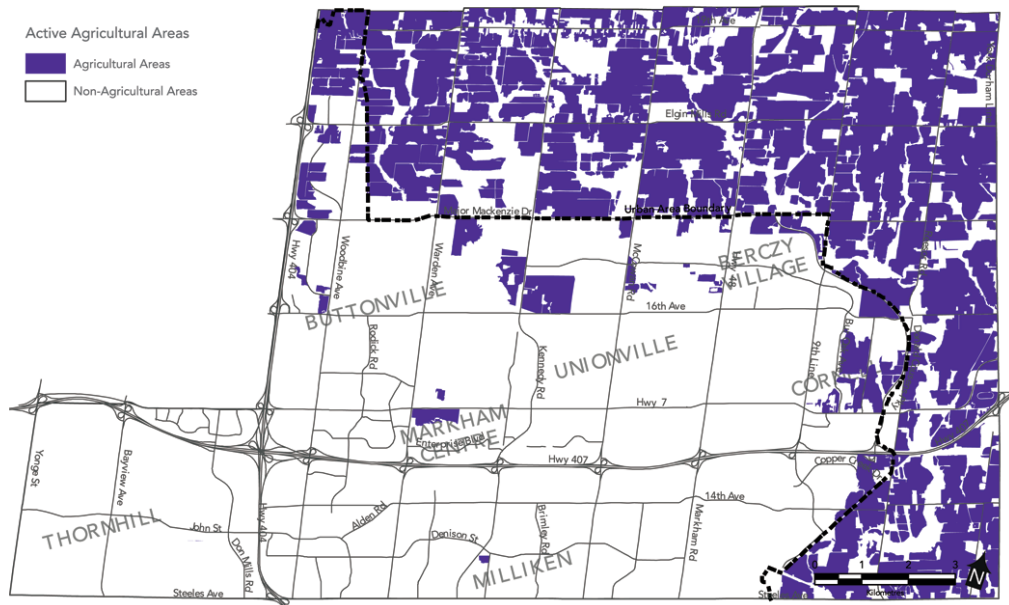
Farmed Land in Markham, 2009

Figure 4.2

Retail Food Environment Index by Neighbourhood, 2009
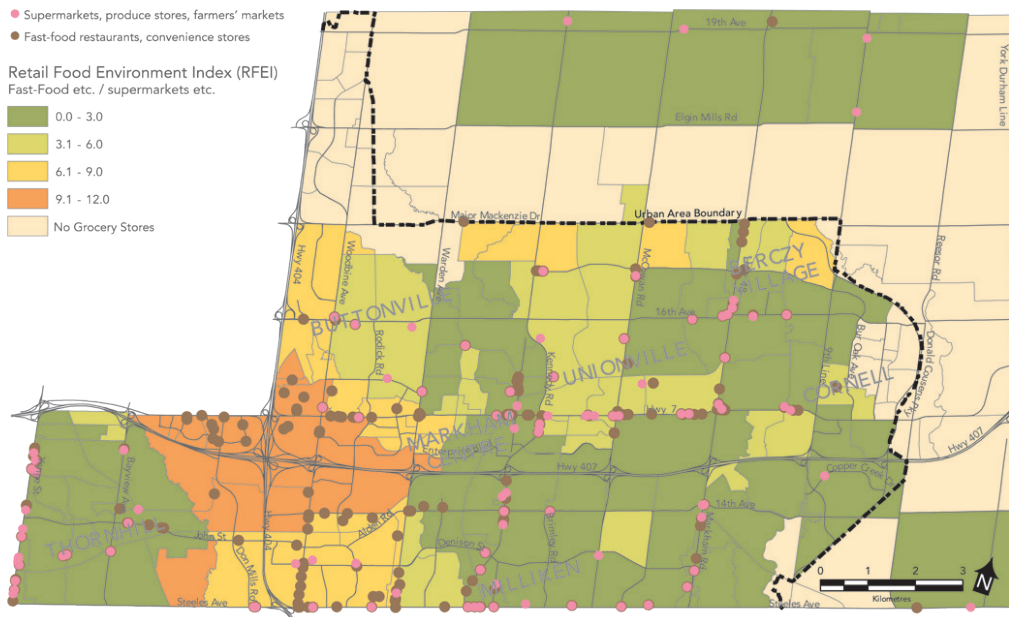

Figure 4.3

Retail Food Environment Index

Indicator

The Retail Food Environment Index is a ratio describing the relative abundance of different types of retail food outlets in a given area. It is determined by dividing the total number of fast food restaurants and convenience stores by the total number of grocery stores (defined as selling fresh produce) and farmers' markets in the area. It measures the availability of healthy foods and is an important indication of the nature of the local food retail economy. Emerging evidence suggests that good access to healthy food in neighbourhoods is associated with good health in residents, and that poor access is associated with poor health outcomes.

Performance

In 2009, "unhealthy" food outlets outweighed healthy food outlets by a ratio of 2.8 to 1. Markham's 372 fast food restaurants and 63 convenience stores outnumbered the 145 supermarkets, 5 produce stores, and 3 farmers' markets, suggesting that it is easier today to access processed and mostly fried foods than healthy foods. However, fast food is concentrated near employment areas, and residential neighbourhoods are generally well-served with a more balanced ratio of grocery stores to convenience food outlets.

Source: Your Local Marketplace, 2009, Markham Businesses Dataset.

Taking Action

(For the full list of Food Security recommendations, please see the Implementation Matrix in the Implementation Chapter).

Objective: Support education and engagement in the local food system

Initial Recommendations:
Municipality

Markham can identify local food opportunities with the help of an advisory group of representatives from throughout the food system. Markham can

also divert food from the waste stream by promoting small-scale composting and possibly large-scale biofuel digestion.

Organizations and Businesses

Organizations and businesses can provide training for food preparation, cooking, nutrition, ethical and environmental choices, and food growing using existing facilities or new facilities (community kitchens, community food centres). Mentorship opportunities and access to land for farming are particularly important for youth and new residents who want to farm.

Individuals and Community Volunteer Groups

Individuals and community groups can coordinate the sharing of knowledge and resources among gardeners and small-scale food growers through networking opportunities and workshop events.

Objective: Significantly increase food production opportunities

Initial Recommendations:
Municipality

Markham can support rural agriculture with zoning, infrastructure, and economic development strategies. It can also review all bylaws and policies to ensure the support of food production within the urban boundary, including setting soil standards in new developments so that yards and boulevards are "garden-ready" and providing assistance to existing neighbourhoods to amend soil. Requiring that community garden plots or other food growing opportunities be provided for higher-density developments will help to meet the needs of residents who want to grow their own food. Markham can promote healthy eating and living by promoting local food, developing demonstration gardens, and implementing agriculture-based education programs at municipal facilities.

Organizations and Businesses

The food processing sector can be analyzed to better understand the economic development opportunities for a food manufacturing hub in Markham that draws on the community's cultural diversity. Organizations

can help plan and implement community-based orchards, and businesses that own land can plant fruit- or nut-bearing trees; these actions increase the amount of urban canopy while also producing local food.

Individuals and Community Volunteer Groups

Individuals and community groups can help to plan and establish community gardens and other food-growing opportunities wherever possible on vacant municipal and private land.

Objective: Significantly increase the viability of local commercial food growing and processing

Initial Recommendations:

Municipality

Markham can implement the recommendations from the adopted Agricultural Assessment, including ongoing consultation, advocating for long-term leases, financial incentives, land-use policy, farm-friendly infrastructure, and innovative programs. It can further incorporate the production and processing of local food into Markham's future economic plans, and create a broader food strategy that reflects a future after peak oil. Markham can immediately promote new and existing food events, including agri-tourism that focuses on local, seasonal, and culturally diverse foods. It can also support local food production by sourcing it for Town facilities and functions, and encouraging local and healthy food sourcing in schools and institutions.

Organizations and Businesses

Organizations can promote and support year-round on-farm food growing and chemical-free organically grown local food. Support for new businesses, such as small plot intensive (SPIN) farming operations, can be provided through support networks. Organizations and businesses can support local food processing and related infrastructure, and can encourage local food processing to be highly water and energy efficient—which will help to keep local food affordable. They can help plan and promote the development of a food precinct to create greater connections between local farmers

and their markets, providing a place for local food brokerage, vending, processing, and consumption. Organizations and food-related businesses must consider climate change impacts in their research and business planning.

Individuals and Community Volunteer Groups

Individuals can encourage local food production by supporting roadside food sales on farms, local independent stores, CSAs (community-supported agriculture programs), and farmers' markets to increase opportunities for farmers to sell food locally.

Partnerships

Partnerships are essential to the promotion of food security. Potential partners include:

- The agricultural community, to ensure that rural agricultural lands in Markham continue to be productive

- Community organizations (York Region Food Network, Seeds for Change), to offer food security programming

- Businesses, to enhance and promote the processing, retail, and restaurant sectors in Markham

- Developers, to ensure that land is set aside for community gardening and soil quality is maintained at a level that will productively grow food

System Thinking

Priorities	Connections
Social Equity:	Food is socially equitable if it is adequate, affordable, healthy, and culturally appropriate.
Identity and Culture:	Agricultural heritage and cultural food practices contribute to community identity.
Individual Health:	Food and diet are directly tied to health, with poor food choices linked to obesity, heart disease, diabetes, and other health issues.
Shelter:	Healthy food stores and food growing opportunities located close to homes supports healthy diets and self-sufficiency.
Food Security:	N/A
Access and Mobility:	Food destinations reached by walking, cycling, and transit make food accessible to all residents.
Education and Skills:	Food literacy (especially growing and preparing food) is a life skill, needed to reduce the consumption of processed food.
Economic Vibrancy:	All aspects of the food system offer economic opportunities.
Materials Management:	Nutrient recovery opportunities from food waste can be capitalized on.
Water Efficiency:	Food growing and processing requires clean water, and can use responsible practices to increase efficiency and reduce contaminants.
Ecosystem Integrity:	Rich, healthy soil is full of biodiversity, and diversity in crops and livestock provides pollinator habitat and nutrient cycling.
Energy and Climate:	Local, smaller-scale, sustainable food production practices use less energy and generate fewer GHG emissions.

Access and Mobility

Access, Connection, and Safe Choices for All

Definition

Access and mobility refer to the movement of people and goods around the community. Access relates to a person's ability to reach desired goods, services, activities and other destinations. Mobility refers to the modes of transportation available, including walking (and wheelchairs, strollers and other mobility devices), cycling, transit (including buses, rail, and light rail), private vehicles and trucks for transporting commercial goods and services.

Factors that affect access and mobility include street or path connections, the proximity of destinations to where people live and work, the distribution of destinations (concentrated in one area or spread throughout the community) and the availability of mobility substitutes such as telecommunications or delivery services. Conventional transportation planning prioritizes the private vehicle at the expense of pedestrians and other users of the road by focusing on vehicle speed, vehicle operating costs and vehicle volume while ignoring accessibility issues. A new priority on moving people with multiple modes of transportation is taking root in transportation planning and will increase the options available to residents.

Global Context

People are the most mobile that they have ever been, with technology enabling us to travel around the world in less than a day. However, in North

American communities the mobility of residents at the local or regional scale is inefficient and causing negative impacts on the social, economic and environmental well-being of communities. Since the end of World War II, private vehicles have become the primary mode of transportation. In North America, unbalanced transportation investment and inefficient land use patterns prioritizing vehicle use have excluded or minimized other mobility options. The result has been an increase in the distances travelled in private vehicles, increased greenhouse gas emissions, economic loss through increased time spent on congested roads and poorer health as residents choose to drive rather than walk or cycle to their destinations.

Local Context

Traffic consistently ranks as the number one issue for Markham residents in surveys and consultations. Markham can promote access and mobility by shifting the focus from moving vehicles to moving people and goods. Markham can build and support routes and facilities that would make alternatives to the private vehicle fast, convenient, safe, and reliable. Walking, cycling and transit are more affordable options than owning and operating a car and reduce per capita emissions from fossil fuels used for transportation. Walking and cycling positively affect individual health and social well-being.

How do we measure up?

Mode of Travel to Work

Indicator
Most of our travel is to and from work destinations. While the private vehicle is often the most convenient mode of travel, there has been much focus on improving options for other modes in order to reduce congestion and road costs and improve air quality.

Performance
Markham remains heavily dependent on the car as a primary means of transportation. However, in the 1996–2006 period transit usage did increase.

Mode of Travel to Work
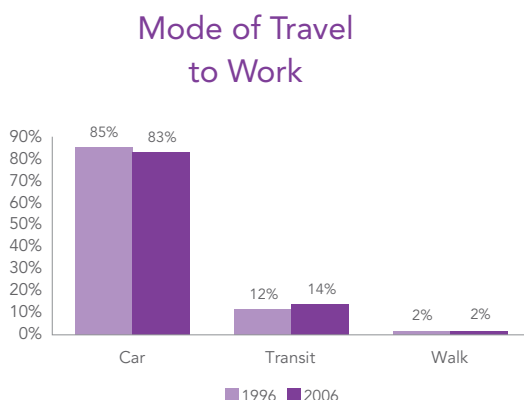

Figure 4.4

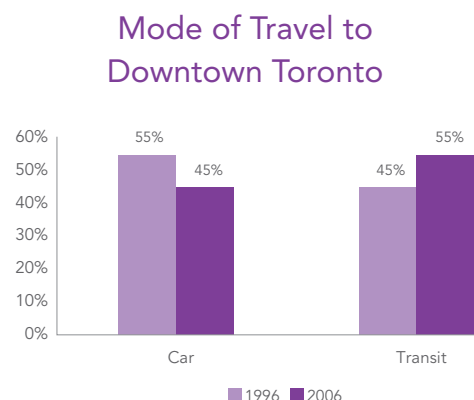## Mode of Travel to Downtown Toronto

Figure 4.5

Internal Markham Trips

Indicator

Markham has traditionally functioned as a bedroom community for Toronto; most work-based trips originate in Markham but leave, bound for Toronto. More recently, Markham has itself become a centre for jobs and is dependent on a regional labour force. Internal trips indicate how many residents live and also work in Markham.

Performance

In 1996, 45% of Markham-based trips were internal, meaning that they started and finished within Markham. This has grown to 52% in 2008.

Mode Choice to Downtown Toronto

Indicator

Traditional commuting patterns to the region's central business district, downtown Toronto, are expected to continue. Ongoing improvements to transportation infrastructure (rapid bus, subway, and commuter train) make it easy for Markham residents to access this urban core.

Performance

The number of trips by transit from Markham to downtown Toronto has been steadily increasing as an outcome of major investments in transit (such as GO Transit), significant service improvements along the Stouffville corridor, as well as increased vehicle congestion along highways leading into the downtown.

Source: Forthcoming.

Transit Trips Per Capita

Indicator

To reduce emissions will require a major shift from private vehicle to transit use for many residents, supported by senior government spending on transit infrastructure.

Performance

Forthcoming.

Source: Forthcoming.

Active Cyclists

Indicator

Cycling is a healthy activity as well as a viable mode of travel; recent investments in cycling infrastructure should encourage greater use of new bike routes.

Performance

Forty percent of Markham residents have gone cycling in the past year (2008).

Source: Household Survey, Integrated Leisure Master Plan, Town of Markham.

Taking Action

(For the full list of Access and Mobility recommendations, please see the Implementation Matrix in the Implementation Chapter.)

Objective: Create a culture of walking, cycling and transit usage

Initial Recommendations:
Municipality

Markham can create policies to ensure that new development and redevelopment focus on the prioritization of pedestrian needs and the viability of multi-modal transportation networks. Funding and partnerships will be needed to implement transportation demand management strategies. Markham can investigate local or regional pricing policies that encourage transit use and active transportation. Making network connections between key destinations and integrating transit and cycling facilities are strategies that Markham can use to support alternative transportation and reduce vehicle dependency.

Organizations and Businesses

Schools and businesses, as key destinations, can reduce vehicle trips by implementing transportation demand initiatives such as altering start times and delivery times to occur during off-peak periods, and providing cycling support facilities such as changing rooms and secure bike parking. Organizations and businesses can share such facilities by supporting multi-modal transportation exchanges in neighbourhood centres that include bus stops, bicycle storage car sharing and private vehicle and taxi parking.

Individuals and Community Volunteer Groups

Community groups can organize walking groups, as well as cycling maintenance and share-the-road workshops to promote safety and assist individuals in making the transition to active modes of transportation.

Objectives: Create roads for all users

Initial Recommendations:
Municipality

Markham can increase the capacity of existing transportation infrastructure with policies focused on network efficiency (including a layered road classification system), reducing greenhouse gas emissions, reducing and managing demand, and making non-vehicle transportation modes attractive to residents. It can pursue measures that enable transit, cycling, and pedestrian priority over single-occupancy vehicles on all major routes and intersections, focusing efforts first on high streets in redevelopment neighbourhoods. To encourage pedestrians and cyclists, Markham can equitably design streets so that these modes are safe, efficient, and viable year-round.

Organizations and Businesses

Organizations and businesses with street-level access can maintain attractive windows, monitor the condition of sidewalks and pedestrian amenities (benches, newspaper boxes, street lights, etc.), and maintain barrier-free access to buildings.

Individuals and Community Volunteer Groups

Community groups can advocate for urban environment improvements that make for a safer pedestrian environment (lighting, crosswalks, narrower roads, benches), especially in neighbourhoods where there are many children and seniors.

Objective: Connect communities

Initial Recommendations:
Municipality

Markham can develop an urban trails and greenway network that facilitates walking and cycling to major civic institutions and employment areas within the community and can maintain pedestrian paths and bicycle trails year-round at the same service levels as vehicle routes. Greenway corridors can also provide connections for wildlife between habitat areas.

Organizations and Businesses

Organizations can develop eco-education resources for businesses and homeowners to raise awareness of landscape planting and management practices that promote habitat corridors.

Individuals and Community Volunteer Groups

Individuals and community groups can steward greenways, public lands, and power line right-of-ways by patrolling for litter and path obstructions, planting native plants, and partnering to establish food gardens.

Partnerships

Partnerships are essential to the promotion of access and mobility. Potential partners include:

- York Region, especially York Region Transit and VIVA, to focus on providing options for moving people in Markham especially by improving York Region Transit and VIVA services

- Other public transportation agencies (Metrolinx, GO, TTC), to ensure seamless connections and affordable fares when using multiple providers

- Neighbouring municipalities, to connect cycling routes, trails, sidewalks, and roads

- Businesses, to encourage their employees to choose alternative modes of transportation instead of the private vehicle and to travel during off-peak times to increase the efficiency of the existing road network

- Developers, to build new communities that are not dependent on private vehicles, providing a range of alternative options and local destinations

System Thinking

Priorities	Connections
Social Equity:	Accessible and affordable transportation choices provide options for people of different means, abilities, and ages.
Identity and Culture:	Walking, cycling, and transit options support a healthy and social lifestyle.
Individual Health:	The ability to navigate through the community using a variety of transportation modes contributes to physical and mental well-being.
Shelter:	The location of housing near key destinations, including workplaces, encourages the use of non-vehicle transportation options.
Food Security:	Local food sources, including grocery stores and farmers' markets, must be accessible with direct and safe routes.
Access and Mobility:	N/A
Education and Skills:	Public education sessions on bicycle safety and maintenance and walking tours of local heritage and natural features will encourage alternative modes.
Economic Vibrancy:	Locating businesses and other workplaces along accessible corridors provides services to residents and supports businesses with a strong customer base.
Materials Management:	Infrastructure for an alternative transportation network can be built using reclaimed or recycled materials.
Water:	Stormwater management to divert and treat runoff from roadways, paths, and trails will protect watercourses.
Ecosystem Integrity:	Trails provide access and connections with a minimum of disruption to natural spaces.
Energy and Climate:	Choosing active transportation options and transit reduces emissions from fossil fuels.

Education and Skills

High-Performing and Empowered Citizens

Definition

Education is the process by which knowledge, skills and values are deliberately transmitted through teaching and learning. In today's fast-paced and ever-changing world, all citizens require flexibility of skill and knowledge at all stages of life. During childhood and adolescence, education is offered through publicly funded schools throughout the community in addition to a number of private options. Demand is increasing for education and skills training for other stages in life, both to improve economic earning potential and for personal fulfillment.

Global Context

Strong economies and high qualities of life are directly linked to the level of education and skill of a country's residents. Education is a route to earning a living and to enhancing personal growth and happiness. Educated people not only earn higher incomes but also contribute proportionately higher to business innovation, productivity, and national economic performance. There is a strong and direct relationship between investments in education, educational attainment and economic growth. Recent evidence

also suggests that educated people make decisions that lead to healthier and longer lives, increased civic contributions and reduced participation in crime.[35]

Canadians have a high level of educational attainment, consistently receiving high rankings in the United Nation's Human Development Index.[36] However, not everyone is able to access education or enjoy the full benefits of their education. The high cost of post-secondary education, which has tripled since 1990 and has been consistently rising faster than the rate of inflation, influences the educational opportunities available for some residents.[37] The further challenge of getting recognition for foreign credentials often limits or delays opportunities for foreign-trained workers.

Local Context

Education and skills are important to Markham because a community thrives when its citizens have the ability to learn and develop skills, find meaningful jobs and are empowered to realize their full potential. In Markham, 56% of residents over the age of 15 have a post-secondary certificate, diploma or degree, with 35% of the credentials being obtained outside of Canada.[38] Markham can promote education through its facilities, programs and services. Focusing just on education, however, ignores work-based skills training and lifelong education that can be fostered outside traditional academic institutions. Markham has an excellent opportunity to work with partners to shift some resources from the formal education system into the skills system. Having high-performing and empowered citizens will allow Markham to develop, retain and grow local talent and innovation.

35 OECD Directorate of Education, "Education at a Glance 2009," http://www.oecd.org/document/62/0,3343,en_2649_39263238_43586328_1_1_1_1,00.html, 137; W. Craig Riddell, "The Social Benefits of Education: new Evidence on an Old Question," http://www.utoronto.ca/president/04conference/downloads/Riddell.pdf.

36 United Nations Development Program, Human Development Report 2010, "The Real Wealth of Nations: Pathways to Human Development."

37 CBC, "Tuition Fees: The Higher Cost of Higher Education," http://www.cbc.ca/news/background/higher-education/.

38 Statistics Canada, "Community Profile, Markham 2006."

How do we measure up?

Resident Employment by Sector

Indicator

The main sectors that employ residents of Markham indicate the knowledge and skills that are important to develop to benefit residents in their current work and also can reveal opportunities to develop additional sectors.

Performance

The top three sectors in which Markham residents are employed are identical to York Region and Toronto: manufacturing, retail trade and professional. Scientific and technical services account for 36% of the workforce in Markham, compared to 35% in York Region and 32% in Toronto.

Source: Statistics Canada, 2006 Census.
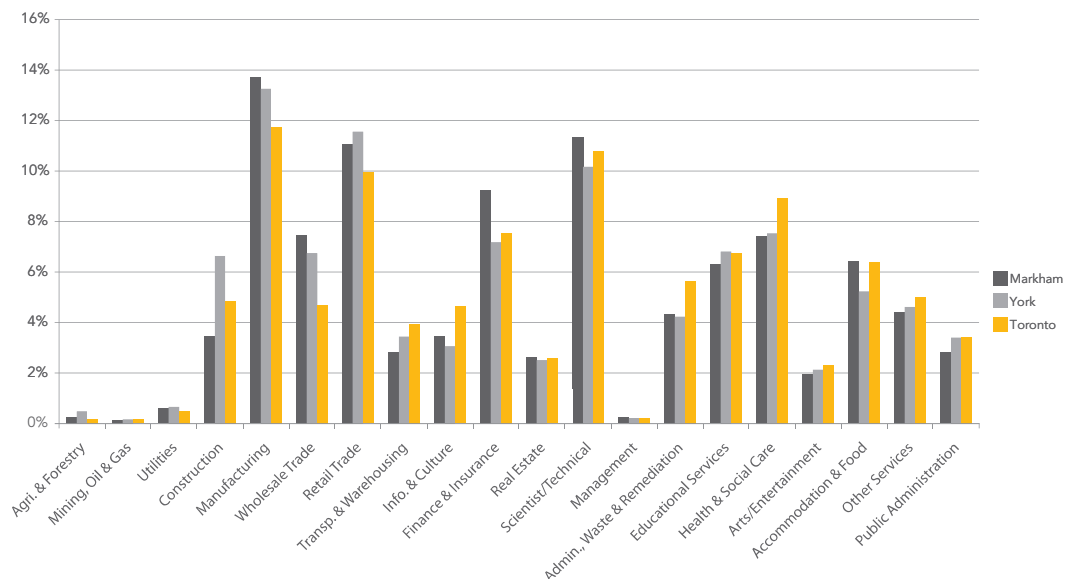
Resident Employment by Sector, 2005

Figure 4.6

People Without Knowledge of English or French

Indicator

No knowledge of both official languages can limit quality of life and success. A 2008 TD Economics Study revealed that newcomers to Canada "are not

being utilized to their full potential." Poor language and literacy skills were identified as the major obstacle.

Performance
Of the 260,760 residents in Markham in 2005, 7% of the population (18,225 residents) did not have knowledge of English or French, Canada's two official languages.

Source: Statistics Canada, 2006. Total population by knowledge of official languages (neither English nor French).

Business Retention by Employment Area

Figure 4.7

Local Unemployment Rate

Indicator
Unemployment is an important economic indicator that tells us about the broader performance of the local and regional economies.

Performance

In 2005, the local unemployment rate was 6.7% in Markham, 5.4% in York Region, and 7.6% in Toronto.

Source: Statistics Canada, 2006 Census.

Talent and Bohemian Indices

Indicator

The Talent Index measures the percentage of the population with a University certificate, diploma or degree (or higher). The Bohemian Index compares the percentage of "bohemians" in a region to the national pattern; it shows the concentration of writers, designers, musicians, actors and other arts-related personnel, and is a comparative measure of an area's cultural amenities and level of diversity.

Performance

In 2006, 29.7% of individuals in Markham had a university certificate, diploma or degree. Markham's Talent Index ranks higher than York Region (26.4%), Toronto (29.5%), and Ontario (20.5%).

Markham's Bohemian Index is 1.0. This is comparable to communities such as Peterborough, Winnipeg, Kelowna, Regina, and Guelph, which all have a similar index (+/- 0.125). Canada's top performers are Vancouver at 1.68 and Toronto at 1.45.

Source: Statistics Canada, 2006 Census.

Library Visits

Indicator

Libraries offer great local opportunities for lifelong learning and services.

Performance

In 2008, 2,062,000 library visits were recorded. This represents approximately 8 trips per person.

Source: Town of Markham.

Percent of Payroll Supporting Employee Development

Indicator
Learning happens at the workplace, and major employers measure the percent of payroll that supports employee development. While no ideal percentage has been determined, a 2% payroll investment in employee development has been proven as an effective amount for meeting the needs of employees.

Performance
Data forthcoming.

Source: Town of Markham.

Taking Action

(For the full list of Education and Skills recommendations, please see the Implementation Matrix in the Implementation Chapter).

Objective: Facilitate lifelong learning and skills development

Initial Recommendations:
Municipality

Markham has a number of facilities that offer lifelong learning opportunities, including Markham Public Library, community centres, Markham Museum, Varley Art Gallery and Markham Theatre. Markham can also continue to partner with school boards, other levels of government, social service providers and agencies to offer new opportunities such as the establishment of Markham University or other social innovation centre to support students, residents and businesses. Markham can also work to better integrate Seneca's campuses into the Markham community.

Organizations and Businesses
Learning opportunities can be provided to residents as part of organizational

mandates and business plans. These can include speaker series, conferences, community forums, professional development and general interest courses. Local facilities and online venues provide accessible opportunities for interaction between community members. Attention to affordability and barrier-free access, including language accessibility, is needed.

Individuals and Community Volunteer Groups

Community groups and individuals with expertise can work with the Markham Library and York Region District School Board to develop and deliver a sustainability curriculum for residents and businesses. This could include topics such as employment re-skilling, energy and water conservation, growing food, financial planning, time management, and programs in other skill and interest areas.

Partnerships

Partnerships are essential to the promotion of education and skills. Potential partners include:

- School boards, for additional facilities that can be used after school hours and on weekends as community learning centres or community hubs

- Universities (especially regional institutions like York University, Ryerson University, the University of Toronto) and colleges (especially Seneca College), to build upon existing collaborations and initiate new ones that enhance education and innovation opportunities for Markham residents

- Social service organizations (YMCA), to provide classes and workshops

- Transition Towns and other groups, to contribute to re-skilling programs

- Markham Board of Trade, to provide opportunities for ongoing learning for members and others

System Thinking

Priorities	Connections
Social Equity:	Recognizing foreign credentials will allow residents to meet their potential.
Identity and Culture:	Arts and culture education will help to preserve cultural identity.
Individual Health:	Educated people are healthier.
Shelter:	Education and skills increase residents' abilities to acquire and maintain adequate housing.
Food Security:	Skills are needed to grow food, cook, and make healthy choices.
Access and Mobility:	Residents can be offered information about alternative transportation options, and offered skills development classes for safe cycling and bicycle maintenance.
Education and Skills:	N/A
Economic Vibrancy:	Skills training and lifelong learning opportunities create a productive and engaged workforce.
Materials Management:	Innovative methods for repurposing discarded material can be developed and then showcased to assist other municipalities.
Water Efficiency:	Innovative methods developed with local learning institutions will help to achieve net zero water systems and educated users.
Ecosystem Integrity:	Outdoor classrooms teach students about the natural environment.
Energy and Climate:	Education and re-skilling are needed to train a workforce that can address climate change impacts.

Economic Vibrancy

Create a Community of Choice to Live, Work, and Play

Definition

A community's economy consists of labour, capital, land resources, and the economic agents (buyers and sellers) that participate in the production, exchange, distribution, and consumption of goods and services of that area. A local economy supports job creation through the retention and growth of existing businesses and through the attraction of new businesses and investment. Strong local economies include businesses that position themselves for the future by continuously improving. A vibrant economy is also a resilient one, supported by a diversity of business sizes and sectors, increasing the ability of the community to be successful despite global economic downturns.

Global Context

The modern economy functions on a global scale, with the activities, decisions, and crises of one country or region rippling around the world. The recent global recession is an example of the far-reaching and long-term impacts that can be felt because of one country's economic practices. The Canadian economy was impacted by the recession but faired better than many other countries because of rich natural resources and federal regulations in the banking industry. Canada's economy has received praise

from the global community for its stability, reduced debt, conservative banking regulations and a focus on economic immigrants.[39]

Canada has the ninth largest economy in the world, measured by Gross Domestic Product (GDP).[40] Like other developed countries, Canada's economy is dominated by the service industry, which employs about three quarters of Canadians. The primary sector makes Canada unique when compared to most developed countries; logging and oil are two important examples of the resources that Canada exports. Canada continues to have a sizable manufacturing sector, led by southern Ontario with its automobile manufacturing and food processing industries.

Local Context

Community development is complimentary to conventional approaches to development; it is a participatory, holistic and inclusive process that leads to positive, concrete changes in communities by creating employment, reducing poverty, restoring the health of the natural environment, stabilizing local economies and increasing community control. Community development is crucial to a vibrant economy as it helps connect consumers with local business. It nurtures the relationship between economic factors and other community elements like local business capacity, housing, education, the natural environment, health, accessibility and the arts. Markham's continued economic success requires a diverse selection of jobs, goods and services to create a community of choice to live, work and play.

Markham can promote economic vibrancy by providing support to a diversified economy—one with a mix of local, regional, national and international businesses and a diversity of business types and sizes, which will create resilience to major global economic fluctuations. Markham can

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39 John Shmuel, "A Few Reasons Why Canada's Economy is Better than the U.S. Economy," http://business.financialpost.com/2010/07/12/a-few-reasons-why-canadas-economy-is-better-than-the-u-s-economy/.

40 International Monetary Fund, "World Economic Outlook," http://www.imf.org/external/pubs/ft/weo/2011/01/index.htm.

plan for and accommodate this diversity of businesses with employment lands, mixed-use neighbourhoods and support for home-based businesses. Markham can also continue to attract global opportunities such as multinational businesses, international trade and innovation centres by relying on the local skills and talents of the diverse population as a major community asset. Markham needs businesses and services that are environmentally responsible and provide sufficient income for workers to live comfortably in the community. One of the main opportunities for Markham is the shift towards a low-carbon economy, which includes opportunities for renewable energy production, energy conservation strategies and other evolving opportunities created as Markham adapts to climate change.

How do we measure up?

Sustainability Reporting

Indicator
This is the number of businesses undertaking public sustainability reporting or showing commitment to sustainability through participation as Greenprint partners.

Performance
Data currently unavailable. This requires research on Markham's companies and business surveys. Communities with a business license system can use the business license application to acquire this information.

Source: Forthcoming.

Business Attraction

Indicator
The number of new businesses established in the most recent year is a good indicator of growth in jobs and the local tax base.

Performance

In 2008, 166 new businesses were established (2% of all businesses, from those with data indicating the year established).

Source: Your Local Marketplace, 2009, Markham Businesses Dataset.

Business Retention

Indicator

Businesses that have been in the city for more than five years indicate if Markham is a community in which businesses want to stay.

Performance

Of reporting businesses, 75% have been at their location for more than five years.

Source: Your Local Marketplace, 2009, Markham Businesses Dataset.

Business Sector Diversity Index

Indicator

A high diversity of sectors ensures that the local economy is balanced and resilient.

Performance

Sector diversity: 0.0961 (0 = more diverse)
Jobs Per Sector: 0.0994 (0 = more diverse)

A word of caution in interpreting diversity: lack of diversity is frequently interpreted as vulnerability. However, in certain cases, especially where diverse business types representing a robust value chain are classed as part of a single sector, then a lack of sector diversity might also be interpreted as regional specialization or clustering success.

Source: Your Local Marketplace, 2009, Markham Businesses Dataset.

Business Size Diversity Index

Indicator

Business size diversity is calculated using Simpson's Diversity Index where 1 represents infinite diversity and 0 represents no diversity.

Performance

Business size diversity: 0.68

Also, 96% of all jobs in Markham are provided by businesses with less than 50 employees.

Source: Your Local Marketplace, 2009, Markham Businesses Dataset.

Taking Action

(For the full list of Economic Vibrancy recommendations, please see the Implementation Matrix in the Implementation Chapter).

Objective: Facilitate and support Markham's existing businesses

Initial Recommendations:
Municipality

Markham can implement the Markham 2020 Strategic Directions economic development plan. Additionally, it can continue its business-focused services and facilities, including Markham Small Business Enterprises Centre, ventureLAB (formerly Innovation Synergy Centre in Markham) and Markham Convergence Centre.

Organizations and Businesses

Trade and commerce organizations can support and consult with businesses to identify opportunities for local economic growth. Businesses can form eco-business districts that aim to reduce greenhouse gases, energy consumption and waste by networking, sharing information and resources and supporting each other. Organizations and businesses can create "buy local" campaigns for locally produced goods and services.

Individuals and Community Volunteer Groups

Community groups can help to identify and promote employment mentorship programs that create awareness of workplace skill requirements and professional work environments. Individuals can participate in their employer's programs that promote work-life balance, healthy lifestyles and active mobility.

Objective: Promote green business development and business greening strategies for existing and new employers

Initial Recommendations:
Municipality

Markham can strategically develop "green jobs" by developing purchase agreements that create demand for green energy, local food production and processing, sustainable practices (e.g. green buildings) and Markham can adopt a community target of 25,000 green jobs as part of Markham's Vision 2020. Markham can also plan for the location and density of employment lands, promoting employment activities within geographic areas served by regional transit networks and encouraging a diversity of shops and services within walking distance from homes.

Organizations and Businesses

Organizations and businesses can contribute to a Markham-based centre of excellence serving the green, social and creative sectors. Organizations can assist new business start-ups with business incubator facilities and expertise, promote viable local businesses and encourage healthy workplace environments. Sustainable, local food enterprises and those businesses that support them may be in demand. Organizations and businesses can provide employees with alternative working arrangements including flexible schedules and working from home.

Individuals and Community Volunteer Groups

Individuals can help create a demand for local green businesses by supporting existing businesses with their consumer dollars. This will increase local employment opportunities in sectors that rely on local

resources and that improve community resilience. Individuals can establish their own businesses and can proactively seek training to ensure continued employment in the green, low-carbon economy.

Partnerships

Partnerships are essential to the promotion of economic vibrancy. Potential partners include:

- Markham Board of Trade and other culturally or sector-specific business associations, to support existing businesses and nurture new economic opportunities

- Developers, to create employment facilities that can meet diverse needs and are flexible to change over time

- Educational institutions, to continue training residents to be creative and innovative

System Thinking

Priorities	Connections
Social Equity:	Access to economic opportunities (starting a business, working, buying goods and services) is important for all residents.
Identity and Culture:	Diverse cultural assets draw and support economic activity.
Individual Health:	A healthy workforce is more productive.
Shelter:	Diverse housing choices meet a range of workforce needs.
Food Security:	Agriculture, food processing and food sales contribute to the local economy.
Access and Mobility:	Labour, goods, and services benefit from mode choices and transportation demand management.
Education and Skills:	An educated workforce contributes positively to the local economy and can work in the new "green jobs."
Economic Vibrancy:	N/A
Materials Management:	Material efficiency reduces costs and waste for manufacturers, retailers and consumers.
Water:	Access to water and sanitary treatment is necessary for local productivity.
Ecosystem Integrity:	Ecosystem services provided by natural and vegetated areas reduce infrastructure costs and support local eco-tourism.
Energy and Climate:	Opportunities created by addressing climate change and energy conservation can result in new businesses and new industries.

Materials Management

Facilitate a Closed-Loop Materials Management System

Definition

Materials management refers to the conservation and efficient use of all materials used in the community—from the construction of new neighbourhoods to meeting our day-to-day needs. A closed-loop materials management system is one that continues to reuse materials already in it, rather than relying on new material inputs. Materials management includes two main categories of materials: renewable and non-renewable resources. Renewable resources are capable of regenerating themselves over time and need to be managed in order to not compromise the ability to regenerate. Non-renewable resources have a finite amount available and need to be managed to ensure they continue to be available or can be recaptured and reused.

Global Context

The materials used in Markham are part of a global system of exchange where raw materials are extracted or harvested, manufactured, consumed and disposed. Each step of the system has environmental, social and economic impacts. The extraction, harvest or manufacture of materials has the potential to cause environmental damage through pollution, groundwater contamination, habitat destruction and greenhouse gas emissions. It may also cause social inequity if there is labour exploitation or if no reinvestments are made into communities that provide the raw materials or labour. Additionally, there are concerns that many materials

might experience a "peak" in the same manner as fossil fuels in which over half of the earth's stores have already been extracted. Minerals including mercury, lead, cadmium, potash, phosphate rock and half a dozen others are considered by some to have already passed their peak.[41] Easily processed and accessible minerals and metals are becoming exhausted, resulting in increasing costs as lower-grade materials require greater processing or mines become deeper and more remote.

Global consumption of material goods has been increasing since World War II, in part caused by cheap energy, efficient manufacturing, convincing marketing and planned product obsolescence.[42] As countries like China and India strive for the same lifestyles as developed countries, demand for material goods will only continue to increase. A re-thinking of the disposal of materials is underway in developed countries where curb-side recycling and composting have started to divert materials from the landfill. However, often materials are transported long distances and use energy and produce waste during the processes of recycling and composting.

Local Context

Markham is a net importer of materials into the community, reliant on other places for meeting our material needs and wants. Once material goods are disposed, it is the responsibility of municipal government or private businesses to remove these materials from the community. Markham is a leader in managing solid waste in Canada with over 70% of residential waste being diverted from landfills. Landfill and waste management costs coupled with decreasing public support for new landfills and alternative forms of waste management will continue to push Markham to build on its success with waste management.

Markham can promote responsible materials management by acting as an advocate for social and environmental responsibility throughout the entire

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41 Chris Vernon, "Peak Minerals," http://www.theoildrum.com/node/3086.
42 Annie Leonard, "The Story of Stuff," http://www.storyofstuff.com/.

supply chain. Markham must continue efforts to "close the loop" of material consumption by reusing materials and addressing the consumption levels and types of goods that produce excessive waste.

How do we measure up?

Landfill Diversion

Indicator
Discarded material not sent to a landfill can be reused in the production of other products or reused as nutrients (compost) for growing food or other plants.

Performance
Markham diverted 69% of all solid waste from landfills in 2008—the highest diversion rate in York Region and the Greater Toronto Area. An audit revealed the green bin and blue box programs were not capturing all the materials they could; about 66% of waste sent to landfill could have gone in the blue box or green bin and 27% of waste could have been diverted through recycling depots and re-use programs.

Source: Town of Markham.

Waste & Materials Diverted from Landfill, 2008
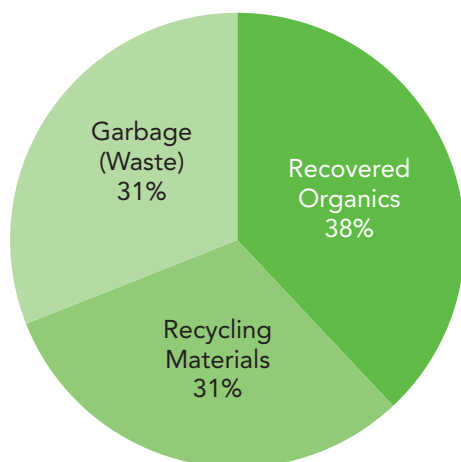

Figure 4.8

Waste Generation

Indicator

Humans are consumers and will always have a need to discard materials resulting from the use of goods and the consumption of food. However, we must reduce the total amount of waste that is produced.

Performance

In 2008, the amount of waste discarded was 75.61 kg per person.

Source: Town of Markham.

Taking Action

(For the full list of Materials Management recommendations, please see the Implementation Matrix in the Implementation Chapter).

Objective: Achieve zero material waste

Initial Recommendations:
Municipality

Markham can develop a procurement policy that includes requirements for closed-loop materials management and it can work to ensure that zero waste is produced in municipal facilities such as libraries, parks, community centres and fire facilities. Markham can also require that its service agreements for municipal services include sustainability provisions like required levels of energy efficiency, renewable energy generation, zero waste, reused or recycled materials and social objectives such as local employment targets. Working with the Province of Ontario, Markham can advocate for producer responsibility regulations for waste materials such as packaging.

Organizations and Businesses

Businesses and organizations can work together, along with Markham, to adopt strategies for zero waste. Local business partnerships that accept returned waste materials generated from consumer goods will require co-

operation from the manufacturing sector to reduce and reuse consumer packaging and other waste. Partnerships that use the waste generated by one business as the fuel or needed materials for another provide waste diversion opportunities. New developments could possibly use alternative technologies for managing waste materials; for example, "pipe technology" collects waste from bins by way of an automated underground system.

Individuals and Community Volunteer Groups

Individuals and community groups can contribute to a culture of conservation and waste minimization by learning about these issues, using social networks to easily share information, resources and organize community action to reduce personal consumption. Community groups can assist with setting up local networks or depots for goods exchange such as lending libraries and swap meets.

Partnerships

Partnerships are essential to the promotion of materials management. Potential partners include:

- Community organizations (cultural groups, ratepayers' associations, etc.), to assist with ongoing waste management education

- Developers, to use reclaimed and recycled materials

- Manufacturers, to develop innovative ways to reduce waste that include reducing packaging and increasing product resilience

- Businesses, to make purchasing decisions that consider social and environmental impacts to reduce end waste

System Thinking

Priorities	Connections
Social Equity:	Materials and the raw resources they are made from must be conserved for future generations.
Identity and Culture:	Cultural practices that reuse materials and conserve resources can be learned by all.
Individual Health:	Waste products can build up in living systems, causing illness as toxins leach out or as concentrations become too high.
Shelter:	Homes and buildings are the places where the most waste and materials are consumed by individuals.
Food Security:	Materials used for food packaging and shipping over large distances is lessened when food is produced and consumed locally.
Access and Mobility:	Mobility devices (cars, bikes, wheelchairs) must be built durably and can be continually repaired or refurbished to keep materials in use.
Education and Skills:	Waste capture systems must be properly used to maximize waste diversion from landfills.
Economic Vibrancy:	Maximizing the use of materials reduces the input costs of goods production.
Materials Management:	N/A
Water Efficiency:	Efficient use of materials will conserve water used in manufacturing processes.
Ecosystem Integrity:	Materials production and waste have negative effects on ecosystems.
Energy and Climate:	Reusing materials requires less energy than recycling and far less energy than new production and resource extraction.

Water Efficiency

Promote Conservation and Minimize Waste

Definition

This priority refers to all water—whether in the natural hydrological system or our human-made water systems. The hydrological system includes groundwater, streams, rivers, lakes, ponds and wetlands that are moving by the physical processes of evaporation, condensation, precipitation, infiltration, runoff and subsurface flow.[43] The human-made water system includes potable (drinkable) water, waste water and stormwater and water collection, treatment, storage and distribution.[44]

Global Context

Globally, water is plentiful. It covers nearly three-quarters of the earth's surface. Oceans make up 97% of all surface water and glaciers and polar ice caps make up 2.4%. Fresh water comes from rivers, lakes and ponds, making up only 0.6% of surface water; this is the water most accessible for human use with the least treatment required.[45] Water is not equitably distributed around the world and some nations have great difficulty accessing safe,

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43 Wikipedia, "Hydrology," http://en.wikipedia.org/wiki/Hydrology.
44 Wikipedia, "Water Supply Network," http://en.wikipedia.org/wiki/Water_supply_network.
45 Wikipedia, "Hydrology."

potable water.[46] Canada holds up to 20% of the world's fresh water.[47] But Canadians are also the second highest consumers of water in the world, with each of us using on average 350 litres of water a day.[48]

Urban development has increased the localized demand for potable water, generating polluted waste water and stormwater runoff from sanitary uses and impermeable built surfaces (roads, parking lots, and roofs). This polluted water requires treatment and management to prevent contamination or flooding, both of which have financial and energy implications. It is also anticipated that climate change will alter water resources, potentially reducing their quality, quantity and our access to them. More energy will be needed to purify water of lower quality and to pump water from possibly greater depths or distances. Using more energy (depending on the energy source) could lead to additional greenhouse gas emissions.[49]

Local Context

Water is especially important in Markham because the community relies almost exclusively on a water supply and water treatment from outside its municipal borders; Markham depends on York Region and the City of Toronto for potable water that comes from the Great Lakes. Reducing the demand for water and associated water treatment is critical to ensure a long-term water supply and to ensure that local streams supply Markham with clean and healthy water. Water management in Markham is influenced by how neighbourhoods and buildings are designed, how infrastructure is designed and paid for and by the decisions residents and businesses make about their water use.

46 Marc de Villiers, "Water: The Fate of Our Most Precious Resource," (New York: Houghton Mifflin, 2000).
47 CBC, "Selling Canada's Water," http://www.cbc.ca/news/background/water/.
48 CBC, "Selling Canada's Water."
49 Gwenth M. Thirlwell, et. al., "Energy-Water Nexus: Energy Use in the Municipal, Industrial, and Agricultural Water Sectors," http://www.policyresearch.gc.ca/doclib/Thirlwell_energy_water_nexus.pdf.

How do we measure up?

Water Consumption

Indicator

Understanding our daily water consumption and waste water generation per person allows comparison to other jurisdictions and the development of strategies to reduce our use.

Performance

Markham residents consume 380 litres of water per person every day. Of this potable water consumption, all but 40 litres per person is waste water.

Source: Regional Municipality of York, Unit Rates, Water and Wastewater Master Plan Update, May 2008.

12.1 Water Consumption

Source: Reference: Regional Municipality of York Unit Rates Water and Wastewater Master Plan Update, May 2008, Genivar Ontario Inc. and XCG Consultants Ltd., pgs. 9 and 20.
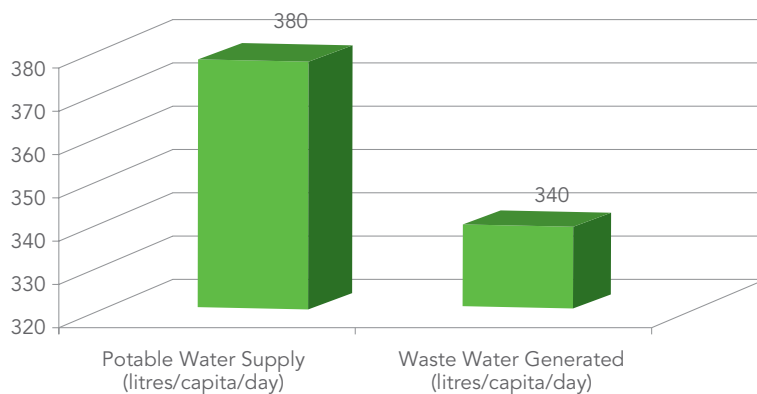

Figure 4.9

Cost of Water

Indicator
Forthcoming

Performance
Source: Forthcoming

Taking Action

(For the full list of Water Efficiency recommendations, please see the Implementation Matrix in the Implementation Chapter).

Objective: Develop a water systems plan that integrates all water functions

Initial Recommendations:
Municipality

Markham can efficiently manage water resources by supporting a networked water system where potable water is used for appropriate purposes and waste water is captured, treated and reused. Potable water sources must be protected to continue to supply Markham with water and a watershed-based approach will assist Markham to manage competing land uses and resource values while prioritizing water quality and supply. Markham can use stormwater management strategies and flood control measures that mimic natural hydrological systems to minimize infrastructure costs and reduce the impact on natural waterways while maintaining efficiency and public safety. The long-term financial sustainability of water infrastructure (and related energy infrastructure for water servicing) can be supported with metered water rates.

Organizations and Businesses

Organizations and businesses can promote and support water-efficient business practices, particularly in the processing and manufacturing sectors. This will contribute to ecological health as well as reduce business costs for energy and water.

Individuals and Community Volunteer Groups

Individuals can use potable water sparingly to meet appropriate needs. Community groups can help to educate residents, businesses and visitors to understand water as a vital resource.

Partnerships

Partnerships are essential to addressing water efficiency. Potential partners include:

- York Region and the City of Toronto, to provide potable water and the Water for Tomorrow program

- Toronto and Region Conservation Authority and Rouge Park, to advocate for the natural water systems in the community

- Developers, to offer creative methods for neighbourhoods to move toward water neutrality (no net consumption of water)

- Businesses, to find partnerships where the waste water for one business may be a resource for another business

System Thinking

Priorities	Connections
Social Equity:	All people need access to drinking water for daily survival.
Identity and Culture:	A culture of conservation can be fostered with education and outreach on water issues.
Individual Health:	Health requires clean, safe water for drinking, food preparation and personal hygiene.
Shelter:	Buildings and other structures, including roads and driveways, create surfaces that water cannot infiltrate, requiring stormwater infrastructure to manage surface runoff.
Food Security:	A lack of water in other parts of the world will intensify food security issues locally.
Access and Mobility:	Infrastructure that removes rain and snow from roads and sidewalks can be used to capture and treat these forms of water for reuse.
Education and Skills:	Education on water issues and conservation practices will reduce water consumption.
Economic Vibrancy:	The lack of local water sources offers an opportunity to develop skills, enterprise, and technologies to help Markham become water independent.
Materials Management:	Resource extraction, production and recycling use large amounts of water.
Water Efficiency:	N/A
Ecosystem Integrity:	A green infrastructure approach to stormwater management will help to restore natural water systems.
Energy and Climate:	Climate change will result in significant changes in precipitation and possibly water quality issues.

Ecosystem Integrity

Protect, Restore, and Enhance Biodiversity

Definition

An ecosystem is a biological system consisting of living organisms and the non-living components that interact with them such as air, soil, water and sunlight.[50] Through biodiversity and the benefits it provides, ecosystems are the fundamental units for supporting life on the earth.[51] Ecosystem services are the foundation for the natural processes of climate, water and air quality regulation, for the provision of food and resources, for cycling nutrients and providing raw resources and for our enjoyment of the natural world.

Global Context

There are severe pressures on the health of the global ecosystem, including resource demands, climate change and loss of biodiversity. Natural ecosystems are being stripped of raw materials as well as being rapidly converted to other uses. For example, forest cover in the last decade has decreased by an average of 13 million hectares per year, with the largest

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50 Neil A. Campbell et. al., "Biology Concepts and Connections Sixth Edition," (Benjamin Cummings, 2008), page 2, 3 and G-9.
51 Millennium Assessment, "Ecosystems and Human Health: Biodiversity Synthesis," http://www.millenniumassessment.org/documents/document.354.aspx.pdf.

losses in South America and Africa.[52] The loss of forests has been driven by population and consumption growth, including the increasing trade in food and agricultural products, growing demand for forest products, expansion of the built environment and climate change.[53] The United Nations reports that since 1970 wildlife populations have been reduced by 30%, the area of mangrove forests and sea grasses by 20% and the coverage of living corals by 40%.[54]

Canada is the steward of many globally important ecosystems, including 350 million hectares of forest that make up 60% of the Canadian landscape. Boreal forest accounts for 70% of all of Canada's forest areas. Freshwater wetlands make up 16% of the landscape, representing about a quarter of the world's remaining wetland area.[55] These natural ecosystems offer unique habitat for plants and animals as well as for humans. Ecosystem management, conservation and restoration will help to mitigate the effects of climate change and to protect the valuable benefits ecosystem services provide to society.[56]

Local Context

Markham can promote ecosystem integrity by integrating ecosystem features throughout rural and urban areas of the community. Human settlement in the Markham area over the past couple of centuries has changed the ecosystem,

52 United Nations Environment Program, "UNEP Year Book: Emerging Issues in Our Global Environment 2011," http://www.unep.org/yearbook/2011/pdfs/UNEP_YEARBOOK_Fullreport.pdf, 47-8.
53 United Nations Environment Program, "UNEP Year Book: Emerging Issues in Our Global Environment 2011," 47-8.
54 United Nations News Centre, "UN-Backed Study Reveals Rapid Biodiversity Loss Despite Pledge to Curb the Decline," http://www.un.org/apps/news/story.asp?NewsID=34557&Cr=biodiversity&Cr1=.
55 Government of Canada et. al., "Canadian Biodiversity: Ecosystem Status and Trends 2010," http://www.biodivcanada.ca/A519F000-8427-4F8C-9521-8A95AE287753/EN_CanadianBiodiversity_FULL.pdf.
56 United Nations Environment Program, "Role of Ecosystems in Developing a Sustainable 'Green Economy' UNEP Policy Series 2-2010".

inhibiting its ability to perform ecosystem services that benefit humans and support the natural world. Prior to human settlement Markham would have been mostly forested. However, much of this landscape was altered to support agriculture, initially by First Nations and later by European settlers. Subsequently, Markham underwent significant urbanization and now 46% of Markham is characterized by urban development.[57]

Markham is strategically located as the centre of a regional system of ecological nodes and corridors. This includes Rouge Park, North America's largest park of undisturbed wilderness, which extends into southeast Markham. The northernmost tip of Markham includes a section of the Oak Ridges Moraine, which is a provincially significant landform known for the important function it serves for groundwater recharge and as the source of the major watercourses that flow south to Lake Ontario. These watercourses include the Rouge and Little Rouge rivers, as well as Berczy and Bruce creeks. Other watercourses in Markham include Petticoat Creek and German Mills Creek, which also have the Oak Ridges Moraine as their headwaters.[58]

How do we measure up?

Naturalness

Indicator

Naturalness reflects the extent and quality of the vegetated landscape. All vegetated areas (forests, woodlots, meadows, wetlands, lakes, ponds, rivers, agricultural areas, playing fields, parks and developed urban areas) are identified and monitored over time to ensure there is minimal loss of vegetation.

Performance

Areas of Markham that are semi-natural to completely natural cover 13%; areas with vegetation (cultivated, altered, or manicured) cover 41%; built areas cover 46%.

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57 Town of Markham, "Environmental Policy Review & Consolidation."
58 Town of Markham, "Environmental Policy Review & Consolidation."
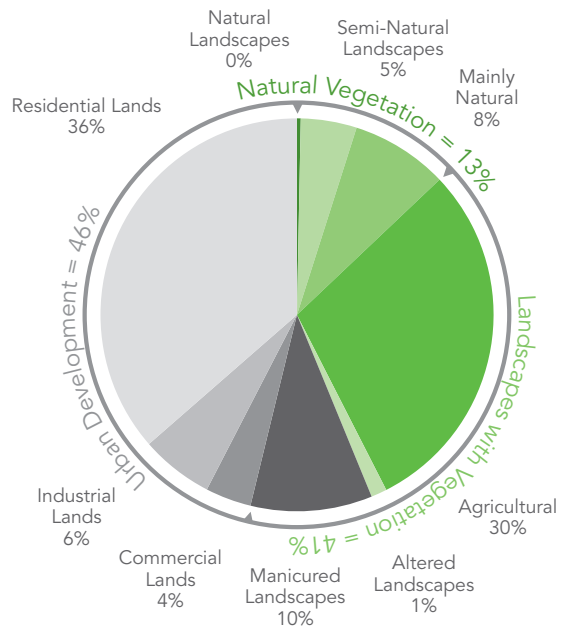
Markham Naturalness by Type

Figure 4.10

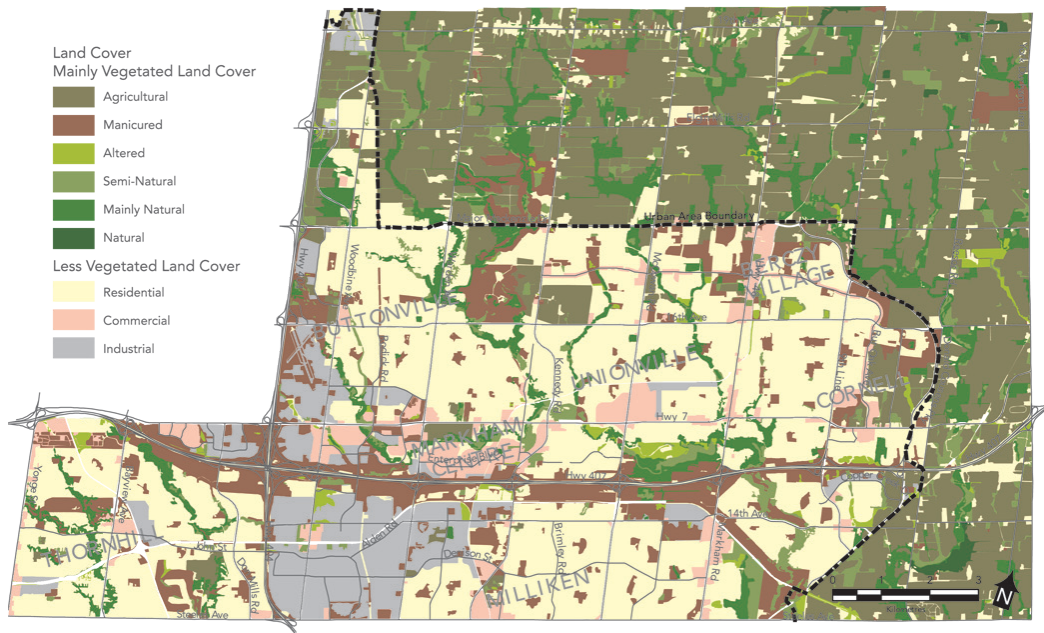## Markham Naturalness by Location

Figure 4.11

Markham Natural Heritage Network
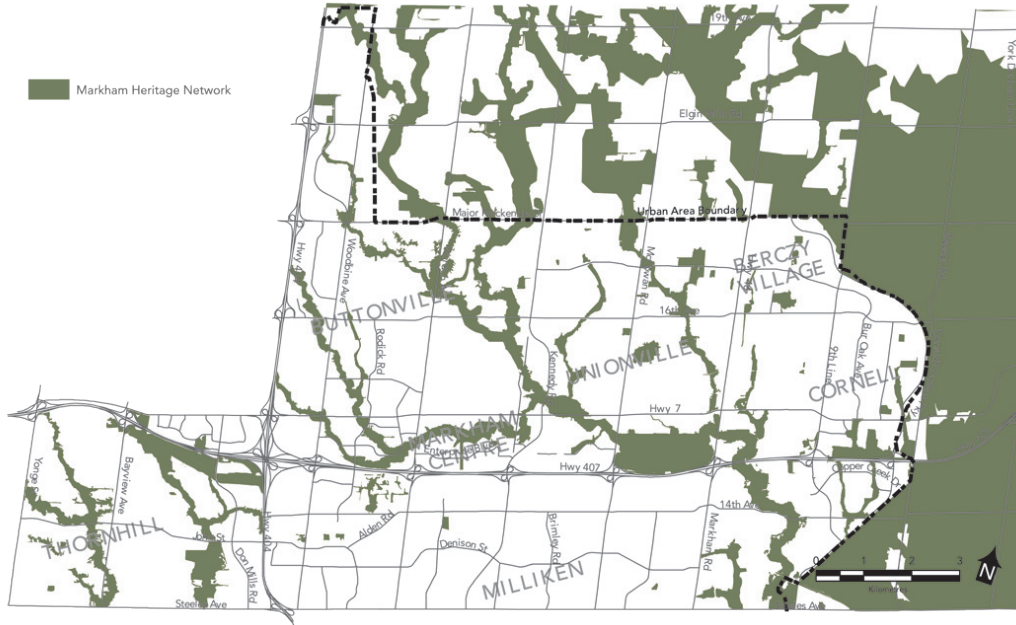
Figure 4.12

Ecosystem Network

Indicator

Networked natural habitats and ecosystems maintain biodiversity and a healthy environment for the benefit of all living things. Hubs and corridors are essential for a healthy local environment and sustained biodiversity.

Performance

Markham's Natural Heritage Network identifies:

- A connected natural heritage system

- Protected woodlands, wetlands and valley lands

- Enhancement of core areas for biodiversity

- East-west ecological corridor enhancement

Source: Town of Markham Spatial Data.

Effective Impervious Area (EIA)

Indicator

Local streams require a healthy base flow of cold water to ensure they can sustain animals and plants. Where urban development occurs, water that would have filtered through the ground to recharge streams is hindered by impervious surfaces such as roofs and roads. This runoff water requires infrastructure to capture and treat it.

Performance

This indicator has not been measured for this reporting period. There are no known databases recording this information in Markham or York Region. The greater the EIA, the greater the area of land that will not allow water to infiltrate. This reduces the chance for precipitation to infiltrate into soils and recharge groundwater and stream base flows.

Source: Forthcoming.

Urban Canopy

Indicator

Urban forests provide significant environmental services such as air quality improvements, uptake and storage of carbon dioxide, erosion control, water "recycling" (through capture and evaporation) and stormwater management (by allowing water to infiltrate the ground at tree roots). Trees are an important aspect of Markham's green infrastructure system.

Performance

This indicator has not been measured for this reporting period. There are no known databases recording this information in Markham or York Region. Markham, York Region and other partners are completing an urban forest assessment (the UFORE Project) which will quantify and qualify Markham's urban canopy.

Source: Forthcoming.

Taking Action

(For the full list of Ecosystem Integrity recommendations, please see the Implementation Matrix in the Implementation Chapter).

Objective: Increase biodiversity

Initial Recommendations:
Municipality

Markham can implement landscaping standards for public and private development that include native plants for habitat and are informed by green building rating programs, bird-friendly guidelines and the Local Food Strategy. Markham can actively acquire lands that enhance or connect wildlife habitat within urban and rural areas and can support habitat enhancement with park planning, maintenance and management of all new and existing landscaped areas.

Organizations and Businesses

Organizations and businesses that own or manage buildings can integrate green roofs and green spaces on or in buildings to provide wildlife habitat and green infrastructure and can establish a dark sky policy to eliminate exterior lights at night. Farms can support biodiversity with the conservation of natural areas between productive areas, on unproductive lands and can use methods to minimize ecosystem damage.

Individuals and Community Volunteer Groups

Individuals and community groups can identify and steward vacant land to provide flexible open space for recreation, gardening and food growing, or wildlife habitat. Landowners can plant native species in yards and common areas.

Objective: Reach 30% tree canopy and vegetation coverage Town-wide

Initial Recommendations:
Municipality

Markham can develop, promote and maintain an Urban Forest Strategy as part of the Trees for Tomorrow tree planting program, contributing to habitat enhancement, climate change mitigation and other ecological services. Markham can also focus on edible landscapes on both public and private lands by integrating food growing into traditional landscaping practices, working with York Region and other partners to incorporate and implement the Local Food Strategy with other landscape guidelines.

Organizations and Businesses

Opportunities for businesses include harvesting end-of-life tree materials as raw material for manufacture, biofuel or for landscaping compost or fill. There is also the opportunity to meet the needs of Markham and residents with a native tree and plant nursery.

Individuals and Community Volunteer Groups

Individuals and community groups can assist landowners to plant trees, food plants and native plant species. Groups can also provide education to landowners to care for and manage their trees.

Objective: Develop and support wildlife habitat

Initial Recommendations:
Municipality

Markham can preserve natural green spaces and agricultural land by defining a physical urban-rural boundary and can protect and enhance the biodiversity of existing wildlife habitat. Developing an interconnected Natural Heritage Network will connect existing green spaces and help to ensure they are of sufficient quality and size to support wildlife. Markham can also develop a community emergency management strategy that includes responsibilities for wildlife, livestock and domestic pets.

Organizations and Businesses

Organizations and businesses can assist Markham to restore the watersheds and sub-watersheds of the Don and Rouge rivers by naturalizing streams and habitat areas that have been built over. They can also work with Markham to develop a local wildlife refuge, shelter and rehabilitation centre.

Individuals and Community Volunteer Groups

Individuals and community groups can work to establish a wildlife stewardship program and continue participating in re-naturalization initiatives like Trees for Tomorrow.

Partnerships

Partnerships are essential to the promotion of ecosystem integrity. Potential partners include:

- Toronto and Region Conservation Authority and Rouge Park, for ongoing rural and urban stewardship of watersheds and natural areas

- Trees for Tomorrow partners, (Evergreen, Friends of the Rouge, others), to conduct public plantings

- Developers, to design more ecologically friendly neighbourhoods and buildings that allow for ecosystem services to be enhanced

System Thinking

Priorities	Connections
Social Equity:	Unlimited access to parks and natural areas provides landscapes for all residents to enjoy.
Identity and Culture:	Parks and natural areas, including heritage landscapes, help reinforce cultural identity as they are often the setting for social and cultural gatherings.
Individual Health:	Vegetation filters pollutants and sediments to keep water and air clean and stores carbon that would otherwise enter the atmosphere as a greenhouse gas.
Shelter:	Residential land areas require outdoor green spaces adjacent to buildings to enhance quality of life.
Food Security:	Closed-loop agricultural systems using organic methods keep soils and natural systems healthy for continued food growing.
Access and Mobility:	Interconnected urban trail networks in natural areas facilitate easy passage and an enjoyable outdoor experience.
Education and Skills:	Wild and naturalized areas provide opportunities for outdoor classrooms.
Economic Vibrancy:	Natural areas can benefit the local economy by attracting visitors, tourists, and recreation activity.
Materials Management:	Reusing materials reduces resource extraction harmful to local and global ecosystems.
Water Efficiency:	Enhancement of natural areas allows for stormwater infiltration and supports healthy stream environments and reduced risk from flood.
Ecosystem Integrity:	N/A
Energy and Climate:	Trees and other vegetation help to reduce urban heat-island effects, lowering overall energy use and helping to mitigate climate change.

Energy and Climate

Carbon Neutral, Responsible and Resilient

Definition

Climate change describes changes to weather patterns caused by the warming of the earth. It is caused by increased levels of carbon dioxide and other greenhouse gases (GHGs) in the atmosphere, mostly linked to human activity. A 2007 Assessment Report by the United Nations Intergovernmental Panel on Climate Change found that global weather patterns have become more extreme with more frequent and more intense rainfall events, more intense heat waves and prolonged droughts.[59] Energy generation and consumption is one of the sources of human-made GHGs. Concerns are rising about future energy supply; as demand for the finite amount of fossil fuels increases, the cost of energy is also anticipated to increase.

Global Context

Climate change is happening on a global scale and some of the most dramatic impacts will be felt on coastal countries, Arctic and Antarctic areas and countries that are already experiencing social, economic or environmental strains.[60] Fossil fuels are traded globally and their demand in

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59 IPCC, "Climate Change 2007 - The Physical Science Basis" (Cambridge: Cambridge University press, 2007), http://www.ipcc.ch/publications_and_data/publications_ipcc_ fourth_assessment_report_wg1_report_the_physical_science_basis.htm.
60 IPCC, "Climate Change 2007 - The Physical Science Basis."

rapidly industrializing countries affects the cost and supply of fuels available in Canada. Energy experts note that we have already experienced a North American peak in natural gas production and that the world can expect a global peak in oil production by 2040.[61] The "peak" refers to the point at which humans have consumed the most accessible known fossil fuel reserves. This is considered the turning point at which production will go into irreversible decline, leading to oil shortages and higher prices.

Canada has the highest energy consumption per person, and nearly the highest production of GHGs per person,[62] yet Canada has the potential to produce more of its energy with renewable resources. The high demand for energy has resulted in greater exploration and use of renewable energy sources such as wind, solar and hydro.

Local Context

As a community dependent on fossil fuels for energy to fuel our vehicles, buses and trucks and to heat our homes and water, Markham is contributing to global climate change and is vulnerable to unstable fuel prices. Markham is expected to experience more severe weather patterns as a result of climate change but actions to prevent or reduce the impacts of severe weather events can help to protect the well-being of the entire community. Communities have significant control over local land use, transportation patterns, building energy use and solid waste disposal, which are all significant contributors to greenhouse gas emissions. Reducing GHGs and other air pollutants by reducing fossil fuel consumption and adopting renewable energy is part of a climate change mitigation strategy. Designing communities for anticipated climatic variability will also make

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61 United States Government Accountability Office, Report to Congressional Requesters, "CRUDE OIL: Uncertainty about Future Oil Supply Makes It Important to Develop a Strategy for Addressing a Peak and Decline in Oil Production," http://www.gao.gov/new.items/d07283.pdf.

62 Free Range Energy Beyond Oil Project, "Putting Consumption into Perspective," (Version 2, October 2008), http://www.fraw.org.uk/publications/e-series/e03/e03-energy_in_the_uk.html.

the community more resilient by providing a flexible platform for adapting to changing conditions.

In Ontario, the Green Energy and Green Economy Act is a globally recognized initiative to harness the potential of renewable energy. Markham can address climate change and energy issues while also positioning itself as a leader in energy conservation and renewable energy. Markham has a number of investments and initiatives underway to support this leadership role.

How do we measure up?

Emissions by Sector

Indicator
Understanding the amount of emissions contributed by each sector allows for the development of targeted mitigation strategies.

Performance
Housing and transportation account for nearly three-quarters of GHG emissions, offering the largest opportunity for reduction strategies. Transportation emissions are expected to lessen significantly as a culture of walking, cycling and transit usage develops.

Source: Town of Markham Greenhouse Gas Emissions Inventory and Local Action Plan for Emission Reductions, Final Report Oct. 6, 2008, ICLEI Canada, 17.

Markham Greenhouse Gas Emissions by Source
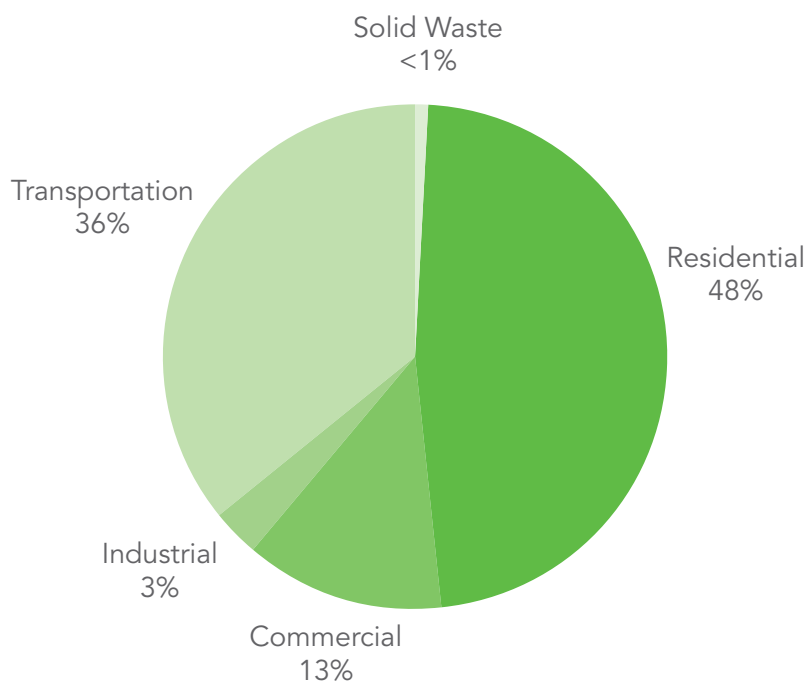
Figure 4.13

Sector	GHGs (tonnes)	GHGs (%)
Residential	1,054,980	48%
Commercial	300,818	13%
Industrial	68,543	3%
Transportation	811,375	36%
Solid Waste	5,356	0%
Total	2,241,070	100%

Figure 4.14

Energy Consumption by Fuel Source

Indicator

Understanding the greenhouse gas emissions from each type of energy source allows for the development of effective mitigation strategies.

Performance

Gasoline for transportation uses in addition to natural gas for space and water heating and industrial processes account for nearly 70% of Markham's

emissions. Gasoline consumption is expected to lessen dramatically as the use of private vehicles declines. Natural gas consumption will decline as buildings become more efficient, are connected to Markham District Energy and as renewable heat sources are developed.

Source: Town of Markham Greenhouse Gas Emissions Inventory and Local Action Plan for Emission Reductions, Final Report Oct. 6, 2008, ICLEI Canada, 18.

Building Energy Use by Fuel Type
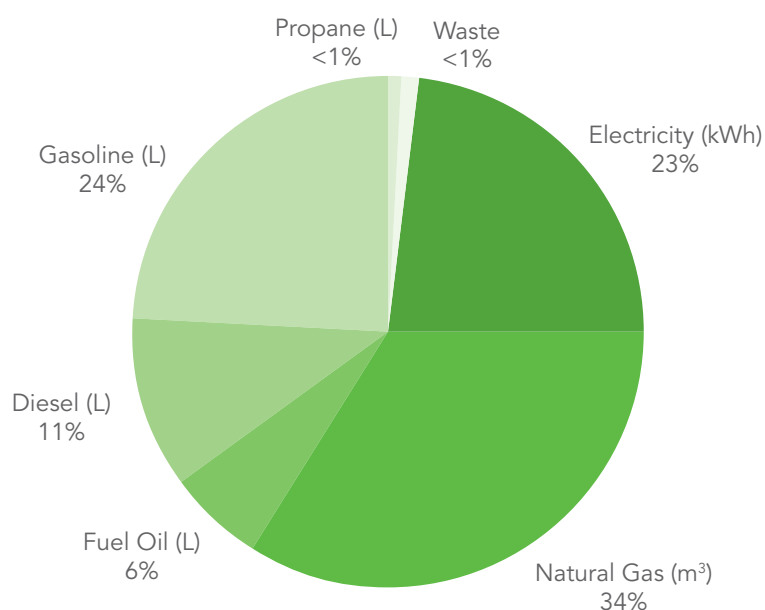
Figure 4.15

Energy Type	Total Use	GHGs (tonnes)	GHGs (%)
Electricity (kWh)	1,965,962,000	519,010	23%
Natural Gas (m³)	413,643,910	777,680	35%
Fuel Oil (L)	45,104,870	127,650	6%
Diesel (L)	92,287,120	252,000	11%
Gasoline (L)	234,251,200	553,280	25%
Propane (L)	3,986,880	6,100	<1%
Waste	-	5,360	<1%
Total		2,241,070	100%

Figure 4.16

Dollars Spent on Energy

Indicator

Current energy prices are anticipated to rise as traditional fuel sources become scarcer and more difficult to extract. For a community as large as Markham, the price could be as high as $330 billon dollars annually (if 150,000 households each spend $2,400 annually on energy). Understanding total energy costs facilitates the development of business cases needed for developing localized energy production.

Performance
Forthcoming.

Energy Production by Fuel Source

Indicator

Tracking fuel sources is important for understanding progress toward achieving Markham's goal of carbon neutrality. The Ontario Green Energy and Green Economy Act will accelerate the transition from fossil fuel production to green energy.

Performance
Forthcoming.

Dollars Earned from Energy Production

Indicator

Local energy production results in greater profits. Maximizing this potential will be key to local economic development and energy security.

Performance
Forthcoming.

Inventory of Vulnerabilities Associated with Changing Climate

Indicator

Understanding local vulnerabilities to a changing climate and the potential impacts on the local economy, residents and the environment is critical to mitigate and adapt to this impact.

Performance

An inventory of anticipated climate change impacts is listed in Table X. Vulnerability assessments are qualitative.

Source: From Impacts to Adaptation: Canada in a Changing Climate, 2007. Natural Resources Canada.

Taking Action

(For the full list of Energy and Climate recommendations, please see the Implementation Matrix.)

Objective: Net zero energy, water, waste and emissions by 2050

Initial Recommendations:
Municipality

Markham can provide leadership on climate change by implementing the Greenprint, which serves as the Climate Action Plan, and by developing an Energy Decent Strategy. Markham can proactively reduce greenhouse gas emissions from buildings, transportation, waste, and agriculture before the impacts of peak oil take effect. As well, local government can develop community-level mitigation strategies for reducing and managing waste, reducing and capturing greenhouse gases in carbon sinks (natural areas and organic agriculture), and recycling water to reuse "waste" water. Other areas of focus include alternative energy sources (solar panels on roofs, waste biofuel for use in district energy systems), adaptation strategies for natural and recreation areas (planting climate-adaptive forest species), preparing for invasive species and new disease vectors, and developing a community emergency management strategy for people, domestic animals, livestock, and wildlife.

Markham will work with local utility providers to develop reporting mechanisms for actual energy costs, supporting the business case for local, renewable energy projects. Local government can continue to support community outreach, education, and understanding on climate change, as well as encourage climate change research and appropriate urban development. It will look for strategies that make connections and increase efficiencies across other Sustainability Priorities to maximize community resilience.

Markham developed the Greenprint as a climate action plan to mitigate and adapt to climate change. Mitigation reduces greenhouse gas emission to limit the effects of climate change and adaptation will prepare Markham for expected climate changes including shorter wetter winters, longer drier summers and increased storm severity.

In 2007 Markham committed to participate in the Federation of Canadian Municipalities Partners for Climate Protection (PCP) initiative. The PCP has five milestones for climate change mitigation:

1. Creating a greenhouse gas emissions inventory and forecast

2. Setting an emissions reductions target

3. Developing a local action plan

4. Implementing the local action plan or a set of activities

5. Monitoring progress and reporting results

Milestone 1, the greenhouse gas emission inventory and forecast, is found in the ICLEI report "Markham Greenhouse Gas Emissions Inventory and Local Action Plan for Emission Reductions" not yet endorsed by Council. The initial findings of the report suggests over 80% of the community's 2001 greenhouse gas emissions came from their homes and transportation. For Markham's municipal operations, referred in the report as corporate emissions, 68% of GHG's came from municipal facilities in 2001.

Milestone 2, setting an emissions reductions target, is the Greenprint's goal of net zero energy, water, waste and emissions by 2050. The Greenprint's target supersedes the targets found in the ICLEI report.

Milestone 3, developing a local action plan, is achieved by the Greenprint, which meets PCP's requirements for public input, current, new and proposed actions, and implementation strategies. Many of the recommendations in the ICLEI report formed the basis for the Greenprint.

Milestone 4 and 5 can be achieves through the Greenprint's implementation, indicator tracking and reporting.

Markham's adaptation to climate change will be driven by the Greenprint's recommendations supplemented by the development of a climate change risk framework for all hard and soft assets and infrastructure that will include historical and predicted weather analysis, identification of high priority needs, risk assessments for a variety of scenarios based on weather analysis and time horizons, adaptation planning to mitigate identified risks, budgeting, design, implementation, follow-up evaluation, and monitoring.

Organizations and Businesses

Organizations and businesses can seek opportunities to reduce air, water and land pollution from transportation, buildings and industry. Resource-based businesses can identify energy generation opportunities and water conservation strategies, as well as opportunities to reduce emissions and sequester carbon. On their property, organizations and businesses can improve stormwater and waste water quality and reduce the quantity released to streams by installing bioswales, green roofs and fewer impermeable surfaces.

Individuals and Community Volunteer Groups

Individuals and community groups can support and participate in opportunities to reduce, reuse and recycle materials and to become more self-sufficient. Community resiliency can be enhanced with individual and

group actions to share knowledge and learn new skills and with participation in a local economy featuring the local production and distribution of goods, food and services.

Partnerships

Partnerships are essential to success in addressing climate and energy. Potential partners include:

- Developers, to design new communities and retrofit existing communities

- Businesses, to provide innovative products and services that reduce energy use and generate renewable energy

- PowerStream (electricity distribution company), MDEI (Markham District Energy Inc.) and other energy producers and distributors, to provide leadership and use Markham as a demonstration site for new technologies

System Thinking

Priorities	Connections
Social Equity:	Energy must be managed to equitably supply every resident.
Identity and Culture:	The perception of unlimited, cheap energy has created a culture structured around the consumption of fossil fuels.
Individual Health:	Emissions and particulates from the use of fossil fuels affects human health, increasing hospital visits and taxpayer-funded health costs.
Shelter:	Retrofits to existing buildings offer the single largest energy efficiency and conservation opportunity.
Food Security:	Growing food, processing, transportation, retailing and meal preparation require energy.
Access and Mobility:	Transportation, particularly the use of private vehicles and a reliance on fossil fuels, produces a large percentage of GHG emissions.
Education and Skills:	Energy pressures and climate change impacts create the opportunity for skills development needed to implement innovative and technical resilience strategies.
Economic Vibrancy:	Local and renewable energy production contributes to economic stability with sustainable jobs and investment.
Materials Management:	Energy is required to manage materials, whether raw resource extraction, recycling and manufacture or disposal.
Water Efficiency:	Increasing water and energy efficiency will have great effect as each resource is used in processes to produce the other.
Ecosystem Integrity:	The construction and operation of traditional energy generating systems often disrupt local ecosystems through normal operation or disaster.
Energy and Climate:	N/A

Implementation

Implementation of the Greenprint will be considered in three time horizons: the short term, medium term and long term. In the short term, a focus on education, engagement and awareness is emphasized. The medium-term focus is on implementing projects. The long-term focus sees Markham approaching the sustainability vision identified within the Greenprint. The following paragraphs describe these time frames in greater detail from the perspective of what it will be like to experience each stage.

Foundation for Success: *Short-Term Focus (2010–2015)*

This is a period of developing strong support within the community and with all levels of government for positive, sustainable change. Engagement, education and the creation of deep awareness are key strategies for building support for bold, innovative initiatives and occasionally some difficult choices. Within the Civic Centre, staff members are busy bringing all plans, bylaws, operations and programs into alignment with the community's Sustainability Priorities and recommendations. This is a multi-year undertaking that is strategic and coordinated. Key staff members, some of them new, are empowered to lead cross-departmental initiatives and budgets are allocated to ensure success.

During this period, progress is made by large jumps instead of small increments. New neighbourhoods, such as Markham Centre, Langstaff, and others create opportunities for accelerating social innovation and sustainable technologies. New housing models, adaptable and smart infrastructure systems, and different approaches for creating "community" are explored. In all of this, the Sustainability Office is busy encouraging staff and community champions, establishing partnerships, launching pilot

projects, all while active learning and adaptive management are taking place. The Sustainability Office is also busy monitoring and reporting on progress with the community and Council and offering support with research on best practices.

Traction and Innovation: *Medium-Term Focus (2015–2025)*

This is a period where many projects are actively underway or are completed. Community members not only see what is meant by "sustainability," but they experience all the direct and indirect benefits. Communities like Markham Centre, Langstaff and others bring life to the term "complete neighbourhood." This creates a growing desire for Markham's existing neighbourhoods to regenerate, to modify their structure and built environment to allow for more sustainable lifestyles to take root.

Markham is a community that is confident in the choices it made. This same confidence allows for innovation to be accelerated. Within Markham, efforts and initiatives aimed at deeply integrating sustainable priorities into all governmental operations have been successful. The Sustainability Office is dismantled and a culture of deep sustainability has emerged with staff, with elected officials and with community members. Community sustainability performance is accelerating rapidly and Markham has emerged as a global leader in community sustainability.

Adaptive and Resilient: *Long-Term Focus (2025+)*

The community's sustained focus and hard work means that Markham is finally approaching its desired level of sustainability performance. Markham is carbon neutral, achieving high levels of social equity and its community members are healthy and prosperous. Markham's diversity is reflected in all levels of government and decisions are inclusive and meet the needs of all residents. Community members have unprecedented housing and mobility choice with access to world-class natural areas and active recreation. Jobs are plentiful and businesses are benefiting from access to a creative and diverse workforce. Global fossil fuel reserves are severely

depleted and old-timers reflect on what the local climate "used to be like when I was young," yet the community is resilient and adaptable to these and other global and local changes. Markham is operating as a healthy system and is now home to 500,000 people. The Markham community is a motivating force that is actively using its leadership ability to collaborate, create partnerships and try out new ideas. People from around the world visit Markham to experience "how it can be done" and leave inspired, ready to implement change.

It is possible that Markham's journey towards sustainability could unfold quite differently than the story outlined above. Regardless of how it unfolds, one thing is certain: without ambition and a vision for what Markham aims to become and a plan for how it intends to do so, achieving a sustainable future will never occur.

Governance Framework

As Council and staff work to develop, adopt and implement the Greenprint Sustainability Plan, it is imperative that the community is engaged and lends its full support to the implementation process. Without this championing of the plan, the Greenprint will remain an operational exercise for Markham rather than a community-wide experience. To ensure successful implementation of sustainability actions in the community, a meaningful Greenprint governance structure is needed. This structure must continue to improve and enhance governance of the plan over time as the community navigates its path to sustainability.

A governance structure that includes clear roles and responsibilities over the duration of the plan will provide a framework from which to engage community members and move the plan forward. Markham General Committee will coordinate the implementation of the Greenprint but collaboration and partnerships must be built to make the journey towards community sustainability fully evident in the community.

As implementation proceeds, Council committees and broader stakeholder working groups will be established to help ensure the community is able

to provide input over time. The committees and working groups will demonstrate a clear commitment to act co-operatively toward achieving the Greenprint vision and priorities and will be guided by principles of collaboration, open communication, integrity, innovation, inclusive engagement, responsibility, transparency and integration. Providing opportunities for community members to give their input into decisions will demonstrate an inclusive approach to community development. Community members' satisfaction with these input opportunities will be monitored; the calibre of a community engagement process affects the quality and sense of ownership over decisions that are made.

Committee and working group participation that is strong and enduring is essential to ensure that Markham and community:

- Have an in-depth understanding of community issues

- Identify the most valuable actions to pursue as a community within our given resources and capacities

- Have the ability to effectively implement the chosen actions to achieve results

- By working together, influence is optimized, better use is made of limited resources, trust is built among organizations and credibility grows within the community.

The role of the Greenprint within municipal decision making is that of an overarching, guiding document. It is a reference for Council committees as they make decisions about Markham's form and function. The Greenprint can inform Council as the latter reviews, coordinates, and approves the direction for the municipality. The Greenprint can be used to determine if decisions before Council are aligned with the greater sustainability vision for the municipality and it can also help Council determine if decisions can yield multiple benefits to multiple priorities. This will support the approval of key projects. The Greenprint will help to align all projects—whether staff-supported or community-based—with the sustainability vision, allowing project sponsors to yield multiple values from their investment. The plan also emphasizes a collaborative approach where decisions are vetted by

stakeholders and residents before being presented to Council. This open, inclusive process supports community capacity building and success.

Successfully implementing the Greenprint will require Markham's municipal government to be proactive. Integrating the Sustainability Priorities and actions will need to become part of everyday municipal process, and a culture of leadership must be created and supported. Progress must be monitored, measured, and reported.

With the knowledge that Markham's journey towards sustainability will be one of learning, change and innovation, the following strategic recommendations for implementing the Greenprint will guide efforts and initiatives.

Key Strategies for Successful Plan Implementation

Integrating Sustainability Priorities and Action with Regular Town Business

Departmental Sustainability Strategies

The Sustainability Office will work with each Town department to develop strategies for priority integration, and plans that identify and develop implementation actions to achieve sustainability goals.

Coordinated Project Management of Cross-Departmental Initiatives

Many initiatives will occur across departments. These are ideally suited for management by the Sustainability Office and strategically identified staff teams.

Champion Development

Community champions of sustainable change will be supported by Markham to take a leadership role in their jobs and in community initiatives.

In order to facilitate these actions the Sustainability Office will:

- Revise the Council report system to include a sustainability lens and Sustainability Office sign-off until a culture of sustainability is embedded in the organization

- Develop a sustainability checklist for Council to use to consider decisions

Creating a Culture of Innovation and Leadership

The Role of Pilot Projects

It is very important to learn by doing. Pilot projects will be encouraged as a standard practice to promote policy and operational change. Town staff and community members will work together to co-develop and monitor pilot projects. Successful pilot projects will be implemented as standard practice.

Corporate Leadership

Markham as a corporation will continue its leadership role in demonstrating successful sustainability initiatives. Markham will more proactively share lessons learned and work with community partners and business to navigate internal management and operational changes that lead to greater sustainability performance.

Partnerships and Leveraging

In acknowledgment that there are often jurisdictional and resourcing constraints, partnerships will be more aggressively pursued with all sectors to promote greater involvement and the maximum leveraging of resources. Markham will also play the role of partnership broker to ensure all available resources are working towards common sustainability objectives.

In order to facilitate these actions the Sustainability Office will:

- Create a reward and recognition initiative that celebrates the successes of Greenprint implementation and encourages collaboration, partnerships, and innovation

- Build capacity within individual commissions to achieve sustainability

- Provide strong leadership within and beyond local government

Monitoring, Measurement, and Reporting on Progress

Monitoring and Measurement

Markham commits to monitoring sustainability performance, using sustainability indicators and status updates on the implementation of sustainability strategies.

Goal Implementation Monitoring

Markham will develop implementation metrics that allow for reporting on the status of each goal or priority area. These metrics will be monitored and reported regularly.

In order to facilitate these actions the Sustainability Office will:

- Measure and report on indicators every two to five years

- Develop simple tools that will enable regular reporting on priority areas for all projects and initiatives; these tools will facilitate a common understanding of how the initiative is allowing Markham to achieve its desired sustainability performance

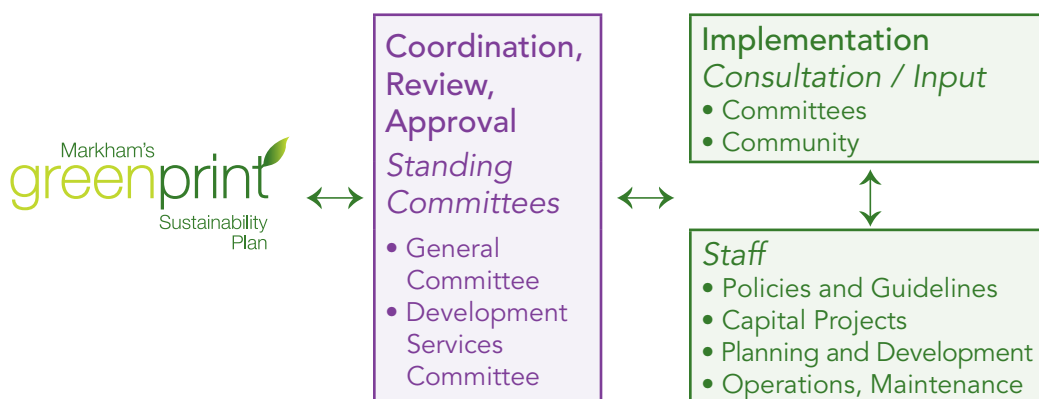# Sharing Responsibility and Activating the Community

Shared Governance

Fundamentally, Markham's sustainability journey will be one of learning, change and innovation. Acknowledging that change must be managed and that community support is critical to success, Markham intends to develop committees and stakeholder working groups that will play an early and ongoing role in ensuring that the community's sustainability vision is implemented. Markham will develop terms of reference for Task Forces and will require that they be representative of the community's diversity.

Community Engagement

Markham intends to take a co-creative and educational approach to ensure community support and ownership of the Greenprint for the necessary change to take place. Accordingly, Markham will develop a community engagement strategy that will ensure consistency in engagement approaches as well as meaningful community participation in all initiatives.

In order to facilitate these actions the Sustainability Office will:

- Work with other partners, such as Transition Town York Region, to establish an initial series of working groups

- Facilitate partnerships among governments, non-governmental organizations, institutions, and the business community to align common goals and objectives and to avoid duplication of services

Markham's **greenprint** Sustainability Plan ↔

Coordination, Review, Approval
Standing Committees
- General Committee
- Development Services Committee

↔

Implementation
Consultation / Input
- Committees
- Community

↕

Staff
- Policies and Guidelines
- Capital Projects
- Planning and Development
- Operations, Maintenance

Financial Framework

Although many decisions about services are made annually, it is important for Markham to ensure there is adequate funding available over the long term. Because the Greenprint is a 50- to 100-year vision, it will be crucial to plan for its implementation. In order to do this, a coordinated effort with staff, residents, businesses and other partners is needed to determine Markham's long-term priorities.

The services provided by Markham (planning, parks and infrastructure, waste management, water distribution, etc.) are funded in several ways: tax dollars, development charges, assessment growth, investments, rate fees, and through partnerships with other levels of government including York Region, the Province of Ontario, and the Government of Canada. In addition, Markham has reserve funds to ensure that future projects can be funded.

Gas Tax Funding

The federal Gas Tax Fund currently provides every municipality in Canada with funding to support community sustainability. One of the criteria to ensure a municipality continues to receive Gas Tax funding is to develop a community sustainability plan. The Greenprint provides this, ensuring Markham is eligible for Gas Tax funding for the long term. The funding can be used to establish a capacity-building fund to help implement the Greenprint and inspire collaboration, partnerships and innovation.

Government Partners

Gas Tax funding will also provide important leverage to work with other levels of government to move the sustainability agenda forward in Markham. Markham was successful in receiving grant funding from the Federation of Canadian Municipalities' Green Municipal Fund for the creation of the Greenprint. These types of funding mechanisms will also play an important role in the implementation of the plan. It is difficult to predict what funding will

be available for community sustainability in 50 to 100 years; however, with the ongoing commitment of Council and the community, innovative and creative ideas will continue to ensure the Greenprint is successfully implemented.

Private Partners

Private partners have the potential to provide knowledge, skills, labour and finances that may not be available through Town staff and resources. Partners range from philanthropic individuals to organizations and businesses, each potentially providing services traditionally performed by Markham. The delivery of services can be contracted to private sector companies or Markham can set up the policy framework that allows private partners to finance, design, construct or operate projects. Private partners are delivering a public good while sharing the risk of project delivery with Markham. The financial circumstances of the municipality make private partnerships attractive for certain capital-intensive projects and costly operations.

Cost Sharing

Some of the creative ways to ensure the long-term success of the Greenprint could include creating a revolving fund and working with others to share services in order to be more effective and reduce redundancy. An example of this may be to start a car-share program with businesses in the municipality to reduce the dependency of staff on a municipal fleet or on private vehicles. Currently, Markham practices co-operative buying with York Region and has leveraged purchasing opportunities through the provincial government. These good practices can reduce costs for each organization and for their employees.

The same approach may be used with partnerships outside the municipality, where non-governmental organizations benefit from Markham's resources and services and vice versa. Other organizations (particularly smaller ones) may have services that are not as efficient or cost effective as they could be (e.g. marketing, research, payroll, computer maintenance). By coordinating with organizations that have core competencies in these areas, everyone could benefit from improved use of resources.

Report Card on Spending

In order to measure success and ensure the Greenprint implementation is coordinated and integrated, a report card on spending and outcomes would be beneficial on a five-year basis. This time frame will allow substantial implementation to occur per report period, but will allow for opportunities to change course and remain flexible if new funding or partnership opportunities present themselves.

Initial Recommendations for the Municipality:

- Establish a revolving fund to be used to implement the Greenprint

- Develop a collaborative and integrated approach for pursuing grants from different levels of government and non-governmental, business and philanthropic organizations

- Leverage new financial tools and opportunities resulting from renewable energy production, energy and water conservation and carbon pricing

- Build collaborations and partnerships to create efficiencies around purchasing, financing and borrowing

- Partner with service delivery agencies to reduce duplication of services

Implementation Matrix

The initial recommendations of the Greenprint have been organized into a matrix. Each initial recommendation includes proposed timing, which will be finalized during the first phase of implementation. The initial recommendations are also summarized in Chapter 4: Sustainability Priorities under the "Taking Action" section for each of the twelve priorities. The matrix is shown on the following pages.

Individual Health

	RECOMMENDATIONS	PROPOSED TIMING		
	Objective: Promote & support physical and mental health of Markham citizens	2011-15	2015-25	2025+
1	Maintain access to all public facilities and programs for Markham citizens regardless of means or ability	X		
2	Adopt the World Health Organization's Age-Friendly Cities initiative	X	X	
3	Continue to build or complete accessible sidewalks, pathways, trails and bicycle networks that connect to all destinations	X	X	
4	Maintain sidewalks, pathways, trails and bicycle routes year round	X	X	X
5	Identify locations for, and work toward, establishing water stations, washrooms, storage and locking for bicycles along sidewalks, pathways, trails, bicycle routes, transit stops, and in the public realm	X	X	
6	Continue to design, retrofit, and build context appropriate streets focused on the needs and comfort of pedestrians, cyclists, and persons with disabilities	X	X	
7	Develop strategies for building parks, playgrounds, connected pathways and bicycle routes ready for the first phase in new communities	X	X	
8	Develop and implement policies to ban smoking all at Markham municipal sites, such as parks and areas outside of municipal buildings (parking lots, etc.)	X		
9	Continue to promote and enhance policies to restrict sales and marketing of high-calorie, low-nutrition foods and drinks from Markham public facilities	X		
10	Build upon and enhance partnerships with school boards to continue using school facilities as community resources	X		
11	Develop and deliver healthy eating and lifestyle curriculum and provide programs for those with mental health issues with Markham libraries, Community Centres and school boards	X		

		2011-15	2015-25	2025+
12	Create opportunities for growing food and establishing healing gardens in parks and appropriate municipal facilities	X		
13	Develop a plan where community facilities act as heating or cooling centres during times of need	X	X	
14	Encourage school boards to design and promote safe routes to schools and walking school bus programs	X		
15	Provide public with information about outreach programs for isolated residents	X		
16	Establish intergenerational programs that build bridges between and within various communities	X	X	
17	Partner with community groups to support and monitor seniors living alone	X		
18	Build on programs and partnerships to support those with mental health issues and increase community awareness of mental health	X		

Social Equity

RECOMMENDATIONS		PROPOSED TIMING		
Objective: Reduce the impact of household poverty		2011-15	2015-25	2025+
19	Continue to work with the Region and Provincial/Federal governments to facilitate an affordable housing strategy		X	
20	Continue to promote and enhance active transportation or access to public transit in all municipal facilities, parks and infrastructure	X		
21	Support programs that allow seniors to continue living with family and within the family home for as long as possible	X	X	
22	Continue to support a range of accessible and affordable creative arts, cultural and heritage opportunities to residents and visitors	X		
23	Reinforce Markham's commitment to creating compact and complete communities through the Official Plan and guidelines. Development should include work, live, play opportunities for all neighbourhoods	X	X	

#	RECOMMENDATIONS	2011-15	2015-25	2025+
24	Coordinate social planning within Markham. Integrate social services not currently being delivered by the municipality with the Region and other service providers to deliver services within neighbourhoods	X		
25	Help create 10,000 new jobs, at all levels, in partnership with other organizations through local economic development activities specifically aimed at reducing poverty		X	
26	Build on work with partners to create employment opportunities for unemployed, underemployed and low-income individuals who reside in Markham, including youth and the diverse populations	X	X	
27	Build on financing and other supports to establish new jobs and businesses in partnership with others		X	
28	Establish places within schools, libraries and community centres where goods and services can be exchanged, reclaimed or recycled	X		
29	Partner with others to support affordable and accessible child care throughout the community	X	X	
30	Promote and build on neighbourhood organizations responsible for fostering interaction, neighbourhood pride, empowering local decision-making, food growing, and local program and services delivery	X	X	

Social Equity

	RECOMMENDATIONS	PROPOSED TIMING		
	Objective: Greater resident involvement in community stewardship	2011-15	2015-25	2025+
31	Continue to recruit and support individuals that represent the Town's demographic diversity for Town committees	X		
32	Continue to nurture and create opportunities for volunteerism throughout the community	X		
33	Continue to develop a community engagement policy and use innovative methods that encourages the participation of all demographic groups	X		

RECOMMENDATIONS	PROPOSED TIMING		
34	Work with partners to welcome, support and build programs and social networks for residents, including seniors, women, and minorities	X		
35	Work with partners to develop and deliver classes about how municipal government functions and how to get involved in making decisions	X		

Social Equity

RECOMMENDATIONS	PROPOSED TIMING		
Objective: Promote greater youth involvement in decision making and participation	2011-15	2015-25	2025+
36	Continue and build on social media tools to communicate with youth	X		
37	Build on the role of Mayor's Youth Task Force and develop opportunities for greater youth involvement and volunteerism in the political process, such as a shadow youth council or the provincial page program, where members of council and staff serve as mentors to engage youth in the political process	X		
38	Continue and build on opportunities to seek youth input in planning decisions and other decisions that shape the community	X		
39	Continue to provide space and programs that cater to the needs of youth at community centres and the Civic Centre	X		
40	Examine the feasibility of financially supporting the campaigns of youth who want to serve in elected government but lack financial resources or networks		X	
41	Continue to engage at-risk youth with targeted services and opportunities, including volunteer opportunities and connecting youth with employers	X		
42	Create mentorship opportunities for youth in Markham, including peer-to-peer and adult-to-youth	X		
43	Encourage youth to celebrate the community and their neighbourhoods through the establishment of youth-driven committees, programs and initiatives	X		

Education & Skills

	RECOMMENDATIONS	PROPOSED TIMING		
	Objective: Facilitate LIFE-LONG Learning & Skills Development	2011-15	2015-25	2025+
44	Build on partnerships with other organizations to attract, provide and promote accessible lifelong learning opportunities, including additional post-secondary opportunities		X	
45	Continue to integrate Seneca College Campus into Markham community by offering real world experience and partnerships	X		
46	Support and promote community interactive learning opportunities through speaker series, conferences, post-secondary courses and community forums, both online and at local facilities	X		
47	Support access to language skills development to ensure barrier-free access to education, training and skills development	X	X	
48	Work with partners, including the Markham Library and the school boards, to develop and deliver a sustainability curriculum for residents and businesses, including re-skilling programs, learning about home and business energy, water efficiency, food growing, community event planning, and home businesses	X	X	

Identity & Culture

	RECOMMENDATIONS	PROPOSED TIMING		
	Objective: Promote and celebrate all that makes Markham great	2011-15	2015-25	2025+
49	Continue to promote and support a sustainable tourism strategy for Markham in partnership with York Region and others	X	X	
50	Continue to implement Markham's Integrated Leisure Master Plan	X	X	
51	Continue to build on and promote urban design and place making guidelines that reflects the community's heritage, natural setting and cultural diversity for all new Markham development	X	X	
52	Continue to build on and support a Public Art Policy that encourages public art in commercial and large residential projects including funding for public art in all Town new construction and retrofit projects	X		

#	RECOMMENDATIONS	2011-15	2015-25	2025+
53	Continue to build on and support festivals, community events and engagement exercises that aim to foster cross-cultural understanding and experiences	X		
54	Double the 2010 floor area of Markham cultural venues by 2030			X
55	Continue to promote and capitalize on Markham's history, natural heritage and diversity for marketing and branding	X		
56	Continue to support a range of affordable, accessible, and meaningful creative arts and other cultural opportunities, that contribute to the local economy, to residents and visitor experience	X	X	
57	Build on diverse programs and events that celebrate and explore those aspects of Markham that all cultures share (e.g. growing culturally diverse foods, food celebration, stories of settlement, music, etc.)	X		
58	Continue to encourage new residents to retain traditional arts and culture practices in community facilities	X		

Food Security

	RECOMMENDATIONS	PROPOSED TIMING		
	Objective: Support education and engagement in the local food system	2011-15	2015-25	2025+
59	Create an advisory group of representatives from many sectors of the food system to identify opportunities in Markham, educate the community, including youth, about healthy eating, food growing and waste reduction	X		
60	Continue to educate the community to avoid food waste and divert food from the waste stream, including promoting home and small-scale composting and/or large scale biofuel digestion	X	X	
61	Support training and education around soil health, food preparation, cooking, nutrition, ethical and environmental choices, food access, and growing at existing facilities or create new facilities (community kitchens, community food centres)	X		
62	Support training, jobs, mentorship and land-access opportunities for residents, including youth and immigrants who want to farm or work in the food industry		X	

		X		
63	Assist gardeners and support farmers' markets and others in sharing knowledge and resources through events, workshops and resources	X		

Food Security

	RECOMMENDATIONS	PROPOSED TIMING		
	Objective: Significantly increase community food-producing opportunities	2011-15	2015-25	2025+
64	Establish requirements for community garden plots or other food growing opportunities for higher-density developments that meet the needs of residents	X		
65	Continue to promote and build on healthy eating and living opportunities by promoting local food, home-based food growing, farmers' markets, developing demonstration gardens and implementing food-growing educational programs at town facilities	X		
66	Set soil standards in new communities so that yards and boulevards are "garden-ready" and provide assistance to existing neighbourhoods to amend soil	X		
67	Review all Town by-laws and policies to ensure the support of food production within the urban boundary	X		
68	Plan and implement community-based orchards as part of enhancements to the urban canopy		X	
69	Continue and build on community gardens and other food-growing opportunities on town-owned land, private land and vacant land wherever possible	X		
70	Foster a forum for residents to share available land and gardening knowledge	X		

Food Security

RECOMMENDATIONS	PROPOSED TIMING		
Objective: Significantly increase the viability of local commercial food growing and processing	2011-15	2015-25	2025+

#	Description			
71	Develop a Local Food Strategy and work with York Region and other partners to incorporate and implement it as part of the planning, design and development framework	X	X	
72	Create an Energy Descent Food strategy, which speaks to the end of cheap food, to respond to peak oil effects upon the food system		X	
73	Implement the recommendations from the adopted Agricultural Assessment Study, including ongoing consultation, advocating long-term leases, financial incentives, land-use policy, farm-friendly infrastructure, and innovative programs	X		
74	Promote existing and support further food events, including agri-tourism and farmers' markets, that focus on local, seasonal, and culturally diverse foods	X		
75	Continue to support and build on locally produced, seasonal, and sustainable foods at Town facilities and functions, and promote healthy vending in local schools and institutions	X		
76	Further incorporate the production and processing of local food into Markham's future economic plans		X	
77	Establish small plot intensive (SPIN) farming and home-based food growing support networks that encourage residents to grow food or share their land for commercial food production		X	
78	Encourage the availability of locally produced food grown using ecologically friendly methods at a price affordable to community members	X		
79	Consider the impact of climate change on agriculture in mitigation and adaptation studies and strategies	X		
80	Work with other levels of government to promote and support on-farm food growing, processing and infrastructure	X	X	
81	Encourage local food processing to be highly water and energy efficient	X		
82	Support roadside food sales at farms, farmers' markets, kiosks in high-traffic areas, local independent stores, and Community-Supported Agriculture (CSA) to increase opportunities for farmers to sell food locally	X		

		PROPOSED TIMING		
83	Plan and promote the development of a food precinct as a means for local food brokerage, vending, processing and consumptions to create greater connections between local farmers and their markets, including farmers' markets	X	X	

Energy & Climate

	RECOMMENDATIONS	PROPOSED TIMING		
	Objective: Net zero, Energy, Water, Waste and Emissions by 2050	2011-15	2015-25	2025+
84	Create an Energy Descent Strategy to reduce greenhouse gas emissions from buildings, transportation, waste and agriculture	X		
85	Reduce dependency on the potable water system by implementing dual and distributed water systems and cisterns to supply harvested rainwater and recycled waste water	X		
86	Promote locally sourced durable building materials, including reclaimed and sustainably harvested materials and plentiful metals, that can be recycled	X		
87	Grow and install climate adaptive plant material	X		
88	Prepare for new disease vectors and invasive species as Markham's climate warms	X	X	
89	Create, promote and maintain carbon sinks to capture greenhouse gas emissions by planting and protecting trees, increasing natural areas, open space and agriculture	X	X	
90	Align the Integrated Leisure Master Plan to respond to climate change threats	X		
91	Build on community emergency management strategy to anticipate and respond to climate change-related events and natural disasters	X	X	
92	Build on the Greenprint as the Climate Action Plan by developing an implementation plan for the Community (residents and businesses) and the Corporation of the Town of Markham focused on reducing Markham's green house gas emissions and preparing for climate change-related shocks and changes.	X	X	X

93	Promote ongoing community outreach, education and understanding as well as climate change research and development in Markham	X	X	
94	Seek opportunities to reduce air, water and land pollution from transportation, buildings and industry	X		
95	Identify energy and water conservation/generation and carbon reduction/sequestration opportunities based on geographic conditions	X		
96	Continue to treat storm and wastewater and control quantity and quality released to streams using best practices at sites, such as bioswales, green roofs and permeable surfaces	X		
97	Support community opportunities for reducing, reusing and recycling materials	X		

Materials Management

	RECOMMENDATIONS	PROPOSED TIMING		
	Objective: Achieve Zero Waste Material	2011-15	2015-25	2025+
98	Adapt procurement policy to include policies for closed-loop materials management	X	X	
99	Advocate with the Province of Ontario for extended producer responsibility regulations for waste materials	X		
100	Ensure service agreements for municipal services include sustainability provisions such as requirements for energy efficiency, renewable energy generation, zero-waste management, reuse of recycled materials, and/or achieving social objectives such as local employment targets	X	X	
101	Ensure zero waste in Libraries, Parks, Community Centres, Fire and all other Markham facilities	X		
102	Establish fees for collecting materials not readily recyclable at a rate commensurate with safe disposal cost	X		
103	Develop alternative energy source, such as waste biofuels for Markham District Energy		X	

#	RECOMMENDATIONS	2011-15	2015-25	2025+
104	Work with local businesses to adopt zero-waste strategies and encourage local business to accept waste materials generated by consumer goods purchased at the business	X		
105	Leverage partnerships with other organizations to reduce supplier waste	X	X	
106	Create policies that achieve diversion opportunities for 'non-residential' waste such as commercial and small businesses, government operations and others	X	X	
107	Consider alternative technologies for managing waste materials, such as "Pipe Technology" for large-scale new developments	X		
108	Develop a culture of conservation and waste minimization—water, energy, materials, and other resources through education, social marketing, and access to real-time information	X		

Economic Vitality

	RECOMMENDATIONS	PROPOSED TIMING		
	Objective: Facilitate and Support Markham's existing businesses	2011-15	2015-25	2025+
109	Implement Markham 2020 Strategic Directions economic development plan	X		
110	Implement a buy local campaign for locally produced or packaged goods and services	X	X	
111	Work with trade and commerce organizations to engage businesses to work together to identify local business growth	X		
112	Develop Eco-Business Districts that promote business networking and information sharing that aim to reduce reliance on fossil fuels, greenhouse gases, energy consumption (from buildings and transportation) from individual businesses or business parks		X	
113	Support and encourage businesses that emphasize employee work-life balance, healthy lifestyles, and active mobility	X		

		X		
114	Continue to promote and build on economic development opportunities and business mentorship programs for Markham's youth, underemployed and new Canadians to provide workplace skills and experience in professional work environments	X		

Economic Vitality

RECOMMENDATIONS		PROPOSED TIMING		
Objective: Promote green business development and business greening strategies of existing and new employers		2011-15	2015-25	2025+
115	Adopt the United Nations definition of and specifically target "green jobs"	X	X	
116	Work with partners to create a demand for local employment in the green energy sector, eco-tourism and local food production and processing by developing purchase agreements - amend purchasing by-laws as necessary	X	X	
117	Promote viable local food businesses and services and support businesses that contribute to local food growing.	X		
118	Target 25,000 green jobs as part of Markham's Vision 2020		X	
119	Work with industry to develop a Markham-based centre of excellence serving the green, social and creative sectors	X	X	
120	Continue to create and build on "new economy" incubators and mentorship opportunities for new businesses	X	X	
121	Create demand for local employment in sectors that rely on local resources and that improve resilience, such as agri-tourism, canning, preserving, cooking or baking, home and clothing repair	X		
123	Continue to promote employment activities within areas that are served by higher-order transit	X	X	
124	Create the conditions that support market-viable businesses within walking distance of residential land uses through land use controls	X	X	
125	Support work-from-home businesses	X	X	

		X		
126	Encourage re-skilling in order to ensure the ongoing evolution of a low carbon economy	X		

Access & Mobility

	RECOMMENDATIONS	PROPOSED TIMING		
	Objective: Create a culture of walking, cycling, and transit usage	2011-15	2015-25	2025+
127	Create the regulatory framework for focusing redevelopment and new development around pedestrian needs	X	X	
128	Increase funding and continue to build on partnerships with schools and employers to implement transportation demand management initiatives to reduce automobile trips	X	X	
129	Support the implementation of pricing policies, such as toll roads and congestion fees, that encourage transit use and active transportation	X	X	
130	Reinforce policies ensuring development is primarily focused on pedestrian and cycle circulation	X		
131	Shift spending and planning priorities to promote greater walking, cycling and transit	X	X	
132	Continue to shift community planning and development to place a greater emphasis on optimizing land use and public-realm design to increase the viability of multi-modal transportation	X	X	
133	Expand multi-modal network improvements by creating dedicated and integrated pedestrian and cycling routes that connect housing areas to employment areas, amenities and institutions	X	X	X
134	Create transit opportunities for high demand destinations such as restaurants, entertainment precincts, tourist destinations and services	X		
135	Connect cycling and bus networks and install bicycle lockers at bus stations and bicycle racks on buses	X		
136	Continue and build on work with employers and others to spread out peak use of roads	X	X	

137	Integrate multi-modal transportation exchanges in neighbourhood centres, including bus stops, bicycle storage, share cars, and private vehicle and taxi parking	X	X	
138	Continue and build on promoting the use of car sharing, offsetting vehicle ownership	X		
139	Continue to build on opportunities to make walking, cycling and transit use safe, convenient and usable for all of Markham's residents	X	X	

Access & Mobility

RECOMMENDATIONS		PROPOSED TIMING		
Objective: Create roads for all users		2011-15	2015-25	2025+
140	Increase transportation system capacity through policies focused on creating network efficiency, increasing modal split, incentives for private sector transit operators, and intelligent transportation technology	X	X	
141	Follow guidelines provided by the Ontario Road Ecology Group's "A Guide to Road Ecology in Ontario"	X		
142	Place the priority on the comfort of pedestrians, cyclists and transit users on streets, through the use of optimized traffic signalling and other measures	X	X	
143	Focus efforts on main streets in regeneration areas	X	X	

Access & Mobility

RECOMMENDATIONS		PROPOSED TIMING		
Objective: Improve connections between communities with habitat and ecosystems		2011-15	2015-25	2025+
144	Take a 'habitat enhancement' approach to park, right of way and road planning, maintenance and management to create connected wildlife corridors	X	X	X

	RECOMMENDATIONS	PROPOSED TIMING		
145	Continue the Trees for Tomorrow tree-planting program and funding, with additional focus in areas susceptible to the effects of urban heat island	X		
146	Continue and build on eco-education resources for homeowners and businesses to raise awareness of landscape planting and management practices that promote habitat creation in front and backyards	X		
147	Continue to coordinate the use of public lands, hydro corridors and utility right-of-ways for planting and growing food in partnership while respecting their role in wildlife habitat	X	X	
148	Build on the urban forest by setting achievable targets for urban canopy coverage in order to provide wildlife habitat	X	X	

Shelter

	RECOMMENDATIONS	PROPOSED TIMING		
	Objective: Regenerate existing neighbourhoods through sensitive evolution	2011-15	2015-25	2025+
149	Coordinate regeneration efforts focused on infrastructure modernization, public engagement, and socio-cultural aspects of neighbourhoods to respond to issues related to climate change and increasing energy costs		X	X
150	Geographically define neighbourhoods within existing communities to inform regeneration	X	X	
151	Focus regeneration on pedestrian needs	X	X	
152	Create and redevelop neighbourhoods that include a maximum 15-minute walk to a "main street", recreation, viable local-serving retail, varied housing choices, including low-rise apartments, access to services/community facilities, and rapid or frequent transit	X	X	
153	Define planning units within larger, existing communities by identifying new neighbourhoods	X	X	

154	Continue to develop neighbourhood-appropriate urban design and architectural character guidelines that promote placemaking, and general Markham guidelines that promote built form focused on liveability and walkability to support community development and gathering	X		
155	Focus redevelopment on creating resiliency	X	X	
156	Promote live-work development within neighbourhoods and along major roads	X	X	
157	Leverage transit through active transportation infrastructure investments for areas within a 5 minute walk from existing or planned rapid transit stations, create compact, mixed-use/pedestrian-friendly neighbourhood centres	X	X	
158	Promote sensitive redevelopment of existing housing to higher intensity-grade-related housing, semi-detached, town- or row-housing, and low-rise apartments where appropriate and market conditions dictate	X	X	
159	Focus on water, energy, and socio-cultural resiliency in neighbourhood regeneration through the use of smart systems, monitoring, and communication		X	
160	Continue to develop high-quality public realm, including heritage preservation, as a means to identify the distinct neighbourhoods	X	X	
161	Strategically intensify underutilized areas such as brownfields, greyfields (auto-oriented retail places, strip malls, large-format retail sites) and undeveloped sites in and around existing neighbourhoods to serve as neighbourhood centres and to increase residential densities to support transit	X	X	
162	Ensure a co-creative and engagement communication model of neighbourhood planning, with public consultation, for regenerating neighbourhoods		X	
163	Work with residents to create more complete neighbourhoods through identifying and creating new buildings, streetscapes, landscaping, and infrastructure measures that will increase vegetation and food-growing opportunities, reduce greenhouse gases, waste generation, and improved energy and water efficiency	X	X	

Shelter

RECOMMENDATIONS	PROPOSED TIMING		
Objective: Plan, design & construct high performance new neighbourhoods	2011-15	2015-25	2025+
164 Continue to prioritize intense mixed-use development for new neighbourhoods	X		
165 Ensure residential densities and other uses support pedestrian-oriented activities and are transit-supportive at all scales	X		
166 Continue to pursue more mixed-use models of community planning and design that integrates business, industry and residential development in one neighbourhood at appropriate locations	X		
167 Integrate parks and open spaces, such as actively programmed parks and plazas that promote community gathering and physical activity for all users, with emphasis on families, youth and seniors	X		
168 Make full use of policy and regulatory tools and pursue partnerships and government funding to deliver housing tenure diversity, and non-market affordable and supportive housing options in large-scale redevelopment	X	X	
169 Plan new neighbourhoods using appropriate modeling and analytical tools, including asset mapping, that demonstrate optimized neighbourhood design that delivers minimum energy consumption and greenhouse gas generation and responds to socio-cultural needs	X	X	
170 Maintain the health and quality of soils throughout the development of new neighbourhoods and the regeneration of existing neighbourhoods	X		
171 Work with natural topography and hydrology to preserve native vegetation, improve storm water management and maintain water quality	X		

172	As a condition of approval, new neighbourhoods should include a plan that identifies key elements of the public realm and social assets (galleries, recreation centres, libraries, parks, plazas, squares, etc., both public and private), and how they will be made accessible to residents	X	X	

Shelter

	RECOMMENDATIONS	PROPOSED TIMING		
	Objective: Develop an Affordable Housing Strategy	2011-15	2015-25	2025+
173	Adopt annual housing targets for new development according to the Markham Preferred Growth Alternative with 27% singles/semis, 19% townhouse, and 54% apartments for new residential units to 2031. This target helps to accommodate households experiencing increased affordability challenges including singles, youth, seniors and new immigrants	X	X	X
174	Adopt strategies to promote and retain rental accommodation in new and existing housing developments	X	X	
175	Work with builders and developers to construct a range of built forms including small lot singles, stacked townhouses, linked homes, apartment buildings and other innovative housing options	X	X	
176	Work with York Region, developers, builders, and other community partners to increase the supply of subsidized and social housing; and alternative forms of affordable housing models such as rent-to-own, and home ownership cooperatives	X	X	X
177	Develop affordable and flexible community based rental housing options as well as an income opportunity for home owners	X		
178	Promote with local builders and developers the principles of flex housing/design features, and improved accessibility to accommodate evolving and different needs of residents	X	X	
179	Continue to work with York Region and other partners to increase the supply of special needs housing for persons with mental illness, developmental disabilities, physical disabilities, and for frail elderly	X	X	

		2011-15	2015-25	2025+
180	Continue to work with York Region to plan for a housing help centre and emergency shelter in Markham	X	X	
181	Provide incentives such as cost offsets, density bonusing, fee waivers, fast-tracked approvals, alternative development standards to help meet affordable housing and special needs targets	X	X	
182	Investigate adding social/affordable housing as a charge under the Town's or Region's development charges by-laws in order to provide funds necessary to provide grants for affordable housing	X	X	
183	Partner with the Region and housing service providers to prepare an education and awareness program to highlight the economic and social advantages of affordable and special needs housing in Markham	X	X	
184	Work with Welcome Centres and other immigrant support service providers to provide housing and related information to new immigrants	X		

Water

	RECOMMENDATIONS	PROPOSED TIMING		
	Objective: Develop a water systems plan that integrates all water functions	2011-15	2015-25	2025+
185	Promote drinking Markham's high quality potable (drinking) water within the community	X		
186	Develop a networked district non-potable water system where waste water is efficiently and safely recycled, and harvested rainwater can be used for non-potable uses like irrigation, cleaning and toilet flushing	X		
187	Continue to develop watershed-based management approaches and policies to guide and integrate overlapping land and resource development, infrastructure, forests, habitat, recreation, fisheries and aquifers	X		
188	Protect, restore, maintain and enhance natural hydrological systems and functions as much as possible	X		

		2011-15	2015-25	2025+
189	Work with partners such as the TRCA to continue to maintain flood control systems at a high level of emergency preparedness, where risks are managed proactively, effectively, and efficiently	X		
190	Optimize potable water supply source protection using a multi-barrier approach	X	X	
191	Continue to protect, enhance and maintain healthy streams, rivers, lakes and wetlands to support wildlife	X		
192	Continue to manage and rectify inflow and infiltration of rain and groundwater to the sanitary sewer system	X	X	
193	Consider the energy dependence of water infrastructure and impacts of climate change when making decisions	X	X	X
194	Develop potable water, waste water and storm water rates that ensure long-term conservation and financial sustainability of integrated infrastructures and incent safe and efficient water recycling and reuse	X		
195	Educate residents, businesses and visitors about water as a vital resource	X		

Ecosystem Integrity

	RECOMMENDATIONS	PROPOSED TIMING		
	Objective: Increase biodiversity	2011-15	2015-25	2025+
196	Implement public and private development landscaping standards that integrate plant species and planting strategies that contribute food, attract songbirds, insects and other urban animals, including vertical landscaping, green roofs and other innovative landscapes	X	X	
197	Adopt Fatal Light Awareness Program's Bird-Friendly Guidelines for all new and existing buildings, including an agreed-upon timeframe for existing buildings	X	X	
198	Revise standards and make use of green building rating programs (such as LEED) to advance native landscaping requirements and site-canopy coverage	X		

199	Establish an edible landscape strategy to integrate food producing plants into landscaping for public and private spaces that includes targets and timeframe	X		
200	Continue to actively acquire lands that enhance, create or connect wildlife habitat within the urban and rural context	X	X	
201	Ensure minimal impact and displacement of wildlife when development and redevelopment occurs and provide wildlife rehabilitation services within the community	X		
202	Provide wildlife habitat through green roofs and green spaces in or on buildings	X	X	
203	Establish a dark sky policy	X		
204	Create a strategy using vacant land as flexible open space for recreation, gardening or wildlife habitat	X	X	
205	Work with partners to communicate the benefits of wildlife in the community and improve education related to wildlife in the community			
206	Establish a strategy to increase biodiversity on agricultural lands while maintaining agricultural productivity	X	X	

Ecosystem Integrity

RECOMMENDATIONS	PROPOSED TIMING		
Objective: Thirty percent tree canopy and vegetation coverage Town-wide	2011-15	2015-25	2025+
207 Continue to promote and maintain an urban-forest planting strategy and plan		X	X
208 Continue to improve natural processes in urban areas by using native and resilient plant species	X	X	
209 Work with partners to establish a native tree-and-plant nursery to supply the Town and resident's needs		X	

210	Develop guidelines with academic and industry experts for tree type and placement for homeowners and developers, maximizing biodiversity, energy efficiency and take into consideration issues such as climate change when making species selection	X	X	
211	Work with community partners to establish fruit and nut trees within street right-of-ways and on other public land as local food opportunities	X		
212	Provide education and assistance programs for homeowners to care for and manage their trees, extending their lives as long as possible	X		
213	Ensure new native, trees are planted to replace aging trees in mature areas	X		
214	Harvest end-of-life tree materials for recycling/reuse within Markham.	X		

Ecosystem Integrity

	RECOMMENDATIONS	PROPOSED TIMING		
	Objective: To develop and support wildlife habitat	2011-15	2015-25	2025+
215	Implement an interconnected Natural Heritage Network, working towards connectivity between existing green spaces and ensure they are of sufficient quality and size to support wildlife	X	X	X
216	Deliberately connect disconnected spaces to allow wildlife movement across the Town	X	X	
217	Protect and enhance existing wildlife habitat and provide green spaces that are biodiverse, climate-adaptable and flexible and for all creatures' enjoyment	X		
218	Define a physical urban/rural boundary that preserves green spaces and agriculture by utilizing strong land use and design tools	X	X	
219	Continue to work with local partners to develop a local wildlife refuge, shelter and rehabilitation centre	X		
220	Continue to renaturalize streams and habitats that have been built over by restoring watersheds and subwatersheds of the Don and Rouge Rivers	X	X	X

221	Work with local partners and the community to establish wildlife stewardship and education programs	X	X	

	GENERAL RECOMMENDATIONS			
222	Measure and report indicators every two years to determine progress and adapt the Greenprint's implementation based on the results			
223	Continue to build and facilitate partnerships among governments, agencies, non-governmental organizations, institutions, and the business community to align common goals and objectives and to avoid duplication of services			
224	Continue to seek out funding opportunities for implementing the strategies and build funding partnerships between departments, other levels of government, businesses and the community			
225	Continue to build capacity and provide strong leadership within and beyond local government to achieve sustainability and to share learning and experiences			

	GOVERNANCE			
226	Develop a sustainability checklist for Council and staff to use to consider decisions			
227	Revise the Council report system to include a sustainability lens and evaluation tool with Sustainability Office sign off until sustainability is embedded in the organization			
228	Work with other partners to establish an initial series of working groups			
229	Establish a Capacity Building fund, funded by Gas Tax, to implement the Greenprint and inspire collaboration, partnerships and innovation			
230	Establish a reward and recognition initiative that celebrates the successes of Greenprint implementation and encourages collaboration, partnerships and innovation			

231	Incorporate systems thinking and Greenprint recommendations into corporate business plans			
232	Link Greenprint with staff performance reviews and provide ongoing training and support			
233	Adapt the Town's purchasing process by identifying social, cultural, environmental, and economic sustainability opportunities and impacts			
234	Continue to promote and develop new opportunities for volunteerism in the community			
235	Create and support a culture of sharing common resources both within the Town and with the community			

	FINANCIAL			
236	Establish a funding source to be used to implement the Greenprint, such as a revolving fund			
237	Ensure a collaborative and integrated approach for pursuing grants with different levels of government, non-governmental, business and philanthropic organizations			
238	Continue to build collaboration and partnerships to create efficiencies around purchasing, financing, and borrowing			
239	Leverage new financial tools and opportunities resulting from the renewable energy production, energy and water conservation, and carbon pricing to implement the Greenprint			
240	Ensure a sustainability lens is used as a decision making tool in the budget process			
241	Partner with service delivery agencies to reduce duplication of services			

Conclusion

The Greenprint is Markham's response to sustainability challenges and opportunities. Global forces of change and local contexts impact the community's standard of living and our quality of life. If we work together, we can take steps to create a future for Markham that is even better than it is today. Neighbourhoods can be more liveable, people can be healthier and there can be continued prosperity for all.

The Greenprint, Markham's Sustainability Plan is a living document that will influence decision making within the municipality for generations to come. It requires ongoing community involvement to ensure that the community's priorities continue to be the focus when projects are approved and budgets are set. Fiscal planning over the long term will be necessary to ensure that the Greenprint is fully implemented.

It is now time to act on the Greenprint's recommendations to help Markham move toward its vision of sustainability and resilience. Everyone has a part to play in making Markham's future a great one.

Glossary

Greenprint Glossary:

Accessibility – is the absence of barriers to residents of all abilities that allows them to participate equitably, including in customer service, information and communications, the built environment, employment, and transportation.

Active Transportation – is any form of human-powered transportation including walking, cycling, using a wheelchair, in-line skating or skateboarding.

Adaptation - long-standing coping strategies to specific hazards or climatic conditions.. Adaptation involves reducing vulnerabilities and positioning to take advantage of potential opportunities resulting from climate change.

Affordable Housing – a common threshold for affordability of housing is defined as spending less than 30% of household income on housing costs. Spending a greater percentage of household income can make it difficult to pay for necessities such as food, clothing, education, and transportation.

Agri-Tourism – any agricultural-based operation or activity that brings visitors to farms that includes picking fruits and vegetables, riding horses, tasting honey or shopping in farm gift shops and farm stands.

Aquifer – underground water storage within rock or unconsolidated materials (gravel, sand or silt).

At-Risk Homelessness – a common threshold for being at risk of becoming homeless is when households spend more than 50% of household income on housing.

Biodiversity – the degree of variation of life within a given ecosystem. Biodiversity is a measure of the health of the ecosystem, with greater biodiversity implying greater health.

Biofuel – an alternative to fossil fuel. It can be in solid, liquid, or gas form and is used to produce heat, or to power machinery using burners, broilers, generators, internal combustion engines, turbines or fuel cells.

Biofuel Digestion – the process of creating fuel through the biological breakdown of organic matter, including biomass, manure, green waste, and plant material, in the absence of oxygen.

Bohemian Index – a comparison of the percentage of "bohemians" in a region to the national pattern. The index shows the concentration of writers, designers, musicians, actors and other arts-related personnel and is a comparative measure of an area's diversity and cultural amenities.

Brownfield – an abandoned or underused industrial or commercial real estate assets or land that is available for reuse and typically requires environmental remediation to remove contaminated materials or soil.

Capacity Building – an approach to building capacity so that people, partners, institutions and nongovernmental organizations can achieve their goals and measurable and sustained results.

Carbon and equivalent carbon – refers to greenhouse gas emissions, in particular carbon dioxide (CO_2). The term also includes other identified greenhouse gases including: methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulphur hexafluoride (SF_6).

Carbon Dioxide (CO_2) – is a trace gas in the atmosphere that is a prominent greenhouse gas and is essential for photosynthesis in plants. Human-made CO_2, mainly from burning fossil fuels for heating, power generation and transportation, has contributed to the increasing concentrations of CO_2 in the earth's atmosphere.

Carbon Neutral – refers to achieving net zero carbon emissions to the atmosphere. Carbon neutral is achieved by both reducing and offsetting carbon emissions. The Greenprint emphasizes reducing carbon emissions as the primary method of becoming a carbon neutral community through increasing energy efficiency and renewable energy production. Remaining emissions can be offset through carbon sequestering, such as tree planting.

Child Poverty – a measure by the Children's Aid Society of Toronto to assess low income trends among children (age 0 to 17 years) and their families. Three datasets from Statistics Canada data are used: after-tax Low Income Measure, after-tax Low Income Cut-Off, and the before-tax Low Income Cut-Off.

Chronic Disease – a category of disease that is long-lasting and recurrent. Chronic diseases include: high blood pressure, arthritis, respiratory diseases like emphysema and asthma, high cholesterol, osteoporosis, diabetes, and cancer. The other main category of disease is acute diseases, which are rapid onset and short lived.

Climate Action Plan – the Greenprint has been designed to serve as a Climate Action Plan, outlining actions to continue and initiate for both the Corporation of the Town of Markham and the wider Markham community. It meets the criteria of Partners for Climate Protection (PCP) program's Milestone 3.

Climate Change – a long-term change in the statistical distribution of weather patterns over a period of time. In the Greenprint, this refers specifically to a change in climate which is directly or indirectly attributed to human activity that alters the composition of the global atmosphere and which is in addition to the natural climate variability observed over comparable time periods.

Closed-Loop – a method of materials management where no waste is generated. A closed-loop system can be achieved through reuse, recycling, and composting in addition to changes in manufacturing and consumption (where products are designed to be more efficient, durable, and easily

recycled and customers find alternatives to purchasing new products for individual use such as tool-libraries and car sharing).

CMA (Census Metropolitan Area) – is an area consisting of one or more adjacent municipalities situated around a major urban core. To form a census metropolitan area, the urban core must have a population of at least 100,000.

Community – refers to the group of interacting people that live, work and play in Markham, including but not limited to residents, businesses, non-government organizations, faith and ethnic groups and all levels of government services.

Community Food Centre – a model for addressing multiple food issues including meeting the needs of low-income residents, supporting local agriculture and combating diet-related illness through building community around the idea of healthy, good food for all. Programming at community food centres may include a food bank, drop-ins, community cooking, urban agriculture, pre- and post-natal nutrition, after school programs, sustainable food systems education, bake ovens and farmers' markets.

Community Garden – a single piece of land gardened collectively by a group of people. It is managed and maintained with the active participation of the gardeners themselves rather than by a professional staff and food production is encouraged. A community garden may be divided into individual plots or tended in a communal fashion, depending on the size or garden and members involved.

Community Kitchen – a public space where people can get together regularly to cook. Community kitchens offer the opportunity to share skills, socialize and reduce costs by purchasing collectively.

Community Supported Agriculture (CSA) – also known as Community Shared Agriculture is a model of agriculture and food distribution where growers and consumers share the risks and benefits of food production. A CSA usually involves customers purchasing a share at the beginning of

the growing season with a system of weekly deliveries or pick-ups of fresh produce over the course of the growing season.

Compact and Complete Community – a method of neighbourhood planning that focuses on having residents live, work and play in one area by increasing density and providing shops, schools, health services, entertainment, leisure and cultural services and employment within walking or transit distance.

Core Need Housing – housing that is in need of major repair, does not have enough bedrooms for the size and makeup of the household, or costs 30% or more of the household's total income. Core need households are also unable to rent an alternative housing unit that meets these standards without paying 30% or more of their income.

Committees and Boards – established by Council to be responsible for and make recommendations to Council regarding certain public services. Most committees include volunteer members of the public as well as members of Council.

Culture – includes the artistic, musical, literary, culinary, political and social elements that are representative of a community.

Cyclist – a person that uses a bicycle for transportation, recreation or sport. Cycling is an extremely efficient mode of transportation and provides numerous benefits compared to cars, including exercise, lower cost, reduced impact on environment (no greenhouse gases to operate, no air or noise pollution), reduced traffic congestion, easy parking, greater manoeuvrability and access to both roads and paths.

Dark Sky – a reduction of human-produced light pollution that creates multiple benefits including energy conservation, less ecosystem disruption, and increased visibility of the night sky (cultural value).

Disease Vectors – any agent (person, animal, or microorganism) that carries and transmits an infectious disease. Well known examples of diseases that require vectors are West Nile virus, Lyme disease, and Malaria.

Diversity – the inclusion and integration of member who have identifiable differences in their backgrounds or lifestyles that appreciates differences while promoting a common goal to live and work harmoniously.

Don River – is a major river in the Greater Toronto Area that has headwaters and tributaries in Markham.

Draft for Consultation – a draft of the Greenprint, Markham's Sustainability Plan that was made publicly available for comment between June and November 2010.

Eco Business District – an area of coordinated eco-business activity, where businesses focus on improving their environmental and social sustainability while making a profit. In these areas, businesses participate in collaborative approaches to improving their triple bottom line by utilizing both virtual and physical networks.

Economic Development – the actions taken within the community to create local economic opportunities and improve quality of life. It can include developing entirely new businesses or industries, adding value to existing sectors, strengthening capacity and improving local infrastructure to help the community achieve its full economic potential.

Economy - consists of labour, capital, land resources, and the economic agents (buyers and sellers) that participate in the production, exchange, distribution and consumption of goods and services of that area. A local economy supports job creation through the retention and growth of existing businesses and through the attraction of new businesses and investment.

Ecosystem – a biological system consisting of living organisms and the non-living components that interact with them such as air, soil, water and sunlight. Through biodiversity and the benefits it provides, ecosystems are the fundamental units for supporting life on the earth.

Ecosystem Services – the foundation for the natural processes of climate, water and air quality regulation, for the provision of food and resources, for cycling nutrients and providing raw resources and for our enjoyment of the natural world.

Eco-Tourism – any ecologically-based operation or activity that brings visitors to the parks, trails, conservation areas, watersheds, or other natural areas of Markham.

Edible Landscapes – the use of plants that produce food in places more commonly used for ornamental plants. Many food producing plants still provide ornamental qualities and can create both beautiful outdoor spaces while at the same time producing healthy, local food.

Effective Impervious Area (EIA) – the developed surfaces that prevent water from filtering through the ground naturally to recharge the hydrological system, including street surfaces, paved driveways, sidewalks, rooftops, and parking lots.

Emergency Shelters – places for people to live temporarily when they are unable to live in their previous residence for reasons such as natural or human-made disasters, domestic violence or sexual abuse, or homelessness.

Energy Descent – the reduction of oil use after the peak of oil availability and is a concept promoted by the Transition Towns movement. An Energy Descent Action Plan (EDAP) is a local plan for planning and preparing for energy descent. It goes well beyond issues of energy supply, to look at across-the-board creative adaptations in the realms of health, education, economy and much more.

Environment – the Greenprint references both the natural and built environments. The natural environment is all living and non-living things that occur naturally in Markham, such as native plants and watersheds. The built environment refers to all the human constructed or human influences things in Markham, such as exotic plants and potable water systems.

Equity – when residents have equal opportunities and rights regardless of age, gender, sexual orientation, religion, ethnicity, income level, health and physical or mental ability.

Extended Producer Responsibility - a strategy designed to promote the integration of environmental costs associated with goods throughout their life cycles into the market price of the products by holding producers liable for the costs of managing their products at end of life.

Fatal Light Awareness Program (FLAP) – a non-profit conservation organization dedicated to the protection of wild birds in built environments, in particular during migration.

Financial Framework – the approaches and methods in the Greenprint to fund implementation of the plan and promote sustainability in Markham.

Flexible Housing - a practical approach to designing and building housing that allows residents to convert space to meet their changing needs and brings together the principles of adaptability, accessibility, affordability and healthy housing.

Food Bank – a non-profit, charitable organization that distributes mostly donated food to members of the community. Food banks in Canada originated with the economic recession of the 1980s and have since become permanent institutions.

Food Security – the ability of community members to access food that is safe, culturally appropriate, affordable and healthy.

Food System – includes production, processing, transportation, distribution, retail, consumption, celebration and nutrient recovery.

Fossil Fuel – hydrocarbons formed from the remains of deal animals and plants exposed to heat and pressure over hundreds of millions of years and includes natural gas, coal and refined crude oil (gasoline and diesel).

Gas Tax – a Federal Government fund that supports municipal infrastructure projects that promote cleaner water, cleaner air, or reduced greenhouse gas emissions. Predictable, long-term and entitlement-based, funding is helping Ontario municipalities plan for sustainability.

Governance - the systems and processes of management that direct an organization's behaviour and conduct. Governance covers accountability, auditing, transparency (openness), reporting and disclosure, responsibilities and representation of various stakeholders (including shareholders, board of directors, advisory boards, employees, etc.) as well as charters, by-laws, and policies documenting the rights and responsibilities of all parties. Governance often includes strategy, risk management, and compensation, benefits, and evaluation

Green Energy Act – the Government of Ontario's legislation that aims to spark growth in clean and renewable sources of energy such as wind, solar, hydro, biomass, and biogas in addition to saving and manage household energy through conservation measures and creating new jobs in the green energy sector.

Green Jobs (United Nations) – jobs that help to protect and restore ecosystems and biodiversity, reduce energy consumption, decarbonize the economy, and minimize or altogether avoid the generation of all forms of waste and pollution.

Greenbelt – legislation by the Province of Ontario to protect 1.8 million acres of working countryside in the Greater Golden Horseshoe and extending to the trip of the Bruce Peninsula.

Greenhouse Gas (GHG) – a gas in the earth's atmosphere that absorbs and emits thermal infrared radiation. In the Greenprint, the term refers specifically to the gases produced by human activity and are therefore contributing to human-made climate change, including CO2, CH4, HFCs, N2O, PFCs, and SF6 .

Greenprint – the name for Markham's Sustainability Plan introduced by Mayor Frank Scarpitti in his 2006 inaugural address.

Greyfield – describes economically obsolescent, outdated, failing or underused real estate assets or land that typically does not require remediation.

Gross Domestic Product (GDP) – refers to the market value of all final goods and services produced within a country in a given period, It is a traditional indicator of a country's standard of living.

Habitat – the natural environment in which plants and animal live or the physical environment that surround (influences and is utilized by) a species population.

Health – the general condition of a person in mind, body and spirit, usually meaning to be free from illness, injury or pain.

Heat Island Effect – the phenomenon when an urban area is significantly warmer than the surrounding rural area. The main causes are the modification of the land surface by urban development which uses materials which effectively retain heat and waste heat generated by energy usage.

Heritage Preservation – an endeavor that seeks to preserve, conserve and protect buildings, objects, landscapes or other artifacts of historic significance.

Higher-Order Transit – bus or light/heavy rail that operates in its own right-of-way or in a priority situation, and therefore moves more efficiently than the regular flow of traffic and can carry large numbers of people quickly and comfortably.

Housing Tenure – refers to the financial arrangements under which someone has the right to live in a home or apartment and includes ownership, rental, special needs, rental (geared-to-icome) and emergency shelter housing.

Housing Type – refers to the variety of configurations for housing, including single-detached, semi-detached, townhouses and apartments.

Hydrological System – includes groundwater, streams, rivers, lakes, ponds and wetlands that are moving by the physical processes of evaporation, condensation, precipitation, infiltration, runoff and subsurface flow.

Identity – includes the physical features of the community, from natural and built heritage (old buildings, main streets, landscapes) to the designs of new public realm developments (parks, streets, bridges, public buildings). Identity also includes less tangible aspects of a community like reputation (accomplishments, track record) and sense of community (connections, neighbourliness, sense of belonging).

Implementation – refers to the carrying out of the Greenprint and includes plans, policies, projects, initiatives, and financial tools by both the municipal government and community that align with the Greenprint's priorities and recommendations.

Indicator – something that helps you understand where you are, which way you are going and how far you are from where you want to be. The Greenprint includes indicators for each of the 12 priorities that measure progress toward building a sustainable community.

Infrastructure – the basic physical and organizational structures needed to facilitate the functioning of a community. Examples include roads, water supply, sewers, electrical grids, and telecommunications.

Integrate – refers to the coordination of all aspects of community planning offered by the Greenprint. An example is a decision or action that contributes to multiple sustainability priorities and does not negatively impact any of the 12 sustainability priorities.

LEED – stands for Leadership in Energy & Environmental Design. It is an internationally recognized green building certification system, providing third-party verification that a building or community was designed and built using strategies intended to improve performance in metrics such as energy savings, water efficiency, CO_2 emissions reduction, improved indoor environmental quality, and stewardship of resources and sensitivity to their impacts.

Live-Work Development – a method of community planning that offers both residential and employment opportunities in the same neighbourhood.

Local Food Strategy – a plan that will align with the Greenprint's Food Security priority and provide detailed direction on how Markham can improve all areas of the food system, including production, processing, distribution, consumption and food waste.

Low Carbon Economy – an economy that has a minimal output of greenhouse gas emissions. It is a proposed method to help avoid catastrophic climate change and is a step towards the more advanced zero-carbon society and renewable-energy economy.

Low Income Cut-Off (LICO) – a calculation by Statistics Canada that is intended to convey the income level at which a family may be in straitened circumstances because it has to spend a greater portion of its income on the basics (food, clothing and shelter) than does the average family of similar size. The LICOs vary by family size and by size of community.

Main Street – refers to the primary retail street in a neighbourhood that is the focal point for shops, retailers, services, entertainment and businesses.

Materials Management - refers to the conservation and efficient use of all materials used in the community—from the construction of new neighbourhoods to meeting our day-to-day needs.

Mitigation – a method of planning for climate change that focuses on reducing greenhouse gas emission that contribute to climate change.

Mobility - refers to the modes of transportation available, including walking (and wheelchairs, strollers and other mobility devices), cycling, transit (including buses, rail, and light rail), private vehicles and trucks for transporting commercial goods and services

Mode of Travel – a term that refers to the method to move from one destination to another and includes private vehicle, rail, public transit, and active transportation (walking, cycling, or rollerblading).

Mosaic Index - measures the number of foreign-born citizens in a community, is recognized as an indicator of openness and diversity.

Multiculturalism – the appreciation, acceptance or promotion of multiple cultures in the community, usually at the organizational level (such as schools, businesses, or government).

Multi-Modal – describes a journey that uses more than one method of reaching a destination, such as cycling to and from bus stops or walking to an arranged carpool.

Native Plants and Trees – describes plants and trees that have developed, occur naturally or existed for many years in an area. In North American it often refers to plants that were present before European colonization.

Natural Heritage – the legacy of natural objects and intangible attributes encompassing the countryside and natural environment, including flora and fauna, scientifically known as biodiversity, and geology and landforms (geodiversity).

Naturalness – a measure of the extent and quality of the vegetated landscape. All vegetated areas (forests, woodlots, meadows, wetlands, lakes, ponds, rivers, agricultural areas, playing fields, parks and developed urban areas) can be identified and monitored over time to ensure there is minimal loss of vegetation.

Neighbourhood – a geographic subunit of the Markham community that meets a full range of ordinary human needs. In its ideal form, the neighbourhood is a compact walkable urban pattern with a balanced range of living, working, shopping, recreational, and educational programs.

Non-Potable Water - is water that is not of drinking water quality, but which may still be used for many other purposes, depending on its quality.

Oak Ridges Moraine – a landform unique to southern Ontario. Permeable sands and gravels, deposited in random patterns by glacial melt-waters between two lobes of ice, now collect precipitation which slowly recharges the deep aquifers below the ground and is the headwaters for 64 rivers or streams.

Obesity – a medical condition in which excess body fat has accumulated to the extent that it may have an adverse effect on health, leading to reduced life expectancy and/or increased health problems

Objective – describes the overarching actions that will be taken as part of Greenprint implementation.   Each of the sustainability priorities has one or more objectives, and each objective has a number of initial recommendations that describe more specific actions.

Official Plan - describes council's policies on how land in the community should be used. It deals mainly with issues such as where new housing, industry, offices and shops will be located, what services like roads, watermains, sewers, parks and schools will be needed, when, and in what order, parts of your community will grow and community improvement initiatives.

Open Spaces – areas of land without human-built structures and can include areas of protected or conserved land, greenways and corridors, and public space such as piazzas, plazas, parks and courtyards.

Peak Oil – is the point in time when the maximum rate of global petroleum extraction is reached, after which the rate of production enters terminal decline. Currently most modern transport, agricultural, and industrial

systems depend on the relative low cost and high availability of oil. The results of post-peak production decline and possible severe increases in the price are predicted to have negative implications for the global economy.

Pedestrian – to a person traveling on foot, whether walking or running, on any human powered vehicle that is not a bicycle and operating self-propelled wheelchairs by reason of physical disability.

Petroleum-Based Fuels – are refined from crude oil, a naturally occurring, flammable liquid, and include gasoline, diesel fuel, kerosene, and jet fuel.

Pillars of Sustainability - the Greenprint is founded on the three pillars of sustainability; environmental health, economic vitality and social and cultural well-being, which are integrated across all 12 sustainability priorities.

Pipe Technology – an example of alternative technologies for managing material wastes which collects waste from bins by way of an automated underground system. In Markham, the water supplied to households, commerce and industry is all of drinking water standard, even though only a very small proportion is actually consumed or used in food preparation.

Priorities – twelve areas identified through the Greenprint consultation that are important to maintain and improve upon for the long-term well-being of the Markham community.

Public Realm – any publicly owned streets, pathways, right of ways, parks, publicly accessible open spaces and any public and civic building and facilities.

Recommendation – provides greater detail and direction for implementation on how to achieve the Greenprint's objectives.

Regeneration – refers to the redevelopment of areas in decline based on renovation and investment by local governments and businesses to bring economic, social and environmental benefits.

Renewable Energy - the use of energy from a source that does not result in the depletion of the earth's resources whether this is from a central or local source.

Resilience – the capacity of the community to adapt, withstand, rebound, and transform (if necessary) in response to, or in anticipation of, disruptive events of all types and magnitudes.

Re-skilling – training to provide basic, new or improved skills, in particular that promotes greater self-, neighbourhood and community sufficiency.

Retail Food Environment Index – a ratio describing the relative abundance of different types of retail food outlets in a given area. The RFEI is constructed by dividing the total number of fast-food restaurants and convenience stores by the total number of supermarkets and produce vendors (produce stores and farmers markets) in the area. The result is the ratio of retail food outlets that offer little in the way of fruits and vegetables and other healthy foods to those in which fruits and vegetables are readily available.

Retrofit - the addition of new technology or features to older systems, such as the improving of existing buildings with energy efficiency equipment.

Revolving Fund - fund or account whose income remains available to finance continuing operations without any fiscal year limitation.

Rouge Park – a park established in 1995 that consists of 50 square kilometres of parkland in Markham and neighbouring municipalities of Toronto, Pickering and Stouffville. The park promotes ecological preservation and restoration in addition to near-urban agriculture.

Rouge River - a major river in the Greater Toronto Area that has headwaters and tributaries in east Markham. Also the watershed of the Rouge Park.

Shelter – refers to the housing options available to residents. An appropriate and adequate range of housing choices including diversity of housing type, tenure and affordability level, help to create more complete neighbourhoods that meet the needs of all residents regardless of age, income level, ability, culture and family composition

Small Plot Intensive (SPIN) farming – is a non-technical, easy-to-learn and inexpensive-to-implement vegetable farming system that makes it possible to earn significant income from land bases under an acre in size.

Smart Buildings - buildings featuring extensive use of sensors, microprocessor controls, and automated systems that are able to detect, diagnose, and control the response to varying environmental conditions or operational requirements.

Social – refers to the interaction of people with others and to their collective co-existence. It includes attitudes, orientations, or behaviours which take the interests, intentions, or needs of other people into account and can refer to the redistributive policies of the government which aim to apply resources in the public interest.

Social Media – media for social interaction, using highly accessible communication techniques. Social media tools such as Facebook, Twitter and blogs use web-based and mobile technologies to turn communication into interactive dialogue.

Social Planning – a process that helps communities identify strengths and weaknesses and determine ways to improve the quality of life in the community.

Special Needs Housing – a unit that is occupied by or is made available for occupancy by a household having one or more individuals who require accessibility modifications or provincially-funded support services in order to live independently in the community.

Sustainability – is the capacity to endure. It is the potential for long-term maintenance and improvement of well being, which has balanced environmental, economic, and social dimensions.

Sustainability Plan – a municipal government document co-created with the community with a shared long-term vision of the future that outlines out and integrates actions that improve the economic, social, cultural and environmental well-being of the community.

Systems Thinking – the process of understanding how things influence one another within a whole. In nature, systems thinking examples include ecosystems in which various elements such as air, water, movement, plants, and animals work together to survive or perish. In organizations, systems consist of people, structures, and processes that work together to make an organization achieve its goals.

Talent Index – measures the percentage of the population with a University certificate, diploma or degree (or higher).

Transit – also known as public transportation is a shared passenger transportation service which is available for use by the general public. Public transport modes include buses, light rail, and subways.

Transportation Demand Management – the application of strategies and policies to reduce travel congestion (specifically that of single-occupancy private vehicles), or to redistribute this congestion in space or in time.

Trees for Tomorrow – an ongoing Markham tree planting program that started with a commitment to plant 75,000 trees by the end of 2010 that was exceeded with 125,000 trees planted by May 30, 2010.

United Nation's Human Development Index – a composite statistic used to rank countries by measure of life expectancy, literacy, education and standards of living for countries worldwide. It is used to distinguish whether the country is a developed, a developing or an under-developed country, and also to measure the impact of economic policies on quality of life.

United Nations Intergovernmental Panel on Climate Change – a scientific intergovernmental body tasked with reviewing and assessing the most recent scientific, technical and socio-economic information produced worldwide relevant to the understanding of climate change. It provides the world with a clear scientific view on the current state of climate change and its potential environmental and socio-economic consequences, notably the risk of climate change caused by human activity.

Urban Agriculture – the practice of cultivating, processing and distributing food in, or around a village, town or city. It is integrated into the urban economic and ecological system such as the use of urban residents as labourers, use of typical urban resources (like organic waste as compost and urban wastewater for irrigation), direct links with urban consumers, direct impacts on urban ecology, being part of the urban food system, competing for land with other urban functions, being influenced by urban policies and plans, etc.

Urban Canopy – trees within the developed areas of the community. Trees and similar vegetation are known to bring multiple benefits to urban areas including reduced heat island effect, improved air quality, support for urban wildlife, and enhanced public realm.

Vision – the over aching statement that guides the Greenprint and is supported by the 12 sustainability priorities.

Water Infrastructure – the human made systems that deliver drinking water, convey sewage, dain surface water, control flooding and irrigate. It can include pipes, storage reservoirs, pumps, filtration and treatment equipment, storm water ponds, and ditches.

Watershed – an area of land where surface water from rain and melting snow or ice converges to a single point, usually the exit of a basin, where the waters join another waterbody, such as a river or lake. The watershed includes both the streams and rivers that convey the water as well as the land surfaces from which water drains into those channels.

Welcome Centres – provide immigrant services as a one-stop service under one roof. The centers are designed to guide and support immigrants through the maze of information and resources in York Region.

Wildlife Corridors – an area of habitat connecting wildlife populations separated by human activities (such as roads or development). This allows an exchange of individuals between populations, which may help prevent the negative effects of inbreeding and reduced genetic diversity (via genetic drift) that often occur within isolated populations.

Wildlife Rehabilitation – the process of removing from the wild and caring for injured, orphaned, or sick wild animals. The goal of wildlife rehabilitation is to provide the food, housing and medical care of these animals, returning them to the wild after treatment.

World Café – a public engagement method which makes use of an informal cafe setting for participants to explore an issue by discussing in small table groups.

World Health Organization Age Friendly Cities – the Age-friendly Environments Programme is an international effort by WHO to address the environmental and social factors that contribute to active and healthy ageing in societies. An Age-friendly City is an inclusive and accessible urban environment that promotes active ageing.

Zero Waste – a philosophy that encourages the redesign of resource life cycles so that all products are reused and waste is eliminated.

Appendix A: Greenprint Process and Community Engagement

Community engagement was essential throughout the development of the Greenprint and included the following major events and activities:

- Social Sustainability Workshop, June 2008

- Youth Engagement, October – December 2008

- World Café, February 2009

- Sustainability Fair, October 2009

- Stakeholder Workshop, December 2009

- Stakeholder Workshops, April 2010

- Greenprint Draft for Consultation Launch, June 2010

- Sustain-a-licious, November 2010

- Community Outreach for Draft for Consultation, June 2010 – April 2011

- Staff Engagement, June 2010 – April 2011

These events were complemented by online engagement, through Markham's Sustainability Blog (http://markhamsustainability.wordpress.com), Facebook (www.facebook.com/markhamgreenprint), and Twitter (http://twitter.com/SOmarkham).

Documentation of the events and feedback received during the process of developing the Greenprint, Markham's Sustainability Plan is available for download at www.markham.ca/sustainability.

Appendix A: Greenprint Community Engagement

The Greenprint, Markham's Sustainability Plan, included extensive community engagement during its preparation and revisions.

A brief summary of the Greenprint process and engagement can be found in the first chapter of the plan, available at www.markham.ca/sustainability. The detailed notes, transcribed comments, event agendas and meeting calendars in this document provide more detail to the summaries.

Welcome by the Mayor, General Introductions

- Green Print: a community sustainability plan for Markham (economic, environmental, and social)
- Canada's high tech capital (high tech, life sciences, Honda head office & Canadian distribution plant, recent business mission to China, medical devices research centre [trying to attract to Markham])
- Local Food Plus for the town's caterer (support to local farmers in sustainable practices, local food buying)
- Want to achieve 70% in waste diversion; now moving to zero waste in city events
- Very welcoming to people from all parts of the world – highest percentage of visible minorities in all of Canada
- Opportunities to celebrate cultures of the city (cultural events) but recognize that it's 'not enough to open doors and let everybody come here and leave it to them to figure out where to go from here'
- Inclusivity Action Plan, Phase 2: ensure that integration into community happens more quickly; Welcome Centre – opened first one last fall
- Partnered with Maytree Foundation to ensure committees and boards of city of Markham reflect the makeup of the area
- Debate over whether Markham is a town or a city, how to define what the community is

9:00-10:00am

Presentation & Discussion - "Social Sustainability"

(Barbara Rahder & Patricia Wood)

- Description of the Social Sciences and Humanities Research Council (SSHRC) funded project, which while focused on other Canadian cities will offer conceptual insight for the Markham context, the cities of focus for the research project are Toronto, Montreal, and Calgary and the areas of study are social sustainability, diversity, and public space
- The goal of the session is to engage in discussions on social sustainability with stimulation coming from the presentations but not limited to the presentation topics
- There are concrete ideas for the economic and environmental pillars of sustainability, but the social sustainability pillar is more complex; it is described using adjectives and covers a wide-range of topics
- Social sustainability includes knowledge of place, social history, who your neighbours are
- What are we trying to sustain? Do not want to keep the status quo, instead need to address equity issues through an environmental justice and spatial justice framework

- Bioregionalism – defined as attachment to place; the more you know about the place you live the more attachment you have to it and the more you value it
- Environmental space – defined as the minimums and maximums to meet the biological needs of humans
- Community space – defined as the minimums and maximums to meet the social/cultural needs of humans, such as access to space to talk/discuss, political space, access to community services, affordable housing
- Environmental and economic indicators are often quantitative, while social indicators are qualitative; there have been attempts to quantify social indicators but they sometimes lose something in translation since collective endeavours cannot be easily measured individually
- Community based planning means rethinking the tenets of planning – from managed planning to facilitated planning
- Sustainable Seattle – social indicators example that came out of a community consultation process; the process of creating a set of indicators is unique for every community and therefore the Seattle indicators cannot just be copied; criteria for the indicators developed in Seattle were:
    - Relevant;
    - Reflect community values;
    - Attractive to local media;
    - Statistically measurable;
    - Logically or scientifically defensible;
    - Reliable;
    - Leading; and
    - Policy-relevant
- Cultural mapping does not take social networking into account for social/cultural planning exercise recently conducted, has been overlooked
- Malls as a social networking place but there is no housing or community services closely situated near most malls
- Community centres are now built large with a range of services offered within a single facility (libraries, arenas, athletic facilities) which requires driving to in a private vehicle; there used to be smaller community centres that offered fewer services but they would be spread throughout the populated areas of the municipality; the shift to larger, centralized community centres linked to economy of scale in the 1990s where money could be saved by building larger centres with all services in one spot; need to find a better balance for new community centres where the financial considerations are balanced with social and environmental considerations
- Parks as a place where neighbourliness occurs, including smaller neighbourhoods parks, a park opening over the weekend drew in 200 people from the neighbourhood
- Consider the design of neighbourhoods themselves, court design for streets can encourage sociability between neighbours within the courts, serve as a place for kids to play and act as mini public squares, courts can also breed social isolation because there is a disconnect from the rest of the community, benefits to the court as opposed to benefits to the community as a whole
- Europe as a model where they need to create their own public space because of density, different concepts of public space
- Not just about providing public space but also about providing a mindset, isolation of backyards and long commutes to work mean that people are not forced to interact
- Social sustainability and bioregionalism as a way to keep people in the community; need to consider who we are engaging and how to reach out to them during the engagement process; consider the different social gathering places for the younger generation like mall, skateboard parks, the internet, etc.

- Public meetings as consultation systematically exclude people, need to consider the work schedules of those you are trying to engage and have realistic expectations based on these time constraints; consider how people decide where to live, they move there for economic reasons but decide to stay there for social attachment; a group of people sitting around a room like this don't know about the generation that will be around in 25 years
- The strategies of engagement for the Green Print – early phases of planning for the consultation, first step will be the online youth consultation first with Delvinia, will be interactive and include Facebook, MySpace, Flickr, blog connected to the website, focus on 11-17 year olds, launch in the summer with ramp up to engage schools in the fall; will be connecting with schools, don't want to assume what youth need in order to want to stay in Markham – What will keep them in the community? What schools and social gathering places do they needs? What work might keep them here? How do you get around town? Are there things here for you to do at night? Want to develop and retain youth, leaders, knowledge in the community
- Other side of Green Print consultation is focus groups, town hall meetings, business breakfasts, lunches, dinners, BBQs for a wider audience that will happen the end of 2008 and early 2009 with the Green Print to be completed at the end of 2009
- Diversity consultations are now starting to happen at the Town, drawing on Mayor's Youth Taskforce that recommended focus groups, assessing the feeling of belonging, face-to-face consultations, looking at services/programs/access including what is working and what changes are wanted within the Town and the services it delivers
- Recommendations about tapping into school boards for consultations
- Social side of sustainability considered to be tough when you're trying to deliver services and programs that follow a process; exclusion may occur depending on what groups are chosen to consult and therefore a balanced approach is required to try to reach a shared vision
- It is important to talk to people to see what they want; if consultation can't make a difference then it is often better not to do it because it could breed cynicism and alienation, can miss nuances and organic aspects of the questions
- Discussion of generational differences and the possibility that youth are "colour-blind"
- Need to watch for contradictions in consultations, i.e. youth are concerned with space away from adults and safety, consider how to access people who wouldn't join groups and associations
- Need for a balance of types of measures between objective and subjective and the importance of the public participation in determining indicators to ensure that they match local needs and are seen as legitimate measures; they need to come out of the process and the indicators should not be imposed
- In the cultural master plan there has been an attempt to go beyond the usual suspects, and methods have included consulting a wider range of groups, such as ESL groups, and they are trying to be careful with the surveying to get at where people are coming from and what they are comparing it to
- The isolation of individuals can be considered as a key problem in the GTA, including underemployment and discrimination, and this extends to Markham, includes long commutes to work; the idea of work, live, play is great but not many people have that
- Note that youth are not the only group that needs to be consulted about the future, also need to consider the aging population that needs facilities and how these facilities will meet the needs of the baby-boomer generation and their life experiences, these facilities will be needed within the next 20 years

10:00-11:15am

Presentation & Discussion - Diversity

(Susan McGrath & Ranu Basu)

- 2006 census data shows that there has been a growth of diversity in the Town of Markham, with 1/3 Chinese and 2/3 as visible minorities, 60% do not have English/French as mother tongue, 70% live in private dwellings, $450,000 average cost of a private home
- Council in Markham does not reflect this diversity
- Compare the mapping of facilities with the mapping of facility usage
- Can hire persons in various groups to reach out to other members of the group; need to consider the needs of persons you are consulting, including space, childcare, time availability
- There are different levels of networking in different spaces; public spaces can be exclusionary or inclusionary
- The geography of youth, can be discovered through mapping
- The census can reveal who is missing from a consultation
- One of the main questions to investigate is whether the services provided meet the needs of the neighbourhood
- Need to look into where people are networking socially and what events allow for a celebration of diversity; need to look into who is excluded and how they can be included
- Economic diversity in many cases needs to be considered more than racial diversity, need to be aware of ghetto-izing the poor, often density is equated with poverty
- Attempt in Markham to try to have a mix of housing within neighbourhoods, such as Angus Glen where there will be townhouses, apartments, and million dollar homes
- Observation that there are more persons living within a single family home in areas of poverty (i.e. multiple families in a single home) – this is happening mostly in South Markham, the same area where there are the most immigrants (see presentation maps)
- Example of Newmarket, which is also undergoing rapid growth and targeting new groups
- Issue of building single family homes first in an area meant to be mixed use and then the new residents will not want the higher density that is scheduled to be built later – example Cornell
- Cornell is characterized by the front-loading of homes on the street – considered the most successful new community, most active civic group is from this area, most engaged, New Cornell Centre will be high-rises and mixed use, will be an interesting experiment
- Rapid growth and recent immigrants are current issues – targeted 'integration' efforts often emerge to address only recent immigrants and not the wider community that also needs to adapt to growth and immigration
- Question regarding what Markham is doing for a broader diversity strategy – response that internally 12 business units have staff training regarding diversity/culture/identity, considered an evolutionary process that will take 3-5 years
- Observation that in many instances there is little or no evaluation of such training activities so that there is no evidence that it works – need a baseline, need to be transparent, and need to measure for successful training evaluation to see if training is making a difference
- Another initiative in Markham is a cultural series at the library in the fall talking about various faiths, one topic addressed a 9/11 book (*Hatred's Kingdom* on Wahhabism), needs to be dealt with carefully
- Consider the multiple scales of inclusion and exclusion – for example the neighbourhood court may include residents but exclude anyone outside of the immediate homes of the court
- It is unrealistic to expect everyone to get along – the goal should be to make sure that there is not a fear of segregation, that there is a sense of smaller community, and a means to access the

larger community by ensuring that the diversity of social needs are met and opportunities are provided

- Need a variety of opportunities to engage with other people, diversity of opportunities to engage in a variety of different situations
- Need to recognize different life circumstances and different understandings of "family", i.e. no longer only the nuclear family yet 2/3 of homes are single detached, need to think about accessibility and affordability
- Youth – need to consider geographic isolation, race/ethnicity, communication, transportation choice – a growing number of youth feel alienated or disengaged, discrimination is widespread, excluded from wealth and opportunities
- Observation that it is easier to choose your own community through communications and transportation options now available, no longer have to stay with the community that is ascribed to you
- Understanding of racism – A reaction to change? A fear? A lack of understanding? Innate desire of who we want to spend time with? Exclusion?
- A survey showed that in Canada 95% of white people and 20% of visible minorities thought that Canada was less racist than the USA
- In a meeting with older white people in Markham a discussion about values (i.e. 'they' don't share our values) – is it a racist attitude or a reaction to change as you get older?
- Library has staff values – treat others as you would like to be treated and they meet regularly to talk about them, but it is still a struggle since the idea is to move beyond established comfort zones
- Understand fear – *Faces of the Enemy* (book on war propaganda) – we live in a culture of fear, often people are bombarded with messages of fear, immigration issues related to fear of losing one's place in society since 'they' may be better educated, work for less money, do harder jobs, the fear is stimulated by the media
- Need to talk about fear of diversity and these other topics openly in the public, esp. for planning, and do not sweep them under the rug if working for social sustainability, this is a challenge to do at the municipal level
- On immigration, there is immigration 'we' like and immigration 'we' don't like, there are economic aspect of issues
- Understand poverty – i.e. service employees, nannies – where do they live, how do they commute, who takes the bus, how do we categorize poverty when nobody wants to think of themselves as working class or poor
- How do we produce counter-narratives that challenge media depictions? Level of discussion in media is so shallow that it doesn't get to real issues.
- What can we actually do to address racism: urban/non-urban divide noted, diversity of our everyday life in urban areas – e.g. public transportation, difference in urban areas is contact that humanizes other groups, example from Ottawa of community soccer tournament – ethno-racial-based teams, 'safe' way to interact
- But the type of contact is important so that the whole community is depicted rather than just a partial community, certain types of contact can exacerbate discrimination. Need contact of equal status and working toward a common goal
- Need to create those types of atmospheres – competitive environment can increase tensions
- 85% of coverage of African Canadians in media centres on sports, entertainment, and crime (50% for white Canadians too). White person who commits a crime doesn't represent the whole community, but is rather seen as a 'sick' individual
- Visible minorities have tensions between each other as well, not just white versus everyone else

- Question of how to engage people who aren't already engaged, diversity within schools has helped in relation to issues of 'tolerance' but schools are becoming increasingly challenging, to promote diversity consider diversity in professions like teachers and police officers
- Moving from Toronto to Windsor in 2003 – noticed differences in stages of work on anti-racism initiatives, etc.
- Racism has consequences in day-to-day life, not just about liking people but also looking at employment, housing, etc.
- Need to look within/between immigrant groups on different indicators, especially on access to settlement resources and outcomes. Who is using services? Why and why not? Need to think about how to make particular services available to particular groups.
- People who do the planning don't 'look like the United Nations' and work from their own experience
- Diversity within diversity – classed, raced, gendered
- Reactive social services planning for social housing an issue, could be proactive i.e. be aware that childcare services, health services, etc. are part of a complete community
- Disconnect between the 2 tiers of government, especially in case of Vaughan/Markham that have very different demographic concerns than the more rural parts of York Region, in Markham there is no discussion of homelessness because housing is seen as a domain of the province so there is a perception that there is no need

11:15am-12:15pm

Presentation & Discussion - Urban Form: From Transit to Housing to Workplaces to Parks
(Liette Gilbert & Barbara Rahder)

- This discussion includes buildings, space and connection (how people and money move)
- Need to look at how growth is happening and why people come here; in part it is the relationship with Toronto, despite high level of economic independence in Markham
- Neighbourhoods and diversity occur within urban form, but relationships change within difference spaces i.e. malls as a place to interact but parking lots a disadvantage
- We cannot change by doing the same thing over and over again
- In Markham there is a lack of options beyond single detached homes and condos
- There has been rapid growth, so there are natural area plans developed to preserve parts of the environment, and the rest is developed
- There are different layers of services and programs that need to be adapted to the needs of the people in different parts of the community, i.e. transportation, affordable housing
- Need to question what brings people to Markham – quality of life, proximity to nature, property values
- There is more attention being paid to green architecture
- Cornell is an example of the streetscape's role
- Design/ Planning and the implementation gaps i.e. affordable housing tends to be delivered last, transit oriented communities built but without transit services in place
- In the next generation we should plan for the future, or for the present with flexibility for the next generation to adapt it
- Gender and Urban Form – Some women are represented and able to access services

- Spatial distribution of community benefits, clear association of low income women of colour, violence, race, ethnicity, income; these marginalized women are overworked and underpaid, unable to participate in current planning system even through they often want to participate
- Public Space and Gender - suburbs have been designed based on a model where there are schools and not jobs and industrial areas with no childcare, this separation of uses does not work for women
- Spatial planners consider themselves gender neutral despite the diversity of interests they have, including race, class, gender, ability, age
- Question of how do we plan for a future generation that we don't know – plan for commonalities that we know are going to exist – around life cycle (children, students, adults, older people)
- Transportation – was by far the largest issues in relation to the quality of life in surveys since there is congestion and a lack of public transit options, the private car facing a difficult future and the need for alternative transportation is obvious i.e. consider that the one bus size may not fit all the needs of every area, consider different bus sizes
- Integrated planning is the idea that it is possible to do traditional land use planning while considering all the service needs of the new residents, i.e. planning for housing and services at the same time based on knowing who is moving into a neighbourhood, including transit
- Transportation poverty – it is important to keep in mind that it doesn't matter if a community offers services if its residents don't have a way to access the transportation to get there, solutions include planning on a human scale, transportation efficiency, autoshare/ zipcar parking facilities so that alternatives to car ownership are available, planning with the rising gas prices in mind because at some point the price will pass a threshold of accessibility
- Reality is that people don't live/work/play in the same area and people want to get to further places to enjoy other opportunities, location of fiends and relatives important, want to retain mobility that we have all grown used to
- Malls as an important place for seniors and youth to interact, consider housing over the mall, areas of recreation, youth and community services located in malls, in some instances there are already instances of housing built near big box stores and residential on top of retail for a active retail community/retail lifestyle, then there is a captive audience for the retail – some developers in Markham Centre are creating mixed use retail, restaurants, and residential, example at 404 and Steeles – but Smart Centers aren't interested in combining this in Markham
- There is a tradition of land use planning where compatible uses could go together and then it changed to a separation of uses – we need to go back to mixed use and revisit the regulations that separate land uses
- Need to look at existing urban form and how to create featurse within the existing form, cannot only look at how to make changes to new developments
- Consider the extent that the building code limits creativity, i.e. prevents building tiny homes, issues with 2nd suites and multigenerational homes
- Markham is generally a new community with 1st generation homeowners based on a system of economic/class and cultural sameness because they are seeking to build equity through land value, there is not a lot else in place to bring value to the land unlike Toronto where there are other elements that make an areas attractive
- 2nd suite bylaw – threatens economic sameness despite other diversity – there is a need for the underlying conditions to change first for value to come from something other than sameness and a key is to look at intensification areas to create the needed mix and transit options – will have to deal with resistance from the 1st generation homeowners and hope that change will

come from intensification; similar concern with transit because there is a link of taking transit with people who are not the same economically/culturally
- In Markham there is the city vs. town debate – need to recognize that there are not the same needs over the whole community, possible to fulfill the political agenda by using the city idea of neighbourhoods and that will help break down the pressures to do the same thing across the entire Town
- There is a need to draw on global examples and learn how to make important projects happen much more quickly
- Cannot proceed with incremental changes because as we chip away the work is leaving us in their dust
- Despite resistance to change Markham is a city, a comparison to Mississauga in the 1960s
- There is a challenge to get services into existing suburbs – in Toronto communities many areas that are now urban started as suburban and incremental changes allowed for intensification but the street pattern is hard if not impossible to change
- Madrid was designed for the pedestrian and Markham is designed for the car, malls, and fridge rather than for humans, and it cannot change until the population supports transit
- The urban form can have both negative and positive health impacts i.e. car dependence in less dense areas, congestion in denser areas
- There is a need to change the language of "intensification" since that term makes it hard to convince people that it is a good/desirable thing
- Can't wait for evolutionary process to happen: must have public transit and affordable housing, Markham is losing the best and brightest to Toronto, want them here to build this municipality
- Council has to at some point take seriously its responsibility to the businesses in the community to provide more affordable housing, public transit so that the 'best and brightest' will stay and/or come here to work and live, rather than just listening to home owners who say they don't need public transit or higher density housing

1:30-2:30pm

Presentation & Discussion - Education and Youth

(Ranu Basu & Scot Wortley)

- Libraries and local schools are key spaces of education
- Local schools are publicly funded, compulsory, one of the few opportunities for people from diverse groups to come together
- Schools are a space for community interaction, have the potential to be a hub of a local neighbourhood, helps to build social networks across the city
- Within both school boards there are policies for equity
- There are a number of forms of social capital at schools, which includes intramural, parental volunteering and fundraising, neighbourhood/community resources like libraries, and extrinsic which is beyond the school and links up to other forms of interaction
- Important to identify how schools understand diverse communities, how communities understand schools in they role that they play, obstacles to accessing education for community groups, role for young people and as places for young people
- There is a lot of anxiety over young people and it has been the same for generations, there is education/achievement side and the youth crime/violence side
- There is more post-secondary education but there are also youth falling behind

- Youth crime is down overall but there are disturbing trends such as a significant increase in the involvement of youth in homicide, high level of violence, issues of poverty and geographic isolation considered source and there are indications that it may get worse based on economic indicators
- The solution is education
- The tough on crime approach has been research and it doesn't work in the long term because it takes money away from community development, deterrents often don't work because youth often don't think of the future or don't think that they have a future
- There is a challenge with the silo effect where there is competition for resources, duplication, no evaluation
- The solution is integrated programs that help young single moms until youth are at least 6-7, need to invest into the long-term
- Schools are community hubs and an asset to most communities no matter how isolated, there is often a problem of the cost to rent school facilities outside of school use, the building has the potential to be a 24/7 service centre with recreation, counselling, family planning, career programs; offering services through schools is a different want of thinking
- School board program to increase engagement with parents, issues with only having parents come in for parent-teacher interviews; needed to start more social events to bring parents into the schools more frequently to increase comfort level, need to find ways to break barriers down to transform space into a more social space.
- Transformation of social space new in Markham – currently there is no cooperation between municipalities and the region
- Examples in the UK and Brooklyn where the school board sold the school buildings and leases them, no longer in control, by then the YMCA or local government can use the space the rest of the day and serve as a community hub, has saved the school boards money because they get a good rate for rent and don't have to pay for the upkeep of the facility
- Toronto District School Board started renting out some space for childcare centres; some schools have early childhood initiatives but conflict in Harris era, funding formula
- United Kingdom model with regional government is a good model – let people do the things they're good at (i.e. let teachers teach)
- Important to offer services when people are available to take advantage of particular services; offer program in schools and community centres – Pleasantview. Recreation department at town takes care of permits for us
- Schools increasingly are becoming 'no-fly zones' in many ways, spaces of exclusion, perception of secondary schools in particular is that you're not supposed to go there at certain times of day or without signing in; both material and figurative signs that people aren't supposed to go there, culture of suspicion and fear, stigmatization
- Need to take care to understand why youth are becoming disengaged, alienated.
- Maybe 10-20% who aren't engaged with the idea of a future, who don't see anything in their own future; need to help students develop realistic goals and also to acknowledge historical and contemporary disadvantages, inequalities
- Youth from focus groups live two lives: must go to work, do well in school, be involved in activities; very entrenched in culture, traditional – people live in intersections of identity, not just in one or the other
- Wearing of hijab – more people who wear hijab are young people, not so much because of parents wearing one - question of identity
- Employment programs for youth (males 18-25) can create challenges: more freedom and disposable income; getting caught up in employment world and not continuing with school –

jobs offered through these programs are often in the service industry – loss of dignity; want job training to build towards a career.
- Carpenters Local 27 is working with a housing developer in Regent Park in apprenticeship program.
- Most mentorship programs are very short-lived, those that have worked have lasted for many years and have intensive contact between mentors and mentees – if mentor leaves after two years, it's another loss – emotional attachment; good intentions can have unintended consequences

2:30-3:30pm

Presentation & Discussion - Public Space and the Citizen
(Patricia Wood & Liette Gilbert)

- Brainstorm of public spaces:
    o Urban street with cafes; a street that has life on it
    o Bryant Park in NYC – next to a library, green space, busy, oasis in the city. There is so much life going on. It's to me what a public space should be: full of people but also a retreat. Chess tournaments are always going on there.
    o The Castro in San Francisco. Beautiful architecture, people everywhere, clubs, bars, markets
    o Trails, parks
    o Like places that don't cost a lot of money. I don't go downtown in Toronto because it costs so much. Art galleries and museums shouldn't cost money
    o Washington DC doesn't charge for its public attractions – everything is free
    o Walkable cities – old European cities, built for pedestrians – it doesn't have to cost money; outdoor cafes where you can watch the world go by
- Public space/institution is not just the space but also the public, where people can be anchored and interact
- The interaction can occur regularly or not
- Public space is not just publicly owned but can include malls, transit, parks, plazas, media, internet
- Not just a once a year event, needs to be an every day basis
- Need to consider who is excluded from public spaces and on what basis – i.e. homeless people
- Institutions can be public places, such as hospitals and emergency rooms
- Need to identify if public spaces are democratic, a measure of how democracy is doing
- Public space can be the memorable parts of the city or everyday spaces
- Citizens do not equal taxpayer and the language from governments often focus on the taxpayers and not the citizens
- Consider the definition of citizen – an ideal, means that program are developed based on understandings of the citizen
- Expectations of what a citizen acts like – more than just voting but also responding to everyday life
- Consider citizen as a flexible idea beyond residents to include workers and businesses – and that means a lot of people who do not live in Markham

3:30-4:00pm

Wrap Up & Next Steps

(John Livey)

- Have to be able to suspend instant gratification for future reward
- Very active volunteer community in town of which many people aren't aware – events, art gallery would be difficult to run without them
- Putnam, *Bowling alone*; role of social networks in relation to economic prosperity
- 'Click with Markham' campaign – part of strategic plan: http://www.clickwithmarkham.ca/

Organizers and Presenters

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Youth Engagement: Quest for the Best Markham
October – December 2008
Community-wide

From October 25 to December 12 2008, Markham ran an online challenge for Markham students, ages 11 to 18. It was an opportunity for them to share their ideas on the future and engage them in helping Markham become a healthier and more vibrant community.

A contest based website was the key tool used to engage youth. The main contest was the "Quest for the Best Markham." It called for short, written submissions about how to achieve a more sustainable community.

> "We all know Markham has what it takes to be the best. Give us your big ideas on how to make Markham a green community. Think trees, community planning, jobs, transportation, culture, growth and public safety. Think about the future you would like to see for Markham."

The website also ran weekly photo contests and poll questions based on sustainability themes to generate regular site visits.

The contest website was promoted to Markham students, both online and offline. The promotion included:

- An advertising campaign of posters, postcards, bookmarks, and signs at community centres and libraries; newspaper ads; stickers and buttons
- Direct mailings to all Markham's elementary and high schools via YRDSB and YCDSB calling for schools and classes to compete
- Participation in the EcoLeague Youth Forum (EcoLeague is a youth empowerment program that challenges and motivates students across Canada to help save the planet through community and school-based environmental action projects; their website is www.ecoleague.ca)
- Built in social media tool "AddThis" to share the site on all mainstream social media sites including Facebook, MySpace, Twitter, etc.
- Targeted social media campaign that was primarily based on a Facebook Fan Page (proven to be the most popular social media in focus groups)
- Visits to school eco-clubs, including a presentation and a pizza lunch
- Partnership with the Mayor's Youth Task Force to promote the contest, including chalk drawings on Town property
- A contest launch event at Markville Mall on October 25

The contest received more than 2,000 submissions from Markham students.

The three individuals and three schools who took top honours were announced on February 7, 2009 at an event at that featured guest speaker Michael Smith from "Me to We" Responsible Style and local bands The Diverse Attraction and The Fitzpatrick Incident at Markville Mall.

Participation Details:

13

- Number of school that participated – 24
- Number of students that participated – 1,083
- Number of ideas suggested – 2, 826
- Number of ideas when organized by theme – 252

Quest for the Best Markham Winners and Honourable Mentions:

TOP STUDENTS

First Place: Stephanie Chandrakumar
St. Vincent de Paul Catholic Elementary School
Prize: bike and helmet (value of up to $500)

Second Place: Diego Santesteban
Thornhill Secondary School
Prize: digital camera (value of $350)

Third Place: Keane Aldrich Go Tan
Markham District High School
Prize: Apple 8GB iPod Nano (value of $200)

Honourable Mentions:

Asma Iqbal, Markham Gateway Public School

Brian Thilagarajah, Markham Gateway Public School

Nick Prasad, Brother André Catholic High School

Arundhati Ganesh, Coledale Public School

Gabriel Shifferaw, Father Michael McGivney Catholic High School

Samantha Leung, Markham District High School

Jocelynn Rennie, Pierre Elliott Trudeau High School

Steven Sherman, Thornhill Secondary School

Stefania Chan, St. Vincent de Paul Catholic School

Muchen Zhou, St. Justin Martyr Catholic Elementary School

Ansen On, St. Justin Martyr Catholic Elementary School

Cindy Su, Highgate Public School

TOP SCHOOLS

First Place: Pierre Elliott Trudeau High School
Level of participation: 713 students
Prize: $2,500 to be used towards improving the sustainability of the school

Second Place: St. Justin Martyr Catholic Elementary School
Level of participation: 175 students
Prize: $1,000 to be used towards improving the sustainability of the school

Third Place: Markville Secondary School
Level of participation: 51 students
Prize: $500 to be used towards improving the sustainability of the school

Honourable mentions:

Markham Gateway Public School

St. Vincent de Paul Catholic Elementary School

Markham District High School

Wismer Public School

Brother André Catholic High School

Thornhill Secondary School

Unionville Meadows Public School

Unionville High School

James Robinson Public School

Milliken Mills High School

San Lorenzo Ruiz Catholic Elementary School

Top 100 Ideas:

Top 100 Ideas from the Quest for the Best Markham Contest (based on frequency of suggestion)

1. Plant more Trees (in the community, around the school, along the streets, in parks, etc.)

2. Better public transit (more buses + more routes + more stops + more frequent)

3. Reduce, Reuse, Recycle more

4. More garbage bins in Public space (put blue/green bins besides every garbage bin), regular pickups

5. Use Renewable Energy (Solar, Water, Geothermal Energy)

6. Conserve Energy

7. Add Bike lanes & bike trails (Promote biking)

8. Built more Sidewalks/Trails (Promote Walking)

9. Place Green and Blue Bins at Schools & food court & community centres

10. Waste Free environment

11. Garbage pick up day/events/groups/contests

12. More and improved Neighbourhood Parks and Green Spaces

13. Promote Carpooling (create a carpool website, advertisements)

14. Control urban sprawl (Stop developing)

15. Reduce bus fares or find an alternative fee system

16. Promote Hybrid cars & trucks

17. Use less paper

18. Ban Plastic Bags/promote reusable bags

19. Music Venue

20. More Shopping centres (malls) or plazas in walking distance

21. Conserve Water

22. More, greener community centres and recreation centres

23. Litter-less lunch at school

24. Gardens (for vegetables & flowers)

25. Make people appreciate environment (Green appreciation Day, environmental holiday,

Markham Earth Hour, car free day)

26. Reduce cars (i.e. Limit 1 Car per family)

27. More community events (Markham Fair, Family Day Fair, Cultural Fair) & Encourage community participation

28. Buses running on electricity or solar

29. Art on building walls & public spaces like bus shelters (paintings of lush forests on the floors of bus stops or pavements)

30. More culture: art galleries, theatres, museums and libraries

31. Ban smoking completely

32. More entertainment areas

33. More High rise Apartments

34. Satisfying work and interesting career options, especially for young people, in Markham

35. More hospitals, clinics, doctors and nurses

36. Put Recycling bins next to mailbox for junkmail

37. Bigger fines for littering

38. Build Subway lines

39. Fewer drive thrus/anti-idling

40. Preserve Farmland

41. Recycling and energy conservation contest

42. Town invests in green outdoor space at/near schools to chill, play games, sleep, study, garden, etc.

43. Bring back the Block Parent program/Neighbourhood Watch to promote community safety

44. Educate people on green/blue bins use (make the charts easier to understand)

45. More Police Patrol

46. Household Hazardous Waste - more depots within the community with longer hours and education campaign or monthly pickup

47. Green roofs on all commercial buildings

48. Better and Bigger Bus Shelters

49. Ban Bottled Water

50. More Street Lights (solar powered or LED)

51. More sports and facilities

52. Charge fee for plastic bags

53. Protect trees, don't let them be cut

54. Cut Emissions by 10%

55. Discourage driving

56. Ban Pesticides

57. Battery & cell phone recycling program

58. Youth clubs at community centres and other places to hang out

59. Bring back the Festival Caravan

60. Make more events/contests to encourage schools to be more environmental friendly (like the Quest for the Best)

61. Electronic homework

62. More outdoor basketball & soccer fields

63. Public Bike Racks @ parks & schools

64. More efficient recycling programs at school or zero waste

65. Community harmony

66. More churches

67. Ban Styrofoam products

68. Free bus rides for students

69. Engage diversity

70. More farmers' market

71. Stores for Organic products (organic cotton clothes, recyclable bags, etc.)

72. Recycling bins and green bins to restaurants, stores, condos/apartments, industrial, commercial, schools, etc.

73. Energy conservation in public places and buildings (i.e. motion sensors in parks, baseball diamond lights on only when in use)

74. School composting programs/facilities

75. Pay for your pollution and garbage

76. Make sure curbside pickup is complete, garbage isn't left behind or spread over front yards

77. Rooftop gardens

78. Prevent Crime

79. Introduce more idle free zones

80. Security - cameras in neighbourhoods, more police

81. Build more affordable housing

82. Use schools/youth to raise environmental awareness

83. Town invest in school eco-clubs to help implement their programs/projects (i.e. school gardens)

84. Make communications electronic (i.e. e-mail report cards, newsletters)

85. Use energy saving lighbulbs

86. Student forum for identifying problems and solutions with the Mayor

87. Real Time Bus schedule information

88. Sell bus tickets at schools

89. Build Green Houses

90. Pay to save environment (reward people for planting trees on their property)

91. Reduce Parking Lot sizes

92. Coffee cup ban

93. Eco-conference for all Markham schools - create communications between school's eco-

clubs and help expand membership

94. Require double-side printing

95. Reverse vending machines - to recycle beverage containers and get a deposit returned

96. Reduce the salt on the streets in the winter

97. Better clearing of smaller streets in the winter and trucks that prevent snow piling up at the end of driveways

98. Sustainable community design, based on transit, pedestrians, eco-design, density, respect for wildlife, etc.

99. Reduce food waste (range of food serving options in school cafeterias)

100.   Build more skate parks (i.e. one needed at Angus Glen)

Winning Entries:

1st Place
Stephanie Chandrakumar, Saint Vincent Du Paul Catholic Elementary School
Markham Can Make a Difference
It would be nice to see a few changes in Markham that will make it as the number one spot to live in, work, and school at. To do this, Markham needs to receive as much input from different ideas and I can make a different by giving ideas on how to make Markham, become a greener community and even better.

I think that everyone should think green, by growing trees. The residents of Markham should all grow trees and they can do this on the day that the Mayor of Markham chooses for this event. They Mayor could also choose a designated area, a nice land, and hold a tree planting campaign on this site. This could later be developed as a recreational park for the people of Markham. We need to encourage our wild life, like deer and rabbits and also the birds and butterflies to live in. This way, we school children can also learn about our fauna and flora. It would be nice for the people of Markham to enjoy camping or have picnics in many designated areas.

Community planning is essential for any city to develop, and right now in Markham we need more high schools because so far we have a lot of elementary schools and a few high schools. Another hospital would help ease the present problems handled by our one hospital, the Markham Stouville hospital. Having another hospital maybe for emergency patients only, would help the people of Markham.

Jobs in Markham are few and as far as I can remember the people known to my family, travel out of Markham to go to work. Some even travel as far as Mississauga, Brampton and Toronto. If businesses are encouraged to open up in this city, there will be jobs for the people of Markham. A few factories could open up further north of Markham where there is bare land. By this, not only will our people get jobs but our infra-structure like roads, telecommunications and hydro will also develop.

We are a multi-cultural city and this is a beautiful thing. We do have a beautiful Markham theatre where we could host many cultural events. A food festival could be a yearly event. Another could be a parade of festivals from different countries, we as children could fund raise for our multicultural nations that need our help. This way Markham could be on the map and this is a good way to interact and have fun.

Markham is a new city and a beautiful and clean one. If we add a few details and make a few adjustments, we will make a greener place to live in. It is necessary to make our city in the whole of Ontario because it is the best city to live in. We need to join hands within our communities to make this the greenest city and we can do it. We as Markham children should help to make it "GREENER".

2nd Place
Diego Santesteban, Thornhill Secondary School
Imagine a town where life was based around walking instead of driving. The town would be divided into groups of condominiums, each with a community center, schools, and a commercial area in the center. Instead of driving around, LRT lines would link the boroughs with each other and the rest of the GTA. Instead of a supermarket, each group of building(s) would have a general store on its main floor. Instead of having stones of the roof of a building, there would be parks, trees, playgrounds, windmills, and solar panels. Rather than making people walk outside in the cold, there would be bridges and tunnels linking the buildings in the boroughs. Instead of having suburban houses, 1-story complexes, and vast parking lots in the spaces between boroughs, there would be forests, complete with bike and pedestrian paths, and with picnic tables, benches, plaques and other such things to encourage awareness of the living world around us. Instead of driving trucks around to collect recycling and compost, one would take paper and plastics to one of the recycling centers in each community, and green waste would be composted on the rooftop garden and used as a fertilizer. Instead of people dominating and abusing the planet and its supplies, humans would live in harmony with other animals, insects, plants, and nature.

3rd Place
Keane Aldrich Go Tan, Markham District High School

The only way to stimulate the younger generation is to provide them with opportunities and challenge. A leadership center is the perfect way to accomplish this. What is a leadership center exactly? It is building that carries out leadership conferences and opportunities for adolescents. It allows them to take charge and show initiative, and encourages them to pursue their aspirations.

An elected council of students from high school will be responsible for running the leadership center. Rooms will be set up so that adolescents can have a space to run and join activities, clubs, and events. Want to run a charity fundraiser or start up your own Entrepreneurship Club? Any high school student can start a club or run an activity, as long as they have the approval of the elected council and adult administrators who run the building. However, most of the approved ideas will be centered around promoting leadership, humanitarian efforts, and entrepreneurship. As soon as an idea is approved, the elected council will allot them a certain amount of money to ensure that the venture succeeds. The club itself can choose to use this money however they wish, as long as they send in a proposal as to why they need the money. The leadership center will provide any high school student to carry out their grand ideas.

Now why should you pursue this venture? You are giving a chance for aspiring teens to achieve greatness and impact their community. It is these ambitious teens that will grow up to be the leaders of

the world. You are giving a chance for great, young minds to come together, and the only thing that will come from it is a healthier future and a better world.

On a practical level, the building is an investment. In my school and many others, clubs and events always turn a profit-it is rare for a club or event to go into a deficit. With hundreds of clubs and events being run by a young, innovative generation, this building will be self sustainable. Money from successful fundraisers, charity events, sponsors, and donators will be used in the maintenance of the building and of course to the betterment of our world.

The leadership center is not much of a center at all-it is more of a hub. It encompasses all that the Markham community is searching for. Teenagers can start clubs that will work towards a green environment, run programs that will create jobs, go to schools to promote multiculturalism, or even start a neighbourhood watch program to increase public safety. What I have presented to you is not just a single idea-but one that will spawn many others. All you need to do is plant the seed and watch it grow.

World Café: Community Outreach
February 2, 2009
Markham Civic Centre

Background

The World Café consultation approach has been used internationally as a way of engaging participants in talking about ideas that matter to them. World Café conversations take place in a simulated café setting with small tables and 4-6 chairs at each table. Participants are invited to take a seat and engage in a conversation on a proposed question or topic for approximately 20 minutes. Then they are asked to switch tables and engage in a conversation with a new group of people on a secondary related question or topic.

The World Café will incorporate two or three rounds of conversations, allowing participants to meet and share ideas with many people while keeping the groups small and the conversations intimate. One person remains at each table throughout the sessions to help with the continuity in conversations and to capture emerging patterns. All participants are encouraged to take notes, draw or doodle directly on the paper at each table. There is a short report-back from each table at the end of the session. This is an opportunity to share the main themes of conversations that took place at each table in response to questions posed by the facilitator.

This style of meeting breaks down some of the barriers of participation for participants who have less power in an organization or community and/or who may be to shy to voice their opinions in a formal meeting setting. World Café creates a powerful environment for hearing many voices, exploring important questions in a short amount of time, and increasing the sense of congeniality at an organization or in a community.

AGENDA

6:30 p.m.	Registration (Great Hall, outside Canada Room)
6:30 – 7:00	Coffee, tea, dessert (Lower Atrium)
7:00 – 7:10	Welcome Message (Mayor Frank Scarpitti)
7:10 – 7:20	Introduction to World Café (Bryan Smith)
7:20 – 8:20	Break-out sessions at Café tables - linkages (All)
8:20 - 8:40	Break-out groups by theme areas (All)
8:40 – 8:50	Summary of break-out sessions (Bryan Smith)
8:50 – 9:00	Concluding Remarks (Bryan Smith)

World Café Vision:

Complete Communities

Markham's neighbourhoods are inclusive, safe, and friendly places to live. There are amenities, shops, small businesses, and markets within walking distance and a wide range of employment opportunities nearby. Within the neighbourhoods there are both affordable and higher density housing.

Celebrate Diversity

Markham is an inclusive and accessible community where there are opportunities for everyone. The cultural diversity of Markham is celebrated in festivals, facilities, and everyday life, the community is accessible for everyone with no barriers, there are activities and opportunities for youth, and seniors are able to age in place with state of the art facilities and many housing options.

Destination Markham

Markham is the place to live, work, and play. The arts and cultural scene is flourishing with open air theatres, music venues, public art, and schools. Markham has an attractive built form, with distinctive architecture and coordinated planning. There are modern sports and recreation facilities that are accessible and offer a variety of community programs.

Healthy Environment

Markham has clean air, water, and land. Green and natural spaces are preserved and connected, with large public gardens and parks and offer environmental education to all residents. Markham's agricultural lands are thriving, with grown in Markham food readily accessible in neighbourhood farmers' markets. Alternative, green energy including solar, wind, and geothermal is produced locally and Markham is a zero waste community.

Transportation Choices

Markham offers a wide range of transportation options. Transit is convenient, affordable, friendly, safe, and part of an integrated and efficient GTA network. There is a connected network of bicycle trails, making cycling a viable and attractive alternative to cars. Walking in Markham is safe and convenient with a complete network of sidewalks and walking trails. Traffic congestion has been alleviated because cars are no longer considered the best way to get around.

Transcription of Tablecloths:

- Arts/culture flourishing
    - Open air venues for music (free to use)
    - More cultural venues
    - Public art
        - Graffiti walls on purpose
    - Celebrate our identity, past present and future
    - Creation of theatre district

- Neighbourhoods
  - Sense of community
    - Inclusive
    - Friendly
    - Know neighbours
    - Safe
  - Housing choices
    - Affordable
    - Represent all socio-economic groups within community
    - Density and diversity
  - Human scale/pedestrian oriented
    - Amenities, shops, and markets in walking distance
- Diversity
  - Celebrate
  - Interaction
  - Equity
  - Multi-faith facilities
  - Inclusive
  - Increase
  - Cultural outreach
- Education
  - University
  - Environmental/sustainability education
    - Eco Schools
  - Integrated/continued education
- Youth
  - Youth oriented placed and activities
  - Youth venue for arts
  - More excitement and activities
  - Employment for new graduates
- Local food
  - Farmers Markets
  - Community/vegetable gardens
  - An abundance of local food options
  - Greenhouses
- Agriculture
  - Preserved lands
  - Sustainable agriculture
  - Greenhouses
- Complete communities
  - Attract small businesses/jobs
  - Work/live close together
  - Mainstreets
    - Car free/pedestrian
  - Marketplaces
  - No strip malls or big boxes
  - Walkable and connected communities
  - Good quality daycares that are accessible

- Transportation
  - Transit
    - Integrated networks/efficient
      - Connect to GTA
      - Connect to airport
    - Buses
      - Smaller buses
      - Bus lanes
    - User friendly/convenient
    - Subway line/light rail
    - Affordable
    - Accessible
    - Incentives to use
    - Community based mass transit
  - Bike trails
  - Walking
    - Sidewalks
      - Safe
    - Walking paths
    - Solar heated pathways for year round access
  - Bike/car share program
    - Comfortable/safe places to walk
  - Roads/Cars
    - Toll roads
    - Alleviate traffic congestion
    - Safe/wide boulevards
    - Ring roads
    - Parking
      - Car elevator parking
      - Every spot has a plug in
      - Reduce large parking lots
- Heritage preservation
  - Villages and hamlets to be preserved
  - Main streets keep identity and character
  - Maintain historical buildings
- Markham's Image
  - Distinctive architecture
  - Destination
  - Markham brand
  - Downtown feeling with things to do
- Clean environment
  - Air
  - Water
    - Rain water harvesting
    - Water conservation
    - Rainwater/grey water use
- Green buildings

- - Energy efficiency
  - Water efficiency
- Waste Management
  - Recycle
  - Reduce waste/zero waste
  - Integration across public/private/public institutions
  - Extended producer responsibility
- Green space
  - Preservation
  - Nature/wildlife
  - Trees
  - Natural spaces
    - Connected
  - More fenced in dog parks
  - Public parks – larger (like Stanley Park, High Park, etc.)
  - Public gardens
- Accessible
  - Accessibility standards
  - Accessible transit
  - Accessible services in the community
- Excellent governance
  - Residents treated as stakeholders
  - Excellent planning
    - Less NIMBY (Not in my backyard)
    - Coordinated planning
- Health and Wellness
  - Healthy residents
  - Healthy and active seniors
  - World class health facilities
  - Hospitals
    - More smaller hospitals rather than one large one
    - No waiting at hospitals
- Partnerships
  - Public/Private Partnerships
  - Partnership between government/public, businesses/corporations, schools, non-profit organizations/NGOs, individuals
- Density
  - More urban
  - Intensification
    - Preserve farmland
    - Build on existing neighbourhoods – no more new sub-divisions
  - More taller buildings
  - Does not feel like a canyon
- Growth
  - Continued increase in population
  - Take advantage of hydro corridors for public use
- Employment
  - People work from home

- o More spare time
- o Varity of jobs created
- o Agriculture
- o Attract international businesses to generate tax revenue
- o New industries (i.e. centre for renewable energy)
- Recreation
  - o Sports facilities
    - ▪ Address new sports needs
  - o Multiuse facilities
    - ▪ Reflect diversity and address special needs
  - o Increase number and variety of community programs
    - ▪ Reflect diversity and address special needs
  - o Community based facilities
  - o More access to community centres (i.e. easier to rent space)
  - o Sports stadium
- Community
  - o Strong communication
  - o Opportunities for all
- Energy
  - o Clean, Reliable and Secure Energy Supply
  - o Alternative/renewable energy sources
    - ▪ Solar
      - • Solar panels on every roof
    - ▪ Wind
      - • Wind turbines at every door
    - ▪ Biomass
    - ▪ Geothermal
  - o High standards for residential efficiency
  - o Create energy security and resiliency within community
  - o Carbon neutral community
- Seniors
  - o Facilities
  - o Age in place
  - o Retirement communities
- Take advantage of strengths/facilities
  - o Utilize Buttonville for short hauls – Ottawa, NY, Montreal, Philly etc
- New Opportunities
  - o Adopt new technologies
  - o Wireless umbrella in Markham

Sustainability Fair
October 24, 2009
Markham Civic Centre

Markham's first Sustainability Fair was held at the Markham Civic Centre on October 24, 2009 – the International Day of Action against Climate Change. During the fair, 150 participants explored the "Now", "Wow" and "How" of making Markham economically, socially, culturally and environmentally sustainable.

The Sustainability Fair included educational booths and activities from Markham area organizations. Participants were welcome to test drive electric bikes, make their mark on the community art project, watch a demo on solar panels and learn more about other sustainability initiatives already at work in our community.

A number of Town of Markham initiatives were also showcased including waste reduction, natural lawn care, the bicycle network, the design of Markham Centre, fire safety, the hybrid and biodiesel fleet, the volunteer garden at the Markham Museum and the Town-Wide Greenway System.

Thank you to the following participating organizations:

- PowerStream
- Enbridge
- Markham Environmental Advisory Committee (and Phil Ling)
- North American Native Plant Society

- Earth Rangers
- Markham Arts Council
- Smart Commute
- Eco Health Foods
- Local Food Plus
- York Region Food Network

Keynote Speaker

Attendees were then treated to an inspiring keynote address from Dr. Avi Friedman that examined the relationship between our individual health and how we design our communities.

Dr. Friedman observed that the way that we have designed communities in the past has discouraged physical activity, causing negative implications to ripple through the social, cultural, environmental and economic fabric of our community. He challenged the audience to think differently about how communities can be designed to allow residents to walk to a neighbourhood store for their groceries, let children play hockey in our streets, encourage pedestrians and cyclists in our transportation network and support community gardens where people can grow healthy food.

Group Discussion

Participants were then invited to join small group discussions on the 12 proposed themes for the Green Print Community Sustainability Plan, where they were asked to provide insight and ideas, and to answer three questions:

- How do you think Markham is performing on this topic?
- What should Markham be aiming for in the long term?
- What changes should Markham implement to get there?

The Summary of What We Heard:

Education & Skills

- Equal opportunities for students to participate (i.e. no cost for school trips)
- Tools and support for parents (i.e. food choices, activities)
- Respect diversity of community members
- Accessible and well advertise social services
- ESL services and multi-lingual services to overcome barriers
- International credentials and experience recognized
- Communities developed to support neighbours knowing each other
- Public realm for social interaction and community groups
- Libraries as centres for learning and resources

Food Security

- Community gardens and backyard gardens part of community design
- Agricultural lands protected and farmers supported
- Culturally and ethnically appropriate foods grown locally
- Grocery stores, local cafés, and restaurants within walking distance
- Schools serve local food and have school gardens
- Farmers markets in every community
- No need for food banks
- Agri-tourism developed including festivals and local food maps

Shelter

- Everyone has the opportunity to have a permanent home
- Housing is built close to transit and within walking distance of services
- Opportunity to age in place
- Affordable housing required of all developers
- Affordable housing integrated within communities seamlessly
- Services for homelessness expanded
- Second-suites (apartments in family housing) legalized
- Overcome "Not In My Backyard" attitude toward shelters, half-way houses and affordable housing

Water Efficiency

- Tap water remains healthy and is the preference over bottled water

- Wells remain a safe source of water outside of the urban boundary
- Water use is limited in the summer (i.e. lawn watering)
- Year round water conservation practices in households (i.e. shower, appliances, duel flush toilets)
- Approach water in a systems approach, including rain barrels, grey water and storm water
- Household hazardous waste does not enter our water system
- Native plants used to treat storm water

Materials Management

- Zero waste a reality
- Lifecycle assessment a part of the procurement policy
- Re-use and re-store rather than throwing away
- Pay for service to use of product rather than the product itself
- Manufacturers reduce the range of materials to increase 'recycleability'
- Developer responsibility for integrated and efficient communities
- Reduction in use of disposable plastic (i.e. plastic bags, plastic bottles)
- Reduced amount of packaging and retailers required to take it back

Social Equity

- Inclusive community, including people with disabilities (i.e. wheelchair friendly curbs)
- Enough affordable housing
- Everyone feels like a stakeholder in their own community
- Senior centre/groups in neighbourhoods and multilingual
- No more gender bias in the workforce
- Parks designed for all ages (i.e. basketball for youth, benches for elderly)
- Bring discussion groups and engagement opportunities to the people (i.e. for youth issues go to high schools, for seniors go to their centre)
- Facilities spread evenly throughout the town and close to residences

Economic Vibrancy

- Integration of all sectors in the economy to compliment each other
- A balance of both local and foreign businesses operating within Markham
- Reduce need to commute with local jobs and a range of commuting options
- Diversified the zoning policies to encourage complete communities
- Affordable housing in Markham so workers can live close to their jobs
- A vibrant green business and technology sector
- A local network where businesses can learn from each other
- Retrofitting buildings to make industries more efficient

Individual Health

- Increased exercise opportunities and healthy menus for children in schools
- Support for low income people to have healthy options and make healthy options
- Nutritional education is made a priority in schools
- Healthy environment to encourage activity and reduce environmental illness
- Programs that support healthy lifestyles
- Health services provided at the community level (i.e. school nurses)
- A network of pathways to encourage physical activity

Identity and Culture

- Elimination of a sense of segregation in the community among the many ethnicities
- Maintain the sense of safety felt by Markham residents
- A slower pace of life (small town, safe, sense of pride in work)
- People are considerate and respectful of each individual regardless of economic status, race, gender, age, education, etc.
- Cross-cultural experience and ability to be exposed to our different cultures

Ecosystem Integrity

- No development past the current urban boundary
- Development that is based on intensification and integrating ecosystems within communities
- Sustainable funding for urban plantings, trees and parks
- An animal shelter in Markham and programs to learn to live with wildlife
- Connections between natural heritage features and connecting pathway system
- Clean and healthy rivers and streams (i.e. can swim in the Rouge, improved water management)
- School involvement in local ecosystem restorations

Access and Mobility

- Transit that has easy to understand and direct routes
- Pedestrian routes are maintained (i.e. garbage picked up, surfaces maintained)
- Safe and connected cycling network (i.e. paths separated from traffic)
- Trail system a connected network that links places within the community
- Transit oriented development (i.e. can live close to work, increased density)
- Balance of commuting options (i.e. HOV lanes, transit ways, roads)
- Children can walk safely to school (i.e. walking school bus)
- Investment in transit for improvements and affordability

Energy and Climate

- Renewable energy generation (i.e. solar panels)
- Homes and communities are designed to be energy efficient and carbon neutral
- Better transportation options (i.e. non-stop GO Train service)

- Markham's carbon footprint has been calculated and strategies developed to reduce greenhouse gas emissions
- Energy consumption reduced throughout the community
- Waste used to generate energy
- Regular monitoring and reporting on energy efficiency
- Energy audits and retrofits on existing buildings

Transcripts of Tablecloths:

Goal: Education and Skills

Now?	How?	Wow!
School trips should be paid for by school board to save self-esteem of those who can't afford to pay	Tools for parents - food choices- skills/education	More promotion of libraries - free resources, education/learning
Parents should take more active responsibility for children - education, food, activities	Invest in renewables	Social sensitivity, compassion and empathy towards others
Kids pay for the lack of involvement of their parents	Develop our communities so that we can meet our neighbours and have social interaction	Make connections to other cultures - what contributions have other cultures made? E.g. be the change… attribute to Ghandi
People need to understand the roles & responsibilities around parenting Understand how others live in the community and respect and appreciate how they live their lives	Cooking classes - pass on knowledge/recipes	Social equity - need to make certain that we hear from folks across the spectrum of the community
	Public transportation - active transportation more accessible	Links between home, education - jobs need to be well established
Need access to social services & what those places can do for you	Re-program parks/open spaces to be flexible and include opportunities for community groups	Shared networks - vibrant places people can interact

Communication, language, cultural barriers

ESL
Multi-lingual services to help break down barriers

International knowledge/education difficult to implement in Canada
Social capital
Connecting through community organizations and having them disseminate information

Too much focus on technology - need to be able to meet people

Public realm competitions - mapping uses - schedules
More community events to help the community

Goal: Food Security

Now?

How?

Wow!

Local food markets

Backgardens are an afterthought - soil stripped, meant to be put back - not always the case

Developing houses on farmland

Community gardens - need more ads

Very fertile lands
Threats to productive farmlands (York Region)

ALUS - Alternative Land Use Services

Sharing skills & stories for gardening to feed you all year

Supporting farmers to be successful

Community garden network, education

Rebuild the soils in developments where the soils have been removed

Change zoning & by laws

Connection of farmer to consumer

Protecting remaining farmlands
Grocery stores selling all local produce

Get community gardens in every community - parks?

Get Farmers Markets everywhere

100% food secure

Not designing parks that allow for food systems/community gardens

Poor promotion of local options
No local foods available @ stores when in height of season

Good farmland is diminishing
Cultural/ethnical grocery stores are importing from far away
increasing organic food available in stores

Grocery Stores are close by (within 5km)

Farmers Markets twice a week - good

Corn vs. produce?

Food choices of local product limites
Access to local café limited
Grocery Stores not accessible to transit, bike, walk
Food not convienient to get unless in a car
1,000 + mile diet
Food traceability - we don't know where it comes from
Farmland thretened by development
2 farmers markets
Demand for community garden plots

Economic incentive
Change culture to be community oriented - socializing

Bike racks @ all grocery stores
New communities - higher densities require urban agriculture & accessible food

Outreach, educationm change in values to pay more for food

Partnerships - farmers, schools, restaurants

You pick festival weekends

Farmers board for Town of Markham
Expand the "fun stuff" to farms

Retirement homes have land available
Self-contained, complete communities
How safe are water & land that grow our food

Food linked to transit hubs for convience

Protect ALL farmland

Protect land & water - quality - safety

Community garden in every ward 10-15

Travelling food markets through community

Local foods @ schools

Local food as requirement for developers
Bike, walkable, transit friendly, locally accessible food

No more food banks

Walkable, bike friendly small food establishments (not super-restaurants)

Safety of food ingredients - are they consistent in guidelines?

Organic food - are they justified for extra $ spent?

Goal: Shelter

Now?

Homelessness - What public programs are in place?

Do we have enough affordable housing in Markham?

Need more affordable and special needs housing

Good balance - low, medium, high density good communities (e.g. Cornell) Trend for more apartments

Homelessness - need some solutions - mosaic interfaith (out of the cold) different churches use their floors - need more permanent solutions

We are doing a good job at homelessness but a lot more is needed

How?

Integrate affordable homes with Market units (seamless) to avoid stigma

Provide multi-unit housing for homeless

Overcoming nimby attitude to shelters, half-way houses and affordable housing

Small single family homes on small lots (affordability) Grow Home concept

Recognize long lead times for development - ensure bringing new lands on stream

Region of York - more social housing - Require all developers to provide some affordable
Legalize 2nd suites - ensure good land supply for housing - Family housing & apartments

Wow!

Everyone has the opportunity to have a permanent home

More homes for humanity

Transit oriented development - walkable - live-work - Aging in place

Goal: Water Efficiency

Now?

How?

Wow!

We take our water for granted - promotions disconnecting downspout & use rain barrels

Promote our tap water

Wells are safe

We use too much water By-laws limiting water use in summer (lawns, etc.)

Lack of respect for our water resources

Residents should know where stormwater goes now - they must not put chemicals down drains and sewer catch basins We don't respect our water - we leave it running

Where do our farms get water

30-60 minute showers from one person

Dual flush, greywater, ban watter bottles

We used to know the value of water

Toilets = dual flush

Water is a persons responsibility - we are wasteful

Take care of hazardous water

How to promote ads to not waste - conserve

Capture Stormwater and respect it as a valuable resource

Teach residents to respect and appreciate our water

Don't contaminate - maintains water efficiency

Native plants in stormwater swales and gardens to: reduce runoff, clean and attenuate stormflow, increase infiltration

Town-wide ban on all plastic water bottles

Encourage dual flush toilets

Sewer - where our water goes

Education on the water cycle - too many people take advantage of where our water comes from

Rain barrels for gardens

Greywater use - ie. toilets

Shorter showers

Appropriate use - potable for drinking/cleaning

Less water consumption

1/4 of the water consumption we use now

Goal: Materials Management

Now?

How?

Wow!

Procurement policy - low cost wins vs. life cycle

Markham's green purchasing policy is poor

Waste Management program

Difficulty of metrics (how do you measure benefit to citizen)

No metrics for non-financial piece

Only small fraction of population engaged today

Talk is ahead of understanding the delivery of a product

Solar

Challenge of getting developers on-side for LEED, greenspace parks, long-term plan

Millions of sq. m roof area for solar energy & heating that are not being used

Excellent garbage collection - 3-stream system

Markham needs to promote its Green Purchasing program

Town must show leadership on procurement, lifecycle & costs & partnerships with developers

Big box stores (Costco, Loblaws, Wal-Mart…) should have bins for all recycling & package materials & producer responsibility

Partnerships - public/private i.e. Wal-Mart doing some good stuff

Producer responsibility

Council has to show leadership

Town has to show leadership - procurement, buying policy, lifecycle

Community outreach

Sponsor more - restore

Paying for the service use of the products rather than the product itself

End of life accountability

Measurement - longer term built in costs

Replace bottled water with a proper filtration system

More focus from big companies

Zero waste, producer responsibility

COSTCO et al - be able to bring packaging back

Purchasing policy that can take into consideration metrics of non-financial items

Developer responsibility - integrated communities

Telework

Next version of a tote bag?

Tax incentive to sale items for renovation of bathroom cabinet

Re-use material - better than throwing away

Restore - used wire that others can re-use or fix

Less sprawl - more community

Bad - use of plastic water bottles

Good - recycling depots - they are great!

Bad - overpackaging of products

Good - grocery stores are charging 5 cents per bag - encouraging use of recyclable bags

Good - municipal recycling i.e. green bins, blue bins

Concern regarding plastics, pressure of provate organizations on reducing package of products

Plastic bags - encourage people to use re-usable bags

Amount of packaging

Increase onus or manufacturer to reduce range of materials and increase recyclability

Goal: Social Equity

Now?	How?	Wow!
Inclusivity - does not include people with disabilities	Legislation, organization	Raising awareness
	Implementation of public education - forums, seminars, conferences etc.	
Child poverty - should be "poverty"		People are more aware - greater education
Not enough affordable housing	Travelling library	Improved involvement by all
	Multi-language announcements on Markham page of newspaper	Greater involvement from all the faces of Markham in public or
Removing barriers		community events

Now?	How?	Wow!
Marginalized groups are not getting the attention they deserve	Basketball hoops in parks for youth, adding more benches for the elderly	Senior centre/groups in neighbourhoods catering to language there
Don't get access and public opportunities Greenprint and other web pages	Public websites in multiple languages	Everyone feels like a stakeholder to their community and town
	More outreach programs Encouraging others to step out of their comfort zone and communicate with people from other cultures	
Youth work force		
Active senior centre in Markham	Equal opportunity for all who are willing to	
	Gender bias in workforce need to be changed	
	Facility accessibility close to residence	
	Wheelchair friendly curbs	
	Town could rent rooms/space in Malls for community groups to use	
	Bring discussion groups to the people i.e. senior issues discussed in their centre, youth issues in high schools	

Goal: Economic Vibrancy

Now?

How?

Wow!

Industries are too sparse causing industries to look elsewhere that are more intensified Welcoming foreign industries (i.e. Chinese businesses) in Markham because of the community (strength)

Build affordable housing for workers because Markham is too expensive to live in

Invest in green businesses and technology for a greener community

Integration on all sectors in the economy to compliment each other

Integration of different businesses (local & foreign) to grow in Markham

Support local economies & add to local economies	Learn from each other's differences to grow businesses together	Retrofitted buildings - consuming energy that is renewable so that industries run efficiently
Limited manufacturing	East meets West - Network locak economy with foreign industries (a facilitator)	Connecting global businesses to the local economy
Employment segregated from living	Learn how to compliment each other through networking of different sectors	Emerging more local businesses in Markham so that people don't have to commute during the day
	Finding an option between 2 extremes, i.e. car and public transit - find another option that falls between their 2 choices	Building Markham to have a sense of vibrancy with the industries in the city so people stay in the town rather than commute to the city
	Diversifying the zoning policies of land in particular sectors	Concentrating the community with the businesses

Goal: Individual Health

Now?

How?

Wow!

		Healthy environment - supportive programs - people become priority over bottom line
Obesity is a challenge in young children	Creative support systems & community to improve emotional health in Markham	
Nutritional education needs to become a priority in schools & the community	Obesity - educate parents and care givers about healthier choices in nutrition and exercise	Being public of what is expected of each person
Physical activity needs to be encouraged by providing access to panels	There needs to be an expectation of parents	"Teaching" people to be responsible for all of their choices
Emotional health of the individual can be improved by a nuturing community	Obesity - change offerings of food at schools in vending machines and cafeteria to provide healthier organic choices	Obesity in schools - exercise has increased - cafeteria's need healthy menu choices. How much exercise is in the schools? Age appropriate - what happened to health nurse in schools?

Poverty directly affects quality of health

Employment affects health as does it lack

Go out and get low income people to come to these groups

Pathways need to be covered in mulch or tiny stones rather than asphalt

Parents need to be positive role models

We need to expect more of everyone

There needs to be low income people on every one of these groups for their input

Greater education in schools re: benefits of exercise & diet - sense of community, we are too isolated and need parent involvement in dietary choices - it is a community problem not just teachers

Go back to the basics - all human beings desire housing, enough food so that they can learn in school

Goal: Identity and Culture

Now?

How?

Wow!

Currently our advancements are driven by human laziness - things are designed to be used with less effort

Citizens are too worried with safety - need a greater sense of security (especially for women & children)

Although our community is composed of many ethnicities I feel there is a sense of segregation. Need more integration which will come in time as the younger generations mesh with North American culture

We need to go back to the style of living in the 50's - small towns, safe, sense of pride in work - slower pace of life

Think of us as a small Town - people make a difference

People who are considerate and respectful of each individual as human beings regardless of economic status, race, education, age, gender

Bringing cultures together - cross cultural experience, ability to be exposed to our different cultures

Goal: Ecosystem Integrity

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Now?

Council & Town staff are concerned about the environment

We compliment Town banning herbicides & pesticides

Thank you for bird friendly windows

No development in white area North of Major MacKenzie

Rouge River & Markham Centre, Markham conservation park plants for east end

Live/Work/Play planning philosophy

Challenges: A more favourable environment for urban plantings, a commitment for operational $ for maintaining trees & parks
Planned communities, Challenge: improve commercial opportunities in residential areas, walkability in old & new residential areas

Animal Care Committee (Domestic & Wild), but no shelter in Markham - abandoned pets

How?

Increase education about invasive species & prohibit their sale and propagatum

Add natives to all site development proposals
For local food, provide for longer term leases on the agricultural lands in east Markham - Encourage markt garden farms

Low impact green space maintenance in Townhouse & built residential environment e.g. electric equipment

Animal Care Committee is fund-raising to build an animal shelter

Require all new developments to have environmentally friendly buildngs - encourage existing buildings to retrofit

Need to plan for more integrated communities - encourage people to walk more

Transit-friendly development to alleviate sprawl

We need to ban totally pesticides & herbicides

Wow!

Swimming in the Rouge River
We must make farming more financially rewarding than land developing

Markham needs an animal shelter

We need Councillors like Shapero and Burke who are Eco sensitive

Save Milne park east-end wilderness areas

We need to curtail urban sprawl - concentrate our development

Do not extend Don Cousens Parkway into whitebelt! It will open up development in the entire area

Need to take care of Markham's animals and wildlife

Need to build a Town of Markham animal shelter

Pesticide By-Law - A visible improvement already

Trees for tomorrow - Maintenance, quality plantings, public access

No connection with natural heritage features

Eco-system disrupton - rooming integral aspects of longer system
Parks, Rivers, Streams - but not enforced by development - not monitored/protected sufficiently

Team up with more other local clubs to assist with events

Rouge River is in bad shape, lots of trash

Keep Milne conservation as a conservation area

Improve water management by using grey water or rain water for plantings rather than treated water, and using planted areas for water management aka. Street tree symposium

Learning to live with wildlife by establishing and supporting local wildlife clubs "eco literacy"

Evergreen, tree planting, introducing nature

Integrating natural environment with communities, embrace rather than turn back

Stocking of fish in waterways

Promote more schools to get involved about the local ecosystem

Better connecting pathways throughout to all parks

Competition for best section of the river system (Beautification) with natural choices

Make more fish ladders e.g. @ Milne dam

More nest aeas on pathway systems (partial sheltered)

Need to limit development to protect our valuable farmland - no building in the white belt area which should remain protected

Develop a better linked park system

Low impact recreation, active lifestyle

Clean, safe, self-sustaining river and wild life

Goal: Access and Mobility

Now?   How?   Wow!

Confusing routes (bus) - but affordable Garbage on the sides of Hiway 7 needs to be cleaned up - not pedestrian friendly

Metrolinx plan is great but needs funding

All day GO coming soon - need to get to Markham Village

Pedicabs for schools

Pedicab taxi, pedicab rentals, electric assisted

Pedestrain only streets

Cycle paths that are physically separated from auto's

Path - use mulch or sand rather than asphalt (hard on back, water runs off) Nature trails that connect areas and actually go somewhere

People living closer to work

Free use of electric assisted bike for a year for x # of homes in Markham by application

Transit oriented development - have density & good planning but no transit

Need good balance of roads/HOV and transit ways

More official development and employment lands in Markham

Remove barriers to cycle network (under railway, 407, 404)

Walking school bus

Tax structure to encourage living close to work

Stand alone (e.g. solar) changing stations for electric vehicles at various points in the Town e.g. malls

No more freeway extensions through greenbelt

Dedicated transit corridors

No road widenings except if 100% dedicated to transit (I don't trust HOV enforcement)

More cycling trails e.g. Milne Park

Yonge Subway, 407 (25 years?) Pan AM games to invest in Transit - senior government funding

Toll roads (e.g. 404) increase tax and pay parking

Make Highway 7 - Pedestrian & cycle friendly

New revenue tools to pay for all this transit

Mobility hubs, High density & transit modes converging

Development charges act - get away from 10 year average level of service e.g. transit

Metrolinx/province should take lead on designing mobility hubs

Goal: Energy and Climate

Now?	How?	Wow!
Home energy efficiencies	Awareness of incentive programs	More solar panels - more green buildings
Carbon footprint calculations for home - compare to benchmark	A green standard for new buildings	Exercise at home to generate energy for home & buildings & get paid
Calculate Markham's carbon footprint & communicate outcome with community	Engage in diverse outreach	Carbon negative community gardens with integrated biochar (BBQ's)
OSEA - Apply to Ontario Sustainable Energy Project for grants Energy $	Reporting regularly on efficiency gains	Small scale production of energy & biochar integrated into local composting systems
More Cornell Community designs	Faclitate Community Solar PV Groups	Homes are built to be totally carbon free
Reduce energy consumption within Markham's community	Attract New Green technology to Markham (i.e. Air produced cars are a reality today & do business in them) Create communities where school parks/church is central to allow people to walk to them rather than drive	Non-stop GO Train service
Retrofit existing assets to be more efficient		100% Energy supplied in Markham
Expand waste to energy in Markham	Convert lighting to LED's not CFL's - 50-90% Energy savings Take advantage ot F.I.T. Program & encourage renewable energy for home owners and Town owned buildings	Better transportation = less cars
Need more bicycle paths connecting communities (i.e. Milne Park)		Better design communities based on minimizing Energy
	Encourage nature plan & gardens to decrease the use the use of power lawn equipment & reduce water consumption (energy to treat & pump)	Rethink road widenings on major arteries - we should not be totally car friendly

Install solar panels on appropriate buildings & assist residentail financial of solar initials

Waste to energy solutions are available to transform garbage into energy profitable and carbon neutral Retrofit Town of Markham facilities with LED lighting

Address the school board municipality in bussing - public separate (english/french) - boards need to work together to stop duplication and save resources

Stakeholder Workshop
December 3, 2009
Angus Glen Community Centre

On December 3, 2009, more than 100 local and regional stakeholders participated in a workshop to review Markham's 12 sustainability goals and develop strategies for how each goal can be implemented.

Attendees included representatives from ratepayer associations, advisory committees, places of worship, non-profit groups, developers, educational institutions, businesses and all levels of government.

The workshop opened with an overview of local and global issues, and a review of Markham's 12 sustainability goals.

A World Café format was then used to hold a series of small group discussions. There were three rounds of 30 minute discussions, with each discussion focusing on one goal. Participants chose which goals they wished to discuss, and group members changed after each round. Groups were asked to consider:

When Markham has achieved world-class sustainability performance in (insert goal), what measures and actions were taken to make this happen?

Over the course of the afternoon, 60 implementation strategies (five for each goal) were developed as a starting point for the next phase of the Green Print process. These strategies will be grouped to create 10 to 12 themed "Big Moves for a Sustainable Markham". For each Big Move, opportunities within all Markham departments and with potential partners will be investigated.

Stakeholders and the public will be invited to review the Big Moves in the spring of 2010.

60 Implementation Strategies:

Economic Vibrancy

Transportation and Transit

1. Funding
2. Political will
3. Access and Mobility
4. Integrated System
5. Transit available with development

Promote Markham

1. Economic Development Department

- o   Aggressively court business/industry
- o   Seamless – support to business (Municipal/Provincial/Federal)
2. Diversity of Business and People
3. Build Strength
4. Branding
5. $ matching

Live/Work

1. Containment
2. Proximity
3. Transportation
4. Quality of Life
5. Reduce Footprint
6. Telecommute

Green Industry

1. $ for Investing in New Technology
2. Prescribed Regs vs Performance
3. Green Building Balanced With Place Making
4. District Energy
5. Science Park

Access and Mobility

Parking Strategy

1. Commuter/Auto Share/Bike Share
2. Links to Active Transportation
   - o   Lockers for bikes
   - o   Bundle buggy rental
   - o   Links to transit strategy
3. Ecologically Friendly
   - o   Swales
   - o   Permeable paving
   - o   Trees etc.

Transit Strategy

1. Integration
   - o   Single fare system
   - o   Customer service
   - o   GTA agency - Metrolinx (Viva/YRT/TTC/GO/Durham/Peel)

Cycling/Pedestrian (and Safety) Expansion

1. Interconnected, expanded cycling/pathway system
2. All new development needs to be cycle/pathway supportive separate lanes for cycling/pathways on main roads

Mixed Use Development

1. Live-work
2. Access to Culture and Social Services
3. Transit Supportive
4. Pedestrian Friendly
5. Make it Accessible to All

Social Equity

Transit (for every aspect of life in Markham)

1. Accessible
   o People with disabilities
   o Immigrants (Language)
2. For More Than Work
   o Entertainment
   o Tourism
   o Medical
   o Special groups (youth, elderly)

Action – Oriented

1. Not just policy and data collection
2. Invest in prevention/intervention to save $
3. Measure outcomes/specific actions

Neighbourhoods (Hubs)

1. Neighbourhood Planning
2. Community Assets
   o Schools, BIAs, Libraries, Churches, Private
3. Building Social Capital
   o Volunteers
   o Integration
   o Identity and sense of place
4. Welcome Centres
5. Integrated Service Delivery

6. Build Trust, Community Engagement and Empowerment

Collaboration

1. Multi-Disciplinary
2. Focus on Clients
3. Outreach
4. "Common Turf"
5. Owned By Community
6. Active Participation
7. New Human Services Planning Board at York Region
8. Advocacy to Province to Support Collaborations/Partnerships
9. Client Focussed Services/Integration

Income/Employment

1. Job Creation – Good Jobs $
2. Support Credentialism Programs
3. Diversity of Stable and Affordable Housing

Materials Management

Urban Farm – High rise

1. Compost – Public/AGRA
2. Crops – Market Gardening
3. Chickens/Eggs
4. Plants

Retrofit Homes

1. Insulation (Recycled Newsprint)
2. Water Use
3. Heating/A/C
4. Solar
5. Incentive Programmes
6. Toilets

Waste Reduction

1. Better Packaging
2. Producer Responsibility
3. Private/Business Recycle
4. Apartments/Condos

5. Bottled Water

Technology

1. Incineration
2. Use of Alternative Vehicles
3. Piped Systems
4. Multi-use Vehicles and Pick-up of Materials
5. Energy From Waste
6. District Heating

Central Collection

1. "Pipe Technology"
2. Start With New Developments
3. Recycle Green All the Time
4. Used in Europe

Identity and Culture

Market Markham's Uniqueness

1. Cultural Diversity
2. Ethnicity
3. History
4. Technology
5. Social Harmony
6. Heritage

Develop and Promote a Sense of Community Outside of Own Ethnicity

1. Ethnicity
2. Diversity
3. Community

Promote Markham's Unique Identity

1. Creating a Town Sponsored Community Facilitator For
    o Festivals
    o Community Events
    o Cross Cultural Opportunities with appropriate budget and funded programs

Acknowledge, Preserve and Celebrate Our Heritage and Culture

1. Built

2. Natural

3. Creation of Public Art

4. Public Spaces

5. Farms

Enhance Markham's Artistic Community (More Venues)

1. Theatre

2. Art

3. Music

4. Dance

Food Security

All About Food

1. Food is the Meaning of Life

   o Brings our diverse community together
2. Maybe We Should Be Branded

   o i.e. Leamington is tomato capital
3. Climate Change – Adapt To The Different Food That Could Grow

Community Gardens

1. Residents to Work Together In Their Own Backyard, Parks and Roof Top Garden

   o Social and health benefits
2. Use Town Property and Water

Urban Agriculture

1. Utilizing Old Areas to Develop Farming Area and Other Land i.e. Hydro Fields

2. Roadside Kiosks on Town Land to be Used by Farmers to Sell Food (100 mile diet) – connecting farmers and residents during harvest time

3. Bring in new Canadians Who Have Experience to Farm Lands

4. Give Incentives to Business People Who Consider and Build Upon Local Produce or Developers Building

Education

1. Promote Healthy Eating and Healthy Living

2. Buying Organic and Knowing Where It Comes From

3. Teach People How to Grow Own Food

4. Marketing and Promotion

5. Town Should Act as Role Model (i.e. Zero Waste Policy)

Individual Health

Physically Active Community

1. Partnerships With Schools and Work Places

2. Walking/Cycling More

   o Pathways and Trails

Strategy For Attracting Employment Closer To Home

1. Live/Work/Play

2. Balanced Community

3. Design of Neighbourhoods

Hospitals and Medical Services

1. Services

2. Funding

3. Healthier Residents = less costs/Hospitals

4. Equipment/Doctors (retention of)

5. Mental Health Facility – sufficient resources

Educated Community

1. Public – Eg. Car Pooling

2. Interest in Physical Activity

3. Healthy Living – Preventative

4. Engaged Community = Healthier Community

Realization of Poverty (reduction of Poverty)

1. Correlation – Food Choices
2. Obesity – Disease/Malnutrition
3. Access to Housing
4. Access to Recreation
5. Stress

Shelter

Ensure Community Integration

1. Income mix
2. Set Aside Portions of Communities
3. Policies/Incentives for New Forms of Tenure (options for homes)

Ensure Continued Diversity of Housing Types

1. Policy Framework/Official Plan
2. Good Intensification
3. Mixed Use Community
4. Regulate/Encourage Second Suites, Both Existing and in New Communities
5. Live/Work Options

6. New Options to Improve Affordability

Strengthen Community

1. Built Form That Supports Community
2. Municipal Land Use Policies
3. Integrate Community Supports
4. Transit
5. Neighbourhood Level Strategies
6. Re-branding "Affordability"

Address the Need To Having Housing for All Stages of Life Cycle

1. Housing For All Stages of Life Cycle
   o Integrated/cross sectional approach
   o Municipal policies in Place
   o Developer buy In
   o Variety of ownership/tenure types
   o Supportive infrastructure in place (transit, soft infrastructure)
   o Communications strategy

Development of a Local Affordable Strategy

1. Define Affordable

2. Identify Incentives/Tools

3. Link to Regional/Provincial/Federal Housing Strategies

4. Identify a Leadership Champion – Council Leadership

5. Link to Economic/Health/Education and Settlement

6. Housing is a Fundamental Building Block of a Healthy Community

Energy and Climate

Energy Performance

1. Benchmarking Peer Buildings
   o Towns
   o Churches

- Schools
- Homes etc.
2. Measure Current Performance
3. Report energy/Co2 Distribution (range) Among Peers
4. Have Leaders of Each Group Share Their Success and Train Others
5. Set Targets For All To Raise Level To Top Rank
6. Town Mandate/Incentive To Reach Goal
7. Report Progress
   - To public
   - To peers
8. Share Progress To World Along With How To Do It

Town of Markham energy Leadership

1. Energy Efficiency

2. Building Operations

3. Retrofits

4. New Buildings

5. Exceed Highest Standards

6. Gives Credibility When Mandating Energy Efficiency

7. Staff Education and Understanding

New Buildings

1. High Performance Standards for New Buildings

   - Higher than Building Code
   - LEED/Energy Star
2. Include All New Buildings
3. New Building Awards
4. Energy Efficient Community Design
   - New Communities
   - Intensification (i.e. Langstaff, Markham Centre)
5. Use Required Policy and Incentives and Improved Image

Building Energy Performance Retrofit Program

1. Community Wide

2. Multi-Sectoral – including homes
3. Tied to Canada Green Building Council's National Program – "Green Up"
4. Includes Operations
   o Recommissioning
   o Retrofit of Systems
5. Encourage Use of Local Systems Technologies and Services
6. Encourage Integration of Renewable Energy Technologies

Education and Training

1. Greening the Curriculum
2. Centre of Green Technologies – learning academy
3. Government Incentives
4. Private Sector Support
5. Competitions
6. Children/Schools Awareness
7. Re-training of Adults
8. Corporations and Economics
9. Media – Local Awareness/Attitudes

Water Efficiency

True Cost of Water

1. Water Is Too Inexpensive
2. Conservation Pricing – Peak Rate Pricing

Right to Clean Water

1. Individuals Right vs Framers Rights to Use Chemical Fertilizers, Pesticides. Who has the Greater Right?
2. Education/Policy – Water Improve Quality – Natural Streams/Ground Water
3. Stromwater – Including Inflow And Infiltration Into Sanitary Sewers

Culture of Conservation

1. Start Today
2. Education
3. Don't Use a Quality of Water Than You Need
4. Reduce, Reuse, Recycle, Re-think, Rejoice/Reward
5. Personal C…? (can't read host's writing)

The 5 R's

1. Rethink
2. Reduce
3. Re-use
4. Recycle
5. Rejoice/Reward

Education and Skills

Mentorship Program

1. Support the Education System, Skill Development and Work Force, Employment Assimilation

Barrier Free = Seamless Access to Educational Training and Skill Development

1. Affordability
2. ESL (Common Language)
3. Who, What, How, When

Mandatory Curriculum: Global For All Post Secondary Citizenship (mandatory centennial

1. Community Engagement
2. Volunteerism
3. Who (Seneca), What, How, When

Partnership With External Expertise For Distance Learning

1. Affordable
2. Accessible
3. Innovative
4. Who, What, How (Corporate Donations), When

Ecosystem Integrity

Develop Eco-Education For Home Owners, Business Owners (To Raise Sensitivity Issues)

1. Publicize and Promote Markham's Green Spaces and Parks
2. Establish R and D Centre in Markham Centre

Integrate Plants/Habitat into all aspects of Urban Space

1. Go beyond LEED buildings to include landscape standards
2. Use plants in ways that improve the liveability of the community (i.e. specific species that clean air near sources of pollution

Create an Urban Forest

1. Help people plant trees on their own property
2. Require that developers plant desirable species, not just what is cheapest/easiest

Create a Greenbelt with Teeth

1. Preserve the green spaces that we still have
2. Enhancements to green spaces that need it
3. Provide connectivity and large enough habitats for species

Select a diversity of plant species that will be "Climate Change Ready"

1. Understand the climate change scenarios and select trees/ plants that will be resilient to the possible
2. Have a diversity of species so that invasive species, extreme weather, etc. will not decimate our plant species

Stakeholder Workshops
April 26 & 27 2010
Pingle House and Markham Civic Centre

The draft strategies that were produced during the December 2009 workshop and reorganized into integrative goals were reviewed during workshops in April 2009 with four separate stakeholder groups including Developers, Business, Non-Governmental Organizations, other Government Jurisdictions, and Committees and Rate-payers Associations.

Each of the stakeholder workshops opened with an overview of the Greenprint, including the process to date, the Sustainability Goals and the Sustainability Strategies. An exercise followed where each participant was asked to think about the TOP 2 strategies in the plan that affect them the most and share with the rest of the group. The strategies were then discussed in order of interest, with emphasis on what the target for the strategy should be and what steps can be taken to transition to the targeted end state. The detailed notes that were taken during the stakeholder workshops follow.

Developers & Professional Consultants

April 26, 9:00am

<u>**Top 2 Goals and Rationale:**</u>

Build and maintain resilient infrastructure

- Need to know why
- Want it to make sense
- Want it to be cost effective – maintainable
- How is 0% sustainable for taxes?
- Building economically
- Maximize investments
- Do not overbuild or underbuild

Ecosystems and Landscapes

- Ways to deal with it; can do more than just lawns; plants and soil options
- Pristine valleys could be naturalized
- Don't need to be manufactured landscapes; can use what you have
- Reincorporating natural assets

Side note during discussion: cultural stuff should be left to cultural groups not the place for government; don't need to be spending tax payer money on it

Walkable, Complete Neighbourhoods

- What is the optimal mix of use? Residential/commercial/office
- It competes with traditional planning and is an uphill battle
- Policy and regulation competes with the Greenprint vision

Transportation

- Is currently not effective
- Need transportation link to the subway and to infrastructure
- Structure/services

Infrastructure and Landscaping/ Transportation

- Bus stops involve a long walk and a wait, downstream means that people won't use it
- Downtown Markham – how many people actually buy homes close to where they work? Only the non-drivers walk in Markham (young and old)

- Kids in front of TV, computers, education important
- Regional multi-use path on Major Mac – off the curb good as an idea but not once implemented
- Impacts downstream to other neighbourhoods
- Transit investment needed
- A walkable highway 7??

Transportation

- Other models in the world for transit like the short bus, "bus-pool", privately owned mini-bus doing routes
- There can be more flexibility, lower costs, increased efficiency, can use electric vehicles

General Discussion

- Question: Will targets be measurable in the Greenprint?
- Response:
  o There are indicators that will be measured over time
  o A baseline has been prepared and will be an appendix to the plan
  o The Sustainability Office will do the monitoring
- "If they build it, they will come" has been the approach with single family homes so far, it is how we got here
- Need to change the mindset/culture regarding single family homes, offer a different supply of housing/affordability, make housing affordable, don't need a "piece of land"
- FLAP – Fatal Light Awareness Program – advocate for bird friendly design, new developments, need to make the designs safer for birds
- Growth is "an accounting exercise" – how do you get mixed-use?
- Buildings are things that evolve and adapt, single use thinkers
- Prefab buildings can be taken down and recycled
- Evolving communities don't exist here, they might not be perfect but they can be beautiful
- Compartmentalization/ silos are a challenge – need to bridge the gaps between departments at the Town, have to navigate departments

Targets and Transitions for Goals:

Infrastructure/Servicing/Landscapes

Targets:

- Cost effective infrastructure/ the full lifecycle
- Long-term and short-term funding for infrastructure (sewage, water, transit)
  o from the provincial and federal levels of government (macro)
  o tax base, different taxes (micro)
- GDP

- Transit coverage linked to frequency of service, public money, density

Transitions:

- Provincial election
- Growth plan
  - funding to make it work (why is money being taken away from transit now?)
- Overcoming compartmentalization/silos
  - Are other departments plugged into this workshop?
  - How will it work on the ground?
  - Policy alignment, standards
- Tendency is to overbuild – redundancy
  - Bigger does not equal better

Transportation/Transit/Roads

Targets:

- Increased and ongoing funding
- European cities
- Density – what range of densities are better for transit?
  - 100 people per hectare = 40 units
  - Town houses, low-rise apartments
  - Nodes and corridors
  - 8-9 stories max
  - An evolution of densities, not high-rises by single family homes

Transitions:

- In favour of transit but question of how to implement it?
  - Smaller/fewer roads, smaller/no driveways
  - Could benefit the developers if there is less to build
- Evolving block structure
  - Flexible zoning bylaws that can change over time
  - Gradation from lower density to higher density, gradual transition
- Development Charges
  - Can do this if it is affordable
  - People will move to the city before they move to high rises in the 905
  - Generally not an area for high-rises, but there are strategic places to do it (eg. Hwy 7, old retail)
  - Impediment will be cost
  - No family condos – but if development charges are reasonable people will build, need to be cost effective
  - Can use them to encourage the types of building that the Town wants
  - Can link them to priorities

Neighbourhoods and Buildings

Targets:

- Mixed use
    - It doesn't just mean retail below or people and jobs per ha
    - How to have flexibility? Make it achievable and build-able?
    - People and jobs per ha – should be flexible by neighbourhood
    - Vertical vs. horizontal – mix of types

Transitions:

- Adaptive reuse over time
- Typologies of good mixed use – vertical versus horizontal, building types, infill
- Term mixed use should be more flexible
    - Can include different types of employment
    - Don't always need 10 stories above
    - Too much retail sometimes for the community
    - Over zoning commercial
    - Need to concentrate retail and have density make it work

Rate Payers, Committees, etc.

April 26, 6:00pm

Top 2 Goals and Rationale:

Viable Ecosystems and Landscapes

- Less nature as community builds out
- Disconnected natural systems
- Environmental protection
- Quality of water in system, swimming in Milne Pond?
- Humans are a part of it, identity

High Performance Buildings

- How to make existing buildings healthy?

Food System

- Connect with events, weddings, etc.
- Community centres not as eco-conscious as they could be (disposable plates)

Multimodal Transportation System

- On the cusp of a new community (Langstaff) and growth
- 30,000 new people, will rely on the 407 and the subway

Resilient Infrastructure/Services

- Bike lanes, more local transit

Complete Neighbourhoods

- Standardization
- Access, connections, viable choices
- 25 year timeframe?
- Paths – need to be paved or somehow accessible m need to reconcile this need with ecological needs
- "wheelable" should be considered
- Mix of housing

Multimodal Transportation

- Need it so that you can transfer from one mode to another easily
- Need proximity between modes
- Blue Light in Toronto is 100% accessible

Walkable/wheelable complete neighbourhoods

- Need to get the focus off of cars, but still need to have roads
- Variety of housing types
- Transit accessibility – example of blue light in Toronto (100% accessible)
- Developers design
    o steps to get in front doors
    o don't do a mix
    o need to get away from standardization
    o Universal Design for accessibility

Complete Neighbourhoods

- Strollers too for the walkable/wheelable neighbourhoods – about small wheels
- Complete neighbourhoods, pathways, diversity in housing types, new urbanist
- Family friendly, parks, schools, shops to walk to, aging in place
- Pathways that lead somewhere and are connected

Transportation

- Ineffective bus routes
- Transit

Walkable Complete Neighbourhoods

- Not integrated into current plans
- Relationship with energy

Create and support a food system via viable ecosystems and landscapes

- Would combine these two goals, finds common ground
- Food system needs to be integrated into urban plans
- Will need to rebuild infrastructure to keep regenerating

High Performance/Healthy Buildings

- Paperless through more computers

- Reusable energy
- Timers on switches (operational)
- Solid waste

<u>Targets and Transitions for Goals:</u>

Ecosystems

Targets:

- "Upswing", restored function
- Swim-able lakes/ponds/rivers
- Connections to other ecosystems
- Expanded and integrated into neighbourhoods
- Preserved swamps and wetlands
- Continuous pathways throughout
- Beyond trees and tree planting, work is being done on a range of ecosystems
- Restoration ? Managed? Want to restore functions and increase diversity
- Habitat creation/restoration (eg pollution)

Transitions:

- Expanded definition – ecosystems don't stop at lines on a map
- Water quality – sampling, benchmarks
- Control water runoff, rain barrels, city of Toronto downspout removals
- Set clear targets
- Littler – no control currently, need education and more activities like the 20-minute makeover, need enforcement
- Stewardship
- Farmers? Need to resolve ecosystems vs. productive landscapes

Buildings

Targets:

- Energy efficiency – grid neutral(annual), example of California schools
- 100% accessible – Universal Design, but also accessible for hearing and visual impaired persons
- Mixed use
  - Families need to live in condos/apartments
  - Recreation and leisure
  - Libraries/recreation available in condos

Transitions:

- Building code – need to set the bar higher
- Leadership to raise the bar
- Rights lens/ responsibility
- Educations
- Regulation and incentives
- Smart/efficient design (operational)
    o Green buildings don't always have green users
- Change the costs, cost tools to encourage better behaviour

Local Food

Targets:

- More locally grown food in Markham
    o 20% from within boundaries
    o Not just farms, includes urban agriculture
- More space for food
- Infrastructure and space for food
- Part of a complete neighbourhood
    o Downsizing to a condo or apartment could mean a loss of quality of life without access to land to grown on

Transitions:

- Economics
    o local vs California
    o keep the price of local affordable
- Vegetarianism
    o Under the impact of everything that we eat

Transportation

Targets:

- Need a plan that doesn't rely on the subway
    o It might never come
    o Need it to be locally integrated
    o Should tie in with other transit providers (TTC)
- Multimodal along the streets
    o Paths for all users
    o Paths that lead somewhere (i.e. Markham bike map)
- Transit lanes

Transitions:

- Better connectivity
- Reduce the need to travel
- Distance to transit
- Blow out cul-de-sacs
- Transit – expand it by having the developer subsidize
- Need communities to be transit ready – bring transit in earlier
- Pay parking

Neighbourhoods

Targets:

- Planned better, retrofitted the existing
- Transit supportive – proximity to buses, approximately 200m to a transit stop
- Mix in the housing stock
- Central area/town square in each neighbourhood – shopping, community centre, walkable within 15 minutes
- Identity for neighbourhoods
    - Sense of place, sense of history
- Choice for shopping and services
- More mixed uses
    - Often have to travel to get what you need in everyday life

Transitions:

- Retrofit
    - Existing neighbourhoods need to take more people
    - Encourage this in the planning process by identifying areas where intensification is viable
- Planning neighbourhoods, participation

Infrastructure and Services

Targets:

- Libraries and community centres
    - Facelift for community centres
    - Dispersed/smaller facilities
    - Use existing buildings like schools/ shared facilities
    - Empty fields
- Live work
- Net zero

- All digital

Transitions:

- Turn empty lots into something
- Permeable pavement
- Time shift
    - change time of use
    - remote offices
    - pay-per-use
- Markham has the reputation of leading the way on meeting targets
    - Need to prove that it isn't just theoretical
    - Leveraging role as a leader
- Best practices – learning from others
- No solids in streams

Other Levels of Government

April 27, 9:00am

<u>**Top 2 Goals and Rationale:**</u>

Healthy People

- A catalyst
- Will allow for all of the other goals/initiatives to happen

Inclusive and Engaging Government

- Greatest opportunity to impact on where you live
- Important to have a say

Complete Neighbourhoods

- Developers built the community
- Big-boxification
- Market driving development
- Affordable housing
- Diversity
- Services are key – medical facilities, schools, work, community services
- Close to work, opportunities for employment

Public Transit

- We have what we have now because that is what we asked for; everyone wants everyone else to take public transit so a whole paradigm shift is needed
- Why are young people not here? Affordable housing is missing, there isn't the rental stock and basement apartments are illegal
- Robust and complete, walkable neighbourhoods a contradiction to services within a metropolitan area (which is the current reality) – people travel for places of worship, schools and entertainment

Trails

- Gated, fenced, locked, not publicly accessible
- Should be integrated with parks

Complete Neighbourhoods & Multimodal Transportation

- Should be a single goal since they need each other
- Walking as a priority

Affordable Housing

- It should be on the list of goals or dealt with more explicitly
- It is the biggest thing that we fail at
- There are lots of tool available for us
- Youth as well should be better included; walkable is important to them, need to make opportunities for them to get out an play rather than making appointments through "play dates"
- Need to have housing that is affordable for youth so that they live here
- People are leaving because of the cost of housing

High Performance Buildings

- Need efficiency by encouraging developers
- Operations of building
- Healthy people, healthy environment
- Resources that go into buildings
- Ontario Building Code doesn't do this

Complete Neighbourhoods

- Walk to schools – concern with vehicles and pollutants
- Obesity and disease
- Live/work/play
- People can participate in their community
- Walkable, safe neighbourhoods, key for schoolboards
- Affordable housing, access to basic needs

Healthy Buildings/Homes

- A culture of conservation, sense of sustainability
- Involve Markham hydro

Transportation

- Very important
- Smart Commute
- How employees get to work and students get to school

Walkable, Complete Neighbourhoods

- Chronic disease, affordable housing, lower income supports & services
- Working and living in the same community
- Access to recreation centres and health services

Inclusive and Engaging Government

- Partnerships are important for serving people with low incomes and disabilities
- Accommodating everyone's needs – low income, diversity, disabilities, aging
- Increasing diversity through immigration and aging population are key
- Retain population and how to attract new people

Smart Network

- Places to work is key
- High tech, Markham downtown
- Average travel time in the GTA is 80 minutes to commute to work (2 ways)
- Only 26% of trips are within Markham
- Servicing new neighbourhoods with energy systems

Multi-modal transportation

- A lot is going on already like Smart Commute, Transit
- A closer network will attract people to stay
- Closer live-work
- Programs in place

Walkable, Complete Neighbourhoods

- Where is safety? Biggest increase in budget is police – crime vs. traffic focus on budget
- All stems from Walkable Complete Neighbourhoods – need to define
- 6 lane arterials contradict these objectives
- Definition of neighbourhoods
- Crosswalks
- Focal points

Partnerships

- Need to leverage partnerships to get the Markham that we want
- Bad decisions have been made because of a lack of partnerships
- Combined services

Complete Walkable Neighbourhoods

- Park focused in the 80s is a challenge; how do we change this now?
- Local corner stores need to be safe to walk to but crosswalks are not prevalent and people need to be taught how to use them
- In the past would maximize lots and land use for the developers and nothing has changed
- New subdivisions are removed from existing subdivisions

Smart Reliable Infrastructure Network

- Cogeneration facilities so that we can still function in blackouts

Partnerships

- Such as governments and school boards
- Opportunities with churches should also be explored

Affordable Housing?

- What did developers have to say about this? (response: there wasn't much discussion about affordable housing in the earlier discussion)
- Developers like the idea of 2nd suites because they can make additional profit off the sale
- But there are local concerns of parking, safety, NIMBY
- "Attainable Housing", Workforce housing, incubator housing

Targets and Transitions for Goals:

Walkable, Complete Neighbourhoods

Targets:

- Complete housing choice/housing continuum
- Graduated density/transition
- Interesting design/diversity
- Access to transit 500 m or 10 minute walk, pedestrian scale
- Streetscaping scaled to pedestrian
- Connections, street and pedestrians
- Eyes on the street
- Walkable block, fine grain
- Different level of service – mainstreet vs. mall
- Integrated affordable housing – 25% generally, 35% in centre
- Graduated density/transition , design density
- Housing choice, diversity

Transitions:

- Integrated social/affordable housing – language is important
- Design competition
- Car co-ops
- Narrower streets/roads – consider emergency services
- Design for the speed that we want cars to drive
- Complete streets – includes parking in streets and walking
- Focal point of neighbourhoods is pedestrian oriented shopping districts, reintroducing main streets (businesses are failing here)1
- Destination streets
- Partnerships for affordable housing – government, developers, services
- Public engagement

Transportation

Targets:

- New developments have high targets
- Review targets by areas
- Operating cost targets, capital targets (jointly with the province and feds, subway) are different
- Based on targets for level of service
- Maximum parking standards
- Bike sharing/car sharing – but we currently lack the density to make this work
- A safety target about how comfortable people feel on the street – cards, pedestrians, cycling
- Modal split

Transitions:

- Review targets – targets by area
- Parking – need parking authorities and pay parking
- Delivery of infrastructure, operations vs capital costs
- Work with other levels of government, get engaged in provincial and federal politics
- Developer role
- Traffic studies makes using cars easy, project evaluations needs to change, need to evaluate differently, currently focus on car impact not on people
- Comprehensive approach to traffic calming, horizontal traffic calming
- Design for highway conditions, MTO design manual (being reviewed now)
- Rear parking for pedestrian and traffic comfort
- Safe pedestrian routes through car spaces, i.e. existing parking lots
- Car sharing needs density

Partnerships

Targets:

- Shared use of facilities, maximized use, multi-service
- Non-profit developers/operators, community based and private/government money going in (example at Bathurst and Major Mac)
- Way to deliver health services – prevent heart attacks
- Design of streets (York does asphalt and local municipalities do sidewalks – coordination to get a better road experience
- Alternative delivery models – use existing facilities
- Accessible services

Transitions:

- Examples of different levels of government working together (i.e. hospitals and community centre facilities – but need to be careful of "big box facilities" vs. meeting local neighbourhoods needs)
- Delivery of services locally – schools, churches can deliver recreation/art uses during the off hours (currently they can be rented)
- Joint facilities – larges schools impact on the surrounding community
- Immigration settlement strategy – experience is the focus of partnerships (health, settlement) to coordinate services and make accessible (transportation, language, etc.)
- Experience as a focal point for service delivery
- Street design, settlement, health

Healthy Buildings

Targets:

- York Regional Official Plan – province reviewed targets in Chapter 5 – the whole section
- Retrofitting existing stock
- Improvements to the Ontario Building Code needed to meet what York is asking for, wanting a common standard, advocacy for higher standards, partnering for reform
- Operational targets/role
- Work with developers to inform residents to use and maintain technologies

Transitions:

- Incentive programs to bridge the gap, such as water efficiency
- Advocacy for local control (i.e. Ontario Building Code) – which is going on now
- Costs will be what pushes adopting healthier buildings
- Governments need to lead
- Working with the market transformation
- Developers are starting to get it, can see it in their advertising and some of them make it their policy
- Public education, government education
- Partnerships for reform

- Hong Kong makes money on transit

Smart and Reliable Network

Targets:

- Independence; redundancies; localized services such as hydro, water, district energy
- Flexible and adaptive – transparent systems, use lanes more effectively, transit systems are a priority, flex lanes for traffic demand
- Integrated hybrid systems – renewables and baseload, move back and forth between them

Inclusive Governance

Targets:

- Community partnership council with a diverse range of residents
- Easy, accessible services
- Public – information in appropriate language
- Go to them and have multiple points of access – not just civic centres, surveys, tap into other events
- Time limits vs. volume of consultations
- Evaluation type discussions (phased steps of engagement)
- Delivery of communications for community meetings

Transitions:

- Resources
- Focus on representation from across the board
- Incentive-ize public engagement with bonuses
- Maximize the use of kiosks
- Promotion/delivery of consultation events, need to change how events work
- Easier access to information needed – language, use of cultural media
- Proactive engagement, personal invitations, target different demographics
- Student engagement – get the next generation involved early
- Representative groups advising
- Tap into other networks and leaders (cultural, special interest groups)
- Evaluate engagement
- Outreach orientations

Non-Governmental Organizations

April 27, 1:00pm

Top 2 Goals and Rationale:

Culture of Excellence

- Learning community, home grown solutions
- From culture of excellence success in other areas would flow

Walkable, Complete Neighbourhoods

- Incorporates/catalyzes other ideas

Resilient Infrastructure

- Not just the hard infrastructure, but also include soft infrastructure and people

Healthy People

- About equity – in presentation did not acknowledge the inequity that exists and the impacts that has on health

Inclusive and Engaging Government

- Government needs to know how to engage, people need to understand and be welcomed into the process
- Linkages to health

Healthy People

- Not just food, walking and hospitals
- Need to include violent homes, women and children
- Currently we are lacking adequate services to deal with these kinds of issues
- Emergency and social services are needed
- Lack services for new immigrants

Inclusive and Engaging Government

- Disparity between levels of government

- Boundaries in York Region exist between local municipalities – should be more inclusive within the region
- Understand policy
- Welcoming government and community
- Disconnect with province and feds

Walkable, Complete Neighbourhoods

- Need to be able to walk
- No one that their organization serves are drivers, they need affordable transit
- Neighbourhoods is about people, not income

Transportation

- Services geared to income, affordability

Inclusive and Engaging Government

- Language barriers
- Need to use plain language

Culture of Excellence

- Identify who is leading, look at other communities
- 7 communities are doing this already – why not us?
- Are we a 'high tech" capital?
- Use the brain power than already exists, be a community of leaders

Food System

- Good food is the basis of good health
- It connects people, brings them together

Walkable, Complete Neighbourhoods

- Health implications
- Creates a community where people can contribute
- Need destinations

Targets and Transitions for Goals:

Walkable, Complete Neighbourhoods

Targets:

- Meets all accessibility standards (ODA and AODA)
- Safety in neighbourhoods
- Accessible food sources – grocery stores
- All services, including health services
- Design for people, not for cars/not for big box
- Public places where people can gather – where? how?
- Food growing
- Rethink green spaces – paths and routes

Transitions:

- Zoning that facilitates housing types and tenure (including rental), integration of housing types and tenure
- Park dedication – how much? are we meeting targets? Rethinking green spaces, soccer fields vs trails
- Pilots, try different things that are innovative, a learning community, new approaches
- Access to information (such as a garbage day e-mail reminder)
- Retrofitting – increases the stories for strip malls/shopping malls/retail; can use this as affordable housing, minimum development standards, 2-4 story retail and housing precinct
- Smaller housing, places that we can afford, less stuff
- Vertical community – what does that mean for walkability?
- Large homes creates a privatization of lifestyle/internalization, neighbourhoods has to be better than the indoors
- Can we create beautiful places
- Common plaza, places to meet, sit and have coffee, no drive thrus
- What is public space, taken away from the public and now privatized, public space a commodity like bus ads, should be oriented to the users (public)

Transportation

Targets:

- 100% accessible
- Affordability (can do other things to make it more affordable, cost of transportation can make or break affordability of housing)
- Transportation can be the tipping point between living in Markham being affordable or unaffordable
- Social inclusion
- Safe cycling paths/trails/lanes
- Affordability – also vehicles, insurance (increasing), fuel cost (increasing)
- Streets that can be crossed
- Pedestrian oriented streets

Transitions:

- Understanding and managing the full cost of transportation (insurance, ownership, fuel)
- Walking – need to understand how to design roads that are safe to cross – how do you walk here as it is now?
- Communication strategies for affordability, etc. to be for the entire community, not just the low income members because it can benefit all
- Riding with the community when you take public transit, in your community when you are on the bus, experience focused
- Time to wait – why not a phone ap or something so that people know how long they have to wait, could also be a solar powered bus post
- The experience of transit, not just function
- Need to get people to try transit – like free bus day
- Parking is like cocaine, the more you have the more you want – need to break the parking addiction

Inclusive and Engaging Government

- More engagement – create a sense of belonging
- Missing the "who" from the presentation – it focused on "how" and "what"
- Office of Community Engagement for Markham – can get people invested in their community, get used to coming together, overcome the old boy network
- Innovation/new/creative ways to do things – be willing to try things and fail (not just engagement)
- Direct discussions
- Local cable stations are gone – could Markham take over the old community channel? It could be community driven, about what is going on in Markham (Stouffville has radio, Vancouver has TV)
- Maytree Foundation – governance and newcomers, diversity, have public policy training institute
- How often are people being asked for their input? Plebiscite? Referendum? Able to control a decision? Online voting?
- Communication – signage, local channels, local newspapers (best practices – Mississauga)
- Communication as a key tool for positive change and investment in the community
- New and realistic engagement and approaches
- DiverseCity – public policy institute

Healthy People

- Prevention oriented, be proactive
- Income is the highest determinant of health – social determinants of health?
- Eliminating physical education/food literacy from schools
- Community centres cots – could have everything free, participation rates would increase

- Supportive social infrastructure – who looks after services? Seamless service, social infrastructure
- Social capital, cohesion
- Adults with developmental delays – should have seamless support in communities
- Free recreation services
- Catalysts for social interaction
- Community garden as a catalyst
- Support systems as a social determinant of health, lack of connections because of cars and lifestyles means safety issues and assistance for people who need it
- What is the level of social cohesion?
- Need to think upstream, how can we improve things?
- Leadership on providing information on how to get help – re: sexual assault or other things that people don't talk about
- Community switch board to use networks that are already in place – storefronts could serve as connections, could offer community programming (i.e. East Scarborough Storefront)
- Social planning at the local level – local perspective on many things
- Social planning/development (Regina)

A Culture of Excellence

- How does excellence get developed? From the ground, exploring potential that is now underdeveloped, missing opportunities, all kinds of skills to grow food and other things
- Asset mapping – what do we have? What belongs to everybody? What are we leading at? What do our businesses do? What do our schools do?
- Are there annual awards? if so how well are they advertised? A lot of luck involved if we decide to only count famous people
- Tap that unknown potential, our strengths
- Enable/grow locally – not just imports
- Losing athletic kids to Toronto – why?
- With asset mapping need to find out where there is a critical mass – and then we need to figure out what to do from that information
- Awards/showcasing/profiles
- Centres of excellence and innovation – more than just businesses and profits but also about social services and innovative community living
- Risk adverse community is not willing to gamble
- Bring people together to cross pollinate on things that matter – creating a commons of innovation
- Top organizations list
- Bring together the brightest and the best
- We need to invest in this, have an honest discussion about taxes, how it works, what they get

Food Systems

- Food education (cooking)
- Community gardens

- Food policy council, charter
- Affordable, accessible healthy food
- Inventory of kitchens, where community kitchens could be
- Food mapping, understand the system
- Dufferin Grove Park – bake oven in the park, farmers' market, community meals
- Urban hens
- Urban agriculture, schools
- Food centres
- Food policy council
- Animal husbandry
- Abattoirs needed in Ontario
- Immigrants who are available to be farmers, have the skills but lack the money
- Infrastructure for urban agriculture
- School greenhouses
- Backyard garden sharing

Launch of Greenprint, Draft for Consultation at Unionville Festival

June 5, 2010

GREENPRINT LAUNCH EVENT, JUNE 5TH UNIONVILLE FESTIVAL, VARLEY ART GALLERY

get your **FREE** eco-friendly bag while quantities last!

Join Mayor Frank Scarpitti and Council Members at the Varley Art Gallery starting at 11:30 to learn more about Markham's Greenprint Sustainability Plan. Come enjoy great activities and entertainment throughout the day!

SCHEDULE

11:40 Mayor Frank Scarpitti launches Markham's Sustainability Plan
(see reverse for more details)

11:50 Tribal Vision Native Dance

12:05 Youth Singer Maria Krotiris

12:10 Town Recreation Demo

1:00 Tarana Indian Dance

1:15 Singer Kimberly Ramon

1:30 Kenn Lewis Steel Drum Band

1:45 Otesha Interactive Theatre, Part 1

2:00 Chinese Folk Dance

2:10 Otesha Interactive Theatre, Part 2

2:30 Close of Event

MARKHAM

LEADING THE WAY TOGETHER TO LIVABLE NEIGHBOURHOODS, HEALTHY PEOPLE AND CONTINUING PROSPERITY

The Greenprint is Markham's long-term sustainability plan to address environmental health, economic vitality, social well-being and cultural vibrancy.

Markham's greenprint
Sustainability Plan

Learn more by visiting us online at:
www.markham.ca/sustainability

Follow us on Twitter at:
SOmarkham

Join our Facebook group:
Markham Greenprint

This bookmark is crafted from handmade, plantable paper. Place seed paper under a thin layer of soil in sunlight. Water thoroughly and watch the wild flowers bloom!

Sustain-a-licious! Second Annual Sustainability Fair
November 6, 2011
Markham Civic Centre

In support of The Greenprint - Markham's Sustainability Plan, the Town hosted a delicious celebration with workshops, children's activities, interactive booths and opportunities to taste and learn about local foods. Over 200 Sustain-a-licious! visitors had the chance to learn more about The Draft Greenprint Plan and provide input into how Markham can create a more sustainable community now and into the future. Families learned more about the way our food grows, how it's cultivated, and the earth that supports it. There were live animal shows, hands-on workshops, seminars, tasty food samples from local farmers and restaurants, door prizes and much more. Below is an outline of the activities during the event.

Who Came	What They Did
York Region Food Network (YRFN) – a charity dedicated to eliminating hunger in our community	Leading a seminar on food security and social justice, plus being available all day to talk about their programs
Local Food Plus (LFP) – a non-profit organization that certifies local sustainable food producers (and Town of Markham partner)	Samples of certified foods and available all day to answer your questions about why local sustainable food is important to our community
Fatal Light Awareness Program (FLAP) – a group working to safeguard migratory birds in an urban environment	A presentation on the threats of urban environments to migratory birds and an information booth focused on solutions
York Region Raw Food Co-op/Naturally Alive – a raw food and health services business	A booth with food samples and a workshop on how to make responsible food choices.
Edencrest Farms – a Community Shared Agriculture (CSA) farm offering produce throughout the growing season	A workshop on sustainable agriculture, including explaining how CSAs works and farmers on-hand all day at their booth
Main Street Markham – one of our Business Improvement Areas that runs a Farmers' Market and promotes local restaurants	A booth at the fair offering information on the Main Street Markham Farmers' Market and local restaurants
ChocoSol –chocolatiers committed to horizontal trade with farmers in Chiapas, Mexico and sustainable processing here in the GTA	Hands-on, bicycle powered tortilla and chocolate making and sampling. Find out where chocolate comes from and why your choices matter
Evergreen – a not-for-profit committed to making cities more livable (and Markham Trees for Tomorrow partner)	Information booth on what they're doing in Markham and how you can get involved, with seeds give-away.
Cathy's Crawly Composters – vermicomposting (composting with worms) expert and supplier	Demonstrations on how household food scraps can be converted to nutrient rich fertilizers with free mini-composters to the first 100 booth visitors

Canadian Raptor Conservancy – involved with projects protecting birds of prey, wildlife and their habitat	Two Birds of Prey Shows in the Great Hall and available throughout the day to discuss how you can help protect wildlife
Heart and Stroke Foundation – a Canadian charity committed to reducing heart disease	A booth highlighting their heart-healthy lifestyle programs and can help you eat better
Rouge Park – an urban wilderness park that is also home to many of Markham's farms	A presentation on the Rouge Park and their stewardship programs, plus a booth on the many ways you can enjoy the park
York Region – our regional government that is also committed to sustainability	A table highlighting a range of services and programs that are available to Markham residents to help them be more sustainable
Federation of Chinese Canadians in Markham (FCCM) – a not-for-profit that serves the Chinese community and runs the Taste of Asia Festival	All-day information on their services and promotion of the Taste of Asia, the largest multi-cultural Asian street festival in Canada
FarmStart – an innovative program that is helping develop a new generation of farmers	A seminar on economically viable and environmentally sound farming and on-hand all day to answer your questions
Green River Coffee – a local provider of freshly roasted, fairly traded coffee	A booth showcasing their coffee and information on what fair trade is and why it is a more sustainable choice
The Pampered Chef – a cookware company that offers products to help you transform local ingredients into delicious meals	A display of their products that can be purchased and a possible cooking demonstration showing how to use their cookware
North American Native Plants Society – a group dedicated to the study, conservation, cultivation and restoration of native plants	An information table on their programs and services, with a special focus on edible native plants
Transition York Region – a group committed to building local resilience while reducing carbon emissions and reliance on fossil fuels	A presentation on the new Transition York Region group and how Markham residents can get involved in a more sustainable future
Markham Teen Arts Council – a group the represents the youth art community in Markham	A hands-on booth with art activities for kids and information on the Markham Teen Arts Council and how to get involved
B & L Honey – a honey producer that provides educational talks, along with a full range of products	A display of honey based products including candles, pollen, creamed honey, comb honey and pails up to 60lbs.
Oklin – manufacturer of indoor home food waste composting systems	Demonstrations and information on the home food waste composting technology that can produce high quality compost in your home
Seeds of Diversity – a charitable organization dedicated to the conservation, documentation and public accessibility of heritage varieties of plants	An information table on heritage seeds and how to get involved growing, propagating and distributing some of their over 1900 varieties
Garden Jane –a community oriented business that helps people of all ages grow and enjoy eating healthy food	An interactive booth on how to grow sprouts in your home with free sampling, information on how to do it safely and seeds to take home

Greenprint Community Outreach Calendar
2010 and 2011
Community Wide

May 7 – 5:00 p.m. Mayor's Youth Task Force Battle of the Bands – Milliken Mills Community Centre

May 12 – 8:00 a.m. to 2:20 p.m. Mayor's Youth Task Force Youth Golf Tournament – Markham Green Golf Club

May 15 – 5:00 p.m. to 7:00 p.m. Mayor's Youth Task Force Amazing Markham Race – Civic Centre

May 27 – **6:00 p.m. to 8 p.m.** Family Fishing at TooGood Pond – Rouge Park

June 5 – 11 a.m. to 12 p.m. Launch of Greenprint during Unionville Festival **–** Varley Art Gallery

June 12 – 1:30 p.m. to 7 p.m. Rouge Fairway Residents' Association Summer Festival – Box Wood Public School

June 15 – 7:00 p.m. Cornell Ratepayers' Association Meeting -

June 19 – Time 7 a.m. to 5 p.m. Markham Village Music Festival – Main Street Markham

June 26 – 12 p.m. to 11 p.m. Taste of Asia – Pacific Mall

June 27 – 12 p.m. Stiver Mill Farmers Market Gathering Opening - Stiver Mill Farmers' Market

July 1 –Canada Day – Milne Park

July 9 & 10/11 – 6 p.m. to 1 a.m. & 12 noon to 1 a.m. Night it Up! – Warden & Steeles

July 13 – 9 a.m. to 3 p.m. Youth and Seniors Picnic in the Park – Milne Park

July 17 – 9:30 a.m. to 4 p.m. Art in the Park – Markham Museum

July 18 – 9:30 a.m. to 5 p.m. CARnival – Main Street Markham

July 23 – 9 a.m. to 3:30 p.m. Making a Difference Summer Camp program – Markham Village Branch

July 27 – 9 a.m. to 2 p.m. Passport to Knowledge Camp program – Markham Village Branch

July 30 – 12 p.m. to 2 p.m. Passport to Knowledge Camp program – Markham Village Branch

August 4 – 10 a.m. to 1 p.m. Passport to Knowledge Camp program – Milliken Mills Branch

August 5 – 12:30 p.m. to 1:30 p.m. Eco-Adventure Camp – Markham Museum

August 8 – 10:00 a.m. to 3:15 p.m. Annual Cornell Picnic – Cornell P.S.

August 15 – **9:00 a.m. to 5:00 p.m.** Pedestrian Day – Main St. Markham

August 19 – 11:00 a.m. to 4:30 p.m. Newcomer Orientation Day – First Markham Place

August 21 – 11:00 a.m. to 6:00 p.m. Markham & Unionville Jazz Festival - Linda Briggs – Unionville Main St.

September 11 – 10:00 a.m. to 6:00 p.m. Milliken's Children Festival – Civic Centre

September 17 – 5:00 p.m. to 7:00 p.m. 2010 Mid-Autumn Welcoming Community Fair – Chinese Youth Center 3447 Kennedy Road

September 22 – 5:30 p.m. to 8:30 p.m Cornell Travel Fair – Rhenish Church

September 25 – 10:00 a.m. to 4:00 p.m. Applefest – Markham Museum

September 30 & October 1 – 9:00 a.m. to 1:00 p.m. & 3:00 p.m. to 7:00pm. Markham Fair – Markham Fair Grounds

November 6 – 10:00am to 4:00pm Sustain-a-licious - Civic Centre

November 26 – Time 11:00a.m. to 1:00 p.m. YENYR's (Youth Environmental Network of York Region) Ecological Action Conference – Civic Centre

December 3 – 10:00 a.m. to 12:30 p.m. Markham District Energy Inc. (MDEI) press conference on student bursary. Book signing by Tom Rand "Kick the Fossil Fuel Habit – Civic Centre

Feb 18, 2011 – 10:00 a.m. to 1:30 p.m. Large Urban Mayor Caucus of Ontario (LUMCO) Meeting – Civic Centre

March 3 – 6 p.m. to 9 p.m. Angus Glen Ratepayers Annual Open House and Meeting – Angus Glen Golf Course

April 19 – 10 a.m. to 2:30 p.m. IBM Earth Day Event – 8200 Warden Ave Markham

Starting in the summer of 2010, community outreach included a survey asking community members to select the two Sustainability Priorities that were most important to them using dot-mocracy (using a sticker to indicate their preference on a diagram displaying all 12 priorities). The following are the results of these informal surveys.
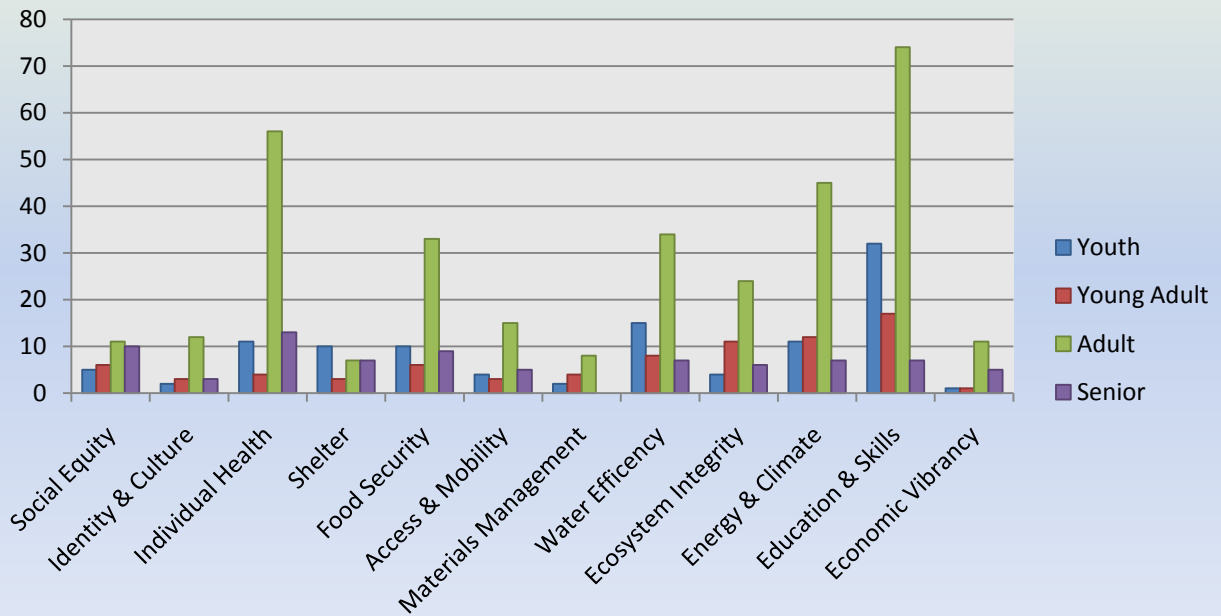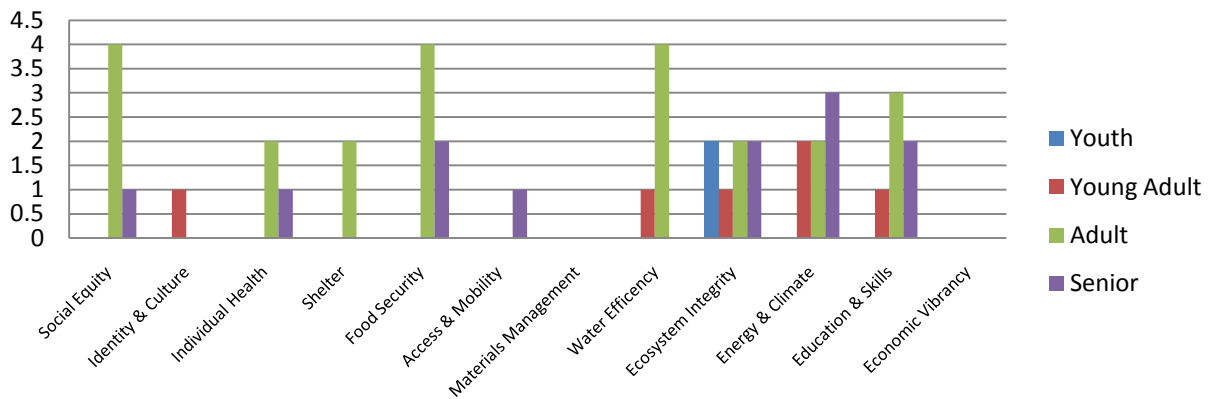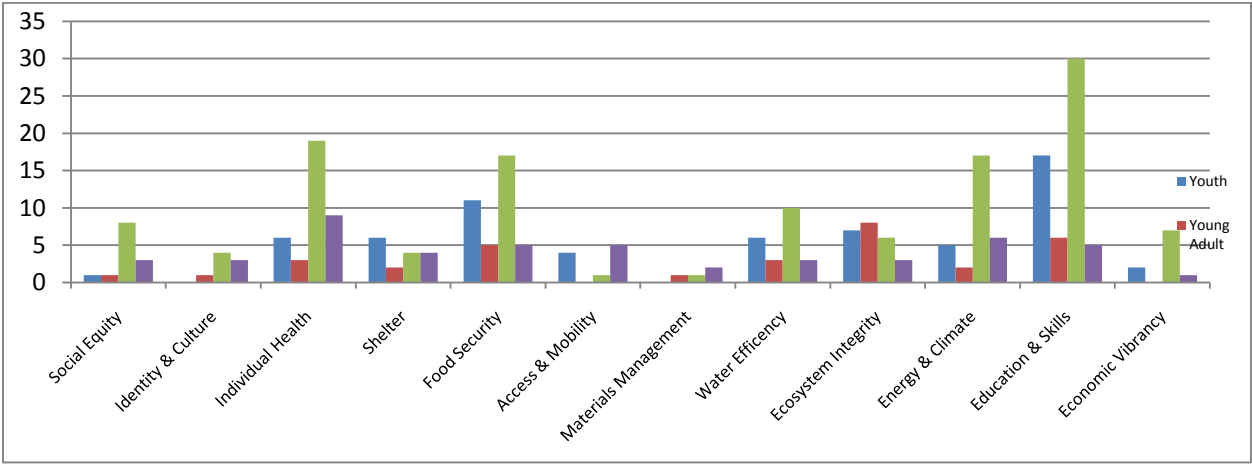

NIGHT IT UP! SURVEY RESULTS
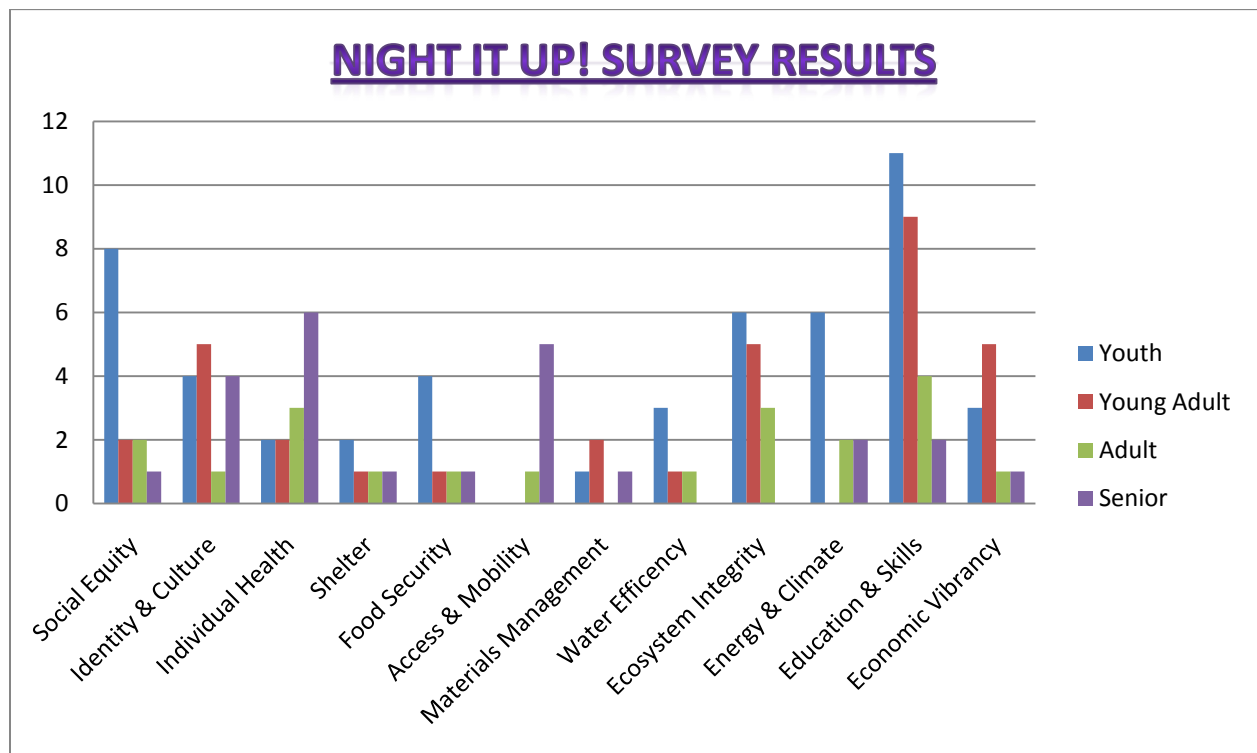
CANADA DAY SURVEY RESULTS
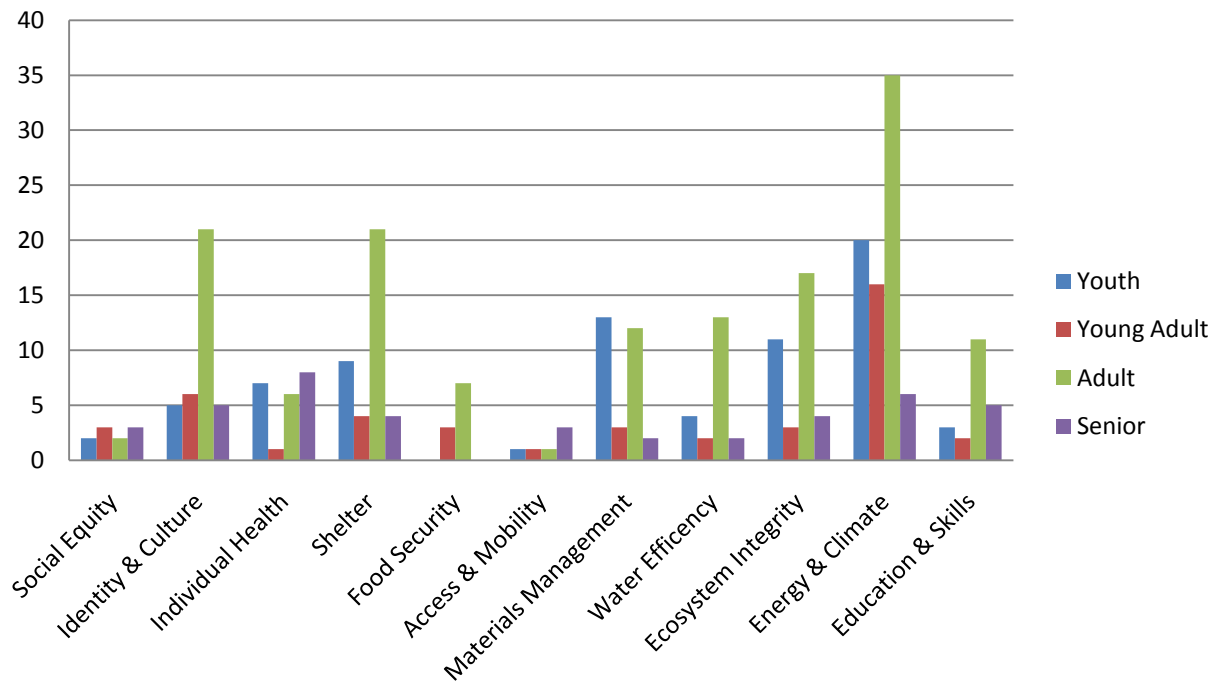
TASTE OF ASIA SURVEY RESULT
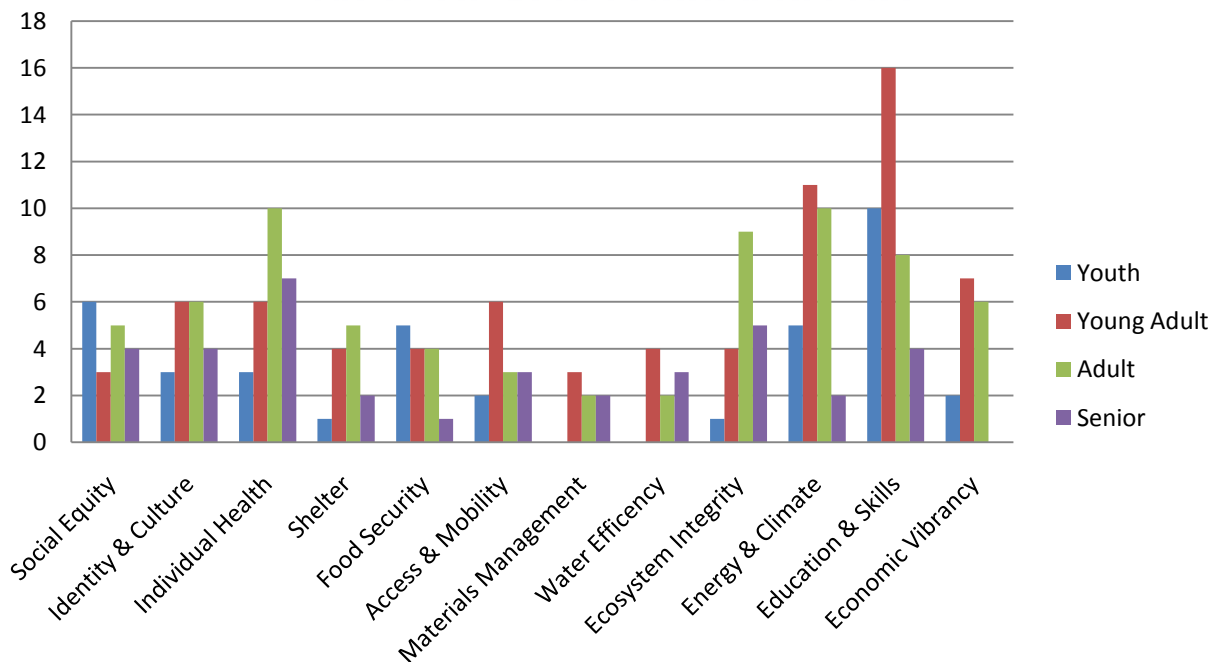
GREENPRINT LAUNCH – WHAT'S YOUR PRIORITY SURVEY RESULTS

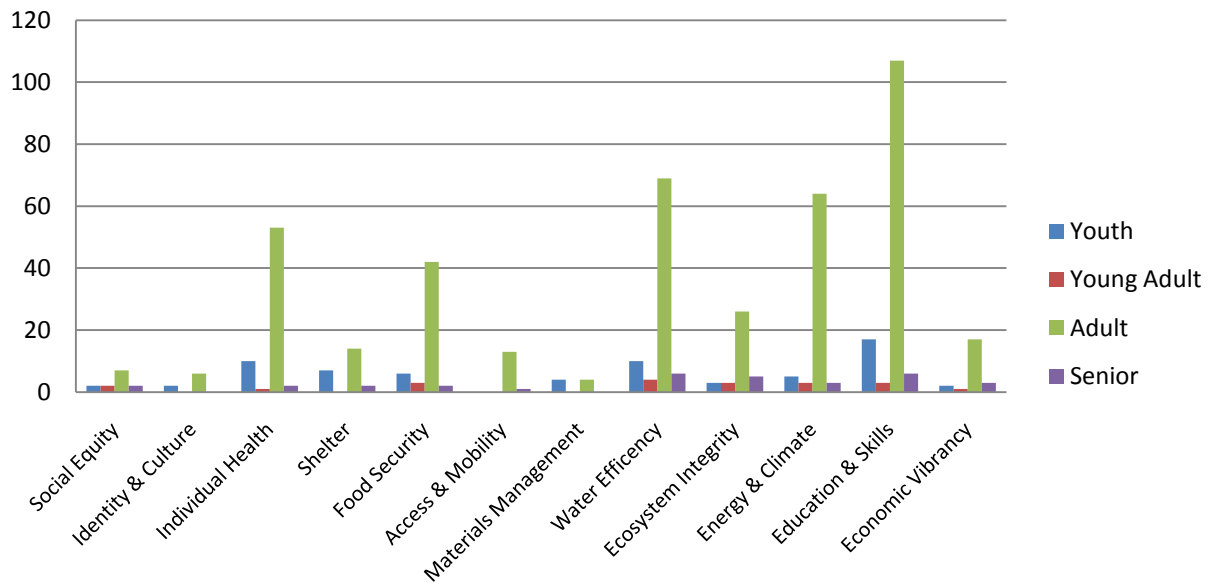Art in the Park & CARnival Survey Results

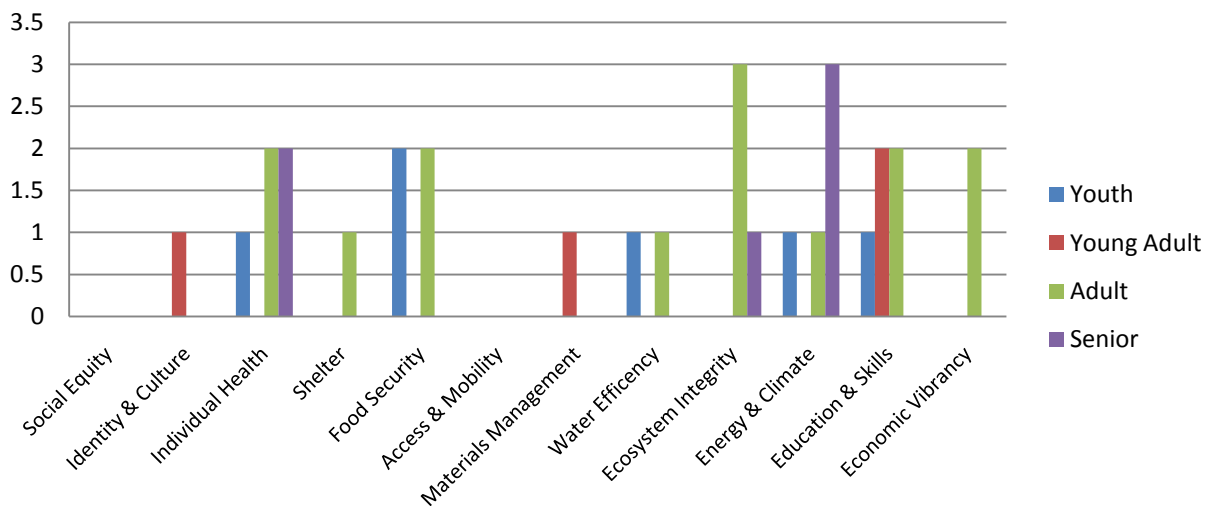Pedestrian Day Survey Results

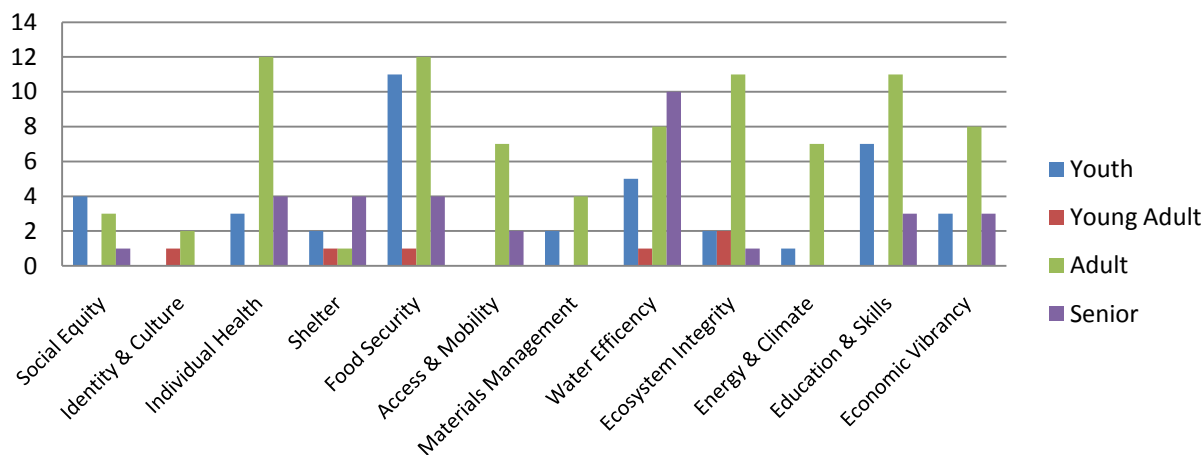Newcomer Fair & Jazz Festival Survey Results
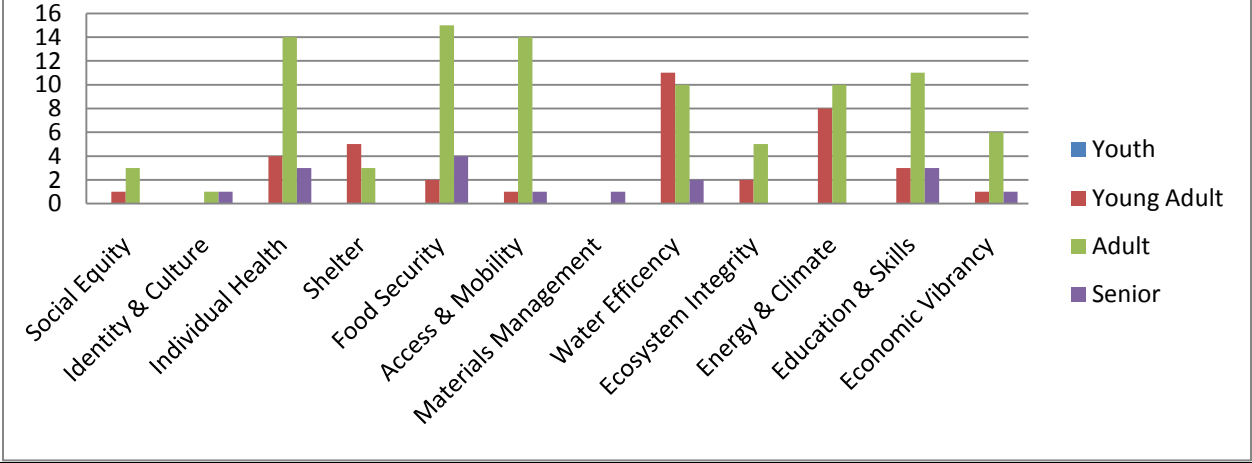
Milliken's Children Festival Survey Results

Travel Fair Survey Results
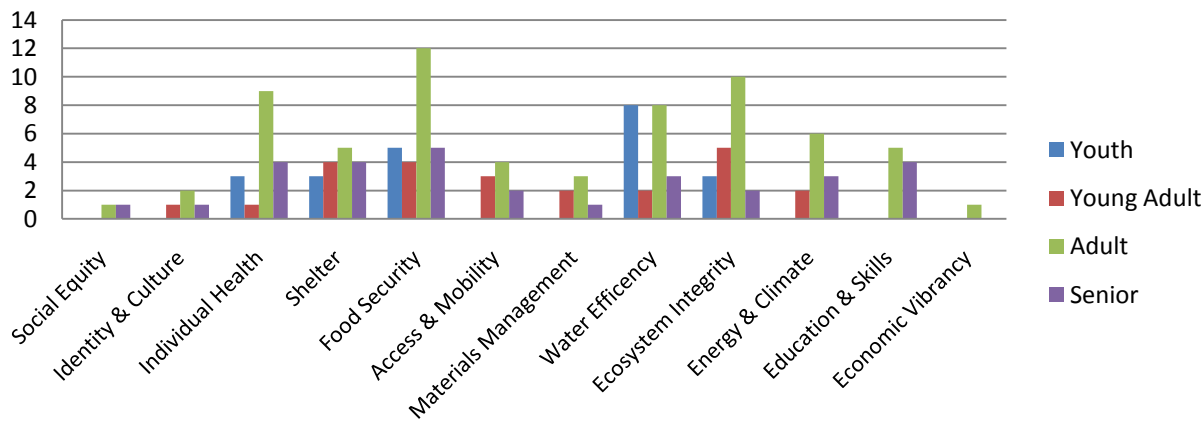
Markham Museum's Applefest
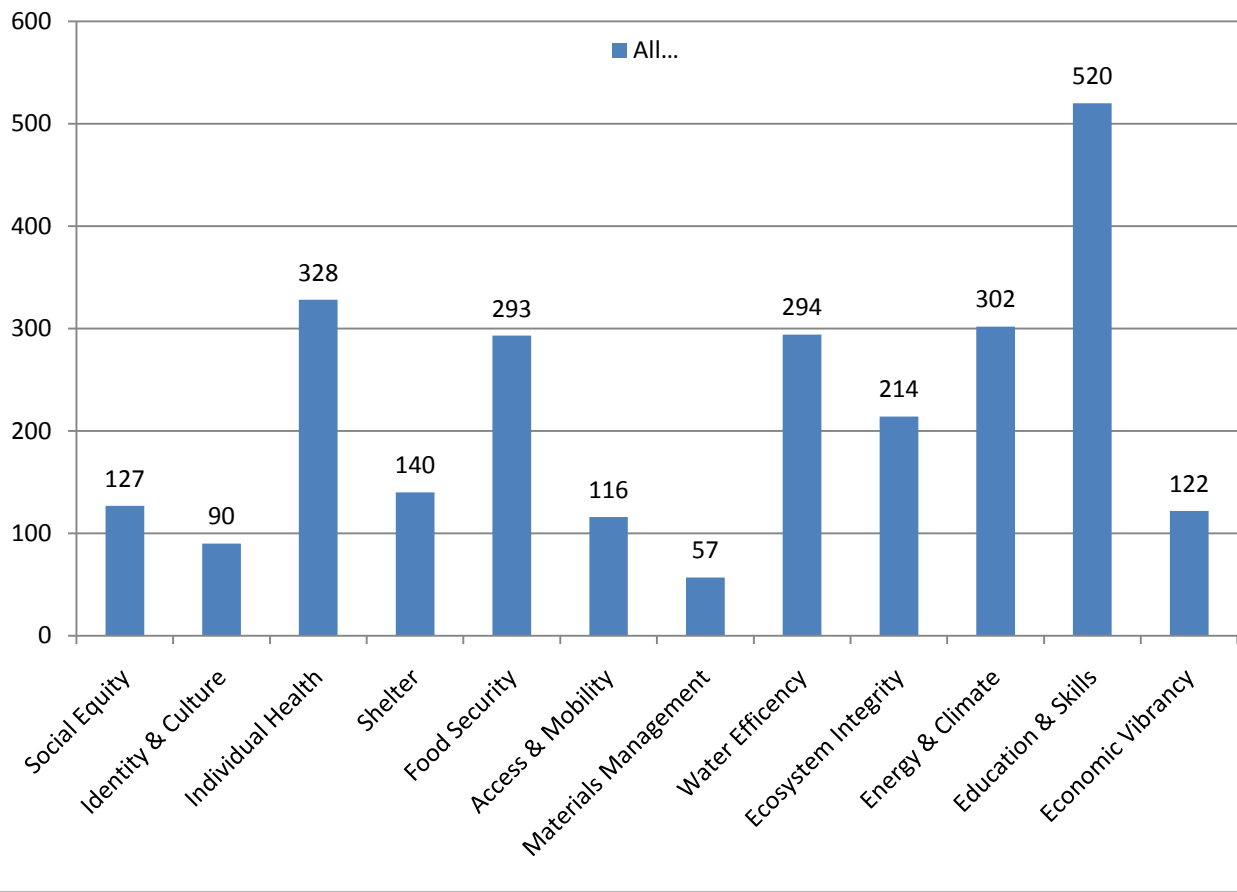

Markham Fair

Summer Outreach Survey Results

Bar chart showing values: Social Equity 127, Identity & Culture 90, Individual Health 328, Shelter 140, Food Security 293, Access & Mobility 116, Materials Management 57, Water Efficency 294, Ecosystem Integrity 214, Energy & Climate 302, Education & Skills 520, Economic Vibrancy 122

June 25 – Engineering Transportation Group, Mtg #1 (Brian Lee and staff)

June 28 – Development Services Planning Managers, Mtg #1(Biju Karumanchery and Managers)

July 07 – Community Services Operation, Mtg #1 (Peter Loukes and Managers)

July 19 – Community Services Culture, Mtg #1 (John Ryerson and Managers)

July 20 – Development Services Front Counter (Nathalie Orsi and staff)

July 23 – Community Services Culture, Mtg #2 (John Ryerson and Managers)

July 23 – Community Services Operation, Mtg #2 (Peter Loukes and Managers)

July 27 – By-Law Enforcement, Mtg #1 (Bill Wiles, Supervisors and By-law Officers)

July 27 – Development Services Policy Planning, Mtg #1 (Tim Lambe and Senior Coordinators)

July 27 – FLAP "LUNCH & LEARN" Session for all Town staff

July 29 – Corporate Services EMT, Mtg #1 (Andy Taylor and Directors)

Aug 10 – Human Resources, Mtg #1 (Sharon Laing and Managers)

Aug 10 - Development Services Policy Planning, Mtg #2 (Tim Lambe and Senior Coordinators)

Aug 12 – Community Services Culture, Mtg #3 (John Ryerson and Managers)

Aug 16 – Development Services Policy Planning, Mtg #3 (Tim Lambe and Lilli)

Aug 23 – Corporate Services Purchasing, Mtg #1 (Alex Moore and staff)

Aug 30 – Building Standards, Mtg #1 (Tim Moore and Managers)

Aug 31 – Library, Mtg #1 (Catherine Biss and Managers)

Sept 7 – Economic Development, Mtg #1 (Stephen Chait and staff)

Sept 10 – Recreation, Mtg #1 (Mary Creighton and staff)

Sept 10 – Fire, Mtg #1 (Bill Snowball and Deputy Chiefs)

Sept 13 – Development Services Urban Design, Mtg #1 (Catherine Jay)

Sept 23 – Asset Management, Mtg #1 (Steve Andrews)

Oct 1 – Community Services, Facilities (Brenda Librecze and staff)

Oct 7 – Economic Development, Mtg #2 (Stephen Chait)

Oct 25 – Building Dept, Mtg #2 (Tim Moore and Managers)

Oct 29 – Engineering (Brian Lee's Group)

Nov 2 – Development Services Planning, Mtg #2 (Biju and Managers)

Nov 4 – Greenprint LUNCH & LEARN Session for all Town staff

Nov 22 – By Laws, Mtg #2 (Bill Wiles)

Nov 25 – Powerstream LUNCH & LEARN Session for all Town staff

Nov 30 – Corporate Communications (Dennis Flaherty's group)

Nov 30 – Engineering (Brian Lee's Group)

Jan 19 – Councillor Howard Shore

Jan 21 – Councillor Colin Campbell

Jan 26 – Regional Councillor Joe Li

Jan 31 – York Region Community Services Commissioners

Feb 2 – Finance Dept

Feb 17 – Councillor Burke

Feb 24 – Clerks Dept

Apr 21 – Corporate EMT Directors and Managers Meeting

Apr 26 – Development Services Directors and Managers Meeting

Apr 28 – Community Services Directors and Managers Meeting