



Green Infrastructure Ontario Coalition Comments on the Coordinated Review of the Four Provincial Plans

In response to the request for comments on the Province's coordinated review of the Growth Plan for the Greater Golden Horseshoe, the Greenbelt Plan, the Niagara Escarpment Plan, and the Oak Ridges Moraine Conservation Plan, the Green Infrastructure Ontario Coalition (GIO) has reviewed the supporting materials and provides the following comments.

GENERAL COMMENTS

Green infrastructure can make a significant contribution to many of the priorities outlined in the province's coordinated review process. In response to the province's consultation questions, the comments below demonstrate how including green infrastructure as a strategy would integrate across priority areas to support sustainable growth, protect the natural environment and support economic development in the region.

Green infrastructure is a proven tool that utilizes natural solutions to provide ecological, economic and social benefits. It includes the natural capital, semi-natural areas, and vegetative technologies that are designed and/or managed to deliver a wide range of infrastructure functions. It includes everything from tree-lined streets, urban parks and gardens, to green roofs, urban agriculture, bioswales, and permeable pavement. One of the key attractions of green infrastructure is its ability to perform several functions in the same spatial area. In contrast, most grey infrastructure (eg. roads, pipes) usually has only a single purpose and benefit. Green infrastructure investments have a high return over time, provide job opportunities, and can be a cost-effective complement (or alternative) to grey infrastructure.

Green infrastructure can also catalyze economic growth by attracting inward investments and generating employment, address climate change, reduce environmental costs and improve the health of local populations. Investing in green infrastructure can also strengthen the economy by fostering innovative approaches and creating new green businesses.¹

¹ http://ec.europa.eu/environment/nature/ecosystems/docs/green_infrastructure_broc.pdf

CONSULTATION QUESTION COMMENTS

Question 1: How can the plans better support the long-term protection of agricultural lands, water and natural areas?

- Highlight the importance of planning for natural heritage systems at various scales. Currently, the plans outline a framework of planning for key linkages at the provincial scale, however, complementary watershed and local scale natural heritage systems are identified by municipalities and conservation authorities based on the unique needs of their communities. It should be recognized that, while local natural features and areas may not appear to provide key functions at a provincial scale, they do provide significant beneficial functions at the watershed and local scales. The plans should be updated to align with the recently updated Provincial Policy Statement and the Natural Heritage Reference Manual, where natural heritage systems protection at various scales is encouraged.
- Recognize that long term protection requires that agriculture lands, water and natural areas are considered an important part of province's infrastructure network. The services provided by these features includes air and water filtration, erosion protection, regulation of water flow, coastal protection, pollination, maintenance of soil structure, water purification, and carbon storage.

Question 2: How can the plans be strengthened to ensure our communities makes the best use of key infrastructure such as transit, roads, sewers and water?

- Expand the definition of infrastructure to include living and engineered green infrastructure. Like roads and sewers, the province's green assets and ecological systems work as part of the comprehensive infrastructure fabric that supports and sustains society.
- Amend plans to include low impact development (LID) as a clear objective. This will create more resilient communities.
- Encourage municipalities to incorporate LID and climate adaptation considerations into new infrastructure and urban design including roads and buildings, as well as retrofits.
- Require long term lifecycle accounting when estimating the costs of infrastructure redevelopment, new infrastructure construction and changes to current practices. This would involve encouraging municipalities to analyze a range of alternatives, including green infrastructure, based on full life-cycle costs when undertaking a project. The aim would be to minimize the total cost of owning and operating the assets while delivering the desired service levels.
- Require municipalities to define targets for stormwater quality and volume reductions. Guidance should be provided to help them strive to achieve these targets through implementing measures to manage rain at or near where it falls. They should be encouraged to implement infiltration, harvesting, and other source control measures on public and private lands in the context of development, redevelopment, infill, and

retrofit. Also require municipalities to develop Stormwater Management Master Plans that include implementation of low impact development measures in new and retrofit developments.

- For example, consider amending s. 3.2.5, bullet point 8 of the Growth Plan to include that “municipalities will meet defined targets for stormwater quality and volume reductions through stormwater plans that include infiltration, rain water harvesting, and other source control measures. Plans should provide for the implementation of green stormwater infrastructure/low impact development measure on public and private lands in the context of development, redevelopment, infill and retrofit.”
- Consider amending s. 4.2.1 of the Growth Plan to include natural hydrological systems. Require management of the hydrologic cycle/water balance and erosion control through stormwater management in planning and design to achieve more robust and resilient communities. This will help protect natural hydrological systems, and maintain spaces for floods and water retention which can help address the extreme weather associated with climate change.
- Encourage municipalities to work with utility companies, emergency management and waste departments to develop more space-efficient design standards and ‘find’ space for green infrastructure in mobility corridors.

Question 3: How can the plans continue to support the design of attractive, liveable, and healthy communities that are accessible to all Ontarians at all stages of life?

- Urban trees are a key component of attractive, liveable, and healthy communities. The extent and condition of the Province's urban forests is determined to a great degree by the built environment and the planning and development processes. Including guidance and support for urban forest policies, plans, targets, and strategies in municipal planning would support the development of sustainable communities. This could be achieved through the following mechanisms:
 - The Growth Plan should require municipalities to set urban forestry targets (eg. species diversity, age distribution, canopy cover) as part of their official plans. The province should then support this by developing tools and guidance materials to support municipalities, landowners, community groups, and other stakeholders in managing Ontario’s urban forests.
 - The Plans should encourage stewardship of urban forests and be clear that this extends beyond tree planting to supporting stakeholders in planning, protection, and maintenance of urban trees.
- Support municipalities in setting targets for locally grown food. The target could either be a percentage or an absolute amount and could be developed by each municipality with direction and approval by the province so that the unique situation of each community can be accommodated. Toronto for example would need to look at promoting and quantifying small plot urban agriculture where as other communities could protect large tracks of agricultural land.

- Provide objectives aimed at increase agricultural operations within cities. This could help support the direction in which many new farmers wish to take agriculture, produce a high-demand product, educate the public about food production, and encourage urban youth to consider farming as a career.ⁱ

Question 4: How can the plans better support the development of communities that attract workers and businesses that employ them?

- The green infrastructure sector already employs over 150,000 people across the province and is poised for growth. An increase in green infrastructure implementation would create short term and permanent jobs. In the U.S., one stormwater maintenance company reported, during the economic downturn, their number of employees went up 417 percent, revenue went up 540 percent, and profits increased by nearly 400 percent.² In general the jobs created are for people who are designers, growers, manufacturers, contractors and maintenance professionals, and job growth means more local jobs for skilled designers and engineers as well as less-skilled maintenance crews.
- Quality green infrastructure can have a positive impact on land and property markets, creating settings for investment and acting as a catalyst for wider regeneration. High-quality, connected environments attract skilled and mobile workers that, in turn, encourage business investment³ For example, the Crewe Business Park in England was designed to follow natural contours and features of the land, connect existing trees and vegetation, and incorporating green infrastructure technologies. The business park has created more than 2,800 jobs, with the high-quality office environment often cited as the motivation for businesses in their choice to locate there. The park has received local and national recognition and has been the catalyst for spin-off redevelopment projects nearby.

Question 5: How can the plans help address climate change?

- Green infrastructure is a necessary component in the province's climate change adaptation and resilience strategy. The province should encourage implementation of green infrastructure to help reduce emissions and moderate the adverse impacts of climate change. Green infrastructure enhances the ability of communities to deal with extreme weather events by:
 - Decreasing ambient urban air temperatures and providing shade
 - Reducing flooding
 - Reducing erosion
- Green infrastructure assets also reduce emissions by:
 - Directly removing pollutants from the air

²[http://wfrc.org/new_wfrc/Green_Infrastructure/\(Re\)Connect%20The%20Wasatch%20Front%20Green%20Infrastructure%20Plan.pdf](http://wfrc.org/new_wfrc/Green_Infrastructure/(Re)Connect%20The%20Wasatch%20Front%20Green%20Infrastructure%20Plan.pdf)

³ <http://www.landscapeinstitute.org/PDF/Contribute/2013GreenInfrastructureLIPositionStatement.pdf>

- Reducing energy use, the urban heat island effect, and water treatment needs, therefore lowering emissions from regional electricity generation (and associated costs for consumers and businesses)
- Reducing the high temperatures that contribute to ground level ozone formation
- As part of any expansion of the urban boundary and any major urban re-development, require consideration of climate change adaptation in watershed and sub-watershed level planning within the Greenbelt Plan, the Niagara Escarpment Plan and the Growth Plan (see s. 24 of the Oakridges Moraine Conservation Plan as an example).
- Require the development of integrated watershed plans. Watershed based planning considers the integration between the natural landscape, land uses, and necessary supporting infrastructure. It also includes risk assessments which take into account existing and future potential risk and liability as a result of climate change. This planning approach addresses many of the consultation questions outlined in this review, and helps manage growth in a sustainable manner.

Question 6: How can the implementation of the plans be improved?

- Encourage the development of stormwater user fees and development charges that incentivize the retention and treatment of stormwater on individual properties (e.g. through vegetative and ecological processes such as bioswales, rain gardens, permeable pavement, green roofs, and rainwater harvesting and reuse) and support investments in stormwater management. These systems help municipalities save money on their built infrastructure, and result in the public developing a greater understanding of their role in stormwater management.
- With each passing year, the design of green Infrastructure strategies become more creative and sophisticated, in large part due to ongoing testing and evaluation by numerous cities, conservation authorities, and non-profits. Non-prescriptive guidance and regulation that do not limit creative solutions would support the implementation of the plans and spur further innovation in the province.
- Educate regulatory approval authorities about LID and ensure the sewage works approval process/criteria facilitates LID rather than creates barriers to it.
- Consider amendments to the Ontario Building Code that would support green roofs and other building-based LID features in all new residential, commercial and industrial development

For more information on the Green Infrastructure Ontario Coalition and the above comments, please contact Michelle Sawka, at msawka@greeninfrastructureontario.org or 647-287-6540.

ⁱ Young, C. 2005. "Five Year Review of the Provincial Policy Statement." Guelph, ON: FarmStart.