

Natural Systems Planning Primer

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Land Use and Natural Systems Unit
Planning and Growth Management
November 2015

Today's Topics

- Welcome
- Policy Framework
- Development Review
- Ottawa's Forestry & Tree Bylaws
- BREAK
- Interactive Case Study
- WRAP-UP

Mission

The Natural Systems Unit serves the city through the development and implementation of policies and guidelines to sustain the natural environment for current and future generations

What is a liveable city?



THE NATURE EFFECT

9 OUT OF 10
CANADIANS
say that when
they felt
connected to
nature they
felt happier

5 OUT OF 10
CANADIANS
travel to
experience
nature

70% OF
CANADIANS
spent time in
nature within
the previous
12 months.

**1 million VISITS TO OTTAWA EACH
YEAR FOR OUTDOOR
RECREATION**

**\$40.4 billion
SPENT BY CANADIANS ENGAGING
IN NATURE-RELATED ACTIVITIES**

Nature based tourism creates jobs in

**TRANSPORTATION
ACCOMMODATIONS
ATTRACTIONS**

**RETAIL
GUIDING**

Value Proposition

Why should a family choose to come to Ottawa instead of Toronto, Montreal or Calgary?

— Mayor's State of the City Address, January 2015

POLICY FRAMEWORK

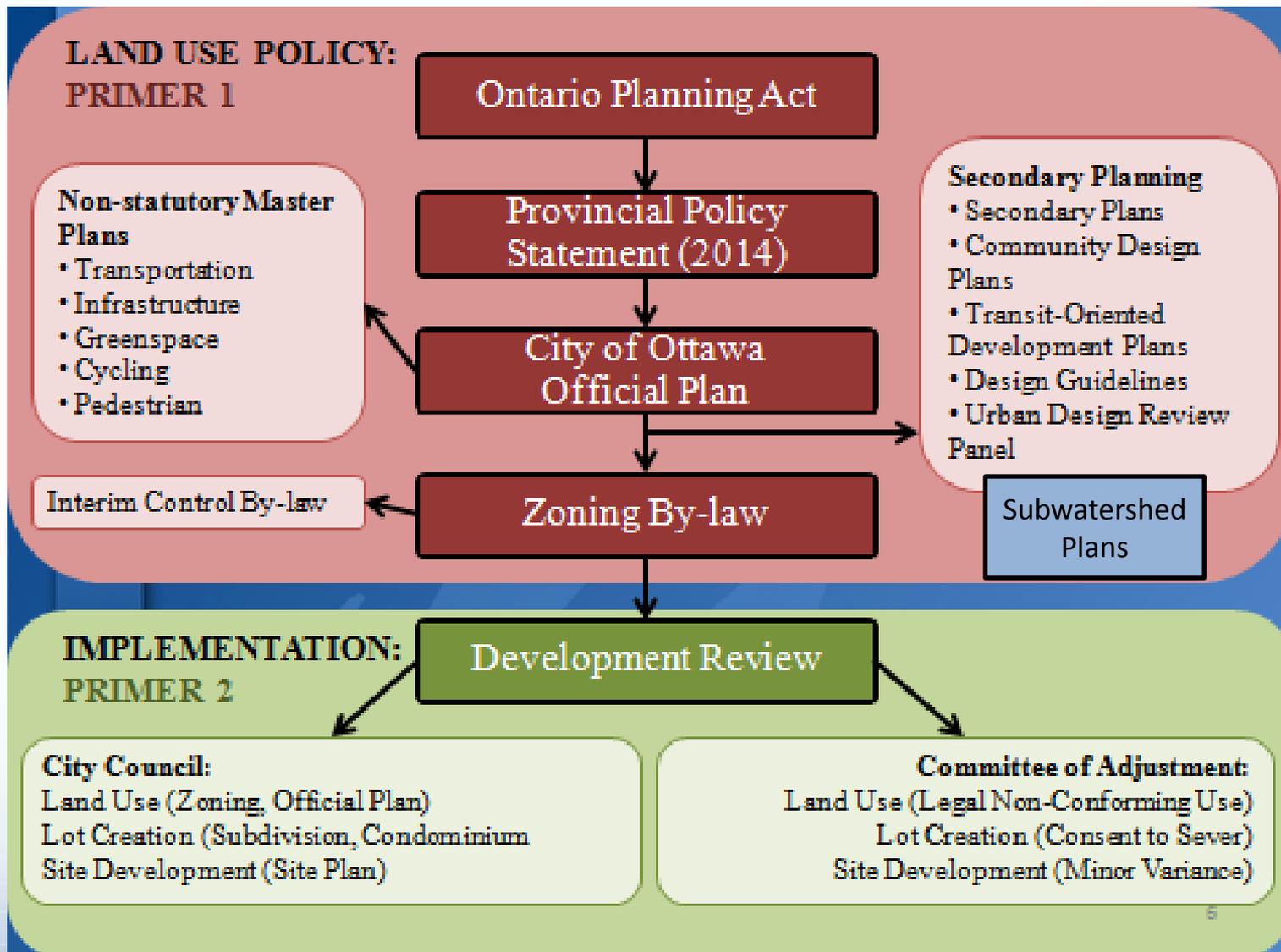
Legislative Menu

Legislation

- Planning Act – PPS
- Environmental Assessment Act – Municipal Class EA
- Municipal Act
- Drainage Act
- Ontario Water Resources Act
- Fisheries Act
- Species at Risk Act
- Clean Water Act
- Environmental Protection Act
- Conservation Authorities Act
- Ontario Building Code Act

Municipal Function

- Official Plan
- Development Review
- Subwatershed Studies
- Environmental Management Plans
- By-laws
- Municipal Drains
- Source Water Protection
- Certificates of Approval
- Records of Site Condition
- Generic Regulations
- Building Code Permitting and Enforcement



Planning Act

- Provides the Legislative Framework
 - How the planning system will work
 - Who the decision makers are
 - How disputes are resolved
 - How public can provide input
- Establishes municipal role in planning
 - Official Plan & zoning by-law
 - Development review

Provincial Policy Statement

Establishes provincial land use planning interests, and how those interests are to be protected while providing for appropriate development

- Strong, healthy communities
- Wise use and management of resources
- Public health and safety
- Municipal planning policies “shall be consistent with” the PPS

Provincial Policy Statement

Defines & protects *natural heritage system*

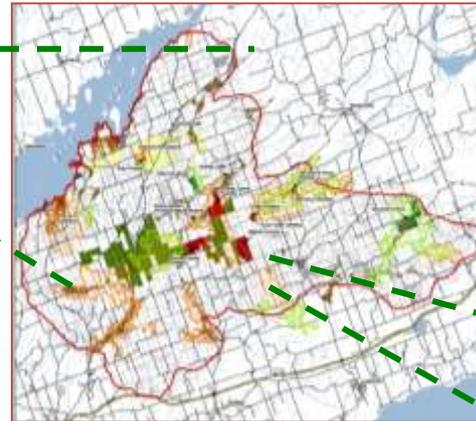
- No development or site alteration in:
 - significant wetlands
 - habitat for fish or endangered / threatened species unless authorised under relevant legislation
- No negative impacts to any other significant natural heritage features, or adjacent to any of the above

Natural Heritage System

Ecoregion



Natural Area



Property

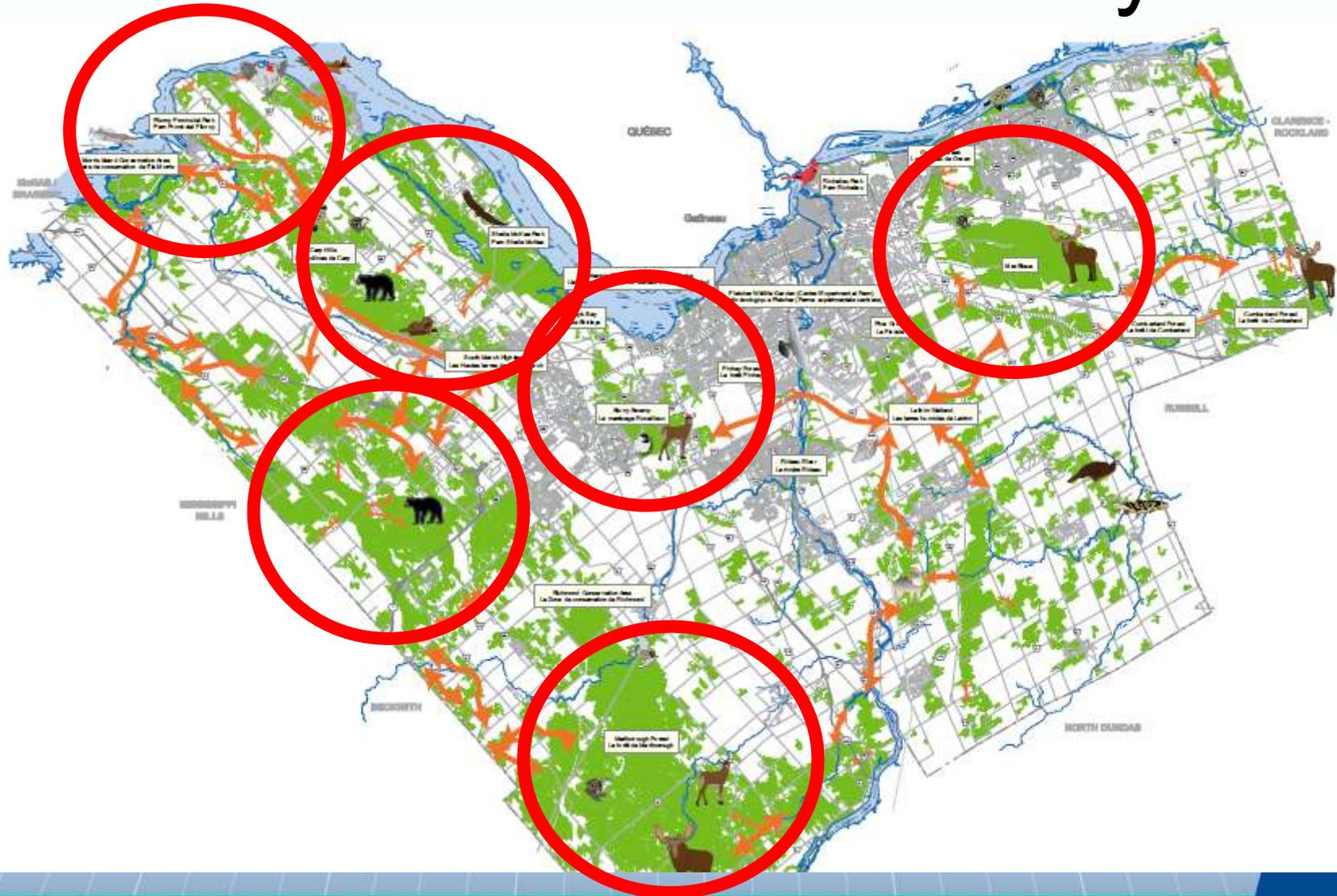


Scales of Effective Conservation Planning

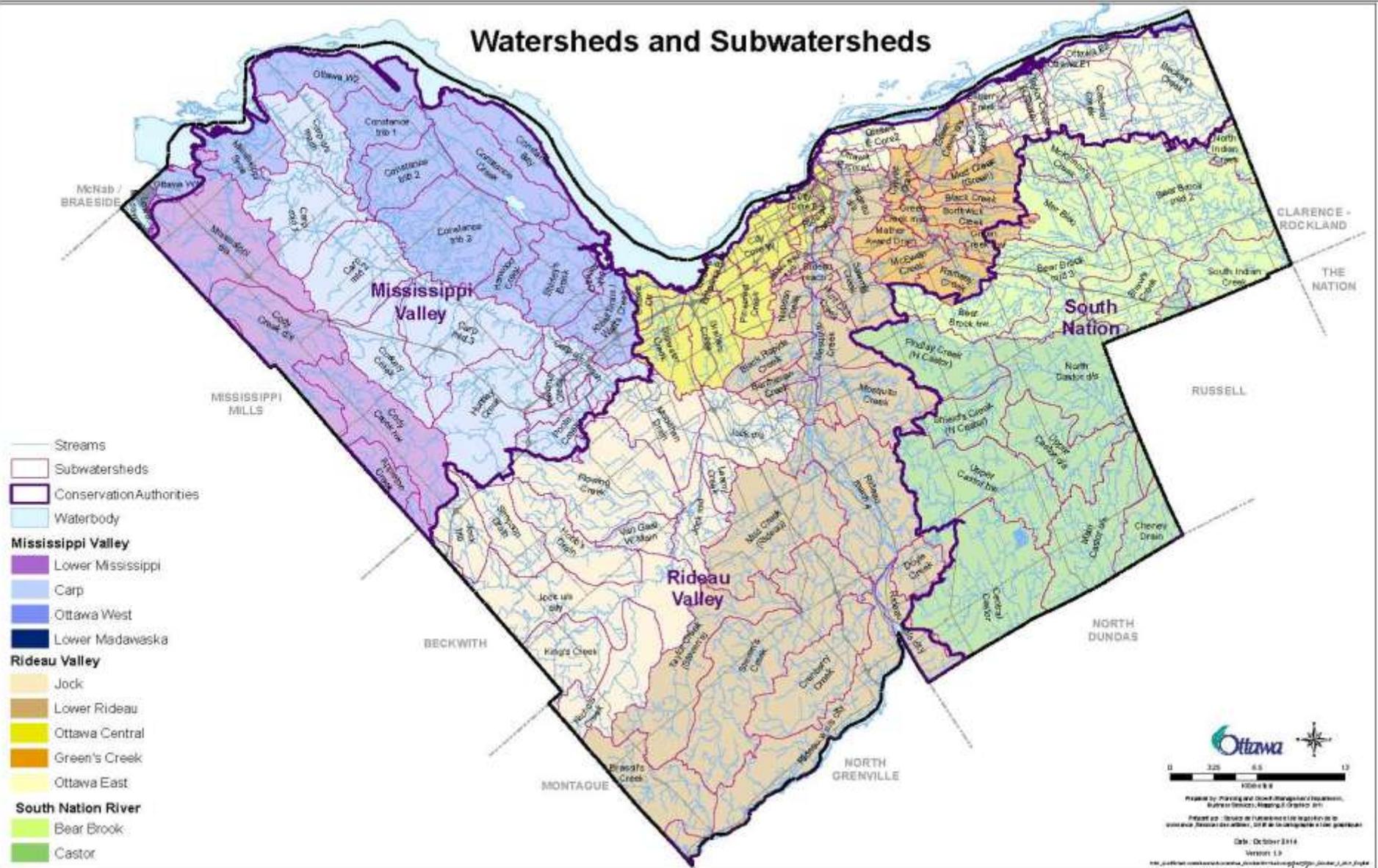
Geographic Scale



Centres of Biodiversity



Watersheds and Subwatersheds



- Streams
- Subwatersheds
- Conservation Authorities
- Waterbody
- Mississippi Valley**
 - Lower Mississippi
 - Carp
 - Ottawa West
 - Lower Madawaska
- Rideau Valley**
 - Jock
 - Lower Rideau
 - Ottawa Central
 - Green's Creek
 - Ottawa East
- South Nation River**
 - Bear Brook
 - Castor

Scale: 0, 3.25, 6.5, 13.0
 1:50,000
 Prepared by: Planning and Growth Management Department, Ottawa City Hall, Planning & Growth Services, Planning & Growth Unit
 Date: October 2014
 Version: 1.0

Conservation Authorities

- Flood plain/ Hazard Management
- Watershed Reporting
- Managing Natural Resources
- Water Quality & Quantity Monitoring
- Educational Programs
- Planning and Regulations
- Forest Management



SOUTH NATION
CONSERVATION
DE LA NATION SUD



Species at Risk

- Identified under provincial or federal legislation (in many cases, both)
- Over 60 SAR may occur in our area (some are quite common!)
- Endangered / threatened species habitat protected through legislation
- Habitat for species of special concern = significant wildlife habitat



By-laws

Examples

- Zoning
- Tree Bylaws
- Idling Control
- Sewer Use



Building on Ottawa's Accomplishments

- Ottawa River Action Plan
- Since 1960's the City has acquired over 10,000 hectares of natural areas
- Stewardship Programs
- Air Quality and Climate Change Management Plan
- Stormwater Management Retrofit plans for older urban areas
- Water Quality Monitoring
- Wildlife Strategy and Wildlife Protocol

Development Review

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Development Review Services Branch
November 2015

Today's Topics

- PGM and Development Review Services
- Development Review Process
- Environmental Planning
- Where to find more information –
Ottawa.ca

Planning and Growth Management

THE DEPARTMENT CARRIES OUT ITS MISSION THROUGH ITS FIVE BRANCHES



**Transportation
Planning**



**Development
Review**



**Policy
Development
and Urban
Design**



**Building
Code
Services**



**Business
Services**

DEVELOPMENT HOTSPOTS

488

DEVELOPMENT APPLICATIONS RECEIVED

195

Site Plan Control

83

Zoning By-law Amendment

30

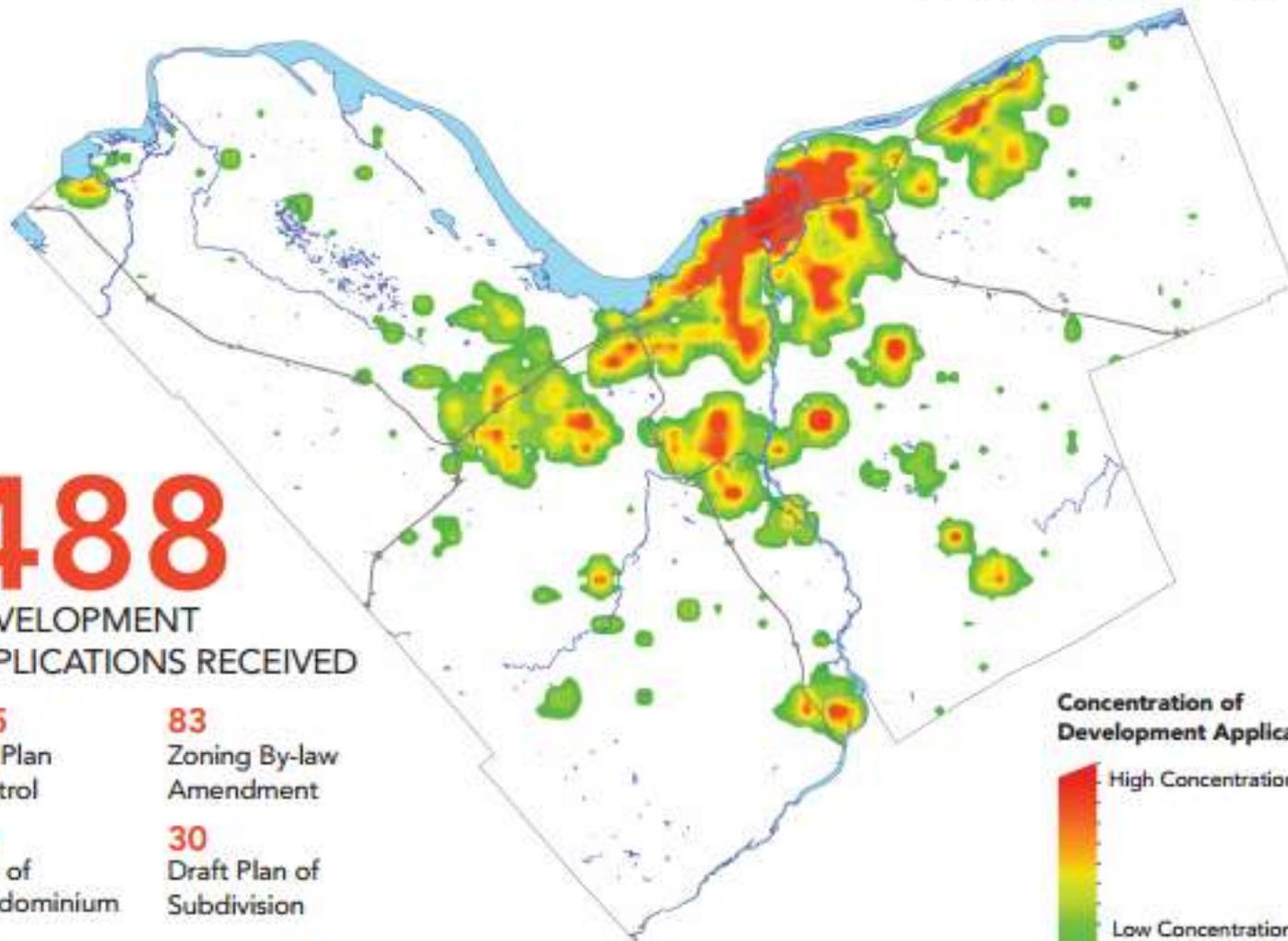
Plan of Condominium

30

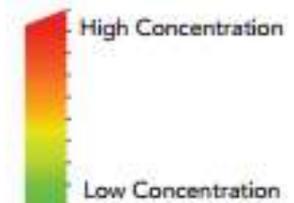
Draft Plan of Subdivision

9

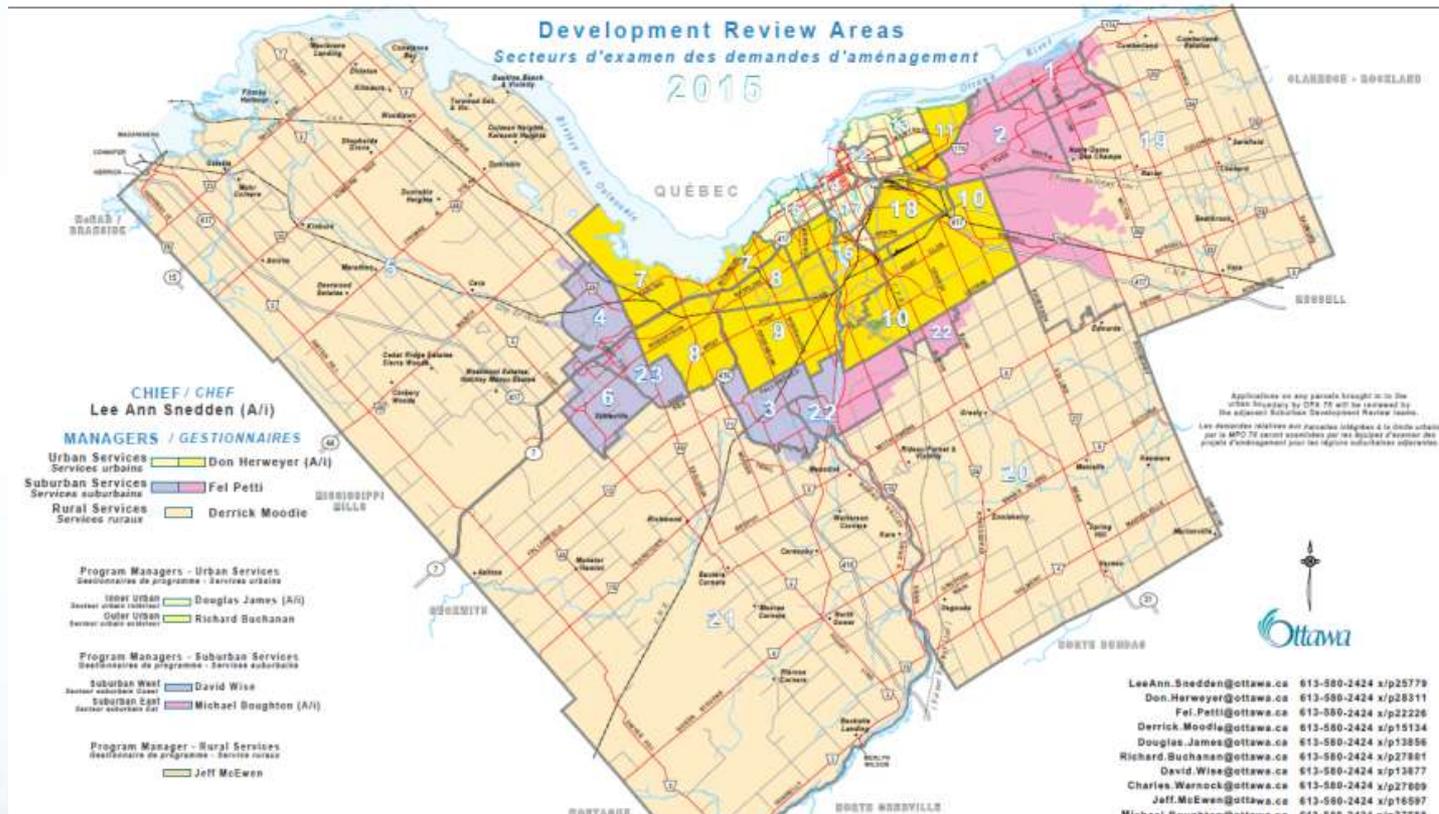
Official Plan Amendment



Concentration of Development Applications



Development Review Services



- Geographically based: urban (2), suburban (2), rural
- Land Use Planners, Engineers, Transportation, Parks Planners, Environmental Planners and Heritage

Development Review Process

1. Pre-Application Consultation
2. Application Submission
3. Application Deemed Complete / Reviewed for Adequacy
4. Community "Heads Up"
5. Circulation to Technical Agencies, Community Organizations and Ward Councillor
6. Posting of On-Site Signs
7. Community Information and Comment Session
8. Issue Resolution - Staff Memorandum or Committee Report Preparation
9. Notice of Decision by Staff (Applications Under Delegated Authority)
10. Notice of Public Meeting
11. Notice of Decision by Committee or Council
12. Post Application

Pre-Consultation

- Meeting with applicant
- Identify environmental features
- Content of Environmental Impact Statement

Application Deemed Complete

- All required reports provided
- Reports complete
- Ready for circulation



Circulation and Issue Resolution

- Circulated to community and agencies
- Internal Departments
- Issue Resolution – iterative process

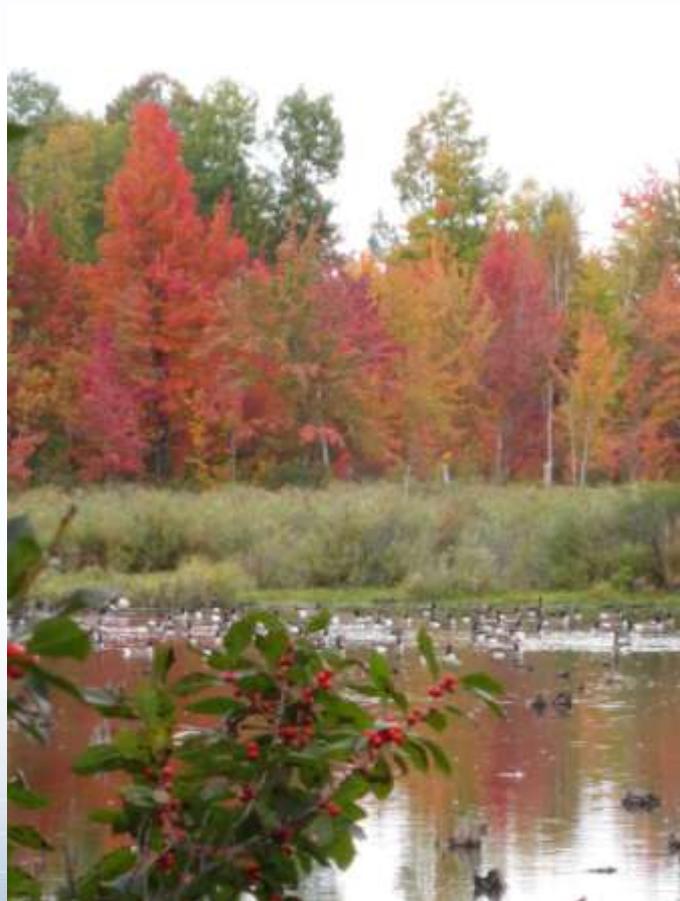


Post Approval

- Draft Approval of Subdivision
- Appeals to OMB
- Construction



Environmental Review



Supporting Studies



Environmental Impact Statement

- Required for NHS, PSW, NEA, RNF, UNF, ANSI and adjacent lands
- EIS to demonstrate no impact on the ecological function of above (OP Section 4.7.8)



- no negative impact, defined as degradation that threatens the health and integrity of the natural features or ecological functions for which an area is identified due to single, multiple or successive development or site alteration activities.

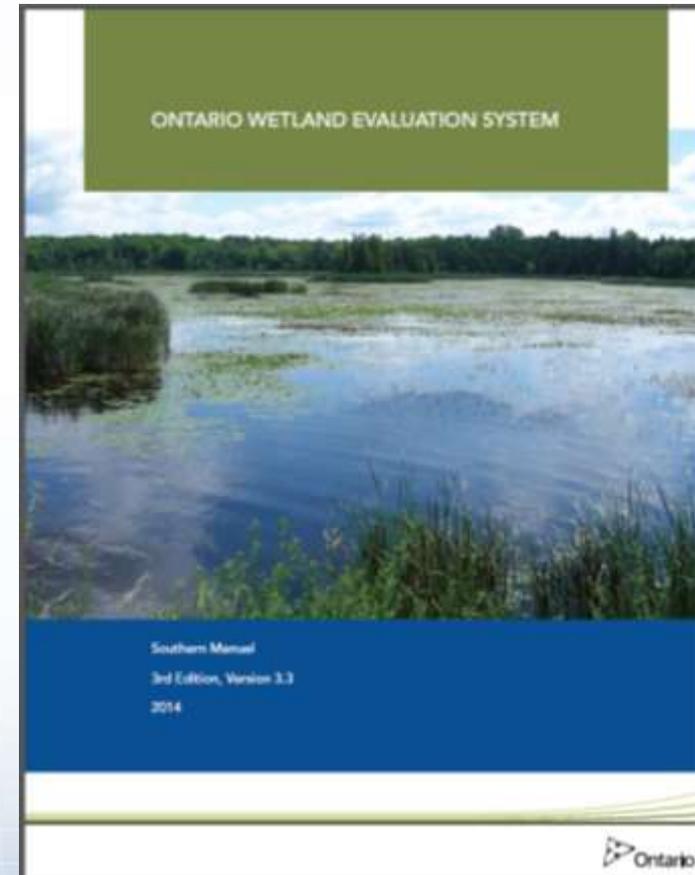
Types of EIS

- Scoped
 - Severances
 - Minor
- UNF Adjacent
- Full or Detailed
 - Subdivision
 - Site Plans



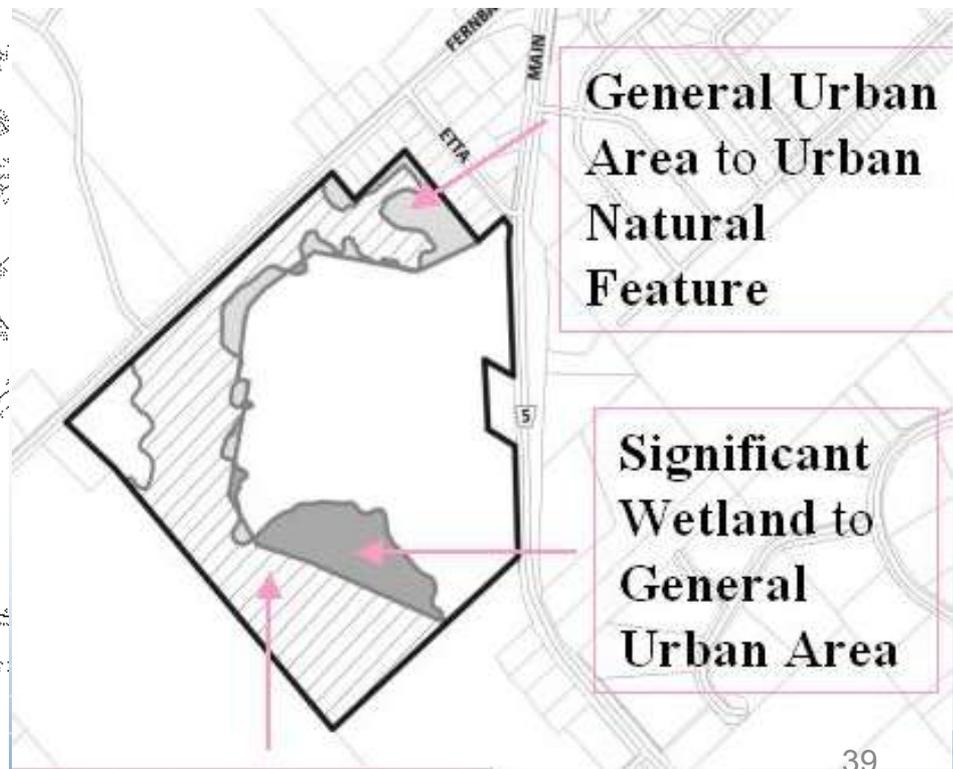
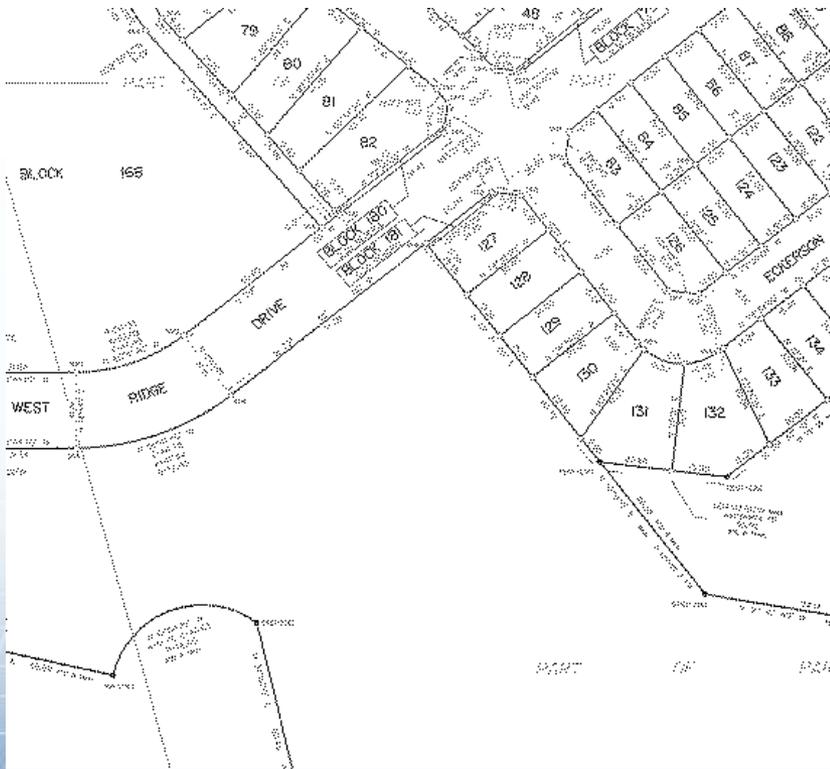
Provincially Significant Wetlands

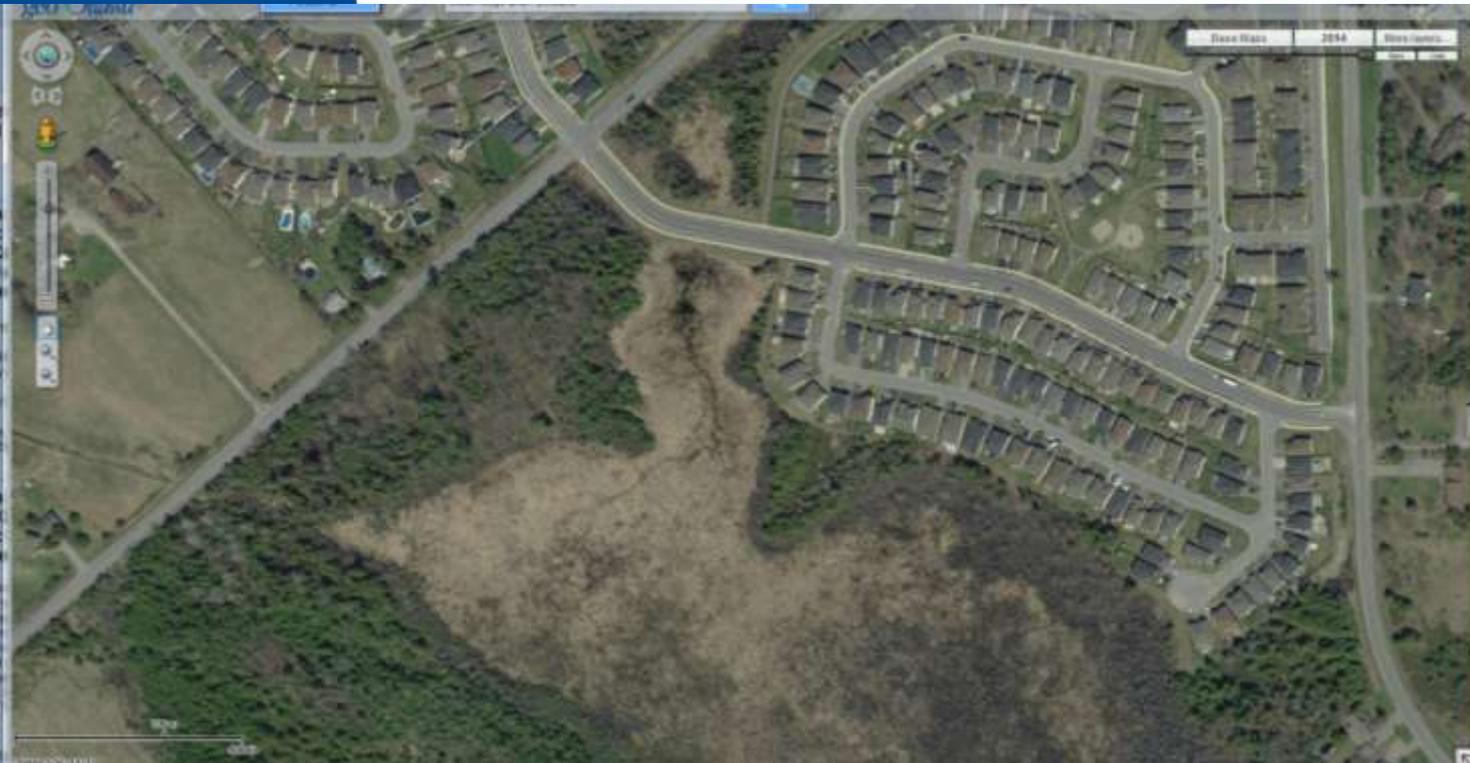
- Evaluated by Consultants
- Approved by MNRF
- Protected by CA and City



Example – Southwest Stittsville

- OPA – re-designated land
- Zoning and Subdivision – created lots, roads, greenspace





Areas of Natural and Scientific Interest

- 20 Life Science ANSIs in Ottawa
- Carp Hills ANSI abuts Village boundary
- Limit is identified and protected through EIS and development outside of the feature

Carp Hills





Species At Risk

- EIS identifies potential habitat and surveys
- Habitat must be addressed prior to draft approval
- MNRF lead
- Avoidance and Compensation



Watercourse Setbacks

- Adjacent to rivers, lakes, streams
- Corridors protected through a setback:
 - 15 m top of bank
 - 30 m from normal high water mark
 - Flood plain (OP Section 4.8.1 and CA)
 - Geotechnical hazard

Whichever is greater



Groundwater Impact Statement

- OP policies for development review s. 4.7
- Subwatershed studies map recharge, discharge areas
- Different for Rural vs Urban



Stormwater Management

- OP policy: SWM plan support subdivision, site plan
- Set treatment objectives
 - quantity of water released controlled
 - quality managed by reducing suspended solids
- Discussion fish compensation
- Locations for ponds

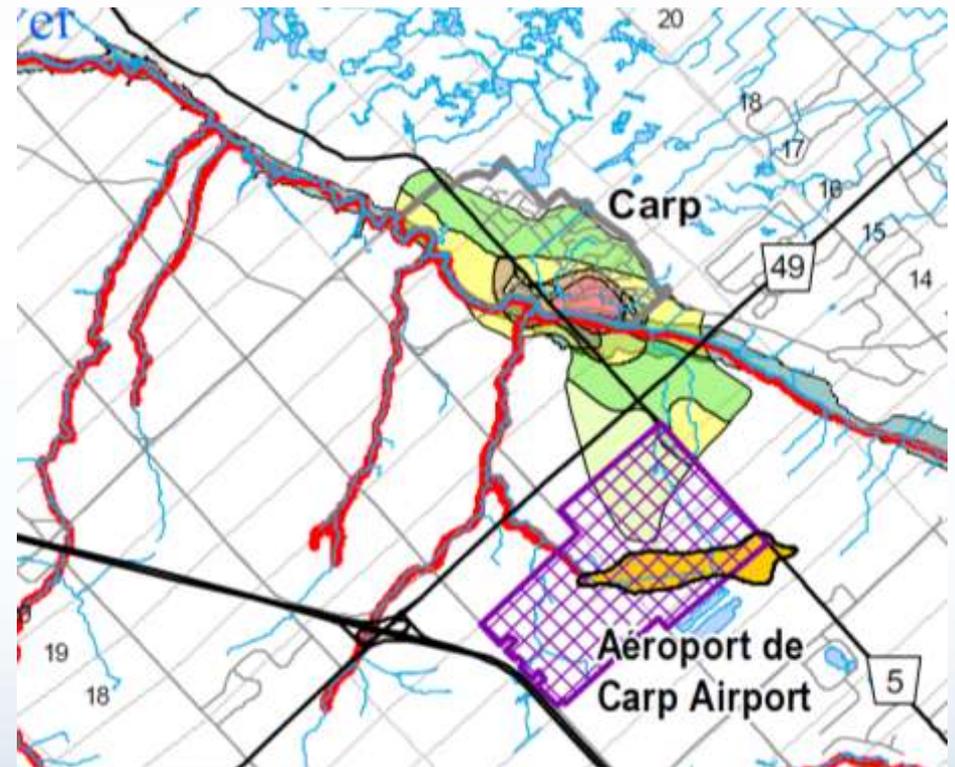


Other Environmental Planning

- Wellhead Protection (OP 4.8.2)
- Unstable Soils or Bedrock (OP 4.8.3)
- Contaminated Sites (OP 4.8.1)
- Mine Hazards and Abandoned Pits and Quarries (OP 4.8.5)
- Constraints Due to Airports/Aircraft (OP 4.8.6)
- Environmental Noise Control (OP 4.8.7)
- Personal Security (OP 4.8.8)
- Energy Conservation Through Design (OP 4.9)
- Greenspace Requirements (OP 4.10)

Wellhead Protection Study

- Wellhead protection area designed on Schedule K
- OP Section 4.8



Visit us:
Ottawa.ca/planning

ottawa.ca
3-1-1    
TTY 613-580-2401



Development Application Search

Advanced Search

Find a Ward

FAQ

Development Application Search

Search

Example: "Alta Vista"
Woodroffe
Commercial
Subdivision

[Advanced Search](#)
[Find a Ward](#)
[geoOttawa](#)

This Website contains information about the following development applications, subject to public consultation. Development information received before February 1, 2008 is not available online.

- Official Plan Amendment
- Zoning By-law Amendment
- Plan of Subdivision
- Site Plan Control
- Demolition Control
- Plan of Condominium

IT IS IMPORTANT THAT YOU READ THE FOLLOWING TERMS OF USE AND CONDITIONS CAREFULLY. [Read More>>](#)

ottawa.ca/devapps

Ottawa's Forests

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Land Use and Natural Systems Unit
Planning and Growth Management
November 2015

Ottawa's Forests

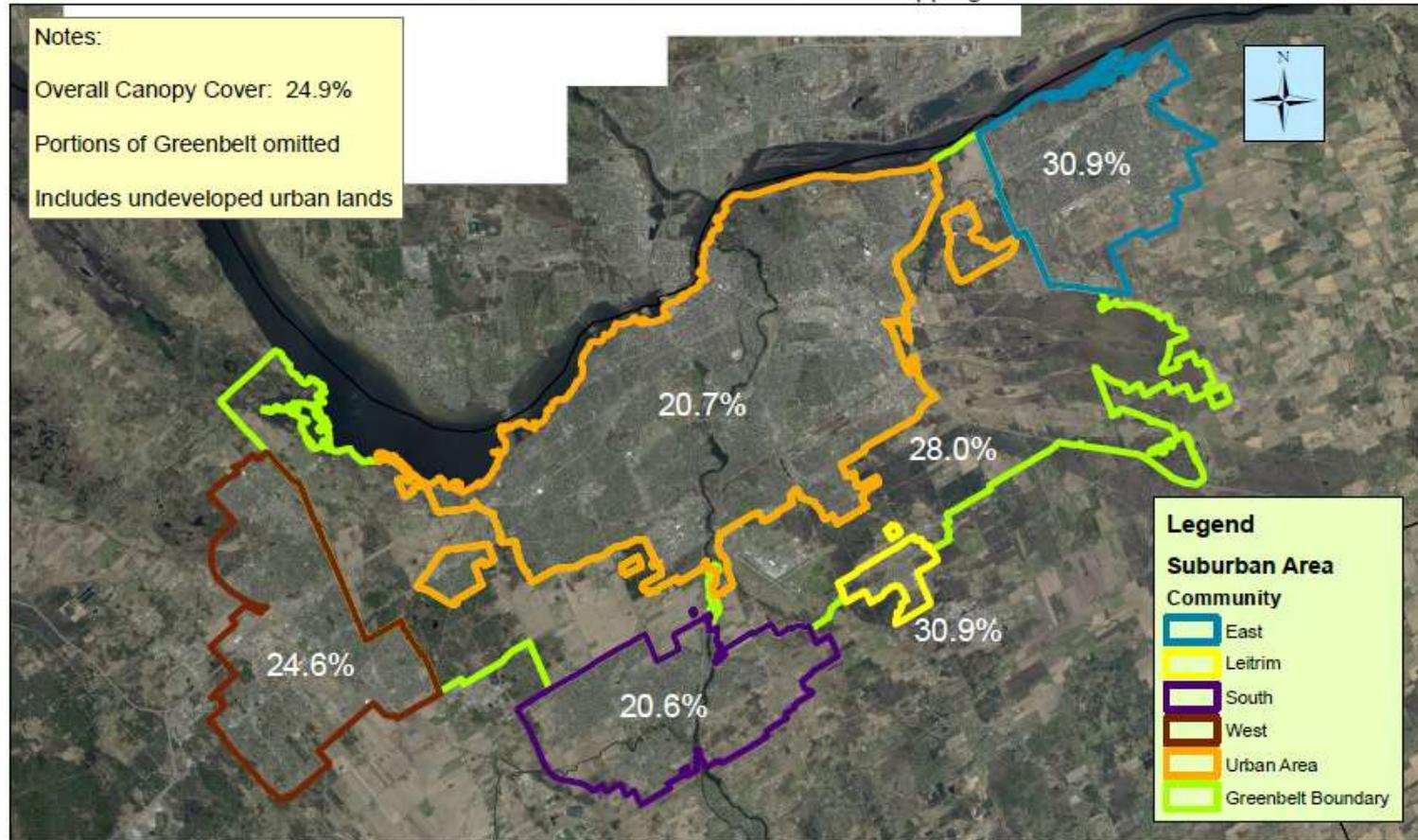
Forest Cover in the City of Ottawa 2010



0 5 10 20 Kilometers

Ottawa's Forests

Canopy Cover in Urban and Suburban Ottawa
2014 Tree Crown and Urban Forest Mapping



0 2.5 5 10 Kilometers

Ottawa's Forests

- Ottawa: 2796 km² total area
- Ottawa: 780 km² treed
- Very diverse – species distribution, age class, structure
- Human influences –past, present and future



Ottawa's Forests

City-managed Forests

- 300,000 plus street trees
- 10,000 ha of Community Forests
- 900 parks with trees

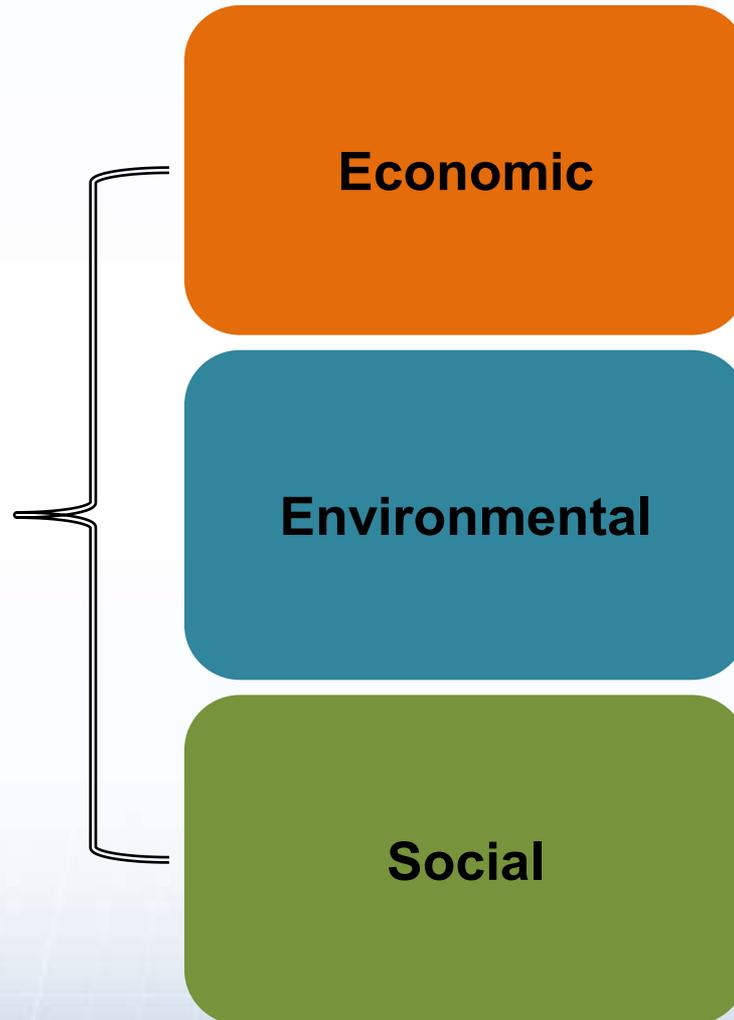
Privately-managed Forests

- Farm woodlots
- Privately-owned trees
- Commercial forests, maple syrup operations



Should we manage our urban and rural forests?
If so, why? Why not?

Values



- Higher property values
- Income
- Tourism

- Wildlife habitat
- Water benefits
- Carbon storage
- Soil protection

- Recreation
- Health and happiness
- Sense of place

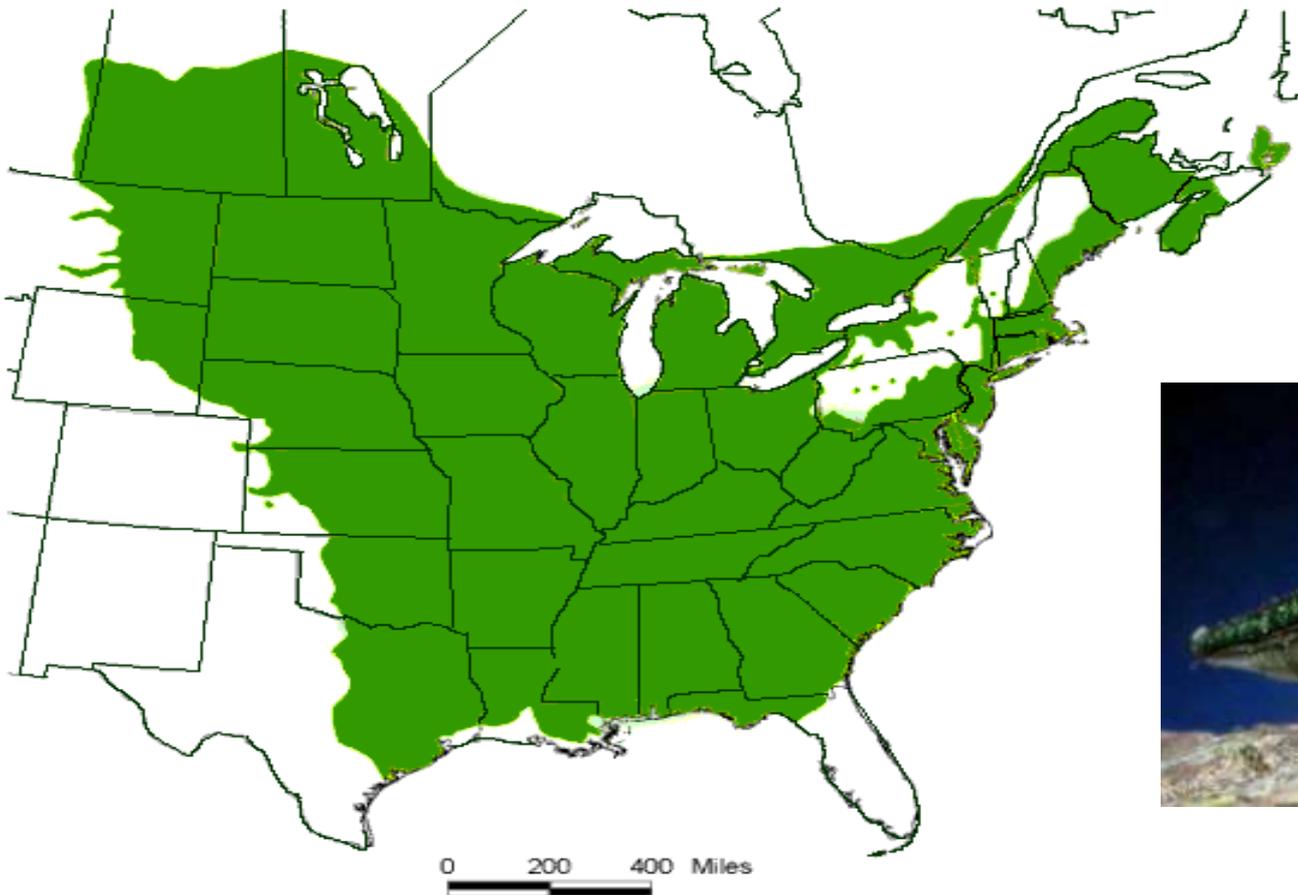
Agents of Change

- Ottawa is a settled landscape
- Trees and forests have a life cycle
 - Management geared at controlling change
- Many factors influence forest change



Invasive Species

Native Range of Green Ash



Before EAB: 25% ash

Invasive Species



UGA0949054

Invasive Species



Human Influences



Human Influences

An aerial photograph of a rural landscape. The image shows a grid of agricultural fields, some of which are plowed and others that appear to be in a different stage of cultivation. A prominent road or highway runs diagonally from the bottom left towards the top left. A large, dense wooded area is situated in the lower center of the frame. The overall scene illustrates human influence on the natural environment through agriculture and land management.

Human Influences



Weather Events



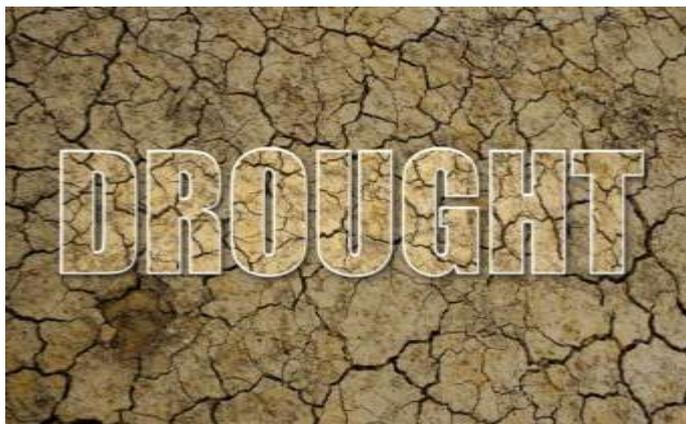
Weather Events





Cultural practices can amplify damage caused by even minor weather events

Weather Events



Policy

Ottawa's official plan – foundation for all tree-related policies

2.4 Maintaining Environmental Integrity

2.4.2 Natural Features and Functions

2.4.5 Greenspaces

3.2 Natural Environment

4.7 Environmental Protection

4.7.2 Protection of Vegetation Cover

4.7.8 Environmental Impact Statement

City Departments

Planning and
Growth
Management



Natural Systems

- 2 Planning Foresters
- City Hall
- Development applications
- Tree / Forest Policy

Public Works



Forestry Services

- 5 Foresters
- Constellation
- City-owned trees
- Distinctive Tree

Tree By-laws in Ottawa

Urban Tree Conservation By-law (2009)

- Private trees
- PGM & Forestry Services
- Urban area only

Municipal Trees and Natural Areas By-law (2006)

- Public trees
- Forestry Services
- Urban & rural areas

Tree By-laws in Ottawa

Rural area tree by-laws:

1. Municipal Trees and Natural Areas By-law

Municipal Trees and Natural Areas By-law

- All city-owned trees are protected
- Can't injure or destroy a city-owned tree without permission
- Forestry Services provides permission
- Compensation sought for all trees removed



Municipal Trees and Natural Areas By-law

Permission granted...

- City construction project
- Development site and no options for tree retention

Permission denied...

- Resident doesn't like tree
- Trees are blocking views
- Construction not approved by the City
- Healthy
- No justifiable reason

Urban Tree Conservation Bylaw

Properties <1Ha & condo
properties >1Ha

Distinctive Tree Permit

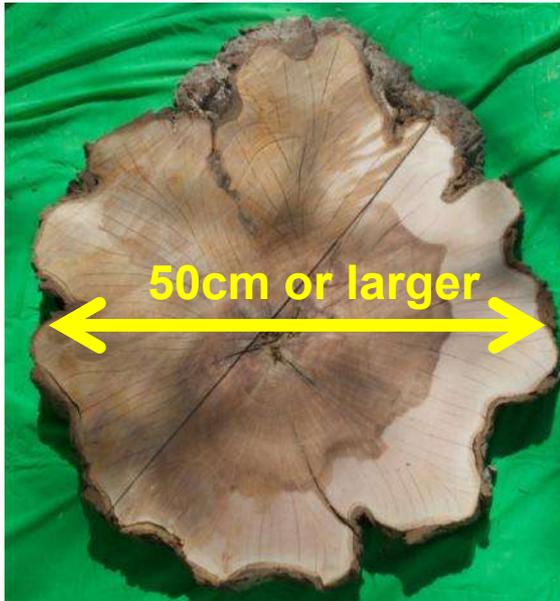
Managed by Forestry Services
Privately-owned trees

Properties >1Ha or planning
application files

Tree Cutting Permit

Managed by PGM
Privately-owned trees

Distinctive Tree Permits



Issued for:

- Unhealthy tree
- Unsafe/hazardous
- Causing foundation damage
- Construction

Not issued for:

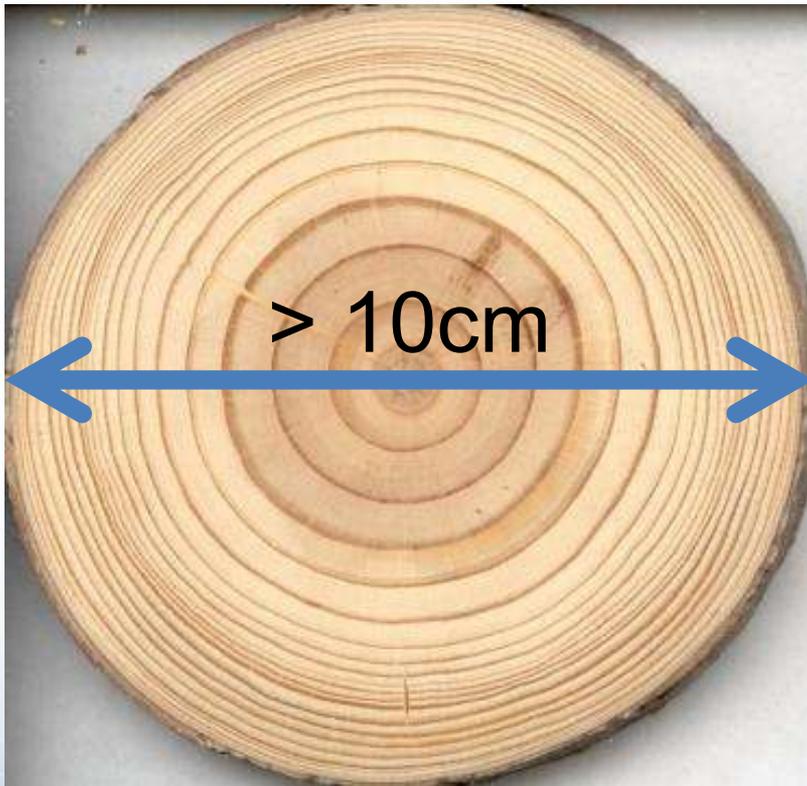
- Unhealthy, but alternatives to removal
- Owner does not like tree
- Improve view

Distinctive Tree Permits

Process



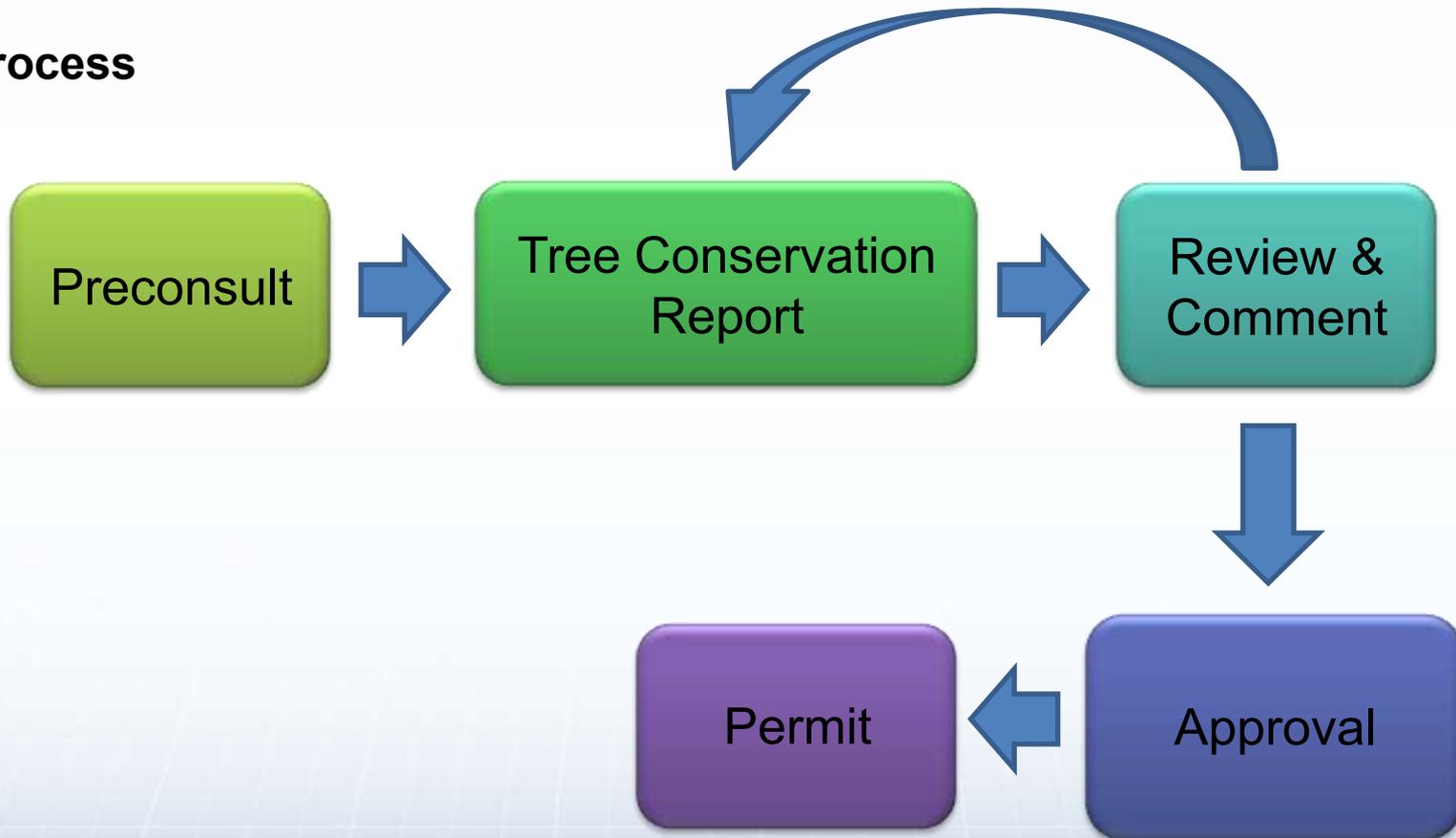
PGM issued Tree Cutting Permit



- Properties > 1ha
- **Planning application files - site plan, plan of subdivision**
- Any tree >10cm diameter

PGM issued Tree Cutting Permit

Process

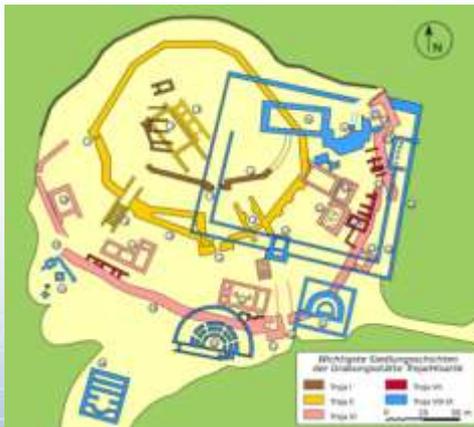


PGM issued Tree Cutting Permit



Tree Conservation Reports

1. Stand-alone report
2. TCR / Landscape Plan combination
3. TCR / Environmental Impact Statement combination



PGM issued Tree Cutting Permit

Tree Conservation Reports

Components:

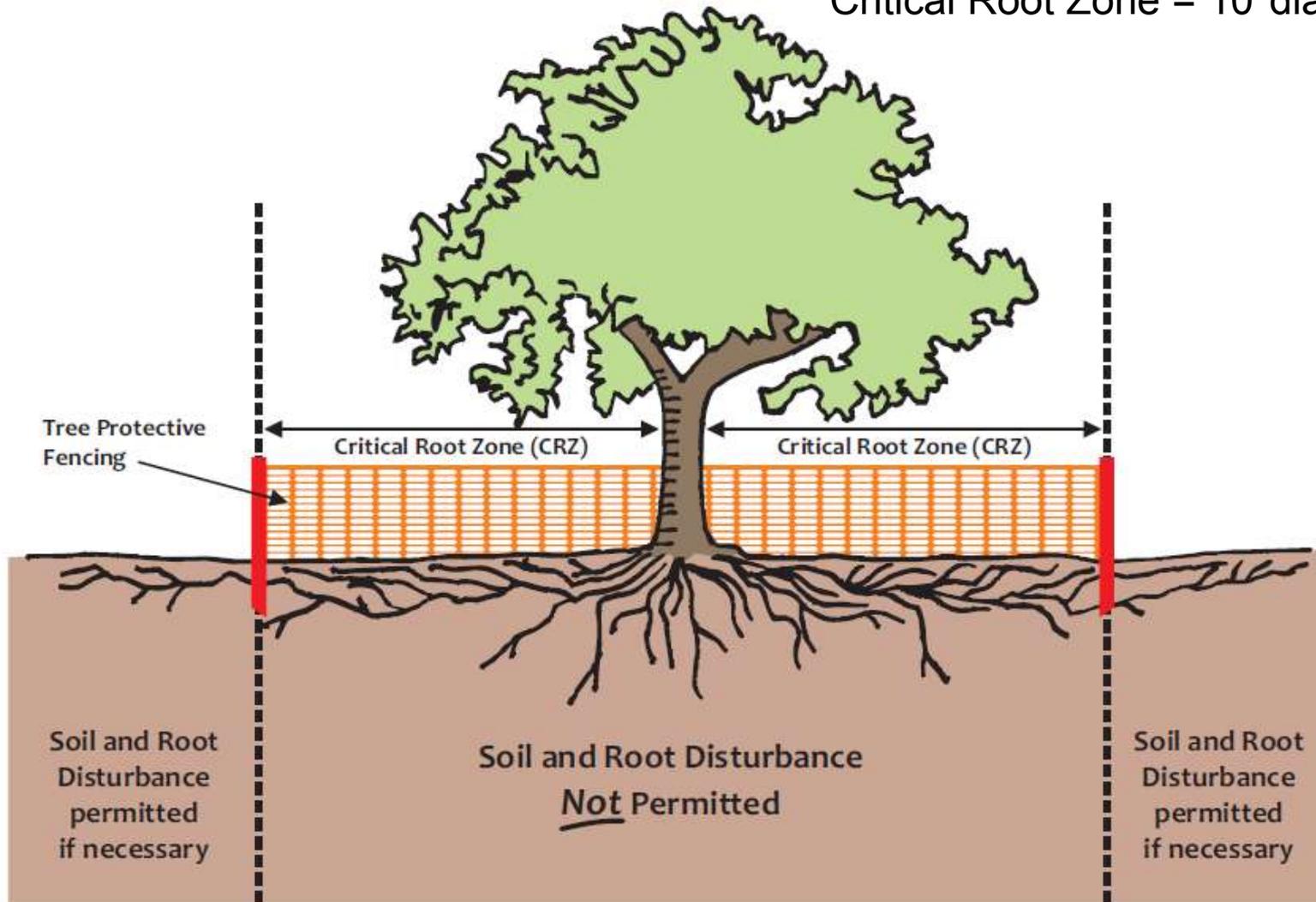
- Maps
- Tree information
 - Species
 - Diameters
 - Health Status
 - Plans –
remove/retain
- Tree protection information



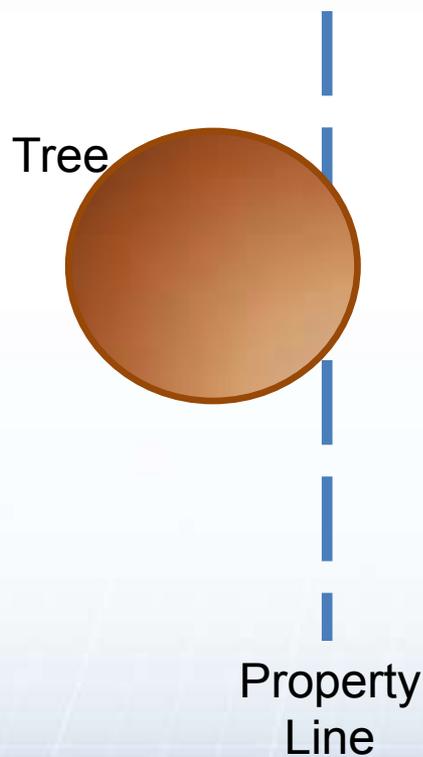
(Schedule A of the Urban Tree Conservation Bylaw)

Tree Protection

Critical Root Zone = 10*diameter



Boundary Trees



Trees with trunks that cross a property line are co-owned by both property owners

- Not just ground level
- Even if the tree was not originally planted on the property line

Coming soon....

Urban Forest Management Plan

- **Vision for our future urban forest**
- **Consultative development process**

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Additional Information:

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Ottawa.ca



Cardinal Creek Case Study

Land Use and Natural Systems Unit
Planning and Growth Management
November 2015

What does the study include?

Natural Heritage

- Identification of a natural features, linkages, ecological functions
- Natural Heritage – Water Resources relationship

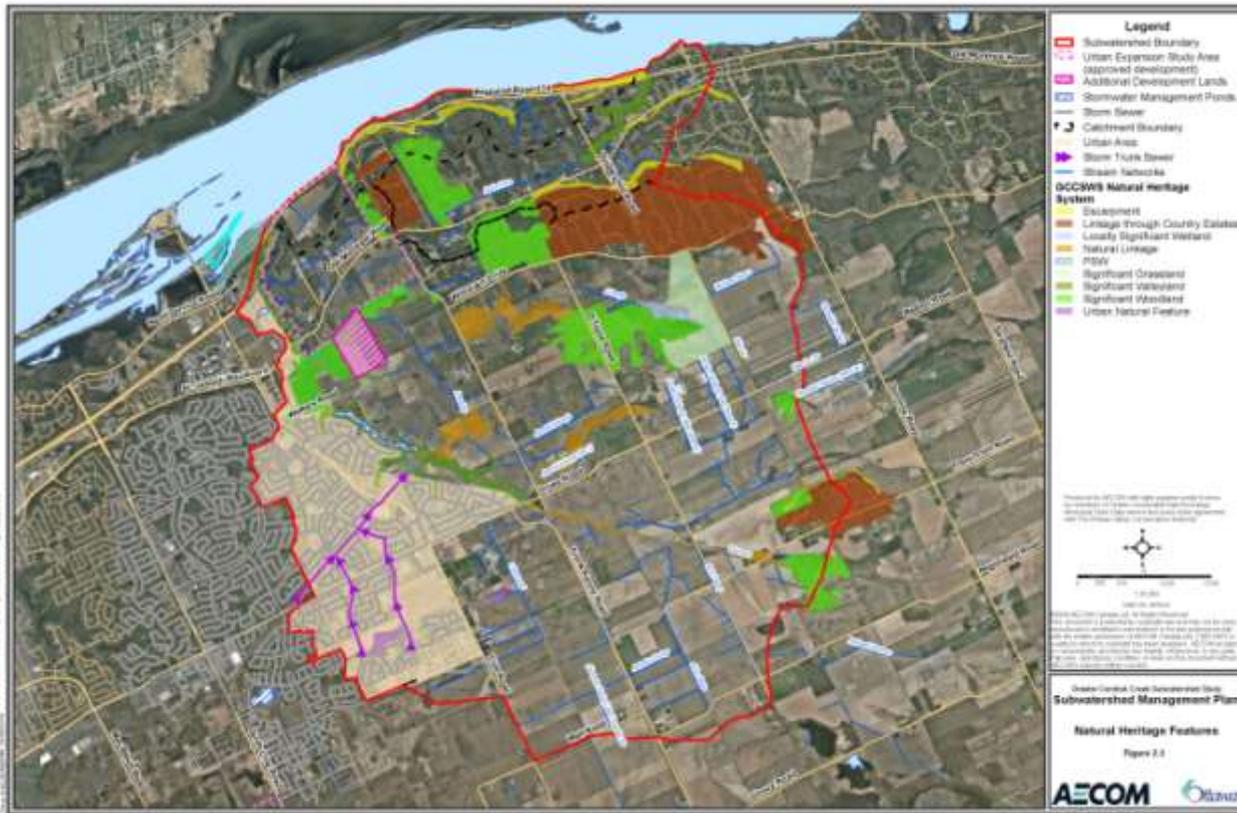
Development Issues

- Areas for conservation/protection, hazard lands, surface water, groundwater
- Guidelines for development
- Public access

Monitoring and Management

- Recommendations for monitoring
- Recommendations for stewardship, mitigation, restoration, compensation

Natural Heritage System



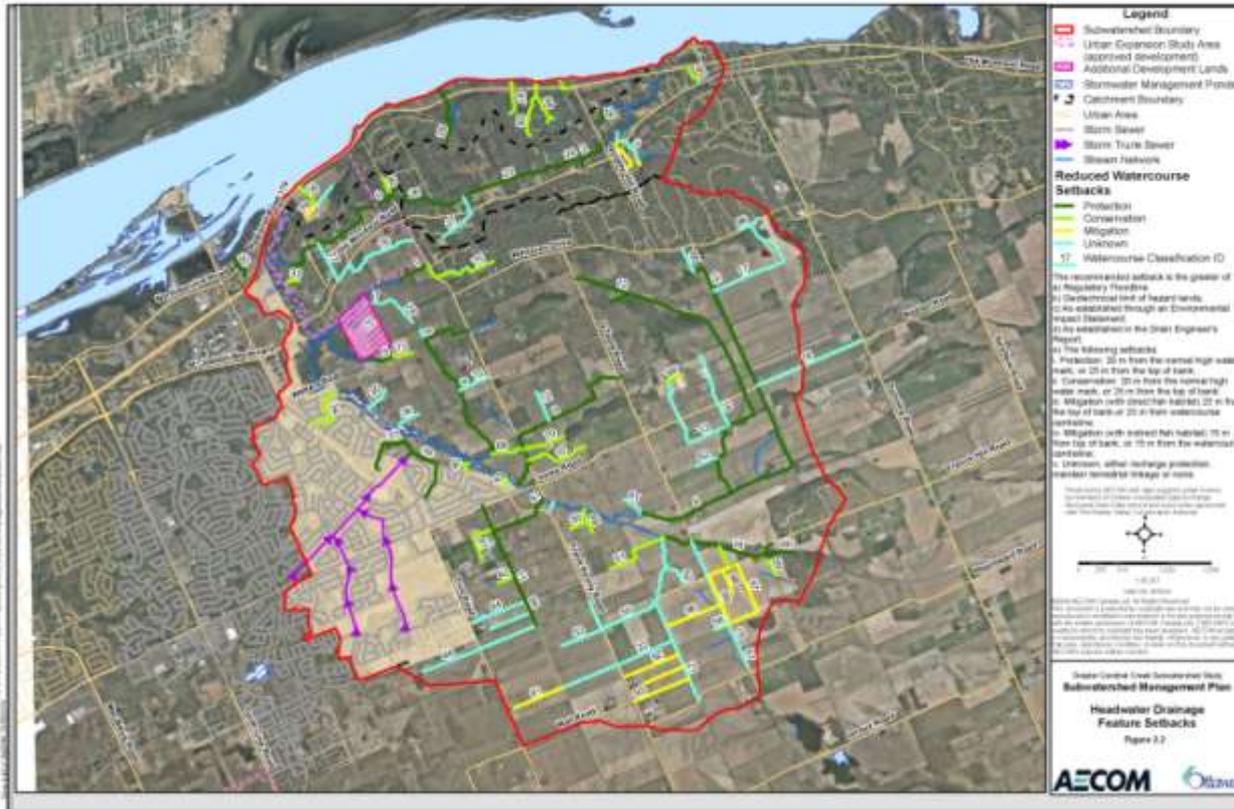
Identifies a system of significant natural features that must be evaluated and considered in any development scenarios

Karst

- ANSI
- Hazard
- Groundwater infiltration and recharge feature



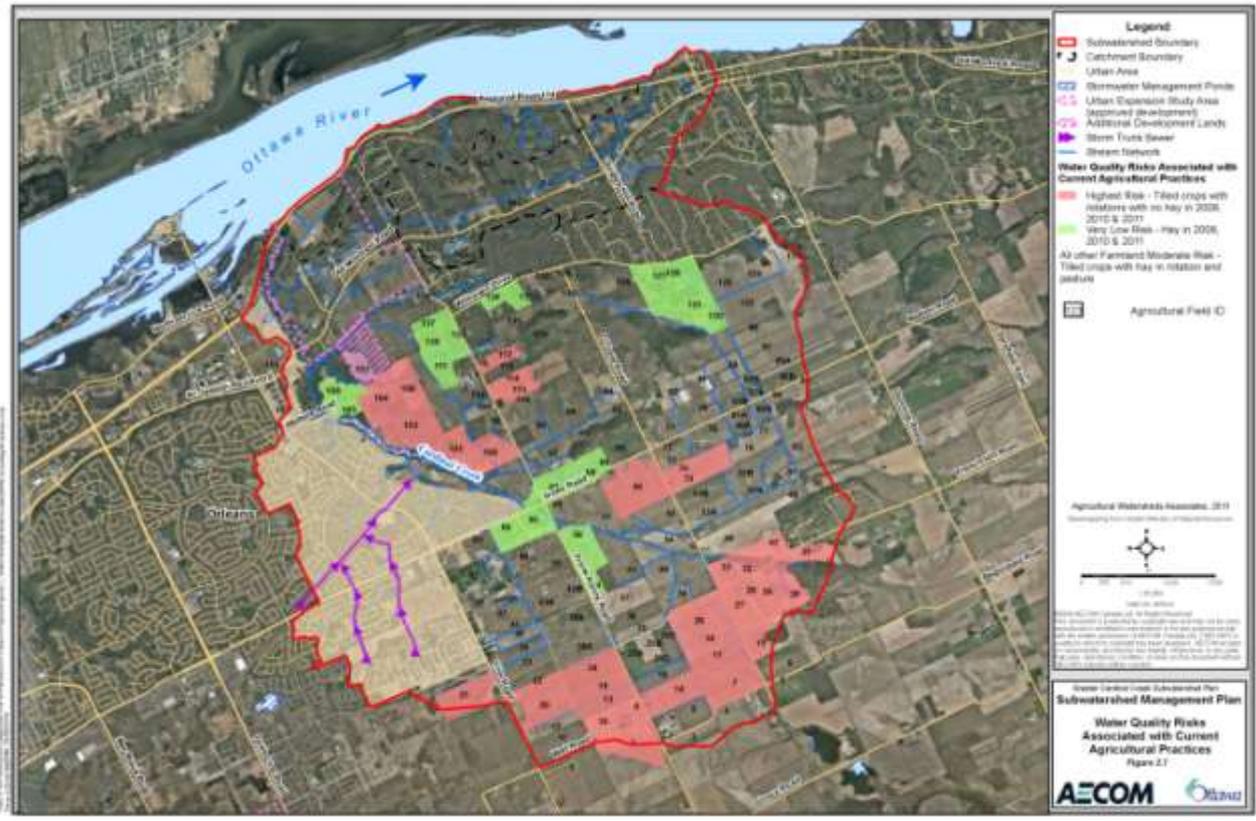
Watercourse Setbacks



Study recommends setbacks for protection of watercourses.

They can be refined through site investigation as part of development review process.

Agricultural Risks to Water Quality



Some agricultural activities have a higher risk of affecting water quality.

Best Management Practices are important.

Hydrology Model



Predicts the impacts of residential development

Establishes flow targets for stormwater management

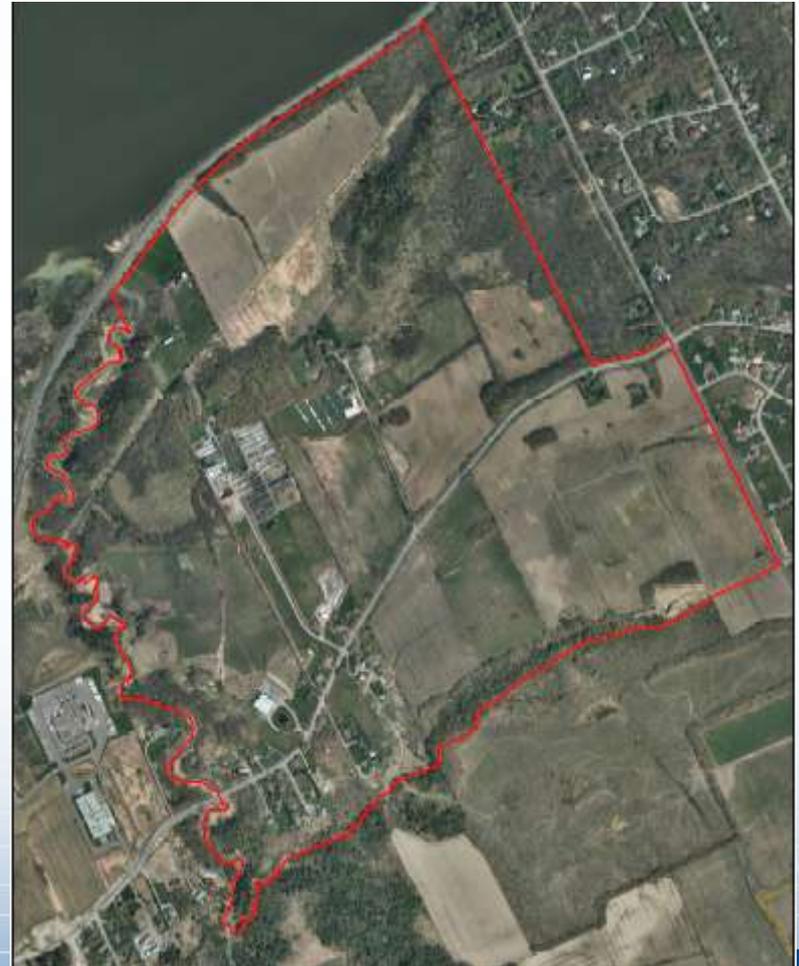
Restoration and Enhancement

- Slope stabilization
- Riparian plantings and restoration on Cardinal Creek Valley
- Promotion of agricultural best management practices
- Continued maintenance of municipal drains



Be the Natural Systems Planner!

- There is an urban expansion area within the subwatershed
- Use the maps provided to identify the environmental constraints
- Draw the constraints on the Study Area Map



What did you decide?

Community Plan

Legend

	Arterial Road		Arterial Mainstreet 'A'
	Major Collector		Arterial Mainstreet 'B'
	Minor Collector		Urban Natural Features
	Potential Future Bus Rapid Transit Corridor <i>(to be determined by the City of Ottawa's current TMP)</i>		Major Open Space
	City of Ottawa's Preferred Rapid Transit Alignment		Residential
			Existing Residential
			Mixed Use



- Greenspaces
- Watercourse setbacks
- Reduced stormwater discharge
- Groundwater recharge areas