



AD Latornell Session F1B Lessons Learned from Implementing Natural Heritage Systems

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Conservation Authority

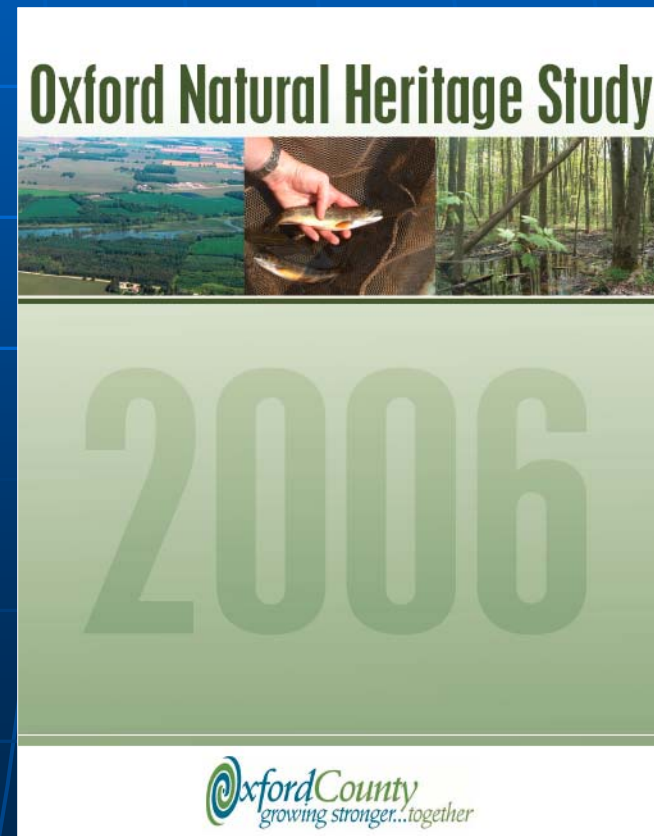
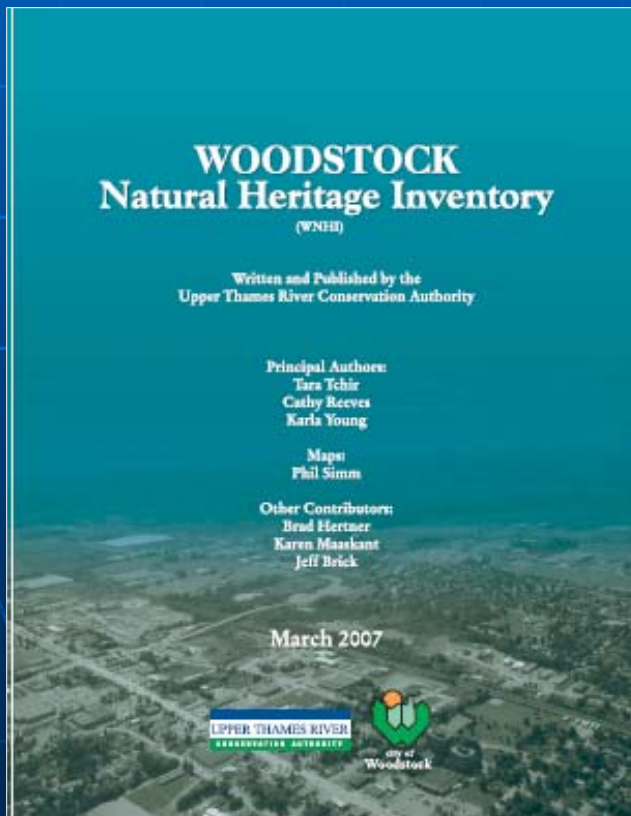


Outline

- Natural Heritage Studies
 - Some concepts
 - Studies in the southwest
- Landscape ecology approach methodology
- General findings
- Implementation Options
- Pressures
- Next steps
- Lessons learned

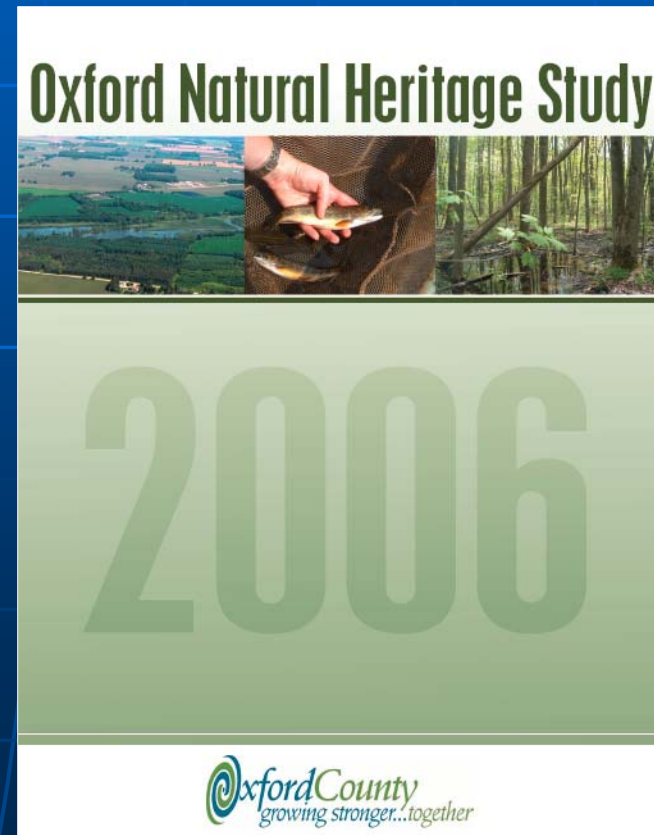
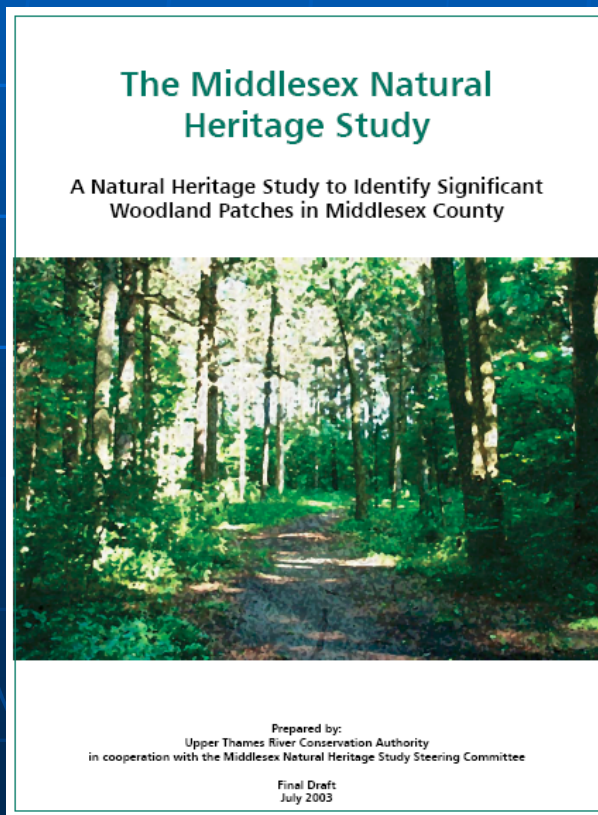
Natural Heritage Concepts

- Natural heritage inventory vs. natural heritage study



Natural Heritage Concepts

- Focus on woodlands or focus on the broader natural heritage system



Natural Heritage Concepts

- Patch protection vs. landscape approach
- Patch protection – patches are significant for the species that are found in them
- Landscape approach – patches are valued for the contribution that they make (existing or potential) due to their:
 - Size, shape, proximity or linkage

Natural Heritage Studies History

- Various Wetland Inventories, ANSI reports, County ESA Reports (generally 70's to present)
- Oxford County Terrestrial Ecosystem Study (1997)
- Middlesex Natural Heritage Study (2003)
- Oxford Natural Heritage Study (2006)

Natural Heritage Studies History

- Municipality of Kincardine (2009)
- Lambton (under way)
- Huron County (under way)
- Several others
- Needs:
 - Update Middlesex and Oxford NHS
 - Run model for Perth County
 - New 2010 ortho-imagery

Landscape Study Methodology

- Accurate mapping of vegetation polygons using ortho-imagery
- Landscape ecology analysis of existing vegetation inventories and the corrected vegetation information to develop landscape criteria
- Use GIS to model patches that meet criteria
- Features already mapped meet a criteria

Oxford NHS Terrestrial Results

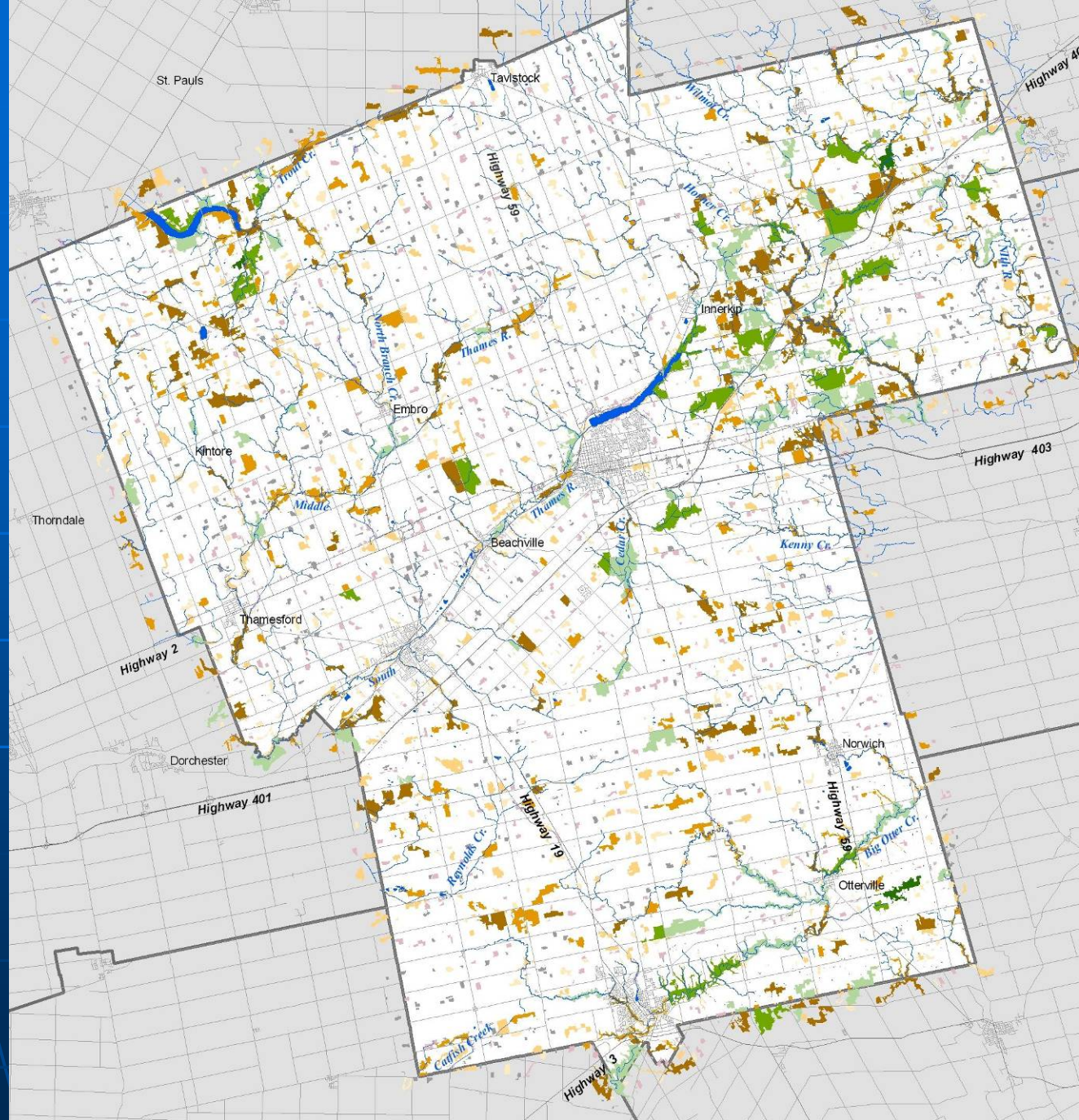
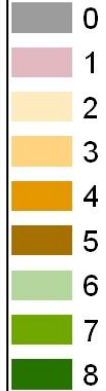
- 12.5% Forest Cover
 - 9.7% upland + 2.8% wetland
 - 75% deciduous + 25% mixed
 - 80% of patches <10 ha
- 1.8% meadow (riparian)
- Total = 14.3% natural cover
- Target for sustainability is 20-30%.
- 11% Forest Cover in 1952



Colour coded map showing the number of criteria that each patch meets No one patch meets all nine criteria

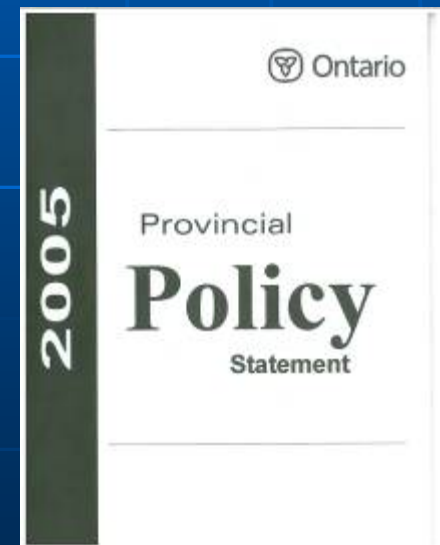
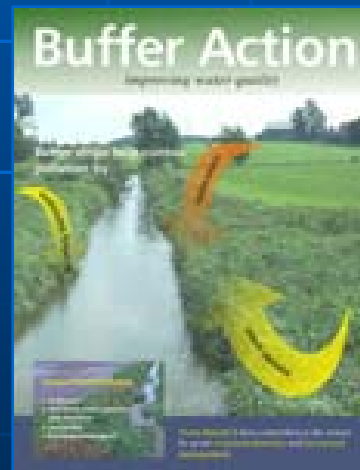
Legend

Natural Heritage Patch
Total Criteria Met (of 9)



Implementation

- Implementation options:
 - Acquisition
 - Regulation
 - Stewardship and Incentives
 - Taxation policy
 - Education
 - Other “locally developed ” options



Implementation Options

■ Acquisition

- Purchase strategic lands or pursue conservation easements
- Concerns related to:
 - Cost
 - Management
 - Liability

Implementation Options

■ Regulation

- Planning Act – Designate, zone and enforce
- Woodland Conservation By-Law
 - Limited to woodlands
- Concerns related to:
 - Perception of over-regulation
 - Enforcement
 - Dynamic nature of natural systems

Implementation Options

- Stewardship and incentives
 - Encourage best practices that achieve strategic objectives ie. Buffers, plantings that provide linkages
 - Provide expertise and cost sharing incentives to assist
 - Ecological goods and services approach for certain components of the system

Implementation Options

■ Taxation Policy

- Tax exemption for lands that are deemed significant
- Possibly make exemption automatic (ie. remove the need to apply)
- Tie to regulation (ie. if designated for protection, tax exempt)

Implementation Options

- Education
 - Workshops, tours etc.
 - Recognition programs
- Other locally developed implementation options

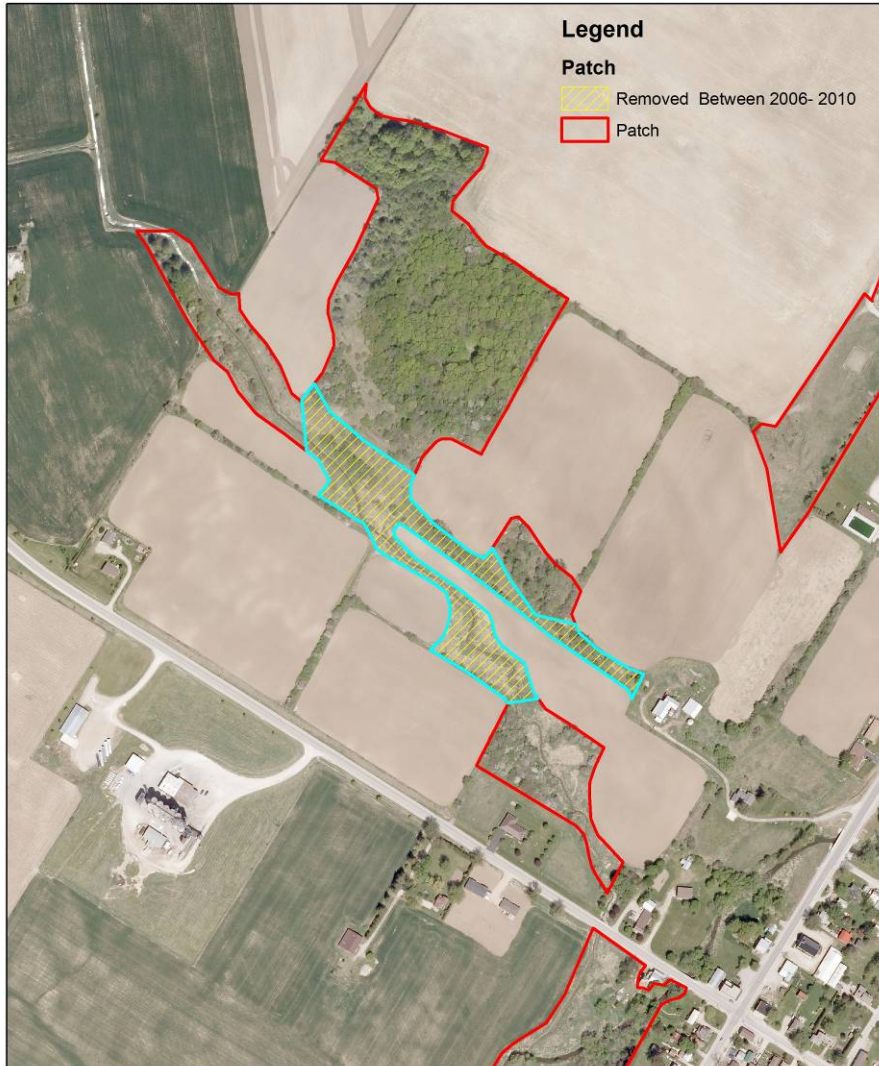
Implementation Options

■ Process

- Consider a mix of the options available
- Participation of stakeholders in the process
- Oxford Natural Heritage Study used and Implementation Advisory Committee made up of stakeholders to review various implementation options

Pressure on Natural Heritage

Protecting Patch ? (2006)



Protecting Patch ? (2010)



Pressure on Natural Heritage

- Potential causes:
 - Commodity prices
 - Land prices
 - Farm consolidations
 - Land tenure
 - others

Next Steps

- Proposal for southwest conservation authorities to work with their municipalities and MNR to standardize mapping and create landscape systems models
- Standardized approach for updating ortho-imagery
- Landscape criteria that are adaptable to local planning area scales

Next Steps

- Standardize vegetation mapping:
 - Eliminates problems with boundaries
 - Information to support municipal needs
 - OP information
 - Woodland Conservation By-Law
 - Comparison over time (ie. 2006 vs 2010 and beyond)
 - Allow for landscape model to be run at different scales
 - Ability to collaborate on updates and schedule priorities to meet municipal demands/wishes
 - Projects and proposals with other partners ie. Carolinian Canada, Nature Conservancy

Lessons Learned

- Map the system rather than the features
- Protect the system rather than focusing on protecting the feature
- Consider a range of implementation options
- Engage stakeholders on developing the implementation plan



Questions and Discussion

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