# Submission to the Ontario Ministries of Municipal Affairs and Housing, October 31, 2016

## Comments on Proposed Changes to the Four Provincial Land Use Plans

### Introduction

The Faculty of Forestry, University of Toronto, welcomes the opportunity to comment on the proposed changes to the four provincial land use plans- the Growth Plan for the Greater Golden Horseshoe, the Greenbelt Plan, the Oak Ridges Moraine Conservation Plan and the Niagara Escarpment Plan. These plans shape how land is used in the crucial Greater Golden Horseshoe area of southern Ontario. The issues raised in our submission together address the four land use plans.

Our first observation is that it is critical to **recognize urban and peri-urban forests as land use categories** and include them in each of these four plans. The proposed changes do not recognize the important link between land use and forests. The growth of urban areas and increased density need to take into consideration not only natural remnants (i.e., natural heritage) but the future planning of urban forests to support green communities.

The four plans were developed at different times and reflect different approaches to natural heritage protection and urban development. The new recommendations, however, are deficient in considering the full ecological, social and economic values of forests. In our view, it is necessary to explicitly mention trees and forests in the plans.

### The Main Building Blocks are Forests and Trees

Forests are the predominant natural vegetation in southern Ontario. Natural heritage systems, green infrastructures and significant wetlands (e.g., swamps) are dependent on forests. Consequently, forest management and green systems planning need to be incorporated into integrated and strategic landscape and land-use planning. Such changes to the four plans under review should go a long way towards ensuring that emerging forest management, conservation and restoration needs are accounted for in landscape planning. The systems will then be defined to capture present day conservation values and can also be carefully planned to include possible climate impacts, landscape and forest restoration, and the numerous ecological and social benefits forests provide.

The proposed changes to the four plans include good ideas about natural heritage systems, significant features and green infrastructure. These terms, however, are abstract and do not communicate the connection to their complex ecological components associated with forests and woodlands.

Land use planning also needs to look beyond simple measures such as the percentage of forest cover if we are to understand and respond to risks such as storm events associated with climate

change or invasive species. Managing risk requires knowledge about enhancing forest diversity, improving forest age structure, minimizing fragmentation, and improving and building forest connectivity. Now more than ever there is a critical need to incorporate forests and trees in long-term land use planning and decision making, and strategic policy development that supports adaptive management.

**Climate Change and Resiliency**

The fragmented landscape of southern Ontario is vulnerable to the effects of climate change. Urban development, competition for land use, invasive species, and pollutants, among other pressures, are well understood in the conservation community to be the main challenges to sustainability.

As climate change impacts range from global to local scale, it is prudent to build regional scale green systems that will serve as the 'backbone' of healthy, resilient and functional working landscapes. Such Natural Heritage Systems need to nest into each other to enhance the impacts of local, regional, provincial, continental and global systems. Again, forests, as the predominant NHS component, both spatially and structurally, are the main building blocks of green systems. Building hierarchical nested Natural Heritage Systems, even as aspirational blueprints, involves all levels of government.

Natural Heritage System planning needs to move to the next level of integrated and strategic landscape planning that includes monitoring the quality of forests. This will require accounting for emerging needs; the system should not only be defined to capture present day conservation values, but also be carefully planned to include potential climate impacts.

**Building Multiple Scale Green Systems**

Depending on the scale of observation and expected ecological benefits, the Natural Heritage System and green infrastructure can be of different size ( e.g. a woodlot, wetlands, park, treed street , green wall) and composed of different elements (e.g. planted trees, natural forest, urban forest, natural wetlands or built wetlands).

At the landscape level ( e.g. watersheds, regions), besides serving to protect biodiversity; strategically designed and planned natural heritage systems, composed of diverse forests and wetlands, also provides goods and services. For instance, by protecting and maintaining forests and wetlands in headwater areas, vegetation serves to filter water from pollutants and nutrients, stop stream sedimentation, provide bank stability, and create habitat for wildlife. Natural heritage systems that include forest hedgerows, enable protection of agricultural crops from wind and erosion, as well as provide pollination services.

At the scale of a city or a town, the back-bone of NHS and green infrastructure is an urban forest and its canopy. Urban forests as the main building block of urban green infrastructure is composed of natural forest remnants, parks, green areas and single trees along boulevards and in residential areas. These urban forest elements combined make an urban canopy that is critical for reducing water runoff and providing flood protection; cleaning the air by trapping pollutants; providing shade; cooling houses during the summer; and reducing wind and noise. In addition, public urban forest elements such as parks, open green spaces, and treed streets provide recreational opportunities and serve to improve human physiological wellbeing.

There are also numerous small-scale green infrastructure elements that can be planned throughout urban environments to address and mitigate local environmental issues and concerns. For example, on a neighborhood or subdivision level, the size of green infrastructure is in the form of trees, green walls and green roofs, trees and shrubs in parking lots and school yards; and planted vegetation in unused and marginal urban spaces.

**Urban Forests and Development and Intensification**

Population growth, and the resulting urban and suburban development, cannot be examined in isolation from forests. Growth imposes pressure on the existing forest and, at the same time, the quality and livability of development depends on the amount and condition of the urban forest.

The proposed changes do not clearly make the connection between settlement (i.e., cities, towns) and natural heritage systems. Already urbanized landscapes present different and limited opportunities for designing natural heritage systems. In this case, green areas and systems are important for biodiversity, but also for providing numerous ecological, social and economic functions.

Various open spaces within and around built up areas provide the best potential for inclusion as NHS prospects, even when the spaces may not be physically connected. These may include ravines, riverine riparian areas, naturalized parkland, cemeteries, school yards, hydro rights-of-way, neighborhoods with high urban forest canopy cover, and natural features and areas around the urbanized area. Restoration and tree planting achieved as part of infilling and redevelopment can establish better NHS connections and improve its ecological and social functions.

Urban forests and forest across landscapes should be seen as nature-based solutions for urban regeneration and resilience. Urban forests are an important green infrastructure asset for urban communities across Ontario. The capacity of urban forests to support healthy and resilient cities, however, is constrained by urban and land use planning.

**Recommendations**

In summary, the Faculty of Forestry submits the following recommendations in response to the proposed changes to to the four provincial land use plans:

1. It is important for specific wording inclusion of urban and peri-urban forests in these plans.
2. The definition and ecological components of natural heritage systems need to be clearly listed and defined, particularly in respect of trees and forests.
3. There is a need to plan spatially for forests and green systems within the proposed plan areas. Incorporate forest conservation and spatial planning as a land use planning component, recognizing that forests ( as the building blocks of landscapes) are dynamic and also facing risks and threats to their sustainability. Forest conservation and restoration need to be considered as important elements of spatial and land use planning.
4. Strategic landscape and green system spatial planning needs to address not only traditional conservation objectives, but also climate mitigation targets, and the provision of ecological goods and services.

5. Urban intensification should also require strategic planning and management of the urban forest. For example, with reference to Section 4 Building Complete Communities, without considering and planning for urban forests, communities should not be built.