

Integrating Climate Change Adaptation into Ajax's Official Plan

**Upwind-Downwind Conference: Built Environment – Foundation for Cleaner Air
February 24, 2014**

Concurrent Session: Land Use Planning with Climate Change and Sustainability
Stev Andis, MCIP RPP, Senior Policy Planner, Town of Ajax



Protect › Enhance › Restore
ENVIRONMENT



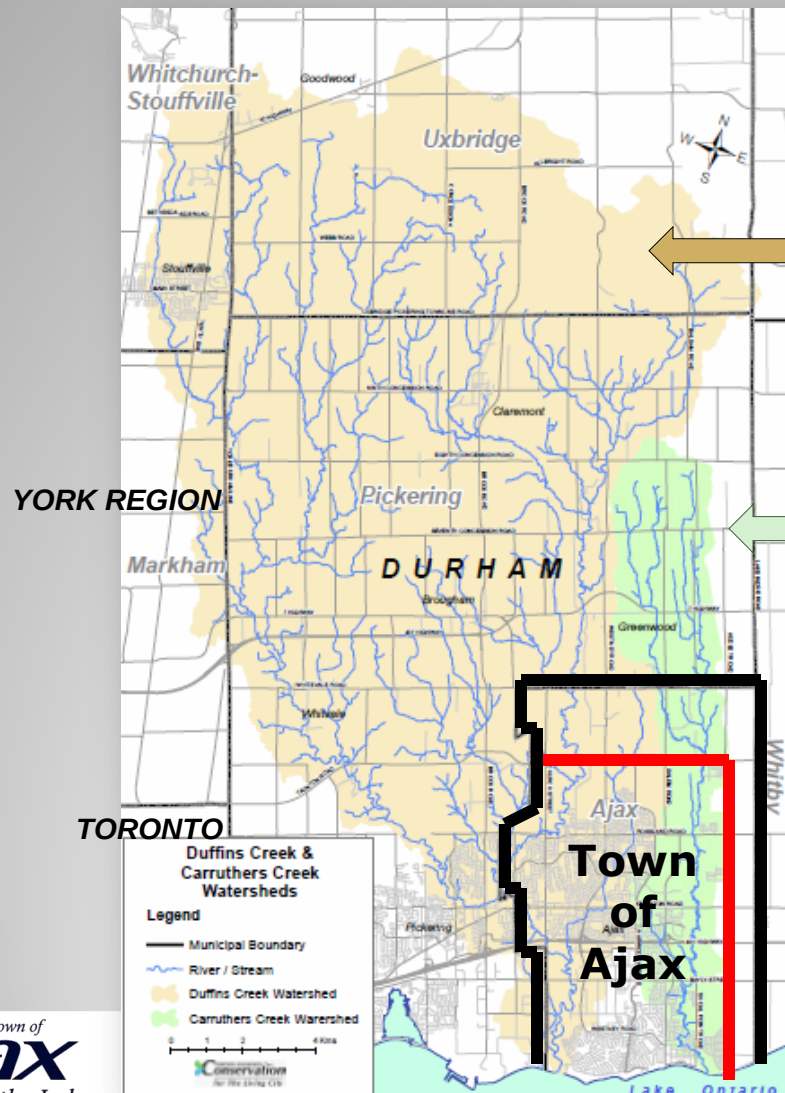
Ajax is a Great Lakes Basin Coastal Community



Ajax is a member of the Great Lakes and St. Lawrence Cities Initiative (GLSLCI). The GLSLCI is presently a group of 112 Mayors representing communities in Ontario, Quebec and the U.S.

2

Local Watershed Context



**Duffins Creek Watershed
(283 sq km)**

**Carruthers Creek Watershed
(38 sq km)**

**Town of Ajax
(70 sq km)**

**"Fixed" Urban
Area Boundary**



Protect › Enhance › Restore
ENVIRONMENT



Federal and Provincial Climate Change
Policies, Plans and Legislation

Changing climate, soil types, land uses and human activities
cause/amplify impacts such as flooding and erosion

**Scientific
Knowledge**
to support
effective
decisions &
actions

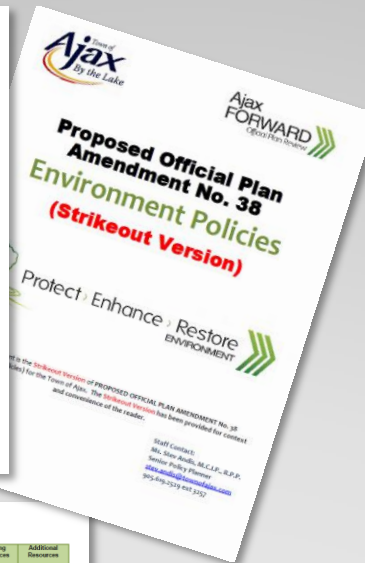
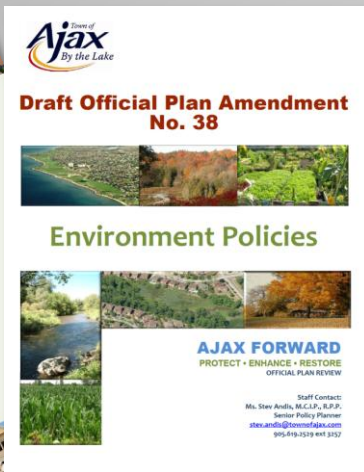
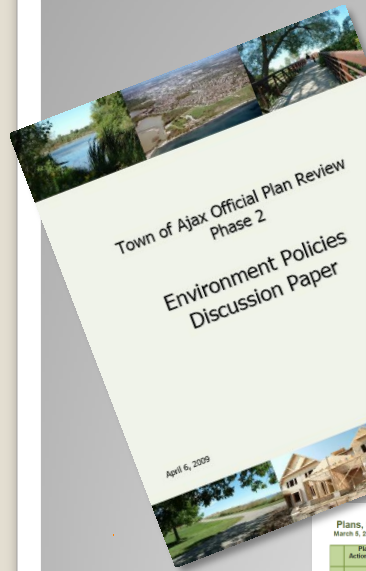
Town of Ajax
Needs to Adapt to
Extreme Weather/
Climate Change

**Informed
Public**
want to live in
healthy, safe
community

Municipal Tools for "Implementing" Climate Change Adaptation
Official Plans, Study Requirements for Development Applications,
Infrastructure EAs & Retrofits, Public Education

**Climate Change Policies = Effective,
Co-ordinated Municipal and Public Adaptation Actions**

Extensive Consultation



Climate Change "Umbrella"

Today's Context: Extreme Weather Ajax's Changing Climate Mitigation and Adaptation

Plans, Strategies & Actions in Environment Policies (OPA No. 38)

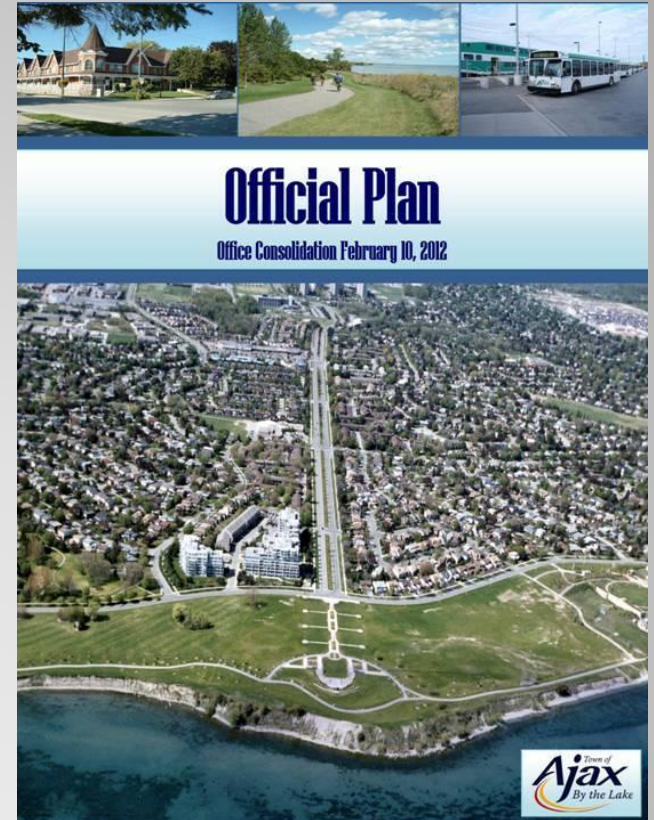
Plans, Strategies & Actions identified in Draft OPA No. 38	Basis	Time Frame			Priority	Existing Resources	Additional Resources
		Short Term (2010-2011)	Mid Term (2012-2014)	Long Term (2015+)	High / Medium / Low		
10) Stormwater Management Strategy Policy 2.5.4.4 (Stormwater Management System)	during pre consultation and development application review, as well as best practices currently underway in other municipalities. Based on setting up OPA 2.5.4.4 to formalize the town's stormwater infiltration as part of its strategy. Refers to preparing and implementing a Stormwater Management Strategy to guide the design, maintenance and upgrading of stormwater infrastructure	Complete EA and Commence Strategic Development The Strategy will be established, by November 2009. Stormwater EA which is being completed in parallel with the EA related to the PRD in November 2009.	Developing and Implement	Implement and Continuously Update	Medium	PRD and Other Departments	Consulting expertise to complete EA
14) Pollution Prevention Plans and Programs – (Policies 2.2.2.2(a) and 2.5.6.4) (Solid Waste (Landfill and Contaminated Sites, respectively))	This is a new policy in Draft OPA No. 38 to formalize the Town's support of TRCAO's Pollution Prevention Program, approach to Green Fleet and use of Eco-Products. It will also implement recommendations for green building from the Town's recently completed Stormwater EA. It also includes implementing waterborne and airborne contaminants from local sources.	Complete Stormwater EA (refer to item 13) and implement Pollution Prevention Program, approach to Green Fleet and use of Eco-Products. Check for businesses, Greenhouse Gas Emissions It will also implement recommendations for green building from the Town's recently completed Stormwater EA.	Prepare and Implement	Implement	Medium	PRD (Business Development and Marketing)	Unknown at this time

Page 7 of 9



Restructuring the Ajax Official Plan

- Policy hierarchy requires all development to comply with 'Climate Change and Environment Policies'
- Policies and study requirements to improve the resilience of the natural heritage system and built environment



Setting a Planning Context

“As the effects of climate change emerge, municipal land use decisions and actions will promote mitigation of and adaptation to climate change to protect and sustain the health and well-being of the community.”

“... strategic actions need to be taken to reduce Ajax’s vulnerability to climate change and the impacts of severe weather... through investment in adaptation and climate-resilient development and infrastructure. ***The Plan’s environment-related goals and policies shall apply to all land uses and infrastructure, ...***”

Climate Change Principles

- To maintain a livable and healthy community by addressing the needs of the current population without compromising the ability of future generations to meet their own needs, Ajax will promote:
 - Reduction of environmental impacts of land uses, infrastructure, and human activities on air, land and water resources
 - Planning actions and decisions that consider the accumulating environmental impacts of urbanization and human activities, reduce and remediate adverse effects and negative impacts on air, land and water resources

Climate Change Principles

“During the review and approval of development applications, the Town shall aim to ensure proponents have designed proposals to be less vulnerable to potential damage from actual and predicted climate change impacts ... by reducing surface water runoff ...”



Source: Lawrie Road Resident, Ajax

Climate Change Protection Policies

- Develop Climate Change Action Plan with mitigation and adaptation strategies to improve resilience
- Consider a wider range of design standards and alternatives, determining acceptable and tolerable levels of risk or failure, and associated benefits and costs
- Increase proportion of permeable surfaces to reduce flood risk and strain on sanitary and stormwater infrastructure



Source: Lawrie Road Resident, Ajax

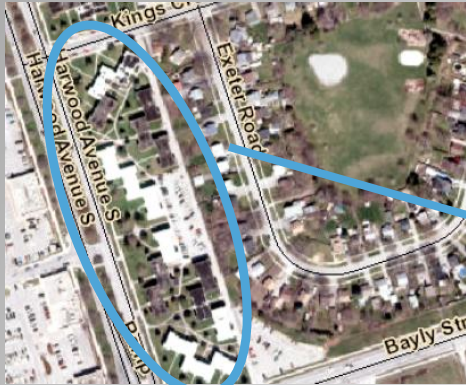
10

Air Quality, Urban Heat Island & Tree Canopy Policies

- Define UHI action areas for targeted greening
- Promote tree planting to reduce energy use through shading and sheltering
- Promote greater use of permeable surfaces
- Encourage native tree species that are resilient to climate change and provide high levels of carbon sequestration



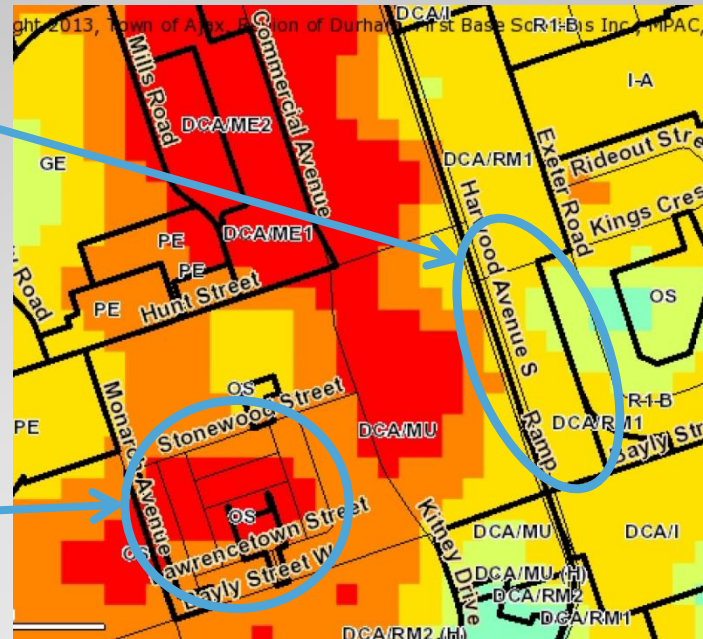
Urban Heat Island Mapping



Development A
(low-rise apartments) 91 uph

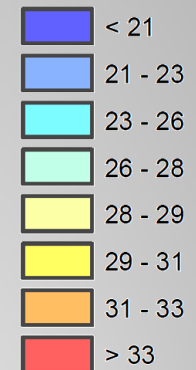


Development B
(back-to-back stacked townhouses) 51 uph



Source: Natural Resources Canada thermal imagery

Effective Surface Temperature (°C)



Stormwater Management Policies

- Prepare Stormwater Management Strategy to optimize environmental performance, reduce flood risk
- Development shall be designed with regard for predicted impacts of climate change and to minimize flood risk
- Encourage low impact development
- Encourage permeable surfaces



Enhanced Natural Heritage System Policies

- Expansion of Environmental Protection designation on undeveloped lands
- Increase in minimum vegetation protection zone buffer requirements
- Enhanced minimum requirements for an Environmental Impact Study and Planning Rationale Report



14

Realizing Official Plan Climate Change Policies

Grand Harwood Proposal



Audley Recreation Centre



15

Integrating Climate Change Adaptation into Official Plans

1. Do your homework - understand the community's characteristics and geography
2. Consult openly, proactively and extensively and use creative ways to communicate and engage with all stakeholders
3. Educate municipal staff - develop a clear understanding of climate change mitigation versus adaptation strategies
4. Gain senior management's support - prepare supporting documentation that outlines projected resources, schedules and costs

16

Integrating Climate Change Adaptation into Official Plans

5. Gain Council's support – outline actual and potential risks to the community by not addressing climate change impacts and benefits of adopting climate change policies
6. Federal or Provincial planning direction is not required to incorporate climate change adaptation into planning documents
7. Planners need to “think the unthinkable” – expand traditional land use planning policy frameworks
8. Develop “action-oriented” policies that can be implemented and defensible

17

Integrating Climate Change Adaptation into Ajax's Official Plan

Upwind-Downwind Conference: Built Environment – Foundation for Cleaner Air
February 24, 2014

Concurrent Session: Land Use Planning with Climate Change and Sustainability
Stev Andis, MCIP RPP, Senior Policy Planner, Town of Ajax



Protect › Enhance › Restore
ENVIRONMENT

