

Liveable Peel Presentation Outline

Future Trends and Fresh Ideas

- How much greenspace is enough?
- Historical context
- Global context – sustainable communities
- Natural wonders
- Implementation strategy

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Six Decades of Conservation Beginnings and into The Living City....Key Milestones

- 1946 - Etobicoke River Conservation Authority (ERCA).
- 1947 - Etobicoke Valley Report.
- 1957 - ERCA amalgamated into MTRCA and an era of community-based watershed management work started.
- 1959 - Plan for Flood Control and Water Conservation.
- 1960's - Land acquisition in Peel (eg. Bolton Dam and Reservoir).
- 1977 - Adoption of first erosion control and bank stabilization projects in Peel.
- 1989 - Adoption of Greenspace Strategy.
- 1994 - Adoption of Valley and Stream Corridor Management Program.
- 1997 - Legacy: A Strategy for a Healthy Humber.
- 1999 - Designation of the Humber as a Canadian Heritage River.
- 2002 - *Greening our Watersheds: Revitalization Strategies for Etobicoke and Mimico Creeks.*
- 2002 onwards - Etobicoke-Mimico Watersheds Coalition implementation actions continue to embrace Peel Region's environmental and social sustainability principles.
- 2003 - Developed the vision for The Living City.



The Living City Vision



The quality of life on Earth is being determined in rapidly expanding city regions. Our vision is for a new kind of community, The Living City, where human settlement can flourish forever as part of nature's beauty and diversity.





Mission

Our mission is to work with our partners to ensure that The Living City is built upon a natural foundation of healthy rivers and shorelines, greenspace and biodiversity, and sustainable communities.



Thinking Sustainability ...back then

“River valley development is the wise use of all natural resources of a river valley for all the people living in the valley for all time”

Etobicoke River Conservation Authority
Department of Planning and Development ,
Conservation Branch: September 3, 1954



1947 Etobicoke Valley Report and 1954 Etobicoke River Conservation Authority Recommendations

Land Use

- Proper land use practices including agriculture best management and wise planning for headwater areas, as future development was seen as inevitable.
- Regulation of buildings, roads and other encroachment on natural watercourses (floodplain) of the river.

Water

- Flood control (resulting from floods on the Etobicoke Creek between 1795-1945) – Brampton proposed diversion and Long Branch flood remediation works.
- Run-off and erosion control - Head-water in-stream dams and channel construction to control run-off.
- Groundwater study- for well protection in Peel County.

Etobicoke Creek in
Downtown Brampton 1857



Brampton Channel



Long Branch



1947 Etobicoke Valley Report and 1954 Etobicoke River Conservation Authority Recommendations

Forest and Wildlife

- Establishment of forest on public and private lands, woodlot preservation and invasive species management (54% was existing and recommended as target to maintain).
- Preservation and enhancement of wildlife including aquatic habitat and enhancement and protection of riparian habitat along the creek.

Preservation of Natural Resources

- Preservation of historical sites relating to natural resources.
- Preservation of swamps (wetlands) that serve as natural reservoirs.
- Protection of Heart Lake “Kettle-pond”– establishment of wildlife sanctuary, acquisition of Cheltenham Swamp, Dixie Woods and Summerville Woods for forest preservation and recreation in small sections.

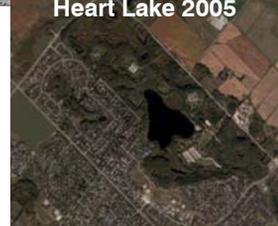
Public Recreation

- Establishment of public recreation areas in the watershed.

Heart Lake 1948



Heart Lake 2005



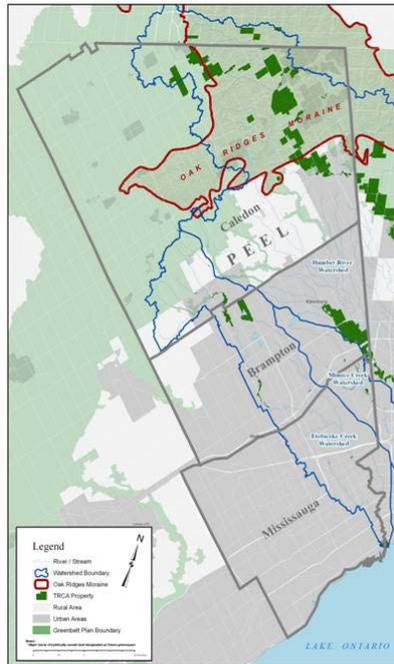


Conceptual Approaches to Watershed and Greenspace Management

- 1946 – Conservation report approach
- 1959 – Flood control approach
 - led to land acquisitions
- 1960's – Drain the developing city safely approach
 - channels and acquisitions
- 1980 – Watershed plan approach
 - Ecosystem approach
 - Valleys
 - Waterfront
 - Oak Ridges Moraine
 - Niagara Escarpment
 - Protection of major resources and remnant features
- 1994 – Valley and Stream approach
 - Clarified role of valley systems in regional ecosystem (features and functions)
- 2002 – The Living City approach
 - Natural Heritage System
 - Energy efficiency, green buildings, renewable energy
 - Climate change mitigation and adaptation



Region of Peel





Melbourne Principles

1. Provide a long-term vision for cities based on: sustainability; intergenerational, social, economic and political equity; and their individuality.
2. Achieve long-term economic and social security.
3. Recognise the intrinsic value of biodiversity and natural ecosystems, and protect and restore them.
4. Enable communities to minimise their ecological footprint.
5. Build on the characteristics of ecosystems in the development and nurturing of healthy and sustainable cities.



Melbourne Principles

6. Recognise and build on the distinctive characteristics of cities, including their human and cultural values, history and natural systems.
7. Empower people and foster participation.
8. Expand and enable cooperative networks to work towards a common, sustainable future.
9. Promote sustainable production and consumption, through appropriate use of environmentally sound technologies and effective demand management.
10. Enable continual improvement, based on accountability, transparency and good governance





“The Restoration Economy”

G. Storm Cunningham

Four Growth Industries – Natural Environment

- Restoring our Ecosystem
- Restoring our Watersheds: Aquifers, Forests, Rivers, Streams
- Restoring our Fisheries
- Restoring our Farms and Rural Economies



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Urban Environmental Accords

June 5, 2005, San Francisco

Energy

- Increase use of renewable energy to meet 10% of the city's peak electric load, and reduce peak load by 10% within 7 years.
- Reduce greenhouse gases by 25% by 2030.

Waste Reduction

- 25% per capita reduction in solid waste within 7 years and 0 waste by 2040, to landfills and incinerators.
- Adopt law reducing using of disposable, toxic or non-renewable product category by at least 50% in seven years.

Urban Design

- Mandate green building rating system standard to all new municipal buildings.
- Adopt urban planning principles and practices towards smart growth.

Urban Nature

- Ensure park or recreational open space with 1/2 km of all city residents by 2015.
- Inventory canopy cover and establish goal based on ecological and community considerations.
- Legislate protection of critical habitat corridors and other key habitat characteristics from unsustainable development.



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Urban Environmental Accords

June 5, 2005, San Francisco

Transportation

- Expand public transportation coverage to within ½ km of all residents within 10 years.
- Phase down sulfur levels in fuels, concurrent with using advanced emission controls on all buses, taxis and public fleets to reduce particulate matter and emissions by 50% in 7 years.
- Reduce percentage of commute trips by single occupancy vehicles by 10% in 7 years.

Environmental Health

- Annually identify 1 product, chemical or compound used in the city that represents the greatest risk to human health and adopt law provide incentives to reduce or eliminate use by municipal government.
- Promote use of locally grown foods and ensure 20% of all city facilities (including schools) serve locally grown and organic foods within 7 years.
- Establish Air Quality Index (AQI) to measure air pollution and set goal of reducing number of days categorized by AQI as unhealthy or hazardous by 10% in 7 years.

Water

- 100% access to safe drinking water by 2015.
- Reduce water consumption in cities using >100 L per day by 10% by 2015.
- Protect the ecological integrity of primary drinking water sources.
- Adopt municipal wastewater guidelines and reduce volume on untreated wastewater discharges by 10% in 7 years through expanded use of recycled water and implementation of a sustainable urban watershed planning process.



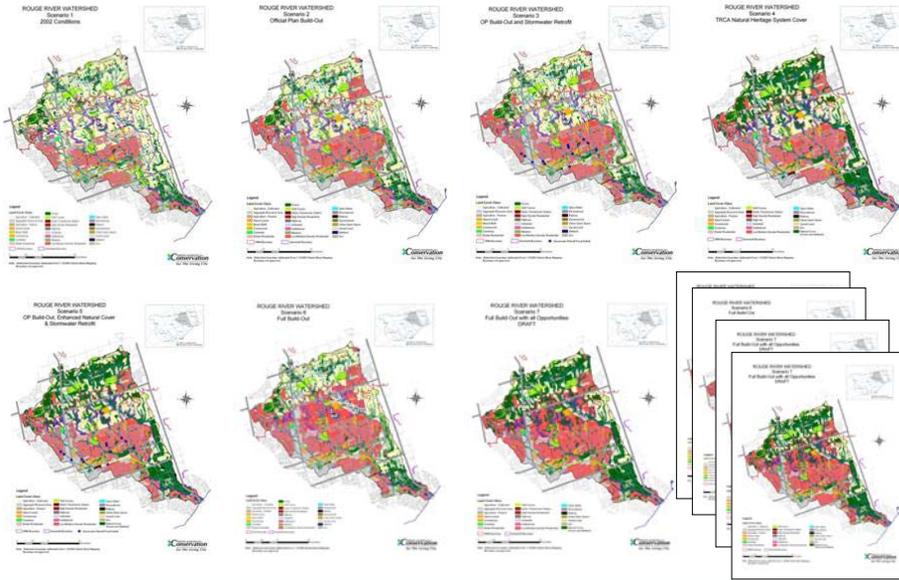
Putting Concepts into Practice



- Regional terrestrial natural heritage system
- Integrated watershed planning
“...the balancing of interests and interdependencies in decisions”
- (adapted from Grigg, 1999)



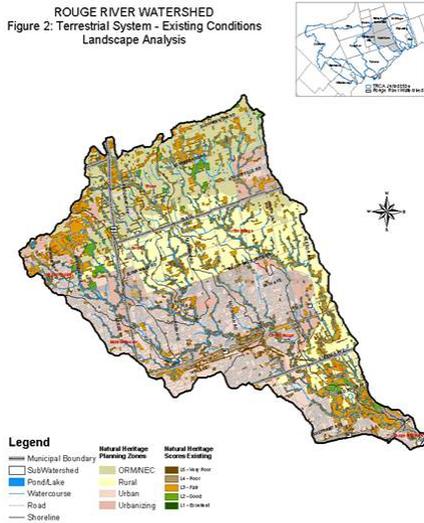
Future Scenarios – Rouge Watershed



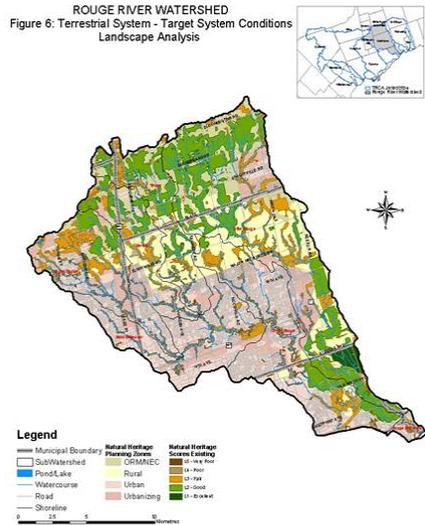
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ROUGE RIVER WATERSHED
Figure 2: Terrestrial System - Existing Conditions
Landscape Analysis



ROUGE RIVER WATERSHED
Figure 6: Terrestrial System - Target System Conditions
Landscape Analysis



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Need to protect overall water budget – this will require a new form of community design!



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Climax Forests



Song Birds



Healthy Rivers







Learning From Experience (Etobicoke and Mimico Creeks Watersheds)

Forest and Wildlife

- Fragmented and poor quality natural cover due to surrounding land use.
- Etobicoke watershed 5.7% natural cover
 - minimum recommended target 11.25%.
- Quality is L4 (L1 Good to L5 Poor).
 - minimum target is L3.
- Channelization of watercourses:
 - lack of riparian cover;
 - degraded water quality;
 - loss of fish habitat.
- 20% of Etobicoke watershed and 16% of Mimico watershed is forested riparian cover.
 - Environment Canada target is 75%.



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Learning From Experience (Humber River Watershed)

Loss of Biodiversity

- Increase natural cover
 - Brampton is 7%, target 30%
 - Caledon is 23%, target 30%
- Increase streambank vegetation
 - Upper Humber (Caledon) 57%
 - West Humber (Brampton) 28%
 - Target is 75%
- Improve stormwater management
 - 25% urban areas in Brampton have quality/quantity control
 - 65% of total watershed has no control
- Manage river flow
 - 3% increase in total annual flow
 - Only slight increases detected on West Humber
- Remove in-stream barriers
 - Passage for migratory fish (Bolton/Palgrave)
 - Reduce water temperatures
- Protect water quality
 - Bacteria levels continue to increase
 - Chloride levels continue to increase
 - Identify aquifer vulnerability areas
 - Safeguard wellhead protection areas



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Implementation Strategy

- Natural Heritage Strategy
- Fish Management Plan
- Greenlands Acquisition Project, 2006 – 2010
- Integrated Watershed Management Strategies
- Energy efficiency, green buildings and renewable energy
- Understanding the connections between healthy natural environment and healthy people
- New funding commitments and mechanisms

