

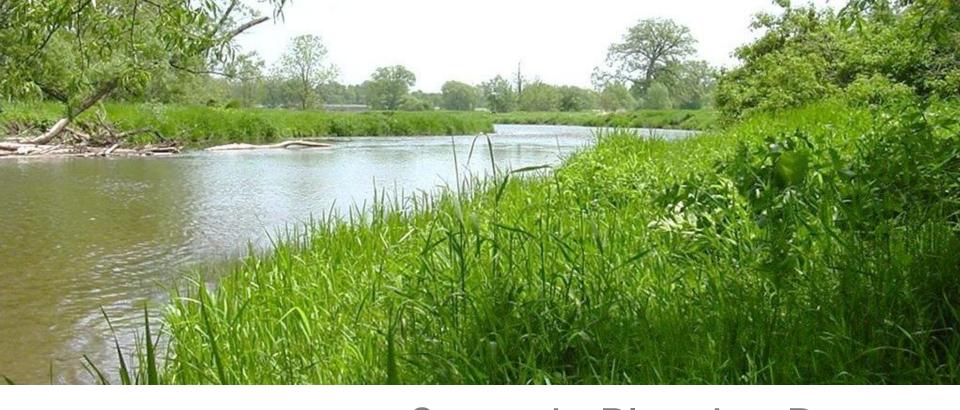


# Brampton Grow Green an Environmental Master Plan



## today's agenda

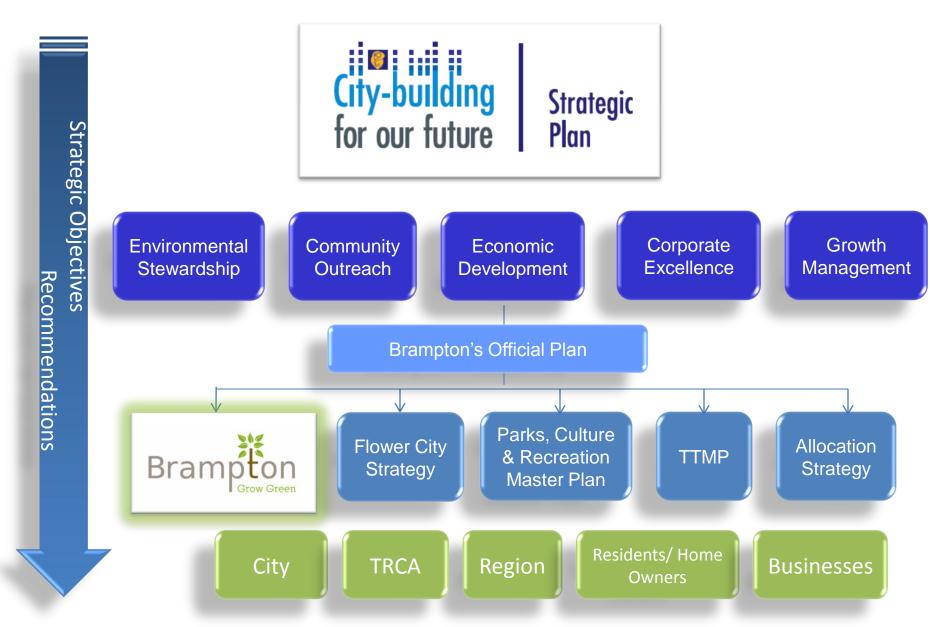
1. introduction 5 minutes 2. overview of the EMP study a) background 5 minutes b) vision, principles and goals 5 minutes group discussion 10 minutes c) environmental performance framework 20 minutes breakout discussion 60 minutes 3. next steps 10 minutes



# Strategic Planning Process



# where EMP fits into the City's planning...





# what is an Environmental Master Plan?



why are we doing it?

Brampton is no longer a small town but a large city ...

Brampton must think and act in accordance with its anticipated growth and its regional significance



## the EMP will contain

vision a community-based vision for Brampton's environmental future principles outline the values used to achieve the vision principles goals help make the vision happen goals metrics establishing what to measure and where to aim for the future targets specific thresholds to assess environmental performance specific things that can be done to improve environmental performance actions strategies to change the way the community and the City operates strategies

the EMP will be a living document that monitors and communicates the environmental performance of Brampton

## keys to implementation

declare and demonstrate the City's commitment to the environment as a priority

reposition the City as a leader in sustainable environmental practices

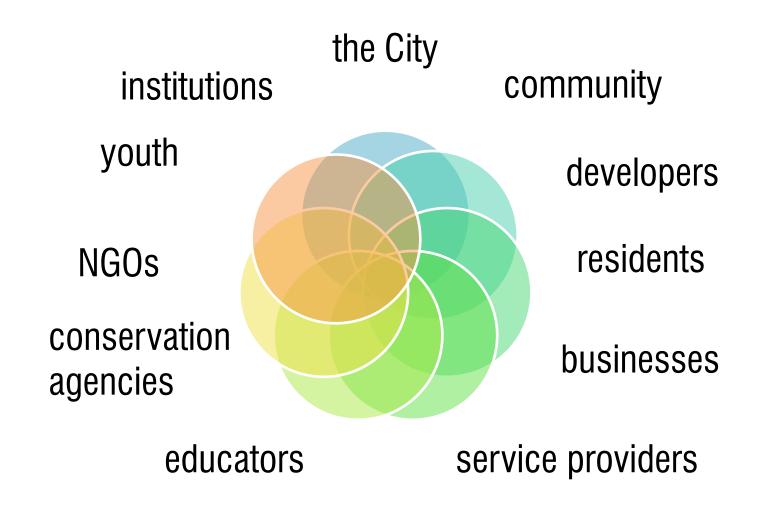
build the capacity/resources/awareness to effect change over time

incorporate key partners

encourage the community!

establish a phased approach (implementing and monitoring progress)

## key implementation partners

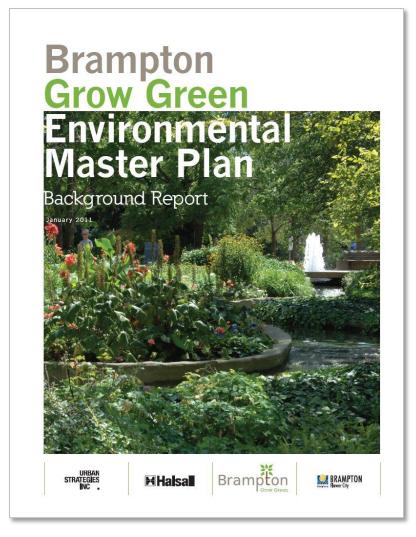




# a snapshot of Brampton



## Brampton today



### the background report contains:

a review of City documents and reports

a list of environmental initiatives already undertaken
what we heard: stakeholder engagement
environmental characteristics of Brampton
a vision for the environmental future of Brampton
guiding principles

### what we've heard this far

some trails provide dead-end connections

city is built for cars with implications for traffic, water and air quality, human health/fitness

create an environmental vision for each

community

protect and strengthen natural systems

make the downtown

better for cyclists and pedestrians

Brampton has many assets and

it's time to think about the value of those assets

## environmental characteristics

4 Watersheds and 5 significant valley systems 14 Lakes

4,600 hectares (11,400 acres) or 18% of the municipal land base currently identified as natural heritage system 400 parks

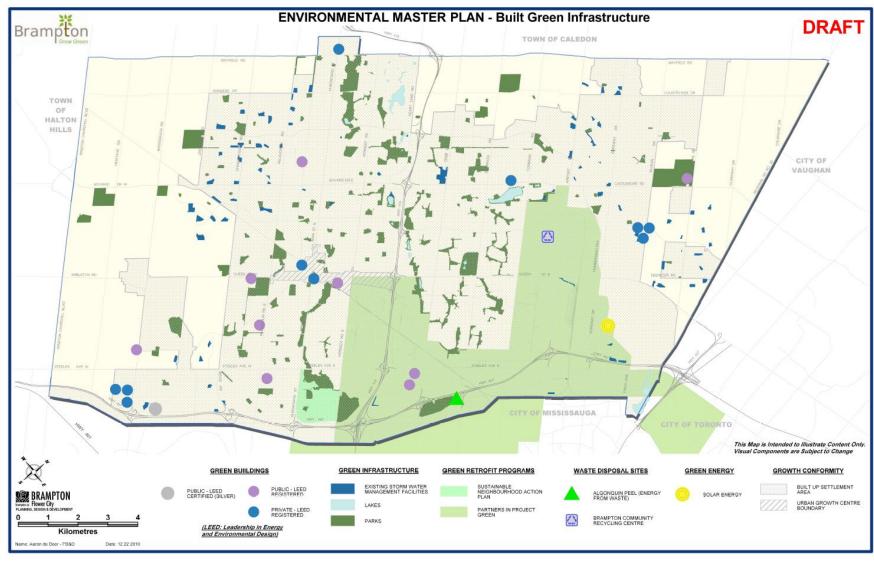
960 hectares (2372 acres)

of conservation areas 200 hectares (500 acres) of Greenbelt

An average of 11% tree coverage across the City 90 kilometres of existing trails and pathways

150 existing stormwater management ponds

## environmental characteristics



## environmental initiatives





# defining a vision



## the EMP will contain



the EMP will be a living document that monitors and communicates the environmental performance of Brampton 17

## vision – what we want Brampton to be

"protect the future: Brampton is a community that will conserve, enhance and balance our natural and built environments to create a healthy, sustainable city. We will carry out our responsibilities to meet the needs of the present community without compromising the ability of future generations to meet their own needs."

## principles – our values

### Leadership

We will be innovative, lead by example, and advocate environmental sustainability within and beyond our community. Best practices from around the globe will guide our operations and shape our policies and plans.

### Responsibility

We will integrate community and natural systems sustainability into everything we do. We will learn of trends and initiatives beyond our community to better anticipate Brampton's environmental needs and concerns.

### Balance

We will achieve our environmental goals within a balanced environmental, social, cultural and fiscal agenda that considers the direct and indirect costs of our actions and inactions.

### **Accountability**

We will be open in our decision-making and actions, and we will monitor, evaluate and report our environmental progress.

### Stewardship

We will inform, engage and participate with the community to protect, conserve and enhance our natural and built environments.

### **Partnership**

We recognize the need for, and value of, partnerships with other levels of government, conservation agencies, conservation groups, stakeholders and the community, to deliver and implement environmental programs and activities to improve and benefit the health and diversity of our natural and built environments.

## goals - making the vision reality

### Invest in PEOPLE to create a healthy, liveable and safe community.

Advance the awareness and engagement of the Brampton community in healthy lifestyles, Environmental stewardship and the green economy to manage choices that impact the built and natural environment.

### Reduce impacts on AIR quality.

Improve air quality to reduce human health impacts and limit contributions to climate change.

### **Protect and respect WATER as a non-renewable, life critical resource.**

Conserve water, and manage rainfall and snowmelt as a resource to improve the quality and quantity of water returned to the environment to limit disruption to water flows and contamination of water sources and habitat.

### **Manage LAND to sustain the natural environment.**

Conserve, enhance and use land efficiently to foster healthy communities and ensure diverse, functioning natural heritage systems.

## Reduce ENERGY consumption and manage the impact of energy usage on our environment.

Reduce energy use, particularly from non-renewable sources, to limit greenhouse gas emissions, preserve natural habitats and resources, and increase energy security.

### Reduce and manage the material considered WASTE.

Reduce waste generation to limit greenhouse gas emissions, preserve habitats and resources and decrease management costs.

## discussion

### **Question:**

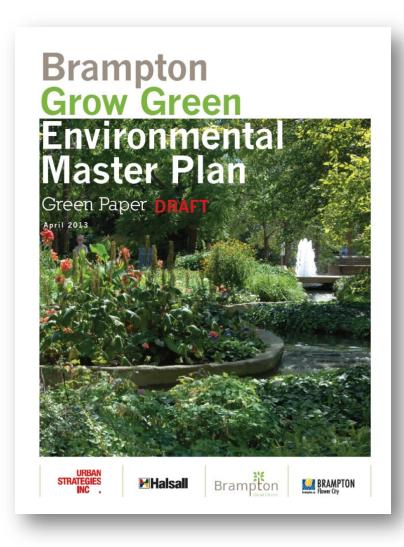
Do you have any questions or comments on the Environmental Master Plan Vision, Principles and/or Goals?



# environmental performance framework



## Brampton today



### the green paper provides:

a foundation for the Environmental Master Plan in combination with the Background Report

identifies key elements to improve and monitor the City's environmental performance

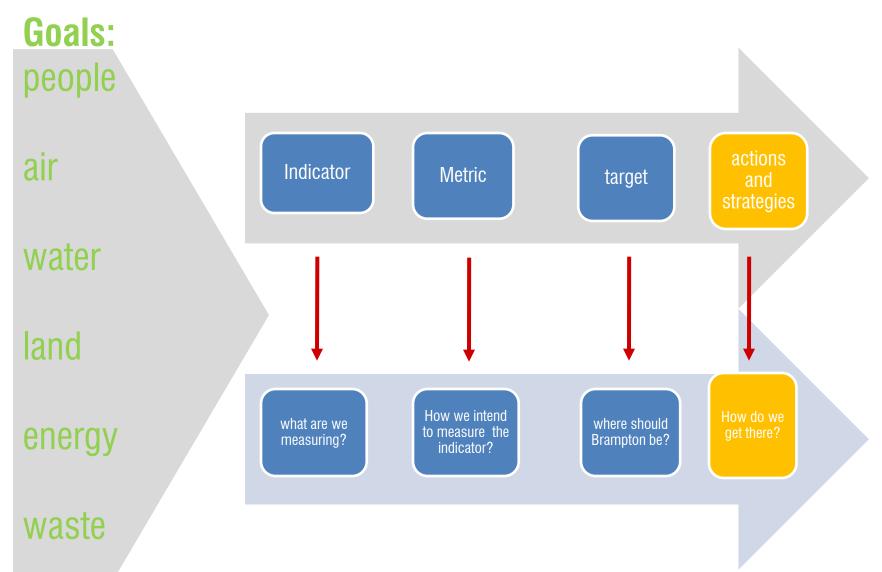
- Core Components, Indicators, Metrics and Targets
- Short, Medium and Long Term Actions

corporate implementation strategies to implement the EMP

## The purpose of today's EMP workshop

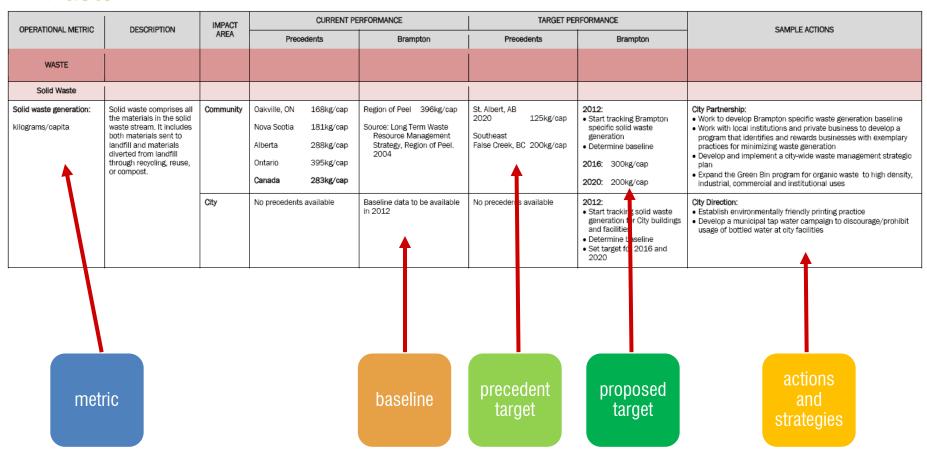
vision a community-based vision for Brampton's environmental future principles outline the values used to achieve the vision principles goals help make the vision happen goals metrics establishing what to measure and where to aim for the future targets specific thresholds to assess environmental performance specific things that can be done to improve environmental performance actions strategies to change the way the community and the City operates strategies

# environmental performance framework



## example indicator

### waste



## goal: people



advance the awareness and engagement of the Brampton community in healthy lifestyles, environmental stewardship and the green economy to manage choices that impact the built and natural environment.

### what is Brampton doing?

Flower City

Flower City Strategy
Buffer Flower Planting specifications/guidelines
Communities in Bloom
Community Tree Planting Days
Urban Design Awards
Downtown Beautification Program
Gateways Program
Flower City Floral Beds
10 Million Bulb Challenge
Adopt "Your" Tree Program
Tree Dedication Program
Big Tree Challenge (Friends of Claireville)
Brampton Fall Fair
Green Education: Teacher Preparation Package

**Brampton Clean City** 

Spring and Harvest clean-ups and Downtown Clean Sweep Adopt-a-Park program GIMME 5 3R's Program Play Clean Commissioners Green Challenge

**Interest Groups** 

BEPAC High School Green Club Council Mayor's Youth Team Clean and Green Schools Clean City Committee Heart Lake Secondary School Roberta Bondar Public School: Passionate Earthlings North Peel Secondary School Rotary Club of Brampton (Loafer's Lake beautification) Meadowvale Cremation Gardens Brampton Horticultural Society

Chingaucousy Garden Club Eco-Buzz (Peel Environmental Youth Alliance) Harvest Community Services of Peel Valleybrook Green Team & Community Stewardship

#### Food

Brampton Farmer's Market Community Gardens

Priorities and Directions

Brampton Environmental Planning Advisory Committee Emergency Management Plans Environmental Master Plan Green Procurement Strategy Green Economic Strategy Parks Naturalization other initiatives...

Metro Vancouver: develop a regional food

system strategy

Toronto: develop a food strategy

Peel Region: track childhood obesity; map

diabetes

## goal: air



improve air quality to better human health and limit contributions to climate change.

### what is Brampton doing?

#### Transit

Transportation and Transit Master Plan
Connect 10 – Hurontario Study
AcceleRide Program
BRT Strategic Implementation Plan
(ZÜM)
SmartDriver
Smart Commute Brampton-Caledon
E-Ride
SmartBus technology
Employee Transit Pass Agreement
Ridership awareness campaign

#### Fleet

Biodiesel fuel in City vehicles Green Fleet Plan Smart Cars and Hybrids Municipal Fleet Anti-Idling Policy EPoke M5/Vehicle software

**Active Transportation** 

Pathways Master Plan Bike & Ride Pathways Pocket Book Pedestrian Safety Plan Active Transportation Plan Alternative Design Standards New Road ROW Standards (bike paths/lanes) Walk to Work-School Day Active Transportation Interactive Web-Based Map

#### **Road Operations**

LED traffic signals Solar Panels for Parking Meters Low-VOC and water-borne paints in traffic markings Streetscaping Buffer Planting Guidelines Environmental Assessments

#### **Air Quality**

Anti-Idling Policy
Clean Air Partnership/GTA Clean Air
Council
Transportation and Transit Master
Plan Sustainable Update for the City
of Brampton Air Quality

#### Strategic Direction

Smog Response Plan Peel Region Air Quality Working Group

### precedent initiatives...

Sudbury: discourage the establishment of new drive-thru facilities

Oakville: develop a car sharing and bicycle sharing program

Metro Vancouver, Hamilton: identify areas of reduced air quality, monitored and identified actors to address sources of pollution/implement an air monitoring network

## goal: water



conserve water, and manage rainfall and snowmelt as a resource to improve the quality and quantity of water returned to the environment to limit disruption to water flows and contamination of water sources and habitats.

### what is Brampton doing?

Stormwater Management

Stormwater Management Master Plan Stormwater Retrofit Study Functional Servicing Report Terms of Reference Draft Low Impact Development Stormwater Management Planning and Design Guideline (TRCA | CVC) Potable Water Water Smart Peel Peel Children's Groundwater Festival (ROP | CVC | TRCA) Salt Management Plan Sewage Bylaw

#### Lakes and Watercourses City of Brampton Lake Assessment Study

City of Brampton Lake Management and Monitoring Credit River Fisheries Management Plan Humber River Fisheries Management Plan, 2005
Yellow Fish Road Program (TRCA)

Yellow Fish Road Program (TRCA)
Watercourse Remediation and Restoration
Program

Redside Dace Rehabilitation Project

**Watershed Management** 

Report) (TRCA)

Liveable Peel: Ensuring Sustainable
Watersheds in 2051 (ROP)
Subwatershed Plan
CVC Watershed Planning and Regulations
Policies 2010
Credit River Water Management Strategy
Update (CVC)
Credit River Flow Management Study (CVC)
CVC Monitoring Programs: Fletcher's Creek,
Effectiveness, Integrated Watershed,
Comprehensive Groundwater
TRCA Living City Strategy and Policies
Greening our Watersheds: Revitalization
Strategies for the Etobicoke and Mimico
Creeks 2002 (TRCA)
Etobicoke-Mimico Watershed Coalition
(TRCA)
Humber River Watershed Plan (TRCA)
Listen to River (Humber River Watershed

Humber Watershed Alliance (TRCA)

precedent initiatives...

Edmonton: reuse wastewater by treating it to a level where it can be reused by industry Sudbury: systematically reduce leakage in water distribution systems

Oakville: develop phosphorous management plans and mechanical/natural stormwater management plans at City facilities

## goal: land



conserve, enhance and use land efficiently to foster healthy communities and ensure diverse, functioning natural heritage systems.

### what is Brampton doing?

#### **Growth Management Policy**

2006 Official Plan OP Amendment and Growth Plan Conformity Mount Pleasant Secondary Plan Strategic Plan: Six Pillars Growth Management Program Growth Management Development Review Team

#### **Healthy Communities**

Environmental Master Plan William Osler: Brampton Civic Emergency Plan Bylaw Sustainable Neighbourhood Retrofit Action Plan (SNAP) Heritage Studies and Adaptive Reuse Plans Downtown Revitalization Landscape Design Guidelines Development Design Guidelines Subdivision Design Manual Chapelview Housing Development LEED (ROP) Snelgrove Restoration Plan Heritage Cemetery Conservation Program Alderlea Bowstring Bridge Rehabilitation Project Heritage Property Incentive Grant Program (bylaw) Cultural Landscane Inventory Community Improvement Plans Living City Campaign (TRCA)

Main's/Fletcher's Creek Corridor Planting Greenland Securement Strategies (ROP CVC | TRCA) Greenland Securement Committee (ROP)

Goose Management

Natural Heritage System Planning and Management 2006 Official Plan Region of Ped Official Plan City of Brampton Subwatershed Studies (CVC | TRCA) CVC Mount Pleasant, Fletcher's Creek, Credit Valley, Northwest Sandalwood Parkway, Tributary 8B, Bram West TRCA Countryside Wilages, Valles of Humber, Springdale, SP47, Bram East Brampton Natural Areas Inventory
Watersheds Natural Areas Inventory (ROP|TRCA|CVC) Watersteus National Aleas in Wellow (NOP | IncA|CVC Urban Forest Effects Model Study (UFORE) — (ROP | Brampton | Mississauga | Caledon | TRCA | CVC) Brampton Urban Forest Management Program AgPlan Forest Inventory Arboricultural Assessments Woodlot Management Strategy Forest Maintenance Manual Tracking our Tree Inventory Heritage Tree Proposals Terrestrial Natural Heritage Strategy (TRCA) Draft Terrestrial Ecosystem Enhancement Model (TEEM) and Urban TEEM Brampton Invasive Species Management Program Invasive Species Strategy (CVC)
Brampton Valley Re-naturalization Program

Claireville Conservation Area Management Plan Update Heart Lake Conservation Area Management Plan Education and Awareness Adopt "Your" Tree Program
Tree Dedication Program
Big Tree Challenge (Friends of Claireville)
Community Tree Planting Day
Landowner Guides to Natural-Open Space Areas

#### **Environmental Studies and Guidelines**

Comprehensive Study Terms of Reference Environmental Implementation Report Environmental Impact Study Woodlot Development Guidelines Guidelines for the Assessment of Existing Tableland Vegetation

#### **Bylaws and Enforcement** Park-lands Bylaw

Tree Preservation Bylaw Woodlot Conservation Bylaw Topsoil Removal Bylaw Noise Bylaw Property Standards Bylaw

#### Public and Open Space

Parks and Recreation Master Plan Chinguacousy Park Redevelopment Loafers Lake and Norton Place Master Plans Fitzpatrick Community Park Development Plan

#### **Employment Lands and Districts**

Employment Land Strategy Pearson Eco-Industrial Park Strategy Mount Pleasant Station Area Downtown Revitalization Central Area Community Improvement Plan

### precedent initiatives...

Calgary: integrate planning and management of all natural and human-made public areas and facilities

Metro Vancouver: complete inventory of all significant and endangered wetlands in the region

Calgary: increase the residential population and number of jobs within walking distance (<800m) of LRT stations and major bus zones by 100% and 50% respectively

## goal: energy



reduce energy use, particularly from non-renewable sources, to limit greenhouse gas emissions, preserve natural habitats and resources, and increase energy security.

### what is Brampton doing?

#### **Facilities**

Recreational Centres & Facilities LEED Buildings
Recreation Facilities Services
Asbestos Management Program Updating electricity & gas procurement strategy Lighting retrofits
Standardize Building Automation Systems & operations
Building Retrofits

Energy

Algonquin Power Energy from Waste Facility
Energy conservation audits
Rethinking Energy
Municipal Building Retrofit Program
Sustainable Procurement/Life Cycle
Cost-Based Decision Making
Energy Consumption and

Greenhouse Gas Emissions Annual Report Energy Awareness for Office & Operational staff Energy Consumption Benchmarking – internal/external Energy Partnerships Preventative Maintenance Programs

### other initiatives...

Vancouver: mandate that all new municipal buildings must be LEED Gold
Sudbury: require green buildings standards required for all major construction
Calgary: on target to use 100% green power for municipal purposes by 2012
Ottawa: create a LEED incentive initiative (develop options for incentives for buildings that achieve LEED certifications)
Calgary: develop energy research capability by partnering with universities and colleges

## goal: waste



reduce waste generation to limit greenhouse gas emissions, preserve habitats and resources and decrease management costs.

### what is Brampton doing?

Fall Leaf Vacuum Program
Long-term Waste Resource
Management Strategy (ROP)
Incineration and Waste Transfer
and Disposal Study
Algonquin Power Energy from
Waste Facility
Peel Organics Composting
Program (ROP)
Hazardous Waste Registration

### precedent initiatives...

North Vancouver: recycle nylon City banners into reusable shopping bags
Sudbury: develop a municipal tap water campaign to discourage/prohibit usage of bottled water at city facilities
Toronto, Caledon, Ottawa, York Region, Calgary: adopt a green bin program for organic waste
Calgary: develop producer responsibility programs for end-of-life management of products or packaging

## 6 EMP goals and 30 operational metrics

### **People**

### **City & Community Participation**

Community Outreach Programs

Rates of Obesity

Recreation Participation

Community Gardens

Access to Local Food

#### Waste

City & Community Waste Generation

**City & Community Waste Diversion** 

#### Air

Vehicle Kilometres Travelled

**Transit Ridership** 

**Trails** 

Community GHG Emissions/Per Capita

**City GHG Emissions Total** 

Renewable Energy (onsite & offsite)

#### Water

### **City & Community Potable Water Demand**

Lakes, Ponds and Streams Water Quality

Stormwater Pond Retrofits

Stream Channel & Corridor Naturalization

#### Land

#### **City & Community Tree Planting**

Natural Heritage System Protected

**Biodiversity Restoration** 

**Density (Greenfield, Built, UGC)** 

#### **Energy**

Building Energy Use (Residential, ICI)

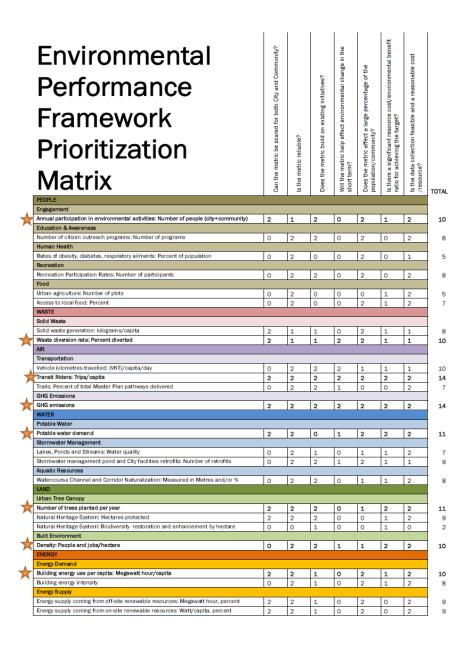
**City & Community Building Energy Intensity** 

## **Prioritizing Metrics**

setting targets and monitoring performance is a new process for many municipalities:

criteria chosen to prioritize indicators and metrics included:

- can the metric be scaled
- is the metric reliable
- does the metric build on existing work
- will the metric effect change in short-term
- does the metric affect a large % of the population
- is there significant resource cost/ environmental benefit ratio to achieve the target
- is data collection feasible and reasonable cost



# core performance metrics

Goal	Indicator	Metric	<b>Target</b>
People	Engagement	Participation in Environmental Activities	Begin Tracking
Air	GHG Emissions	GHG Emissions	27trips/resident
All	Transportation	Trips/Capita	Begin Tracking
<b>Water</b>	Potable Water	Potable Water Demand	Begin Tracking
			Begin Tracking
<b>Land</b>	Urban Tree Canopy	Trees Planted	UGC: 103 pj/ha
	Built Environment	Density	BA: 42 pj/ha GF :8 pj/ha
Energy	Energy Demand	Building Energy Intensity	Begin Tracking
<b>Waste</b>	Solid Waste	Waste Diversion Rate	Begin Tracking

## example indicator: solid waste generation

### waste



### Waste diversion rate:

(% reduction)

Waste diversion rate is the percentage of total materials from the solid waste stream that are diverted from landfill through recycling, reuse, composting or gas production through anaerobic digestion.

## Draft EMP Core Performance Targets



#### WASTE

City Metric: Waste diversion rate

#### Proposed Initial Actions (2013)

- · Develop a Waste Management Strategy to implement and promote waste reduction, reuse and recycling for all City facilities, buildings, streets and
- · Undertake waste audits and develop a Waste Reduction Plan for each municipal building and facility, including targets and tracking/monitoring
- · Develop standard City procurement practices and procedures to minimize waste generation for City operations, including service suppliers
- · Develop a comprehensive education program designed to encourage solid waste diversion

#### Future Actions (beyond 2013)

- Ensure that packaging is returned to material suppliers
- · Reuse and recycle City construction material
- · Provide recycling bins in all city buildings, streets
- · Develop strategies to track, manage, collect and safely dispose of all toxic materials used within City of Brampton facilities and operations

#### Who are supporting City Departments?

- · Buildings & Property Management
- · Community Services · Financial & Information Services

#### Where is Brampton now?

2013:

Determine Baseline

### Where is Brampton going? Percent diverted: 2016 TARGET 80% diverted 2021 TARGET 100% diverted

Performance of Other Municipalities Markham: 74%

Brampton's Current Performance Baseline to be determined

**Example Targets** 

Markham: 100%

Toronto: 70%

**Proposed Brampton Target** Baseline to be determined by 2014 80% diverted by 2016 100% diverted by 2021

### discussion

## focus: prioritizing metrics, targets & actions

# With respect to the **Environmental Performance Framework: Full List** Indicators:

• In reviewing the Indicators and Metrics, are there any additional Indicators and/or metrics that need to be considered for the final Environmental Performance Framework?

# With respect to the **Environmental Performance Framework: Priority Indicators:**

- Are there specific Indicators and/or Metric that the City should prioritize as part of the initial implementation?
- Do you think the proposed targets are realistic?
- Can you identify some actions that should be prioritized in order for Brampton to be an environmental leader?



# implementation strategy



## key city implementation strategies

internal organization, with emphasis on positioning sustainability to implement to effectively implement environmental municipal initiatives resources how the City manages, tracks, measures and reports on its environmental data how the City communicates performance collection & awareness & environmental strategies both performance education internally and externally monitoring how the City's regulations and guidelines are drafted and city-wide prioritized to influence how environmental environmental city building and practices are policy investment incorporated into planning, the functioning of municipal facilities budgeting and the services and decision how the City commits money to sustainable provided by and to the making initiatives and how the City embeds City of Brampton framework environmental principles into decision making



# next steps



## EMP next steps...

vision a community-based vision for Brampton's environmental future principles outline the values used to achieve the vision principles goals help make the vision happen goals metrics establishing what to measure and where to aim for the future targets specific thresholds to assess environmental performance Specific community and corporate initiatives and activities that can be actions done to improve environmental performance strategies to change the way the community and the City operates strategies

## EMP next steps...

- Draft Grow Green Integrated Implementation and Action Plan and host additional public consultation meeting(s) in the fall;
- •Finalize Grow Green Environmental Master Plan to be delivered in Winter of 2014, including:
  - Background Report
  - •Grow Green Paper
  - Integrated Implementation and Action Plan
    - Develop Baseline for Priority Performance Metrics
    - Propose Targets for Priority Performance Metrics



# thank you!

For more information, visit the Master Plan Web Page at <a href="www.brampton.ca">www.brampton.ca</a>
To provide further feedback email <a href="mailto:growgreen@brampton.ca">growgreen@brampton.ca</a>