Possibility grows here.

Greenbelt Foundation
#404 – 720 Bathurst Street
Toronto, Ontario, M5S 2R4
(416) 960-0001
www.greenbelt.ca

Response to ERO # 019-6160
Proposed Updates to the Ontario Wetland Evaluation System
Ministry of Natural Resources and Forestry

INTRODUCTION

We support the Province of Ontario's stated objective of helping to "reverse the decades-long trend of wetland loss in Ontario."[1] However, the best way to do this is to protect what we have.

The province is proposing updates to the Ontario Wetland Evaluation System that could result in the significant loss of wetlands in Ontario along with critical and irreplaceable ecosystem services including flood mitigation that helps keep communities safe.

The Greenbelt Foundation appreciates the opportunity to provide the following feedback in response to ERO posting #019-6160. This feedback is offered with the caveat that more time is required for a full impact analysis, particularly in the context of the range of other legislative proposals being made at the same time under the umbrella of Bill 23, as well as amendments to the Greenbelt Plan.

We want to get this right, as does the Province of Ontario, and we recommend that a decision be paused for an extended consultation period.

WHY THE GREENBELT FOUNDATION IS COMMENTING

The Greenbelt provides immense value to Ontario, but its agricultural, natural heritage and water resource systems are significantly impacted by, and dependent on effective watershed management and other conservation oversight and regulation.

For more than 18 years, we have supported "smart growth" efforts that allow our province to build communities in the fast-growing Greater Golden Horseshoe region in a manner that addresses land use and housing needs, leverages existing infrastructure, and ensures access to green spaces and other public amenities.

We have also undertaken significant work and investment in the area of nature-based solutions to provide ecosystem services such as water supply and storm water

[1] Government of Ontario, More Homes, Built Faster *Technical Briefing* presentation (October 25, 2022)

management, as well as the use of natural infrastructure to reduce risks to communities and households, especially in the context of more frequent extreme weather and climate change.

WETLANDS: HIGH VALUE NATURAL INFRASTRUCTURE

Wetlands provide important functions to filter and store water and are significant natural systems for wildlife and biodiversity. Our submission focuses on wetlands as a natural defence system for Southern Ontario as we prepare for droughts, floods and other climate change events and how wetlands are uniquely positioned to support strong, growing communities.

Wetlands are quickly becoming the centrepiece of a modern approach for governments to deliver stormwater services, disaster management and halt and reverse crisis-level declines in biodiversity. Communities in the Greater Golden Horseshoe and across Canada are currently renewing investments to maintain, restore and manage wetlands and wetland functions. Businesses including insurance companies and major financial institutions are supporting these efforts. The federal government has also recently launched a Natural Infrastructure Fund and Nature-Based Climate Solutions Fund.

Significant and widespread concern exists about how the proposed updates to OWES will result in the loss of many, even a majority, of Provincially Significant Wetlands (PSWs) in southern Ontario. With impending growth and increasing extreme rainfall events due to climate change, now is a critical moment in time to value and invest in wetlands. Wetlands are not suitable building sites for the new homes needed to strengthen our provincial housing supply – while protecting them will, in fact, provide neighbourhoods with critical property protections and climate resilient, sustainable areas to grow.

Wetlands provide high value ecosystem services that deliver numerous direct community benefits and enhance resilience to climate change. Ecosystem services provided by wetlands include carbon storage and uptake, flood control, erosion control, water filtration, sediment retention, waste treatment (e.g., removal of excess nitrogen and phosphorous runoff) and the protection of habitat for plans and animals including species at risk.[2]

[2] Ducks Unlimited Canada, Earthroots, Ecojustice and Ontario Nature. (2012). Protecting Greenbelt Wetlands. How Effective is Policy? Retrieved from https://www.greenbelt.ca/protecting_greenbelt_wetlands

A new economic model developed by the University of Waterloo finds southern Ontario wetlands provide $4.2 billion annually in water filtration services, including sediment and phosphorous removal. These services are "keeping our drinking water sources clean and helping to mitigate harmful and nuisance algal blooms in our lakes are rivers."[3] Evidence of wetland eco-services can be used to compare costs to engineered solutions and help increase understanding and support for the need to protect and invest in wetlands. The study further found that all wetlands – marshes, bogs, swamps and fens, are important contributors.[4]

Natural infrastructure should be considered when addressing the $16.8 billion provincial infrastructure backlog and the $52 billion municipal infrastructure backlog.[5] Research by the MNAI has shown that natural infrastructure is more adaptable to environmental fluctuations and stressors than traditional grey infrastructure. Natural infrastructure is also multi-functional and provides co-benefits alongside its primary purpose. This makes it very cost-efficient use of public finances; a single investment delivers the core service while also providing numerous other public benefits. Natural infrastructure generally has low to no capital costs as an existing natural asset; operating, maintenance and renewal costs are often lower than is typically possible with engineered alternatives.

Investments in ecosystem resilience and regeneration produce a large return on investment. For example, a study by the Intact Centre on Climate Adaptation demonstrated that natural wetlands could reduce the costs of flood damage by 29% in rural areas and 38% in urban areas.[6] Thus, the rationale for the increased use of natural infrastructure is becoming stronger, given growing infrastructure deficits resulting from aging infrastructure and the accelerated risks from climate change.

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[3] University of Waterloo. (January 25, 2022). New economic model finds wetlands provide billions in filtration value. Retrieved from https://uwaterloo.ca/news/media/new-economic-model-finds-wetlands-provide-billions

[4] Ibid.

[5] Financial Accountability Office of Ontario (August 17, 2021). Media Release: Ontario's municipal infrastructure backlog was $52 billion in 2020. Retrieved from https://www.fao-on.org/en/Blog/media/MR-municipal-infrastructure-2021; Financial Accountability Office of Ontario. (November 26, 2020). Provincial Infrastructure. Retrieved from https://www.fao-on.org/en/Blog/Publications/provincial-infrastructure-2020

[6] Moudrak, N.; Hutter, A.M.; Feltmate, B. (2017.) When the Big Storms Hit: The Role of Wetlands to Limit Urban and Rural Flood Damage. Prepared for the Ontario Ministry of Natural Resources and Forestry. Intact Centre on Climate Adaptation, University of Waterloo.

The Greenbelt provides a further view of wetland benefits. Within the Greenbelt, there are approximately 100,063 hectares of wetlands.[7] The total carbon sequestered by wetlands in the Greenbelt can be approximated at 25,016 tonnes per year.[8] Greenbelt wetlands play a key role in protecting private and public property by reducing flood risk. A 2016 report by Green Analytics estimated the value of property protection to be $224 million per year.[9] This total was estimated over 15,000 provincially significant wetlands throughout the Greenbelt. The average wetland within the Greenbelt was found, whose individual wetland values ranged from $3,000 to over $5.5 M per year.[10]

Communities in southern Ontario are already making investments in wetlands as natural infrastructure. For example, the Greenbelt Foundation has partnered with Conservation Authorities to develop business cases for the following projects:

1. Historic wetlands are being restored on top of the Niagara Escarpment in Hamilton to protect 306 mixed residential and commercial properties downstream currently experiencing flooding. Flood costs in any year could reach $95.1 million under worsening climate scenarios.[11] Cost for land securement and wetland restoration totals $10-15 million compared to $28 million for grey infrastructure solutions.[12] The wetland area will be developed into a new community greenspace – Saltfleet Conservation Area and enhance biodiversity and wildlife connectivity in the region.

2. The Lake Scugog Enhancement Project in Port Perry demonstrates how investment in natural areas can boost local tourism & recreation economies. By investing $3-4 million in and restoring a functioning wetland and aquatic system in Port Perry Bay, the tourism industry, which the surrounding community relies on, will be saved.[13] With no action and increasing impacts of climate change, the

[7] Green Analytics. (2016). Ontario's Good Fortune: Appreciating the Greenbelt's Natural Capital. Greenbelt Foundation. Retrieved from https://www.greenbelt.ca/ontarios_good_fortune_greenbelt_natural_capital
[8] Green Analytics. (2016). Ontario's Good Fortune: Appreciating the Greenbelt's Natural Capital. Greenbelt Foundation. Retrieved from https://www.greenbelt.ca/ontarios_good_fortune_greenbelt_natural_capital
[9] Green Analytics. (2016). Ontario's Good Fortune: Appreciating the Greenbelt's Natural Capital. Greenbelt Foundation. Retrieved from https://www.greenbelt.ca/ontarios_good_fortune_greenbelt_natural_capital
[10] Ibid.
[11] Anielski Management Inc. (2019). Investing in the Future: The Economic Case for Natural Infrastructure in Ontario. Greenbelt Foundation. Retrieved from https://www.greenbelt.ca/economic_case
[12] Ibid.
[13] Ibid.

lake could eventually become so shallow it would no longer really be a lake. The Net Present Value (NVP) of reducing nutrient loading over 50-years would be $716,000-$936,000. Annual ecosystem services values for recreation and aesthetics totals $38.5 million. Considering other values (biodiversity, climate regulation), the full value of annual ecosystems services provided by a healthy Bay is $220 million.[14] The lake serves 20,000 visitors each year.

The Greenbelt Foundation has also partnered with Municipal Natural Asset Management Initiative (MNAI) to help municipalities in the Greater Golden Horseshoe region (GGH) to value the eco-services provided by nature and incorporate into service delivery programs such as stormwater management. Multiple municipalities in the GGH have completed natural asset inventories, enabling them to begin model and identify natural infrastructure opportunities and design projects.

These ecosystem services will become more important in the future, given the impacts of climate change and population growth. Flooding is one of the most widespread and expensive natural disasters across Canada. These natural disasters are growing in frequency and intensity with climate change causing severe impacts in terms of insurance claims, economic losses, and in some cases fatalities.[15] In 2020, insurable losses within Canada related to flooding reached $2.5 billion, making that year the fourth worst year for insurable claims since records began to be kept in 1983.[16] Non-climatic stressors, such as urban growth and land-use changes, also increase the risks associated with flood events.

Despite these benefits, there has already been a significant loss of wetlands in southern Ontario. A 2010 report by Ducks Unlimited Canada found that half of the Greenbelt's wetlands and nearly three-quarters of southern Ontario's original wetlands have been lost since European settlement.[17] Land development is a significant cause of wetland loss within the Greater Golden Horseshoe region. The proposed changes to the OWES together with the proposed changes to the Conservation Authorities Act and Planning

[14] Ibid.

[15] Feltmate, B. and Moudrak, M. (2021). Climate change and the preparedness of 16 major Canadian cities to limit flood risk. University of Waterloo. Intact Centre on Climate Adaptation. Retrieved from https://www.intactcentreclimateadaptation.ca/wp-content/uploads/2021/02/16-Cities-Flood-Preparedness-1.pdf

[16] Ibid.

[17] Ducks Unlimited Canada, Earthroots, Ecojustice and Ontario Nature. (2012). Protecting Greenbelt Wetlands. How Effective is Policy? Retrieved from https://www.greenbelt.ca/protecting_greenbelt_wetlands

Act under Bill 23 (under ERO posting # 019-6141) will reduce protections for wetlands and make them even more vulnerable to development pressures.

Key Recommendations and Cautions:

1. **Government should not proceed with the proposed update to the OWES.**

   The Greenbelt Foundation recommends that the Ministry of Natural Resources and Forestry not proceed with proposed changes to the Ontario Wetland Evaluation System.

   Key components of the proposed changes to OWES would:

   - Make major changes that undermine the regulation and protection of wetlands. The proposed changes would remove two important ways in which wetlands qualify for protection:
     - Species at risk habitat will no longer influence decisions about which wetlands must be protected,
     - Swamps, marshes, and bogs would be addressed on their own and not as part of "wetland complexes", which are interconnect pockets of wetlands in the same area that function as connected biological, social and hydrological systems. Many of the wetlands have status as part of a complex and would not qualify on their own.
   - Result in many wetlands losing their designation and being lost or degraded by development. This would likely reverse decades of our evolving understanding of wetland functions and potentially put communities at greater risk of flooding or higher costs to manage these lost eco-services.
   - Remove oversight and transparency by the Provincial government, with the Ministry of Natural Resources and Forestry no longer involved in the review and approval of wetland evaluations. Also, evaluated wetlands may no longer be registered and information publicly available through the Land Information Ontario database.
   - Given the proposed Bill 23 amendments to reduce the permitted oversight by Conservation Authorities, municipalities would need to play a larger role in wetland evaluation in the future. We are concerned that most municipalities are not prepared or able to fill the gap. Municipalities may also approach evaluations inconsistently across Ontario, leading to confusion and frustrations for all.

- Finally, the proposed changes to the OWES could lead to wetland degradation that would have cumulative impacts on watersheds, as wetlands are often connected to larger regional natural heritage systems. These impacts include the displacement of native plants and animal species, the disruption of migration and breeding grounds and the climate change resiliency of watersheds being reduced. The proposed changes to the OWES could create serious risks to the environment at a time when impacts of climate change are urgent and signal a move away from environmental protections when they are needed the most.

2. **Greenbelt wetlands should remain protected**

   It is the Foundation's understanding that any changes to the OWES would not affect wetland policies and protections in the three Greenbelt plans – the Greenbelt Plan, the Oak Ridges Moraine Conservation Plan and the Niagara Escarpment Development Plan. The permanence of Greenbelt policies and the boundary is paramount to the long-term success and viability of the Greenbelt, provides certainty for developers and enables major investments by Greenbelt businesses such as agriculture and nature-based tourism operators.

3. **Priority should be given to Indigenous Rights before proceeding**

   We wish to note that Consultation with affected First Nations must happen and interests and concerns addressed before implementation decisions are made.

Our Solution: Investing in Natural Infrastructure

1. **Government and MNFR should invest significantly in wetlands as natural infrastructure**

   The Provincial government should invest significantly in wetlands through a natural infrastructure program and protect and enhance their role in protecting people and property from extreme weather events, which are increasing due to climate change. In many cases, stormwater ponds installed in new developments to manage runoff and flooding are no longer adequate. Some Ontario municipalities have moved on to build naturalized stormwater systems to mimic wetlands (e.g., Markham), while others are constructing new wetlands to manage flooding or pollution (e.g., Hamilton, Port Perry). Ontario municipalities are

already required to include natural assets such as wetlands in their asset management plans as an effective tool in managing costs and performance.

Instead of removing protections for wetlands, the provincial government should focus on supporting and investing in natural infrastructure. Natural infrastructure provides an affordable solution to building resilience against the effects of climate change and provides a range of economic, environmental, individual, and social benefits.[18] The costs of adapting are less today than they will be in the future. According to the Climate Institute's latest report, *Damage Control: Reducing the Costs of Climate Impacts in Canada*, if Canada does not take increased adaptation measures, the Canadian economy will take a $25 billion hit in 2025, rising to $78-$101 billion by 2050.[19] The mounting costs of climate change will cause severe damage to Canada's economy, with the worst costs being experienced directly by individual households (e.g., lower incomes, job losses, lower business investments and cuts to exports). Therefore, climate adaptation is an affordability issue.

Ontario's infrastructure is vulnerable to climate change. The Financial Accountability Office of Ontario estimates that 34.7% of the Province's assets (valued at $92.1 billion) are not in a state of good repair.[20] The capital spending required to bring eligible assets up to a state of good repair totals $16.8 billion. The number is higher to address the municipal infrastructure backlog at $52 billion.[21]

2. Capture co-benefits of wetlands in government policy

Provincial government infrastructure programs could also reward wetland restoration projects that provide community co-benefits including greenspace,

[18] Task Force for a Resilient Recovery. (2020). Bridge to the Future. Final report from the Task Force for a Resilient Recovery. Retrieved from https://www.recoverytaskforce.ca/wp-content/uploads/2020/09/TFRR-Final-Report_EN.pdf

[19] Canadian Climate Institute. (2022). Damage Control. Reducing the Costs of the Climate Impacts in Canada. Retrieved from https://climateinstitute.ca/wp-content/uploads/2022/09/Damage-Control_-EN_0927.pdf

[20] Financial Accountability Office of Ontario. (November 26, 2020). Provincial Infrastructure. Retrieved from https://www.fao-on.org/en/Blog/Publications/provincial-infrastructure-2020

[21] Financial Accountability Office of Ontario (August 17, 2021). Media Release: Ontario's municipal infrastructure backlog was $52 billion in 2020. Retrieved from https://www.fao-on.org/en/Blog/media/MR-municipal-infrastructure-2021

tourism and biodiversity benefits. This would multiply the benefits of infrastructure investments, support additional government priorities and improve communities.

About The Greenbelt Foundation

The Greenbelt Foundation is a charitable organization dedicated to ensuring Ontario's Greenbelt remains permanent, protected, and prosperous. Our work centres on protecting and investing in near-urban nature, natural infrastructure, and climate resilience; supporting local Greenbelt farmers and the rural agricultural sector and economy; promoting the vast and varied tourism and recreation opportunities that the Greenbelt offers; and engaging Ontarians in enjoying and helping to keep the Greenbelt thriving.

About The Greenbelt

The 2.1 million acres of protected lands of the Greenbelt support $9.6 billion in provincial GDP and nearly 180,000 full time jobs. The Greenbelt is home to 78 species at risk and 721,000 acres of wetlands, grasslands and forests that provide $3.2 billion in annual ecosystem services --- which includes $224 million of flood protection services and 71 million tonnes of carbon storage.

The Greenbelt's forests, lakes, rivers, and wetlands also provide essential recreational opportunities for the GGH's growing population. It is home to over half of the large parks in the region, has a network of biking and hiking trails including the 475 km Greenbelt cycle route and numerous cultural and historical sites that are all with easy access of our urban centres.

Farmland makes up 40% of the Greenbelt. With the high-quality soils, favourable climate conditions, and proximity to Canada's largest market, Greenbelt farms and agri-food businesses make a significant contribution to the regional economy. The agricultural sector is the second largest contributor to the province's GDP at $39.5 billion/year, providing 822,000 jobs. We continue, however, to lose hundreds of acres of prime farmland outside of the Greenbelt. Permanent protection of our prime agricultural land is an economic imperative and essential to sustain a reliable source of local food.