Improving Access to Large Parks in Ontario's Golden Horseshoe

Policy, Planning, and Funding Strategies

March 2022

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Green Infrastructure ONTARIO COALITION

This report was prepared by Green Infrastructure Ontario Coalition (GIO) and Re:Public Urbanism, with funding and support from the Greenbelt Foundation. Additional support was received from Ontario Parks Association and Toronto Region Conservation Authority.

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Introduction

The Importance of Large Parks

Parks are crucial green infrastructure assets that provide a wide range of co-benefits and services. They contribute environmental services like stormwater management, urban heat reduction, improvements in air and water quality, and preservation of biodiversity and critical habitat. They also provide physical and mental health benefits like space for recreation and exercise, improvements in concentration and mood, and reduction in anxiety and stress, as well providing places to socialize and gather outdoors. For Indigenous Peoples, they also offer the potential to safeguard their rights, including Free, Prior and Informed Consent, and carry out cultural, traditional, and spiritual practices that are tied to the land. [1]

In densely populated areas like the Golden Horseshoe, large parks are particularly valuable, as they provide an opportunity for people to escape into nature.

Context

This report is a follow-up to the *State of Large Parks in Ontario's Golden Horseshoe*, published in 2019. That report was the first-ever regional scale analysis of large park supply in the Golden Horseshoe and was intended to inform our understanding of what large parks we have, their capacity, and how this will evolve with population projections identified in Ontario's *Growth Plan for the Greater Golden Horseshoe*. That report concluded that there is a shortage of large park supply across the region, with some large parks already having capacity issues, and this limited supply will not keep up with population growth if governments do not prioritise large park planning. There is a growing gap in government capacity for planning, funding, establishing, and managing large parks for public recreation and nature appreciation, and there is a need for further research on policy and funding solutions to address this gap. These findings were the inspiration for this new research.

Purpose of this Report

Given the Golden Horseshoe's rapidly growing population and limited supply of land for new large parks, it is more important than ever to protect existing large parks and explore innovative ways to create new large parks. This report aims to accomplish the following:

- Update the 2019 park inventory maps using a modified definition of "large parks;"
- Validate the existing large park inventory and develop an inventory of planned large parks across the Golden Horseshoe;
- Assess which areas of the Golden Horseshoe have low accessibility to existing and planned parks to identify areas of highest need (including analysis of modes of transportation, travel times, etc.);
- Conduct an equity analysis of current large park distribution to identify communities of need;

[1] *For more information, see the David Suzuki Foundation's 2018 report, Tribal Parks and Indigenous Protected and Conserved Areas: Lessons Learned from B.C. Examples, which explores learnings from Indigenous-lead conservation efforts in British Columbia.*

- Identify key challenges, barriers, and opportunities related to large park planning, funding, and establishment in the Golden Horseshoe;
- Identify exemplary practices and transferrable models from Canada and around the world that could inform large park planning in the Golden Horseshoe; and
- Provide conclusions and recommendations to support the planning, funding, and establishment of large parks.

While the findings are focused on the Golden Horseshoe region, they are also applicable to other regions across Canada.

Defining Large Parks

In the 2019 report, large parks were defined as those 50 ha and larger; this size was chosen based on the unique or magnified benefits associated with large parks (listed below). However, in the vast majority of plans reviewed, many municipalities classify their largest parks at 20 ha, creating a gap between their largest parks and the definition used in the 2019 report. An adjustment to the definition of large parks was deemed necessary to fill the size gap between 20 and 50 ha and the categorization was supplemented in the following ways to try to ensure the parks included still capture the innate feeling of escaping into nature:

- The minimum size threshold for "large parks" has been lowered from 50 ha (2019 report) to 20 ha (current report);
- The definition of "parks" has been expanded to include other natural areas and greenspace (such as valley lands and natural corridors, which are not typically included in municipal definitions of "parks," with the exception of private greenspace that is officially non-accessible); [2]
- A minimum Normalized Difference Vegetation Index (NDVI)* classification has been used to ensure that the focus remains on more natural parks with a significant amount of vegetation;[3] and
- The parks must have a clear public access/entrance point, demonstrating that the parks were accessible and used by the public for recreation.

This revised definition recognizes that parks smaller than 50 ha that meet these criteria can still provide significant ecological services, recreation opportunities, and linkages to other parks and natural heritage systems, which is particularly valuable in the urban context.

** Normalized Difference Vegetation Index (NDVI) was used to estimate the density of green on an area of land. This index can identify the differences between water, pavement, grasslands/fields, and dense forested lands. NDVI average of parklands provided a general understanding of groundcover and could eliminate areas which do not provide significant ecological services or access to nature. Low NDVI values (-1-0.3) allowed the project team to identify and eliminate sports fields, independent paved parking lots, and agricultural lands. These areas were removed from the study boundaries manually with careful consideration of the project intent.*

[2] For the purposes of the analysis, this report defined "large parks" as including both officially-dedicated parks, as well as accessible "non-park" parcels (i.e. greenspaces). Instead of referring to "large parks and greenspaces", for simplicity's sake, the report just uses the "large park" terminology. In consulting with municipal planners and conservation authority staff, it became apparent that these "undeveloped" lands are used recreationally by many residents, albeit maybe not as much as in official parks. For example, the City of Toronto's recent Ravine Strategy acknowledges the frequent recreational use of ravines by the public (see: https://www.toronto.ca/wp-content/uploads/2017/10/9183-TorontoRavineStrategy.pdf) [3] Although an increasing body of research is pointing to the positive social, environmental and health impacts of "bluespace" (i.e. lakes, ponds, creeks, etc.) (e.g. see: Gacson et. al (2020); Volker et. al. (2013)), this report focuses on terrestrial greenspace. Although bluespace was not part of our analysis, bluespaces were encompassed within a number of parks identified.

Benefits of Large Parks

- Large, natural parks allow for better wilderness experiences, providing an opportunity for solitude. There are health and well-being benefits associated with reduced noise and visual stimulation.[4]
- Large parks are more likely to be used for physical activity than smaller parks.[5]
- Large parks contribute more ecosystem services, including cooling benefits and air quality improvements.[6]
- Large parks help contribute more to climate change mitigation by sequestering more carbon.
- Large parks help foster biodiversity and critical habitat, and often harbour more native species, which also directly supports recreational and nature-appreciation activities such as bird watching.[7]
- Large parks are economic generators, driving tourism in many communities.[8]
- Large parks are the best natural classrooms, helping encourage public understanding, appreciation, and enjoyment of nature.[9]
- Large parks can advance reconciliation by recognizing and upholding Indigenous rights (including treaty rights and the right to self-determination) and Indigenous Peoples' self-described responsibilities to manage and steward their traditional territories.[10]
- Finally, large parks have also been recognized as important green infrastructure for reducing the impacts of climate change. Vegetation in parks store and sequester carbon, mitigate extreme heat, minimize flooding, and improve water and air quality.[11]

Rationale for Research

The Golden Horseshoe is characterized by increasing land values, rapid development, and land scarcity, which makes establishing large parks quite difficult. Many large parks in the area are already experiencing high user rates and with the projected population growth there will be increasingly fewer large parks per person.

The COVID-19 pandemic has also increased the demand for parks. The pandemic has underscored the vital role large parks play in providing residents a space to exercise and escape into the outdoors. Park People ran a survey[12] in 2020 of 1,600 Canadians and representatives from 51 municipalities across Canada to understand the role of parks during the pandemic, and their role in recovery. The findings showed that Canadians had an increased appreciation of parks during the pandemic. Additionally, results indicated that there was higher park use and increased demand for access to parks across all Canadian cities surveyed during the pandemic, particularly during COVID-19 lockdowns. For example, numbers presented in the Conservation Halton 2020 Annual Report showed that their parks experienced over 100,000 more visitors in 2020 compared with 2019.[13] Many Park People survey respondents also indicated they preferred to visit parks offering a more natural experience. The dual pressures of decreased park supply per capita and increased demand undermines the ability of existing parks to deliver a satisfying user experience and puts strain on the ecological function and integrity of these spaces.

Emerging research and publications (described in the bulleted list below) have shown that increased access and investments into parks is connected to improved health and well-being, and reduced costs to the healthcare system. Health benefits associated with access to parks include higher levels of physical activity, mental health improvements, and reduced exposure to pollution and extreme heat, lessening the burden on the healthcare system, particularly into the future. Some key initiatives and traditional knowledge perspectives that connect nature and health include the following:

- Indigenous Peoples have long understood the connection between health and nature. The Truth and Reconciliation Commission of Canada Report released in 2015 acknowledged that within the diversity of Indigenous health practices and beliefs across nations, a common belief amongst Inuit, Métis, and First Nation people is that a sacred connection exists between people and the Earth. The environment is central to Indigenous social networks,

identity, values, culture, and traditional knowledge. Human health and well-being are seen as inextricably linked with the land.[14]

- EcoHealth Ontario has a body of research and tools dedicated to exploring and understanding the connections between greenspace and human health to support practitioners and planners in protecting and increasing parks and greenspaces through policy. For example, EcoHealth Ontario and the Greenbelt Foundation developed a framework to highlight the importance of green and natural spaces to human health by valuing the benefits monetarily and presenting the business case for investment in greenspaces.[15]
- The Smart Prosperity Institute produced a publication in 2021 focused on the health benefits of nature-based solutions called, "The Nature of Health". The report focuses on the connection between urban nature, human health, and climate change, and identifies tools and methodologies local and regional governments across Canada can use to value the health benefits of natural features.[16]
- The Ontario government joined the Healthy Parks Healthy People (HPHP) movement in 2014. This initiative first launched in Australia in 2000 and has become a global movement supported through the International Union for Conservation of Nature (IUCN) to promote, understand, and support the link between environmental and human health. The Ontario HPHP team conducted a stakeholder consultation in late 2019, and are currently reviewing the responses, which will inform a draft strategy. The draft was scheduled to be released in 2020 but has been delayed due to COVID.[17]

The intent of this research is to understand the key barriers in large park funding, planning, and establishment, and to identify strategies and models that could help address the projected gap in large park supply in the Golden Horseshoe.

[4] See: Buxton et. al (2021). [5] See: Brink et. al (2016). [6] Ibid. [7] See: Beninde et. al. (2015). [8] See: Canadian Parks Council (2014). [9] Ibid. [10] See: David Suzuki Foundation (2018). [11] See: https://greeninfrastructureontario.org/parks-and-open-spaces/ for a list of environmental, social and economic benefits of parks and open spaces. [12] See: https://parkpeople.ca/2020/07/16/covid-19-and-parks-highlights-from-our-national-surveys. [13] See: https://conservationhalton.ca/annualreport. [14] See: Fijal & Beagan's 2019 literature review examining Indigenous views of health and wellness in Canada. [15] See: Green Analytics 2020, A Conceptual Framework to Understand the Business Case for EcoHealth in Ontario. [16] See: Full report available here, https://institute.smartprosperity.ca/publications /nature-of-health. [17] See: https://www.ontarioparks.com/hphp/engage for more information about the HPHP initiative.

Overview of Methodology

This project is a collaborative effort, developed in partnership with and funded by the Greenbelt Foundation. The Green Infrastructure Ontario Coalition (GIO), with support from the Toronto and Region Conservation Authority (TRCA), has been working to conduct a policy review and global search for transferable models. GIO also led stakeholder engagement and validation through a survey, workshops, and informational interviews. A consultant, Re: Public Urbanism (Re: Public), conducted the park inventory and community needs assessment using Geographic Information Systems (GIS) analysis, and provided content for the community needs and mapping workshop. Below is a description of the major activities and methods utilized in this research.

Updated Golden Horseshoe large park inventory:
This research involved updating and validating the large park inventory compiled for the 2019 report. Parks and greenspaces in the Golden Horseshoe with a minimum size of 20 ha were included to align with the new definition of "large parks," and some linear parks connecting to existing greenspaces with high quality natural features were also included.

Community needs assessment:
An assessment was conducted to understand the current large park network and future parks planned for the next 10-year period. An analysis and scoring of accessibility to large parks in the Golden Horseshoe was carried out to evaluate the total amount of large parks an individual can reach by walking, cycling, public transit, and driving. The mapped inventory of existing and future parks was overlaid with the accessibility analysis and demographics (e.g., population density, income) to conduct the equity analysis of current large park distribution and identify communities of need for new, large park creation in the Golden Horseshoe.

Stakeholder survey:
A survey was disseminated to stakeholders involved in park planning to inform and improve our understanding of the current park funding, policy, and land acquisition strategies used in large parks planning in the Golden Horseshoe. The survey was completed by 28 respondents from local government and governmental agencies (e.g., conservation authorities, parks commissions).

Desktop research and jurisdictional analysis:
Desktop research and a global jurisdictional analysis was carried out to examine and identify themes and gaps in how levels of government in the Golden Horseshoe plan new large parks, and how that compares with approaches elsewhere. A review of policy and practice and an analysis of the stakeholder survey results allowed us to identify key barriers to large park planning and establishment. Jurisdictions around the world were reviewed to inform potential good practice, transferable models, or policy recommendations to improve regional large parks planning in the Golden Horseshoe. When selecting exemplary practices or models, jurisdictions with comparable population densities, population growth, and similar local planning models were chosen.

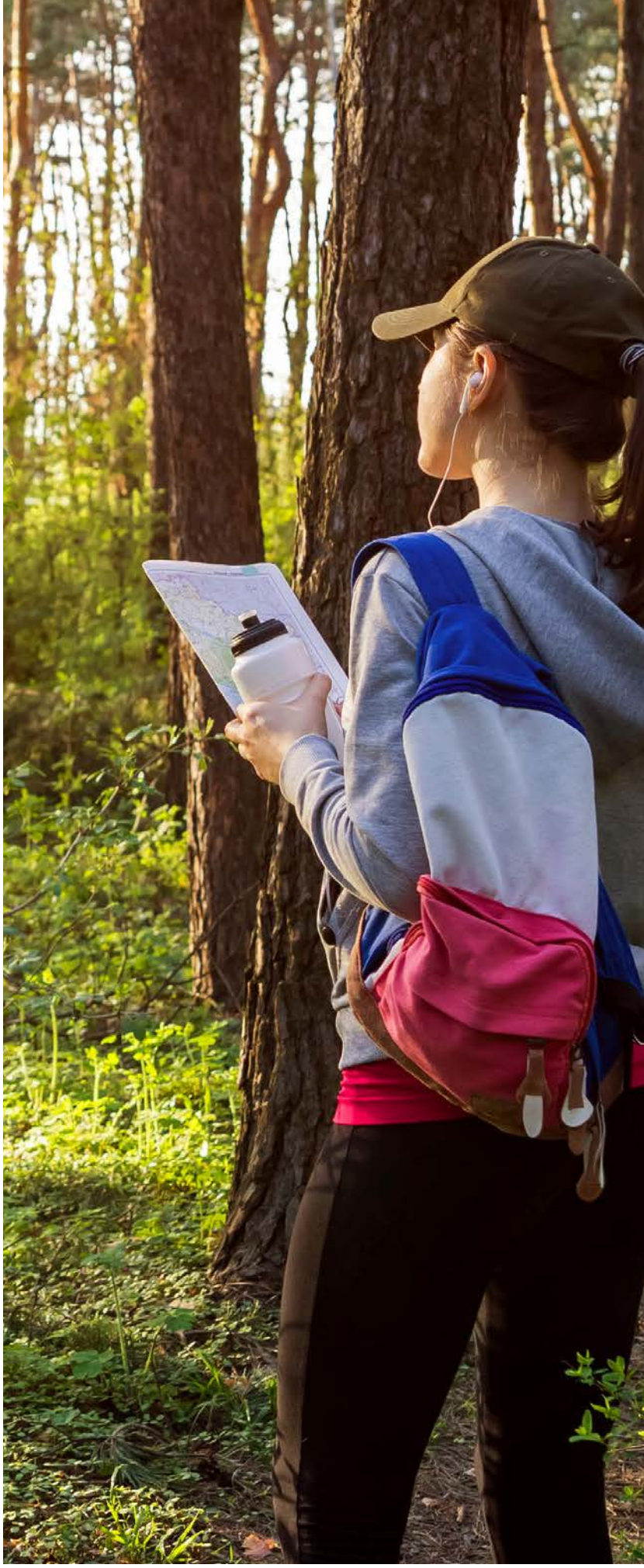
Workshops:

Two workshops were held to engage with stakeholders on the frontlines of parks planning and policy in the Golden Horseshoe.

- At the **Community Needs and Mapping Workshop** the results of the updated existing and planned park inventory, the accessibility analysis, and the assessment of areas within the Golden Horseshoe that have the greatest need for new large park creation were shared. The workshop provided an opportunity to validate the methods and results of this assessment and get feedback from municipal, regional, and conservation authority staff from the study area.
- The purpose of the **Policy and Planning Workshop** was to present and get feedback on the four main themes and gaps identified with respect to parks funding, planning, and establishment. For each theme, practices or models were highlighted from jurisdictions in Canada and worldwide that could offer potential approaches to addressing the barriers to large parks planning. The workshop allowed an opportunity to validate the identified barriers and models through input from academics, and municipal, regional, conservation authority, provincial, and federal staff who are engaged in parks planning.

Smaller focus groups and informational interviews:

The desktop research, jurisdictional analysis, and workshops were supplemented with interviews when further information or feedback was deemed necessary.



Mapping Existing & Planned Large Parks

Redefining Large Parks

In addition to updating the 2019 maps to meet the revised definition for "large parks," several other changes were made to support the accessibility and equity assessment.

The analysis also combined adjacent parks that were interrupted by gaps of 20 m or less to account for parks split by road and infrastructure networks, but otherwise functioning as contiguous greenspace. The majority of additional parkland added to the large parks inventory was composed of continuous parkland such as ravine systems and linear park networks connected across roads or infrastructure by paths or trails. The intent was to recognize that the Golden Horseshoe is a substantially urbanized region where it is reasonable to expect that a large park user may encounter some interruptions and infrastructure while visiting a large park.

The additional parks added to the inventory provided significantly more data to analyze the condition of large park access in the Golden Horseshoe, providing a better assessment of gaps in large park provision. The new definition of large parks contributed to a change in the amount of current supply and projected need for large parks in the region compared to the 2019 study:

2019

139 Parks
Total Parks

27,000 Ha
Large Parkland Hectares

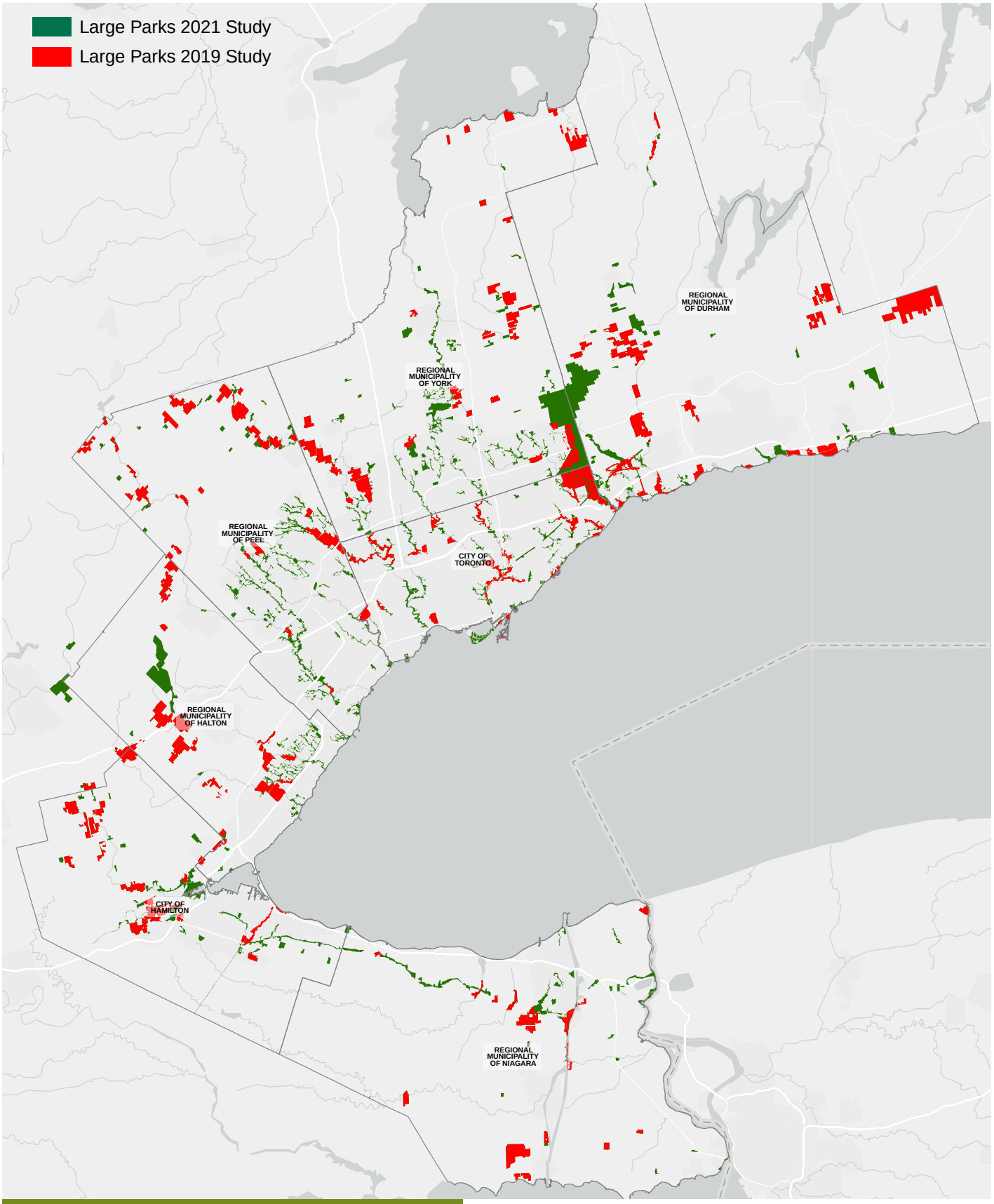
2021

354 Parks
Total Parks

60,631 Ha
Large Parkland Hectares

An additional 215 parks and an additional 33,631 ha of parkland were added to the large parks inventory, largely due to the additional hectarage of continuous parkland that was captured in the analysis, including ravine systems and linear parks bisected by roads but connected by paths or trails. There are 4,115 out of 60,631 ha (6%) of parkland that belong to parks under 50 ha. As described in the section "Defining Large Parks," this parkland includes official parks owned and operated by municipal, provincial, and federal governments, conservation areas, regional forests, and other publicly owned and accessible greenspaces.

Figure 1: Large parks (50ha or more) from 2019 report vs large parks (20ha or more) from 2021 report.



The current supply of large parkland per capita is

8.5 Ha/1,000 PEOPLE

The Golden Horseshoe needs to create **32,000 Ha** over the next 30 years to maintain the current provision of large parkland (or a rate of 1,076 ha per year) based on the projected population growth outlined in Ontario's *Growth Plan for the Greater Golden Horseshoe* (approximately 4 million more people expected in the Golden Horseshoe).

Currently there are 19 new large parks planned for the Golden Horseshoe over various planning horizons leading up to 2051, with a combined area of approximately **5,000 Ha.**

Even with those planned parks, the provision of large parkland is projected to drop to **6.1 Ha/1,000 PEOPLE** by 2051.

Figure 2: *Map of planned new large parks*

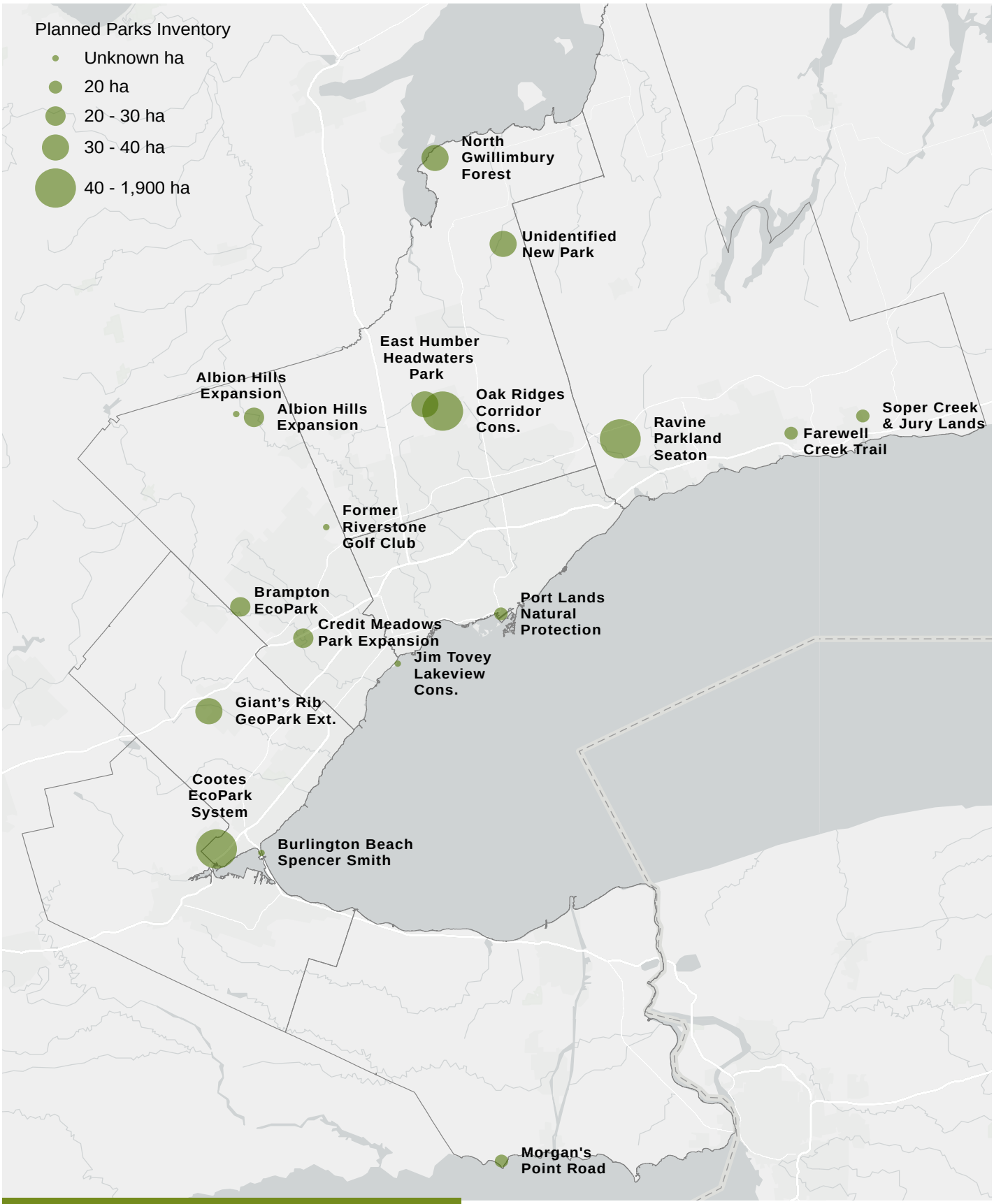
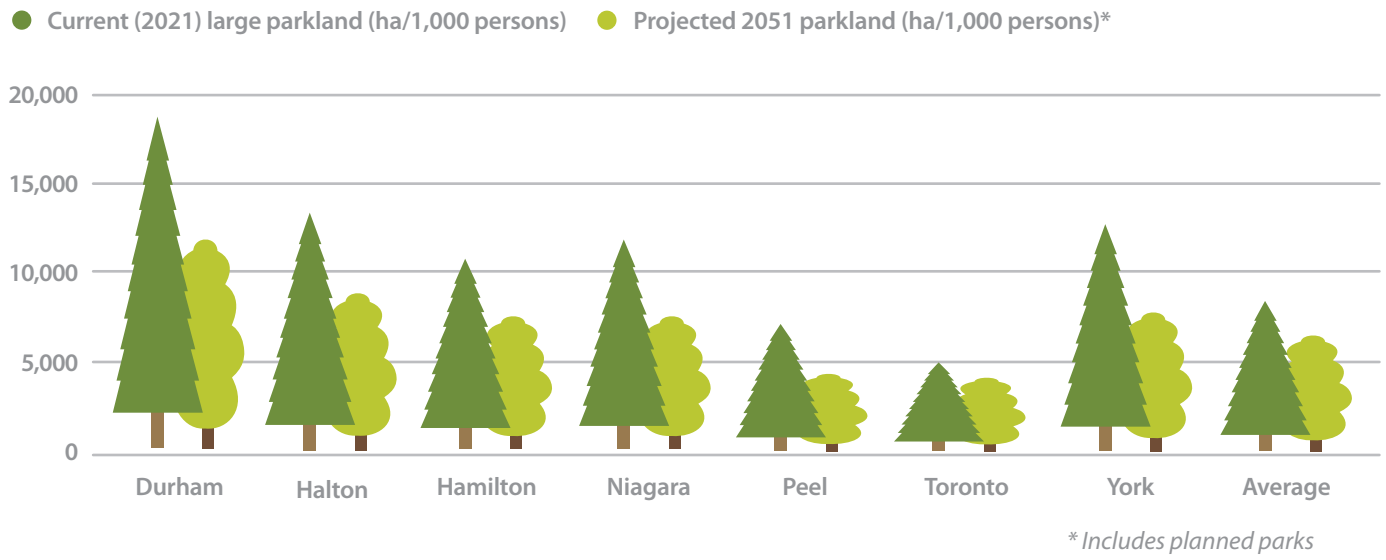


Figure 3: *Current large parkland provision vs. projected future parkland provision*



** Includes planned parks*

Measuring Accessibility to Large Parks in the Golden Horseshoe

The accessibility analysis shows how many hectares of identified large parkland an individual can reach from a given point by walking, cycling, transit, and driving. The analysis was conducted through the following steps:

- Four modes of transportation used to travel to large parks were analyzed:


walking


cycling


public transit


private automobile

- Each travel modality was split into two distance categories to provide a temporal analysis of each transportation mode:

Walking	Cycling	Public Transit	Private Automobile
(15 minutes: 0 -1,200 m)	*(15 minutes: 0 -3,250 m)*	*(0 - 30 minutes)*	*(0 - 30 minutes)*
(30 minutes: 0 -2,500 m)	*(30 minutes: 0 -7,500 m)*	*(0 - 60 minutes)*	*(0 - 60 minutes)*

- Entrance and access points to large parks were identified using the Ontario Trail Network Database, which served as the starting points for the network analysis of each transportation mode. Where the dataset did not have an established access point, the analysis used an intersection of roads abutting parks within 10 metres.
- The network analysis measured accessibility catchment areas using the identified entry points and the pedestrian and road network. The total hectares of parkland accessible from each modality was summed so that accessibility scores by walking, cycling, transit, and driving could be measured.
- A final scoring was created through the average performance in all modalities and was summarized at the census tract and municipal scale. The score is a ranking based on all outcomes from the modal analysis. To achieve this, all accessibility results were ranked for each modality, and an average was taken from this ranking. The final scoring is an average performance from walking, cycling, transit, and driving.

Results of Large Parks Accessibility Analysis

Accessibility by Active Transportation (walking, cycling, public transit)

A similar pattern emerged in the analysis for each active transportation modality, where neighbourhoods in proximity to Rouge National Urban Park and cities such as Hamilton, Oakville, and Brampton showed relatively high accessibility via active transportation modes (walking, cycling, and transit), whereas municipalities in the eastern end of the study area (e.g., Oshawa and Clarington), northern end (between Newmarket/Uxbridge to Lake Simcoe), and western end (the Hamilton-Niagara corridor), as well as Mississauga and Burlington, had lower availability of large parkland by active transportation.

In terms of walkability, approximately 1.7M people in the study area (approximately 1 in 5 people) have no large parks within a 15-minute walk from their residence and 800,000 more have no large parks within a 30-minute walk from their residence. The distribution of bikeable large parks is less evenly distributed across the study area and is concentrated in areas within close proximity to Rouge National Urban Park, as well as Hamilton, Oakville, Brampton, and Vaughan. Like cycling, access by public transit is also unevenly distributed across the study area. Cities such as Hamilton, Oakville, Brampton, and Vaughan again demonstrate high rates of accessibility by public transit, while peripheral and more rural locations in the region demonstrate very limited access to parks by transit.

Accessibility by Driving

In terms of accessibility by driving, residents of Toronto and the surrounding municipalities to the north and east (Vaughan, Richmond Hill, Markham, Aurora, Uxbridge, Pickering, and Ajax) could access the largest amount of parkland by driving for 30-minutes: 16,000 ha or more. Conversely, residents of Hamilton, the Niagara region, and the eastern (Clarington and surrounding areas) and northern (Scugog, Brock, and Georgina) perimeters have much less parkland available to them within this same distance: 4,300 ha or less. These findings may be somewhat skewed by the geography of the study area and differing transportation behaviours in these regions, however. Regarding

geography, Toronto is in the centre of the study area, and residents here can go in all directions to access parks within a 30-minute drive. However, parks outside of the study area were not considered, so the analysis does not capture residents in the periphery accessing parks outside the Golden Horseshoe. Regarding travel behaviour, findings from a 2021 survey of York Regional Forest Tract visitors by York Region showed that 53% of respondents would be willing to travel less than 30 minutes to a forest tract by car and 4% stated that they would be willing to drive more than 60 minutes to a York Regional Forest tract.[18] Only 4% of respondents indicated that they do not drive to the forest. In the GTA and Hamilton-Niagara corridor, or in the eastern and northern perimeters of the study area, residents are much more likely to rely on single occupancy vehicles to access parks while residents in Toronto are much more likely to use active transportation or transit, and less likely to drive. So, even if there are more hectares of large parks accessible by car in Toronto, people may be less likely to use cars to access it.

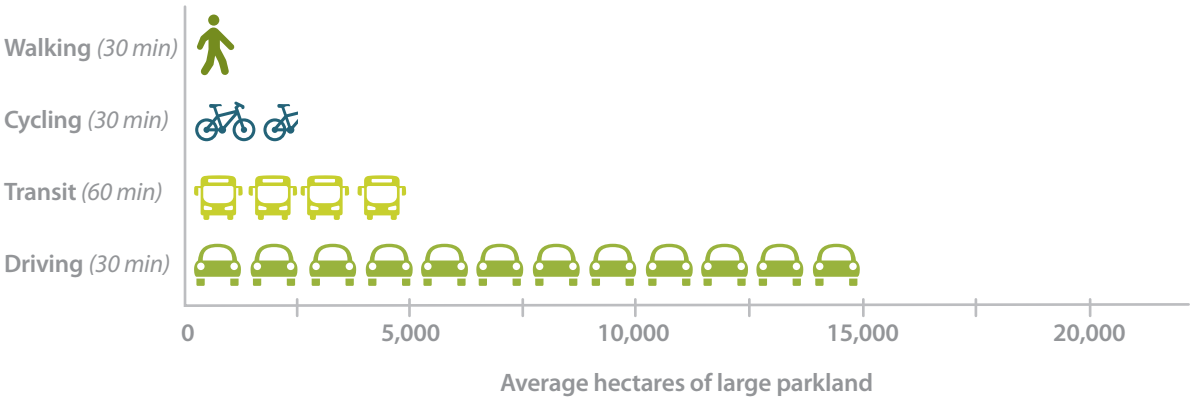
Final Accessibility Score

The results of the analysis suggest there are several localized factors that influence the provisioning and accessibility of large parks within the study area including:

- geographic make-up;
- parks planning and development frameworks; and
- transportation networks of individual municipalities.

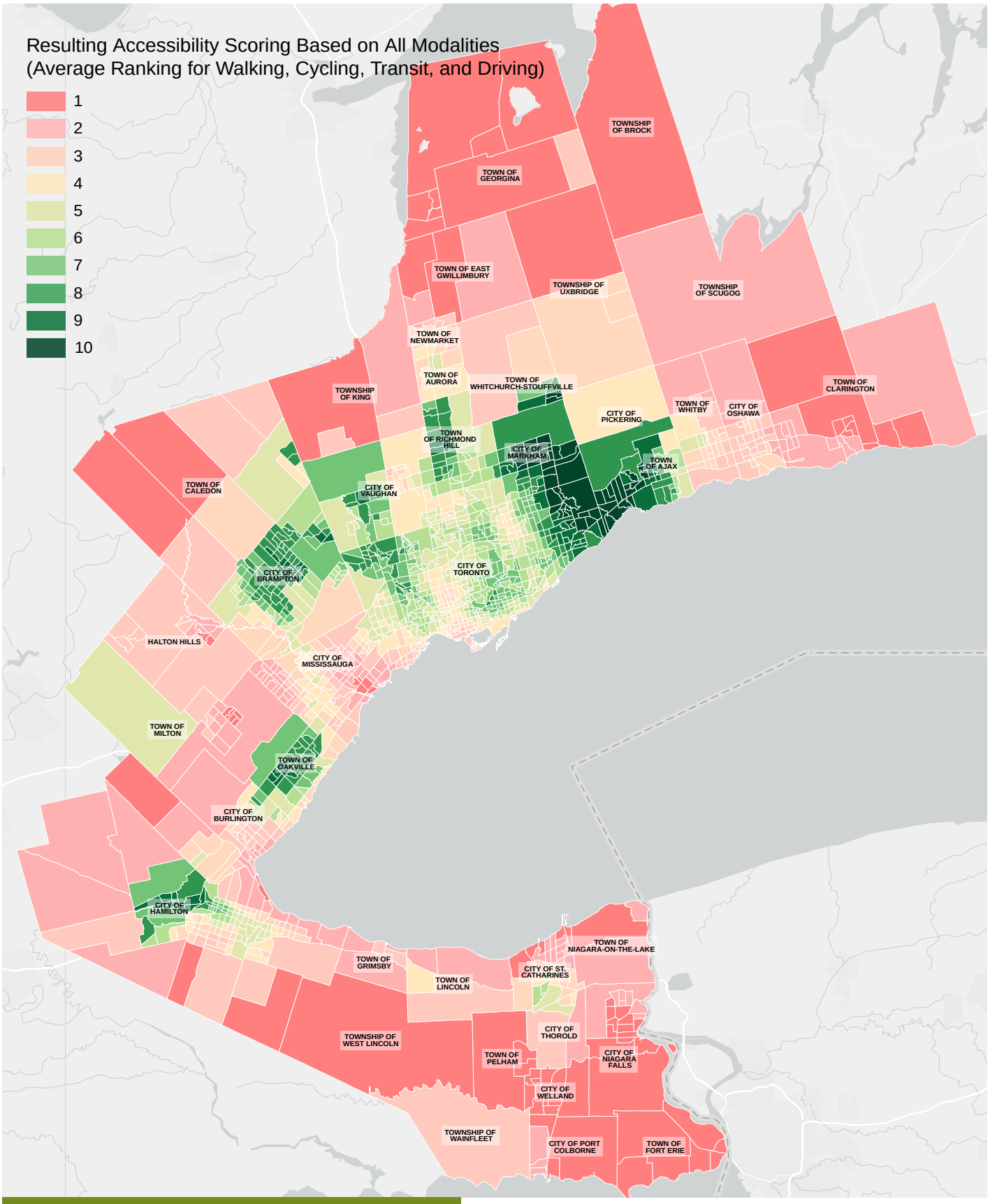
Feedback received from stakeholders in the Community Needs/Mapping Workshop highlighted that the data produced in the analysis did not always align with on-the-ground experience or local perception of large park accessibility. For example, when comparing the accessibility scoring between the City of Hamilton and municipalities in the Niagara Region, Hamilton appears to have comparatively higher accessibility to large parks. However, anecdotal observations indicated that Hamilton residents face geographic barriers to parks such as the topography of the escarpment, which inhibits accessibility to parks via active transportation, while residents in areas of Niagara have a lot of access to greenspace outside of the large parks definition, specifically private greenspace (e.g., woodlots on their own or neighbouring private properties, farmers' fields). While access to private greenspace is beneficial in the short term, it is not a "secure" way to access greenspace because the land may not be protected and/or could be sold and developed.

Figure 4: *Average hectares of parkland reached by residents using different modes of transportation*



[18] *See: York Region's 2021 Report, Options for Dogs in the York Regional Forest (https://bit.ly/3GvIWKq).*

Figure 5: *Average accessibility score of large parkland using all modes of transportation, by census tract*



Areas with High Accessibility Scores

Through the analysis, high access census tracts were identified, many of which are abutting significantly large parks such as Rouge National Park or lands surrounding the Bruce Trail. Others are abutting trail systems and linear parks which connect residents to a larger park network, for example census tracts in Oakville and Brampton reveal a highly connected linear park network. These green networks reveal the importance of connecting large parks through green infrastructure and trail networks to increase accessibility to larger park systems.

Areas with Low Accessibility Scores

The results of the analysis showed that 2.1 million people are living in neighbourhoods with the lowest accessibility to parks. Relatively high park supply in an area does not necessarily mean it is accessible; provision of parkland can be quite differentiated by neighbourhood within individual regions. Some regions that have high provision of parkland per capita at the aggregate level also have many neighbourhoods that are quite underserved. For example, Durham, Halton, and Niagara Region have some of the highest supply of parkland in the Golden Horseshoe, yet these 3 regions also have the highest proportion of residents living in areas of low accessibility. The table below shows overall large parkland provision and percentage of the population living in low accessibility areas by region (Figure 6). The municipalities or regional municipalities with the most equitable parkland provision are Toronto and Peel, while Niagara and Halton were shown to have the least equitable provision.

The analysis showed that many tracts with low accessibility are abutting major infrastructural or geographical limitations, such as large highways, railways, and water bodies. Lake Ontario provides a significant geographical limitation, as accessibility is one-sided, limiting proximity in areas along the waterfront. Additionally, many of the census tracts with low accessibility scores are located within areas abutting industrial lands. Given the road network structure of industrial lands, this proximity can limit accessibility.

Based on these findings, it is clear that park accessibility can be improved through the creation of new large parks and also through the use of linear parks and trails to connect existing large parks, which would provide residents in these low access communities with safer and easier access to large parks.

Figure 6: *Percentage of population living in low access* areas per region*

Regional Municipality	Large parkland per capita (ha/1,000 persons)	% of population living in low accessibility areas
Toronto	4.8	12
Peel	5.8	32
Hamilton	10.2	23
Niagara	10.8	68
York	12.1	15
Halton	12.8	59
Durham	18.4	47
TOTAL for study area	8.5	27

** Low access areas had an overall accessibility score (average accessibility rank for all travel modalities) between 1 and 3 out of 10.*[19]

[19] *See: Greenbelt Foundation Large Parks Community Needs Analysis and Planned Parkland Inventory: Technical Report for additional information and a more in-depth look at the analysis.*

Community Needs Assessment: Evaluating Accessibility and Underserved Populations

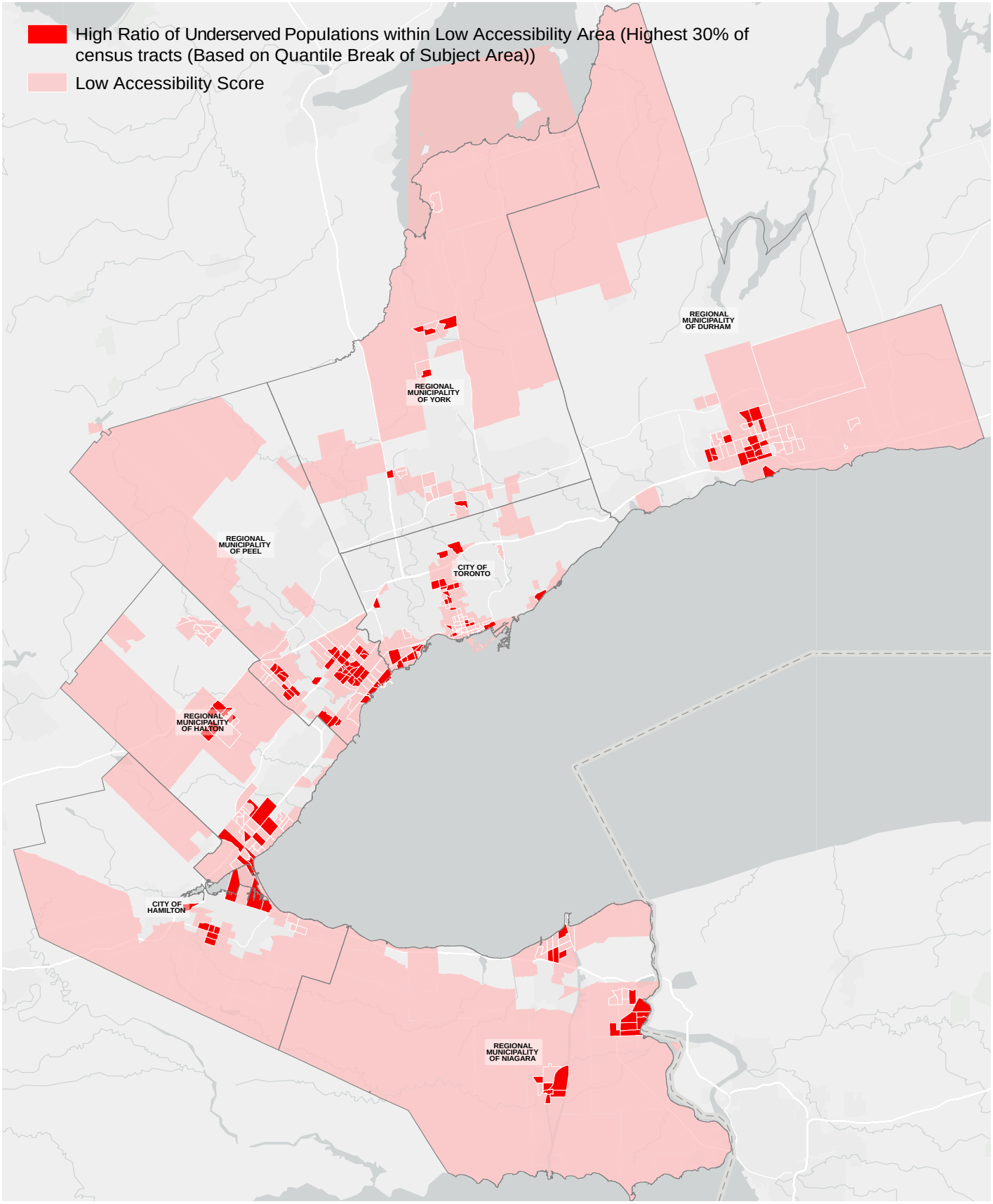
Underserved communities and populations were identified using data from Red Cross Canada and Employment and Social Development Canada. The following populations were categorized as underserved:

- Low-Income Populations
- Visible Minorities
- Indigenous Populations
- Recent Immigrant (2011-2016)
- Children
- Elderly Persons

Neighbourhoods with high ratios of underserved populations were overlaid onto areas with low accessibility scores to identify areas of high need for parkland based on each population. Below are the findings generated from the analysis:

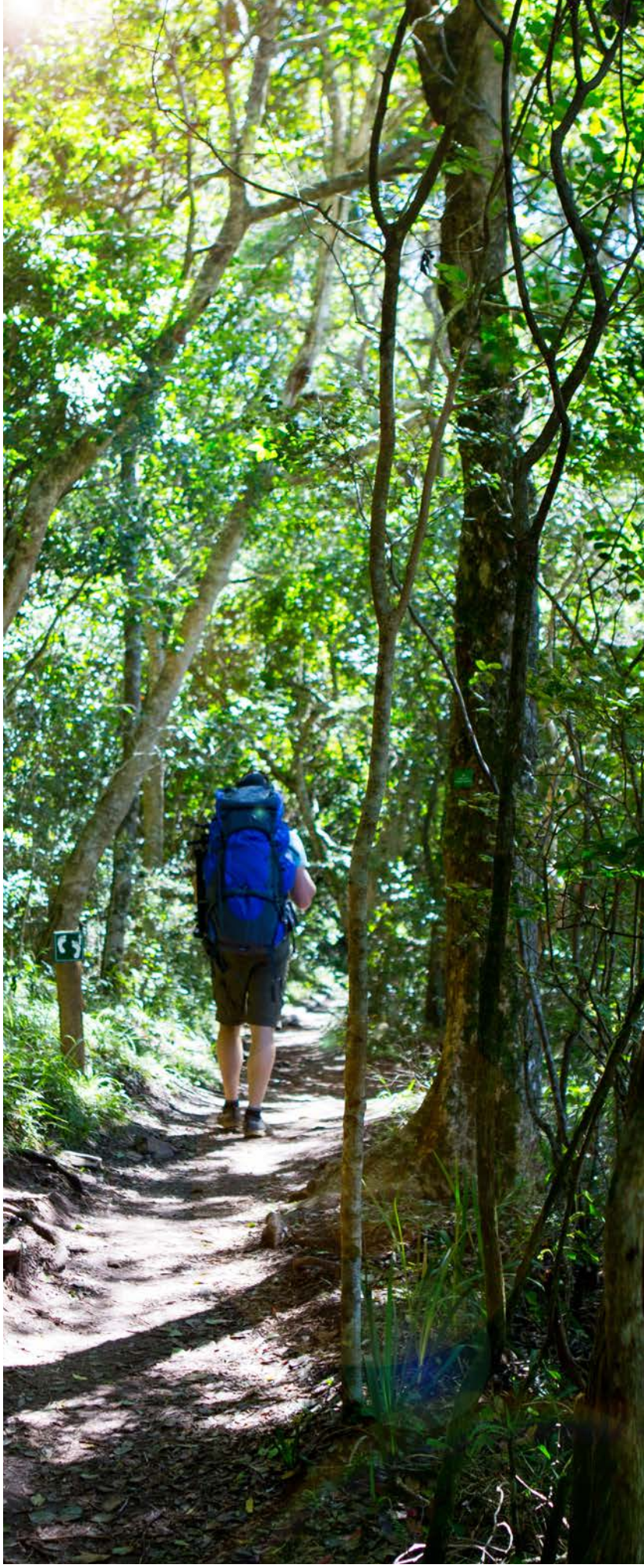
- **The most significant correlation between park access and population data was the prevalence of higher income individuals living in closer proximity to large parks;**
- **Low-Income Neighbourhoods: 30% of low-income neighbourhoods have low access to large parks;**
- **Visible Minority Neighbourhoods: 27% of Visible Minority neighbourhoods have low access to large parks;**
- **Low-Income and High Visible Minority Neighbourhoods: 30% of Visible Minority and Low-Income neighbourhoods have low access to large parks;**
- **Indigenous Populations: 55% of neighbourhoods with high ratios of Indigenous populations have low access to large parks;**
- **Recent Immigrant Population: 27% of neighbourhoods with high ratios of recent immigrant populations (between 2011-2016) have low access to large parks;**
- **Children (0-14): 30% of neighbourhoods with high ratios of children have low access to large parks which equates to 47,000 children; and**
- **Seniors (65+): 47% of neighbourhoods with high ratios of seniors have low access to large parks.**

Figure 7: *Highest Ratios of Underserved Populations and Low Accessibility Areas*



The highest ratios of underserved populations in the study area and the areas with the lowest accessibility were mapped. While it is important to consider all communities and their access, this map reveals the potential need of underserved populations that additionally have low access to large parks in the study. It is important to note, these census tracts are primarily located in central areas of communities.

**For additional details or a more in-depth look at the analysis, please see: Greenbelt Foundation Large Parks Community Needs Analysis and Planned Parkland Inventory: Technical Report.*



Policy Themes & Promising Models

Introduction

This report aims to support planning and policy professionals with increasing provision of and equitable access to quality large parks in the Golden Horseshoe. Through engagement with key stakeholders, four strategies were identified to help overcome barriers to establishing and managing additional large parks, including for underserved populations:

1. Establish a regional strategy and strengthen intergovernmental coordination
2. Employ innovative approaches and partnerships to increase the size and quality of the large park network
3. Improve effective funding mechanisms for large parks
4. Centre equity and accessibility in park planning

After identifying these strategies, this research sought to find models or case studies from jurisdictions in Canada and globally that could be replicated or borrowed from in the Golden Horseshoe area. This report includes at least one model or case study that speaks to each strategy. There are many interesting models and case studies of large parks planning around the world, but this research focused on those most likely to be applicable to the context of the Golden Horseshoe region. Therefore, the search was limited to jurisdictions that:

- Are from a high-income, English-speaking country
- Are population centres with minimum population densities of 600 people/km^2 (the Golden Horseshoe area is the most densely populated area in Canada, with an average population density of approximately 720 people/km^2)[20]
- Are city regions with growing populations that are projected to continue to grow into the foreseeable future
- Are acknowledged as leaders in large parks planning or establishment

The following pages will discuss these themes in greater detail and provide relevant examples of transferable models or practices.

> "(We need) improved coordination across multiple jurisdictions – funding, connectivity [between] existing park systems, (and a local and regional) vision."
>
> ~ Survey Participant (Conservation Authority)

[20] *See: section 3.3 of the Golden Horseshoe Food and Farming Alliance's report on demographic trends in the Golden Horseshoe (https://www.niagararegion.ca/living/ap/pdf/2014/ghep-section-3.pdf).* [21] *See: https://www150.statcan.gc.ca/n1/pub/11-402-x/2010000/chap/geo/c-g/desc/desc01-eng.htm.* [22] *See: https://www150.statcan.gc.ca/n1/pub/16-201-x/16-201-x2016000-eng.htm.* [23] *See: Per a review of stated goals in municipalities' Parks and Recreation Master Plans and oral indication of municipal participants at workshops.*

1) REGIONAL STRATEGY AND INTERGOVERNMENTAL COORDINATION

Because the study area is the most densely populated contiguous region in Canada[21] and one of the most built-up,[22] availability of larger natural and semi-natural lands in the Golden Horseshoe is low. Planning for large parks can be a challenge for municipalities, due to the limited availability of land parcels and high land values within their jurisdictions. Parcels that have not yet been developed tend to be on the urban periphery, in areas that are either outside of or bordering the jurisdictional boundaries of one or more local governments.

Conservation Authorities (CAs) within the study area are planning to increase land in their conservation area networks over the next ten years. This land is not necessarily going to be dedicated to recreation but may create new conservation areas or expand existing parks. While fewer municipalities are currently planning for increased provision of new large parks, some large parks are in the works at the municipal level. One regional government plans to increase land within its regional forest tract by over 140 ha. Conservation Authorities and regional governments manage larger land areas than lower tier municipalities, including areas outside of built-out urban centres, and so their jurisdictions typically include more naturalized and semi-naturalized lands. As such, they are better positioned than lower tier municipalities to establish new large parks. But there are still significant barriers.

Challenges of Overlapping Jurisdictions

The overlapping jurisdiction between key players and flows of people within and between neighbouring urban and natural areas make the Golden Horseshoe a very interconnected area. Land-use decisions in one area impact resident behaviour and service access in neighbouring areas. Therefore, increasing the provision of large parks inherently has regional implications, and should be carried out accordingly. There is a need for greater collaboration and coordination between jurisdictions, yet stakeholders reported that there are currently few opportunities or forums for collaboration in parks planning and delivery between local governments and agencies in the Golden Horseshoe. There are also important differences in how regions, municipalities, and CAs across the Golden Horseshoe define, manage, operate, classify, and think about parks, which presents a challenge to coordination. Some specific challenges include:

- **Varying roles, mandates, and interests.** Different levels of governments and governmental agencies are managed by different legislative regimes and have varying interests and goals when it comes to parks planning. For example, for municipalities, parks planning is typically aimed at building healthy communities to serve resident needs and programs are aimed at enabling civic participation, serving recreation and active transportation, etc.[23] Other greenspaces like ravines and valleys are often not considered part of the park network or managed as such. Most regional governments do not own or operate parks, although some do oversee regional forest networks. CAs acquire and manage protected areas to support ecological integrity of watersheds and mitigate flood risk. Conservation and recreation can be contradicting interests, as currently practiced (e.g., the former seeks to inhibit human activity, the latter encourages it) and CAs aim to balance these interests across the lands that they manage. Additionally, the Golden Horseshoe contains a significant level of biodiversity, species at risk, and unique Carolinian forest compared to other parts of Ontario. Considerations for these sensitivities should be made. For example, CAs work to plan conservation areas so that sensitive areas are dedicated to low-impact passive use, while less sensitive areas allow for more active recreational opportunities.
- **Lack of alignment in plans and policies.** Related to the challenge above, the plans and policies of different actors in the park planning and delivery space serve different visions and purposes. Plans vary from municipality to municipality (neighbouring jurisdictions), and between municipalities, CAs, and regions (overlapping jurisdictions). The Official Plans and Parks and Recreation Plans of municipalities do not always align with the plans of neighbouring municipalities or with regional environmental or other plans.

- **Ad hoc and inconsistent coordination.** There are no standard or consistent mechanisms to enable collaboration between various players in the park planning space on a regional scale. Some municipalities have excellent working relationships and partnerships with other municipalities and/or their local CAs and regions; others do not collaborate consistently with these organizations. Other groups with interests in large parks (e.g., Indigenous governments, public health authorities, land trusts) are often not brought into the parks planning initiatives.[24] [25]

An effective model for intra-regional coordination and collaboration for large parks in the Golden Horseshoe must take these challenges into consideration.

Transferable Models

Ontario's Greenbelt: A Homegrown Model of World-Class Regional Environmental Planning

Ontario's greenbelt is the world's largest, and the province has been recognized as a world leader in enacting the policy and legislation that supports it.[26] The *Greenbelt Act*, 2005, and *Greenbelt Plan* (updated every five years), have been extremely important in addressing jurisdictional fragmentation by formalizing regional governance and policy-making. Ontario's Greenbelt policy uses vertical (or "top-down") coordination to drive compliance among lower levels of government that are responsible for the bulk of land-use planning decisions, but also enables "horizontal coordination" (i.e., facilitating interactions between the various other public, private, and civil society stakeholders in the region).[27] Vertical coordination is achieved through the legislation and plan, spearheaded by the Province. These regulate and influence land-use decisions at the local level, directly and through their integration into other policies. The role of the province in creating and maintaining the Greenbelt cannot be understated, as it has the authority, a higher-level scope to address regional issues, and higher capacity to support policy implementation. Horizontal coordination is facilitated through the Greenbelt Council (a panel of stakeholder experts composed of members from the municipal, agricultural, and not-for-profit sectors) and the Greenbelt Foundation, which has been characterized as a key institution in helping to coordinate between different actors, facilitating municipal and civil society participation into Greenbelt matters, and building broad public support for the Greenbelt.

The *Greenbelt Act* and supporting policy has been instrumental to safeguarding agricultural lands, avoiding development in environmentally sensitive areas, and encouraging more "smart growth" practices in the region. In 2017, the Greenbelt protection extended to 21 major urban river valleys and 7 coastal wetlands across the Greater Golden Horseshoe. River valleys connect the suburban and rural lands of the Greenbelt to Lake Ontario, provide communities with greenspace to explore, reduce flood risks, and are important ecological corridors.

However, the *Greenbelt Act* has not been without problems. For example, coordination, partnerships, and alignment between local governments and other public institutions are not wholly provided for in the Greenbelt model. Also, the differing territorial scopes and objectives of various provincial plans (e.g., the Greenbelt, the *Growth Plan for the Greater Golden Horseshoe*) can make municipal implementation a challenge.[28] Another issue that has emerged is the surge in development surrounding the Greenbelt in areas ill-equipped to cope with the pressures of urban intensification. This has placed extra stress on designated agricultural areas and rural settlement areas in the Greenbelt.

A Suburban Parks Strategy in Melbourne, Australia

The City of Melbourne is facing growth and development pressures similar to jurisdictions in the Golden Horseshoe. To sustain park provision in growing suburban areas, the City has created a plan to facilitate the implementation of large parks and create a ring of parkland around Melbourne. The state Department of Environment, Land, Water, and Planning (DELWP) subsequently developed a Large Suburban Parks Plan targeted at creating three new regional parks and upgrading or expanding 12 large suburban parks in Melbourne's established and growing suburbs. The three new proposed regional parks are currently in the planning and community consultation process and the implementation of park infrastructure is expected to begin in 2022. The intention of creating and enhancing the suburban park network is to strengthen the suburban communities by providing residents with more opportunities

for recreation and a connection with nature as well as providing ecological benefits. These parks are intended to improve human health, conserve nature, address climate change, support cultural heritage, and generate economic growth. They are large and complex projects connecting to other local parks, drainage features, utility easements, and critical habitat corridors. Melbourne's Large Suburban Parks project team is partnering with a range of partners including local governments, Traditional Owners and Aboriginal communities, government agencies, and communities to deliver these parks.[29] The program is currently undergoing changes that have yet to be made public, however the initiative shows an exemplary approach to parkland coordination involving a broad array of partners.

[24] A positive example of multi-stakeholder collaboration brought up during the policy workshop was Peel Region's Regional Greenlands Securement Program. Established in 2005, this program is spearheaded by Peel Region's Integrated Planning Division and convenes meetings between municipal partners, CAs, the Bruce Trail Conservancy and the Oak Ridges Moraine Land Trust at least once a year. The Greenlands Securement Program has facilitated funding for 25 projects and helped to secure more than 477 hectares of underserved greenspace in Peel's Regional Greenlands System.
[25] Over the last 20 years, York Region has run a Land Securement Working Group that includes the Region, local municipalities, CAs, the Nature Conservancy of Canada, the Oak Ridges Moraine Land Trust and some surrounding Regions. The purpose of the group is to take a unified approach to land securement in the Region, share information, and promote collaboration. *[26] See, for example: http://cielap.org/pdf/GreenbeltInternationalContext2010.pdf.* *[27] See: MacDonald, Mondstadt and Friendly's 2021 paper, Towards smart regional growth: institutional complexities and the regional governance of Southern Ontario's Greenbelt.* *[28] MacDonald, Mondstadt and Friendly discuss promises and barriers to institutional governance of the Greenbelt in their 2021 paper (as above) and their 2020 paper, "Rethinking the governance and planning of a new generation of greenbelts."*
[29] See: https://www.environment.vic.gov.au/suburban-parks/large-suburban-parks.

2) INNOVATIVE APPROACHES TO INCREASE THE SIZE AND QUALITY OF THE PARK NETWORK

In the Golden Horseshoe, large areas of available land are limited and are challenging to bring into the park network. Through this research, land availability has been identified as one of the greatest barriers to the creation of new large parks, particularly in the densely built areas in the GTA. Many jurisdictions are past the point where they can pick areas for parkland acquisition, and they instead often have to respond to whatever opportunities become available. Park networks can be improved by developing partnerships to expand access to land and by connecting existing large parks with "non-park" parcels or corridors, like ravines or urban river valleys that people still functionally use as parkland (even if they are not managed as such).

Partnerships to Expand Access to Land

Collaborating with non-conventional partners on park initiatives could offer an opportunity to help overcome land scarcity. Partners with access to land and potential interest in co-managing with municipalities include institutions like hospitals or universities, Indigenous governments, and not-for-profit organizations like land trusts. Issues around liability, maintenance, and service for users are concerns tied to potentially expanding the large park network by "patching" parks together through unconventional partnerships. Another consideration when "patching" parks together is the *Occupiers Liability Act* R.S.O. 1990, c. O.2, which establishes that "an occupier of premises owes a duty to take such care as in all the circumstances of the case is reasonable to see that persons entering on the premises, and the property brought on the premises by those persons are reasonably safe while on the premises."[30] The challenges presented by the *Occupiers Liability Act* when trails run through different land holdings have been considered by organizations and municipalities in Ontario involved in trail development.[31] Property owners that own land and permit usage of their land for trails and/or recreation are considered occupiers under the *Occupiers Liability Act*, and therefore they are responsible for mitigating risks to users through the maintenance of their land and clearly marking risks or hazards on trails. Occupiers are held liable when injuries or harm is suffered by trail users, even if steps are taken to manage and mitigate risks to trail users.[32] The inclusion of land trusts in the park network can be difficult as many trusts lack enough funding to afford general liability insurance, forcing landholders to prohibit public access to their greenspaces. Another issue remains about how to maintain greenspaces held in a land trust owned by a private landholder without revenue generation. Ultimately, even when partnerships and contracts are formed, questions remain around where the liability lands, and who deals with complaints and upkeep. One potential opportunity to address these issues would be to push for legislative change around liability, either by urging for the removal of liability from landowners or by providing funding for liability insurance through the government to make these non-conventional greenspaces viable options for inclusion in the park network.

Another prospective opportunity to expand public access to large park spaces is through expanded access to existing golf courses. In 2020, City of Toronto Parks, Forestry and Recreation (PRF) launched a review and public consultation process to better understand how City-operated golf courses are being used, and how they could better serve community priorities.[33] Based on the review and consultation, PRF developed recommendations aimed at expanding and enhancing public access to City golf courses both in-and off-season, aligned with the priorities of local residents and Indigenous communities. The Infrastructure and Environment Committee adopted the recommendations put forward by PRF on January 11, 2022 and City Council adopted the recommendations on February 2, 2022.

Applying Different Lenses to Expand the Park Network: "Non-park" Parcels with Public Access

In addition to developing unconventional partnerships, there are opportunities to expand the park network by applying different lenses to acquire land or connecting the existing park network outside areas that are typically defined as "parks." One strategy that has been used in different jurisdictions is to develop linkages between linear or smaller parks and large greenspaces, as these connections play a critical role for increasing access to the park

network where space is limited for large parkland expansion. Working to meet multiple policy goals such as retaining and increasing biodiversity, promoting access via active transportation, and the creation of green infrastructure networks can support parkland expansion. Urban river valleys offer an immense opportunity to expand the park network. These greenspaces hold Indigenous cultural significance, and with investment and planning they can provide additional recreational opportunities while also serving conservation and flood management goals.

An example of a collaborative, cross-jurisdictional project connecting existing parkland with natural corridors in the Burlington-Hamilton area of the Golden Horseshoe is the Cootes to Escarpment EcoPark System.[34] The project partners include local governments, not-for-profit organizations, and academic institutions as well as the engagement of private landowners. The objective of the initiative is to protect and enhance the ecological integrity of natural areas in the Cootes to Escarpment area while providing recreation, cultural heritage, and educational opportunities.

However, expanding the park network through unconventional means can be challenging because there are different implications around levels of protection, operations, management, and service to users for lands that are used as parks but are not officially parks (e.g., utility corridors, urban river valleys). For instance, some of the natural heritage corridors and trails in the Niagara Region are on land owned by Ontario Power or natural gas utilities, which have different management objectives than a park—namely, utility companies require access to utility infrastructure for construction or maintenance, which takes precedence over preserving the integrity of trails.

Increasing Parkland through Target 1 Conservation

Biodiversity conservation and recovery is a pressing priority for the Golden Horseshoe, and a recent report by the Southern Ontario Nature Coalition (SONC) reveals considerable opportunity to combine the goals of increasing large parks and increasing protected and conserved areas.[35] SONC's research identified the potential to protect tens of thousands of hectares in the Golden Horseshoe that could contribute to Canada's Biodiversity Target 1 - Biodiversity Protection (to conserve 25 per cent of lands, freshwater, and oceans by 2025). Many of these lands, such as Provincial Wildlife Areas (PWAs), Areas of Natural and Scientific Interest (ANSIs), and Provincially Significant Wetlands (PSWs), receive some protection through provincial policy but require a higher level of management and protection to count towards Canada's target. Further, many are located on provincial unceded (Crown) land and municipal and Conservation Authority lands. Some level of public access is already available in many of these spaces. However, a considerable number of acres could be made available to the public and many more can be managed for formal public access to increase visitor capacity (e.g., trail systems) while also managing for biodiversity through monitoring and evaluation.

A newly recognized tool to support Target 1 is the Other Effective Area Based Conservation Measures (OECM).[36] This conservation tool enables areas to qualify under Canada's Biodiversity Target 1 and can help communities meet growing demand for access to greenspaces. Recognizing the ability to improve access while protecting and conserving biodiversity within a regional greenspace plan has mutual benefits. As an alternative to more traditional protected areas, OECMs are not managed primarily for conservation, but they successfully "contribute to the effective and sustained conservation of biodiversity." OECMs can be a particularly helpful tool in near-urban areas where managed lands serve multiple functions, such as recreation.

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[30] See: Ontario's Occupiers Liability Act R.S.O 1990 (https://www.ontario.ca/laws/statute/90o02). [31] See: Attridge (2002); City of Toronto (2013); Harper (2015). [32] See: Hike Ontario (2013). [33] See: City of Toronto (2022). [34] See: https://www.cootestoescarpmentpark.ca/about-us. [35] See: SONC, 2021, Near-Urban Nature Network: A Solution to Climate Change and Biodiversity Loss. [36] An OECM is defined as, "A geographically defined area other than a Protected Area, which is governed and managed in ways that achieve positive and sustained long-term outcomes for the in-situ conservation of biodiversity, with associated ecosystem functions and services and where applicable, cultural, spiritual, socio–economic, and other locally relevant values," (Canada, 2018, p. 40).

Transferable Models

The Green Infrastructure Network (GIN) in Surrey, British Columbia

One of the exemplary models of an innovative strategy for increasing the park network is in Surrey, British Columbia. The municipality has been developing a green infrastructure network (GIN), as outlined and prioritized in the city's 2014 *Biodiversity Conservation Strategy*.[37] The GIN is a network of habitat corridors across the city connecting larger habitat areas to provide diversity and connectivity of habitat features throughout Surrey. In the planning of the GIN, the municipality has ensured the network lines up with natural systems in neighbouring cities. Surrey has used different mechanisms and planning tools to acquire and/or secure land for the network including Sensitive Ecosystem Development Permit Areas (SEDPAs).[38] The permit areas are used to identify and minimize the disturbance of development on the GIN and to protect its ecological integrity. These permits cover and protect two classifications of the natural environment from development, Streamside Areas and Green Infrastructure Areas, which include habitat for species at risk, mature tree stands, wetlands, streams and water courses. By designating these areas as SEDPAs, they are protected, and require a permit application to proceed with any development activities. The intention is to achieve a broad range of goals and sustain numerous ecosystem services, including maintaining and enhancing biodiversity, integrating ecological systems into urban areas, and conserving and protecting aquatic areas and habitat. These permit areas are also intended to provide for drainage maintenance access, potential public trails, beaver habitat, tree health, natural stream dynamics, and to manage slope stability. Surrey is working to take a sensitive approach to urban land use planning by protecting and enhancing the existing and remaining natural spaces through the use of these permits and the development of the GIN.

Anishinaabek Land Trust

There is an initiative underway in Ontario to establish an Anishinaabek Land Trust.[39] This Indigenous Land Trust is one of many acts of reconciliation meant to support the restoration of Anishinaabe language, spiritual ceremonies, traditional practices, and clan governance systems. The intent is to establish the land trust outside of the *Indian Act* and have it run using clan-based or traditional style governance by elders and traditional knowledge keepers. Knowledge keepers have been consulted in the creation of the necessary legal documents to establish the land trust and to ensure that there can be flexibility in how the land trust is implemented and operated. The Land Between, a non-governmental grassroots organization, has served as an "incubator," guiding the establishment of the land trust so that it will give members the capacity to operate it within Anishinaabek teachings, including land-based learning and traditional ecological knowledge.[40] A council will be elected for the Anishinaabek Land Trust that will determine the planning and implementation of the trust, including negotiations around the terms of land use in the trust. Land will be acquired across Ontario through private landowner donation, land purchase, and conservation easements.[41]

> "(We need) a Master plan that involves everyone and every level of government."
>
> ~Survey Participant (Municipality)

3) EFFECTIVE FUNDING MECHANISMS FOR LARGE PARKS

Capital funding for large parks land acquisition is a significant barrier to large park establishment in the Golden Horseshoe, especially as land values continue to rise. Currently one of the most effective ways for local governments to acquire land for new large parks is through a fee simple purchase. However, general government revenue is the primary source for funding park projects and the current fiscal tools that municipalities, regions, and conservation authorities have available make it difficult to generate enough revenue to purchase new land for large parks. With the increased attention on parks due to high demand and usage during the pandemic, it could be a strategic time to advocate for more funding for parks.

Planning Act

Currently, lower tier municipal park financing is largely acquired through parkland dedication and cash-in-lieu through Section 42 of the *Planning Act* (S. 42). However, parkland dedication bylaws are not currently an effective tool for dedicating or managing large parks, as they are geared towards neighbourhood parks or new subdivisions; therefore, land dedication results in parcels of land that are not suitable for large parks. Cash-in-lieu has the potential to be a tool to add to funding for large parks, with the caveat that land appreciates in value quickly while cash does not. Municipalities are currently revising their S.42 bylaws before September 2022, presenting an opportunity to update them to be useful for large park dedication. For example, the parkland dedication bylaw could be reconfigured to allow for the allocation of parkland at an off-site location. This change could potentially help larger tracts of land be allocated as parkland through the process or allow for an alternative to cash-in-lieu when there is no land available on the development site.

Fee

Park visitor, parking, and permit fees are a potential revenue mechanism for park funding, but they impede accessibility and are generally not significant enough to fund park creation. Those organizations that use fees tend to need them to fund operations or for visitation management. CAs also depend on outside funding generated through municipal levies and upper-tier municipality funding payments. Recent revisions to the *Conservation Authority Act* and the subsequent release of new regulations may affect funding and management of conservation areas in the future.

Federal Grants

One of the most important sources of funding for large parks is grants from the federal government. Yet, there are a number of challenges with accessing federal funding programs. For example:

- Federal grant applications can take a very long time to complete, are typically very competitive, and successful grants are rare. Further, they often require matching dollars that are hard to procure.
- Wording or definitions can be restrictive and not applicable to the context of Southern Ontario. For example, the government announced funding to help achieve Target 1 of Canada's Biodiversity Strategy. However, the initiative has very narrow definitions around what can be included as conservation land, essentially excluding many potential large parks in the Golden Horseshoe. The recent recognition of the OECM tool may help overcome this challenge by widening the types of lands in near-urban areas that can contribute to Target 1.

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[37] See: Surrey's Biodiversity Conservation Strategy (https://www.surrey.ca/sites/default/files/media/documents/Surrey_BCS_Report.pdf).
[38] See: City of Surrey (2016), City of Surrey (2021a), City of Surrey (n.d.). [39]See: https://www.anishinaabeklandtrust.org/ for more details.
[40] See: https://www.thelandbetween.ca/ for more information about the charitable organization that has been created. [41] A conservation easement is a legal agreement between a landowner and an organization (e.g., land trust, government agency, or municipality) whereby the landowner continues to own and manage the property within a set of mutually agreed upon rules.

- Federal funding is often allocated to other national-level organizations (such as the Nature Conservancy of Canada) and those organizations then distribute funds based on their own priorities, which can result in priorities being overlooked at other scales, such as the municipal level. There is a significant need to develop different federal funding mechanisms for land acquisition in urbanized areas.
- Many federal funding programs are not applicable to the southern Ontario context due to minimum requirements for land areas or other criteria.
- Federal funding is often awarded based-on one outcome (e.g., improved stormwater management). This approach disadvantages green infrastructure solutions (like the creation of new large parks) that have a range of co-benefits. While a single co-benefit's outcome may not be competitive with a traditional infrastructure project, green infrastructure projects become more competitive when the outcomes associated with all co-benefits are aggregated. The criteria for current and future funding programs should recognize these numerous co-benefits, and allow for the aggregation of multiple outcomes.
- Funding programs often privilege new projects instead of maintaining old ones and/or do not cover operational costs, which can be a major barrier to ensuring there is adequate staffing and other resources to maintain park facilities into the future.[42]

Operations and Maintenance

Securing sufficient funds for effective operations and maintenance is a major challenge in parks planning. Operations and maintenance considerations can impede new park establishment because decision-makers might not support creating new large parks due to insufficient budgets for ongoing operation costs. The current funding set-up has not kept pace with parkland acquisition and will continue to be inadequate if organizations want to keep up with per capita parkland and population growth. There is a need to not only increase the funding for land acquisition but also operations budgets, especially because municipal levies do not rise with inflation (currently at its highest rate in two decades). Without long-term funding for park projects, there is a risk of creating "paper parks" that have no staff, no operational budgets, and no management.

Some of the challenges associated with meeting operations and maintenance costs can be helped by undertaking asset management planning and setting up a clear park classification system. Incorporating built and natural park assets into asset management can help staff make the case for increased budgets to address service needs and avoid risks. It can be helpful for municipal governments to ensure their parks classification system aligns with and supports operation and maintenance requirements for different types and sizes of parks. In the future, when the government wants to create a new park, the classification can be used to inform how much budget to reserve per acre to operate and maintain that park over the long term (e.g., urban parks are more expensive per acre than rural parks). Both including park assets in asset management plans and creating clear park classification schemes can help ensure governments are allocating appropriate long-term funding for each park they create. But these strategies will not fill the financial gap and new funding mechanisms for parks operations and maintenance, particularly from senior levels of government, is important to ensure new large parks are created and properly managed and maintained.

Development Charges

Development charges are fees obtained from developers that are used to help pay for capital costs to support the increased need for services such as roads, water, and parks and recreation as an area is developed and grows. In Ontario, the *Development Charges Act,* 1997, S.O. 1997, c. 27, allows municipalities to implement bylaws that impose development charges. The Act indicates that a development charge bylaw can be used to direct funding towards parks and recreation services, however, development charges cannot be used for land acquisition for parks. If development charges were permitted to be used by municipalities towards land purchases, they could be a useful funding tool

to support park acquisition in the Golden Horseshoe. For example, the City of Surrey, British Columbia collects funding through Development Cost Charges (DCCs) on new developments to help acquire and improve parkland to benefit the city as its population grows. DCCs are legislated under the provincial *Local Government Act*, and through the Surrey Development Cost Charge Bylaw, 2021, No. 20291. Beginning in 2021, the city is increasing its City-wide Parkland Acquisition DCC rate with the goal of providing more funding directly to acquire lands for the Green Infrastructure Network to meet the goals of the *Biodiversity Conservation Strategy*.[43]

[42] *A new program recently announced by the federal government could potentially help to address some of these challenges. The government's new National Urban Park Program is committing $130 million to work with partners to create a national network of urban parks. The program is still under development, and decisions around how sites will be selected and governed are still being determined.* [43] *See: City of Surrey (2021b).*

Transferable Models

Federal Grant Programs for Parks and Open Spaces: USA's Land and Water Conservation Fund

The Land and Water Conservation Fund (LWCF) is a bi-partisan program established in 1964 that provides funding to federal, tribal, state, and local governments to acquire, manage, and maintain natural areas that protect water resources, and provide cultural heritage and outdoor recreation opportunities for Americans. The program also allows for grants to community associations and not-for-profit groups for the same purposes. In 2020, the *Great American Outdoors Act* was passed, a bi-partisan law that authorized the federal government to distribute $900 million annually in permanent funding to the LWCF (prior to this law, the yearly budget of the LWCF was at the discretion of Congress). The primary source of revenue to the LWCF comes from royalties paid to the Bureau of Ocean Energy Management, Regulation, and Enforcement for offshore oil and gas drilling and exploration. Since its inception, the LWCF has helped to fund thousands of projects across the USA that maintain, acquire, and protect natural areas, helping to acquire and protect approximately 3 million hectares of land and water.[44] This federal fund has been a crucial source of funding for the ongoing protection, preservation and maintenance of parks, open spaces, and wildlands across the USA.

Municipal Green Bonds as a Way to Raise Capital for Large Parks, Conservation and Restoration: The Cases of Portland, OR and Toronto, ON

Raising large sums of capital to acquire new land is a challenge for local governments with tight budgets. This is particularly true in the context of high and increasing land values. A number of organizations, including local governments and other public and civil society organizations, have been turning to bonds in order to fundraise the capital needed to purchase large swathes of land.[45] Bonds allow these organizations to raise money from investors by promising to repay the initial investments along with a low interest rate over a period of time. "Green Bonds" are bonds where the funds raised are spent toward projects with environmentally positive benefits. Municipal green bonds were first issued in Europe in 2007, and both issuance and demand for these bonds have been growing ever since.[46]

In November 2019, 71% of people who cast their vote in Portland, Oregon approved a ballot measure that would introduce a $475 million bond to finance open spaces and new parks, protect and restore land and habitat, and undergo improvements to existing parks. This bond included a specific focus on projects that will contribute to racial equity and positive outcomes in marginalized communities. The City of Toronto has also recently launched its Green Debenture Program—a green bond that will finance a variety of capital projects that increase environmental sustainability. The city has offered three rounds of the green bond in 2018, 2019, and 2020, raising a total of $630M in three years. Proceeds from the program have gone to support cycling infrastructure, the Port Lands Flood Protection project, green retrofits to social housing, and more.

4) PLANNING FOR ACCESSIBILITY AND EQUITY

Accessibility and equity in parks planning is a gap that many jurisdictions and parks and planning professionals are working to address. There has been a growing recognition of the need to improve the equitable access, distribution, availability, and quality of public greenspaces and tree cover across jurisdictions, particularly for underserved populations.

Limited Canadian research has been conducted to examine equitable access and governance of urban greenspaces. Therefore, this research examined the current accessibility of large parks to populations across the Golden Horseshoe. The analysis showed that some areas across the Golden Horseshoe have better access to large parks than others (Figure 7). A recent study proposed that there are two dimensions of urban green equity: (1) the spatial distribution of urban vegetation and (2) access to and power within decision-making about urban vegetation.[47] Another study assessed 10 metropolitan areas in the United States and showed urban vegetation (defined as mixed vegetation, woody vegetation, and public parks) was inequitably distributed in large urban areas, consistent with the trends presented in the Golden Horseshoe analysis.[48] Factors that predicted better access to trees and vegetation included income and education. Some jurisdictions in the Golden Horseshoe have been looking to provide better trail connections and transportation services to improve park accessibility for underserved populations. Transit is a barrier to large park access, particularly in suburban or rural areas across the Golden Horseshoe where driving to a park is a given. For example, no Niagara Peninsula Conservation Authority properties have public transit access, and feedback gathered in York Region showed that public transit is not reliable enough to get to York Regional Forest tracts. These access issues have been accentuated by the significant increase in demand for parks during COVID lockdowns and the limitations and closures of some parks during the lockdowns.

It is necessary to plan parks holistically to address their inequitable distribution in the Golden Horseshoe. However, planners should be aware of unwanted consequences. For example, research has shown how improving the equitable distribution of greenspace has the potential to contribute to green gentrification[49], where new parks and trails can contribute to higher property and housing costs, making the areas unaffordable for previous residents. Additionally, changes to the landscape of a community can reduce residents' sense of place if they are not appropriately consulted around the decision-making and shaping of their neighbourhood.[50]

Researchers have proposed mosaic governance as a promising approach to support the collaboration and inclusion of diverse practices, cultures, peoples, and institutions in greenspace planning across cities.[51] Mosaic governance can take numerous forms, but, generally, is the widening of governance arrangements between local governments and local urban actors. It is an approach that involves a combination of modes of governance (e.g., self-governance through active citizenship, and conventional municipal governance through top-down planning), and requires multi-level collaboration, and a diversity of actors. The approach helps facilitate the scaling out of projects (number, size, impact) and the scaling up of ideas and initiatives (citizens getting ideas recognized and formalized by local government). Mosaic governance ensures: (a) the recognition and sensitivity to the local context in which plans are being proposed, (b) the important leadership role of municipal and regional governments is leveraged, and (c) a balance is maintained between including professional expertise and knowledge and social, citizen-based initiatives.

[44] See: Places Funded by the LWCF (https://lwcfcoalition.org/map)and The history of the Land and Water Conservation Fund, a critical tool supporting parks and outdoor recreation by the Wilderness Society (2020). [45] Carolinian Canada has launched a pilot conservation impact bond with a strong emphasis on Indigenous reconciliation, See: Deshkan Ziibi Conservation Impact Bond Leadership Team (2021). [46] See: Peterson et al. (2020). [47] See: Nesbitt et al. (2018). [48] See: Nesbitt et al. (2019). [49] See: Anguelovski (2016); Krings & Schusler (2020). [50] See: Anguelovski (2016); Immergluck & Balan (2018); Krings & Schusler (2020); Rigolon & Németh (2018) and (2020). [51] See: Buijs et al. (2016) and (2019).

Some Initiatives in the Golden Horseshoe Aimed at Increasing Equitable Access to Parks

Credit Valley Conservation Authority (CVC):

CVC has a program dedicated to increasing park access for underserved populations (students, newcomers, etc.) by subsidizing buses to their conservation lands. Unfortunately, COVID made it necessary to pause this program, which has had a major impact on newcomers' access to parks over the past two years. Accessible transit itself is an issue because of the limitations around sufficient transport routes to parks and conservation areas, especially in rural areas. CVC also recognizes the importance of reducing cultural barriers and facilitating connections between people and greenspaces through this type of program, acknowledging that the natural spaces Canadians might take for granted are unfamiliar for newcomers to Canada.

Central Lakes Ontario Conservation Authority (CLOCA):

CLOCA has been working with the regional municipality to extend transit routes in a certain proximity to conservation areas to increase access for underserved populations.

Niagara Peninsula Conservation Authority (NPCA):

NPCA has a successful program where local libraries acquire NaturePlus passes from the NPCA to lend to library patrons so they can access gated Conservation Areas for free.

Niagara Region:

NIagara Region recently launched a ride share service called the NRT OnDemand program, to increase access to public transportation for a minimal fee. Riders can select a specific pickup and drop-off location and get transported to major transit transfer sites without having to stay within a specific service boundary or fixed schedule.

York Region:

York Region has developed a new Vision in which access to greenspace has been identified as a key community indicator. The Region has recognized the importance of greenspace in one of its most important strategic documents. This metric will be reported to Council every four years.

City of Vaughan:

The city of Vaughan aims to increase access to green areas near or within major utility corridors by working with property owners to attain public use easements and use them as points of access to the park system.

City of Mississauga:

Through the development of the new parks plan, the City is working to increase equitable park access and distribution across the city. They are measuring parkland on a neighbourhood scale to provide park provisions per neighbourhood and meet walkability standards—the City uses a walkability target, with parks recommended to be located within 800 metres of residential areas.

Working with Indigenous Governments

Jurisdictions across the Golden Horseshoe have been working to prioritize Indigenous voices, partnerships, and relationship-building with Indigenous nations. CLOCA is considering how to open engagement with Indigenous governments to increase Indigenous access to public lands in the spirit of reconciliation. In Niagara Region, the government is involved in some co-funding and implementation plans for parks with Niagara Treaty groups to increase access and involve them as a managing partner, but these discussions were interrupted by the pandemic. CVC has an Indigenous roundtable that engages in their projects (e.g., park management plans) and has made commitments in their strategic plan to explore Indigenous co-management.

Transferable Models

The Equity Bold Move in Vancouver, British Columbia

Vancouver has started to examine distributional equity through The Equity Bold Move, an initiative developed as part of the city's broader strategic parks and recreation plan, VanPlay. The municipality aims to prioritize inclusion for residents who have faced the greatest barriers to accessing the benefits of the natural environment. Through the program, the city is trying to better understand inequities in the distribution, quality, and usage of parks. Thus far, the initiative has involved a two-year community and stakeholder engagement process and an inventory and analysis of the park network. Priority areas (initiative zones) have been identified, mapped, and overlaid to show park access gaps, areas with high demand for low barrier recreation, and urban forest canopy gaps. The data is being used to look at gaps in provision, inform equitable implementation strategies, and ensure the equitable delivery of resources, projects, and programs.

Indigenous Co-Governance in Auckland, Aotearoa-New Zealand

In 2013, the City of Auckland, Aotearoa-New Zealand adopted a 10-year Parks and Open Spaces Strategic Action Plan. One of the integral pillars identified in the action plan was to incorporate practices, values, customs, and knowledge from Māori (the concept of Tikanga Māori, customary laws) and develop partnerships between Māori (particularly mana whenua, Māori who have historic and territorial rights in identified areas), Auckland Council and the Auckland community. Māori have an important role to play in the planning, development, and management of Auckland's park and open spaces network. One goal within the action plan was to develop co-governance arrangements with Māori to increase their participation and influence in Auckland's parks and open spaces. Co-governance and co-management strategies have emerged in New Zealand largely as result of the Te Tiriti o Waitangi/Treaty of Waitangi settlement process. Implementation strategies outlined in the action plan describe the necessary actions to enable Māori aspirations and include the following:

- Co-govern parks and open spaces with Māori through the collaborative development of management plans;
- Work with Māori to promote storytelling of Māori cultural heritage and history throughout the parks network, by restoring Indigenous place names, interpretation, artwork, and memorials;
- Develop partnerships with Māori and community groups to launch programs that enhance the biodiversity of the parks and open space network;
- Work with Māori to identify, protect, preserve, and manage significant places within the parks and open space network; and
- Implement a framework that formalizes the partnership and role of Māori in policy, planning, design, development, and management of greenspaces in Auckland. The Māori Plan[52] developed by the Independent Māori Statutory Board (IMSB) in 2012 and updated in 2017, was created to complement other strategic plans and provide a framework to guide and monitor the progress towards Māori objectives and aspirations. It is meant to be a tool to support the partnership between Māori and Auckland Council.

In 2020, Auckland Council engaged in public consultation as part of the process to update the city's Regional Parks Management Plan which is undergoing revisions and expected to be released in 2022. Much of the feedback received was focused on increasing and improving Māori participation in the management of the parks and open space network, with a particular focus on integrating education about Māori history and culture into Auckland's greenspaces.[53]

[52] *See: Independent Māori Statutory Board (2017).* [53] *See: Auckland Council (2021)*

Recommendations

Large parks provide important services to communities across Ontario's Golden Horseshoe; however, the number of planned large parks is not anticipated to keep up with population growth, and the current distribution of large parks is not equally accessible to people across the region. There are several barriers to the establishment and management of new large parks in such a rapidly growing region. There is currently no regional strategy for large park planning and no forum for intergovernmental coordination on the topic. The existing funding mechanisms do not support large park creation well and the region needs to look to innovative approaches and partnerships to increase the size and quality of the large park network. Finally, it is very important to centre equity and accessibility in park planning processes and consider how they can be applied to large parks, because it is not possible to create a large park in every neighbourhood.

The strategies, transferable models, and findings about park distribution and equitable access described in this report are intended to be a resource for park funders, planners, and policy makers across jurisdictions to guide future large parks development. In addition to these findings, decision-makers should consider the following recommendations to overcome barriers to the equitable funding, planning, and establishment of new large parks across the Golden Horseshoe:

Governance and Collaboration

- Create a Regional Golden Horseshoe Large Parks Strategy that:
  - Is spearheaded by an organization that is well-positioned to be a regional convenor (e.g., the Province, the Greenbelt Foundation, Conservation Ontario);
  - Includes substantive participation and support from the province, if not led by the province;
  - Convenes a multi-stakeholder roundtable to give input and direction into the strategy and support regional alignment and consensus-building. The Roundtable should include representatives from every local government, Conservation Authority, and First Nation in the study area as well as from the provincial government, the federal government, and the Greenbelt Foundation;
  - Includes measures to address inequity of access to large parks across the Golden Horseshoe that were highlighted in this report;
  - Involves other sectors with interests in increasing large park provision, including but not limited to public health, infrastructure, and not-for-profits and charitable organizations; and
  - Is appropriately funded to ensure there is adequate capacity and resources to operationalize the strategy.
- Create a cohesive, regional policy framework for the Golden Horseshoe and/or Greater Golden Horseshoe region

that aligns existing provincial and associated land-use policies and plans relevant to the region, including a large parks strategy;

  - Include this policy framework as a key element in future updates to the *Greenbelt Plan*.

- Explore mosaic governance as an approach to support the collaboration and inclusion of diverse practices, cultures, peoples, and institutions in parks planning across cities.
- Engage with Conservation actors to identify land that can provide new or enhanced public access and count towards Canada's Target 1 – Biodiversity Protection. These actors will include government, land securement organizations, and private landowners.
- Ensure broad collaboration with non-conventional partners at all stages of parks initiatives, including planning, establishment, and co-management.

Funding and Legislative Changes

Funding streams should be combined to finance projects that support both biodiversity and parkland creation goals.

- As municipalities review their parkland dedication bylaws under Section 42 of the *Planning Act*, there is an opportunity to reconfigure them so that municipalities:
  - Generate revenue towards large parks as well as neighbourhood parks through cash-in-lieu payments;
  - Can direct a portion of cash-in-lieu towards Conservation Authorities or Upper Tier Municipalities, as large park projects fall more under their purview; and/or
  - Allow for the allocation of parkland at an off-site location either in the place of cash-in-lieu or if a larger space for a park is available off-site.
- Address issues of liability for different landholders to increase the viability of including land trusts and non-conventional greenspaces in the parks network, and to support greater accessibility through cross-jurisdictional trail networks, either through the removal of liability from landowners or by providing provincial funding for liability insurance.
- Incorporate green infrastructure assets into asset management, which presents an opportunity to make the case for more budget for park management, maintenance, and operations.
- Current infrastructure funding programs:
  - **Federal:** Natural Infrastructure Fund - future intakes of this program should support the planning, establishment or expansion, and management of large parks, and make this funding available to a broad range of stakeholders (e.g., municipalities, regional governments, Conservation Authorities, First Nations, and not-for-profit and charitable organizations) to support innovative, collaborative approaches to large park creation; and
  - **Provincial:** Investing in Canada Infrastructure Program (ICIP) - recognizing the valuable role that large parks play as green infrastructure, in addition to their social, and physical and mental health benefits, future intakes of the Green Infrastructure Stream of the provincial ICIP program should support the planning, establishment or expansion, and management of large parks.
- The provincial government is consulting on additions to the Greenbelt Urban River Valley designation and should consider specific investments to connect Urban River Valleys to the park network to increase connectivity and accessibility.

- Explore the possibility of a regional green bond or other innovative funding mechanisms for large parks in Golden Horseshoe; this initiative should be collaborative but led at a regional scale.
- Amend the provincial *Development Charge Act*, so that municipalities in the Golden Horseshoe can use funds collected through development charges towards land acquisition for large parks.

As an overarching recommendation that bridges both "Governance and Collaboration" and "Funding and Legislative Changes," consideration should be given to how to increase equitable access to the parks network. Given the increasing challenges in securing large tracts of land in this region due to both land scarcity and high costs, even if the park supply is significantly increased there will likely still be regions and populations that are underserved. In addition to these funding recommendations, which focus primarily on increasing park supply, funders and decision makers should also be considering ways to fund and deliver programming to reduce barriers and improve access to existing parks. The examples of local programs and transferable models identified in the "Planning for accessibility and equity" section of this report can serve as a starting point, and the multi-stakeholder roundtable proposed here as part of a Regional Golden Horseshoe Large Parks Strategy can be a way to share successes and lessons learned, to build on these initiatives, and to develop best practices to increase equitable access across the region.

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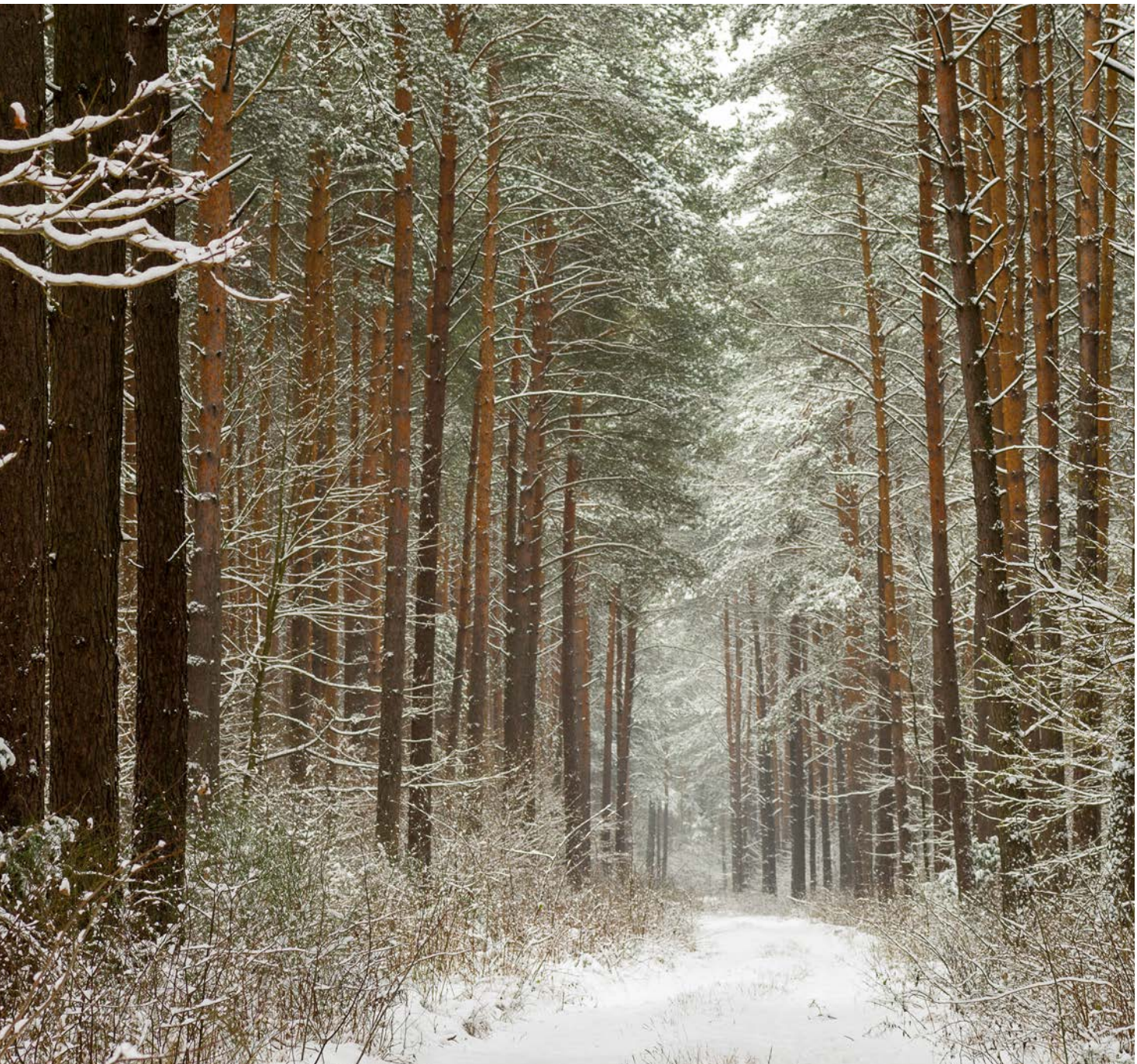

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Research and writing was conducted by Jennifer Court, Christine Mettler, Jackie De Santis, Michelle Sawka, and Re:Public Urbanism

Thank you to all the partners for sharing their data and reviewing the report.

Maps have been produced by Re:Public Urbanism. Third party data was used to compile the maps with various source dates. We have done our best to confirm that all facts and figures are accurate. However, we do not retain liability for any errors or misrepresentations.

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