Planning for Health, Prosperity and Growth in the Greater Golden Horseshoe: 2015-2041

Recommendations of the Advisory Panel on the Coordinated Review of the Growth Plan for the Greater Golden Horseshoe, the Greenbelt Plan, the Oak Ridges Moraine Conservation Plan and the Niagara Escarpment Plan
## Contents

List of Maps and Figures ................................................................. 3
List of Vignettes .............................................................................. 3
Letter of Transmittal .......................................................................... 4

**Executive Summary** ................................................................. 6
The Greater Golden Horseshoe –
A Region Under Pressure ................................................................. 8
Towards a Better Future ..................................................................... 10
Building Complete Communities ....................................................... 11
Supporting Agriculture ...................................................................... 12
Protecting Natural and Cultural Heritage ........................................... 13
Providing Infrastructure ..................................................................... 14
Mainstreaming Climate Change ......................................................... 15
Implementing the Plans ..................................................................... 16
Towards Timely Action ...................................................................... 17
In Conclusion .................................................................................... 18

1. **Introduction** ............................................................................ 19
   1.1 Background ............................................................................. 20
   1.2 The Greater Golden Horseshoe .................................................. 22
      1.2.1 Urban Growth .................................................................. 24
      1.2.2 Agriculture .................................................................... 28
      1.2.3 Environment .................................................................. 29
      1.2.4 Human Health .................................................................. 31

2. **What We Heard** ..................................................................... 33
   2.1 Summary of Stakeholder Submissions ....................................... 34
   2.2 Summary of Public Input from Town Hall Meetings ....................... 36

3. **Towards a Better Future** ....................................................... 38
   3.1 Strategic Directions .................................................................. 39
      3.1.1 Building Complete Communities ......................................... 40
      3.1.2 Supporting Agriculture ......................................................... 41
      3.1.3 Protecting Natural and Cultural Heritage ................................. 42
      3.1.4 Providing Infrastructure ......................................................... 43

4. **Building Complete Communities** ......................................... 48
   4.1 Where and How to Grow ........................................................... 50
      4.1.1 Complete Communities ......................................................... 51
      4.1.2 Growth Forecasts ................................................................ 59
      4.1.3 Intensification .................................................................... 61
      4.1.4 Designated Greenfield Areas ................................................. 65
      4.1.5 Transit Hubs ....................................................................... 68
      4.1.6 Floodplains ......................................................................... 70
      4.1.7 Settlement Area Expansion .................................................... 72
      4.2 Planning for Employment ........................................................ 79
      4.2.1 Protecting Employment Areas ................................................. 80
      4.2.2 Planning for Mixed Uses ......................................................... 83
      4.2.3 Rural Economies ................................................................ 84

5. **Supporting Agriculture** ......................................................... 87
   5.1 Productive Farmland .................................................................. 92
   5.2 Healthy Agricultural Economy .................................................... 95

6. **Protecting Natural and Cultural Heritage** .............................. 97
   6.1 Water and Watersheds ................................................................ 99
   6.2 Natural Heritage ....................................................................... 104
   6.3 Aggregates .............................................................................. 111
   6.4 Cultural Heritage ..................................................................... 114

7. **Providing Infrastructure** ....................................................... 116
   7.1 Infrastructure and Land Use Planning ......................................... 118
   7.2 Coordinated Decision-Making .................................................... 121
   7.3 Infrastructure Corridors .............................................................. 123
   7.4 Resilient Infrastructure ............................................................... 125
   7.5 Infrastructure Priorities ............................................................... 128
   7.6 Moving People ........................................................................ 130
   7.7 Moving Goods ........................................................................ 134
8. Mainstreaming Climate Change .... 136
   8.1 Mitigation ........................................ 139
   8.2 Adaptation ....................................... 141
   8.3 Achieving a Low Carbon, Resilient Greater Golden Horseshoe 142
9. Implementing the Plans ............... 144
   9.1 The Greenbelt ..................................... 147
    9.1.1 Growing the Greenbelt ....................... 147
    9.1.2 The Existing Greenbelt ....................... 152
   9.2 The Niagara Escarpment ....................... 154
   9.3 Aligning the Policy Framework .............. 156
   9.4 Streamlining Implementation ................. 157
   9.5 Governance and Oversight .................... 162

Appendices ........................................... 166
   Advisory Panel Membership and Terms of Reference 167
   David Crombie (Chair) ................................ 167
   Keith Currie ......................................... 167
   Rae Horst ............................................ 168
   John MacKenzie ...................................... 168
   Leith Moore .......................................... 169
   Debbie Zimmerman ................................... 169
   Terms of Reference ................................... 170
   Acronyms ............................................. 174
   List of Recommendations ......................... 175
### List of Maps and Figures

<table>
<thead>
<tr>
<th>Map/Figure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Structure of the Greater Golden Horseshoe</td>
<td>20</td>
</tr>
<tr>
<td>Adoption of Minimum Intensification Targets by Upper- and Single-Tier Municipalities</td>
<td>62</td>
</tr>
<tr>
<td>Adoption of Minimum Designated Greenfield Area Density Targets by Upper- and Single-Tier Municipalities</td>
<td>66</td>
</tr>
<tr>
<td>Land Use Terminology</td>
<td>72</td>
</tr>
<tr>
<td>Designated Urban Areas to 2031 in the Greater Golden Horseshoe</td>
<td>75</td>
</tr>
<tr>
<td>Subwatersheds Within the Growth Plan Area of the Greater Golden Horseshoe</td>
<td>100</td>
</tr>
<tr>
<td>Percentage of Natural Cover in Sub-watersheds</td>
<td>106</td>
</tr>
<tr>
<td>Four Plans at a Glance</td>
<td>146</td>
</tr>
</tbody>
</table>

### List of Vignettes

<table>
<thead>
<tr>
<th>Vignette</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designing Communities for People of all Ages and Abilities</td>
<td>52</td>
</tr>
<tr>
<td>Community Hubs</td>
<td>53</td>
</tr>
<tr>
<td>Planning for growth along transit corridors</td>
<td>62</td>
</tr>
<tr>
<td>Complete Communities on a Smaller Footprint</td>
<td>63</td>
</tr>
<tr>
<td>Mount Pleasant Village</td>
<td>67</td>
</tr>
<tr>
<td>Hurontario Corridor</td>
<td>68</td>
</tr>
<tr>
<td>Flood Risk Reduction, West Don Lands</td>
<td>71</td>
</tr>
<tr>
<td>Financial Services</td>
<td>83</td>
</tr>
<tr>
<td>Urban Agriculture</td>
<td>90</td>
</tr>
<tr>
<td>George Family Farm</td>
<td>92</td>
</tr>
<tr>
<td>Cooper’s Farm</td>
<td>95</td>
</tr>
<tr>
<td>Duffins Creek Watershed</td>
<td>101</td>
</tr>
<tr>
<td>Fonthill Kame-Delta</td>
<td>105</td>
</tr>
<tr>
<td>Rice Lake Plains - Enhancing Natural System Protection</td>
<td>107</td>
</tr>
<tr>
<td>Minesing Swamp</td>
<td>122</td>
</tr>
<tr>
<td>Waterloo Light Rail Transit</td>
<td>129</td>
</tr>
<tr>
<td>Guelph’s Community Energy Plan</td>
<td>139</td>
</tr>
<tr>
<td>A Grand Plan</td>
<td>142</td>
</tr>
</tbody>
</table>
Dear Minister McMeekin and Minister Mauro,

I am pleased to present the final report of the Advisory Panel for the Coordinated Review of the Growth Plan, Greenbelt Plan, Oak Ridges Moraine Conservation Plan, and Niagara Escarpment Plan. We have come to consensus on a comprehensive set of recommendations that will strengthen these important land use plans and ensure we are moving towards a healthier and more prosperous Greater Golden Horseshoe (GGH).

Throughout our deliberations we heard from members of the public, municipal representatives and stakeholders at 17 regional town hall meetings held throughout the GGH, we received thousands of formal written submissions as well as messages through letter writing campaigns, and met with many stakeholders from a variety of sectors. This input provided us with valuable insights on the plans and experiences with implementation.

Our recommendations for the plans are grounded in a firm belief that the plans provide a strong foundation for the region. These award-winning plans are beginning to direct growth and protect what is valuable in the region. Throughout the consultation process we heard that there is strong support for these plans and the framework they provide.

We also heard that there is an urgent need to improve the plans and ensure effective actions to curb sprawl, grow the Greenbelt, support agriculture and address traffic congestion. Successful implementation of the four plans is essential to the health of the region’s current and future residents, economic prosperity and the sustainability of the environment.

Our advice to the Province builds on the foundation the plans create and we have organized our recommendations around six strategic directions that we see as critical to the success of the region:

• Building complete communities
• Supporting agriculture
• Protecting natural and cultural heritage
• Providing infrastructure
• Mainstreaming climate change
• Implementing the plans

We recognize that these themes are interdependent, and strongly recommend that the Province move forward on these six strategic
directions in an integrated and timely manner. We realize that our recommendations will be implemented over varying timeframes. We believe that many of them can and should be implemented through the amendment process during the timeframe of the Coordinated Review. We emphasize that it will be important to ensure that any work needed to inform conformity with the Growth Plan is available when needed by municipalities. It may take longer to implement other recommendations, but we stress that it is essential to act on them as quickly as possible (within five years) in order to achieve a better future for the region in a comprehensive, efficient and effective manner.

We also know that many of the challenges facing the region cannot be addressed solely through land use planning. Therefore, we have called for sustained focus, investment and coordination across provincial ministries and with other levels of government to ensure that the potential of this great region is realized.

We support the Province’s leadership to-date establishing the integrated land-use planning framework of the plans, and encourage the Province to continue with this bold approach as it addresses the issues facing the region and its residents. We also urge the Province to continue working with the region’s First Nation and Métis communities to ensure their concerns and visions for the future are adequately heard.

I would like to thank the individuals, stakeholders and municipalities who shared with us their experiences with the plans, as well as their recommendations on how they can be strengthened. We considered all of the information and advice we heard carefully in our deliberations.

I would also like to extend a sincere thank you to the members of the Advisory Panel for bringing their experience and expertise to this review, and for their careful consideration and engagement throughout this process.

This review provided a unique opportunity to pause and reflect on the experience implementing the plans, and I and the Panel members appreciate the opportunity to be part of this important process.

The Honourable David Crombie, Chair
Executive Summary
The Greater Golden Horseshoe (GGH) is one of the fastest growing regions in North America. In recent decades, it has experienced tremendous pressure from population growth and the urban and suburban development that accompanies it.

The Province has put in place legislation and plans to accommodate growth while protecting valuable farmland, water resources and natural heritage. In 1985, it established the Niagara Escarpment Plan (revised in 1994 and 2005), followed by the Oak Ridges Moraine Conservation Plan in 2002. The Province then embarked on a landmark initiative for the region, creating the Greenbelt Plan in 2005, followed by the Growth Plan for the Greater Golden Horseshoe in 2006. These four plans provide a framework to accommodate population and employment growth in a more sustainable manner while protecting vital assets such as high-quality farmland, water resources and natural areas. In the last decade, the plans’ policies have begun to reduce urban sprawl, encourage the development of more complete communities, and provide increased focus on the region’s agricultural resources and natural heritage.

The Province is undertaking a simultaneous review of all four plans, recognizing their common geography and the interconnected nature of their policies. This Coordinated Review of the four plans provides an opportunity to assess progress to date, address challenges and make improvements to strengthen the plans and ensure a vibrant, healthy region for current and future generations.

The Government created an Advisory Panel to provide recommendations that would inform this review. Our role is to develop consensus-based recommendations to the Ministers of Municipal Affairs and Housing, and Natural Resources and Forestry on ways to amend and improve the plans. Our analysis and the recommendations contained in this report are based on careful consideration of the advice provided during 17 Town Hall Meetings held across the GGH; submissions and briefings by the public, stakeholders and municipalities; site visits to places of interest in the region; and background papers prepared by staff of the Ministries of Municipal Affairs and Housing, and Natural Resources and Forestry.
The greater Golden Horseshoe – a region under pressure

The Greater Golden Horseshoe is blessed with abundant fresh water, significant natural features, excellent farmland and a moderate climate. These assets support a high quality of life and diverse economic opportunities for the residents of the region, which in turn continue to attract ongoing population growth. The GGH has seen rapid rates of growth since the end of World War II, especially since the 1990s when the population
EXECUTIVE SUMMARY

began to grow by 100,000 to 120,000 people every year. The extent of settlement has also grown. For example, between 1971 and 2006, the region’s urban footprint more than doubled. Much of the recent urban growth has been in the form of low-density, car-dependent suburbs, providing many residents with affordable, single-detached homes. However, this form of development, often known as urban sprawl, has resulted in loss of farmland, traffic congestion, deteriorating air and water quality, impacts on human health, and the loss of green space, habitats and biodiversity. The changing climate and increasing frequency and severity of extreme weather events create additional pressures on the region’s communities, agricultural production, infrastructure and natural systems.

The Province has forecast that the number of people living in the GGH will grow from the current population of about nine million people to about 13.5 million by 2041, with the number of jobs forecast to rise from 4.5 million to 6.3 million. This will increase our population by nearly 50 per cent and the number of jobs by 40 per cent. A central question for the region is “where and how will future growth be accommodated?” This question was a major imperative for the creation of the Growth Plan and Greenbelt plans. At the heart of the Growth Plan is the allocation of growth forecasts to GGH municipalities to help them assess the amount of land required to accommodate new development. As of 2013, approximately 107,000 hectares were available as “designated greenfield areas” to accommodate forecast growth to 2031, the first time horizon of the Growth Plan. Amendment 2 to the Growth Plan provided additional forecasts for the GGH to accommodate two million more people by 2041, and some municipalities are now working on analysis to assess land needs to accommodate this additional growth.

Ultimately, the amount of land needed to accommodate expected growth to 2041 will depend on the rate of intensification (infill in existing urban areas) and the density of new development in each municipality. Fortunately, land consumption rates are decreasing, reflecting a trend towards building more compact communities. For example, between 1991 and 2001, the population of the Greater Toronto and Hamilton Area (GTHA) grew by 19 per cent, while the urban area expanded by
26 per cent. Between 2001 and 2011, the population of the GTHA grew by 18 per cent, but the urban area expanded by only 10 per cent. If the trend for decreasing land consumption continues, it is likely that much of the land that has been designated to accommodate forecasted growth by 2031 will not actually be developed by that date, providing flexibility to accommodate some or all of the expected needs to meet 2041 forecasts within existing designated greenfield areas.

The Greenbelt contains almost 800,000 hectares (two million acres) of protected land, including the Niagara Escarpment, Oak Ridges Moraine and the land known as “Protected Countryside” that lies at the centre of the GGH. The Greenbelt protects important ecological and hydrological systems, as well as an agricultural system composed of prime agricultural lands, rural areas and specialty crop areas. In addition, the three Greenbelt plans are an essential component of the provincial strategy to contain urban sprawl. There is evidence to show that they are important tools to contribute to protection of natural and agricultural assets, and control of urban expansion. However, they need to be strengthened to fully reach their objectives. We also heard concerns that speculative investments pose a risk of “leapfrog” development in areas beyond the Greenbelt, such as Simcoe and Brant Counties.

Towards a Better Future

The four plans are designed to address the challenges associated with growth and development, and we fully support their goals and objectives. This review provides a timely opportunity to pause, reflect and adjust these land use policies to shape future growth more effectively. With the benefit of past experience with plan implementation and input from stakeholders, the general public and experts in many disciplines, we have identified six strategic directions and provided 87 recommendations that build on the existing goals and objectives of the four plans in order to fully realize their potential to contribute to greater economic prosperity, more efficient transportation, more productive agriculture, healthier communities and more resilient natural systems.

Our strategic directions encompass many inter-related ideas that work together to achieve the objectives of the four plans. For example, we must curb sprawl and build more compact communities in order to
support transit, reduce greenhouse gas emissions and protect valuable farmland. Protection of farmland alone is not enough unless it is also productive and supports a strong agricultural economy. Our sense of place in this beautiful part of the Great Lakes Basin relies on the care we invest in our natural and cultural heritage. Natural features and functions, including water resources and biodiversity, are essential to support healthy, prosperous communities that are resilient to climate change. Many forms of infrastructure – from water supply, stormwater and wastewater to transit, cycling, walking and roads – provide an essential foundation for human health and economic activities. Drastic reductions in greenhouse gas emissions are essential to reduce our contribution to climate change. Decreased vehicle emissions will also pay huge dividends in improved air quality throughout the region. Finally, implementing the four plans more effectively and efficiently depends on a more collaborative and coordinated effort involving different levels of government, civil society and the private sector.

Building Complete Communities

During the consultation phase of this review, it was clear that there is widespread support for the overall intent of the four plans – to use land more efficiently, create livable communities, reduce commute times, protect valued resources and support a strong and competitive economy. We heard that people value a diverse mix of land uses and housing types, a range of employment opportunities, high-quality public open space, a variety of transportation choices, and easy access to stores and services. We call these places “complete communities”.

Existing urban settlements in the GGH range from historic villages to downtown centres and low-density suburbs. There are many opportunities within these areas for rejuvenation to create more complete communities with vibrant mixed uses, transit-supportive densities and infrastructure for walking and cycling. New developments in greenfield areas can also be designed as complete communities that provide jobs, housing, transit and recreation opportunities, while supporting individual and community health. Infrastructure costs are lower for compact communities. They can also help to decrease greenhouse gas emissions and energy use, thereby working towards becoming a net-zero or low-carbon community.
Our recommendations on building complete communities focus on strengthening the plans by:

- Directing more new development to existing urban areas through intensification, and less to new greenfield areas
- Increasing the density of housing and job opportunities in new development to create well-designed, healthy and transit-supportive communities
- Establishing stronger criteria to control settlement area expansion
- Encouraging a greater mix of housing types, including affordable housing
- Protecting employment areas and supporting evolving economic activities

**Supporting Agriculture**

The GGH has high-quality soils and climatic conditions that make it ideally suited for a wide range of crops and livestock, including the specialty crop areas in Niagara Region and Holland Marsh. These same qualities have also made this region a highly desirable place to live, from the original Aboriginal land users to the early settlers from Europe and the more recent immigrants from around the world. Agriculture today is a major contributor to Ontario’s economy, identity and way of life.

During the consultations for this review, many associations and individuals in the farming sector emphasized that farmland is a finite resource and the planning regime in the GGH needs strengthening to stem the ongoing loss of agricultural land to other land uses. We also heard concerns about threats to the viability of agriculture from speculative land investments, land use conflicts in near-urban areas, complex regulations and deficiencies in rural infrastructure.

Recognizing the fundamental importance of agriculture in the GGH, our recommendations focus on:

- Promoting the identification, mapping and protection of an agricultural system throughout the region
- Implementing stronger criteria to limit the loss and fragmentation of prime agricultural lands, particularly in the outer-ring municipalities beyond the Greenbelt
EXECUTIVE SUMMARY

• Supporting productive agriculture
• Recognizing the importance of locally sourced food and urban agriculture
• Integrating the needs of agriculture throughout the plans, for example when considering settlement area expansion, the rural economy, management of natural resources, infrastructure development, climate change and plan implementation
• Applying an agriculture lens to other provincial policies and programs (such as climate change, transportation and infrastructure, financial tools, community improvement plans and education) to address the unique needs of agriculture in the GGH

Protecting Natural and Cultural Heritage

The GGH is defined by the Great Lakes and the rivers that flow into them, combined with the rolling landscapes of the Oak Ridges Moraine and the dramatic cliffs of the Niagara Escarpment. The natural systems in the region provide a range of ecosystem services that support human life, biodiversity and economic activities. During the consultations, we heard that many groups and individuals are concerned about ongoing environmental degradation in the region and its effects on our health, as well as on the sustainability of natural systems and wildlife.

Aggregates contained in geological formations represent another natural resource that is essential for continued growth and development. We heard during the consultations that we need to find a better balance between supplying essential aggregate materials for buildings and infrastructure, while minimizing the immediate and long-term cumulative effects of extraction and transportation on natural systems, agriculture and rural communities.

Cultural heritage embodies, protects and sustains our sense of identity and meaning and helps to make communities vital and special places. Heritage resources provide important visual landmarks, enhance community appeal and convey a sense of place. They also create opportunities for recreation and tourism, and help attract investment based on cultural amenities. In many communities in the GGH, built heritage, cultural heritage landscapes and archeological resources are under pressure from development and site alteration.
Our recommendations to improve protection and management of natural and cultural heritage focus on:

- Requiring integrated watershed and sub-watershed planning as a prerequisite for settlement area expansion, and major new developments and infrastructure projects
- Improving the mapping, identification, protection and enhancement of natural heritage systems throughout the region
- Growing the Greenbelt by adding areas of critical hydrological significance, such as headwaters of major rivers, moraines, groundwater recharge areas, important surface water features and urban river valleys
- Improving the management of excess soil from development sites
- Developing a long-term strategy for ensuring the wise use, conservation, availability and management of aggregate resources
- Strengthening the protection of cultural heritage

Providing Infrastructure

Daily life in the GGH depends on a wide range of infrastructure—ranging from roads and transit to communications, water supply, wastewater treatment, stormwater management, and energy generation and transmission. Much of our existing infrastructure is aging and requires maintenance and upgrading. The pace of growth in the region requires massive investments in infrastructure to support new homes, businesses and transportation requirements. Meanwhile, the changing climate is bringing about increases in extreme weather events and forcing us to re-think many existing standards and expectations for infrastructure design and management.

During the consultations, we heard from many stakeholders and individuals that traffic gridlock is one of the greatest issues affecting individual health and wellbeing, business efficiency and economic competitiveness. People told us that water and sewer services need to be provided more efficiently, and that inadequate stormwater management is affecting groundwater resources, water quality, flooding and erosion. Stakeholders also emphasized that green infrastructure is just as important as the more traditional forms of built infrastructure and encouraged us to integrate the use of multi-functional green systems throughout urban and rural areas.
Our recommendations focus on upgrading existing infrastructure, meeting the demands of growth, increasing resilience to climate change, and keeping the region’s economy strong and globally competitive by:

- Requiring greater integration of infrastructure planning with land use planning
- Designating and protecting corridors for provincial and municipal infrastructure
- Requiring upper- and single-tier municipalities to undertake climate change vulnerability risk assessments to guide the design of resilient infrastructure
- Providing policy direction to support green infrastructure
- Improving coordination among the Growth Plan, the Province’s Multi-modal Transportation Plan for the Greater Golden Horseshoe, and Metrolinx’s regional transportation plan, The Big Move
- Identifying strategic areas within the region’s planned and existing transit network for focused intensification
- Increasing focused investment in transit initiatives to support complete communities
- Increasing efforts on transportation demand management, active transportation and transit integration

Mainstreaming Climate Change

Climate change is one of the most pressing issues facing the GGH, and the Province as a whole. By 2050, we can expect an increase in average summer temperatures ranging from 2.5 to 3.5 degrees Celsius in southern Ontario and 1 to 4.5 degrees Celsius in Northern Ontario, depending on location. The projected change in winter temperatures is even more dramatic, increasing by 3 to 6 degrees Celsius in southern Ontario and 6 to 10 degrees Celsius in Northern Ontario, depending upon location. This will have significant impacts on our environment, economy, health and quality of life.

We heard from stakeholders and the public that climate change mitigation and adaptation must be explicitly addressed in the four plans in order to reduce Ontario’s greenhouse gas emissions while also preparing to manage the risks of a changing climate to our health, safety, economy,
ecosystems and infrastructure. We view climate change as a critical driver for many of the policies in the four plans, one that needs to be brought into the mainstream of all our planning and development activities.

Our recommendations demonstrate how we can mainstream climate change throughout the four plans by:

- Applying more aggressive intensification and density targets to achieve compact, low-carbon communities
- Improving alignment of transportation planning and investment with growth forecasting and allocation
- Accelerating progress to improve and extend transit and active transportation infrastructure
- Promoting stronger protection and enhancement of natural systems and agricultural lands
- Directing upper- and single-tier municipalities to prepare climate change plans or incorporate policies into official plans to advance climate change mitigation and adaptation goals

Implementing the Plans

Although the four plans share many goals and intentions, there is no question that having multiple plans with overlapping geographies and diverse implementation mechanisms has created challenges for landowners, developers, municipalities, provincial ministries, and many other organizations and stakeholders. During the consultations we heard concerns that terminology and policies in the plans are inconsistent and sometimes conflicting. Municipalities emphasized the need for more technical and financial support to comply with the requirements of the plans. We heard concerns about the amount of time and expense involved in Ontario Municipal Board (OMB) hearings, and some of the procedures of the Niagara Escarpment Commission. Many environmental groups and some municipalities called for expansions of the Greenbelt while some landowners and other stakeholders raised concerns about Greenbelt boundaries and designations.

Our recommendations to improve implementation of the plans include:

- Addressing designation and boundary concerns associated with the existing plans by applying policy changes
EXECUTIVE SUMMARY

recommended in this report related to such matters as:
settlement area expansion; complete communities; strategic
employment lands; infrastructure and servicing; agricultural
viability; protection of farmland; natural heritage systems; water
resources; climate change; and enhancing plan implementation
• Increasing efficiency and reducing duplication of approval
processes for the Niagara Escarpment Plan area
• Streamlining the policy framework, terminology and timelines
of the four plans
• Extending the timeframe for municipalities to conform with
Growth Plan Amendment 2 to 2021
• Developing a comprehensive monitoring program
• Ensuring there is a secretariat within the provincial government
with the capacity and resources to ensure effective
coordination of actions by provincial ministries, the Niagara
Escarpmnt Commission, municipalities, conservation
authorities, and other local bodies that will facilitate
implementation of the four plans and address the
recommendations in this report
• Creating an oversight forum to monitor and report on
implementation and deliver public education about the four plans

Towards Timely Action
This review is a snapshot in time. We recognize that ten years is a
relatively short period to measure the effects of land use planning
initiatives, but some clear trends and needs are already emerging. We
have concluded that there are signs of progress towards more effective
growth management, and there is support for agriculture and
environmental protection in the GGH, but there are also signs that the
current policy framework needs to be strengthened in order to ensure
that the vision and goals of the plan are fully achieved. We heard a sense
of urgency from the many stakeholder submissions and participants in
the Town Hall Meetings and agree that we must seize this opportunity to
strengthen the framework, address the mistakes of the past and create a
better future for the region.
EXECUTIVE SUMMARY

We recognize that our recommendations will be implemented over varying timeframes. For example, some policy amendments can be made relatively quickly during the time period of this review, whereas it may take several years to develop guidance material, prepare new maps or undertake environmental monitoring to support new or amended policies. The Ministries have stated that they hope to conclude the Coordinated Review and have amended plans in place by summer 2016. We support that aggressive timeline and believe that many of our recommendations can and should be implemented through the amendment process. We emphasize that it will be important to ensure that work needed to inform conformity with the Growth Plan is available when needed by municipalities. Finally, it may take longer to implement other recommendations, but we stress that it is essential to act on them as quickly as possible (within five years) in order to achieve a better future for the region in a comprehensive, efficient and effective manner.

In Conclusion

We sincerely hope that that the Province will act on our recommendations in a comprehensive and timely fashion. Our deliberations during this review, combined with the input from many stakeholders and members of the public, revealed an urgent need to strengthen the four plans and to support them with a wide range of complementary actions. The plans provide a strong foundation but we must step up our efforts to curb sprawl, build complete communities, grow the Greenbelt, support agriculture and address traffic congestion. We owe it to current and future generations to ensure that the GGH supports healthy lifestyles, a high quality of life, a sustainable environment and a prosperous economy.
Introduction
1.1 Background

The Greater Golden Horseshoe is one of the fastest growing regions in North America. In recent decades, it has experienced tremendous pressure from population growth and the urban and suburban development that accompanies it.

The Province has put in place legislation and plans to accommodate growth while protecting valuable farmland, water resources and natural heritage. In 1985, it established the Niagara Escarpment Plan (revised in 1994 and 2005), followed by the Oak Ridges Moraine Conservation Plan in 2002. The Province then embarked on a landmark initiative for the region, creating the Greenbelt Plan in 2005, followed by the Growth Plan for the Greater Golden Horseshoe in 2006.

Urban Structure of the Greater Golden Horseshoe

Note: The information displayed on this map is not to scale, does not accurately reflect approved land-use and planning boundaries, and may be out of date. For more information on precise boundaries, the appropriate municipality should be consulted. For more information on Greenbelt Area boundaries, the Greenbelt Plan 2005 should be consulted. The Province of Ontario assumes no responsibility or liability for any consequences of any use made of this map.
1.1 BACKGROUND

These four plans provide a framework to accommodate population and employment growth in a more sustainable manner while protecting vital assets such as high-quality farmland, water resources and natural areas. Ministries and municipalities implement the four plans though their own land use planning work. In the last decade, the plans’ policies have begun to reduce urban sprawl, encourage the development of more complete communities, and provide increased focus on the region’s agricultural resources and natural heritage.

Under their respective laws, each of the plans must be reviewed at least once every ten years. The Province is undertaking a simultaneous review of all four plans, recognizing their common geography and the interconnected nature of their policies. This Coordinated Review of the four plans provides an opportunity to assess progress to date, address challenges and make improvements to strengthen the plans and ensure a vibrant, healthy region for current and future generations. It includes a range of opportunities for municipalities, stakeholders and the public to provide input. The Ministries have stated that they hope to conclude the Coordinated Review and have amended plans in place by summer 2016.

As a means to structure discussion on the Coordinated Review, the Province produced a public discussion document that outlined six goals:

1. Protecting agricultural land, water and natural areas
2. Keeping people and goods moving, and building cost-effective infrastructure
3. Fostering healthy, livable and inclusive communities
4. Building communities that attract workers and create jobs
5. Addressing climate change and building resilient communities
6. Improving implementation and better aligning the plans

The Government also created an Advisory Panel to provide recommendations that would inform this review. Our role as an Advisory Panel is to develop consensus-based recommendations to the Ministers of Municipal Affairs and Housing, and Natural Resources and Forestry on ways to amend and improve the plans. The Province will seek input on any subsequent amendments to the four plans.

Our analysis and the recommendations contained in this Report are based on careful consideration of the advice provided during the Town
1.2 THE GREATER GOLDEN HORSESHOE

Top row, left to right: Keith Currie, Leith Moore, John MacKenzie, Rae Horst, David Crombie, Debbie Zimmerman

Hall Meetings; submissions and briefings by the public, stakeholders and municipalities; site visits to places of interest in the GGH; and background papers prepared by staff of the Ministries of Municipal Affairs and Housing, and Natural Resources and Forestry, in collaboration with partner ministries (Ministries of Agriculture, Food and Rural Affairs, Environment and Climate Change, and Transportation).

We recognize that almost 30 per cent of the population of Aboriginal peoples in Ontario live within or in close proximity to the area covered by the four provincial plans. The region’s lands, waters and natural resources have supported Aboriginal communities, economies and cultures for thousands of years and the unique perspectives of these communities are vital as we plan for the healthy, sustainable and prosperous future of this dynamic and fast-growing region. We know that Aboriginal communities face unique challenges as the region continues to grow. We encourage the Government of Ontario to continue to engage First Nation and Métis communities to ensure that their perspectives are appropriately considered as the Government develops proposed plan amendments.

1.2 The Greater Golden Horseshoe

The GGH is blessed with abundant fresh water, significant natural features, excellent farmland and a moderate climate. These assets support a high quality of life and diverse economic opportunities for the residents of the region, which in turn continues to attract ongoing population growth. A broad range of provincial laws, policies and regulations govern land use and development activities in the GGH,
1.2 THE GREATER GOLDEN HORSESHOE

as in the rest of Ontario. Additional direction is provided by the four land use plans that are the subject of this review, which were created at different times for different, but inter-related, purposes.

In 1973, the Niagara Escarpment Planning and Development Act made provisions for a Commission and in 1985, the Niagara Escarpment Plan was released to address concerns about threats to the integrity, heritage and beauty of the unique escarpment landform and ecosystems. It is intended “to provide for the maintenance of the Niagara Escarpment and land in its vicinity as a continuous natural environment and to ensure only such development occurs as is compatible with that natural environment.” The Oak Ridges Moraine Conservation Act was passed in 2001, enabling the creation of the ecologically based Oak Ridges Moraine Conservation Plan in 2002, in response to concerns about the development pressures on the Oak Ridges Moraine and their impacts on water, habitats, agriculture and its distinct landscape character.

However, the pace and scale of growth continued to threaten many of the attributes of the region that we hold dear, resulting in unwanted side effects, including loss of farmland, urban sprawl, traffic gridlock, impacts on human health, deteriorating air and water quality, and the loss of green space, habitats and biodiversity. In 2004, a discussion paper about the future of the region put it bluntly: “If we continue to consume land for urban development at the rate we have been for the past three decades, we will jeopardize the financial, social and environmental factors that make the region so attractive to new residents and new economic growth. Business-as-usual development will consume 1,000 square kilometres of primarily agricultural land by 2031, an area twice the size of Toronto.”1 The Growth Plan for the Greater Golden Horseshoe (Growth Plan), 2006 and the Greenbelt Plan, 2005 were designed to address these issues by providing a regional approach to growth management and environmental protection.

So what is the situation in 2015? With over a decade of experience, are we beginning to see the effects of the four plans, and what are the trends? In this section, we examine these questions from the

---

perspectives of urban growth, agriculture, environment and human health. In doing so, we recognize that ten years is a relatively short period of time to measure the effects of land use planning initiatives. Implementation takes time, and much of the urban development that has occurred over the past decade was approved prior to the preparation of the Growth Plan and Greenbelt Plan. There has been a little more time to assess the effects of the Oak Ridges Moraine Conservation Plan (2002) and considerably more for the Niagara Escarpment Plan (1985). Another challenge is that available data often vary in quality, reliability, consistency and geography. Therefore, while some clear trends are visible, and others are emerging, our picture of the region is incomplete (see Chapter 9 for recommendations to address this issue).

1.2.1 Urban Growth

The GGH has seen rapid rates of growth since the end of World War II, especially since the 1990s when the population began to grow by 100,000 to 120,000 people every year. The extent of settlement has also grown. For example, between 1971 and 2006, the region’s urban footprint more than doubled. This rate was faster than the rate of population growth during that time.

As we mentioned above, in 2004 the discussion paper Places to Grow – Better Choices, Brighter Future pointed out that it would be unacceptable to continue with “business-as-usual” development patterns because this would consume 1,000 square kilometres of primarily agricultural land by 2031. Recent research by the Neptis Foundation shows that the total amount of greenfield that has now been designated to support expected growth to 2031 is in fact just over 1,000 square kilometres. If this was considered unacceptable in 2004, it is certainly unacceptable in 2015. That said, there is some evidence that the pace of urban expansion is slowing, so it is possible that not all of the designated land will actually be needed by 2031. The Neptis Foundation research shows that from 2001 to 2011, the population of the GTHA grew by 18 per cent, while the urban area expanded by 10 per cent. This contrasts with the much greater expansion rates in the previous decade between
1.2.1 URBAN GROWTH

1991 and 2001, when the population of the GTHA grew by 19 per cent, and the urban area expanded by a massive 26 per cent.2

A key component of the Growth Plan’s policies to curb the rate of urban expansion is the emphasis on accommodating growth through infill development or intensification of existing urban areas. The Growth Plan identifies a built boundary, and directs that a minimum of 40 per cent of new residential growth must be accommodated within the built boundary through intensification by 2015, and for each year thereafter. Performance indicators show that between 2007 and 2010, upper- and single-tier municipalities across the region, excluding Toronto (where all growth is intensification), reduced outward expansion by accommodating an average of 44 per cent of new residential development through intensification.3 However, it is important to recognize that the Growth Plan includes a policy to permit alternative intensification targets for municipalities in the outer ring to allow for variations in the size, location and capacity of built-up areas, and many of them are working with lower targets that range from 15 to 32 per cent.

Another major direction of the Growth Plan is to develop more compact, complete communities by increasing the density of housing and employment opportunities. The Growth Plan sets minimum density targets for designated urban growth centres and greenfield development areas. For example, in designated greenfield areas, each upper- or single-tier municipality is required to achieve a minimum density target of 50 residents and jobs combined per hectare. However, as with intensification targets, the Growth Plan permits municipalities in the outer ring to use alternative (lower) density targets for their greenfield developments.

Since 1986, there has been a long-term trend towards smaller lot sizes across the GGH, but many of the houses built on those smaller lots are still detached dwellings in car-dependent suburbs. Growth Plan performance indicators found that there was a greater variety of housing types being built in 2013 compared to 2006, with a larger proportion of higher-density

---


developments across the region. This shift not only contributes to higher densities and less land consumption, but also increases the housing options available to residents with varied housing needs. However, housing affordability remains a concern across the region.

Thus we see that implementation of Growth Plan policies to focus development in existing urban areas and develop more compact communities is showing mixed results so far. There is considerable variation in the use of intensification and density targets, with many municipalities in the outer ring being permitted to use alternative targets that are lower than the general targets established in the Growth Plan. This presents a risk that if the policy regime is not strengthened, much future development could be quite similar to existing suburban areas in the GGH. This is one of the outcomes that the Growth Plan was originally intended to prevent.

Another central tenet of complete communities is access to employment opportunities. The Growth Plan directs major office and institutional employment to urban growth centres and areas near transit, and seeks to protect employment areas in strategic locations from conversion to non-employment uses. While the Growth Plan indicators found that 66 per cent of the 16.9 million square feet of office space built or under construction in the Greater Toronto Area (GTA) since 2006 was located within urban growth centres and in areas near transit, much of this office growth is concentrated in the City of Toronto. Outside the City of Toronto, only 20 per cent of the new major office development was located in urban growth centres and areas near transit.

Finally, traffic congestion has become one of the most frustrating symptoms of a region that has developed rapidly with low-density suburban housing, combined with insufficient investment in transit and active transportation. Traffic congestion is not only harmful to our health and wellbeing; it is also a drain on our economy. For example, in 2006 the annual cost of congestion was estimated at $3.3 billion, with a further $2.7 billion in lost opportunities for economic expansion. This problem

---


1.2.1 URBAN GROWTH

will be magnified in the coming decades, with an expectation of 2.1 million more trips during the morning peak period by 2041.

One of the principles of the Growth Plan is to ensure that residents have access to a range of transportation options, and the Plan directs that growth be accommodated in ways that contribute to transit-supportive communities. However, Growth Plan indicators only found marginal changes in the modal split between transit and private vehicles between 2006 and 2011, with the vast majority of residents continuing to rely on cars for their morning commute and other trips, and only 14 per cent using transit. The implementation of the Growth Plan and The Big Move is predicted to result in a 70 per cent increase in the number of transit users during the morning peak period by 2041.6 However, this would represent a very modest increase in the percentage of trips made by transit, to a share of only 17 per cent of total trips by all modes of transportation. Furthermore, many parts of the GGH will not be served by the new regional transit infrastructure, and continued development of low-density housing and employment options will not provide the numbers of riders needed to support efficient and attractive transit systems.

In 2013, the Transit Investment Strategy Advisory Panel, chaired by Anne Golden, summed up the transportation challenge this way: “Road congestion and transit crowding in the GTHA have reached a tipping point. Unless we choose to expand our transit infrastructure to offer choice, entice hundreds of thousands of commuters out of their cars, and connect people to jobs, we will pay a steep price.”7

In conclusion, we find that there are some signs of progress towards more effective growth management in the GGH, but there are also signs that the current policy framework needs to be improved in order to ensure that the vision and goals of the plan are fully achieved. Since these are still early days in implementing the plans, we have an important opportunity to strengthen the framework, address the mistakes of the past and create a better future for the region.

---

6 Ministry of Transportation. Analysis of Forecasts from Greater Golden Horseshoe Model. 2015.
1.2.2 Agriculture

Farmland constitutes about half the land area of the GGH and represents one of the most important economic sectors of the region. In 2011 alone, agricultural production in the GGH brought $6.3 billion into our economy. It is also a significant employer, with 35,000 employees in 2011, representing 39 per cent of Ontario’s employment in this sector. The Greenbelt farms are particularly productive, for a variety of reasons, and produce an average of 55 per cent of Ontario’s fruit and 13 per cent of its vegetables.

The agri-food economy is complex, but its foundation is land – an increasingly precious resource in the urbanizing GGH. While agriculture within the Greenbelt receives stringent protection, the remainder of the GGH has continued to experience significant farmland loss over the past decade. For example, in the five years from 2006 to 2011 the GGH lost over 65,000 hectares, about 4.4 per cent of its agricultural land – an area larger than the City of Toronto. Most of this loss occurred outside the Greenbelt area and is primarily due to urban growth.

Loss of farmland to urban expansion presents challenges to agricultural viability and can reduce the overall economic contribution of agriculture to Ontario’s economy. It frequently results in fragmentation of the remaining farmland, eroding the benefits of having a concentration of farms and supportive businesses in an area. This has serious consequences for the viability of the farming sector. Near urban farming is hindered by a variety of challenges, from land use conflicts to the loss of local agricultural services and suppliers. Another trend that affects the sustainability of farming in parts of the GGH is the purchase of farmland by development interests with the expectation that the lands will be converted to urban settlements in the future. These “lands in waiting” are often leased to tenant farmers, and the owners may not invest in the necessary infrastructure for continued agricultural productivity.

---

8 Friends of the Greenbelt Foundation. The View So Far. 2015.
9 Ministry of Agriculture, Food and Rural Affairs, Data from Statistics Canada’s National Household Survey. 2015.
10 Friends of the Greenbelt Foundation. The View So Far. 2015.
The viability and sustainability of agriculture in the GGH are also constrained by some of the policies in the four plans, and by other processes and regulations that place insufficient priority on supporting a productive agri-food sector.

If current trends continue, we will lose more farmland to new developments, fragmentation will intensify, and the viability of agriculture on some of the best farmland in the country will be further eroded. However, we believe that the four plans under review have the potential to provide much greater support for productive agriculture. In addition, strategic initiatives beyond the scope of the plans are needed to ensure the long-term sustainability of the GGH agri-food industry.

1.2.3 Environment

We all depend on a healthy environment to provide clean air, drinking water, productive soils and diverse flora and fauna. Robust natural systems provide essential ecosystem services including water storage and filtration, waste treatment, flood control, cleaner air, shade, biodiversity, habitats, crop pollination, carbon storage and resilience to climate change. For example, in the Greenbelt alone, the David Suzuki Foundation has estimated that these services are worth at least $2.6 billion a year.\(^{12}\)

However, the rapid population growth and associated development of urban settlements, transportation and other infrastructure have taken a severe toll on natural systems in the GGH over the past decades. The Niagara Escarpment Plan, Oak Ridges Moraine Conservation Plan and Greenbelt Plan (collectively referred to as the Greenbelt plans) represent a significant effort to provide permanent protection for most of the natural and agricultural lands in the Greenbelt’s almost 800,000 hectares (two million acres). Unfortunately, the Greenbelt is still threatened by ongoing impacts associated with urban sprawl, imported fill (excess soil from construction projects), aggregate extraction, urban runoff, roads, highways and other infrastructure. Outside the Greenbelt, in the nearly 2.5 million hectares (6 million acres) of the remaining

---

Growth Plan area, there is less protection for natural systems, and generally less information about the health of those systems.

According to a report card produced by the Conservation Authorities Moraine Coalition, forest cover in the Greenbelt is generally being maintained in critical areas, but there is little evidence to suggest that the Greenbelt Plan’s goals to restore and enhance forest conditions are being achieved in any significant way. Most urbanized watersheds have poor to very poor forest conditions, and almost 50 per cent of sub-watersheds in the Greenbelt were shown to have fair, poor or very poor surface water quality due primarily to the effects of land use activities such as pollution, dumping of fill, soil erosion and absence of forest cover. Outside the Greenbelt area, and particularly in some of the heavily urbanized areas along Lake Ontario, water quality is reported as poor to very poor.

Air quality in the GGH is affected by pollutants from transboundary flows across the U.S. border or between provinces, industrial and institutional sources, urban land uses and transportation. The Province tracks progress with respect to five key pollutants: ozone, fine particulate matter, nitrogen dioxide, carbon monoxide and sulphur dioxide. Over the past decade, there have been improvements in air quality in southern Ontario, largely due to the application of stricter emissions standards, improved vehicle emissions and fuel quality, and the closure of coal-fired power plants. However, air pollution, particularly from traffic sources, remains a significant concern for human health, contributing to cardiovascular and respiratory ill health, hospitalizations and premature deaths (see below).

Climate change is already causing serious damage to natural systems, human health and safety, agriculture, and infrastructure in the GGH, as it is elsewhere. The most dramatic expressions of climate change are the increasing numbers of extreme weather events, such as severe heat waves, droughts, storms and flooding. More frequent periods of high temperatures in summer, combined with poor air quality, pose a growing health risk. We are also experiencing warmer winters with less ice cover

---

on the Great Lakes. There are numerous signs of major ecosystem impacts, including a shift from cold- and cool-water fish species to more warm-water species, algae blooms and the spread of invasive species such as zebra mussels.

Energy consumption associated with transportation and buildings in the GGH is a significant contributor to Ontario’s greenhouse gas emissions and air pollution. If no changes are made to the policy framework and implementation of the four plans, we would expect to see escalation of many of these emissions associated with future population growth, transportation and economic activities. On the other side of the ledger, the GGH forests, wetlands and agricultural lands currently play a critical role in storing carbon and mitigating the impacts of climate change. Unless greater efforts are made to protect natural systems and sustain agriculture, we will continue to erode their ability to contribute to carbon storage and provide resilience to climate change.

If current trends continue, we will experience ongoing loss and degradation of environmental conditions in the GGH, with negative effects on health, wellbeing and economic prosperity in the region. The policy framework established by the four plans is a good start, but will need to be strengthened if we want to ensure the long-term availability of healthy watersheds with clean air and water, productive soils and diverse native species.

1.2.4 Human Health

Medical doctors and public health officials have been sounding alarms about the unhealthy consequences of low-density, car-dependent urban sprawl for some time. They report that the impacts on our health are numerous and include increased rates of:

- Diabetes, cardiovascular disease and obesity
- Respiratory disease, including asthma, related to air pollution
- Road accidents

---

1.2.4 HUMAN HEALTH

WHAT IS URBAN SPRAWL?
Urban sprawl describes the expansion of human settlement outside central urban areas by creating low-density, car-dependent suburbs. It typically includes a landscape of wide streets and driveways, cul-de-sacs, large parking lots, and single-use areas such as residential subdivisions and office parks with few connections to services and amenities.

- Accessibility issues for children, seniors and people with physical disabilities
- Few choices to “age in place” where higher-density housing such as apartments and seniors’ housing is not available
- Mental health issues and social isolation
- Limited access to local healthy food

For example, air pollution is responsible for up to 1,000 premature deaths and up to 4,000 hospitalizations every year in the GTHA. These trends are predicted to worsen if we continue to build car-dependent communities, with the region expecting another two million cars and their emissions by 2031. Chronic diseases such as obesity and diabetes have been rising rapidly in the GTHA, and there are almost 57,000 new cases of diabetes and 7,000 new cases of heart disease in the GTHA every year. For both obesity and diabetes, about a quarter of cases are preventable through greater physical activity. Yet, many previously “built-in” sources of daily physical activity, such as walking or cycling to schools, stores or places of work, have been largely removed from people’s lives due to urban sprawl, inadequate transit and limited infrastructure for active transportation.

These and other health-related issues also have economic effects. For example, physical inactivity and obesity cost the GTHA $4 billion annually, which includes $1.4 billion of direct medical costs. Of several conditions contributing to these costs, diabetes exceeds all others in terms of the total number of new cases and those attributable to physical inactivity. Without change, these costs will continue to soar, with serious consequences for our health care system and quality of life.

Many factors contribute to chronic disease in our society, but we believe that during this review we have a responsibility to re-orient land use and transportation planning decisions with a focus on reducing the burden of social, economic and health stresses associated with poor air quality, traffic congestion and car-dependent lifestyles.

17 Medical Officers of Health of the GTHA. Improving Health by Design in the Greater Toronto-Hamilton Area. 2014.
18 Medical Officers of Health of the GTHA. Improving Health by Design in the Greater Toronto-Hamilton Area. 2014.
What We Heard
The consultation for this phase of the Coordinated Review included opportunities for stakeholders and the public to make submissions and presentations to the Panel, and a series of 17 Town Hall Meetings were held across the region.

Panel members attended Town Hall Meetings, met with numerous stakeholders and received over 19,000 letters and submissions from the public, municipalities and organizations. Many people expressed their appreciation for the transparency and accountability of the process. We were impressed to discover a good deal of consensus that the existing plans are working, although it was recognized that they are not yet reaching their full potential. We received valuable comments and suggestions about ways to strengthen the plans and improve implementation. We have considered this input carefully in our analysis and recommendations in this report.

2.1 Summary of Stakeholder Submissions

The Province received about 19,300 submissions during the Coordinated Review, including 60 from municipalities, over 200 from organisations, and 17,500 from mass campaigns. The submissions revealed general agreement that the plans are valuable tools, but they also emphasized that significant efforts are required to ensure that the plans’ objectives are fully realized. Some of the common themes were:

Managing growth

• Increase intensification and density targets in order to minimize urban sprawl
• Provide more guidance and education on intensification and urban form
• Create transit-supportive density and urban form to reduce car dependence, improve transit and increase active transportation options to better support human health
2.1 SUMMARY OF STAKEHOLDER SUBMISSIONS

Protecting the environment
• Provide stronger policies to protect water resources, natural heritage and farmland throughout the GGH
• Promote greater use of green infrastructure and low-impact development
• Improve policies to manage excess fill from building sites
• Address climate change

Supporting the region’s economy
• Increase support for rural and agricultural economies and communities
• Provide provincial support to identify and protect employment areas

Investing in transportation and infrastructure
• Improve alignment between transportation and development
• Invest in transportation and other infrastructure

Improving implementation
• Harmonize terms and definitions where possible
• Align the plans with other provincial initiatives where appropriate
• Increase provincial guidance and implementation support to municipalities
• Establish a coordinating body to improve implementation effectiveness, efficiency and reporting

The submissions also focussed attention on a number of challenging issues on which stakeholders had very different views. For example:
• Should the Greenbelt be expanded and if so, where?
• What is the intended future of the lands between the greenbelt and the inner-ring settlement areas (generally known as the “whitebelt”)?
• Should new and expanded aggregate extraction sites be permitted in the three conservation plan areas?
• Should major infrastructure be permitted in the three conservation plan areas?
• Should the role of the Niagara Escarpment Commission be maintained, expanded, reduced or eliminated?
2.2 Summary of Public Input from Regional Town Hall Meetings

The public consultation process for this stage of the Coordinated Review included 17 Town Hall Meetings that were held across the GGH. Each meeting included an open house, followed by a presentation and facilitated round-table discussions where participants were asked to provide feedback on the six themes of the Coordinated Review. About 3,000 people attended the meetings and provided input through the round-table discussions as well as written comments in workbooks. Participants included representatives of stakeholder organizations, municipal elected officials and staff, and members of the general public.

The Regional Town Hall Meetings showed that there is a great deal of support for the goals and approaches of the four plans, and high expectations that they will be strengthened through the Coordinated Review process. Key priorities included:

- Protecting and expanding the Greenbelt, particularly to enhance the protection of sensitive ecological and hydrological features and functions, conserve valuable farmland and prevent “leapfrog” development
- Protecting agricultural land, and supporting farmers and the viability of farming. Participants suggested a range of tools including a land bank, mapping prime agricultural areas, buffering farmland from other uses, and allowing a broader range of permitted uses
2.2 SUMMARY OF PUBLIC INPUT FROM REGIONAL TOWN HALL MEETINGS

- Maintaining existing urban boundaries to manage growth and direct development
- Ensuring a supply of diverse and affordable housing options to provide choices for people at various stages of life and income levels
- Developing public transit and supporting active transportation to fulfill the objectives of the plans, enhance connectivity and reduce greenhouse gas emissions
- Aligning the four plans to improve implementation, for example, by harmonizing terminology, enhancing provincial support for implementation, eliminating inconsistencies among plans, and promoting better understanding of the plans across different stakeholder groups and the public through outreach and education

Some issues elicited a range of responses at the Regional Town Hall Meetings, including whether:

- Lands currently protected could be removed from the Greenbelt. Many participants felt that no removals should be permitted, while some recommended a criteria-based approach to review, and remove or add lands and features to the Greenbelt
- Additional policy direction is needed on the so-called ‘whitebelt’ lands located between the Greenbelt and urban boundaries in the inner ring
- Density and intensification targets should be increased. There was a range of feedback including support for higher targets, making them more flexible to recognize regional variation, and incentives for, or enforcement of, the achievement of targets
Towards a Better Future
The Province has forecast that the number of people living in the GGH will grow from the current population of about nine million people to about 13.5 million by 2041, with the number of jobs forecast to rise from 4.5 million to 6.3 million.

This will increase our population by nearly 50 per cent and the number of jobs by 40 per cent. In Chapter 1, we considered what this growth might look like if we continue with the current approaches to implementing the four plans. We concluded that we can and must do better – in fact we owe it to current and future residents to ensure that the region is well managed for healthy communities, a prosperous economy, efficient transportation and strong, resilient natural systems.

This review is providing a timely opportunity to pause and adjust the land use policies that can help achieve a better future for the GGH. With the benefit of past experience, and input from stakeholders, the general public and experts in many disciplines, we have identified some strategic directions. We believe these are essential in order to fully realize the potential of this region for economic prosperity and healthy communities. They are:

1. Building complete communities
2. Supporting agriculture
3. Protecting natural and cultural heritage assets
4. Providing infrastructure
5. Mainstreaming climate change
6. Implementing the plans

In this chapter we provide an overview of the six strategic directions and outline the integrated approach that we believe will be essential to improve and implement the four plans.
3.1 Strategic Directions

Our strategic directions encompass many inter-related ideas that work together to achieve the objectives of the four plans. For example, we must curb sprawl and build more compact communities in order to support transit, reduce greenhouse gas emissions and protect valuable farmland. Protection of farmland alone is not enough unless the land is also productive and supports a strong agricultural economy. Our sense of place in this beautiful part of the Great Lakes Basin relies on the care we invest in our natural, cultural heritage and scenic assets. Natural features and functions, including water resources and biodiversity, are essential to support healthy, prosperous communities that are resilient to climate change. Many forms of infrastructure – from water supply, stormwater and wastewater to transit, cycling, walking and roads – provide an essential foundation for human health and economic activities. Drastic reductions in greenhouse gas emissions are essential to reduce our contribution to climate change. Decreased vehicle emissions will also pay huge dividends in improved air quality throughout the region. Finally, implementing the four plans more effectively and efficiently depends on a more collaborative and coordinated effort involving different levels of government, civil society and the private sector.

3.1.1 Building Complete Communities

During the consultation phase of this review, it was clear that there is widespread support for the overall intent of the four plans – to use land more efficiently, create livable communities, reduce commute times, protect valued resources, and support a strong and competitive economy. We heard that people value a diverse mix of land uses and housing types, a range of employment opportunities, high-quality public open space, a variety of transportation choices, and easy access to stores and services. We call these places “complete communities”.

Existing urban settlements in the GGH range from historic villages to downtown centres and low-density suburbs. There are many opportunities within these areas for rejuvenation to create more complete communities.

---

with vibrant mixed uses, transit-supportive densities and infrastructure for walking and cycling. New developments in greenfield areas can also be designed as complete communities that provide jobs, housing, transit and recreation opportunities, while supporting individual and community health. Infrastructure costs are lower for compact communities. Complete communities can also help to decrease greenhouse gas emissions and energy use, thereby working towards becoming a net-zero or low-carbon community.

3.1.2 Supporting Agriculture

The GGH has high-quality soils and climatic conditions that make it ideally suited for a wide range of crops and livestock, including the specialty crop areas in the Niagara Region and Holland Marsh. These same qualities have also made this region a highly desirable place to live, from the original Aboriginal land users to the early settlers from Europe and the more recent immigrants from around the world. Agriculture today is a major contributor to Ontario’s economy, identity and way of life.

During the consultations for this review, many associations and individuals in the farming sector emphasized that farmland is a finite resource and the planning regime in the GGH needs strengthening to stem the ongoing loss of agricultural land to other land uses. We also heard concerns about threats to the viability of agriculture from speculative land investments, land use conflicts in near-urban areas, complex regulations and deficiencies in rural infrastructure.

We recognize the fundamental importance of agriculture in the GGH, and Chapter 5 of this report includes a number of recommendations to reduce loss and fragmentation of agricultural lands, strengthen agricultural viability, and recognize the importance of locally sourced food and urban agriculture. We have also integrated the needs of agriculture in many other parts of this report, for example with respect to settlement area expansion, the rural economy, management of natural resources, infrastructure, climate change and plan implementation.
3.1.3 Protecting Natural and Cultural Heritage

The GGH is defined by the Great Lakes and the rivers that flow into them, combined with the rolling landscapes of the Oak Ridges Moraine and the dramatic cliffs of the Niagara Escarpment. The natural systems in the region provide a range of ecosystem services that support human life, biodiversity and economic activities. Our cultural heritage is expressed in this landscape – from archaeological remains and century farms to historic main streets and venerable institutional buildings.

Despite recent reductions in the rate of loss of natural features in areas covered by the Greenbelt plans, the region continues to experience pressures from human activities, both within the Greenbelt and in the rest of the Growth Plan area. Close proximity to the country’s largest population makes the maintenance of healthy natural systems ever more challenging.

During the consultations, we heard that many groups and individuals are concerned about ongoing environmental degradation in the region and its effects on our health, as well as the health of natural systems and biodiversity. They told us that although the four plans are designed to help address these issues, we need to strengthen the land use planning framework through such measures as integrated watershed planning and the identification, protection and enhancement of natural heritage systems.

We recognize that our cultural heritage also requires better support. Our recommendations to increase the intensification of existing built-up areas will inevitably result in conflicts with the preservation of heritage buildings and districts. It will be important to find ways to integrate the old with the new so that cultural heritage continues to inform our sense of identity and provide valuable connections with our past.

Our recommendations in Chapter 6 are designed to respond to these challenges and improve the ability of the four plans to manage ongoing pressures from land use and human activities on our environment, natural resources and cultural heritage.
3.1.4 Providing Infrastructure

Daily life in the GGH depends on a wide range of infrastructure – from roads and transit to communications, water supply, wastewater treatment, stormwater management, and energy generation and transmission. Much of our existing infrastructure is aging and requires maintenance and upgrading. The pace of growth in the region requires massive investments in infrastructure to support new homes and businesses, and to meet their transportation needs. Meanwhile, the changing climate is bringing about increases in extreme weather events and forcing us to re-think many existing standards and expectations for infrastructure design and management.

During the consultations, we heard from many stakeholders and individuals that traffic gridlock is one of the greatest issues affecting individual health and wellbeing, business efficiency and economic competitiveness. People told us that water and sewer services need to be provided more efficiently, and that inadequate stormwater management is affecting groundwater resources, water quality, flooding and erosion. Stakeholders also emphasized that green infrastructure is just as important as the more traditional forms of built infrastructure, and encouraged us to integrate the use of multi-functional green systems throughout urban and rural areas.

Chapter 7 tackles these issues by recommending greater integration of infrastructure planning with land use planning, proposing measures to increase the resilience of infrastructure to the changing climate, and examining ways to improve the movement of people and goods through the region. This will help us to upgrade existing infrastructure, meet the demands of growth, increase resilience to climate change, and keep the region’s economy strong and globally competitive.

3.1.5 Mainstreaming Climate Change

Climate change is one of the most pressing issues facing the GGH, and the province as a whole. By 2050, we can expect an increase in average summer temperatures ranging from 2.5 to 3.5 degrees Celsius in southern
Ontario and 1 to 4.5 degrees Celsius in Northern Ontario, depending on location. The projected change in winter temperatures is even more dramatic, increasing by 3 to 6 degrees Celsius in southern Ontario and 6 to 10 degrees Celsius in Northern Ontario, depending on location.

This will have significant impacts on our environment, economy, health and quality of life. Indeed, the impacts of a changing climate are already being felt. Recent examples include:

- In April 2012, an estimated 80 per cent of the province’s apple crop was wiped out by a late frost. A warmer than average March pushed the growing season ahead leaving apple blossoms vulnerable to cooler weather.
- On July 8, 2013, the GTA experienced significant flooding after 126 millimetres of rainfall was recorded, exceeding the previous record set during Hurricane Hazel in 1954.
- In December 2013, an ice storm in southern Ontario and eastern Canada resulted in $200 million in insured losses and pushed the 2013 total insured loss from severe weather across Canada to a record of $3.2 billion.\(^\text{20}\)

The four plans under review offer great potential to reduce Ontario’s greenhouse gas emissions while also preparing to manage the risks of a changing climate to our health, safety, economy, ecosystems and infrastructure. However, efforts must be accelerated if the GGH is to contribute to Ontario’s 2020, 2030 and 2050 targets for greenhouse gas emissions reductions. Likewise, efforts must be coordinated within the region in order to begin to prepare for, and adapt to, a changing climate. We view climate change as a critical driver for many of the policies in the four plans, one that needs to be brought into the mainstream of all our planning and development activities. This Review demonstrates how we can mainstream climate change in the four plans, with a focus on:

- More aggressive intensification and density targets to achieve compact, low-carbon communities
- Better alignment of transportation planning and investment with growth forecasting and allocation

---

3.1.6 IMPLEMENTING THE PLANS

- Accelerated progress to improve and extend transit and active-transportation infrastructure
- Stronger protection and enhancement of natural systems and agricultural lands
- Greater priority on increasing the resilience of infrastructure and communities to a changing climate

Many of our recommendations throughout this report are designed to contribute to climate change mitigation or adaptation and we highlight them with a “spotlight on climate change” icon. We also provide more commentary and specific recommendations on climate change in Chapter 8.

3.1.6 Implementing the Plans

Although the four plans share many goals and intentions, there is no question that having multiple plans with overlapping geographies and diverse implementation mechanisms has created challenges for landowners, developers, municipalities, provincial ministries and many other organizations and stakeholders. During the consultations we heard concerns that terminology and policies in the plans are inconsistent and sometimes conflicting. Municipalities emphasized the need for more technical and financial support to comply with the requirements of the plans. We heard concerns about the amount of time and expense involved in Ontario Municipal Board (OMB) hearings and some of the procedures of the Niagara Escarpment Commission. Many environmental groups and some municipalities called for expansions of the Greenbelt, while some landowners and other stakeholders raised concerns about Greenbelt boundaries and designations.

In Chapter 9 we provide our advice on these issues, including growing the Greenbelt, improving Niagara Escarpment Commission procedures, better aligning the policy framework, streamlining implementation, improving governance and providing oversight. These measures will create a more collaborative, coordinated and efficient approach to implementing the plans, measuring results and reporting on progress.
3.2  A TIMELY AND INTEGRATED APPROACH

3.2 A Timely and Integrated Approach

Our recommendations for the six strategic directions are presented in separate chapters of this report, but we stress that they are interdependent, and need to be implemented in a coordinated and integrated way.

As required by our mandate, our recommendations are directed to the Province of Ontario. However, successful implementation of the four plans will require input and participation of many players. So we expect that the Province will continue to consult and collaborate with municipalities, conservation authorities, health officials, farmers, environmental groups, developers, other stakeholders and the public to ensure that its initiatives are both practical and effective in achieving the goals of the four plans.

We recognize that our recommendations will need to be implemented over varying timeframes. For example, some policy amendments can be made relatively quickly during the time period of this review, whereas it may take several years to develop guidance material, prepare new maps or undertake environmental monitoring to support new or amended policies. The Province has stated that it hopes to conclude the Coordinated Review and have amended plans in place by summer 2016. We support that aggressive timeline and believe that many of our recommendations can and should be implemented through the amendment process. We emphasize that it will be important to ensure that work needed to inform municipal conformity with the Growth Plan is available at least 2-3 years before the proposed conformity date of 2021 (see Recommendation 22). Finally, it may take longer to implement other recommendations, but we emphasize that it is essential to act on them as quickly as possible (within 5 years) in order to achieve a better future for the region in a comprehensive, efficient and effective manner.

While recognizing that the four plans are fundamentally about directing growth and protecting valuable resources through land use planning, stakeholders and the public have highlighted various opportunities and challenges to successful implementation that may be beyond the scope of the plans. These range from economic development, taxation policies and transit services to housing affordability, agricultural infrastructure and
3.2 A TIMELY AND INTEGRATED APPROACH

the role of the OMB. We have included recommendations on these initiatives where we believe that they can make a significant contribution towards the goals of the four plans. They are designated as “COMPLEMENTARY RECOMMENDATIONS” to differentiate them from the recommendations that apply directly to the four plans.

The four plans under review work in tandem with many other provincial policies, programs and statutes, including:

- Accessibility for Ontarians with Disabilities Act, 2005
- Aggregate Resources Act (under review)
- Better Business Climate Act, 2014
- Climate Ready: Ontario’s Adaptation Strategy and Action Plan, 2011-2014, and the new climate change strategy and action plan (under development)
- Conservation Authorities Act (under review)
- #CycleON: Ontario’s Cycling Strategy, 2013
- Green Energy Act, 2009
- Infrastructure for Jobs and Prosperity Act, 2015
- Lake Simcoe Protection Plan, 2009
- Local Food Act, 2013
- Long-Term Affordable Housing Strategy, 2010 (being updated)
- Municipal Act, 2001 and City of Toronto Act, 2006 (under review)
- Ontario Municipal Board (to be reviewed)
- Planning Act and associated Provincial Policy Statement, 2014
- Rural Roadmap: The Path Forward for Ontario, 2014
- Source Water Protection Plans, prepared under the Clean Water Act, 2006
- The Big Move, 2008 (under review)

Note: The dates refer to date of Royal Assent, making or approval
Building Complete Communities
Many people in the GGH live in places where homes, jobs, schools, community services, parks and recreation opportunities are available in close proximity and can be conveniently accessed by public transit, walking and cycling.

However, for many others, urban growth over the last half century has resulted in low-density, car-dependent suburbs. The Growth Plan and Greenbelt plans represent a significant transition in thinking and intent. By encouraging redevelopment and intensification within existing built-up areas, and requiring higher-density development in focused greenfield areas, they are beginning to create a shift to more complete communities.

In this review, we address the need for renewed determination to make the tough decisions and focus investment to make complete communities a reality. For example, in order to achieve the concentrations of housing and jobs that will support transit and active transportation, reduce greenhouse gas emissions, promote a vibrant mix of uses and support healthier lifestyles, we must increase our intensification and density targets. In turn, this will allow us to reduce the expansion of settlement areas and improve the protection of productive farmland and essential natural systems.

Planning for new homes must also be coordinated with planning for employment and transportation, so that people have increased opportunities to work in their own communities, or within a short commute by transit. Ontario’s economy is changing, as it is in other industrialized countries. This poses both challenges and opportunities to plan carefully for future employment areas, including a greater emphasis on mixed-use, live-work communities.
4.1 WHERE AND HOW TO GROW

Our advice and recommendations about “building complete communities” are organized under the following themes:

Where and How to Grow
- Complete communities
- Growth forecasts
- Intensification
- Designated greenfield areas
- Transit hubs
- Floodplains
- Settlement area expansion

Planning for Employment
- Protecting employment areas
- Planning for mixed uses
- Rural economies

4.1 Where and How to Grow

Working in tandem with the Greenbelt plans, the Growth Plan directs growth and protects valuable resources by setting out both quantitative and qualitative policies and mapping, including forecasts for population and employment growth; targets for the amount of residential development that should be accommodated through intensification of existing urban areas; and targets for the density of people and jobs within development areas. These parameters are used to determine how much land will be required to accommodate growth, and whether existing settlement areas need to be expanded. They are also intended to foster the creation of complete communities by encouraging a mix of uses and densities that support transit.
One of the key goals of the Growth Plan is to build compact, vibrant and complete communities in a variety of settings from urban downtowns and suburbs to small towns and hamlets. If they are well planned and executed, such communities can provide a wide range of economic, health, social and environmental benefits to their residents and to the region as a whole.

For example, complete communities promote healthy, active lifestyles based on street networks and built form that encourage walking and cycling. Social interactions are encouraged when community centres, schools, shopping and other services are concentrated together. The development of community hubs based on sharing public assets can provide a focus for activities and programs while making more efficient use of existing services, lands, infrastructure and buildings. Accessible green spaces provide many physical, mental and social benefits associated with opportunities to experience nature and enjoy outdoor recreation with others.21 Supporting urban agriculture, food hubs, farmers’ markets, food co-ops and other food related activities has many benefits that support complete communities while also addressing public interests related to access to healthy food and greater food security.

Complete communities can also help to mitigate climate change by applying the “net-zero” concept. This means that greenhouse gases produced from the use of vehicles, thermal and electrical energy within the community would be offset by efficiency gains and clean energy. A sufficient mix of local shopping and local jobs would enable people to meet their daily needs within the community. Buildings would be better insulated, designed to take advantage of renewable energy and better connected to community information, energy and transportation systems. Green spaces and street trees would provide a carbon sink and help to buffer extreme weather events.

Complete communities can be supported by applying a “complete streets” lens to street design and transportation planning that considers how best to accommodate all road users, including cars, trucks, transit, cyclists and pedestrians, within the street network. By supporting transit and active transportation, complete communities can reduce the number of vehicle trips and distances travelled, thereby saving energy, and reducing air pollution and greenhouse gas emissions. They can also improve access to transit, making longer trips without cars both attractive and viable.

Many municipalities and developers have experienced opposition to proposals for higher-density development, especially in existing urban areas of the GGH. Understandably, people are concerned about change to their existing neighbourhoods and worry that it will result in an overpowering built form, lack of park space and sunlight, and increased traffic volumes. However, well-planned, compact developments that emphasize quality, creative use of space and excellence in design can provide vibrant, healthy communities with a strong sense of place. This requires developers, designers, municipal staff and politicians to work together, in consultation with existing communities, towards a shared vision. In addition, thoughtful education programs are essential to demonstrate the characteristics and advantages of complete communities, including new ways to describe and explain the concept of intensification (see Section 9.5 for our recommendations on education).

Municipalities use development standards to guide the planning, design and construction of communities. They address such elements as the size and arrangement of lots, street design, the amount of parking and the location of utility lines. Alternative development standards allow for more flexible and innovative approaches to development, such as reduced parking space requirements and narrower right-of-ways for local residential roads. These alternative standards can result in more efficient use of land and other economic and environmental benefits. For example, narrower right-of-ways typically cost less to build and maintain, reduce storm water runoff and use fewer materials. While municipalities may currently implement alternative development standards, renewed interest and guidance from the Province would help to promote their use more widely.
A recent review of progress with implementation of the Growth Plan revealed variable results in achieving the Plan’s objectives for complete communities. For example, in designated greenfield areas it was found that most recent developments have low scores for indicators associated with diversity of land use, walking distance to community amenities and street connectivity. On the other hand, compared to historical trends in the region, we are seeing smaller lot sizes and more housing mix in designated greenfield areas. This trend represents an opportunity for the Province to provide stronger direction and expectations for the creation of well-designed complete communities.

Parks and Recreation

One of the challenges of compact development is ensuring a sufficient supply of open space to meet the needs of a rapidly growing population and provide a high quality of life that supports healthy communities and a competitive economy. There is growing evidence to show vital linkages between our physical and mental health, and the provision of shade and green spaces. These needs can be met through connected systems of parks, trails and other open spaces, linked to regional facilities such as conservation areas, nature reserves, major parks (e.g., Rouge Park), golf courses and regional trails.

The Ontario Trails Strategy establishes strategic directions for planning, managing, promoting and using trails in Ontario. Its vision is to establish “a world-class system of diversified trails, planned and used in an environmentally responsible manner, that enhances the health and prosperity of all Ontarians.” A well-connected trail system in the GGH will be a key component of the Ontario system. Indeed, critical elements of this system already exist, in varying states of completion, including the Bruce Trail, Oak Ridges Trail, Lake Ontario Waterfront Trail, Pan Am Trail and Trans Canada Trail, as well as a myriad of other regional and local trails.

COMMUNITY HUBS

Community hubs provide a central access point for a range of health and social services, along with cultural and recreational opportunities that nourish community life. A community hub can be a school, neighbourhood centre, early learning centre, library, community health centre, old government building, place of worship or another public space. For example, the Bathurst-Finch Community Hub in Toronto houses a partnership of 11 organizations that offer a community health centre, dental clinic, mental health programs, settlement services for newcomers, employment support, help with legal matters, and free community meeting space. The Bathurst-Finch Hub is one of eight community hubs in Toronto developed with support from United Way Toronto.

Above: Health programs and libraries are two types of services that may be found in community hubs.
WHAT IS ACTIVE TRANSPORTATION?

Active transportation refers to any form of human-powered transportation – for example, walking, cycling, using a wheelchair, in-line skating or skateboarding.

The four plans also provide direction for recreation opportunities. For example, the Growth Plan encourages municipalities, conservation authorities and non-governmental organizations to develop a system of publicly accessible parkland, open space and trails, including shoreline areas, which demarcates areas for public access, provides a coordinated approach to trail planning and development, and is based on good land stewardship practices for public and private lands. The Greenbelt Plan includes a policy directing the Province to work with municipalities, conservation authorities and non-governmental organizations to encourage the development of a system of publicly accessible parkland, open space and trails. The Oak Ridges Moraine Conservation Plan directs that a recreational trail system shall be established to provide continuous access and travel along the Moraine, accessible to all people, including those with disabilities. The Niagara Escarpment Plan includes policies for a Niagara Escarpment Parks and Open Space System, which includes measures to minimize any adverse impact of recreational uses and trails on the Escarpment.

The Growth Plan also specifies that complete communities should include high-quality public open space. However, recent experience shows that in some areas of the GGH the rate of new residential growth has outpaced the rate of new parkland acquisition.26 This is a critical issue because the provision of a range of readily accessible green spaces and recreational opportunities is essential to promote happiness, health and wellbeing in more compact communities where many people are living in multi-residential units.

The Planning Act enables municipalities to require developers to dedicate land or provide cash-in-lieu of land for the purposes of creating new parkland. The Province is currently proposing to amend these requirements through Bill 73: The Smart Growth for Our Communities Act. Collectively, the proposed amendments related to parks planning, parkland dedication and fiscal transparency are intended to provide for the continued development of the parks system in intensifying areas as well as greenfield developments. The new provisions would require municipalities, prior to adopting official plan policies for the alternative

26 Lorinc, J. Parks in Crisis: All Built Up and No Place to Go. A Spacing Investigation. 2015.
parkland standard, to prepare an overall plan for parks, including an examination of the amount and location of parkland needed in both new and intensifying areas. Additionally, municipalities would be required to be more transparent with the funds collected through cash-in-lieu of parkland and how they are to be spent. The alternative standard is intended to recognize the reductions in size and occupancy of newer housing units.

In addition to traditional parks, there are many other public, institutional and privately owned outdoor spaces that can fulfill needs for outdoor recreation and relaxation. For example, more creative approaches could be encouraged to integrate park functions with green infrastructure, rooftops, mezzanines, alleys and streetscapes. Other opportunities may include shared use of utility corridors, school grounds, hospital grounds and cemeteries as well as the integration of public open space in community hubs.

**Institutional uses**

A key element of complete communities is making sure that there is appropriate space for important institutional uses, such as places of worship, cemeteries and long-term care homes. In 2014, the Provincial Policy Statement (PPS) was updated to reflect the importance of these uses, and the Growth Plan encourages institutional uses to locate in urban growth centres, transit areas and other intensification areas in order to promote complete communities and easy access by transit.

However, as communities grow and become more compact, the price of land and other barriers may make it difficult for appropriate institutional uses to locate in areas that are also in high demand for residential, office or commercial development. For example, as the population ages it will be important to consider ways to provide enough space for cemeteries, while recognizing that they can also contribute much needed open space and tree canopy in compact communities. However, there are several barriers to providing needed cemetery space. For example, rural lands near settlement areas may be too expensive, and communities that have land available may be reluctant to accommodate the needs of other municipalities that have no space for new cemeteries.
Access to healthy food

Some regions and municipalities have created food policies, urban agriculture opportunities, charters and/or hubs to support access to local, affordable and healthy food. The PPS includes a policy to support opportunities for local food, and promotes the sustainability of the agri-food and agri-product businesses by protecting agricultural resources and minimizing land use conflicts. However, there are no similar policies in the four plans.

Housing

The Growth Plan directs municipalities to plan for a range and mix of housing types, taking into account affordable housing needs. The predominant form of housing in the region is single-detached dwellings and it is important that the housing supply continues to be diversified. Although there are many factors that contribute to housing mix and affordability, the land use planning framework can encourage a mix of housing types, including higher-density housing that helps to achieve complete communities with good access to transportation and community amenities. Recent data show that, in many GGH municipalities, average home prices are not affordable for many households and are generally out of reach for households with low incomes. Average rents for purpose-built rental housing are affordable to households with moderate incomes, but are generally unaffordable for households with lower incomes.27

The Province is currently updating its Long-Term Affordable Housing Strategy. Within the GGH, some specific measures that would help meet the goals for housing mix and affordability include better support for mid-rise housing (5-11 storeys), secondary suites, purpose-built rental housing, family-friendly units and options for seniors to remain in their communities.

---

27 Ministry of Municipal Affairs and Housing. Housing Data: Affordable House Prices and Rents. 2014.
RECOMMENDATION 1

Specify that all new developments in existing built-up areas and in designated greenfield areas should support the development of complete communities by incorporating:

• Urban design including built form, streetscapes, green infrastructure and open spaces that support human health, a pedestrian-friendly environment and a vibrant public realm (see, for example, Peel’s Healthy Community Index or Toronto’s Walkability Index
• A complete streets approach to transportation planning and design that considers how best to accommodate the needs of different road users within the street network, including transit as well as safe and convenient active transportation choices
• Timely provision of an adequate supply of parks, trails and other recreation facilities through mechanisms such as alternative parkland standards, partnerships with private land owners and creative new approaches to the provision of open space, particularly in intensification areas
• Protection of viable, healthy natural heritage systems
• Identification and protection of cultural heritage
• Recognition of urban agriculture and the need for access to local healthy food
• An appropriate mix of housing types, including affordable housing
• Opportunities to facilitate the creation of secondary suites in new and existing building stock
• Co-location of community services, public institutions and open space to facilitate the creation of community hubs in locations that support active transportation and transit
• Integration of residential and retail/commercial development in a way that supports active transportation and transit
• Measures to work towards a net-zero state, reduce energy consumption and decrease greenhouse gas emissions
2 COMPLEMENTARY RECOMMENDATION 2
Develop guidance on alternative development standards that identify and promote innovative ways to build more compact, transit-supportive complete communities in greenfield developments and intensifying areas

3 COMPLEMENTARY RECOMMENDATION 3
Recognizing that the PPS and the four plans encourage planning for institutional uses as part of complete communities, continue to work with municipalities to ensure that property tax treatment, capital funding formulae and other regulatory requirements are not creating unintended barriers to the viability of institutional uses in intensifying communities

4 COMPLEMENTARY RECOMMENDATION 4
Develop a strategy, in the context of the Ontario Trails Strategy and in collaboration with municipalities, conservation authorities, non-government organizations and others, for a Greater Golden Horseshoe system of diverse and well-connected parks and trails, including connections to destinations in and around river valleys, to meet the needs of urban and rural communities for recreation, tourism and associated economic opportunities. The strategy should include opportunities for municipalities to protect space for future trails, particularly in urban river valleys

5 COMPLEMENTARY RECOMMENDATION 5
Ensure that the Province’s Long-Term Affordable Housing Strategy supports the goals of the four plans, including measures to support purpose-built rental housing, remove barriers to secondary suites and use zoning or other planning tools to ensure that developments support a mix of incomes and housing types in locations that are transit-friendly with short commute times and options for active transportation

6 RECOMMENDATION 6
When the update to the Province’s Long-Term Affordable Housing Strategy is complete, consider ways to support its objectives through implementation of the four plans
4.1.2 Growth Forecasts

Forecasts are fundamental to the Growth Plan and essential to its effectiveness because they enable municipalities to plan for and manage the growth that is coming, and to assess whether they have enough land to accommodate forecast growth within existing settlement areas. The initial population and employment forecasts in the Growth Plan were developed in collaboration with municipalities and other stakeholders. The Growth Plan requires that the forecasts be reviewed at least every five years in consultation with municipalities. The first review of the forecasts resulted in an amendment to the forecasts to 2031 and the extension of the time horizon of the Growth Plan from 2031 to 2041.

There is a general lack of municipal confidence in the employment forecasts in the Growth Plan. For example, some municipalities have expressed concerns that the employment forecasts are too high, will not be met within the 2041 timeframe, and are currently higher than actual employment on the ground. When the Growth Plan was amended in 2013, a policy was added to the Plan to require development of a new method for measuring and forecasting employment, which has not yet been undertaken.

In addition, many municipalities have indicated that both the population and employment forecasts in the Growth Plan appear to be too high or anticipate growth too early in most areas of the GGH (outside the City of Toronto). As a result, there are concerns that, if the forecasted growth does not materialize, municipalities may be in a situation where they have built more infrastructure than needed and are forced to carry infrastructure-related debt for longer than anticipated because development charges and tax revenues are not available at the right time. There is also potential to designate more land for development than will actually be required to meet Growth Plan forecasts.

These concerns about the Growth Plan forecasts stem in part from the
latest population projections from the Ministry of Finance (MOF) that show slower growth for most of the province. MOF produces annual population projections for the entire Province of Ontario and reviews the demographic assumptions underlying its projections every year. With each successive update, MOF projections have been lowered based on the latest demographic data available, which show slower immigration and lower fertility than anticipated in 2013 when the Growth Plan was amended. Every five years, a major update is produced by MOF, based on a review of methods and long-term assumptions at that time. It would be helpful to align the review for the Growth Plan forecasts so that it occurs at the same time, or soon after, the five-year MOF major updates. This would reduce some of the differences between the Growth Plan’s population forecasts and the MOF annual population projections.

The Growth Plan directs upper-tier municipalities to allocate forecasts to their lower-tier municipalities. During the Coordinated Review, we heard that these allocations are not always based on a full assessment of opportunities to first accommodate growth through intensification. Furthermore, many smaller, rural municipalities are currently experiencing much slower rates of growth than expected and they have expressed concerns that they have been assigned unrealistic forecasts.

**RECOMMENDATION 7**

Develop a new method for measuring and forecasting employment in advance of the next review of the forecasts

**RECOMMENDATION 8**

Undertake the review for the Growth Plan forecasts at the same time as, or soon after, the five-year major update of the Ministry of Finance population projections so that the long-term assumptions achieve the greatest possible degree of consistency and alignment

**RECOMMENDATION 9**

Consider the development of guidance materials and/or new policies to help municipalities plan for, and phase-in the construction of, new infrastructure so that it is not provided too far ahead of anticipated growth
4.1.3 Intensification

One of the main tenets of the Growth Plan is to encourage infill development (intensification) in existing settlement areas. When done well, intensification can bring many benefits associated with more compact built environments, including the provision of complete communities (see Section 4.1.1), lower energy demands, active transportation, good transit services, reduced greenhouse gas emissions, efficient use of existing and planned infrastructure, and protection of natural systems and productive farmland.

Prior to the Growth Plan, the intensification rate across the GGH (except the City of Toronto) ranged from about 15-20 per cent. Progress to meet the Growth Plan’s minimum target of 40 per cent (or an alternative intensification target as permitted by the Minister) for residential intensification by 2015 is now being made in most of the inner-ring municipalities and some of the outer-ring municipalities. This is a good start, but more needs to be done if we are going to address the sustainability challenges in the region, particularly considering that these targets still permit up to 60 per cent of development to be in greenfield areas. We note that research by the Pembina Institute shows that intensification of 60 per cent (and development in greenfield areas reduced to 40 per cent) could, if accompanied by major new transit investments, achieve meaningful reductions in greenhouse gases below 2006 levels (see Chapter 8 for more details).

The 40 per cent general intensification target in the Growth Plan is intended to be a minimum target, but in reality, only two upper-tier municipalities (Regions of Waterloo and Peel) and four lower-tier municipalities (Cities of Markham, Ajax and St. Catharines, and Town of Grimsby) are using higher targets, ranging from 45 per cent to 95 per cent. Toronto is accommodating 100 per cent of its growth as intensification because it is fully built within its boundaries and has no greenfield areas. A number of communities, such as Mississauga,

St. Catharines and Burlington are nearly built out and will have to accommodate all future growth through infill development at that time. On the other hand, the Growth Plan permits the Minister to approve alternative targets to respond to local circumstances, and five of the 15 upper- and single-tier municipalities in the outer ring are now using intensification targets lower than 40 per cent that range from 15 per cent to 32 per cent.\(^{32}\)

York Region is considering three draft growth scenarios for residential intensification to accommodate forecast growth to 2041. They show that if 40 per cent of all residential development each year is accommodated within the existing built-up area, and the remainder (60 per cent) in the designated greenfield area, the Region would need to expand its settlement area by 2,460 hectares. An intensification rate of 50 per cent

**Adoption of Minimum Intensification Targets by Upper- and Single-Tier Municipalities\(^{33}\)**

---


would require a smaller settlement area expansion of 1,260 hectares. The third scenario shows that all forecast growth could be accommodated within the settlement area if 65 per cent of growth is accommodated in the existing built-up area and 35 per cent in the already designated greenfield area.

The Growth Plan requires municipalities to prepare an intensification strategy and to plan intensification areas to achieve significant population and employment growth; provide a diverse and compatible mix of land uses; provide high-quality public open spaces; support transit, walking and cycling; generally achieve higher densities than the surrounding areas; and achieve an appropriate transition of built form to adjacent areas. However, municipalities vary considerably in their ability to accommodate or attract intensification. For example, some urban municipalities have grown up around historic downtowns and are experiencing economic prosperity, while others are struggling to retain and attract businesses. Some municipalities need major infrastructure upgrades or brownfield remediation whereas others are highly rural with a large agricultural base.

During the consultation phase of this review, we heard about a number of challenges to creative infill development. For example, transit and other services are not always available in a timely way. Local public opposition frequently includes site-specific concerns about increased densities, parking, traffic, tall buildings, loss of views, threats to cultural heritage and the inadequacy of parkland or other amenities.

We also heard that development companies face a number of challenges when building in intensifying areas. These include some of the requirements of the Building and Fire Codes, difficulties in obtaining appropriate rezoning, parking requirements, and the costs of downtown taxes and development charges. Redevelopment of brownfields (former industrial lands) can be particularly complicated, and we heard about delays related to risk assessments, inconsistent application of the record of site condition by municipalities, and poor integration of risk management measures with Building Code requirements. The Ministry of Environment and Climate Change is currently undertaking a brownfields modernization initiative to look at opportunities to streamline the record of site condition process and achieve greater efficiency to support brownfields redevelopment.
Some municipalities reported concerns about development charges that are not supportive of the urban form and housing choices associated with complete communities. For example, the charge for a secondary suite may be the same amount as for a single-family home. Another challenge arises where funding formulae and design guidelines for schools are based on standards that encourage a large footprint and surrounding grounds. While this may have been appropriate for older suburban contexts, it creates barriers to including schools in intensifying neighbourhoods. It would be helpful to adjust the capital funding formula for schools to recognize the construction premiums associated with new schools in compact communities.

Finally, we heard that OMB decisions have a tendency to undermine intensification efforts in disputes that involve density, among other concerns.

We believe that many of these challenges could be addressed by a greater emphasis on good design and timely public consultation, combined with measures both within and beyond the plans to address barriers to intensification. In addition, the Province could provide increased guidance on the characteristics of intensification to support urban rejuvenation and create complete communities.

**RECOMMENDATION 10**

With a view to increasing intensification targets to better support the goals of the plans to sustain productive agricultural lands, protect natural resources, achieve compact urban form, support transit, reduce traffic congestion and lower greenhouse gas emissions:

- Assess and apply potential increases in intensification targets in conjunction with related recommendations in this report regarding higher density targets in designated greenfield areas, better support for transit-related intensification and

*(Recommendation 10 continued on next page)*
4.1.4 Designated Greenfield Areas

The Growth Plan establishes minimum density targets for designated greenfield areas that are intended to support the development of more compact, mixed-use and transit-supportive communities. The target for designated greenfield areas is 50 residents and jobs combined per

(Recommendation 10 continued)

• Require municipalities, with guidance and support from the Province, to measure and report annually on the achievement of intensification targets

RECOMMENDATION 11

Provide more specific best-practice guidance to municipalities on how to optimize opportunities to accommodate growth within existing settlement areas in a way that supports complete communities

RECOMMENDATION 12

Address barriers to intensification and the development of affordable housing by encouraging use of tools such as up-to-date zoning, the development permit system, community improvement plans, and reduced residential parking requirements where transit and active transportation options exist

COMPLEMENTARY RECOMMENDATION 13

Ensure that ongoing or planned provincial initiatives consider opportunities to increase rates of intensification in the region, and address barriers and streamline processes to support intensification. Examples include the Modernization of Brownfields, the review of the Highway Access Management Guidelines, the review of Building and Fire Codes, guidance for innovative Development Charges and adjustments to the capital funding formula for schools

4.1.4 Designated Greenfield Areas

The Growth Plan establishes minimum density targets for designated greenfield areas that are intended to support the development of more compact, mixed-use and transit-supportive communities. The target for designated greenfield areas is 50 residents and jobs combined per
hectare measured across the upper-tier or single-tier municipality. To respond to local circumstances, the Growth Plan enables alternative density targets for upper- and single-tier municipalities located in the outer ring that do not have an urban growth centre. Alternative lower-density targets have been permitted for all nine of these municipalities.

However, we are concerned that even 50 residents and jobs combined per hectare is insufficient to support more than basic bus service (one bus every 20-30 minutes). This is not enough to encourage a significant

Adoption of Minimum Designated Greenfield Area Density Targets by Upper- and Single-Tier Municipalities

© Map courtesy of the Neptis Foundation

modal shift from private vehicles to transit. At the other end of the scale, a minimum of 200 residents and jobs combined per hectare is required to support a subway.

Greater densities are also needed to help mitigate climate change. Research by the Pembina Institute suggests that in order to make meaningful reductions in greenhouse gas emissions, the density target for designated greenfield areas would have to be a minimum of 70 people and jobs combined per hectare (see Chapter 8 for more details), combined with significant investments in transit.

The Growth Plan allows for certain environmental features to be excluded (or “netted out”) from density calculations. However, many municipalities net out other non-developable lands, such as hydro corridors, railways or cemeteries. This results in variation in types of lands netted out such that planned densities may appear to be greater than they actually are. This lack of consistency leads to difficulties in accurately monitoring and reporting on progress towards Growth Plan targets.

The purpose of combining people and jobs in the density targets is to encourage the creation of complete communities with a diverse mix of residential uses and employment activity. In practice, however, municipalities have reported great difficulty in achieving the combined target due to diversity in the amount and types of employment across the region, lack of control over where employers locate and the prevalence of low-density employment activity (e.g., warehousing and advanced manufacturing) in many areas. The target is measured across each upper-or single-tier municipality to allow for variations in employment and residential densities. Where employment densities are low, residential density has been increased in order to achieve the combined target for people and jobs.

Finally, because municipalities are planning to meet these targets by the horizon of the Growth Plan (i.e. by 2041), it will be a long time before it is known what actual densities are being achieved. This makes it difficult to assess progress and make adjustments where necessary.
4.1.5 TRANSIT HUBS

In Mississauga, a major light-rail transit line planned for the Hurontario corridor will link the waterfront through Mississauga City Centre. The line anchors a major initiative to achieve denser, transit-oriented development and connects with two GO Transit stations and Mississauga’s east-west bus rapid transit line.

Above: Illustration of potential ultimate conditions at the Hurontario Street/Dundas Road transit stop of the planned Hurontario corridor.

14 RECOMMENDATION 14

Increase density targets for designated greenfield areas in order to support increased frequency of transit, the development of low-carbon, complete communities and mitigate climate change, while reflecting the different characteristics of municipalities. Include measures to:

• Require municipalities, with guidance and support from the Province, to measure and report annually on the achievement of density targets
• Establish a more transparent process for decision-making about alternative targets in the outer ring
• Guide the process of accounting for non-developable lands when calculating development densities through policy
• Review and update the current approach of using combined density targets for residents and jobs in designated greenfield areas

SPOTLIGHT on Climate Change

4.1.5 Transit Hubs

A high density of mixed land uses around transit hubs is critical because it supports higher-order transit, creates a shift from car dependence to transit use, encourages active transportation and unlocks development potential. The Ministry of Municipal Affairs and Housing recently undertook a review of all upper-tier official plans and some lower-tier official plans in the GGH. The review showed that there is no consistent approach to setting density targets or planning for development in association with transit stations and corridors. In addition, only 34 of the GGH’s 333 major transit station areas have reached the minimum recommended density to support transit, and almost 80 per cent of the region’s GO station areas have less than 50 people and jobs per hectare. Metrolinx, an agency of the Ministry of Transportation, has identified 51 mobility hubs in The Big Move, its regional transportation plan (see Section 7.6 for more information). Mobility hubs represent an excellent focus for intensification initiatives and transit investment.

36 Ministry of Municipal Affairs and Housing. Internal review of municipal official plans. 2015.
### 4.1.5 Transit Hubs

<table>
<thead>
<tr>
<th>Transit Service Type</th>
<th>Suggested Minimum Density</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Basic Transit Service</strong> (one bus every 20-30 minutes)</td>
<td>22 units per ha / 50 residents &amp; jobs combined per ha</td>
</tr>
<tr>
<td><strong>Frequent Transit Service</strong> (one bus every 10-15 minutes)</td>
<td>37 units per ha / 80 residents &amp; jobs combined per ha</td>
</tr>
<tr>
<td><strong>Very Frequent Bus Service</strong> (one bus every five minutes with potential for Light Rail Transit or Bus Rapid Transit)</td>
<td>45 units per ha / 100 residents &amp; jobs combined per ha</td>
</tr>
<tr>
<td><strong>Dedicated Rapid Transit</strong> (Light Rail Transit / Bus Rapid Transit)</td>
<td>72 units per ha / 160 residents &amp; jobs combined per ha</td>
</tr>
<tr>
<td><strong>Subway</strong></td>
<td>90 units per ha / 200 residents &amp; jobs combined per ha</td>
</tr>
</tbody>
</table>

The table above illustrates suggested minimum density thresholds for areas within a 5-10 minute walk of transit capable of supporting different types and levels of transit service. The thresholds presented are a guide and not to be applied as standards. Other factors such as the design of streets and open spaces, building characteristics, levels of feeder service, travel time, range of densities across the network and mix of uses can also have a significant impact on transit ridership. Mobility hubs and major transit station areas may require higher minimum densities. Source: Ministry of Transportation’s Transit Supported Guidelines.

The improved connectivity supplied by new transit services increases land and development value. It seems fair and equitable that a proportion of this additional wealth should go towards funding the transportation facility.

**Recommendation 15**

In collaboration with municipalities and stakeholders, clarify policies in the Growth Plan to better identify strategic areas within the region’s planned and existing transit network that should be a focal point for intensification efforts. Explore ways to require:

- Transit-supportive densities and excellence in the design of built form and public realm in transit areas
- Establishment of, and reporting on, density targets, built form, active transportation and design outcomes for individual stations consistent with guidelines such as Metrolinx’s Mobility Hub Guidelines or the Ministry of Transportation’s Transit Supportive Guidelines

---

4.1.6 Floodplains

One of the most serious consequences of climate change in the GGH is the occurrence of more frequent intense weather events. This is contributing to increased episodes of flooding as well as more periods of drought and low water flow. These issues are exacerbated by the loss of wetlands and continued construction of impermeable surfaces without sufficient mitigation to control stormwater (see Section 7.4).

Ontario’s exposure to flood risks is increasing as a result of climate change combined with population growth, an expanding urban footprint, and aging flood and erosion control infrastructure. Extreme weather costs the Ontario government alone about $8.9 million per year in disaster financial assistance for both private properties and public infrastructure. Municipalities and private insurance companies also contribute, so the overall costs of damage resulting from climate change impacts are actually much higher. As an example, the Insurance Bureau of Canada estimated that the total damage in Toronto from the July 2013 flood was approximately $850 million.38

Land use planning regarding floodplains is addressed through policies in the PPS. The PPS natural hazard policies direct development away from areas of natural hazards where there is unacceptable risk to public health or safety or to property, and require that no new hazards be created or

---

4.1.6  FLOODPLAINS

existing hazards aggravated by development. Recent updates to the PPS include consideration for the potential impacts of climate change, including increased risks associated with natural hazards. Provincially approved Natural Hazard Technical Guidance (2002) documents support the PPS hazard policies by providing policies, standards and methods for carrying out floodplain management.

In some unique and exceptional circumstances, the PPS allows communities to continue land uses in the floodplain if the area is officially designated as a Special Policy Area (SPA). The SPA approach is limited to those areas within the 100-year floodplain boundary that existed prior to Ontario’s flood plain policies. This is intended to address the significant social and economic hardships to a community that would result from strict adherence to provincial natural hazard policies concerning development. Because the risks of flood damage are higher in SPAs, the PPS indicates that a SPA is not intended to allow for new or intensified development if a community has feasible opportunities for such development outside the flood plain.

Many historic downtowns were founded and have evolved adjacent to rivers to take advantage of water supplies and power to operate mills. It is not surprising, then, that about seven of the 25 urban growth centres identified for intensification in the Growth Plan include portions of floodplain lands that are designated as SPAs.

17  RECOMMENDATION 17

Establish consistency between the Growth Plan and the PPS by stating that the natural hazards policies of the PPS apply to matters under the Growth Plan, including intensification. In addition:

- Reinforce the roles of the Ministers of Municipal Affairs and Housing and Natural Resources and Forestry in the approval of changes to existing SPAs, consider changes to prohibit appeals to the OMB of provincial decisions regarding SPAs, and ensure compliance with provincial and local policies associated with SPAs
- Prohibit the creation and approval of new SPAs

(Recommendation 17 continued on next page)

FLOOD RISK REDUCTION, WEST DON LANDS

In an urban setting, integrated studies and engineering are required to achieve environmental sustainability and ensure resilience to climate change. One example is the flood protection infrastructure for the West Don River lands that incorporates new green space and wildlife habitat and now protects 210 hectares of downtown Toronto, including the site of the Pan Am Games Athletes’ Village. This project is a major asset that will help to unlock significant economic development potential in the Port Lands.

Above: Corktown Common Park is built on top of the flood protection berm.
(Recommendation 17 continued)

- Update provincial technical guidelines dealing with planning for flooding and erosion along river and stream systems and the Great Lakes
- Continue to update, modernize and expand stream flow forecasting models and flood warning gauge infrastructure in order to better model watershed character and predict watershed response to storm events, including consideration of climate change and giving high priority to SPAs and areas upstream of SPAs

### 4.1.7 Settlement Area Expansion

The Growth Plan directs urban development to defined settlement areas such as cities, towns, villages and hamlets. Settlement areas contain built-up areas, which may include urban growth centres, intensification areas and intensification corridors, as shown in the figure below. There are also settlements in the Greenbelt, where outward growth is more tightly controlled.

#### Land Use Terminology

- Greenbelt Area (Ontario Regulation 59/05)
- Agricultural & Rural Area

Settlement Areas
- Designated Greenfield Areas
- Built-Up Areas
- Intensification Areas
4.1.7 SETTLEMENT AREA EXPANSION

When the Greenbelt was established in 2005, its boundaries were based on a lengthy process that considered the best way to provide permanent protection to the lands within the Greenbelt, while allowing for potential future needs for urban growth over the long term. Outside the Greenbelt, lands can potentially be added to settlement areas through boundary expansions in accordance with criteria required by the Growth Plan. The lands below the Greenbelt and above the inner-ring settlement area boundaries (often referred to informally as the “whitebelt lands”) are part of the rural and agricultural systems of the region. However, they are subject to some of the strongest growth pressures in the region, leading to vigorous debates over their future.

The development sector has generally assumed that the lands below the Greenbelt will eventually be urbanized, and most of these lands have now been purchased or optioned by investors. This has led to significant impacts on the viability of agriculture, including an increase in the number of tenant farmers, lack of investment in agricultural infrastructure, fragmentation of the land base by development-related uses, and near-urban pressures on agricultural operations. The agricultural community has also emphasized that Ontario cannot afford to lose any more prime farmland to development (see Chapter 5). In addition, environmental stakeholders point to the significant water resources and natural heritage features in the lands below the Greenbelt and propose that they should receive an increased level of protection because of their importance in contributing to healthy ecosystems and adaptation to climate change, both in urban areas and in the Greenbelt. Our recommendations to strengthen protection of agricultural lands, water resources and natural heritage systems are in sections 5.1, 6.1 and 6.2, respectively. Our recommendations to strengthen control of settlement area expansion are below.

The Growth Plan establishes a process for making decisions about settlement area expansions based on a number of criteria, including assessment of need based on accommodating forecast growth, and application of the density and intensification targets. Municipalities must also meet the requirements of the Greenbelt plans where applicable, accommodate the provision of infrastructure in a financially and environmentally sustainable manner, and strive to protect prime
agricultural lands. In the areas of the Greenbelt plans, expansions may only occur at the time of the 10-year review, are restricted by availability of servicing, and are not permitted in Specialty Crop Areas, the Greenbelt Plan’s Natural Heritage System and Oak Ridges Moraine Natural Core and Linkage Areas. Furthermore, settlement areas that are currently outside the Greenbelt area may not expand into the Greenbelt.

Experience over the past decade with implementation of these settlement policies has revealed a number of issues. The process of achieving conformity has been slow and challenging, with many appeals to the OMB, some of which are not yet resolved. Most of the Growth Plan related issues brought before the OMB are the result of disagreements over the assessment of land needs and resulting settlement area expansions. Experience with Growth Plan conformity has shown some variation between the methods used by municipalities and other parties to assess the amount of land required to accommodate forecasted growth. The results were often hotly contested, resulting in complex and technical debates at the OMB. Stronger provincial guidance on land needs assessment could help to alleviate conflicts and reduce costly delays.

To implement the Growth Plan, municipalities are currently permitted to designate lands for up to 20 years. However, this timeframe doesn’t always line up with the horizon of the Growth Plan, which is currently 2041 (26 years). It would be helpful to align municipal processes with the horizon of the Growth Plan, recognizing that municipalities usually undertake a multi-year process to assess land needs, undertake required studies and receive approval for settlement area expansions.

Analysis undertaken by the Neptis Foundation in 2013 suggests that there is now more land designated for development than required to accommodate forecast growth to 2031. However, the land may not be located in areas that are experiencing the greatest growth pressures, or have existing or planned infrastructure to support significant growth. According to Neptis’ analysis, there was a total of 436,900 hectares of land designated for development across the GGH. Of that total, approximately 25 per cent (107,100 hectares) is not yet built upon and is in

settlement areas. Nearly half of this land is in municipalities in the outer ring beyond the Greenbelt, which is expected to attract only one-quarter of new residents to 2041 in comparison to the municipalities in the inner ring below the Greenbelt. There are also concerns that some of the lands that have been designated for development in the outer ring are not in the most appropriate locations. It is important to address this over-supply of lands in the outer ring to avoid making infrastructure and development decisions that are not aligned with the best places to accommodate growth.

**Designated Urban Areas to 2031 in the Greater Golden Horseshoe**

Note: The information displayed on this map is not to scale, does not accurately reflect approved land-use and planning boundaries, and may be out of date. For more information on precise boundaries, the appropriate municipality should be consulted. For more information on Greenbelt Area boundaries, the Greenbelt Plan 2005 should be consulted. The Province of Ontario assumes no responsibility or liability for any consequences of any use made of this map.
In addition, overall land consumption rates are decreasing, indicating that the trend to more compact communities was beginning even before the Growth Plan was put in place. For example, between 1991 and 2001, the population of the GTHA grew by 19 per cent, while the urban area expanded by 26 per cent. Between 2001 and 2011, the population of the GTHA grew by 18 per cent, but the urban area expanded by only 10 per cent. If the trend for decreasing land consumption continues, it is likely that some of the land that has been designated to accommodate forecasted growth by 2031 will not actually be developed by that date.

In 2013, Amendment 2 to the Growth Plan provided additional forecasts for the GGH to accommodate two million more people by 2041, and some municipalities are now working on analysis to accommodate this additional growth. Ultimately, the amount of land needed to accommodate expected growth to 2041 will depend on the rate of intensification and the density of new development in each municipality. As proposed in recommendations 10 and 14, we believe that it is both necessary and feasible to increase intensification and density targets.

We also believe that there are some key knowledge gaps that should be addressed before further decisions are made about where to grow in the GGH. Some will be addressed through ongoing provincial initiatives; others are recommended in this report. They involve studies and strategies at the scale of the GGH and/or the Province, on a range of topics (e.g., the assimilative capacity of lakes and rivers, infrastructure capacity and requirements, prime agricultural lands, natural heritage, water resource systems, transportation and transit infrastructure, housing stock, affordable housing, and climate change). In addition, more rigorous and consistent information to assess the performance of the four plans is needed to enable corrections and adjustments to future growth patterns. This information on policy outcomes would include population and employment figures, land consumption and intensification rates, density of built form, transit development and use, agricultural viability, watershed health and protection of natural heritage systems.

40 Municipalities are required to amend their official plans to conform to Amendment 2 by 2018.
Our recommendations on land needs assessment and settlement area expansion are therefore intended to provide sufficient time to study and address these matters while reducing land consumption and ensuring that the goals of the four plans are fully realized. This strategic and prudent approach will focus growth in well-planned, compact, low-carbon communities that support transit and encourage healthy lifestyles. It will also reduce traffic congestion and greenhouse gas emissions, use infrastructure wisely and increase the protection of farmland, water resources and natural areas.

**RECOMMENDATION 18**

Work with municipalities and other stakeholders to develop a uniform and transparent method for undertaking land needs assessments which:

- Provides a common method for determining the existing supply of units and land within the settlement area for residential and employment purposes
- Provides a common method for determining need while ensuring a range and mix of housing types, affordable housing and fiscal sustainability of the community
- Provides a common method for determining developable versus non-developable lands
- Includes modelling of a variety of growth scenarios (including one that would not require new greenfield land)
- Considers the appropriate intensification and density targets as determined through Recommendations 10 and 14
- Assesses progress and addresses failures in meeting the targets over the preceding years

**RECOMMENDATION 19**

Reduce the pace of urban expansion in the GGH by working with municipalities and stakeholders to:

- Continue to consider settlement boundary expansions only at the time of an official plan update, and based on stringent criteria (see Recommendation 20)
- Direct growth in the outer ring to locations that are better aligned to the policies of the plans, provided that the quantity

(Recommendation 19 continued on next page)
of land designated for development results in a reduction of any existing over-supply and that the addition of any new lands is justified using all the criteria in Recommendation 20. This should be undertaken with criteria and processes designed to:

- Apply de-designation, phasing or other tools to significantly reduce the over-supply of designated lands
- Adjust settlement boundaries for municipalities that have an over-supply of designated lands

**RECOMMENDATION 20**

Establish stronger criteria to control settlement area expansion and ensure complete communities by requiring that municipal comprehensive reviews for expansion proposals include:

- Land needs assessment based on provincial direction, as proposed in Recommendation 18
- Application of higher intensification and density requirements, as proposed in Recommendations 10 and 14
- Consideration of aligning the timeframe for designating land for settlement area boundary expansion with the time horizon of the Growth Plan (e.g., 2041)
- Application of stronger criteria to limit the conversion and fragmentation of prime agricultural lands, particularly in the outer ring, as proposed in Recommendation 29
- Implementation of source water protection plans to identify and protect significant groundwater recharge areas and highly vulnerable aquifers
- Appropriate comprehensive watershed and/or sub-watershed planning to identify and protect a healthy and viable natural heritage system and maintain water quality and quantity, as proposed in Recommendation 40
- Completion and updating of master planning and asset management plans to demonstrate availability, sustainability, assimilative capacity, lifecycle maintenance, service level protection and enhancement, and financing of existing and new infrastructure including drinking water supply, stormwater management, low impact development, wastewater treatment, waste management, transit services and roads
- Assessment of long-term fiscal sustainability of the community

*(Recommendation 20 continued on next page)*
4.2 PLANNING FOR EMPLOYMENT

(Recommendation 20 continued)

- Proof of availability of existing or planned community services to ensure complete communities (e.g., community hubs including schools, community centres, parks and trails)
- Protection of employment lands, as proposed in Recommendation 23
- Assessment of impact on mineral aggregate resources to avoid precluding or hindering current and future resource extraction
- Measures to reduce greenhouse gas emissions and increase resilience to climate change

RECOMMENDATION 21

For lands within the Greenbelt Plan, Niagara Escarpment Plan and Oak Ridges Moraine Conservation Plan, apply the criteria listed in Recommendation 20 as well as the existing requirements within the three plans for settlement area expansion. In addition, align the timing of settlement boundary expansion policies in the three Greenbelt plans with those in the Growth Plan to require that they will be considered as part of a municipal comprehensive review (instead of at the time of the ten-year review).

RECOMMENDATION 22

In order to provide time for municipalities to comply with provincial amendments in response to the recommendations above, extend the 2018 deadline for municipalities to conform with Amendment 2 to the Growth Plan to 2021. Ensure that necessary provincial guidance and studies, as recommended in this report, are available in time to inform municipal conformity work.

4.2 Planning for Employment

The economy of the GGH represents approximately two-thirds of the gross domestic product of Ontario and 25 per cent of the gross domestic product of Canada. Similar to the economies of most industrialized nations, the GGH is experiencing dramatic shifts, with a slow and steady shift away from manufacturing and tremendous
growth in service-based activities. As a consequence, the geography of employment is changing and there is a need to update land use policies to support evolving economic realities.

The structure of the GGH is, for the most part, developing in a way that aligns well with this new economy. However, the pace of economic restructuring varies in different parts of the region, and there are many challenges associated with global competition, areas of disinvestment, conversion of employment lands and the rural economy. Recognizing that land use plans and policies alone cannot address all these issues, the following sections provide our recommendations on how the four plans can contribute to sustaining and growing a prosperous economy in the GGH, as well as better integration with initiatives beyond the scope of the plans:

- Protecting employment areas
- Planning for mixed uses
- Rural economies

4.2.1 Protecting Employment Areas

Historically, the economy of the GGH was heavily focused on traditional employment uses like manufacturing and warehousing. But recently there has been a major decline in manufacturing jobs and an increase in knowledge-based and service sector employment. From a land use planning perspective, the historical focus on manufacturing and warehousing resulted in the need to designate and protect land for industries requiring large tracts of land and access to major goods movement corridors, and to separate these industries from other non-compatible uses.

Over the past few decades, the changing nature of the economy, combined with the differentiation of employment and residential land values has created considerable pressure to convert traditional employment areas to other uses such as big box retail, office or residential development. These conversions typically occur on the edges of existing employment areas. As some of these areas transition to other uses, they
become fragmented and often lose economic viability. In turn, this reduces the supply of employment areas for businesses seeking large tracts of affordable land with access to goods movement corridors.

This new economic reality has created multiple challenges. How should we protect lands for traditional employment uses, provide locations for newer job types, and decide what to do with older employment areas where new land uses conflict with or limit classic industrial employment?

The PPS and the Growth Plan set out a list of criteria that must be met before employment lands can be converted to non-employment uses. The Growth Plan conversion policy provides further protection by tying the criteria to the policies and schedules of the Growth Plan, such as employment forecasts and intensification and density targets. These policy provisions are in turn supported by strong provisions in the Planning Act that prohibit appeals of refusal or non-decisions by municipal councils on applications to remove land from areas of employment.

Despite this strong policy and legal framework, there are still situations where municipal decisions are appealed to the OMB. In some cases, at the time of creating an official plan, municipalities may face OMB appeals regarding the permitted uses in designated employment areas, or challenges related to the need for the employment land in a particular area. There can be further OMB cases after employment areas have been designated, for example, in situations where municipalities and developers disagree over what should be allowed in an employment area or about conversions to other uses.

The panel also heard that some municipalities could do more to assess older employment areas that are no longer viable for employment uses, perhaps because they have now been surrounded by non-compatible uses such as residential or because the land has been fragmented or decreased in size and is no longer attractive for industrial or commercial uses. These lands tend to attract economic uses, such as storage facilities, that could be located elsewhere, and municipalities lose opportunities to allow these lands to be converted to other uses that might better serve municipal planning and economic development goals.

The geography of employment is changing and there is a need to update land use policies to support evolving economic realities.
4.2.1 PROTECTING EMPLOYMENT AREAS

During the consultations for this review, municipalities and other stakeholders expressed concern that there is a lack of adequate long-term protection of employment lands adjacent to transportation infrastructure such as 400-series highways, border crossings, ports, harbours and airports. These lands face competing demands from the industrial, commercial, retail and residential markets. Even if a municipality has identified these lands for long-term protection for industrial and commercial uses, they may get converted because there is an immediate economic opportunity related to a retail or even residential development. Many feel that this should not be allowed to happen because these lands are strategically located close to major infrastructure and are seen as crucial to attract new businesses to the region.

Providing stronger protection for certain “strategic employment lands” would require careful consideration so that the region does not end up with too many designated employment areas, or employment areas in the wrong place – neither of these outcomes would be good for the economic health of the region. It would be important to develop clear criteria by which municipalities would identify such lands, as well as careful consideration of ways to improve on the existing protections for employment lands without becoming overly rigid.

23 RECOMMENDATION 23

Update the Growth Plan to recognize the dynamics of a changing economy, better protect industrial uses, and provide greater flexibility to the growing knowledge and service-based economy by:

• Reviewing terminology and definitions in order to clarify policy intent and align with the PPS where appropriate
• Encouraging municipalities to identify, as part of their assessment of employment land needs:
  • Core employment areas that support and protect traditional employment uses (e.g., industry) and appropriate related permitted uses while excluding incompatible and sensitive uses such as residential, institutions and retail
  • Mixed-use employment areas that would support a mix of permitted employment uses. These could also act as a buffer

(Recommendation 23 continued on next page)
4.2.2 PLANNING FOR MIXED USES

(Recommendation 23 continued)

to protect core employment areas from encroachment by incompatible uses and/or as a transition zone to surrounding residential development

24 RECOMMENDATION 24

Update the Growth Plan to require upper-, single- and lower-tier municipalities to identify strategic employment lands within settlement areas at the regional level based on criteria set out by the Province, such as proximity to major transportation infrastructure including ports, railroads and highway interchanges. Conversion of these lands should require Ministerial approval, thus affording them greater protection.

4.2.2 Planning for Mixed Uses

The growing service and knowledge sectors have their own unique planning needs because they are more closely associated with the needs of the residential population (e.g., retail, services, education) and are typically the source of significant number of commuter trips (e.g., major office, health care facilities). Increasingly, employers in these sectors want to locate in closer proximity to residents and other amenities, and with better access to transit, cycling and walking.

The Growth Plan recognizes that not all employment is, or should be, located in employment areas and consideration has to be given to how best to access employment in those particular areas. For example, it requires that major office areas should be located in areas well served by transit and other amenities thereby reducing traffic congestion and contributing to targets to reduce greenhouse gas emissions. However, at present, only about half of all office jobs in the GGH are located near higher order transit lines. Recent research by the Strategic Regional Research Alliance and the Canadian Urban Institute estimates that across the GTHA there are approximately 100 million square feet of office space and 500,000 office jobs in single-use employment areas (e.g., business parks and/or corporate centres) with limited access to transit.\(^{41}\)

FINANCIAL SERVICES

The financial service cluster is the GTHA’s largest economic sector, both in jobs and output. Located primarily in downtown Toronto, the cluster has created more than 100,000 jobs over the past decade. Notably, this growth continued during the economic downturn that saw major financial centres like New York City lose jobs. Financial services now account for roughly one in ten Toronto-area workers.

There are many reasons to continue to focus on this strength. The financial sector creates knowledge-based jobs that drive prosperity. Its reliance on office space makes it ideally suited to intensification, creating demand for many other services within walking distance.

To stay in the top rank of financial centres, the region must respond to global trends. The best employees are typically highly mobile and will be attracted by places that are vibrant, connected and sustainable.

There is an opportunity to improve this situation. Ministry of Municipal Affairs and Housing analysis shows that 167 of the region’s 333 major transit station areas intersect with employment areas. Most of these connections are on the GO lines, leading to opportunities to provide better transit options for commuting using Regional Express Rail and other existing and proposed transit infrastructure. Consideration should also be given to encouraging diversification of corporate centres and office/business parks to include a mix of uses and amenities to serve the local workforce by facilitating more flexibility in permitted uses.

**RECOMMENDATION 25**

Provide policy direction in the Growth Plan for municipalities to use planned and existing transit and transportation networks to connect areas of office, institutional and retail employment, and to create high-quality, mixed-use employment nodes that are safe for cycling and walking. Incorporate:

- A focus on designated urban growth centres and major transit station areas as well as other areas where there are existing concentrations of office space
- Updated criteria for “major office” designations in the Growth Plan to ensure that significant clusters of mid-sized offices (e.g., office parks) are planned in a way that support transit and active transportation
- Coordination with Metrolinx’s The Big Move
- A focus on urban design elements to create attractive and safe spaces that support transit and active transportation

**4.2.3 Rural Economies**

Rural communities encompass diverse economies, including trade, manufacturing, tourism, recreation and agriculture. The largest sector in rural Ontario (by gross domestic product) is manufacturing, and although agriculture is not the largest employer, rural Ontario is home to over 75 per cent of Ontario’s agricultural workforce. Rural economies
are often hampered by limitations in infrastructure and access to services such as transit, natural gas, broadband internet service and three-phase power. The demographics of rural communities include stable or falling populations as well as an aging population – 18.5 per cent of rural Ontario’s population is made up of seniors (65+) compared to 13.6 per cent in urban Ontario and only 2.4 per cent of recent immigrants settled in rural Ontario. This means a declining tax base to fund services as well as increasing pressures on service provision (e.g., health services for an aging population).

In addition, the low density of many rural communities escalates the cost of delivering infrastructure and providing services. For example, there are currently few alternatives to the private automobile for commuting to work or accessing community amenities. This presents a particular challenge to more vulnerable populations, such as seniors, youth and low-income families, who may feel isolated and disconnected from the community, education and employment opportunities. A Community Transportation Pilot Grant Program is currently funding 22 municipalities to test the effectiveness of various models of coordinating transportation services to improve transportation for all members of the community.

The PPS includes policies to support healthy, integrated and viable rural areas, promote diversification of the economic base, enhance economic opportunities and clarify the range of permitted uses on rural lands. The Growth Plan recognizes “rural settlement areas” as being the key to economic well-being and specifies that outside these settlement areas, the only permitted uses are those associated with resource management or use, resource-based recreational activities or “rural land uses that cannot be located in settlement areas.” There is insufficient guidance material to assist in determining these uses, particularly those that “cannot be located in settlement areas.” There are also limited tools and resources to help rural communities make connections between their planning and economic development activities.

The unique characteristics and challenges of rural communities need to be considered in the development and implementation of Growth Plan policies, particularly with respect to density and intensification targets.
26 RECOMMENDATION 26
Increase support for rural economies by refining Growth Plan policies to address the challenges of rural communities, including:
• Additional clarity on permitted land uses outside rural settlement areas and more specific guidance materials on these land uses
• Guidance materials on how to meet density and intensification targets for rural communities

27 COMPLEMENTARY RECOMMENDATION 27
Review approaches to enhance support for the viability of rural communities in the GGH, including:
• Complementary tools and mechanisms that can assist rural communities with planning and economic development, including identification of priorities for rural and agricultural infrastructure (e.g., regional food hubs, broadband internet, natural gas, three-phase power, transportation, drainage and access to reliable water supplies for irrigation and other purposes)
• Mitigation of climate change impacts in rural areas by supporting alternative fuels to reduce greenhouse gas emissions and investing in rural transit and active transportation
• Encouragement for municipalities, local transit agencies and other key stakeholders to identify and implement improved rural transit and active transportation options and provide services to connect rural communities to larger urban centres

More specific recommendations on the agricultural economy are provided in Chapter 5.
5
Supporting Agriculture
5.0 SUPPORTING AGRICULTURE

WHAT ARE SPECIALTY CROP AREAS?
They are areas where the predominant crops include tender fruits, grapes, other fruits, vegetables, greenhouse crops and crops from agriculturally developed and organic soils. They have a combination of suitable soils, climatic conditions, farmers skilled in specialty crop production and capital investment in related facilities and services.

The GGH is home to some of Canada’s most important and productive farmland – a finite, non-renewable resource.

The GGH comprises only 3.5 per cent of Ontario’s land area, but contains 42 per cent of the province’s best (Class 1) farmland and two specialty crop areas (Niagara Tender Fruit and Grape Area and Holland Marsh), which comprise 1.2 per cent of the region.

Agriculture is a significant contributor to the economy of the GGH. It has one of the top three food and beverage processing clusters in North America and Ontario’s largest concentration of agri-food businesses, with farmers in the region producing over 200 different commodities for both domestic consumption/use and export. Recognizing the agri-food industry’s significant contribution to Ontario’s economy and its potential for growth, Premier Wynne has challenged Ontario’s agri-food sector to double its growth rate and to create 120,000 new jobs by 2020.

Agriculture also has significant social, cultural and ecological values. It is part of our identity, contributes to community health and wellbeing, and supports regional food security. Farmers are stewards of the land, which in turn provides essential ecological benefits such as wildlife habitat and corridors, and contributes to climate change mitigation and adaptation.

Farmland in the GGH is located in close proximity to the country’s largest concentration of people. Evolving consumer interests in food, coupled with the region’s rapid population growth, have raised concerns about food security and quality, including where our food comes from, how it is produced, and how far it travels. The GGH’s growing population provides opportunities for the agri-food sector, such as additional demand for local, ethnic and niche foods and markets, but also increases pressure to develop farmland for urban and other non-agricultural uses.

The agricultural lands and farms in the GGH have strong connections to urban areas where many of the region’s agri-food processors and related industries are located. There is an opportunity to better connect and
integrate rural and urban economies. Planning policies that support agriculture, both within and outside settlement areas, can support farmers, protect agricultural lands, promote local food, provide access to healthy food and contribute to food security.

Over the last decade, the Greenbelt plans and the Growth Plan, together with the PPS, have pursued three broad objectives related to agriculture:

- Protect farmland from loss and fragmentation
- Support the viability of the agri-food sector and rural economy
- Direct urban growth to existing settlement areas

Since the four plans came into effect, the majority of urban growth is being directed to settlement areas, with limited lot creation in rural and agricultural areas. However, the agricultural sector continues to experience a number of intersecting challenges that affect its viability and sustainability.

The GGH has continued to experience significant farmland loss over the last decade. Much of this loss is due to urban growth and is occurring outside the Greenbelt area. There is also ongoing pressure to convert agricultural lands to other uses, including golf courses, rural residential, aggregate extraction and infrastructure such as roads and utilities. This fragments the agricultural land base and increases conflicts when these uses are located near active farm operations.

The overall number of farms is also declining, due to farm consolidations and increasing average farm sizes as well as uncertainty about the future of agriculture outside the Greenbelt area. Some areas in the GGH have experienced significant changes in ownership of agricultural lands due to purchase by developers and investors, including foreign purchasers, in the expectation that the land will be designated for urban development. This “land-banking” drives prices up beyond affordability for economically viable agricultural operations and limits viability for new entrants. Another consequence is that tenant farmers do not have the incentive or the capacity to make the necessary investments to sustain profitable agriculture. These issues are particularly acute in the lands below the Greenbelt and in some areas where investors have “leapfrogged” over the Greenbelt to areas in the outer ring, such as Simcoe and Brant Counties.
During the consultations for this review, we heard about many other challenges that affect the viability and sustainability of the agricultural sector, including:

• Increasing land use conflicts between farm and non-farm land uses such as traffic, trespassing, vandalism and complaints about odours and noise
• Difficulty accessing farmland for both new entrants and existing farmers
• Insufficient infrastructure and farm services to support the sector
• Concerns about the effects of natural heritage policies on agricultural viability, especially in specialty crop areas
• A complex regulatory framework that includes and extends beyond the policies of the four plans, often with multiple approvals or requirements for farming practices
• A changing climate with impacts on food production and water available for agriculture

The PPS, Growth Plan and Greenbelt plans were created at different times for different purposes and therefore approach agricultural policy in different ways.

The PPS aims to protect prime agricultural areas for long-term use by focusing growth and development in settlement areas, and providing for the wise use and management of agricultural resources.

The Growth Plan plays an important role in protecting farmland as it directs growth to urban areas, provides intensification and density targets, and curbs sprawl. It does permit expansion into prime agricultural areas, subject to criteria set out in the plan which require that:

• The lands do not comprise part of a specialty crop area
• There are no reasonable alternative options which avoid prime agricultural areas
• There are no reasonable alternative options located on lower priority agricultural lands

The Growth Plan defers to the PPS and Greenbelt plans for specific agricultural land use policies outside and within the Greenbelt, respectively. The Growth Plan also provides for sub-area assessments to

**URBAN AGRICULTURE IN BRAMPTON**

As the name implies, urban agriculture produces food in urban and near-urban areas. It can include commercial farms, institutional farms and gardens, greenhouses, hydroponic facilities, aquaculture, community gardens and rooftop gardens.

An inspiring example of urban agriculture is the 15-hectare McVean Farm in northeast Brampton within the Claireville Conservation Area – a start-up farm that is a joint project of the Toronto and Region Conservation Authority (TRCA) and FarmStart. TRCA, acting on its Sustainable Near-Urban Agriculture Policy, leases the land to FarmStart, an organization that works on the ground with new farmers. Critical support includes access to land, infrastructure and equipment as well as technical training, business planning, skills development and mentorship during the first six years of enterprise start-ups. There are currently over a dozen farmers at McVean, including many new Canadians.

Above: McVean Farm.
5.0 SUPPORTING AGRICULTURE

identify and protect prime agricultural areas, including specialty crop areas, across the GGH (outside the Greenbelt). These assessments have not been undertaken to date, but research is underway (e.g., on regional agri-food growth strategies and asset mapping) to consider enhanced opportunities for protecting agricultural lands and farm viability.

The Greenbelt Plan aims to permanently protect the agricultural land base against loss and fragmentation, and supports agriculture as the predominant land use. It identifies an Agricultural System comprised of specialty crop, prime agricultural and rural areas. The Greenbelt Plan specialty crop areas consist of the Niagara Tender Fruit and Grape Area and the Holland Marsh (identified and mapped in the Greenbelt Plan by the Province). Specialty crop areas are afforded the highest level of protection in the Greenbelt Plan due to their unique combination of microclimate, soils, skilled farmers and capital investments to support specialty crop production.

The boundaries of the Greenbelt Plan were delineated to ensure that all the provincially identified and mapped specialty crop areas were included. Prime agricultural areas outside the specialty crop areas are identified and designated by municipalities. To assist municipalities with Greenbelt Plan conformity, the Province undertook a land evaluation area review (LEAR) for the Greenbelt Plan area that included assessment of soils, climate, productivity and land fragmentation. Municipalities within the Greenbelt Plan area used the provincial LEAR to varying degrees during the identification and designation process. In rural areas, agriculture is supported as a permitted use along with other rural land uses.

The Greenbelt Plan provides a stronger level of protection for agriculture than the PPS and the Growth Plan. For example, it states that:

- Settlement area expansions can only be considered as part of the 10-year plan review
- Conversion of land in prime agricultural areas to rural land uses (e.g., recreational, tourism, institutional and resource-based uses) is not permitted

The Oak Ridges Moraine Conservation Plan and Niagara Escarpment Plan are environmentally focused plans and approach agriculture as a permitted use.
Our recommendations on agriculture are provided below in two sections:

- Productive farmland
- Healthy agricultural economy

5.1 Productive Farmland

The PPS includes expanded and clarified permitted uses and definitions for prime agricultural areas, including value-added processing, retailing and agri-tourism. These changes have been well received by agricultural stakeholders and municipalities across the province. The Greenbelt plans are based on earlier versions of the PPS and do not reflect this recent policy direction. The Ministry of Agriculture, Food and Rural Affairs recently released draft Guidelines on Permitted Uses in Ontario’s Prime Agricultural Areas with the aim of ensuring consistent policy implementation and leveling the playing field across different jurisdictions. It is expected that they will be finalized and released in early 2016.

The four plans and the PPS discourage lot creation and specify minimum lot sizes which are intended to reduce the fragmentation of agricultural land and maintain the viability of agriculture. We heard that this approach does not provide for small lots appropriate to the needs of niche or micro-farming that may be appropriate in some areas. However, the Ministry of Agriculture, Food and Rural Affairs research indicates that there are a significant number of small lots (under 16 hectares/40 acres in size) available for farming in the region, most of which are located in near-urban areas. The Ministry of Agriculture, Food and Rural Affairs is in the process of developing a guide to lot creation in prime agricultural areas that will address this issue, along with the issue of access to farmland in near-urban areas.

As the population of the GGH grows, non-agricultural and agricultural uses are increasingly located in close proximity to one another. This presents challenges for the viability of agriculture, such as constraints on farmland and operations where residential developments are located near active farming uses. In some cases, this can put pressure on farmers to relocate their operations further away from residential areas. It can also
result in the loss of agricultural infrastructure and services such as farm equipment dealerships.

Recognizing that the strength and health of the natural heritage and agricultural systems are interdependent, the Greenbelt Plan’s Natural Heritage System functions as an overlay on top of the Agricultural System of the Greenbelt Plan. However, there are variations in municipal approaches to implementing natural heritage and agricultural policies in the four plans. We heard about some challenges in meeting Greenbelt Plan requirements particularly in specialty crop areas. These challenges include the requirements for vegetation protection zones (i.e. 30 metre setbacks) from key natural heritage features for new buildings or structures, and for natural heritage and/or hydrological evaluation within 120 metres of all key features. Concerns have also been raised that the definition of watercourse, especially in the case of intermittent streams, is too broad, and should not include human-made irrigation and drainage systems.

**RECOMMENDATION 28**

Building on the Agricultural System approach in the current Greenbelt Plan, work with municipalities, the agriculture sector and other stakeholders to provide policy direction and guidance toward the consistent identification, mapping and protection of an integrated agricultural system across the GGH.

**RECOMMENDATION 29**

Consider stronger criteria to limit the conversion and fragmentation of prime agricultural lands, particularly in the outer ring of the GGH, while recognizing and supporting the updated PPS agricultural policies and the supporting Guidelines on Permitted Uses in Ontario’s Prime Agricultural Areas.

**RECOMMENDATION 30**

Provide policy direction and guidelines to ensure that, where appropriate, studies and assessment of potential impacts on agriculture (e.g., agricultural impact assessments) are required for proposed major transportation infrastructure, urban boundary expansions and other major development adjacent or in close proximity to farms.
31 RECOMMENDATION 31
Provide policy direction and guidelines to improve compatibility and reduce conflicts between farms and adjacent non-agricultural uses, for example through requirements for edge planning such as buffers on urban development adjacent to farmland

32 RECOMMENDATION 32
Provide policy direction to promote access to local and healthy food for all communities in the region, such as support for regional/local food strategies, opportunities for urban and near-urban agriculture, hubs, distribution centres, and other measures to support urban and near-urban agriculture

33 RECOMMENDATION 33
Align agricultural terminology and policies in the four plans with the PPS, except where they are specific to particular geography or unique to the plan. Include consideration of opportunities to foster economic diversification of farms by providing greater flexibility for on-farm, value-added uses while maintaining protection of ecological, hydrological and geological features and functions

34 RECOMMENDATION 34
To ensure that agricultural and natural heritage policies are balanced and consistently implemented, provide policy direction and guidance to reduce the impacts on agricultural viability while maintaining the integrity of ecological features and functions (e.g., policies regarding setbacks from intermittent streams in specialty crop areas)

35 COMPLEMENTARY RECOMMENDATION 35
Work with the Municipal Property Assessment Corporation, research institutions and other appropriate partners to monitor and assess farmland ownership trends in the GGH in order to better understand the long-term implications for farm viability
5.2 Healthy Agricultural Economy

A recurring theme during this review was the need for an improved understanding of all the needs of the agricultural sector. As we heard during the consultations, “saving the land won’t save the farmer.” We believe that a complete agricultural system should include not only the agricultural land base, but also other elements of the agri-food sector that are essential to support a healthy agricultural economy over the long term. During the Coordinated Review, we heard about some key issues that could be addressed by such an approach. They include infrastructure, water management, succession planning for older farmers and access to agricultural land for new farmers.

The agricultural sector is experiencing a loss of supportive infrastructure and farm services (e.g., processing facilities) as the number of farm operations in the GGH declines. The Greenbelt Plan and Growth Plan both have policies that aim to support agriculture-related infrastructure such as drainage and irrigation. However, agricultural stakeholders have asked for other types of support for agri-food infrastructure, including regional food hubs, broadband, three-phase power, natural gas and access to reliable water supplies. The Ministry of Agriculture, Food and Rural Affairs is currently working with the Golden Horseshoe Food and Farming Alliance to map agri-food assets (e.g., processing facilities, manufacturing, wholesalers) with the support of municipalities. The Ministry of Agriculture, Food and Rural Affairs has also undertaken work on the concept of regional agri-food strategies, a potential approach for combining protection of the land base with economic incentives and infrastructure development to create the conditions for sustainable agriculture.

Agricultural viability is also challenged by the need to address the multiple regulations and approvals for agricultural uses and activities. Agricultural stakeholders have identified that approval times and associated costs related to meeting these requirements can be very onerous.

The recommendations in this chapter are intended to work in conjunction with recommendations in other sections of the Report to support the long-term viability of the agri-food sector. For example, our COOPER’S FARM

Farming for over 20 years in Durham Region, Steve and Lisa Cooper realized early on that diversifying was a crucial tool to success. They produce livestock and grow hay and some feed crops. They have added value to their work with a Community Supported Agriculture (CSA) venture, participation in five farmers’ markets, and an on-farm roadside store.

CSA relies on building a direct relationship between the farmer and the customer. The Coopers started in 2007 with 50 customer families and now have 550 in the summer and 250 in the winter. To help solidify the relationship with non-farmers, the Coopers have also built an agri-entertainment and education business including a corn maze and farm tours.

These Greenbelt farmers were recognized as Canada’s Outstanding Young Farmers of 2010, a tribute to their innovation and farm management.
recommendations for growth management, infrastructure, climate change, complete communities, goods movement and integrated planning must all consider effects on Ontario’s agri-food sector ensuring that policies, tools or guidance are put in place to help support long-term viability of agriculture.

SELECTION OF LEGISLATION, APPROVALS AND PERMITS APPLICABLE TO AGRICULTURE

- Conservation Authority permits
- Drainage Act
- Farm Property Class Tax Rate Program
- Farming and Food Production Protection Act
- Food safety
- Local Food Act

36 COMPLEMENTARY RECOMMENDATION 36
Streamline the approvals processes at all levels of government to reduce the costs of permits and approval times to farmers. Processes might include the use of a one-window application process for agriculture and/or a trained agricultural specialist/facilitator in each regional/county government and conservation authority within the GGH to help navigate the policies and regulations applying to the agriculture sector.

37 COMPLEMENTARY RECOMMENDATION 37
Work with agricultural stakeholders on mechanisms to build greater understanding and awareness about agricultural and rural issues, and support a “positive planning” approach to better integrate agricultural interests into land use planning. Examples may include education and training, user-friendly guidance to farmers to facilitate understanding of the four plans, agricultural facilitators/liaison officers in municipalities or conservation authorities, and/or enhanced agricultural advisory committees.

38 COMPLEMENTARY RECOMMENDATION 38
Apply a Greater Golden Horseshoe agriculture lens to existing and future provincial policies and programs to ensure that the unique needs of agriculture in the GGH are identified and addressed. Examples may include climate change, transportation and infrastructure planning, financial tools (e.g., property taxation, development charges), community improvement plans, education and awareness, protection and improvement of soil health, assistance for new and beginning farmers, and leasing of publicly owned lands.

39 COMPLEMENTARY RECOMMENDATION 39
Explore opportunities to encourage the appropriate use of agricultural impact assessments to minimize impacts to farmland and agricultural operations through the Environmental Assessment Act processes.
6

Protecting Natural and Cultural Heritage
The natural systems in the GGH, which encompass natural heritage and water resources, supply and support life-sustaining air, water, biodiversity and soils.

These systems include connected features and functions that work together to support terrestrial and aquatic ecosystems by providing food, shelter and migratory pathways. Natural systems also provide ecosystem services like water filtration, and flood and erosion control, provide recreation areas, and supply resources like aggregates that support our rural and urban lifestyles and economies. They are essential for the health of both human and wildlife populations now and in the years and millennia to come.

Natural systems are an integral part of the landscapes that have evolved in the GGH since glaciation. They are characterized by significant geological formations including the Niagara Escarpment, Oak Ridges Moraine and Lake Iroquois shoreline, local moraines (such as the Oro, Waterloo, Paris-Galt and Orangeville formations) the Great Lakes, diverse watersheds, wetlands, and a complex array of flora and fauna.

In an era when climate change is a dominating concern, we recognize that natural systems provide carbon storage and help us adapt to the changing climate. Just as importantly, natural systems help wildlife species adapt to a changing climate thus conserving biodiversity. However, natural systems themselves are vulnerable to climate change and may require assistance to maintain their functions.

Aggregates contained in geological formations represent another natural resource that is essential for continued growth and development. However, the extraction and transportation of aggregates cause a variety of impacts on the natural environment and surrounding agricultural lands, including habitat destruction and fragmentation, loss of key ecological functions, loss of productive agricultural land, damage to local roads and safety issues. We need to find a better balance between supplying essential aggregate materials for buildings and infrastructure, while minimizing the immediate and long-term cumulative effects of extraction and transportation.
Cultural heritage embodies, protects and sustains our sense of identity and meaning, and helps to make communities vital and special places. Heritage resources provide important visual landmarks, enhance community appeal and convey a sense of place. They also create opportunities for recreation and tourism, and help attract investment based on cultural amenities. In many communities in the GGH, built heritage, cultural heritage landscapes and archaeological resources are under pressure from development and site alteration.

This chapter provides our recommendations on:

- Water and watersheds
- Natural heritage
- Aggregates
- Cultural heritage

6.1 Water and Watersheds

The GGH is blessed with abundant sources of water that sustain human life, our economies and natural systems. The headwaters of many of our rivers originate from several moraines (including the Oak Ridges, Orangeville, Waterloo, Oro and Paris-Galt moraines) and the Niagara Escarpment. These areas have significant recharge areas that maintain our aquifers. The water in these aquifers is used for drinking water, agriculture and other purposes, and feeds the rivers and streams that flow southwards to Lake Ontario and Lake Erie and northwards to Georgian Bay (including via Lake Simcoe and the Kawartha Lakes). In addition to providing drinking water and ecological functions, these water resources provide a key competitive advantage for many industries in the region, including agriculture.

Protection and stewardship of water resources depend on a number of instruments and processes. Many conservation authorities have prepared integrated watershed management plans to protect and manage water resources and natural heritage in their jurisdictions, in collaboration with municipalities, stakeholders and the public. The Greenbelt Plan performance indicators show that planning for water resources on a watershed basis is occurring broadly in the Greenbelt area, with 70 per cent of the Greenbelt covered by completed
watershed plans. In comparison, only 35 per cent of the land outside the Greenbelt area, but within the jurisdiction of the 14 Conservation Authorities in the GGH, is covered by completed watershed plans.

The PPS provides a general framework to protect water features and functions, as well as to maintain linkages among these features within their respective water resource systems. The Oak Ridges Moraine Conservation Plan area was delineated primarily on the basis of protecting the Oak Ridges Moraine and its associated water recharge and natural areas. The Greenbelt Plan builds on this protection by

Subwatersheds Within the Growth Plan Area of the Greater Golden Horseshoe

Note: The information displayed on this map is not to scale, does not accurately reflect approved land-use and planning boundaries, and may be out of date. For more information on precise boundaries, the appropriate municipality should be consulted. For more information on Greenbelt Area boundaries, the Greenbelt Plan 2005 should be consulted. The Province of Ontario assumes no responsibility or liability for any consequences of any use made of this map.
incluing additional natural areas, headwaters and rural areas. The Oak
Ridges Moraine Conservation Plan requires watershed plans and the
Greenbelt Plan requires that expansions for water and sewer servicing be
reviewed under the Environmental Assessment Act prior to approval of a
settlement area expansion. Significant portions of other moraines in the
Growth Plan area, such as the Orangeville and Paris-Galt moraines, are
located outside the area of the Greenbelt plans, as are the headwaters of
some rivers (e.g., Grand River), most river valleys, and most of the Great
Lakes coastal areas.

Since the four plans were put into place, conservation authorities have
been working to develop source water protection plans under the Clean
Water Act. They are intended to protect our municipal drinking water
supplies, and are improving our knowledge of surface and groundwater
systems, including the location of significant groundwater recharge areas
and highly vulnerable aquifers. The Lake Simcoe Protection Plan requires
watershed plans and also provides a high level of protection for water
resources, including not only significant groundwater recharge areas
but also ecologically significant groundwater recharge areas and
shoreline natural areas.

Future growth will increase stresses on ecological functions and on water
supplies for urban and rural uses, particularly in inland communities that
rely on groundwater. The results of water budget studies conducted
under the Clean Water Act predict that some areas (e.g., Orangeville,
Guelph) may experience severe challenges in accommodating forecasted
growth using a groundwater-based supply. Some municipalities (e.g.,
Region of Waterloo) have deferred the need to supplement their
groundwater-based supplies by implementing comprehensive water
demand management programs and water conservation bylaws. Other
municipalities (e.g., parts of Simcoe County and York Region) have
augmented their groundwater supplies with water from Lake Ontario,
Georgian Bay or Lake Simcoe. However, water supplies from the Great
Lakes require the construction of expensive and energy-intensive water
pipelines, which in some areas has generated demand for additional
growth and services along the pipeline to help pay for them. In addition,
in future growth can increase pressures on the capacity of water bodies to
receive wastewater and stormwater effluent from urban areas.

**DUFFINS CREEK WATERSHED**

Several scenarios of future land use were modelled to explore the implications
of different development patterns and natural heritage systems in the Watershed.
This showed that multiple benefits could be achieved through protection of existing
natural features in developing urban lands, along with increasing natural cover in
the headwater areas of the Oak Ridges Moraine and Greenbelt. These benefits
would include:

- Reducing flooding and erosion hazards by attenuating stormwater runoff
  volumes and peak flows
- Protecting ground water recharge and discharge to sustain ecological
  functions such as stream base flows and fish habitat
- Meeting human needs for safe water supplies and agricultural uses
- Reducing phosphorus and sediment loads to Lake Ontario to protect
  our main drinking water source and keep the lake clean for swimming,
  fishing and other recreational uses
The Greenbelt plans are making some modest progress in protecting water quality and water quantity, particularly in the Oak Ridges Moraine area. For example, a recent report card by the Conservation Authorities Moraine Coalition concluded that the plans have generally been able to maintain existing surface water quality conditions in the Oak Ridges Moraine Conservation Plan and adjacent Greenbelt lands. However, urbanized and agricultural portions of the Greenbelt Plan areas are still experiencing water quality degradation and almost half of the watersheds scored fair, poor or very poor for surface water quality. In addition, outside the Greenbelt, and particularly in the more heavily urbanized areas along Lake Ontario, surface water quality is reported by conservation authorities to be poor to very poor.

The Great Lakes Protection Act (Bill 66) was passed by the Province in October 2015. This act recognizes the environmental, economic and social values of the Great Lakes and provides new legislative tools to help coordinate efforts to address cumulative impacts of activities on the ecological integrity of lakes throughout the Great Lakes’ watersheds. For example, the act requires Ontario’s Great Lakes Strategy to be regularly reviewed, enables targets to be set on Great Lakes matters and enables geographically focused initiatives to be developed with local public bodies and interests to help achieve targets. Integration of the tools under the act with matters addressed by the four provincial plans, such as watershed planning, infrastructure decisions and land use planning, will be critical to both the protection of the Great Lakes and efficient implementation of provincial plans.

During the consultations for this review, we heard strong support from stakeholders and the public for greater efforts towards integrated management of watersheds. This is essential to ensure that our watersheds can continue to provide safe water supplies; sustain water resources, natural areas and biodiversity; provide assimilative capacity for wastewater; sustain water quality and quantity; and reduce damage...
and risks from flooding and erosion. We also received recommendations
to grow the Greenbelt by adding areas of critical hydrological
significance, such as headwaters of major rivers, moraines, groundwater
recharge areas, important surface water features and urban river valleys
(see section 9.1.2 for our recommendations on growing the Greenbelt).

### RECOMMENDATION 40

Strengthen water resource protection in the Growth Plan and the
Greenbelt plans by:

- Integrating protective policies from the PPS without reducing
  any of the protections in the existing plans
- Exploring whether any of the water resource policies in the
  Greenbelt Plan, Oak Ridges Moraine Conservation Plan, source
  water protection plans and the Lake Simcoe Protection Plan
  should be more broadly applied to the Growth Plan
- Recognizing Ontario’s Great Lakes Strategy and Great Lakes
  Protection Act in the Growth Plan and Greenbelt plans and
  ensure that implementation of the plans and implementation
  of provincial direction related to the Great Lakes are
  appropriately integrated

### RECOMMENDATION 41

Strengthen protection of water resources throughout the area of the
four plans by requiring municipalities that share a watershed to work
with one another and with conservation authorities to develop
integrated watershed management plans and sub-watershed plans.
Watershed planning at the appropriate scales should inform the
development of municipal official plans, secondary plans and block
plans. Watershed and sub-watershed planning should address:

- Climate change mitigation and adaptation, including
  resilience to increased flooding risk
- Source water protection plans, science and information
- Water budgeting and conservation
- Shared water resource management between municipalities
  that share a water source

*(Recommendation 41 continued on next page)*
A PLAN FOR BIODIVERSITY

In 2012, the Government of Ontario released Biodiversity: It’s In Our Nature, which is Ontario’s implementation plan for advancing biodiversity conservation. The plan includes over 100 actions and activities for implementation. They will help to address threats to the province’s biodiversity such as habitat loss, pollution, invasive species, unsustainable use of resources, population growth and climate change.

(Recommendation 41 continued)

- Capacity to supply water, treat and manage stormwater, treat and assimilate wastewater, and foster and sustain healthy natural systems
- Cumulative impacts of existing land uses and proposed developments in the watershed
- Measures to protect people and property from natural hazards
- Targets and measures to protect water quality and quantity
- Measures to protect natural heritage systems, water resources and aquatic ecology
- Approaches to address historic sources of contamination
- Linkages with infrastructure plans and official plans
- Environmental monitoring to provide at least five years of data to inform preparation of a watershed or sub-watershed plan
- Monitoring and reporting requirements to evaluate the success of plan implementation and the state of watershed health

COMPLEMENTARY RECOMMENDATION 42

Develop provincial guidance on watershed planning, including monitoring of water and natural heritage, to support the implementation of Recommendation 41

6.2 Natural Heritage

Natural heritage systems include natural features, areas and linkages that provide connectivity. They support the natural processes and ecosystems that are necessary to maintain biological and geological diversity, natural functions and viable populations of native species. They provide essential ecosystem services such as carbon sequestration; resilience to climate change; temperature moderation; clean air; flood control; water storage, supply and purification; biodiversity conservation; and pollination. They also contribute to human health and well-being by providing opportunities for active recreation as well as social, mental and spiritual benefits.
There are many threats to natural systems and biodiversity in the GGH, including invasive species, pollution and conflicts with land uses such as agriculture, transportation, urban development and infrastructure, and aggregate extraction. Habitat loss and fragmentation constitute the primary threat to Ontario’s biodiversity.\(^{44}\) The cumulative impact of a series of seemingly small habitat losses can be significant and negatively affect the delivery of nature’s services to our communities. A 2010 analysis of factors affecting endangered and threatened species showed that habitat loss is the predominant threat to 85 per cent of the 199 species at risk in the Province.\(^{45}\)

Protection of natural heritage systems enhances resilience of ecosystems and enables adaptation to stresses such as climate change, invasive species and pollution. Robust, viable, connected natural heritage systems enable us to better respond to emerging environmental issues. For example, a well-designed and well-protected natural heritage system could provide much-needed habitat to support healthy pollinator populations, which in turn contribute to a sustainable food supply and community well-being.

In order to protect the region’s important natural resources and biodiversity, the three Greenbelt plans and the Growth Plan, together with the PPS, pursue the following related objectives:

- Protect the land needed to maintain, improve and, where possible, restore the environmental integrity of the region
- Protect, maintain and enhance features and their functions and conserve biodiversity
- Reduce the pressure on natural heritage areas by accommodating growth in well-designed, compact settlement areas

We are starting to see progress on meeting the natural heritage objectives of the plans, particularly the Greenbelt plans, although losses of natural areas are still occurring. For example, between 2000 to 2002 and 2009 to 2011 the Oak Ridges Moraine Conservation Plan and

---


Niagara Escarpment Plan areas lost a relatively small amount of wetlands (less than 50 hectares each) while the Growth Plan area outside the Greenbelt had greater loss of wetlands (more than 1500 hectares). Over the same time period, the Growth Plan area outside the Greenbelt also had the greatest loss of woodlands (approximately 3500 hectares), and the Niagara Escarpment Plan had the least (approximately 200 hectares). The lands below the Greenbelt in the inner ring are particularly vulnerable, where activities such as filling, cutting forests and wetland degradation have been undertaken, often illegally, in advance of designations for urban settlement expansion.
The four plans were developed at different times and reflect different approaches to natural heritage protection, ranging from designation of natural features to the identification of integrated natural heritage systems. A comparison of the approaches in the four plans and the PPS reveals that:

- Niagara Escarpment Plan and Oak Ridges Moraine Conservation Plan do not explicitly define a natural heritage system; instead, they place areas with the highest concentration of natural heritage features in the most protective land use designations (Niagara Escarpment Plan Escarpment Natural and Protection Areas; Oak Ridges Moraine Conservation Plan Natural Core and Natural Linkage Areas)
- The Greenbelt Plan defines a natural heritage system that includes sensitive and/or significant natural features and functions. It is to be managed as a connected and integrated system, and is displayed as an overlay (not a designation) on top of the Protected Countryside
- The Growth Plan states that the Province will, in consultation with municipalities and other stakeholders, undertake sub-area assessments to identify natural heritage systems, and where appropriate develop additional policies for their protection. This policy has not yet been implemented
- The PPS requires municipalities to identify natural heritage systems and to protect, maintain, restore, or, where possible, improve the long-term ecological function and biodiversity of natural heritage systems

See Section 9.3 for our recommendations on aligning the terminology and policies in the four plans.

As official plans are being updated, municipalities are identifying natural heritage systems in accordance with the PPS direction to identify systems in addition to features. A significant amount of the existing mapping is based on features, so municipalities are updating the boundaries to provide for the systems approach. Systems-based mapping is in early stages, and different municipalities are in different phases of mapping and development of their natural heritage systems. For example, the Region of York has a Regional Greenlands System that protects, enhances and

**RICE LAKE PLAINS - ENHANCING NATURAL SYSTEM PROTECTION**

The success of the four plans relies in part on the many local partnerships that have been formed using tools outside the land use planning process to protect, restore and enhance natural systems, such as stewardship, education and land securement. For example, in the Rice Lake Plains at the eastern end of the Oak Ridges Moraine, rare tallgrass prairie and oak savannah ecosystems have been restored, resulting in an explosion of colourful prairie wildflowers and protected habitat for unique species like the threatened Eastern Hog-nosed snake.

*Above: Prairie savannah wildflowers.*
The cumulative impact of a series of seemingly small habitat losses can be significant and negatively affect the delivery of nature’s services to our communities.

strengthens natural heritage features, linkages and functions. Peel Region is working towards a systems-based approach to update its Greenlands System, and Halton has recently approved a Regional natural heritage system. Across the province, municipalities continue to improve the identification and protection of their natural heritage systems.

During the consultations for this review, environmental stakeholders raised a number of concerns about the long-term future of the natural heritage systems in the area of the four plans. For example:

• Despite protective policies, loss of wetlands and woodlands is still occurring in the areas of the Greenbelt plans
• In areas outside the Greenbelt, wetlands and woodlands are still being lost at a high rate, despite policies in the Growth Plan and PPS
• Natural heritage system planning is not yet universal, and many municipalities still use a “natural features” approach
• Approaches to mapping natural heritage systems and protecting them in official plans vary among municipalities and conservation authorities due to differences in capacity and political leadership
• Although some municipalities and conservation authorities are showing leadership in recognizing the values of natural heritage systems for climate change mitigation and adaptation, many are not
• Insufficient attention is paid to securement, stewardship, restoration and enhancement of natural heritage systems and biodiversity
• Insufficient funds are directed to monitoring and reporting

We heard during the consultations that excess soil from development is being disposed of at sites illegally and in improper locations. Participants expressed concerns regarding inadequate oversight and enforcement tools, inconsistency in rules applied in various circumstances, and inadequate technical guidance on appropriate re-use and testing of excess soils. We also heard that parties that excavate soil during development should take greater responsibility to ensure it reaches an appropriate end use and that planning for re-use of soil should occur
earlier in the process. The Ministry of Environment and Climate Change recently released best practices for excess soil management and is working with other ministries to undertake a review of excess soil management policy and ensure that policy tools and direction are in place for consistent, safe and sustainable re-use of soil.

Environmental groups have also recommended a broad landscape approach to natural heritage protection that would include connections to major natural systems beyond the four plans. This would help to sustain biodiversity, reduce landscape fragmentation and build resilience to climate change over the long term. Other stakeholders (e.g., farmers, developers and municipalities) called for greater flexibility at the local level when mapping natural heritage features and applying natural heritage policies.

**RECOMMENDATION 43**

Improve mapping of natural heritage systems by:

- Developing, in collaboration with conservation authorities, municipalities and other partners, a Provincially led, large scale map of natural heritage systems, using a phased approach to sub-regions within the GGH to address priority needs
- Providing guidelines on how to consistently map, define and monitor natural heritage systems, including guidance on connections between regional and local scale systems
- Requiring consistent and comprehensive local scale mapping and protection of robust, long-term, viable natural heritage systems as part of integrated watershed and sub-watershed plans, prior to approval of secondary and block plans (see Section 6.1)

**RECOMMENDATION 44**

Strengthen protection of natural heritage systems by:

- Developing a natural heritage system enhancement strategy for the area of the four plans, including priorities and resources to implement securement, stewardship, restoration and enhancement of natural heritage features, linkages and functions

*(Recommendation 44 continued on next page)*
(Recommendation 44 continued)

- Reviewing and updating the natural heritage policies of the plans to ensure alignment and consistency with PPS policies that require municipalities to identify natural heritage systems and to protect, maintain, restore, or where possible improve their long-term ecological function and biodiversity
- Incorporating the Greenbelt Plan’s Natural Heritage System policies and overlay approach into the Growth Plan as a means of providing a more robust natural heritage system for the non-Greenbelt portions of the Growth Plan area (taking into account the provisions in Recommendation 34)
- Applying the mitigation hierarchy by first considering options to avoid or minimize harm, then options to restore natural systems. Where preservation and enhancement are not possible, explore measures to reduce and potentially offset the negative impacts of roads, other infrastructure and major urban developments on natural heritage systems and biodiversity. Consider using best practices and emerging compensation protocols
- Exploring approaches to apply credits for local scale features such as small woodlands and locally significant wetlands
- Building on the external connection policies of the Greenbelt Plan by developing a strategy to connect the natural heritage systems of the four plans to those outside the region, for example the Adirondack to Algonquin corridor, Prince Edward County, Great Lakes Shorelines, Kawartha Highlands and Carolinian Canada

Complementary Recommendation 45

Support involvement by farmers, other landowners, community groups and the public in protection, stewardship, restoration and enhancement of natural heritage systems by:

- Increasing access to education and incentives to encourage landowners to protect natural heritage systems and maintain ecosystem services
- Supporting and promoting sustainable forest and woodlot management
- Supporting and promoting community-led protection and stewardship initiatives
6.3 Aggregates

The GGH consumes approximately 90 to 100 million tonnes of aggregate per year, more than half of Ontario’s total consumption, to support the existing and growing population. About 35 per cent of this amount is produced within the areas of the four plans, which contain high-quality sources of aggregates that are close to the GGH market.

There are significant environmental and economic benefits of extracting aggregate close to market in terms of transportation costs, greenhouse gas emissions, and wear and tear of the truck routes used to transport the aggregate. Alternate modes of transportation (e.g., rail or ship) are currently not feasible due to the lack of rail infrastructure, intermodal transport hubs and suitable depots at shipyards.

In 2010, the State of the Aggregate Resource in Ontario Study examined a sample of licensed reserves in the province and estimated that there are approximately 1.47 billion tonnes of high-quality bedrock reserves close to the GTA market. High-quality aggregate resources are needed to build higher-density developments and the infrastructure required by the Growth Plan. The Ministry of Natural Resources and Forestry is currently developing a request for proposals for an updated supply/demand analysis for aggregate resource availability within the GGH.

---

A major challenge in the areas of the Greenbelt plans is to make aggregates available for building and infrastructure uses while also protecting prime agricultural lands, specialty crop areas, water resources, natural heritage systems and scenic landscapes. Since 2005, when the Greenbelt Plan was introduced, 12 new aggregate licenses have been approved within the areas of the Greenbelt plans (four within the Protected Countryside of the Greenbelt Plan, six within the Countryside Area designation of the Oak Ridges Moraine Conservation Plan, and two within the Niagara Escarpment Plan area).

The provincial framework for aggregate resources in Ontario has both a regulatory and a planning policy context based on the Aggregate Resources Act and the Planning Act, respectively. The Aggregate Resources Act includes requirements for progressive rehabilitation of pits and quarries once extraction operations are complete. The 2010 State of Aggregate Resource in Ontario Study found that only 58 per cent of the 50 pits and quarries reviewed had been subject to some progressive rehabilitation. At the time of writing this report, the Aggregate Resources Act is being reviewed and the Ministries of Natural Resources and Forestry; Agriculture, Food and Rural Affairs; and Northern Development and Mines are working to improve the regulatory framework for aggregate resources management in the Province.

In the GGH, the Growth Plan provides that the Ministers of Infrastructure and Natural Resources and Forestry will work with municipalities, producers of mineral aggregate resources, and other stakeholders to identify significant mineral aggregate resources, and to develop a long-term strategy for ensuring the wise use, conservation, availability and management of mineral aggregate resources in the GGH, as well as identifying opportunities for resource recovery and for coordinated approaches to rehabilitation where feasible. This policy has not been fully implemented.

The Greenbelt plans allow aggregate extraction in certain designated lands, with specific conditions. New aggregate resource extraction is prohibited in Natural Core Areas of the Oak Ridges Moraine Conservation Plan as well as Escarpment Natural Areas and Escarpment Protection Areas of the Niagara Escarpment Plan.
In September 2014, the Niagara Escarpment Commission voted to recommend to the Minister of Natural Resources and Forestry that no further extraction be permitted within the Niagara Escarpment Plan area. This was in part due to concerns that in some quarries, where extraction is below the water table, it is necessary to pump water in perpetuity. This has long-term implications for water supplies and ecosystem integrity. While we recognize these concerns, and agree that ensuring the protection of the Escarpment Natural Areas and Escarpment Protected Area is paramount, we believe the Escarpment Rural areas should continue to be available for aggregate extraction, subject to the provisions in Complementary Recommendation 47. We need an approach that will take into account the needs for specific types of aggregate to support future growth in the GGH, review proposals on a case-by-case basis, and apply stringent controls to protect water resources, natural heritage, agriculture, specialty crop lands and scenic resources.

**COMPLEMENTARY RECOMMENDATION 47**

Develop a long-term strategy for ensuring the wise use, conservation, availability and management of mineral aggregate resources in the GGH, as well as identifying opportunities for resource recovery and coordinated approaches to rehabilitation:

- Assess future product and source requirements for aggregates to support the new development, intensification areas, infrastructure and other uses envisioned in the Growth Plan
- Identify areas of unexploited high-potential aggregate where extraction operations would have the least impact on natural heritage systems, water resources and prime agricultural lands
- Consider prohibiting extraction in areas that would require perpetual water management after extraction is complete
- Provide stronger policy and more specific guidance on:
  - Protecting and mitigating impacts to prime agricultural areas and active agricultural operations
  - Protecting ecosystem features and functions during extraction operations and in the rehabilitation process
  - Minimize the loss or degradation of natural heritage systems and water resources by applying the mitigation hierarchy that

*(Complementary Recommendation 47 continued on next page)*
Identifying, protecting and managing cultural heritage resources gives communities unique character and identity, fosters cultural and heritage tourism, supports local economies and plays an important role in achieving complete communities.

(Complementary Recommendation 47 continued)

first considers options to avoid or minimize harm and then options to restore natural heritage systems and water resources. Where preservation and enhancement are not possible, investigate how an approach to compensation could be applied in the area of the four plans

- Encourage recycling and use of aggregate materials, while ensuring that aggregate materials are re-processed in appropriate locations
- Provide detailed guidance documents and training for progressive rehabilitation, tailored to the needs of small to large scale producers
- Improve the Ministry of Natural Resources and Forestry’s aggregate study and monitoring capability to manage the aggregate program including ways to ensure progressive rehabilitation, enforcement and data collection; undertake supply and demand market analysis; and explore increases to regulatory fees to assist with increased costs

6.4 Cultural Heritage

Ontario’s cultural heritage is evident in the varied natural, agricultural and urban landscapes that make up the province. Ontario’s cultural heritage resources belong to present and future generations of Ontarians and are vitally important to the social, economic, and cultural well-being of Ontario communities. They include built heritage resources, cultural heritage landscapes and archaeological resources. Appropriately identifying, protecting and managing cultural heritage resources gives communities unique character and identity, fosters cultural and heritage tourism, supports local economies and plays an important role in achieving complete communities.

The PPS includes new policies to wisely use and manage cultural heritage and archaeology over the long term, including:

- Requiring the conservation of significant built heritage resources, cultural heritage landscapes and archaeological resources
- Requiring demonstration that heritage attributes of a protected property will be conserved before development or...
site alteration are permitted on lands adjacent to the protected heritage property
• Promoting the use of archaeological management plans and cultural plans
• Requiring the consideration of Aboriginal interests in conserving cultural heritage and archaeological resources

The PPS works in conjunction with other related provincial policies to conserve cultural heritage resources, including (but not limited to) the Ontario Heritage Act. This act is the principal piece of legislation that protects cultural heritage resources in Ontario; it grants provincial and municipal powers to identify and protect cultural heritage resources.

In many communities, built heritage and archaeological resources are under pressure from development and site alteration. During the consultations, we heard that there is support for making sure that terminology is aligned between the four plans and the PPS, and to consider ways to encourage a consistent approach to assessing and protecting cultural heritage across all plans. In addition, there was support for measures to strengthen cultural heritage protection within the GGH, including creative approaches to adaptive re-use in areas facing high development pressures.

**RECOMMENDATION 48**

Strengthen the protection of cultural heritage resources in the plans by:
• Reviewing and updating the cultural heritage policies of the plans to ensure alignment and consistency with the PPS
• Reviewing and updating guidance on:
  • the preparation of cultural plans and archaeological management plans;
  • the protection of heritage attributes such as significant views, vistas and viewsheds; and
  • ways to incorporate heritage conservation goals and adaptive re-use during intensification in existing urban areas
• Encouraging municipalities to establish additional heritage protection efforts in areas with significant growth pressures, such as urban growth centres and designated greenfield areas
Providing Infrastructure
The GGH needs considerable investment in infrastructure to meet the demands of growth, upgrade and repair existing services, and keep the region’s economy strong and globally competitive.

Ontario municipalities own and maintain $128.3 billion in tangible capital assets on behalf of the public. Conservation authorities hold over $2 billion in flood control infrastructure, including dams. The demand for infrastructure investment is significant and available resources are limited, resulting in what is typically referred to as an “infrastructure deficit.” In 2012, a survey by the Federation of Canadian Municipalities estimated the total replacement cost of the four largest asset categories (roads, drinking water, stormwater and wastewater systems) with a condition rating of “fair to poor” to be $171.8 billion nationally. The Association of Municipalities of Ontario estimates an infrastructure deficit of at least $60 billion for municipal governments in Ontario. Given the current environment of limited financial resources, it is important that strategic approaches are taken to optimize infrastructure investments and benefits.

One of the guiding principles of the Growth Plan is to “optimize the use of existing and new infrastructure to support growth in a compact, efficient form.” By identifying areas for future development, the Plan helps to determine priorities for infrastructure investment by the Province, municipalities and the private sector. During the first round of Growth Plan conformity, municipalities identified where they plan to accommodate growth and some of the infrastructure needed to accommodate that growth. Metrolinx used this information to identify priorities for its regional transportation plan, The Big Move. In 2011, the Province released a long-term infrastructure plan, Building Together, which established the government’s strategic framework to guide investments in infrastructure. As part of the implementation of Building

---

Together, the Province committed to establishing a municipal infrastructure strategy. Launched in 2012, the strategy requires municipalities to prepare asset management plans to support their requests for investment in infrastructure, including roads, bridges, water and wastewater systems. It also encourages municipalities to improve integration of planning for land use and infrastructure, and to identify and manage risks, such as the impacts of climate change.

There are different interpretations of the term “infrastructure” in the Growth Plan, Greenbelt Plan and PPS. For the purpose of this report, infrastructure includes transportation; communications; water, wastewater and stormwater systems; green infrastructure; and energy generation and transmission. Community infrastructure is addressed in Section 4.1 of this report. Infrastructure to support rural and agricultural communities is addressed in Sections 4.2.3 and 5.2, respectively.

Our recommendations for infrastructure to service development in the area of the four plans are provided in the following sections:

- Infrastructure and land use planning
- Coordinated decision-making
- Infrastructure corridors
- Resilient infrastructure
- Infrastructure priorities
- Moving people
- Moving goods

7.1 Infrastructure and Land Use Planning

The Growth Plan, Oak Ridges Moraine Conservation Plan, Greenbelt Plan, Lake Simcoe Protection Plan and the PPS direct municipalities to plan for infrastructure and land use in an integrated fashion to ensure that municipalities get the most value out of existing infrastructure, that new infrastructure investments support growth planning objectives, and that the most cost-effective and sustainable infrastructure alternatives are identified.
For example, in the PPS and the Growth Plan, the provisions for integrating land use and infrastructure are provided at a fairly high level, leaving municipalities to decide how to achieve the goals set out in policy. In the Greenbelt Plan, municipalities are required to undertake an environmental assessment for expanded sewage and water services in advance of settlement boundary expansions, and they are not allowed to use lake-based servicing to address new growth. The Greenbelt Plan also contains provisions that prohibit extensions or expansions of existing lake-based servicing to municipalities that are not on lake-based servicing, with exceptions for failed on-site systems or public health concerns. The Oak Ridges Moraine Conservation Plan requires the completion of watershed and water infrastructure plans prior to major development.

Recommendations elsewhere in this report underscore the importance of detailed infrastructure planning to support growth management and land use planning generally. They include recommendations for more rigorous criteria proposed for settlement boundary expansion as well as for planning in relation to watersheds, stormwater, transportation, and transit. There is an opportunity to build on these recommendations in order to clarify, align and strengthen the policies of the four plans with regard to integrating land use and infrastructure planning.

It is also important to ensure that the implementation stage of infrastructure projects is integrated with land use plans to ensure efficiency and cost effectiveness. For example, when building new transit or a road, the culverts and other infrastructure under the roadway should be already assessed and upgraded as needed in order to avoid having to dig up the roadway again at a later date, creating disruption and a waste of public funds.

**RECOMMENDATION 49**

Require all municipalities in the area of the four plans to undertake integrated planning and decision-making for land use and infrastructure in order to identify the most cost-effective and

*(Recommendation 49 continued on next page)*
(Recommendation 49 continued)

sustainable options to support growth and build complete communities. This systems-based approach to decision-making should take into account such matters as:

- Growth planning and land needs assessments
- Asset management planning
- Transportation master planning
- Water, stormwater and wastewater master planning
- Watershed planning
- Natural heritage system planning
- Parks and open space planning
- Full lifecycle costing and environmental assessment of infrastructure needed for settlement expansion
- Climate change planning
- Opportunities to coordinate infrastructure needs among smaller municipalities

50 COMPLEMENTARY RECOMMENDATION 50

Work with municipalities to coordinate the delivery of infrastructure upgrades and projects in order to ensure the best use of public funds and minimize disruption for the surrounding community. This may include opportunities for cost-sharing to fund projects, and alignment of the timing of construction

51 COMPLEMENTARY RECOMMENDATION 51

Investigate approaches to develop a better understanding of region-wide constraints on growth, informed by existing and future municipal watershed plans and infrastructure plans, in order to help inform updates to Growth Plan population and employment forecasts
7.2 Coordinated Decision-Making

The Growth Plan is designed to support and prioritize the coordination of land use planning with infrastructure planning, investment and delivery with the intention of helping to ensure growth can be accommodated in the most effective and efficient way possible. However, across the GGH, there is a spectrum of approaches to managing and administering infrastructure planning and investment. For example, larger municipalities such as regional governments generally oversee all these elements, with variations in the methods and allocations of the services. In other cases, such as municipalities under a county structure, it is often the lower-tier municipalities that manage and finance infrastructure planning and investment, such as stormwater and wastewater, while the county may still be responsible for overall growth management and other services such as emergency services, waste management and affordable housing.

Growth Plan policies are primarily implemented through the upper- or single-tier municipalities. However, there are challenges when decision-making responsibilities are not well aligned between upper- and lower-tier municipalities. Specifically, this can happen when infrastructure and investment decisions are being made that are not consistent with the established growth management framework. For example, a lower-tier municipality may plan to build or upgrade water or wastewater treatment plants that are not consistent with its growth allocation from the county. This not only leads to a disconnect between the building of infrastructure and the ability to pay for it, but can also lead to pressures to approve additional growth that is not in conformity with the Growth Plan.

All the county governments in the GGH are in the outer ring, which has historically experienced much slower rates of growth than the inner ring. However, as the scale of proposed development has intensified, leading to a reduction in land supply in the inner ring, new development pressures have arisen in the outer ring (e.g., Simcoe County), resulting in lands being purchased or optioned for future purposes. These situations
7.2 COORDINATED DECISION-MAKING

highlight the need for county governments to be more engaged in managing infrastructure planning and investment in order to ensure alignment with the growth management objectives of the Growth Plan and county official plans. It also highlights the need for neighbouring single-tier municipalities to work more closely with the counties so that their infrastructure decisions are coordinated and cost efficient. In this regard, the York Durham Sewage System is a good example of efficient collaboration and partnerships among upper-tier municipalities.

The Growth Plan represents a broad vision for managing growth across the GGH. It is intended to influence decision-making at all levels, and governments should align their decisions to support the objectives of the Growth Plan and resist the temptation to make exceptions for site specific matters. We recognize that there are instances where it is necessary to resolve complex, multi-party planning matters, but transparency and inclusive participation should be ensured in any process to resolve disputes. All levels of government have a part to play in building complete communities by aligning their planning, transportation and infrastructure decisions, and ensuring that these decisions are financially and environmentally sustainable. Those decisions should also be made in ways that minimize the impact on the GGH’s valuable natural heritage, water resources and agricultural systems. As stated in Chapter 6, strengthened watershed protection and natural heritage systems extending beyond the Greenbelt and across the entire GGH could ensure that more attention is given to the assimilative capacity of watersheds. The recommendations in Chapter 5 should be integrated with infrastructure decision-making to ensure the long-term sustainability and viability of agriculture. In addition, environmental assessments should be undertaken in tandem with land use planning to provide opportunities to guide development to the most appropriate locations and facilitate mitigation of environmental impacts.

For example, in Simcoe County, which is experiencing significant growth pressures, there has been insufficient effort towards this type of integrated, coordinated decision-making. One of the consequences is that development is placing increasing stress on the major watersheds associated with Lake Simcoe and the Nottawasaga River. This review offers an opportunity to strengthen Growth Plan policies to improve the

MINESING SWAMP
Minesing Swamp in the Nottawasaga River Watershed, southern Ontario’s largest and most diverse wetland, is defined as a wetland of international significance by the Ramsar Convention. It is home to diverse flora and fauna, including migratory trout, salmon and sturgeon, and helps protect downstream communities like Wasaga Beach from flooding. It is threatened by climate change, encroaching development and changing land uses. As part of the 2006 Intergovernmental Action Plan for Simcoe, Barrie and Orillia, an Assimilative Capacity Study concluded that the watershed was stressed and that best management practices should be implemented to mitigate future growth impacts on water quality. The Study’s recommendations regarding growth management, watershed planning and the protection of water resources and natural heritage systems will contribute to improved protection of special places like Minesing Swamp.

Above: Eastern Prairie Fringed Orchid, Minesing Swamp.
way growth is allocated and built in the future. It is also an opportunity to examine ways to improve alignment with neighbouring municipalities that share common interest.

52 RECOMMENDATION 52

Require counties, single-tier municipalities and regions to improve the integration of infrastructure decision-making and land use planning among upper-, single- and lower-tier authorities to maximize efficiencies and achieve desired planning outcomes consistent with the four plans.

7.3 Infrastructure Corridors

Long-term infrastructure planning can be improved if corridors are proactively identified and protected within provincial plans. Coordinated planning of infrastructure corridors can also realize opportunities for co-locating infrastructure to minimize the use of land and reduce negative environmental impacts. Schedule 6 of the Growth Plan identifies conceptual future corridors and directs municipalities to protect employment lands adjacent to transportation facilities and major highway interchanges. However, Schedule 6 is not considered sufficient to avoid complications arising from applications for conflicting land uses during environmental assessments and infrastructure planning. For example, the Ministry of Municipal Affairs and Housing has been involved in approximately twelve OMB appeals relating to the proposed GTA-West corridor alone. In addition, municipalities, the Province, landowners and utilities have been engaged in land use debates culminating in hearings at the National Energy Board regarding the physical extent and location of utility corridors.

In contrast, planning for the 407 and 403 highways was facilitated by the Parkway Belt West Plan developed in the late 1970s. This Plan utilized planning instruments to pre-designate and protect a specific, multi-purpose infrastructure corridor across the central and western portions of the GTA for transmission and utility facilities, highways, public open space and inter-urban transit. The Parkway Belt West Plan has successfully
facilitated and streamlined the development of linear infrastructure, and private and public infrastructure including power plants and transmission lines, fire stations, compressor stations, waste facilities, recreational facilities and other much needed public infrastructure.

The demand for utility and transportation corridors is expected to increase with future growth. A number of infrastructure projects will require new corridors within urban and non-urban areas. Feedback from municipalities during the consultation process for this review indicates support for more specific corridor protection by the Province. New regulations and detailed schedules in the Growth Plan would help to align municipal and Provincial land use and infrastructure planning, streamline the approval of regional infrastructure priorities and protect land for future corridors from incompatible land uses.

**53 RECOMMENDATION 53**

Consider improved approaches to designate and protect provincial and municipal infrastructure corridors through the use of planning instruments and a revised schedule in the Growth Plan showing the specific extent of existing and planned corridors. In these corridors:

- Permit only compatible development which does not diminish the ability to protect corridors for future use
- Utilize land efficiently and minimize land use conflicts by maximizing opportunities for co-locating provincial, municipal and private infrastructure as part of the planning for infrastructure corridors and major infrastructure projects (e.g., proposed GTA-West, Niagara-GTA Corridor, future power transmission routes, energy pipelines etc.)
- Seek to acquire required lands for public infrastructure in urban and urbanizing areas at the earliest possible stage in the planning process in order to achieve cost savings for taxpayers
- Work with stakeholders to define and protect space for future crossings of infrastructure corridors, early in the environmental assessment and planning processes
- Incorporate measures to reduce impacts on agricultural operations and movement of farm vehicles
7.4 **Resilient Infrastructure**

Climate change poses an increasingly critical challenge for maintaining existing infrastructure and planning for new infrastructure. Measures to increase the resilience of existing and new infrastructure to extreme weather events can reduce the risks of harm to life and property, and decrease the need for costly repairs or replacement.

The updated PPS requires municipalities to plan infrastructure in a “coordinated, efficient and cost-effective manner that considers impacts from climate change while accommodating projected needs.” In addition, we expect that the current review of the Municipal Act and the City of Toronto Act, as well as the preparation of Ontario’s Climate Change Strategy, will provide additional direction on resilient infrastructure and strategic linkages among provincial initiatives.

Stormwater management systems are particularly vulnerable to extreme weather events. During drier parts of the year, the water in our rivers and streams is predominantly from groundwater. However, during wet periods, contributions from snowmelt and run-off from rain events are significant. The amount and speed at which this run-off enters our streams and lakes depends on many factors, including the amount of natural areas, such as wetlands, woodlands, farmland and parkland that absorb and store water, the amount of impervious or paved surfaces, and stormwater management features, such as stormwater ponds, vegetated swales and green roofs.

Retrofitting stormwater management systems in existing older urban areas is essential because many were not designed to provide flood protection. For example, Credit Valley Conservation estimates that almost 75 per cent of Mississauga was developed without flood control, and storm sewers were originally sized to accommodate less frequent and intense rainfall events than are occurring now and will occur in future. This is already exacerbating flooding issues and associated costs.
Even with implementation of modern stormwater management techniques in new greenfield communities, the frequency and intensity of rainfall events often overwhelm retention ponds, leading to pulses of stormwater discharge that create significant erosion, and associated repair costs, as well as discharge of pollutants.

Comprehensive stormwater planning can help with these issues. Stormwater master plans are developed on a sub-watershed basis, consistent with overall watershed plans, and apply across settlement areas and urban growth centres. They are typically prepared in accordance with the Municipal Engineers Association Class Environmental Assessment. They can also be linked to asset management plans and/or a municipal levy or stormwater fee to identify where the dedicated funding is to be allocated.

The Province has provided improved policy direction on stormwater and green infrastructure through the PPS, but updated planning guidance to municipalities is not yet in place. In addition, more recent severe weather events and updated climate modelling reveal a need to conduct new floodplain modelling and provide updated mapping based on more intense precipitation events. In the absence of new standards, targets and training, most municipalities will continue with business-as-usual models, especially if the short-term costs are cheaper.

Green infrastructure and low-impact development techniques offer opportunities to manage urban stormwater in ways that mimic natural systems, thereby mitigating impacts on water quality and quantity. They increase the capacity of urban ecosystems to cope with extreme weather events while providing stormwater retention, controlling erosion, providing wildlife habitats, and improving air and water quality.

Many conservation authorities are promoting a shift towards low-impact development to protect watershed health and improve watershed resilience to some of the hydrological impacts of climate change, and Credit Valley Conservation and the Toronto and Region Conservation Authority have developed a Low Impact Development Stormwater Management Planning and Design Guide. The Ministry of Environment
and Climate Change is preparing a technical manual on low-impact development. The City of Toronto recently adopted a green roof bylaw to require the construction of green roofs on new residential, commercial and institutional development with a minimum Gross Floor Area of 2,000m² as of January 31, 2010.

**RECOMMENDATION 54**

Provide policy direction in the Growth Plan and Greenbelt plans, supported by technical guidance, to undertake municipal climate change vulnerability risk assessments, informed by watershed and sub-watershed plans, to guide the design of resilient infrastructure that has the capacity to cope with climate change impacts in order to enhance resilience and reduce flood damage.

**RECOMMENDATION 55**

Update the Growth Plan and Greenbelt Plan to require comprehensive, sub-watershed based stormwater master plans for greenfield areas prior to any new major development, and within five years for intensification areas like urban growth centres where stormwater plans have not been prepared. The stormwater master plans should be consistent with watershed and sub-watershed plans and include:

- Characterization of existing environmental conditions on a sub-watershed basis
- Description of ongoing maintenance of existing stormwater management facilities and associated costs
- Assessment of the effectiveness of environmental protection provided by existing stormwater facilities
- Evaluation of the cumulative environmental impacts of stormwater from existing and planned development, including assessment of how climate change and extreme weather events will exacerbate these impacts
- Requirements for green infrastructure and low impact development techniques
- Requirements to use financial tools, such as stormwater management fees or municipal levies, to fund stormwater infrastructure
56 RECOMMENDATION 56
Update the plans to provide policy direction for the use of green infrastructure and low-impact development techniques in retrofitting existing urban areas, new greenfield developments, intensification initiatives and urban growth centres, in order to protect water quality, reduce stormwater runoff and improve resilience to climate change.

57 COMPLEMENTARY RECOMMENDATION 57
Through the reviews of the Municipal Act and City of Toronto Act and other provincial initiatives, enable municipalities to pilot new approaches, and remove barriers to the inclusion of climate change resilience in upgrades to existing infrastructure and building of new infrastructure. Consider including green infrastructure, low-impact development, stormwater management, water and wastewater management, transportation systems and energy facilities.

58 COMPLEMENTARY RECOMMENDATION 58
Include funding for green infrastructure and environmental mitigation measures as part of provincial infrastructure investments (e.g., The Big Move and the Southern Ontario highways program).

7.5 Infrastructure Priorities
We have heard from municipal planning officials and the development sector that they would like more certainty around the priority and phasing of provincial infrastructure investments, and more clarity around how these investments support the goals of the plans. Stakeholders have noted that in some cases uncertainty related to provincial funding (e.g., for sewer or wastewater projects) can cause delays in proceeding with development approvals, which in turn can impact municipal revenues, debt and private sector developers.
At present, there is insufficient information about the state of infrastructure in the GGH, the need to upgrade old infrastructure, long-term costs of maintenance and regional priorities for new investment. In addition to the needs of existing and proposed urban areas, rural communities need more investment in infrastructure, such as natural gas and broadband internet.

The location of provincial investments can significantly influence the ability to realize municipal plans. For example, the location of the Durham Region Courthouse in an urban growth centre was an important anchor development for driving redevelopment in downtown Oshawa. The new Brock University School of Fine and Performing Arts is a multi-purpose development that involved new construction and adaptive re-use of vacant heritage buildings in downtown St. Catharines. The complex provides new classroom space and related facilities for students of dramatic arts, music and visual arts as well as a new performing arts centre. As part of the revitalization of downtown Brantford, post-secondary educational facilities are being housed in new buildings alongside the re-purposing of many vacant buildings, supported by the City through gifts of buildings and renovation grants.

If proclaimed, the recent Infrastructure for Jobs and Prosperity Act, 2015 will require the Provincial Government to table a long-term infrastructure plan. Under the act, the criteria for evaluating and prioritizing proposed infrastructure projects include considering whether an infrastructure asset is included in any Provincial or municipal plan or strategy, and whether it supports any other public policy goals of the Government or affected municipalities. It would also provide the ability to require standardized asset management plans from the broader public sector, including municipalities, following consultations with affected stakeholders. As work on implementing the act proceeds, there will be an opportunity to ensure the link to land use planning policies is reinforced through the Province’s long-term infrastructure plan as well as the potential requirement for standardized municipal asset management plans.

**WATERLOO LRT**

The Region of Waterloo is building a rapid transit system that will connect the downtowns of Waterloo, Kitchener and Cambridge with a combination of 19 km of light rail transit (LRT) and 17 km of bus rapid transit (BRT). There are 22 stations along the entire route. The BRT portion has opened and the LRT portion is under construction. Stage one has joint provincial, federal and municipal funding commitments. Stage one of the LRT segment is being delivered using a public-private partnership model. The Region of Waterloo’s corridor planning strategy will identify opportunities for shaping the communities around each station area, and for moving people to, from and within the corridor. The route has already started to attract new development such as condominiums.

Above: Rendering of Region of Waterloo LRT in front of the The Market Square.
We believe that alignment with the intent and policies of the Growth Plan, Greenbelt plans, The Big Move and related policies should be one of the criteria for prioritizing infrastructure funding, both federal and provincial, to municipalities. This will provide incentives to meet intensification and density targets, develop within the capacity of watersheds, reduce carbon footprints, raise local funds for infrastructure, create complete communities, and develop around transit hubs and corridors.

**COMPLEMENTARY RECOMMENDATION 59**

Within the context of implementing the Infrastructure for Jobs and Prosperity Act, if proclaimed:

- Consider the goals of the Growth Plan, Greenbelt plans and The Big Move as criteria for setting priorities for investments in provincial infrastructure
- Promote the standardization of municipal asset management plans, which should include integration with land use planning
- Use best practices in business case analysis to assess and address the cumulative, long-term, fiscal and environmental effects of major projects in the GGH

### 7.6 MOVING PEOPLE

The Growth Plan directs that land use planning, transportation system planning and transportation investments should be coordinated. It places a high priority on public transit as a way of addressing road congestion and reducing greenhouse gas emissions.

Traffic gridlock in the GGH represents a major drain on our economy and our health, as well as a major contributor to greenhouse gas emissions and air pollutants. Estimates of the costs of traffic congestion in the GTHA range between $6 billion and $11 billion a year due to travel delays, accidents and lost productivity. The urgency of health-related issues was stressed in a 2014 report by the Chief Medical Officers of

---

Health of the GTHA which emphasized that “planning for active transportation and public transit use needs to become as routine as planning for water, sewers, roads and utilities.”50

During the consultation phase of the Coordinated Review, we heard from a wide range of stakeholders that there should be stronger policies and tools to align transit infrastructure with development, including a greater focus on public transit and active transportation. A safe and convenient active transportation network connected to the transit network can increase transit ridership, and support vibrant compact communities by providing viable alternatives to automobile travel.

Since 2003, the Province has invested more than $21.8 billion in public transit in Ontario; about 50 per cent of this amount has been invested in GO Transit. The Province’s Moving Ontario Forward plan will make nearly $31.5 billion available over the next 10 years for investments in transit, transportation and other priority infrastructure across Ontario. This includes about $16 billion investment in transit in the GTHA as part of the implementation of The Big Move by Metrolinx, an agency of the Ministry of Transportation. A major priority is to strengthen GO Transit by implementing Regional Express Rail, which will provide faster and more frequent service on parts of the GO Transit rail network, with electrification on core segments.

The Ministry of Transportation is preparing a Multi-modal Transportation Plan for the GGH, with a focus on land use and economic development trends and patterns. It will include transportation networks and land use scenarios with a 50+ year horizon (previous work typically planned for only 20-25 years). The Plan will also address reductions in greenhouse gas emissions and air pollutants by comparing the implications of different transportation scenarios.

The Growth Plan was developed prior to the creation of Metrolinx and its regional transportation plan, The Big Move. The Big Move implements, and must conform with, the Growth Plan, and the two plans share a focus

50 Medical Officers of Health of the GTHA. Improving Health by Design in the Greater Toronto-Hamilton Area. 2014.
on coordinating transit and urban intensification. The relationship between the two plans could be strengthened by more closely aligning terminology that directs intensification efforts (e.g., Metrolinx’s mobility hubs could be reflected in the Growth Plan). The focus of The Big Move is the GTHA whereas the Growth Plan covers the entire GGH. These planning areas need to be considered together in order to strengthen transit linkages across the entire region.

While Metrolinx is responsible for most of the higher-order transit system in the GGH, upper- and lower-tier municipalities operate local transit systems and transportation demand management programs. Data gathered by the Neptis Foundation show that the region’s existing higher order transit network is about 150 kilometres, with GO Transit adding 420 kilometres and local frequent transit adding 1000 kilometres of service. Better vertical integration of provincial and municipal systems could strengthen the overall transit system and contribute to a shift towards greater transit use and more transit-supportive urban form.

Transportation demand management initiatives can support the creation of a seamless transportation network that offers mobility choice and promotes changes in behaviour to achieve a modal shift away from the single-occupancy vehicle. The Growth Plan directs municipalities to develop and implement transportation demand management policies. This approach could be particularly useful in locations that are heavily congested and/or not served by the existing transit network. For example, demands on GO station parking lots could be reduced by improving first kilometre/last kilometre transit and active transportation connections.

The Ministry of Transportation’s Highway Access Management Guidelines outline best practices for managing entrances onto provincial highways and onto roads in the vicinity of provincial highways. We have heard that the standards in these guidelines are not always applied in a way that supports intensification in the areas surrounding highways because they call for traffic speeds and urban design elements that are not compatible with pedestrian-friendly and transit-supportive communities. Similarly, we have heard that the Ministry of Transportation’s review and permitting process related to highway access takes too long and is not responsive to municipal planning timelines and processes.
60 RECOMMENDATION 60
Improve coordination between the Growth Plan and The Big Move by:
• Updating the Growth Plan to recognize the key roles of the Ministry of Transportation, Metrolinx and The Big Move in achieving the Growth Plan’s vision for regional mobility
• Updating Schedule 5 in the Growth Plan to provide more specific details on funded, committed and planned transit projects in the GGH
• Identifying Regional Express Rail as the centerpiece of the regional transit system in both plans, and the need for land use and transit planning efforts to contribute to the success of this project
• Developing shared terminology between the two plans to identify station areas: for example, Metrolinx’s definition of Mobility Hubs could be used in the Growth Plan
• Establishing a consistent monitoring program to integrate progress on transit initiatives with the proposed overall monitoring program for the four plans (see Section 9.5)

61 COMPLEMENTARY RECOMMENDATION 61
The Ministry of Transportation should improve coordination of transportation and land use planning in the GGH by collaborating with Metrolinx, including alignment between The Big Move and the Ministry of Transportation’s Multi-modal Transportation Plan for the Greater Golden Horseshoe)

62 RECOMMENDATION 62
Clarify and strengthen Growth Plan requirements for transportation demand management in specific areas (e.g., GO stations, urban growth centres, intensification corridors, employment lands and large scale development projects). Include requirements for municipalities to set modal split targets and monitor progress towards more sustainable modes of transportation
63 RECOMMENDATION 63
Reduce barriers to active transportation by strengthening policies that identify cycling, walking and other non-motorized transportation as an essential part of the transportation network and by encouraging the development of active transportation plans at a municipal scale.

64 RECOMMENDATION 64
Amend the plans to direct Metrolinx, municipalities and their local transit providers to integrate all modes of transit in the region (including GO trains, subways, light rail and bus rapid transit and bus services) in order to provide better connectivity and access across the region.

65 COMPLEMENTARY RECOMMENDATION 65
The Ministry of Transportation should review the effectiveness and flexibility of the Highway Access Management Guidelines with respect to current planning and development policies, with the aim of more efficiently supporting the growth and development objectives of the four plans.

7.7 Moving Goods
The GGH is a continental hub for manufacturing, distribution, warehousing, redistribution and final consumption of goods. In recent decades, residential development has occurred with little consideration of the needs and impacts of the freight sector. This has led to land use conflicts, lack of infrastructure protection and, increasingly, the marginalization of goods movement activity.\textsuperscript{51}

\textsuperscript{51} McMaster Institute for Transportation and Logistics. Truck Freight Generators and Attractors in the Province of Ontario. 2014.
There are currently four primary clusters of freight intensive businesses in the GGH. They are associated with Lester B. Pearson International Airport, Brampton CN Intermodal Terminal, Vaughan CP Intermodal Terminal and the Port of Hamilton. Smaller clusters exist in Oshawa, Brantford, Cambridge, Alliston and Etobicoke. The provincial and municipal roadways surrounding these clusters are characterized by acute and growing levels of truck congestion. GGH municipalities experience 80 per cent of the total truck delay hours in Ontario.

Schedule 6 of the Growth Plan identifies the framework for investment in goods movement, the conceptual location of future transportation corridors (including the proposed GTA-West, Niagara-GTA and 407 East corridors), and the locations of existing goods movement facilities, border crossings and marine ports. Despite generating substantial freight activity, some major goods movement clusters and facilities – including those in Alliston, Brantford, Cambridge, Etobicoke and Oshawa – are not identified in Schedule 6.

In 2011, Metrolinx released a GTHA Urban Freight Action Plan that provides strategic direction to improve the efficiency and minimize the impact of goods movement in the GTHA. One of the areas of focus is enhancing freight-supportive planning through the use of freight-supportive land use guidelines, development of innovative freight hubs, improving access to existing multi-modal facilities and protecting complementary uses near freight hubs.

**RECOMMENDATION 66**

Provide more specific direction and support for goods movement in the Growth Plan by:

- Updating Schedule 6 in the Growth Plan to identify all primary goods movement clusters and facilities
- Requiring municipalities to consider planning in accordance with the Ministry of Transportation’s Freight-Supportive Guidelines when they are released (expected in late 2015)
Mainstreaming Climate Change
Although the four plans under review do not contain policies that explicitly mention climate change, they do contain policy directions that help to reduce carbon emissions, mitigate climate change and increase our ability to adapt to change.

The plans, in conjunction with The Big Move, are an important component of the Province’s approach to climate change, and will play an essential role in reducing greenhouse gas emissions, especially in the transportation sector. The Growth Plan provides intensification and density targets that aim to reduce outward expansion and ensure that communities are built at transit-supportive densities, direct that transit be the first priority for moving people, and require that communities be planned to accommodate an appropriate mix of uses. This supports the development of compact, mixed-use, transit-supportive communities. It also requires that municipalities develop and implement official plan policies in support of energy conservation and air-quality protection. The Greenbelt plans protect agricultural lands and natural areas that act as natural carbon sinks and provide green infrastructure functions, such as increasing resilience to extreme weather events.

Many other provincial initiatives also provide direction on climate change. For example, the updated PPS explicitly requires that climate change be considered in planning activities. The Big Move is a 25-year plan for transportation in the GTHA. Compact growth and increased densities along transit corridors are necessary to support the viability of the transit projects outlined in The Big Move and to encourage a shift towards greater transit use. #CycleON contains commitments to support the development and implementation of municipal policies related to cycling. Through #CycleON, the Ontario Municipal Cycling Infrastructure Program was established to help municipalities expand local cycling routes, connect with provincial routes and launch pilot projects to make cycling improvements. The Ontario Biodiversity Strategy 2011 highlights the critical role of biodiversity in sustaining resilient ecosystems and calls for actions to reduce greenhouse gases, as well as measures to increase the ability of ecosystems to adapt to climate change.
At the municipal level, only a small percentage of municipalities in the GGH have incorporated climate change mitigation and adaptation into their official plans but increasing numbers of municipalities are including sustainable design features in site plan policies.52

This chapter provides our recommendations on:

- Mitigation
- Adaptation
- Achieving a low-carbon, resilient GGH

Transportation Greenhouse Gas Emissions per Capita in the Greater Golden Horseshoe, 2012

This map shows that per capita GHG emissions from transportation are higher in the outer ring of the GGH, where urban densities are lower than in the denser inner ring.

---

52 Ministry of Municipal Affairs and Housing. Internal review of municipal official plans. 2015.
8.1 Mitigation

Despite these provincial and municipal initiatives, greenhouse gas emissions continue to grow. Ontario is on a path to fall significantly short of its 2020, 2030 and 2050 targets, even when the impacts of The Big Move and the current Growth Plan are taken into account. Despite reductions in other sectors, emissions from transportation and buildings are climbing, and now account for 51 per cent of Ontario’s total greenhouse gas emissions. Water infrastructure also requires considerable amounts of energy for treatment and pumping, and is estimated to use about 50 per cent of total municipal energy consumption.

Pembina Institute research shows that if the current Growth Plan and The Big Move are fully implemented, by 2031 the vehicle kilometres traveled per capita will decrease by over 20 per cent compared to 2006. However, due to ongoing population and employment growth, the total vehicle kilometres traveled for the region as a whole will increase. Therefore, despite the significant gains that the current policy framework can achieve, existing policies alone are not enough to reduce regional greenhouse gas emissions.

On the other hand, Pembina’s research concluded that more aggressive Growth Plan targets could result in a reduction of total vehicle kilometres traveled and greenhouse gas emissions, even in the face of the significant forecasted growth. To achieve these reductions, the intensification target would have to be increased to 60 per cent from 40 per cent. In addition, the density target for designated greenfield areas would need to be increased to 70 people and jobs per hectare from the current target of 50 people and jobs per hectare. Complementary actions to increase the availability of transit and active transportation would also be needed. See sections 4.1.3 and 4.1.4 for our recommendations on intensification and density targets.

Higher-density development also reduces energy consumption and greenhouse gas emissions from heating and cooling, because compact, mixed-use buildings are generally more efficient than low-density, single-use buildings.

The Ontario Building Code is another important factor. When the energy efficiency requirements in the 2012 Building Code come into effect in January 2017, houses constructed after that point will consume only 50 per cent of the energy they would have used in 2005. However, the Building Code primarily deals with new construction, which comprises only one per cent of the overall building stock on an annual basis. Therefore, it will be essential to improve the efficiency of existing buildings.

The Greenbelt’s forests, wetlands and agricultural lands store 86.6 million tonnes of carbon with benefits, such as avoided costs of extreme weather damage, estimated to be $366.7 million per year. They sequester 206,065 tonnes of carbon annually with an estimated value of $10.7 million per year. Systems-based protection of agricultural land, natural areas and water resources is important to maintaining the natural functions of these areas, and thus their long-term carbon sequestration. Our recommendations in Chapters 4, 5 and 6 address ways to strengthen the recognition and maintenance of carbon storage functions by containing urban growth, supporting a productive agricultural economy and ensuring healthy natural systems.

The Province is currently developing a long-term strategy on climate change that will look forward to 2050 and guide the Government’s approach to climate change to enable all actors in society to participate in a long-term transformation to a low-carbon and resilient economy. Guided by the strategy, every five years the Government will identify additional policies and programs to support actions to ensure near-term emissions reductions, build on earlier reductions and set the stage for future reductions. The initial 5-year Action Plan 2015-20 will identify specific climate-critical actions being taken now and over the next five years to support the long-term objectives and to meet the 2020 target.

It is crucial that the climate change strategy and action plan and the outcome of this review complement each other, and that any amendments made to the four plans align with and build on Ontario’s efforts to reduce greenhouse gas emissions and meet future reduction targets.

---

8.2 Adaptation

Adapting to climate change involves taking measures to reduce the impacts of a changing climate. For example, faced with greater storm activity, we may change the way we design and build our roads, bridges and buildings to better withstand these weather events. The scope and severity of the impacts from extreme weather events and associated natural disasters depends on the resilience of our natural heritage systems and agricultural areas, as well as the design and upkeep of settled areas and infrastructure. In order to ensure the safety and health of our urban and rural communities, we can take measures to increase resilience. Here are some examples:

Infrastructure

The life-cycle of existing infrastructure will increasingly be challenged by extreme weather events, as well as the on-going, gradual degradation that can happen with more frequent episodes of freezing rain and heat waves. Existing infrastructure should be assessed in order to identify priority retrofit projects while new infrastructure must be designed to increase resilience and manage risks to public safety at a local and watershed scale. Opportunities exist to create or retrofit communities that are green, healthy, desirable places to live and do business while helping to protect against extreme weather events and other climate change impacts. For example, stormwater management systems can be built to withstand the increased run-off produced by more frequent and intense storms. By proactively adapting our infrastructure systems, communities will be less vulnerable to the impacts of a changing climate. Recommendation 54 provides direction on incorporating adaptation into infrastructure design.

Watersheds

Watershed management provides an opportunity to understand the impacts of a changing climate to the water system at a broad scale. This is important in terms of addressing issues such as increased risk of flooding, and also to finding ways to adapt to periods of drought predicted to result from a changing climate. Recommendation 41 provides direction on opportunities to ensure climate change adaptation is considered while carrying out watershed management.
A GRAND PLAN

The Grand River flows 300 kilometres from the highlands of Dufferin County to Port Maitland on Lake Erie, with communities like Guelph, Waterloo and Cambridge along its shores. The 2014 Grand River Watershed Water Management Plan is designed to accommodate high population growth and productive agriculture while addressing climate change.

A voluntary plan, it was developed jointly by local municipalities, First Nations, the Grand River Conservation Authority, provincial ministries and federal departments with the following goals:

- Ensure sustainable water supplies for communities, economies and ecosystems;
- Improve water quality to improve river health and reduce the river’s impact on Lake Erie;
- Reduce flood damage potential; and
- Increase resiliency to deal with climate change.

As with climate change mitigation (see above), the four plans do not explicitly address adaptation. However, they do provide support for resilient infrastructure and transportation systems, and the protection of agricultural lands and natural areas and features. In addition, municipalities across the GGH have launched significant efforts to adapt to a changing climate. The impacts of a changing climate are an area of direct concern to most municipalities as they directly affect municipal operations and budgets, for example, through decreased lifecycle of municipal infrastructure as well as the health, safety and security of residents during extreme weather events and natural disasters. We recognize the efforts of municipalities and believe this review is a valuable opportunity to build on this work.

8.3 Achieving a Low-Carbon, Resilient Greater Golden Horseshoe

As noted throughout this report, many of our recommendations are designed to mainstream climate change considerations into all decision-making in the GGH. They are identified with a “spotlight on climate change” icon, and will help to achieve multiple benefits and cost savings. For example, transit-supportive communities and workplaces reduce greenhouse gas emissions. Productive agriculture and robust natural heritage systems act as a carbon sink. Healthy watersheds, green infrastructure and low-impact development increase resilience to extreme weather events.

Green infrastructure means natural and human-made elements that provide ecological and hydrological functions and processes. Integrating green infrastructure and low-impact development techniques into our communities can achieve multiple outcomes, including enhancing resilience. Recommendations 55 and 56 and Complementary Recommendations 57 and 58 provide direction on integrating these aspects of resilience into the plans.
In addition, we provide the following recommendations to address some overarching measures that will strengthen the emphasis on climate change mitigation and adaptation in the four plans.

**RECOMMENDATION 67**
Include climate change mitigation and adaptation in the vision, goals and policies of the four plans.

**RECOMMENDATION 68**
Require upper- and single-tier municipalities to prepare climate change plans or incorporate policies into official plans to advance climate change mitigation and adaptation goals consistent with the Province’s climate change strategy and action plan. This could include:
- Identification of long-term and interim greenhouse gas reduction targets, measures to improve resilience to climate change, and a strategy to achieve them through land use planning, infrastructure planning, energy planning and other relevant matters
- Reporting on metrics to assess progress on the plans’ climate change goals and targets (see also Recommendation 85)
- Coordination with nearby municipalities and relevant public bodies as appropriate
- Review and updating of the plan or policies

**COMPLEMENTARY RECOMMENDATION 69**
Develop technical guidance to help municipalities contribute to overall provincial greenhouse gas emissions reductions targets, including:
- A framework for setting targets and reporting on progress at the municipal level
- Tools and incentives to assist municipalities in implementation of their plans

**COMPLEMENTARY RECOMMENDATION 70**
Work with municipalities to identify and implement options to encourage energy retrofits of existing buildings and operating practices in order to save energy and reduce greenhouse gas emissions.

Many of our recommendations are designed to mainstream climate change considerations into all decision-making in the GGH.
Implementing the Plans
The Growth Plan and the Greenbelt plans work with the PPS to provide direction for managing growth and protecting resources in the area of the four plans and Greenbelt.

Each policy framework has its own enabling legislation, its own purposes and objectives and its own history, resulting in a series of layered provincial policies and plans that have generated implementation challenges over the past ten years.

Municipalities and other stakeholders have raised concerns that the current policy framework is overly complex and that there is a lack of clarity in how to apply certain policies. They report that this has delayed implementation and increased costs due to time and resources to support OMB hearings.

In this chapter, we discuss opportunities to improve integration, provide clarity to the policy frameworks and streamline implementation, while maintaining provincial interests in land use planning and ensuring that the high standards currently set by the plans are not compromised. We also address the need for a coordinated approach to governance and oversight to increase efficiency, improve reporting and provide independent tracking of outcomes.

Our recommendations in this Chapter are grouped in the following sections:

- The Greenbelt
- Growing the Greenbelt
- The existing Greenbelt
- The Niagara Escarpment
- Aligning the policy framework
- Streamlining implementation
- Governance and oversight
9.0 IMPLEMENTING THE PLANS

Four Plans at a Glance

Niagara Escarpment
- Approved in 1985 under Niagara Escarpment Planning and Development Act, 1973
- Plan area covers approximately 194,000 hectares
- Focused on maintaining escarpment as a continuous natural environment and providing for compatible development

Greenbelt
- Approved in 2005 under Greenbelt Act, 2005
- Plan area covers approximately 400,000 hectares
- Focused on protecting agricultural and environmentally sensitive lands while providing for range of recreation, tourism and cultural opportunities

Growth Plan
- Approved in 2006 under the Places to Grow Act, 2005
- Plan area covers approximately 3,200,000 hectares
- Focused on building compact, vibrant communities; managing growth to support a strong economy; optimizing existing and new infrastructure

Oak Ridges Moraine
- Approved in 2002 as Minister’s regulation under Oak Ridges Moraine Conservation Act, 2001
- Plan area covers approximately 190,000 hectares
- Focused on protection of moraine’s ecological and hydrologic features and functions
9.1 The Greenbelt

The Greenbelt was established in 2005 to protect environmentally sensitive and agricultural lands and contribute to the containment of urban sprawl in the GGH.

9.1.1 Growing the Greenbelt

In 2008, the Province established criteria for expansions to the Greenbelt\(^\text{57}\) that include:

- Providing supportive council resolutions through a single- or upper-tier municipality with lower-tier support based on public consultation
- Demonstrating how the proposed lands connect physically or functionally to the existing Greenbelt, including connections to one or more of the Agricultural, Natural Heritage and Water Resource systems
- Demonstrating that a proposal would complement and support the Growth Plan and any other related provincial initiatives

In 2013, 250 hectares (630 acres) of land in Oakville (Glenorchy) were added to the original 730,000 hectares (1.8 million acres) of the Greenbelt. There are no formal submissions for expansion from municipalities in progress at this time. However, some municipalities and stakeholders have expressed interest in adding specific hydrological and agricultural areas as well as major urban river valleys to the Greenbelt area. The Niagara Escarpment Commission is also interested in adding specific lands to the Niagara Escarpment Plan area.

In early 2015, the Provincial Government’s mandate letter to the Minister of Municipal Affairs and Housing tasked the Minister to:

- Partner with municipalities to grow the Greenbelt through the Coordinated Plan Review and respond to municipal requests in a timely manner
- Ensure there is a clear, simple process in place to address requests for further expansions

\(^{57}\) Ministry of Municipal Affairs and Housing. Growing the Greenbelt. 2005.
In addition, the Niagara Escarpment Commission prepared a discussion paper in 2012 including criteria and potential additions to the Niagara Escarpment Plan area. The paper focused on identifying Escarpment-related geological features, natural heritage systems, cultural heritage and scenic resources. In July 2015 the Niagara Escarpment Commission endorsed potential Niagara Escarpment Plan area additions totaling 45,600 hectares (113,000 acres). The Commission will provide this list of potential additions to the Minister of Natural Resources and Forestry as part of its advice during this review.

In this section, we consider two policy approaches to expansion:

1. Extending the Protected Countryside to protect areas of critical ecological and hydrological significance
2. Including major urban river valleys to support the connections between the Greenbelt, Great Lakes and inland lakes, building on the Urban River Valley (URV) designation

The Protected Countryside

The Greenbelt boundary defined in the Greenbelt Plan of 2005 was based on a study area that included the areas of the Oak Ridges Moraine Conservation Plan and the Niagara Escarpment Plan, as well as the remainder of the municipalities of Durham, York, Peel, Halton, Hamilton and Toronto, and the area identified as Niagara tender fruit and grape lands in the Niagara Region official plan. Simcoe County was not part of the study area (except for those parts already included in the Niagara Escarpment Plan).

The Growth Plan relies primarily on the PPS for protection of environmentally sensitive and agricultural lands that lie outside the Greenbelt area. It also includes a provision for sub-area assessments to develop additional protection policies for natural systems or prime agricultural areas. No sub-area assessments have been completed at this time.

For many decades, investors and the development sector, including foreign companies, have been securing lands throughout the region in expectation of future development opportunities. This process has escalated since the introduction of the Oak Ridges Moraine Conservation
9.1.1 GROWING THE GREENBELT

Plan and the Greenbelt Plan. This “leapfrogging” over the Greenbelt destabilizes the agricultural economy and raises fears of development pressures in areas of the Growth Plan that are actually designated in municipal official plans for agriculture or natural heritage protection.

During the consultations for this review, municipal and environmental stakeholders expressed support for the 2008 Growing the Greenbelt criteria. Many environmental stakeholders recommended a strategic approach to Greenbelt expansion that would protect areas of critical ecological and hydrological significance including key headwaters, moraines, groundwater recharge areas, important surface water features and urban river valleys.58 This approach would help to provide permanent protection to many important ecosystem services including flood mitigation, drinking water filtration, drought resilience, healthy agricultural lands and climate change adaptation. Stakeholders also emphasized the need for greater protection of biodiversity, including pollinators and wildlife habitats, consistent with the Ontario Biodiversity Strategy 2011.

Many in the agricultural sector do not support growing the Greenbelt at this time. Their priority is to see a focus on agricultural viability and fixing existing problems in the Greenbelt, accompanied by stronger growth management to protect agricultural lands (see Chapter 5). The development industry is concerned about Greenbelt expansions because of the perceived effects of the Greenbelt on land supply and prices.

The Niagara Escarpment Commission prepared a discussion paper in 2012 and addenda in 2013 and 2014 on potential additions to the Niagara Escarpment Plan area and set out criteria to assess potential lands. The Niagara Escarpment Commission criteria included the presence of Escarpment-related geological features, natural heritage features and systems, cultural heritage resources related to the Escarpment, and the scenic value of the land. Using these criteria, in 2015, the Commission endorsed a list of recommended additions to the Niagara Escarpment Plan area for consideration during this review.

---

9.1.1 GROWING THE GREENBELT

The panel recognizes that examining potential areas and providing the rationale to support Greenbelt expansions may be a longer-term exercise in some cases. However, based on information from stakeholders, background research, data from related initiatives (e.g., source protection plans) and recommendations from the Niagara Escarpment Commission, we believe there are some significant areas, particularly with respect to water (e.g., significant recharge areas) that could be added during the Coordinated Review.

RECOMMENDATION 71

Establish a Provincially led process, in consultation with the Niagara Escarpment Commission, municipalities, conservation authorities, stakeholders and the public, to grow the Greenbelt (including the Oak Ridges Moraine Conservation and Niagara Escarpment Plan areas) beyond its current boundary using a systems approach, based on areas of ecological and hydrological significance where urbanization should not occur, with consideration for:

• Protection of areas that sequester and store carbon or protect and improve resilience to climate change
• Rural source water protection priorities (i.e. not in settlement areas)
• Protection of adjoining areas of critical hydrological significance, such as important surface water areas, key headwaters, moraines, groundwater recharge areas, highly vulnerable aquifers and areas where stress on groundwater quantity may require further study
• Natural heritage systems as defined by municipalities and conservation authorities, with support for further studies and mapping where required
• Publicly owned lands (municipal, conservation authority, provincial and federal) that meet natural resource criteria for growing the Greenbelt
• Potential additions to the Niagara Escarpment Plan area as identified by the Niagara Escarpment Commission
• Minimizing negative impacts on agricultural viability
• Opportunities for education on the values of the Greenbelt such as public health benefits, biodiversity, ecosystem services, connectivity, growth management, and climate change mitigation and adaptation
Urban River Valleys

The Urban River Valley designation (URV) was added to the Greenbelt Plan in 2013. It was introduced to address challenges being identified by municipalities in applying the rural-based Protected Countryside policies to urban areas (e.g., concerns about rural uses such as aggregate extraction and storm water management limitations). The URV designation recognizes the important role of river valleys in connecting the Greenbelt to the Great Lakes and inland lakes to the Oak Ridges Moraine. It regards urban river valleys as gateways to the Greenbelt in urban municipalities.

The URV designation is a separate designation from Protected Countryside and is tailored specifically to facilitate growing the Greenbelt on publicly owned lands, at the request of municipalities. It requires official plan policies to have regard for Greenbelt objectives, provides for including lands (e.g., tablelands) associated with river valleys, and allows for trails, parks, open space and recreation uses as well as infrastructure. The Greenbelt Plan identified external river valley connections that may provide opportunities for URV designation.

Apart from the original designation of the Glenorchy lands in Oakville at the time of Amendment 1, no other URVs have been designated by the Province. Some municipalities have questioned the benefit of the URV designation for lands already subject to environmental protection (e.g., under the PPS and Conservation Authorities Act) and have raised concerns about the costs and resource requirements for boundary regulation and public consultations. Members of the development industry and landowners generally support the URV designation on public lands only. On the other hand, there is support from environmental stakeholders and some conservation authorities to provide more complete protection for entire river valleys by extending the URV approach to private as well as public lands.
9.1.2 The Existing Greenbelt

Since the approval of the Greenbelt Plan in 2005, the Ministry of Municipal Affairs and Housing has received many inquiries and requests to revise policies, change designations, remove lands from the Greenbelt and adjust its boundaries.

Many of the requests to the Ministry include policy concerns about settlement area expansions, agricultural viability, natural resource protection, future employment lands and infrastructure corridors. We also heard about small-scale, site-specific requests to change existing uses or adjust boundaries (within the plans or at the outer boundary of the Greenbelt) that proponents perceive to be inaccurate or based on outdated information.

A number of municipalities and landowners have asked to have their lands removed from the Greenbelt or to re-designate lands adjacent to Highways 400, 404 and the QEW corridor for strategic employment land purposes. These types of requests, if granted, could involve re-designating lands within the Greenbelt that might be used for strategic employment or a future transit hub, or removing some lands from the Greenbelt plan area, where they would be subject to the policies of the Growth Plan.

Other landowners have requested that their lands be removed from the Greenbelt to provide for settlement area expansion. However, these
requests are generally not supported by municipalities, most likely because of servicing constraints, growth forecasts not demonstrating a need, or the lack of comprehensive work to assess future development needs. As discussed in Section 4.1.7, we believe that municipalities should undertake a broad, comprehensive review of their growth needs for the entire municipality over the long term. This will provide a context for assessing specific Greenbelt boundary adjustment requests.

Other requests involve lands subject to transition files (i.e. files in process at the time of Greenbelt Plan approval and completed under policies that pre-dated the Plan) and lands located at the interface between the Greenbelt and an adjacent urban area. In many cases, this resulted in lands being designated for urban purposes that are inconsistent with Greenbelt policies and schedules.

Any removal of land from the Greenbelt requires consideration of the purpose and permanency of the Greenbelt. The Greenbelt Act stipulates that the size of the Greenbelt cannot be reduced. Any boundary changes would also have to be consistent with provincial interests in the Greenbelt such as agricultural viability and environmental protection. In addition, amendments to the Protected Countryside can only be proposed by the Minister of Municipal Affairs and Housing, and would be subject to approval of the Lieutenant Governor in Council.

Although the Advisory Panel mandate does not include site-specific matters, we have carefully considered the types of requests that have been made to the Ministry. A number of the concerns that prompted people to request changes to boundaries and designations in the Greenbelt intersect with the major themes of this report, and we have used them to inform our recommendations. We believe this review provides an opportunity to address many of the concerns through policy revisions based on our recommendations.

For example, the Greenbelt Plan contains policies to recognize existing, approved or planned uses, and careful consideration should be given to assessing whether refinements to those policies can address some of the issues raised. In Chapter 4, we recommend ways to direct growth, develop complete communities and support economic activities. In
Chapter 5 we outline a number of issues affecting the agricultural sector and make recommendations to address them and improve viability of the agricultural economy. In Chapter 6 we propose ways to improve the protection of natural heritage and water resources. In Chapter 7 we examine the opportunities to improve infrastructure planning and delivery.

We expect that the more robust policy framework proposed in this report will enable the Province to respond to requested changes to Greenbelt policies, designations and boundaries through the anticipated amendments to the four plans that will be made within the timeframe of this review (i.e. by June 2016).

73 RECOMMENDATION 73

Within the time period of this review, address designation and boundary concerns associated with the existing Greenbelt Plan, Oak Ridges Moraine Conservation Plan and Niagara Escarpment Plan through policy changes based on recommendations in this report related to such matters as settlement area expansion, complete communities, strategic employment lands, infrastructure and servicing, agricultural viability, protection of farmland, natural heritage systems, water resources, climate change and enhancing plan implementation. This should include:

• Working with upper- and single-tier municipalities as they undertake a comprehensive review to implement any new policy directions through official plan conformity
• Provincial approval authority for official plan conformity amendments for upper- and single-tier municipalities

9.2 The Niagara Escarpment

The Niagara Escarpment Plan is administered by the Niagara Escarpment Commission under the Niagara Escarpment Planning and Development Act. Since the Niagara Escarpment Plan has not been comprehensively reviewed in over 20 years, the Coordinated Review is a significant opportunity to align Niagara Escarpment Plan policies with more recent initiatives, including the PPS, Greenbelt Plan, Growth Plan, source water protection, species at risk and wetland protection. There is also a need
to update Niagara Escarpment Plan mapping and designations to reflect land use changes and current knowledge and to address new issues such as climate change.

As the arm’s-length agency responsible for the Niagara Escarpment Plan, the Niagara Escarpment Commission is undertaking a detailed review of the Plan and making recommendations based on a series of discussion papers that address 21 policy areas in three categories:

1. Clarifications and updates to existing policies, including the designation criteria and mapping of lands in the Niagara Escarpment Plan area, permitted uses and development criteria with which permitted uses must comply
2. New policy directions, including issues not previously addressed in the Niagara Escarpment Plan (e.g., climate change, scenic resources, disposal of excess fill) and significant changes in policy direction, including additional restrictions on aggregate resource extraction operations
3. Alignment among provincial plans and policies, including consistency in definitions of key terms and alignment of policies among plans where appropriate

We have reviewed the Niagara Escarpment Commission’s submission to the Coordinated Review and found that there is general agreement with many of our recommendations, especially those that address alignment of the four plans, growing the Greenbelt, natural heritage systems, agriculture, parks and trails, infrastructure, transportation, rural economies and climate change. However, we do not support the Niagara Escarpment Commission’s recommendation to prohibit new aggregate operations in the Niagara Escarpment Plan area (see Section 6.3). There are also many recommendations that are specific to the Niagara Escarpment Plan area and we encourage the Province to consider them when making changes to the Niagara Escarpment Plan.

During the Coordinated Review we heard support for the designation of the Niagara Escarpment as a UNESCO Biosphere Reserve and recognition of the Niagara Escarpment Commission as having played an important role in its protection. A few organizations suggested that a similar body should be created to oversee the Oak Ridges Moraine Conservation Plan.
and Greenbelt. However, we also heard concerns about the development control process administered by the Niagara Escarpment Commission. For example stakeholders told us about challenges associated with implementation of the Niagara Escarpment Plan, including:

- Significant delays associated with the processing of development permit and plan amendment applications
- Duplication of review efforts by ministries, agencies and conservation authorities since many of them receive similar applications for permits or proposals pursuant to legislation or policy under their jurisdictions
- Lengthy and expensive hearing processes with variable, and sometimes unpredictable, outcomes that can require Ministerial involvement
- Limited resources for enforcement related activities
- Impediments to rural and agricultural economies, such as the provision of value-added activities on farm lands

**RECOMMENDATION 74**

Update the Niagara Escarpment Commission development control process, without compromising the purpose of the Niagara Escarpment Plan, by:

- Identifying ways to streamline the process and reduce duplication of effort
- Refining the planning approvals process to better focus on outcomes and achieve greater alignment with the other plans, including the use of common definitions
- Increasing support for the agricultural system and rural economy

**9.3 Aligning the Policy Framework**

Ontario’s land use planning system is based on a PPS that applies to the entire province, along with provincial plans that provide more specific policy direction to certain geographical areas, such as the GGH, the Greenbelt, Niagara Escarpment and Oak Ridges Moraine. The PPS
describes how it is to be read in conjunction with provincial plans, and explains the basic provisions for precedence in the case of conflicts. For the most part, the four plans explain how they relate to the PPS and to other provincial plans, including provisions for deferrals and policy overlap. Nevertheless, a common theme during consultations for this review was the perception that the policy hierarchy is not clear, resulting in different interpretations about the application of the various policy frameworks.

In addition to the four plans that are subject to this Coordinated Review, there are three other provincial plans that are specific to the GGH: the Parkway Belt West Plan (1978), the Central Pickering Development Plan (2006) and the Lake Simcoe Protection Plan (2009). Where the Growth Plan and Greenbelt plans overlap with these other provincial plans, implementation challenges can arise due to confusion and conflicts about which policy framework prevails.

**RECOMMENDATION 75**

Streamline the policy framework provided in the four plans to the extent possible to increase clarity and consistency while ensuring that the primary intent and highest standards currently set by the plans are not compromised. Include:

- Policy updates and additions recommended in this report
- Use of the terminology of the PPS, except where terms are specific to local geography or unique to the plan (e.g., Niagara Escarpment or Oak Ridges Moraine)
- Clarification of policy hierarchies among the four plans and the PPS as well as relationships to the Parkway Belt West Plan, Central Pickering Development Plan and Lake Simcoe Protection Plan

**9.4 Streamlining Implementation**

The Growth Plan, Greenbelt Plan and Oak Ridges Moraine Conservation Plan are implemented by municipalities through amendments to their official plans to conform to the provincial plans, subject to varying time frames and approval regimes. The Niagara Escarpment Plan is
implemented in a different way, via the development control system, except for urban areas where the municipal planning process applies. Aligning the timing of implementation of the Growth Plan, Greenbelt Plan and Oak Ridges Moraine Conservation Plan, where possible, could reduce the overlap of approvals for provincial plan implementation.

Experience with the conformity exercise for the Growth Plan, Greenbelt Plan and Oak Ridges Moraine Conservation Plan over the past ten years shows that time frames vary considerably and have been longer than expected in most cases. They range from an average of 2.6 years for conformity with the Oak Ridges Moraine Conservation Plan by the Regions of Peel, York and Durham, to an average of 7 years for the Growth Plan. Lower-tier official plan conformity with the Growth Plan is still ongoing (74 per cent have adopted official plans or amendments to conform with the Growth Plan) primarily due to delays in the upper-tier official plan conformity process.

During this review, we heard many concerns from stakeholders and the general public about the influence of the OMB on implementation of the four plans.59 For example, comments from the general public included concerns about the perceived power of the OMB, requests to review the role of the OMB in the planning process to ensure that policies are applied consistently, and suggestions to dismantle the OMB altogether. The general public feels that meaningful community participation in the OMB process is resource-prohibitive and that once the OMB becomes the decision-maker on a matter there is generally no further opportunity for community input. The development sector believes that the OMB plays an important role in making difficult planning decisions and addressing “not in my backyard” issues. Municipalities were of the view that many OMB decisions conflict with provincially approved municipal plans and called for clearer direction in the Growth Plan and Greenbelt plans to help inform OMB decisions. They also emphasized that the requirement that OMB hearings consider matters “de novo” (starting from the beginning) increases costs and delays. The Ministry of Municipal Affairs and Housing

59 The Ontario Municipal Board (OMB) is an independent tribunal that conducts hearings and makes decisions on a wide range of municipal and land-related matters including official plans, zoning by-laws, subdivision plans, consents and minor variances, land compensation, development charges, ward boundaries, and aggregate resources.
will work with the Ministry of the Attorney General to undertake a review of the scope and effectiveness of the OMB in the near future.

A key theme heard throughout the consultations for this review was the need to ensure that residents are better consulted at the beginning of the planning process for new developments and to encourage them to provide feedback on the future of their communities. In this regard, Bill 73, the proposed Smart Growth for Our Communities Act, 2015, includes proposed Planning Act changes that would require municipalities to set out in their official plans how and when the public would be consulted. In addition, accountability would be increased by requiring municipalities to explain how public input affected their planning decisions. If passed, Bill 73 would also require citizen representatives on municipal planning advisory committees. These proposed changes would go a long way towards better growth management outcomes by ensuring that local residents have an increased opportunity for early and full engagement and increased transparency.

Another aspect of Bill 73, if passed, that could facilitate the implementation of the provincial plans, is the proposal to remove the ability to appeal certain matters to the OMB where there is an existing provincial approval (e.g., Greenbelt Plan and Oak Ridges Moraine Conservation Plan protection boundaries, or Growth Plan population and employment forecasts).

Effective implementation of the plans requires that municipalities conduct the studies needed to inform planning for growth. The Development Charges Act specifies that studies done to set development charges can be paid for through development charges themselves, but we have heard that there is sometimes a lack of clarity regarding which studies are eligible (e.g., studies demonstrating the effectiveness of green or low-impact infrastructure alternatives, or watershed and sub-watershed plans that inform more detailed planning work). We believe that the Province should consider clarifying the rules to specify which studies should be eligible for some cost recovery through development charges. Any changes would require legislative changes to the Development Charges Act.
76 **RECOMMENDATION 76**
Streamline the conformity process wherever possible by synchronizing the process and timelines among the Greenbelt Plan, Growth Plan and Oak Ridges Moraine Conservation Plan.

77 **COMPLEMENTARY RECOMMENDATION 77**
During the review of the Ontario Municipal Board (OMB), give consideration to reducing delays, costs and conflicts with the goals of the four plans by:
- Limiting appeals to the OMB regarding official plans, official plan amendments, zoning bylaws, and targets for intensification and density that are in conformity with the policies of the four plans
- Reviewing alternatives to the requirement that the OMB must consider matters “de novo”
- Revising rules, procedures and timelines to increase effectiveness and reduce delays
- Exploring more collaborative processes to resolve disputes
- Increasing support for municipalities during OMB appeal processes
- Improving support for public participation and fair access to OMB processes, including a user-friendly online tool providing information on OMB hearings

78 **COMPLEMENTARY RECOMMENDATION 78**
Enact proposed changes to the Planning Act that would support increased public involvement in planning decisions as soon as possible.

79 **RECOMMENDATION 79**
Enhance implementation of the four plans by:
- Improving consistent application of the plans’ policies through guidance to interpret and implement them (e.g., through technical backgrounder and case studies)
- Reviewing existing provincial programs and initiatives to ensure alignment with the four plans.
80 COMPLEMENTARY RECOMMENDATION 80
The Province should consider providing clarity on the types of municipal background studies that are eligible for cost recovery in a development charges bylaw with the goal of facilitating innovative and sustainable approaches to providing infrastructure.

81 COMPLEMENTARY RECOMMENDATION 81
Increase provincial support for smaller municipalities to undertake the mapping and analysis required to implement the plans.

82 COMPLEMENTARY RECOMMENDATION 82
Improve the coordination of implementation across provincial ministries by developing directives for provincial real estate decision-making and infrastructure funding approvals to enhance support for the policies and outcomes of the four plans, for example:

- Prioritize urban growth centres and intensification corridors as areas for investment
- Develop incentives and directives for provincial real estate and other investments in urban growth centres and intensification corridors
- Link provincial approvals of infrastructure funding to policies and outcomes of the four plans

83 COMPLEMENTARY RECOMMENDATION 83
Make the plans more user-friendly by developing mechanisms for landowners, stakeholders and the public to identify the plans and policies that apply in a given location. For example, this might include an interactive web portal or the use of Ontario’s Open Data Catalogue.
9.5 Governance and Oversight

Responsibility for implementing the four plans and planning in the GGH is shared between the Province and municipalities. Conservation Authorities also play a key role. At the provincial level, the Ministry of Municipal Affairs and Housing is responsible for the Growth Plan, Greenbelt Plan and Oak Ridges Moraine Conservation Plan. The Ministry of Natural Resources and Forestry is responsible for the Niagara Escarpment Commission and Plan, and Conservation Authorities. As discussed earlier, there are many other provincial ministries whose initiatives can help to achieve the goals of the four plans. They include the Ministries of Agriculture, Food and Rural Affairs; Economic Development, Employment and Infrastructure; Education; Training, Colleges and Universities; Energy; Environment and Climate Change; Finance; Health and Long-Term Care; Tourism, Culture and Sport; and Transportation. During this review, many stakeholders and the general public emphasized that there is a need for greater coordination among agencies to improve consistency and effectiveness of the plans’ implementation. Recommendation 85 lists some of the key functions that could be undertaken by a coordinating body for the area of the four plans.

During this review, we also heard requests for more provincial oversight of the four plans, including shared, consistent data and regular, systematic reporting on progress. All four plans include provisions that the Province will develop performance indicators to measure the effectiveness of the policies of the plans. Ontario’s Niagara Escarpment (ONE) monitoring program was created in 2005 with the purpose of evaluating the effectiveness of Niagara Escarpment Plan policies in meeting their purpose and objectives and, in April 2015, initial sets of performance indicators were released for the Greenbelt plans and the Growth Plan. Some of the data needed to assess the plans are currently available for some parts of the region, but they are collected at different times and using different methods, which makes it very difficult to aggregate and compare the information.

Since the Province does not generally collect primary land use data, it relies on other sources such as the Oak Ridges Moraine Foundation, Statistics Canada, Ministry of Transportation, Municipal Property...
Assessment Corporation, Teranet/Ontario Parcel Alliance, conservation authorities and municipalities.

A number of organizations currently provide information to stakeholders and the public about specific themes and plans. Examples include the Friends of the Greenbelt Foundation, Oak Ridges Moraine Foundation, Niagara Escarpment Commission, conservation authorities and a variety of non-government organizations. There is an opportunity to expand this work to increase support for the Growth Plan and to cover additional themes, such as climate change, human health, transit, active transportation, complete communities and intensification.

There was general agreement during the consultations for this Coordinated Review that the plans are well intentioned and should be enhanced. However, the long-term sustainable planning principles on which they are based are not always well understood by the public. For example, proposals for intensification are frequently met by community opposition, which can lead to refusals, delays and ultimately higher costs for the types of projects that support the outcomes sought by the Growth Plan. Although the policy frameworks for the Greenbelt plans and Growth Plan are linked, there is little public understanding of their relationships, and little public awareness or understanding of the Growth Plan and its goals.

In 2005, Friends of the Greenbelt Foundation was provided with $45 million in funding as an independent, non-profit charitable body promoting awareness of the Greenbelt and funding supportive activities such as public education, research and promotion of local agriculture. We heard from stakeholders that this work has been very valuable and should be continued. It would be helpful to provide similar attention to the promotion, understanding and implementation of Growth Plan policies.

**RECOMMENDATION 84**

Develop a comprehensive monitoring program for the GGH focused on measuring the outcomes of the policies in the four plans. The Province should:

- Identify the metrics and data requirements
- Facilitate standardized collection and reporting
85 RECOMMENDATION 85

Ensure there is a secretariat within the provincial government with the capacity and resources to ensure effective coordination of actions by provincial ministries, the Niagara Escarpment Commission, municipalities, conservation authorities, and other local bodies that will facilitate implementation of the four plans and address the recommendations in this report. The secretariat should accomplish, but not be limited to, the following outcomes:

• Effective growth management to create transit-supported, complete communities in the GGH
• Integration of land use planning with financial planning and infrastructure planning (including water, wastewater, stormwater, transportation, agricultural and green infrastructure)
• Ensuring the updated Long-Term Affordable Housing Strategy supports affordable housing in urban growth centres, intensification areas and greenfield developments
• Action towards climate change targets and objectives, consistent with the upcoming Ontario Climate Change Strategy
• Mapping and policies for a GGH agricultural system and Greater Golden Horseshoe natural heritage system
• Development and implementation of a consistent and integrated approach to watershed plans throughout the region
• An aggregate resources strategy
• A program to grow the Greenbelt
• A system of publicly accessible parkland, open space and trails

86 RECOMMENDATION 86

Create an oversight forum with the capacity and resources to monitor and report on implementation and deliver public education about the four plans. The forum should include representation from provincial ministries, the Niagara Escarpment Commission, Oak Ridges Moraine and Greenbelt Foundations, Greenbelt Council, municipalities, conservation authorities, public health units,

(Recommendation 86 continued on next page)
9.5 GOVERNANCE AND OVERSIGHT

(Recommendation 86 continued)

professional associations, non-government organizations and members of the public. It should be responsible for:

• Reporting on the results of the comprehensive provincial monitoring program (see Recommendation 84)
• Hosting an annual symposium to report on progress, share best practices and build support among political leaders, stakeholders and the public
• Identifying priorities for the education and outreach program (see Recommendation 87)
• Overseeing funding mechanisms to support efforts that contribute to the goals of the four plans

87 RECOMMENDATION 87

Develop an education and outreach program targeted to specific groups and audiences, including municipal councils and staff, other agencies, key thought influencers, stakeholder organizations, farmers and the general public. Include topics that will explain the intent of the four plans, promote their benefits and illustrate ways to achieve their goals. For example:

• Benefits of density and intensification
• Characteristics and benefits of complete communities
• Need for affordable housing including rental housing and second units
• “Agriculture 101” for non-farmers
• Information to explain the four plans to the public, stakeholders and elected officials
• Aggregate resources planning, extraction, management and site rehabilitation
• Stewardship and enhancement of water and biodiversity
Appendices
Advisory Panel Membership and Terms of Reference

Membership

David Crombie (Chair)
David Crombie has a long history of public service and engagement. He was elected as an Alderman for the City of Toronto in 1969 and then as Mayor in 1972, an office he held until 1978. During his time as Mayor of Toronto, he was instrumental in Toronto’s urban reform movement and oversaw the creation of the St. Lawrence neighbourhood, the development of affordable housing and a new downtown plan. He served as a Member of Parliament from 1978 to 1988, during which time he held several cabinet positions, including Minister of Health and Welfare, Minister of Indian and Northern Affairs and Secretary of State for Canada. From 1988 to 1992, he served as the Commissioner of the Royal Commission on the Future of the Toronto Waterfront. He is the former president and CEO of the Canadian Urban Institute, former Chair of Ontario Place Corporation, founding Chair of the Waterfront Regeneration Trust and Chancellor Emeritus of Ryerson University, and served on the CivicAction Board of Directors.

Currently, he is the President of David Crombie and Associates Inc., Chair of the Toronto Lands Corporation, Chair of the Nuclear Waste Management Advisory Council and Director of the Mount Pleasant Group of Cemeteries. In recognition of his contributions to Ontario and Canada, Mr. Crombie was appointed as an Officer of the Order of Canada in 2004. In 2012, he was made a Member of the Order of Ontario.

Keith Currie
Keith Currie, a Simcoe County crop farmer, was re-elected as Vice President of the Ontario Federation of Agriculture (OFA) at the Annual General Meeting in 2014. His 25 years of experience with the OFA began with an appointment to the Simcoe County Federation of Agriculture, where he held numerous positions including President in 2004. Currie has served on the Board of Directors of the OFA for the
past 12 years. With a diploma in Agricultural Production Management from Ridgetown College, Currie manages an eighth-generation cash crop farm near Collingwood with his wife and four children.

Rae Horst
With over 30 years’ experience managing natural resources at the senior policy level for the Ontario Ministry of Natural Resources and as CAO of the Credit Valley Conservation Authority, Rae has written provincial environmental and resource extraction legislation, regulation and policies; conducted major provincial policy public consultation exercises; implemented both environmental and industrial legislation; and negotiated major land development and mining development agreements. Rae was a former Ontario Ministry of Natural Resources Director responsible for petroleum resources, aggregate extraction, conservation authorities, native land claims and provincial land and waters and represented the Province for negotiations with the U.S. for a water withdrawal from the Great Lakes by the U.S. Rae is a geologist with a BSc from McGill University, an MSc from Laurentian University and an MBA from the University of Toronto.

John MacKenzie
John MacKenzie is Deputy City Manager, Planning and Growth Management for the City of Vaughan. MacKenzie is responsible for the City’s Building Standards, Development Planning, Policy Planning and Parks Development Departments. From 2011 to 2014 MacKenzie was the City lead on efforts to advance and facilitate the first phase of transit oriented development projects in the Vaughan Metropolitan Centre. MacKenzie currently represents the City of Vaughan on advisory Committees including the Metrolinx Planning Leaders Forum. From 2005 to 2011 in his role as Director of Real Estate Development and AFP Initiatives at Ontario Realty Corporation, MacKenzie led inter-disciplinary teams on land development, land use policy and infrastructure projects across Southern Ontario. This work included project management for Toronto Waterfront Revitalization projects in the West Don Lands, and several hospital redevelopment projects across the province. During this time MacKenzie also served as an Advisory Committee Member for the Ontario Greenbelt Foundation.
From 2000 to 2005 MacKenzie played a major role in preparing and implementing provincial plans and initiatives including the Oak Ridges Moraine Conservation Plan and Greenbelt Plan. MacKenzie holds a Masters of Science Degree in Planning from the University of Toronto and an Honours Bachelor of Arts Degree in Geography and Urban and Environmental Studies from Brock University. MacKenzie is a member of the Ontario Professional Planners Institute, Canadian Institute of Planners and the Ontario Association for Impact Assessment.

Leith Moore
Since 1957, Fieldgate Homes has left its footprint on almost every corner of the GTA, creating new home communities, condominiums and commercial developments of distinction across the metropolitan region and beyond. As the company has grown, it has diversified too, building on the reputation of excellence in design and construction. Leith joined Fieldgate Homes in 2014 to lead the diversification of the Fieldgate brand into urban communities and condominium homes. Prior to this Leith was Vice President of Development for the Sorbara Group of Companies (1985-2014). Leith was the Chair of BILD (Building Industry and Land Development Association) and 2012-2013 President of the Ontario Home Builder Association. Leith was a member of the 2013 Ontario Transit Investment Strategy Panel (Golden Panel). He is a graduate of the School of Urban and Regional Planning at the University of Waterloo (1981). He was also Past Chair and member of the Board of Evergreen (a national non-profit environmental charity), and from 2006-2013 an adjunct professor at the School of Urban and Regional Planning at the University of Waterloo.

Debbie Zimmerman
Since 2003, Zimmerman has been the CEO of the Grape Growers of Ontario, the official organization that represents over 500 registered grower members on 17,000 acres in the province’s three viticulture areas: Niagara Peninsula, Lake Erie North Shore and Prince Edward County.

Actively involved in politics for 36 years, her political career began in 1978 as a local alderman for the Town of Grimsby, and in 1989 she was elected to Regional Council. In 1997, Zimmerman was elected Regional
Chair for the Regional Municipality of Niagara, a position in which she served for two terms.

Zimmerman is the past chair of the Municipal Property Assessment Corporation for the Province of Ontario (2004-2010), and a former member of the Niagara Escarpment Commission (1994-1997). She currently sits on the Board of Directors of the YMCA of Niagara, the McNally House hospice, and is the Co-Chair of the Pathstone Mental Health Fundraising Campaign. Zimmerman has been the recipient of many awards, including the Greater Niagara Chamber of Commerce “Community Leadership Award” in 2013, the “Niagara Award” in 1998, the Niagara Women’s College “Board of Governors Award” in 1998, the Niagara College “Board of Governors Award” in 2001, and the YMCA “Woman of Distinction” award in 2003. In 2015, she was awarded the “Local Food Champion” award for her commitment to local food and years of service to Niagara.

**Terms of Reference**

**Advisory Panel to the Ministers for the Coordinated Review**

**Background**

The Ministry of Municipal Affairs and Housing (MMAH) and the Ministry of Natural Resources and Forestry (MNRF) have four provincial plans (the “Plans”) that are all approaching their statutory, individual ten-year reviews.

- the Growth Plan for the Greater Golden Horseshoe
- the Greenbelt Plan
- the Oak Ridges Moraine Conservation Plan
- the Niagara Escarpment Plan.

The Greenbelt Plan, Oak Ridges Moraine Conservation Plan and the Niagara Escarpment Plan are known collectively as the Greenbelt Plans. The Province is undertaking a coordinated approach to the review of the Plans. MMAH and MNRF are the core ministries (the “Ministries”) leading the Coordinated Review, and they are supported by partner ministries.
The consultation process will follow legislated requirements for the Plans’ reviews, including those for the involvement of the Niagara Escarpment Commission and the Greenbelt Council. The consultation process will involve two rounds of consultation. The first round will seek public and stakeholder input to inform the development of amendments. The second round will be to consult on the proposed amendments. During the first round of consultation, which is expected to launch in February 2015, the Ministries will seek input on focused areas and policies within the Plans. A consultation document will guide the discussions. It will include an overview of the Plans, the scope of issues to be considered during the reviews, and specific policy issues and questions to be addressed. Input and feedback from this round of consultation will help inform the development of proposed amendments to the Plans.

The consultation process to inform the development of amendments may include:

- Regional town hall/workshop meetings across the GGH with municipalities, stakeholders, Aboriginal communities and organizations, and the public (up to 13 meetings)
- A workshop with key stakeholders
- Two workshops specific to Aboriginal interests
- Neutral third-party facilitation for the meetings and summary reporting of the input received
- Briefings and meetings with the Greenbelt Council and the Niagara Escarpment Commission
- Issue-focused meetings with experts and stakeholders as required
- Additional opportunities for one-on-one meetings with individual Aboriginal communities and/or organizations with issues or concerns that cannot be adequately addressed during a workshop
- Environmental Bill of Rights Registry posting with a proposed posting period of 90 days
- Digital presence and other tools to support public engagement.
The feedback and input received at the regional, stakeholder and Aboriginal workshops/meetings will be recorded, summarized and shared with participants and the public. Additionally, the facilitator will prepare a summary report on all of the submissions. All summaries will be available to members of the Advisory Panel (the “Panel”), who will also have the ability to review individual submissions.

**Mandate**

The Panel will develop consensus-based recommendations on how to amend and improve the Plans and present a report to the Minister of Municipal Affairs and Housing and to the Minister of Natural Resources and Forestry (the “Ministers”) by September 1, 2015. The recommendations will consider the areas set out in the consultation document focusing on key areas of priority, including:

- Opportunities for growing the Greenbelt
- How to support agricultural activities and further protect agricultural land
- How to increase intensification, achieve densities to support transit and align infrastructure investments
- How to accommodate a growing population with housing and employment development
- How to further protect the region’s Natural Heritage Systems
- How the Plans can support the Government’s targets for reducing greenhouse gases
- Other priority areas raised during the consultation, as identified by the Panel or the Ministers.

The Panel will develop consensus-based recommendations based on the input and feedback from the public, stakeholders, municipalities and Aboriginal communities and organizations received during round one consultation. The Panel will access background information and government expertise as needed to inform the work, by:

- Meeting with staff and officials
- Reviewing research, reports, and other background information.
After the report has been presented, the Panel may also be requested to provide additional advice to the Ministers, as part of the Coordinated Review.

**Responsibilities of the Panel**

The Panel will use their expertise, knowledge and available resources to provide best advice to the government. The Panel’s work will be guided by the following key principles:

- Public interest remains paramount and protected
- Recommendations align with the government’s overall strategic directions and priorities
- The process remains transparent and professional.

**Support for the Advisory Panel**

The work of the Panel will be supported by MMAH and MNRF staff, including logistics, consultation materials, and other support as needed. MMAH and MNRF will draw on relevant staff expertise in other ministries as appropriate. Staff will also participate in briefings and meetings with the Panel to provide expertise and other information as required for the development of recommendations.

**Deliverables**

The Panel will submit a report to the Ministers by September 1, 2015 with recommendations and advice on how to amend and improve the Plans based on public and stakeholder input.

The Ministers will review the report and determine how and when its recommendations and advice would be made public.

**Timeframe**

The work of the Panel will begin in February 2015.

The Panel is a short-term body with a mandate subject to the pleasure of the Lieutenant Governor in Council and lasting until June 30, 2016.
**Conflict of Interest**

The Panel members are required to declare any actual, potential, or perceived conflict of interest arising in regard to any matter under consideration for the recommendations.

**Confidentiality and Access to Information**

All materials produced by the Panel, including research analysis, reports and recommendations, remain the property of the Ministry of Municipal Affairs and Housing and the Ministry of Natural Resources and Forestry and will be released publicly at the discretion of the Ministries.

Background research reports provided to the Panel are the sole property of the Ministries and will be made available to the public at the discretion of the Ministries.

**Acronyms**

GGH – Greater Golden Horseshoe
GTA – Greater Toronto Area
GTHA – Greater Toronto and Hamilton Area
LEAR – Land Evaluation Area Review
MOF – Ministry of Finance
OMB – Ontario Municipal Board
PPS – Provincial Policy Statement, 2014
SPA – Special Policy Area
URV – Urban River Valley
List of Recommendations

4. Building Complete Communities

Recommendation 1 ....................................................... 57
Complementary Recommendation 2 ............................... 58
Complementary Recommendation 3 ............................... 58
Complementary Recommendation 4 ............................... 58
Complementary Recommendation 5 ............................... 58
Recommendation 6 ....................................................... 58
Recommendation 7 ....................................................... 60
Recommendation 8 ....................................................... 60
Recommendation 9 ....................................................... 60
Recommendation 10 ..................................................... 64
Recommendation 11 ..................................................... 65
Recommendation 12 ..................................................... 65
Complementary Recommendation 13 ............................ 65
Recommendation 14 ..................................................... 68
Recommendation 15 ..................................................... 69
Complementary Recommendation 16 ............................ 70
Recommendation 17 ..................................................... 71
Recommendation 18 ..................................................... 77
Recommendation 19 ..................................................... 77
Recommendation 20 ..................................................... 78
Recommendation 21 ..................................................... 79
Recommendation 22 ..................................................... 79
Recommendation 23 ..................................................... 82
Recommendation 24 ..................................................... 83
Recommendation 25 ..................................................... 84
Recommendation 26 ..................................................... 86
Complementary Recommendation 27 ............................ 86

5. Supporting Agriculture

Recommendation 28 ..................................................... 93
Recommendation 29 ..................................................... 93
LIST OF RECOMMENDATIONS

Recommendation 30 ............................................................. 93
Recommendation 31 ............................................................. 94
Recommendation 32 ............................................................. 94
Recommendation 33 ............................................................. 94
Recommendation 34 ............................................................. 94
Complementary Recommendation 35 ................................. 94
Complementary Recommendation 36 ................................... 96
Complementary Recommendation 37 ................................... 96
Complementary Recommendation 38 ................................... 96
Complementary Recommendation 39 ................................... 96

6. Protecting Natural and Cultural Heritage

Recommendation 40 ............................................................. 103
Recommendation 41 ............................................................. 103
Complementary Recommendation 42 ................................. 104
Recommendation 43 ............................................................. 109
Recommendation 44 ............................................................. 109
Complementary Recommendation 45 ................................. 110
Complementary Recommendation 46 ................................... 111
Complementary Recommendation 47 ................................... 113
Recommendation 48 ............................................................. 115

7. Providing Infrastructure

Recommendation 49 ............................................................. 119
Complementary Recommendation 50 ................................. 120
Complementary Recommendation 51 ................................. 120
Recommendation 52 ............................................................. 123
Recommendation 53 ............................................................. 124
Recommendation 54 ............................................................. 127
Recommendation 55 ............................................................. 127
Recommendation 56 ............................................................. 128
Complementary Recommendation 57 ................................... 128
Complementary Recommendation 58 ................................... 128
LIST OF RECOMMENDATIONS

Complementary Recommendation 59 ........................................................ 130
Recommendation 60 ................................................................................. 133
Complementary Recommendation 61 ........................................................ 133
Recommendation 62 .................................................................................. 133
Recommendation 63 .................................................................................. 134
Recommendation 64 .................................................................................. 134
Complementary Recommendation 65 ........................................................ 134
Recommendation 66 .................................................................................. 135

8. Mainstreaming Climate Change
Recommendation 67 .................................................................................. 143
Recommendation 68 .................................................................................. 143
Complementary Recommendation 69 ........................................................ 143
Complementary Recommendation 70 ........................................................ 143

9. Implementing the Plans
Recommendation 71 .................................................................................. 150
Recommendation 72 .................................................................................. 152
Recommendation 73 .................................................................................. 154
Recommendation 74 .................................................................................. 156
Recommendation 75 .................................................................................. 157
Recommendation 76 .................................................................................. 160
Complementary Recommendation 77 ........................................................ 160
Complementary Recommendation 78 ........................................................ 160
Recommendation 79 .................................................................................. 160
Complementary Recommendation 80 ........................................................ 161
Complementary Recommendation 81 ........................................................ 161
Complementary Recommendation 82 ........................................................ 161
Complementary Recommendation 83 ........................................................ 161
Recommendation 84 .................................................................................. 163
Recommendation 85 .................................................................................. 164
Recommendation 86 .................................................................................. 164
Recommendation 87 .................................................................................. 165