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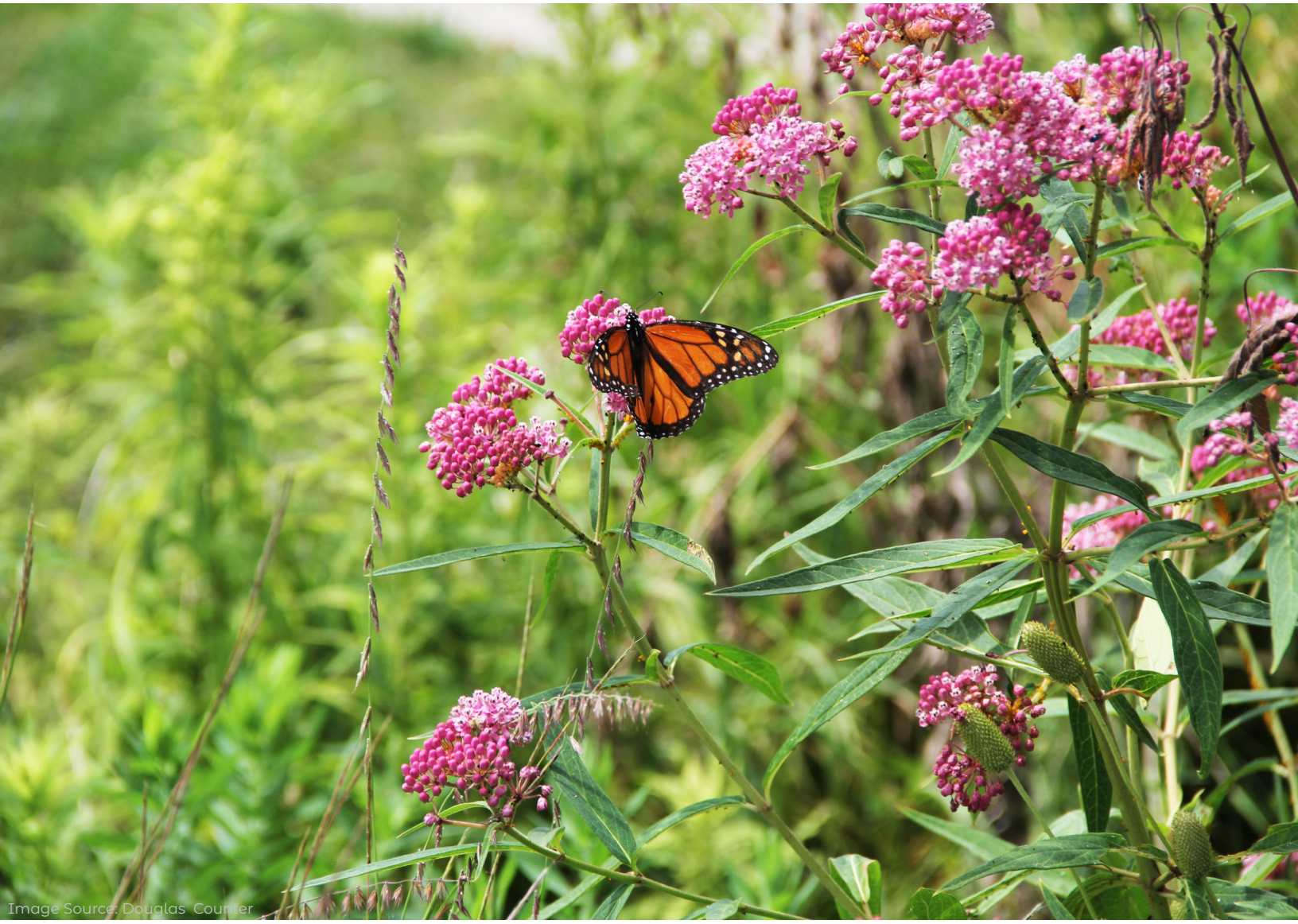
BYLAWS FOR BIODIVERSITY:

RE-MODELLING CITY OF TORONTO'S MUNICIPAL CODE CHAPTER 489, GRASS AND WEEDS



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RYERSON UNIVERSITY

BYLAWS FOR BIODIVERSITY: RE-MODELLING CITY OF TORONTO'S MUNICIPAL CODE CHAPTER 489: GRASS AND WEEDS

By

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Bachelor of Arts (Hons), Carleton University, 2019

A Major Research Paper
Presented to Ryerson University

In partial fulfillment of the requirements for the degree of

Master of Planning
In
Urban Development

Toronto, Ontario, Canada, 2021

Image Source: Douglas Counter

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CHAPTER 489: GRASS AND WEEDS

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ABSTRACT

The glorification of the manicured lawn is a result of a colonial history of English landscape practices that were adopted in North America. As climate science and evidence of biodiversity loss are now at the forefront of public policy, environmentalists and ecologists are questioning the value of the lawn that has been engrained into North American society. The evolution of weed and grass by-laws in municipalities across Ontario tend to limit property owners' and occupants' rights to express environmental and cultural beliefs through the planting of natural landscapes that differ from the traditional-style lawn. This paper examines the City of Toronto Municipal Code Chapter 489, Grass and Weeds, which is compared and contrasted with five North American municipalities property standards and weed and grass by-laws. The by-law is challenged and questioned against the City's environmental strategies that promote alternative landscaping practices. This paper is intended to provide insightful recommendations on how the City of Toronto and other similar municipalities can revise their weed and grass by-laws through a proposed model by-law intended to support environmental stewardship.

Key Words:
Natural garden; lawn; by-law; policy; landscape; biodiversity; Canada.

Image Source:Lorraine Johnson

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Land Acknowledgement

The landscape of primary discussion in this Major Research Paper is located within the City of Toronto. Toronto is in the 'Dish With One Spoon Territory'. The Dish With One Spoon is a treaty between the Anishinaabe, Mississaugas and Haudenosaunee that bound them to share the territory and protect the land. Subsequent Indigenous Nations and peoples, Europeans and all newcomers have been invited into this treaty in the spirit of peace, friendship and respect. I both want to acknowledge the landscape of the Dish With One Spoon Territory and express my gratitude for the opportunity to conduct my research in this territory.

Many Thanks To...

I want to begin by extending my many thanks to Professor Nina-Marie Lister for her support and guidance in the production of this Major Research Paper. Through the invaluable opportunity I was given to work alongside Professor Nina-Marie Lister as a research assistant for the Ecological Design Lab, I was able to explore this topic in depth working in the realm of environmental law and policy while growing passionate about alternative landscape practices that are supportive of urban biodiversity and the encouragement of cultural expression and beliefs. I want to thank author and expert gardener, Lorraine Johnson, for her time, commitment, and dedication to helping me refine this project and sharing her wealth of knowledge with me in the topic. Thirdly, I want to thank David Donnelly at Donnelly Law for providing guidance in exploring the legislative framework and supporting my vision for modelling this by-law. Thank you Douglas Counter for offering your wonderful images of your beautiful garden to enhance the visualizations in this paper.

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THE FRONT-LAWN AESTHETIC

The Introduction of the Lawn to North America

The manicured lawn that is prevalent in the North American landscape today was not always familiar and is, in fact, a recent development of North American society. Dating back to the 1860's with the beginning of the Civil War, many of America's private properties fronted onto the street with a small kept garden. At the time, farms and farm houses dominated the landscape and were characterized by pastures and fields with no presence of a manicured lawn and very little garden (Jenkins, 1999).

Alterations to the natural landscape came long before European colonists arrived to the Americas and were undertaken by Indigenous peoples to sustain a modest livelihood who used the land for hunting and fishing for both ceremonial purposes and subsistence activities (Collins & Murtha, 2010). When European colonists arrived to the Americas, they quickly noticed that pasture grasses were non-existent (D'Costa, 2017). The grasses on the east coast were annuals and included species such as broom straw, wild rye, and marsh grass; none of which were pasture grasses suitable for livestock (Jenkins, 1999; D'Costa, 2017). Grassy areas that surrounded the Native American villages were cultivated, however, the Indigenous peoples did not keep grazing stock (Jenkins, 1999). As such, European cattle, sheep, and goats grazed the native grasses and plants that were available on the east coast which were far less nutrient dense than those of northwest Europe, but the grasses quickly depleted and there were limited food sources left. Animals quickly began to die over the winter seasons from starvation or resorting to eating poisonous plant species as their only source of food available (D'Costa, 2017).

Chapter 1: Introduction: The Front-Lawn Aesthetic

In the seventeenth century, it was evident that the over-grazing that had occurred upon the arrival of the European settlers eliminated most of the native grasses and field plants. Settlers began to import European grass and clover seed which quickly replaced the native grasses and filled the previously destroyed landscape. The supply ships used to import the European grasses and clover seeds would arrive at the ports where the dump sites were located which led to the introduction of many other species such as dandelions and plantains that were a product of the dumping of bedding, fodder, and manure (Jenkins, 1999; D'Costa, 2017). By 1672, there were twenty-two European weed species that were reported to have become common to the east coast and they began to spread rapidly across America; over several generations, some of these were mistaken to be native grasses to the Americas because they were so prominent and wide spread. With this came some of the species that are most favoured today such as Kentucky Bluegrass. Yet Kentucky Bluegrass is not, in fact, native to North America but rather originated in Europe, Asia, and Northern Africa (Jenkins, 1999).

The transformation of the landscape in the seventeenth century provided wild grasses that were used among farmers in the eighteenth century, so there was very little focus on deliberately planting pasture grasses at this time. However, the annual grasses that had once taken over the landscape were so overgrazed that they diminished and were unable to ripen and reseed. This resulted in farmers abandoning the land that could no longer be utilized for grazing purposes (Jenkins, 1999; D'Costa, 2017). It became widely understood that English and European grasses did not grow well in the southern region in particular due to poor soil conditions and extreme heat; some grasses such as Kentucky Bluegrass needed a winter season to lie dormant for optimal growth which was not prevalent in the southern region. The grasses that did flourish, such as Bermuda grass, were considered to be weeds and were unappealing to farmers. Thus, farmers began feeding their livestock grains such as wheat and rice, however, the lack of grazable grass made it difficult for their animals to sustain adequate growth (Jenkins, 1999). The early nineteenth century reintroduced farmers to the importance of cultivating grasses for their livestock and as grasses became widespread across America, grass seed was readily available for both agricultural purposes, which in turn, led to the availability for use in parks and residential lawns (Jenkins, 1999; D'Costa, 2017).

Figure 1. Kentucky Bluegrass on yard of North American home (Source: Great-Greens).

The first lawns as we know them today were introduced in England and France in the eighteenth century. The climate in England, which is typical of frequent rain and moderate temperature, allowed for efficient growth of turf grass. Americans became familiar with the English landscape through literary sources and landscape paintings that were imported from England (Jenkins, 1999). During the eighteenth century, there were very few Americans that had the privilege of being able to travel to Europe and directly observe the English landscape aesthetic and European garden styles. However, Thomas Jefferson, who served as a leading politician, philosopher, and architect at the time, was fascinated with the European landscape design and traveled extensively across Europe to observe the English-style lawns made of turf grass, romantic gardens, and country estates; he believed that landscape design was one of the fine arts (Jenkins, 1999).

Figure 2. Badminton House and landscape garden, Gloucestershire, England in 1880 (Source: Wikimedia Commons).

Jefferson was one of the first landscape architects and eighteenth-century gardeners who attempted to replicate the English-style lawn and garden landscape in North America through his country estate in Virginia Piedmont, known as Monticello (Jenkins, 1999). Monticello was rooted in the plantation-slave system of agriculture. Jefferson developed plantations for the cultivation of wheat and tobacco to expand agricultural operations and engage in tobacco trade with European markets (Smithsonian National Museum of African American History and Culture, n.d.). The diversified agricultural operations in which Jefferson had developed, required extensive labour that enslaved workers were responsible for carrying out. Plantations of this size were typically characterized by vast spreading lawns surrounding elegant mansions of superior architectural design and extensive fields worked by enslaved labourers (National Gallery of Art, 2021).

It is unsurprising that the planned landscape characterized by luxurious lawns and romantic gardens were additionally dependent on enslaved labourers and symbolized a social hierarchy between those that worked on the landscape, and those that lived in the main dwelling, being the Monticello (National Gallery

of Art, 2021). Over time, there became a rapid and visible separation between the wealthy and the poor.

Figure 3. Monticello's main house and South wing (Source: Thomas Jefferson Foundation at Monticello)

A more widespread shift to the lawn in North America, however, did not occur until the late nineteenth century. This began with small enclosed gardens that were originally planted for herb and vegetable growing which later transformed to purely aesthetic gardens containing a mixture of planted flowers and was typically only done by wealthy landowners; the same demographic that first adopted the 'traditional' lawn in North America, copying lawn and garden designs from England (D'Costa, 2017). Lawns at this time were still restricted to the wealthy and most Americans until the early 20th century did not have a lawn. Lawns were difficult to tend to at the time before pesticides, herbicides, and chemical fertilizers became widespread. Only those that could afford to hire someone to tend to the lawn had one, or, as Jefferson did, relied on enslaved labourers. The lawn not only became an indicator of economic success (Robbins, 2007), but has deep roots in slavery and is in this way a powerful colonial symbol of oppression, as much as wealth. Landowners who were unsuccessful in achieving the appearance of a well-manicured lawn were advised through political and public pressure to rip it up and start again (Robbins, 2007).

However, aside from landowners' lack of interest in tending to their lawns, resulting in an 'unsatisfactory' lawn to the public eye, the challenges and failures of the lawn could more likely be attributed to attempts to grow grass species unsuitable for the climate or geographic area (Jenkins, 1999). It is important to note that the garden design styles were adopted from England, an area of moderate temperature and frequent rain, and were being replicated in North America across diverse eco-regions with climatic extremes.

Figure 4. Classic English garden style example (Source: Thinkstockphotos.com)

Even as lawns emerged and became more widespread in the early 20th century, it was not until the mid-20th century that they became common. Urban areas at this time, where much of the population resided, did not have yards and the phenomenon of the lawn was exclusive to suburban areas. Suburban developments were limited and while they contained the largest land coverage for lawns on the outskirts of the city limits, these developments were often dominated by white, middle- or high-income residents who had the economic means to invest in lawn care and homeownership in the suburbs became symbolic of independence. The lawn which many had believed to be a symbol of culture, is rather an expression of a shifting political economy that is based on colonialist structures (Robbins, 2017).

Figure 5. 1950 Levittown's suburban landscape (Source: Bettman/Corbis)

It is unsurprising that along with the post-war suburban shift, that there also became an emphasis on science and technology. After World War II, the rise of technology and chemicals that originated in war made it easy and more affordable for homeowners to achieve the manicured lawn that was previously exclusive to the wealthy (Zeldovich, 2018). Fertilizing crops was not only a chemical instrument exclusive to providing food sources, but the industrial revolution equipped humankind with the ability to fertilize and manage their lawns to be lush, green, and free of weeds, at ease (Zeldovich, 2018).

As the aesthetic of the lawn became widespread, it became common to complain about poor lawn care and direct blame to lack of economic means and human competence (Robbins, 2017).

Samuel Parsons, an American landscape architect who was both the Superintendent of Parks for New York and Chief Landscape Architect for numerous projects in Washington and Philadelphia, wrote about the lawn as a place that must be open and largely monocultural with little to no outlying trees or shrubs, carefully mown, and a place where people could gather free of obstruction; he believed that any lawn that did not conform to these standards was otherwise a failure (Robbins, 2017).

Rise of the Natural Garden

Despite the glorification of the manicured lawn that swept the nation, the perception of the front lawn has changed over time. The scientific evidence behind climate change is shedding light on the threat that biodiversity loss has on the planet. It has become well known that rising global temperatures are inevitably causing ecological shifts that pose risk to species diversity, genetic diversity, habitat loss, and species decline. The decline of species is responsible for continuous changes in the function of ecosystems which in turn can accelerate the rate of climate change creating a feedback loop that further exacerbates the problem ("Species and Climate Change", 2019). With this, there has been a shift towards environmental thinking; "environmental thinking challenges the idea that humans are above nature and that nature can be thought of simply as a commodity to be bought, sold, altered, and destroyed" (Bormann et al., 1993, p. 42). The environmental movement has its roots in parallel with Green Revolution of the 1960's and the rise in use of chemical pesticides and fertilizers also raised awareness of the dangers these posed to other living species.

Rachel Carson's landmark book, Silent Spring, spurred the growth of the Environmental Movement in the 1960s. Silent Spring made the public aware of not only our behaviour in neglecting ecological and environmental connections, but also to question the fate of chemicals and pesticides that had become overwhelming available and used after World War II on the natural landscape (Bormann et al., 1993). The gateway opened by Silent Springs led to a new understanding of nature and the human role in it. Environmentalists and ecologists began questioning the value of the lawn that had been ingrained into North American society. People were beginning to understand the importance of ecology as a science and grew concern about the lawn; an artificial landscape tended to by fertilizers, chemicals, and were largely monocultural (Jenkins, 1999; Robbins, 2017). Environmentalists and ecologists began to rebel against mowing and chemical inputs,

and shifted their interests to planting and tending to natural gardens and meadows instead (Jenkins, 1999).

'Silent Spring' Is Now Noisy Summer

Pesticides Industry Up in Arms Over a New Book

By JOHN M. LEE

The $300,000,000 pesticides industry has been highly irritated by a quiet woman author whose previous works on science have been praised for the beauty and precision of the writing.

The author is Rachel Carson, whose "The Sea Around Us" and "The Edge of the Sea" were best sellers in 1951 and

Rachel Carson Stirs Conflict—Producers Are Crying 'Foul'

fending the use of their products. Meetings have been held in Washington and New York. Statements are being drafted and counter-attacks plotted.

A drowsy midsummer has suddenly been enlivened by the greatest uproar in the pesticides industry since the cranberry scare of 1959.

Miss Carson's new book is entitled "Silent Spring." The

Figure 6. "Silent Spring is now Noisy Summer" Article (Source: New York Times)

Although the Environmental Movement engaged environmental thinking and shifting interests from the lawn to natural landscapes, there is a barrier that exists when it comes to deviating from the lawn which results from municipal by-laws regarding grass and weeds and provincial weed control legislation. In the context of this paper, I will be referring to the Toronto Grass and Weeds By-law, Municipal Code Chapter 489, Grass and Weeds.

The Evolution of the By-law

Weed control legislation in Ontario first appeared in a response to the growing concern among agriculturalists of the spreading of thistles that inherently infested their farms. The first weed control provincial legislation was enacted in 1865 as an attempt to curb this frustration, referred to as the *Canada Thistle Act* of Upper Canada. This legislation evolved into what is known today as the *Weed Control Act* (R.S.O 1990, CHAPTER W.5) (Iscove, 2010).

The Weed Control Act ("the Act") is intended to "facilitate the control of noxious weeds on lands in close proximity to lands used for agricultural or horticultural purposes" (OFA, 2020, n.d.). *The Act* gives legal obligations to landowners to manage noxious weeds on their property and requires municipalities to appoint a weed inspector. As of January, 2015, *the Act* provides 25 species that are included on the Noxious Weeds List in Ontario. *The Weed Control Act* identifies noxious weeds as those that may cause disruption to agricultural land reducing the yield and quality of crops, have negative health and well-being impacts on livestock, and pose health and well-being risks to agricultural workers (OMAFRA, 2020). This list, however, does not explicitly address which species are native and which are invasive.

The Weed Control Act is applicable to noxious weeds and locations that are in close enough proximity to agricultural and horticultural lands that it poses crop, livestock, and human health concerns. However, due to the urban context of the City of Toronto, the geographical range of the City is not within close enough proximity of agricultural lands to which noxious weeds would pose risks.

Toronto has a history of weed management dating as far back to 1875 which was *By-law 629* regarding the removal of grass and weeds from streets and lane-ways of the City. In 1968, The City of Toronto enacted By-law 73-68, *Housing Standards By-law*, that was "to provide standards of repair and maintenance of dwellings and to prevent overcrowding of dwellings" (By-law 1968-0073, *Housing Standards By-law*, 1968). By-law 73-68 was the first mention of "excessive growth" for grass and weeds on private yards; the By-law stated under 'Standards, Rubbish,' Section 7: "all parts of a dwelling, including the yards appurtenant thereto, shall be kept clean and free from (c) excessive growths of weeds and grass" (By-law 1968-0073, *Housing Standards By-law*, 1968). In 1994, the City of Toronto enacted By-law 0440, *Municipal Code Chapter 202, Grass and Weeds,* which was a stand-alone by-law to regulate the cutting of grass and weeds by the owner and occupants of private lands at the owner's expense. By-law 0440 restricts height limits on the growth of grass to not exceed 20 centimetres in height and owners or occupants of the land must cut any grass and weeds and remove the cuttings at their own expense. The By-law at this time did not include an exemption for natural gardens explicitly using the rationale of concern for allergy sufferers and because of concerns for "respecting the slovenly appearance of yards in the City" (By-law 1994-0440, *Municipal Code Chapter 202,* 1994).

In 1997, after the successful ruling of the *Bell v. Toronto (City)* case, the City amended *Municipal Code, Chapter 202, Grass and Weeds,* to enact a by-law that creates an exemption for natural gardens (By-law 1997-0037, *Municipal Code, Chapter 202*, 1997). The *Bell v. Toronto (City)* case was one of the first high profile cases in Canadian courts that challenged weed and grass by-laws. Ms. Bell was an environmentalist who grew a natural garden on her property in Toronto. When Ms. Bell was given an order by the City to cut the grass and weeds existing on her property that the City deemed to be 'excessive', Ms. Bell brought the case to provincial court where she argued that her garden was an expression of her beliefs in environmentalism and that these beliefs should be protected under Section 2 of the *Charter*; in which the provincial court agreed (Donnelly, 2020). At the time, the by-law that Ms. Bell was accused to be in non-compliance with did not contain a natural garden exemption process. This exemption, under By-law 1997-0204, *Municipal Code, Chapter 202,* requires the owner or occupant to request the review of an Advisory Notice to be heard by the City Services Committee who may decide to recommend that Council retract the notice and grant the exemption, or, confirm the validity of the notice and send a second notice. The case also led the City to develop a by-law that designates the Neighbourhoods Committee as the appropriate committee for hearing appeals from a notice to cut long grass or weeds rather than the City Services Committee (By-law 1997-0204, *Municipal Code, Chapter 202,* 1997).

In 2004, and in the by-law that exists today, the City of Toronto adopted the new *Municipal Code Chapter 489, Grass and Weeds*, and motioned to repeal the tall grass and weeds by-laws of former municipalities. *Municipal Code Chapter 489, Grass and Weeds* currently still includes the height restrictions of grass that cannot exceed 20 centimetres in height and includes the exemption process for natural gardens. It is stated that anyone who is not in compliance with the by-law is guilty of an offence (*Municipal Code, Chapter 489, 2013*).

Although the exemption may seem like a step in the right direction, it is problematic and may be seen as a step backwards. The enforcement and exemption process associated with weed and grass by-laws typically favours gardeners and environmentalists or ecologists that are familiar with government processes and have the economic means to fight the process therefore making the enforcement of this by-law inequitable and unjust (Donnelly, 2020). The *Bell v. Toronto (City)* case of 1996 was the shift in which the

natural garden became the counter movement from the traditional lawn and over the past 24 years, the by-law has yet to change.

Biodiversity loss has grown larger, the climate crisis has worsened, people want to better relations with Indigenous communities and to be supported in taking positive actions to create more environmentally responsible landscapes, however, the by-law remains unchanged and the exemptions process remains disincentivizing (Lister, 2020). Natural gardens are becoming more popular and are increasing as a cultural practice; they are no longer an unusual concept or a rare occurrence. Asking gardeners to apply for an exemption requires them to defend their choice for planting species that differ from the lawn, setting the precedent that they must have official approval to uphold cultural practices and engage in action that supports biodiversity and the natural landscape (Lister, 2020). Furthermore, the exemption process does not regulate the complaint-driven process and those that complain about a yard to the By-law Department are not required to ground their complaint in evidence of which plant species pose a health or safety risk to humans or the environment. In this way, an investigation is triggered solely based on aesthetic appearance. By-law officers do not have the formal training to investigate, nor is it required of them, to identify the problematic species that is the focus of the complaint (Lister, 2020). Thus, the exemption process is not an effective means of ensuring property maintenance out of the concern for public and ecological health, but is rather a way to disincentivize gardeners from deviating from the lawn and asserting their ecological and cultural beliefs.

CHAPTER 2
CHALLENGING THE BYLAW

At the time of the *Bell v. Toronto (City)* case, the exemption process may have been a stride in the right direction, however, much has changed since 1996. “Twenty-five years later, in the midst of a pandemic, in an ongoing biodiversity crisis, a climate emergency and a reckoning with colonialism, the City continues to place barriers in the way of positive action undertaken by those who deviate from the lawn norm” (Lister, 2020, p.2). Gardeners, environmentalists, ecologists, and those that are simply interested in ecology rather than horticulture practices have taken a stance and challenged the by-law. Although there have been some who have taken this approach, it is important to articulate that the process remains an unfair burden on natural gardeners and is costly of both time and financial means. Sandy Bell, Douglas Counter, Deborah Dale, and Professor Nina-Marie Lister are all residents of Toronto and the Greater Toronto Area who have defended their natural gardens and challenged the by-law. The cases of each of these activists will be summarized briefly to provide justification for the need for change in the legislative framework of natural gardens, meadows, and innovative landscapes designed to promote biodiversity.

Sandy Bell

Figure 7. Sandy Bell showing CBC reporter the wild garden in her front yard of her home in Toronto. (Source: The National/CBC Archives)

Sandy Bell was an east-Toronto resident who was convicted for refusing to cut the grass and weeds in her yard that were deemed "excessive" by a By-law Inspector. Ms. Bell was given a $50 fine for her lack of compliance (Mick, 2007). The *Bell v. Toronto (City)* case of 1996 was the first of its kind to receive high-profile attention in the courts. Ms. Bell challenged the by-law on the bases that "the impugned portion of the by-law should be found to be of no force or effect because it violated her freedoms of expression and conscience guaranteed, respectively, by s.2(b) and s.2(a) of the *Canadian Charter of Rights and Freedoms*" (Shields, 1996, n.d.). Additionally, Ms. Bell was advised by her lawyers to argue that the by-law should be deemed invalid as it exceeds the legislative authority of the City of Toronto and was void for vagueness and uncertainty (Shields, 1996).

Sandy Bell was initially charged under By-law 68-73, *Housing Standards By-law*, in 1993 which regulated excessive growth of grass and weeds. By-law 0440, *Municipal Code Chapter 202, Grass and Weeds* was enacted in 1994 which regulated the height of grass and weeds and prohibited grass and weeds over 20 centimetres (Shields, 1996). By-law 0440, *Municipal Code Chapter 202, Grass and Weeds*, was enacted prior to Ms. Bell's appeal hearing. Though not explicitly stated in By-law 0440 at the time, the by-law was allegedly intended to impose the same height restrictions on natural gardens. Ms.Bell and her lawyer agreed that the basis in which her appeal should be heard should be decided on the grounds of ***Canadian Charter of Rights and Freedoms*** (Shields, 1996). Both the appellant and the City were more interested in obtaining a judicial opinion concerning the constitutional validity of municipal regulation of natural gardens in general. For this reason, the court did not consider the provisions of the new by-law (By-law 0440) at the time, as the precise wording of the by-law was no longer a pressing concern (Shields, 1996).

Prosecution witness, Vito Furlano, a City of Toronto building inspector, testified in the provincial court hearing claiming that Ms. Bell was given more than 15 days' notice to comply with the order of cutting her weeds and grass that were "excessively too high". In defence, Ms. Bell testified that she moved to the property in 1990 where she observed the presence of three plant species: Virginia creeper vine, sedum, and Kentucky Bluegrass. Her intention was to add several perennials that would add value to "an environmentally sound wild garden" (Shields, 1996, n.d.). Ms. Bell testified that the natural garden was within her environmental beliefs and provided a number of points of evidence of how the natural garden served benefits to a diverse

ecosystem. Secondly, she argued that the natural garden provided a natural setting for educating her child on how to co-exist with nature. She then went on to provide evidence that none of the plants in her natural garden were identified as noxious weeds and posed no human or ecological health and safety concerns. She added that the City of Toronto was at the same time, working on re-naturalizing their parks and ravines and as such, it was unfair that she was being convicted for doing the same in her yard with her natural garden (Shields, 1996). Ms. Bell also argued that neither the words “excessive” nor “weeds” had been provided with definitions in the by-law and the lack of clarity should deem the by-law to be void for vagueness (Shields, 1996). Mr. James Hodgins, an expert in naturalistic landscaping, testified on the behalf on Ms. Bell and testified that:

> “About 90 per cent of native plant species grow higher than that. The 20-cm. height limit in the new by-law, he testified, would eliminate golden rod, New England asters and evening primrose, all of which are part of the native plant community generally regarded as "weeds". As well, many grasses grow over a foot high, with Mr. Hodgins pointing to a half dozen species of grasses, all of which are over a metre in height, which grow in the flower beds outside the Toronto City Hall. According to his evidence, the effect of a 20-cm. height restriction (which he described as "bizarre, incomprehensible and arbitrary") would be to "sterilize" and "devastate" naturalized gardens, both aesthetically and ecologically” (Shields, 1996, n.d.).

Concluding the case, Justice Fairgrieve ruled in favour of Ms.Bell finding that the by-law was void for vagueness regarding “excessive growth” and that the by-law did in fact violate s.2(b) of the *Charter* imposing Ms.Bell’s freedom of expression (Shields, 1996; Donnelly Law, 2020). Justice Fairgrieve said that he did not find the City’s argument persuasive and importantly expressed that:

> “I think we have all become accustomed to accepting that not everyone shares the same tastes, and that differing practices are no less valid or tolerable simply because they deviate from the norm. While the by-law may have been passed for a legitimate purpose, it should be remembered that Ms. Bell's garden was found to have "excessive growths of weeds and grass" not because there was any evidence of any health concern, fire hazard or other nuisance or harm caused by it, but simply because of its appearance” (Shields, 1996, n.d.).

Douglas Counter

Figure 8. Street view of Douglas Counter's Boulevard and Tall Grass Prairie Garden. (Source: Douglas Counter)

Figure 9. Ironweed coming into bloom in Douglas Counter's Boulevard Ditch Garden. (Source: Douglas Counter)

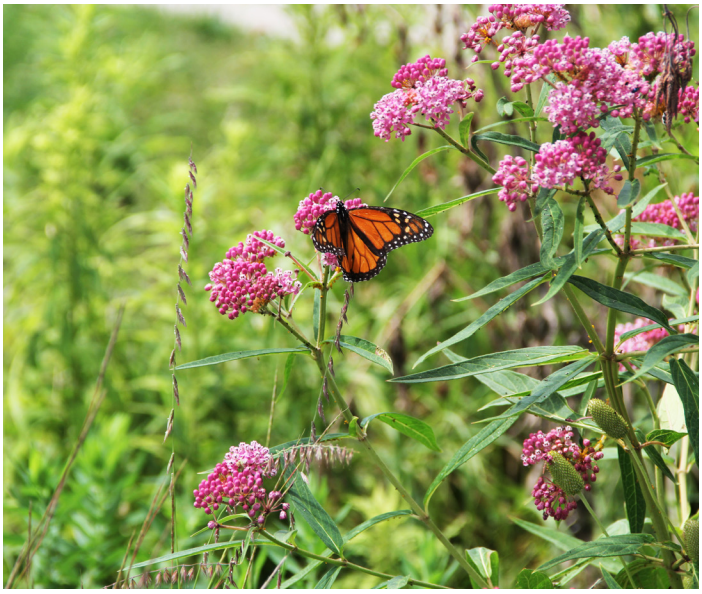


Figure 10. Swamp Milkweed and Sideoats Grama in Douglas Counter's Boulevard Ditch Garden. (Source: Douglas Counter)

In 1997, Douglas Counter planted a natural garden on his front yard in memory of his mother. The garden was home to more than 80 species of native plants and wildflowers. The garden was extended to the city-owned boulevard two years later with the intent to educate his community members about how the natural garden can positively influence local water quality by addressing storm water runoff issues (Counter, n.d.). Much like Ms. Bell, Douglas Counter is an advocate for the naturalization of gardens, expressing that by converting all or a portion of a yard to a natural garden has a significant impact on increasing biodiversity and eliminating pollutants caused by chemical-dependent turf grass and the emissions from gas powered lawn mowers (Counter, n.d.).

Mr. Counter's case ended up in the Ontario Superior Court of Justice after receiving several complaints from neighbours that were reported to city by-law enforcement. Similar to Ms. Bell, Mr. Counter argued that cutting back or removing any natural gardens from the city-owned boulevard that he tended to was both unconstitutional and invalid (*Counter v. Toronto, 2002*). Justice Pitt found Mr. Counter's natural garden to constitute as expression and found that Mr. Counter's natural garden was protected under s.2(b) of the *Charter*. Justice Pitt explained that though gardening should be a form of expression in itself, Mr. Counter's case was even more compelling because of the educational and commemorative plaques that were placed alongside the garden for public engagement (*Counter v. Toronto, 2002*). The City's submission argued that the by-law was not to restrict expression and that the height restriction imposed that ordered Mr. Counter to cut back the natural garden was due to safety concerns regarding sight line since the natural garden was placed on the boulevard. Justice Pitt found the City's submission to be justified and accepted that it was not intended to restrict expressions (*Counter v. Toronto, 2002*). Mr. Counter's case was the first time in Canadian case law that recognized the right to expression of environmental beliefs and values on a public boulevard or public land (Counter, n.d.). This case is also noteworthy in that the provincial court recognized the growing popularity of natural gardens and Justice Pitt expressed that:

> "...the real issues in this litigation are less complex than counsel would have the court believe. While the City's legal response has been more than adequate, it seems to me it has now become critical that the City develop and implement a coherent strategy to deal with natural gardens, which all agree have become increasingly popular" (*Counter v. Toronto, 2002*, [14]).

Deborah Dale

Deborah Dale has been a resident of Scarborough since 1989. She is an environmental biologist with a long established background in civil engineering, health and safety, and industrial relations. In the mid 1990s, Deborah Dale was motivated by her environmental beliefs and disconnected the downspouts on her home from the storm sewer and used the rain water to support a garden of native plants in her yard (Dale, n.d.). Deborah Dale is an environmentalist who believes that small actions on an individualist scale can lead to enormous impact. Disconnecting her downspouts and creating native plant rain gardens was an act of protection for the environment and her neighbourhood community, alleviating pressures from extreme weather events that can lead to flooding or lessening the negative impacts of run off into local streams (Dale, n.d.). Following the creation of her natural garden, the North American Native Plant Society (NANPS) from Toronto, granted her funding to promote natural rain gardens and lead educational seminars in the Toronto region about the topic (Dale, n.d.). However, this did not stop City staff from demolishing her 12-year old garden after neighbours complained about the "weeds" (Marlow, 2007).

Six days prior to the City cutting down Deborah Dale's natural garden, the City sponsored her to give a seminar on the benefits of growing natural rain gardens that promoted the growth of native species. Deborah Dale came home to find that her natural garden containing over 200 plant species, valued at $10,000 CAD, had been cut down to the stems with nothing left (Marlow, 2007). Her garden was home to "two eight-year-old fragrant sumacs, giant purple hyssops, and four varieties of milkweed plants, in which monarch butterflies had already laid eggs" (Marlow, 2007, n.d.). The City's Licensing Department claimed that all proper warnings were filed, however, Dale argued that she had attempted on many occasions to prove to the City that her garden was not an abundance of weeds in which the City blatantly ignored. In its defence, the Municipal Licensing Department claimed that the only records that they had were complaints by neighbours about Dale's yard that supposedly consisted of "overhanging branches, waste, long grass, and weeds" (Marlow, 2007, n.d.). Regardless of the historical wins of Sandy Bell and Doug Counter in their legal battles, Dale was yet another victim of the City's attempt to control the way in which a property is maintained based solely on aesthetics through the complaint-driven process.

Professor Nina-Marie Lister

More recently on August 20th, 2020, Professor Nina-Marie Lister received a visit from a by-law officer at her home in the Davenport area in Toronto. The officer informed her that there were numerous complaints by neighbours about her garden, complaining the weeds and grass were too long and must be cut. Professor Lister has a natural garden in the front yard of her home and her family made a substantial financial investment to ensure that the garden was properly landscaped and tended to (Donnelly Law, 2020). The garden has been carefully planned and designed by Prof. Lister, and is maintained collaboratively with EcoMan, a natural landscaping service in Toronto. The garden contains a number of plants with ecological significance that provide habitats to several species such as at-risk monarch butterflies, nesting bees (including Toronto's official bee, the green metallic sweat bee), various nesting birds, and urban mammals such as rabbits, chipmunks, and squirrels (Donnelly Law, 2020). The plants that have been strategically selected for Professor Lister's natural garden include:

"Bluebell, Black-eyed Susan, Bee balm, (swamp and common) milkweed, boneset, New England aster, Queen Anne's Lace, purple coneflower, coreopsis, (annual) sunflower, 2 Bull thistle plants that are cut regularly and not allowed to seed, Foxtail, purslane, red and white clover, Canada wild rye, switch grass, little bluestem, lambsquarters, goldenrod, joe pye-weed, buttercup, forget-me-nots, violets, columbine, pinks, daylillies, Dutchman's breeches, peonies, Hellebores, hollyhocks, oregano, creeping thyme, English lavender, Lily of the valley, astilbe, allium and sedum" (Donnelly Law, 2020, p.2). In addition to her front yard meadow, her property includes both a green roof and terraced planting beds where these plant species thrive.

Following the visit from the officer on August 20th, 2020, on August 26th, 2020, Professor Lister engaged in a phone conversation with the officer who stated that Lister had been served with an Advisory Notice of Violation for her garden that she then discovered was in violation of *Municipal Code Chapter 489, Grass and Weeds*. After asking for a copy of the Violation Notice on August 27th, 2020, following the phone conversation, Professor Lister received no response until September 15th, 2020, when she heard from the officer who indicated that an Advisory Notice had in fact not been issued to Professor Lister but rather she had been granted an exemption as per the *Municipal Code Chapter 489, Grass and Weeds*, an exemption that she neither sought, nor wanted (Donnelly Law, 2020).

Figure 11. Professor Nina-Marie Lister's natural garden in Toronto.(Source: Lorraine Johnson)

The natural garden exemption process has many unintended consequences. Firstly, it is both costly in terms of time and money especially if the exemption is refused and an appeal is sought. Secondly, the process requires gardeners to defend their gardens and choice of plants, but does not require those that complained to justify their complaints on a basis of human and ecological health and safety. Lastly, when a natural garden exemption is approved, the address of the garden is placed on the City's website, violating the gardener's privacy.

As a landscape ecologist, urban planner, Director of the Ecological Design Lab, and Director of the Graduate Program of the School of Urban and Regional Planning at Ryerson University, Professor Lister felt as though it was her obligation to lead by example through maximizing the ecological potential of her property by incorporating a natural garden that serves significant ecological importance to Toronto's biodiversity and wildlife habitats and so supports the *City's Pollinator* and *Biodiversity Strategy* – policies that the by-law clearly contradicts. The garden also provides opportunities for eco-education for school groups and Toronto residents that pass by to observe the natural environment in an urban setting.

Figure 12. Overhead image of Professor Lister's garden in relation to the surrounding neighbourhood (Source: Michael Awad).

In collaboration with David Donnelly from Donnelly Law, David Donnelly sent a letter on behalf of Professor Lister's case to Mayor John Tory stating that Professor Lister would be rejecting the exemption of the by-law, arguing that the by-law is both illegal and unconstitutional (Donnelly, 2020). In responding to both the public letter and letter from Donnelly Law, the Executive Director from Municipal Licensing and Standards, deems the *Grass and Weeds By-law* as being of great importance to the City for control over property maintenance, and indicates that the City is confident in the by-laws constitutionality though the City agrees the by-law should be reviewed (Grant, 2020). Donnelly Law argues that the response received from Municipal Licensing and Standards is unacceptable and thus, the letter to Mayor Tory indicates that through collaboration between Professor Lister and Donnelly Law, a model by-law will be created for the City to provide an alternative enforcement regime that allows plants to grow and be kept at their natural height, only prohibiting species that may pose human or ecological harm (2020). If the City rejects a bylaw change, Professor Lister has instructed Donnelly Law to take the City to court, as it has been seen before in the *Bell v. Toronto* case.

In a story that ran in the Toronto Star on October 5th, 2020, Donnelly Law extended an invitation from Professor Lister to the Mayor and City By-law Enforcement to 'tea in her garden' where she would be able to present an opportunity to educate staff on the plants carefully curated in her garden, and to explain why they should in fact be encouraged rather than prohibited (Donnelly Law, 2020).

Figure 13. Visit from Mayor John Tory with Nina-Marie Lister and family, and David Donnelly in Professor Lister's natural garden/ meadow (Source: Nina-Marie Lister).

On October 16th 2020, Mayor Tory accepted the invitation and toured the garden with David Donnelly and Professor Lister and her family.

The visit from Mayor Tory was timely in that the City of Toronto has adopted a number of environmental strategies over the past five years. Each of the policies, programs, and strategies are intended to contribute to a greener, more sustainable, and liveable city. Not only does the City have a progressive range of environmental strategies, but the City was named a partner in the Biophilic Cities Network, a network which recognizes cities that have adopted nature-based policies in planning and design. Toronto was also the first city in North America to adopt a Green roof By-law that both requires green roofs and establishes the construction standards for them (City of Toronto, 2016). Toronto's partnership with the Biophilic Cities means that Toronto among a network of other partner cities, recognizes the importance of celebrating nature in its many forms and works to incorporate biodiversity into the city's urban spaces that are crucial to connecting city residents with the natural environment. Additionally, Toronto adopted its first Biodiversity Strategy in 2019 to advance the City's role in protecting and restoring nature in Toronto's natural landscape. These initiatives indicate that the City wants to be an environmental leader that supports ecological health and biodiversity, however, it is ironic that the City has one of the most progressive green roof by-laws in North America, yet prosecutes citizens for naturalized landscapes on private yards. The following section will explain how this paper intends to address the concerns with the grass and weeds by-law and how to revise it to better support the City's goals and strategies in environmental leadership.

CHAPTER 3
PROJECT OVERVIEW

The City has a number of strong policies that are supported by the *Biodiversity Strategy* such as the *Ravine Strategy*, *Resilience Strategy*, and the *Pollinator Protection Strategy*. These strategies provide the City with an opportunity where urban biodiversity can be enhanced and resilient ecosystems can be promoted through the City's policy framework. As seen through the cases of Sandy Bell, Douglas Counter, Deborah Dale, and Nina-Marie Lister, the City is aware of the problem that the Toronto *Municipal Code Chapter 489, Grass and Weeds* By-law presents, however, the By-law still remains to be a barrier and works against the City's own policies to support pollinators and biodiversity. The City has the option to support diverse pollinator communities and allow residents to create both ecologically significant and sustainable habitats in their own front yards, however, the current By-law and exemption process disincentivizes gardeners to deviate from the lawn and assert their environmental and cultural beliefs.

Through review of the Toronto *Municipal Code Chapter 489, Grass and Weeds* By-law and the City's various strategies including the *Biodiversity Strategy, Ravine Strategy*, and *Pollinator Protection Strategy,* it is evident that the current By-law is outdated and contradicts many of the recent strategies adopted by the City. By comparing case studies from the City of Vaughan, City of Oakville, City of Ottawa, City of Burlington and the City of Fredericton, New Brunswick, Toronto's By-law will be reviewed in this paper to identify how the By-law can be updated to be more progressive and support the policy framework the City already has through its strategies. This project aims to bring the challenges of the By-law to the forefront and provide recommendations for how a new by-law should be modelled to advance natural gardens and native plants in the City, support gardeners, and enhance Toronto's landscape.

CHAPTER 4
METHODS

To effectively make recommendations about how the current by-law should be re-modelled, a secondary research review has been conducted in two components. The first component consists of reviewing municipal policies relevant to the by-law. To better understand where there is discrepancy in the City of Toronto's policy framework in relation to the By-law, the following policy documents and strategies were reviewed: City of Toronto *Pollinator Protection Strategy*, City of Toronto *Biodiversity Strategy*, and City of Toronto *Ravine Strategy*. The Toronto *Municipal Code Chapter 489, Grass and Weeds*, and *Weed Control Act,* R.S.O. 1990, c. W.5 were examined in relation to the policies and strategies to identify barriers in the by-law that contradict the City's biodiversity goals.

The second component of the secondary research review involved conducting a multiple case study analysis to compare and contrast Toronto's *Municipal Code Chapter 489, Grass and Weeds*, with other North American municipal grass and weeds by-laws. The case studies selected for this portion of the research include: City of Vaughan, City of Oakville, City of Ottawa, and City of Burlington (within the Ontario context) and the City of Fredericton, New Brunswick. The selection of the municipalities for the multiple case study analysis was made due to similarities in their legal jurisdictional framework and geography for the purpose that any recommendations that could be made from precedence within these case studies could be realistically applied to the City of Toronto. Each case study provides an in-depth review of the municipality's by-law, considers the similarities and difference to the City of Toronto's by-law, and is the basis for informed recommendations made about principles to be considered in the model by-law.

CHAPTER 5
ANALYSIS

City of Toronto, Municipal Code Chapter 489, Grass and Weeds

Toronto *Municipal Code Chapter 489, Grass and Weeds*, explicitly lays out six sub-sections within the by-law that were extensively reviewed for the purpose of this paper. The problems associated with this by-law are discussed in the section titled *Barriers in the By-law* in this paper.

Subsection 489-1 refers to *definitions* in which the sub-section outlines definitions for the terms 'Executive Director', 'Officer', and 'Owner'. Interestingly, the by-law does not provide a definition for 'Natural Garden', 'Grass', or 'Weeds', which are the main terms exclusive to the by-law.

Subsection 489-2 is in regard to *Maximum Height*. 489-2 (a) indicates that the owner or occupant of the property must both cut and remove the cuttings from the property for grass and weeds that grow excess to 20 centimetres in height (City of Toronto, 2004). Sub-section 489-2 (b) indicates that for the purpose of this by-law, the terms 'Grass and Weeds' refers to:

> "(1) All noxious weeds and local weeds designated under the *Weed Control Act*; and
> (2) Any other vegetation growth that does not form part of a natural garden that has been deliberately implemented to produce ground cover, including one or more species of wildflowers, shrubs, perennials, grasses or combinations of them, whether native or non-native, consistent with a managed and natural landscape other than regularly mown grass" (City of Toronto, 2004, p.2).

However, although the terms 'Grass and Weeds' are partially defined in this sub-section, there are over 12,000 types of grass species, and more than a dozen are typically used in the growing of the 'standard' lawn which are generally mixed (Pennington Seed, 2020; "Identify your grass", 2021).

Sub-section 489-3 regards *Notice to Comply.* Within this section, the by-law indicates that if an officer finds that an owner or occupant is not in compliance with the terms outlined in the by-law, that the officer may give Notice to Comply which is in effect from 72 hours once the Notice has been given (City of Toronto, 2004).

Most importantly, the sub-section 489-3 (e) refers to the Exemption process. The Exemption process is confusing, timely, and expensive to the owner or occupant of the property. Sub-section 489-3 (e) Exemptions states that:

"(1) An owner may apply for an authorization for an exemption from a prohibition or limitation contained within this chapter on the basis that the growth is exempt as a natural garden by filing with the Executive Director an application in the form prescribed by the Executive Director" (City of Toronto, 2004, p.2).

The section named *Exemptions* further requires that the owner or occupant must request that the Notice to Comply be reviewed by the Executive Director and that the Executive Director must authorize the growth on the basis that the growth is in relation to a natural garden (City of Toronto, 2004). The Executive Director must then give written notice to the Councillor of the ward in which the property is located, and the Executive Director can only authorize the natural garden if all of the conditions are met. The conditions in which this decision is based on are as follows (City of Toronto, 2004, p.3):

(a) All of the Councillors notified under Subsection E(3) have either:

[1] Not responded within 14 days of the notice; or

[2] Responded indicating that they have no objection to the application being approved.

(b) The applicant has complied with all terms and conditions of approval of the last exemption issued to them under this section, if any.

(c) The applicant has provided the following:

[1] The applicant's name, address and telephone number;

[2] A general description of the nature of the growth that is subject to the request for an exemption;

[3] A written undertaking, in a form satisfactory to the Executive Director, that the owner or occupant will maintain the natural garden free of noxious and or invasive weeds and in good repair.

(d) The growth has been inspected by a City horticulturalist who has recommended approval of the exemption.

If the Exemption is granted by the Executive Director, the Exemption comes in to effect after 21 days of the issuance of notice of decision. If the Exemption is not granted, the owner or occupant may apply to have the decision of the Executive Director reviewed by City Council in which the owner or occupant is required to submit an application within 21 days of the notice of the decision from the Executive Director

and pay any applicable fees that are outlined in *Chapter 441, Fees and Charges* (City of Toronto, 2004). A notice of the hearing would be sent to all residents within a 10-metre radius of the property where the natural garden is located and would be done at the applicant's expense. Council can then choose to grant and refuse the exemption, and if granted, may choose to enforce a condition of approval in which City Staff would have the authority to monitor the natural garden (City of Toronto, 2004).

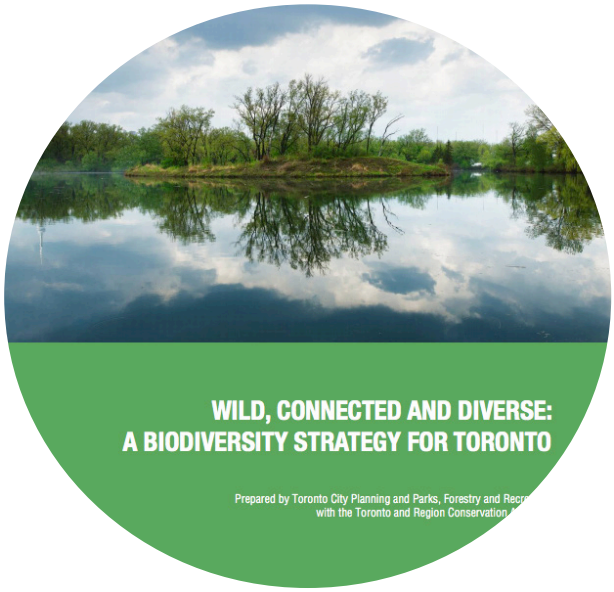
Sub-section 489-4 refers to *Failure to Comply; Removal by City; costs*. This section of the by-law gives authority to the Executive Director to enter the property in which the natural garden or lawn is located between sunrise and sunset to alter or remove the growth on the property of an owner or occupant who received a notice of non-compliance as outlined in the notice. Further, any work done by City Staff in this regard is at the expense of the owner or occupant (City of Toronto, 2004).

Sub-section 489-5 *Exemptions* indicates that any policy outlined in *Chapter 489* shall not affect "any right or duty of the City with respect to any highway right of way" (p.5) or the enforcement of the *Weed Control Act* with respect to noxious weeds on the entirety of the property, including a natural garden (City of Toronto, 2004).

Lastly, sub-section 489-6 refers to *Offences*, stating that any person in contravention of this by-law is guilty of an offence (City of Toronto, 2004).

CITY OF TORONTO

BIODIVERSITY STRATEGY



The City of Toronto adopted its first Biodiversity Strategy in 2019 called *Wild, Connected, and Diverse: A Biodiversity Strategy for Toronto*. It is the intention of *The Strategy* to promote a livable city that supports biodiversity.

On page 6 of *The Strategy*, it states, "The Strategy's actions are complementary to provincial and national initiatives that contribute to global biodiversity recovery. The actions also align with the Toronto Ravine Strategy and other City strategies by addressing shared issues including ecological integrity, management of invasive species and the importance of local native plant material" (City of Toronto, 2019).

The Strategy recognizes that urban biodiversity is integral to achieving a healthy, thriving, and sustainable city. Seventeen key benefits of urban biodiversity are outlined in *The Strategy*, some of which include: cultural benefits that promote a sense of place and attractive living environments, outdoor recreational activities that promote environmental education opportunities, genetic resources that promote the growth of native species, primary non-commercial food production for personal consumption, and habitat and refuge that supports habitat for both resident and migratory species (City of Toronto, 2019). Some of the other benefits listed in *The Strategy* are more direct benefits that relate to natural gardens such as the benefits of pollination and enabling pollinators in the City, climate regulation, controlling environmental disturbances such as flooding and drought, water regulation that can be controlled through vegetated landscapes, erosion control that can be prevented by discouraging the loss of soil through the promotion of vegetation coverage, and nutrient cycling (City of Toronto, 2019).

The Strategy places an emphasis on ecological integrity in an urban context and stresses that "ecosystems have the highest integrity when their mixture of living and non-living parts and the interactions between these parts are **not disturbed by human activity**" (City of Toronto, 2019, p.14).

The Strategy is meant to guide other strategies promoted by the City, such as the *Ravine Strategy*, to set a policy framework that promotes investment, activities, and stewardship action that prioritizes ecological integrity at the forefront (City of Toronto, 2019).

The Strategy recognizes the importance of native plant species which are "those that occur naturally in a region in which they evolve" (City of Toronto, 2019, p.27). However, the City recognizes that many landscaping plants that are readily available are not native and are not grown from locally sourced seeds. Non-native plants do not pose the same benefits to local species and wildlife and can promote invasive species spread that can degrade the remaining landscape. The City of Toronto has been largely concerned with biodiversity loss over the recent years, thus, *The Strategy* states that (City of Toronto, 2019, p.27):

> "The City encourages property owners to select locally-adapted native plants for landscaping wherever possible especially near natural areas. Every yard can make a difference, and many yards together can make a significant contribution".

Ontario has the largest amount of invasive species within Canada and is largely due to heavily urbanized areas and landscape disturbances (City of Toronto, 2019). *The Strategy* **encourages** native plant species **emphasizing that the removal of native spaces from an ecosystem can have significant negative impacts on habitat, pollinators, and co-evolved species** (City of Toronto, 2019).

Overall, it's clear that the City considers its policies, regulations, strategies, and plans to be sufficient and proactive in protecting biodiversity and restoring the landscape, however, the by-law sheds light on areas in which the City can improve on in their policy framework especially in support of the *Biodiversity Strategy.*

CITY OF TORONTO
POLLINATOR PROTECTION STRATEGY

In addition to the City's *Biodiversity Strategy,* the City adopted a *Pollinator Protection Strategy* in 2018 to support pollinator communities that help to enhance urban biodiversity and promote resilient ecosystems (City of Toronto, 2018).

The impacts of biodiversity loss, climate change, diseases, and pesticide use has influenced population patterns of pollinator species to be on a drastic decline. Toronto has upwards of 360 native bee species and 112 recorded butterfly species. Pollinator species are essential to the function of ecosystem services that contribute to biodiversity in urban areas (City of Toronto, 2018).

The *Pollinator Protection Strategy* outlines eight Toronto specific threats to pollinators which are forage habitat loss, loss of larval host plants, nesting habitat loss, overwintering habitat loss, introduced and invasive species, diseases and pests, pesticides, and climate change (City of Toronto, 2018). The *Pollinator Protection Strategy* has identified six priorities with tangible actions that can help to support pollinator habitats city-wide.

The first of the six priorities of the *Pollinator Protection Strategy* is to Create and Enhance Habitat. This priority stresses the importance of planting more pollinator-friendly native plants, trees, and shrubs, and creating pollinator habitats wherever possible. It is within this priority that *the Strategy* reads, "**review the City's landscaping practices, including mowing and mulching activities, with the goal to preserve pollinator habitats**" (City of Toronto, 2018, p.21).

The second priority is to Design and Connect Green Spaces. One of the action items included in this priority is to **engage with developers, property owners, and landscape architects to encourage the creation of landscapes that are pollinator-friendly, including the addition of green roofs and natural gardens.** The City offers supports for biodiverse green roofs through the Eco-Roof Incentive Program and

the City's Green Roof By-law (City of Toronto, 2018).

The third priority is to Partner and Build Relationships. This involves relationship and partnership building with universities, colleges, groups such as Toronto Master Gardens, and local growers and nurseries to “encourage them to provide native, pesticide-free plant material, and seeds for pollinator habitats” (City of Toronto, 2018).

The Invest and Incentivize priority works to provide financial support, grants, and resources that will aim to inspire residents to create pollinator friendly habitats (City of Toronto, 2018).

The fifth priority, Educate and Train, works to provide educational materials for Toronto residents to develop pollinator-friendly gardens and **expand City Staff training on pollinator protection strategies and native plant identification** (City of Toronto, 2018).

The last priority is to Celebrate and Recognize Achievements. This priority emphasizes the recognition of resident efforts, community organizations, and others involved in contributing to pollinator protection by promoting certification programs, creating a Garden Awards program, enhancing the Urban Design Awards program, and promoting educational opportunities to encourage future action (City of Toronto, 2018).

The *Pollinator Protection Strategy* is concluded by **providing tips for creating a pollinator-friendly garden which include growing native plants, keeping it natural, engaging in mass plantings, leaving dead stems and leaves on the property for bees and butterflies, avoiding pesticides, and reducing mowing to avoid disturbing ground nesting bees** (City of Toronto, 2018).

CITY OF TORONTO
RAVINE STRATEGY

The City of Toronto *Ravine Strategy* supports the City's ravine system through five guiding principles and twenty action items that are intended to support protection, education, and stewardship (City of Toronto, 2017).

The City recognizes that its ravines are some of the last places in the City to serve as refuges for native plants and wildlife, signifying their importance to biodiversity and supporting ecosystem services. Toronto's ravines serve as some of the City's largest carbon sinks helping to mitigate the impacts of climate change by regulating local temperatures (City of Toronto, 2017). Due to the heavy urbanization of the Toronto area, Toronto's ravines remain a sacred landscape to residents, in addition to their value of biodiversity, to allow residents to connect with nature in a landscape that is heavily characterized by concrete and buildings (City of Toronto, 2017).

The City emphasizes in the *Ravine Strategy*, the need for partnership in action to help maintain these critical spaces. Toronto's Community Stewardship Program (CSP) is one of the City's largest programs of this kind that has been operating since the year 2000 and engages between 50-130 volunteers per year. The program works to plant native trees, shrubs, and wildflowers throughout the ravine sites across the City and remove invasive species (City of Toronto, 2017). Invasive species remain to be one of the largest threats to Toronto's ravine species, thus, it is of critical importance to the City to ensure high quality planning, design, construction, and maintenance of the landscape and the ravine system in particular (City of Toronto, 2017).

The City has well-intentioned strategies such as the *Biodiversity Strategy*, the *Pollinator Protection Strategy*, and the *Ravine Strategy* that stress the importance of public and private engagement in protecting and enhancing the natural landscape through practices that include re-designing the landscape to support native species, pollinators, and natural systems that have incredible importance to the City's biodiversity challenges. However, there is a large disconnect between the City's visions and principles provided through their strategies and their policies to implement them. In particular, the on-going case of Professor Nina-Marie Lister has shed light on the barriers that exist in the by-law currently and provides insight to the gap that exists between City strategies and the *Grass and Weeds* By-law. The following section will discuss the current barriers in the *Grass and Weeds* By-law as well as their validity in a legal framework.

Barriers in the Bylaw

The letter written by Donnelly Law addressed to Mayor John Tory acted as an official response to the City when Professor Lister rejected the exemption offer under section 489-3(e) of the *Municipal Code Chapter 489, Grass and Weeds,* which was provided by a Property Standards Officer. The letter informed the legal analysis that was undertaken to support the rejection of the exemption that Professor Lister neither wanted nor asked for. Donnelly Law informed the Mayor that the actions taken by City By-law Enforcement against Professor Lister were both unconstitutional and a form of harassment, stating that the enforcement action works against the City's *Pollinator Protection Strategy* and the *Biodiversity Strategy* – two public policies that encourage native plant species and pollinator habitats in residential gardens (Donnelly Law, 2020). Indicated in the letter written by Donnelly Law, there are six fundamental problems with the by-law and enforcement of the by-law.

The first problem is that the by-law is clearly unconstitutional as found in *Bell v. Toronto (City)*. The complaints-driven process that informs the enforcement of the by-law is based solely on aesthetic concerns. As found in *Bell v. Toronto (City)*, terms such as 'excessive growth' are both "completely subjective and essentially arbitrary" leading to judgements that are based on "personal taste or aesthetic preference" (Donnelly Law, 2020, p.5).

Secondly, the by-law does not define "grass"; there are over 12,000 named grass species, yet the by-law fails to define which species are "offensive". Donnelly Law suggests that "an easy "fix" to the By-law is to restrict enforcement to the 25 species of plants identified on the *Noxious Weed List,* and only in circumstances where a real threat to human health and safety, or ecological health (from invasive species) is posed, as in the case with Giant Hogweed and Dog-Strangling Vine" (Donnelly Law, 2020, p.5). The letter argues that forced mowing is not the answer and for the City to not be in contradiction of their own encouragement of environmental strategies such as the *Pollinator Protection Strategy* and *Biodiversity Strategy,* the City should rather being encouraging residents to plant native species in their yards (Donnelly Law, 2020).

The first priority within the *Pollinator Protection Strategy* is to Create and Enhance Habitat. Within this priority, it is further stated under an action item that the City should "**review the City's landscaping practices, including mowing and mulching activities, with the goal to preserve pollinator habitats**" (City of Toronto, 2018, p.21). The *Pollinator Protection Strategy* further provides tips for growing a pollinator-friendly habitat that were listed in this paper prior, that indicates that **mowing should be reduced or avoided to allow for nesting bees to remain undisturbed.** Further, it encourages the planting of native species and allowing dead plant matter to remain on the property to provide habitat opportunities for bees and butterflies (City of Toronto, 2018). In addition to the *Pollinator Protection Strategy*, which is supported by the *Biodiversity Strategy*, the *Biodiversity Strategy* encourages property owners to engage in landscaping that is made up of native plant species wherever possible and states, "Every yard can make a difference, and many yards together can make a significant contribution" (City of Toronto, 2019, p.27). However, the regulations of this by-law **clearly** contradict the priorities and action items outlined in the City's strategies.

The second fundamental issue is that By-law enforcement staff do not undergo training in identifying plant species, nor are they required to, posing strong uncertainty that an officer would be able to identify a grass species let alone one of the 25 noxious plants outlined by the *Ontario Weed Control Act*. It is strongly encouraged that the new By-law should only focus on prohibiting the plants listed on the Noxious Weeds List prescribed under *Ontario Regulation 1096 248/14* (Donnelly Law, 2020).

For the case of Professor Lister who was found to be in violation of the by-law, she had indicated that her property only contains two “weeds” that serve critical ecological purposes for butterfly pollinator species but neither of which pose any harm to humans or crops (Donnelly Law, 2020). The basis of the complaint for the case of Lister’s garden, is that it looks “messy” which is an aesthetic judgement. This complaint has no place within the bylaw as it is unenforceable. This also validates the judge’s decision in the case of Ms.Bell where Justice Fargrieve argued, “there was not any evidence of any health concern, fire hazard or other nuisance or harm caused by it, but simply because of its appearance” (Sheilds, 1996, n.d.). The enforcement of the by-law for this purpose places aesthetic values and appearance above supporting pollinator species which, puts the City’s strategies into question.

Thirdly, David Donnelly argues that it is hypocritical that the City itself is in violation of the by-law while they continue to prosecute residents (Donnelly Law, 2020). Much like the findings in Ms.Bell’s case where Mr.Hodgins brought forth the findings that Toronto City Hall was in fact in violation of its own by-law, David Donnelly found quickly that the City has four municipally-owned properties in Leslieville that serve as prime examples of being in violation.

The fourth problem comes back to the City’s promotion of the *Pollinator Protection Strategy* that it is clearly contradictory by serving violation notices to residents that choose to plant native species in their natural gardens (Donnelly Law, 2020).

Under the Strategy’s Priority #18, it states:

> “ (19) Inspire residents to create pollinator habitats by offering resources such as pollinator-friendly gardening tips, plant lists, seeds, and recognition signage (e.g. Pollinators Are Welcome Here!) through Community Environment Days and Live Green Toronto outreach events” (City of Toronto, 2018).

It is indicated in the *Pollinator Protection Strategy*, the *Biodiversity Strategy,* and the *Ravine Strategy*, that the strategies are intended to set a policy framework that promotes investment, activities, and stewardship action that prioritizes ecological integrity, however, the enforcement of this by-law does not support that vision. Priority #18 under the *Pollinator Protection Strategy* is only one example in which this by-law is in contradiction of the City’s environmental strategies. This paper outlined various instances in which each strategy promoted some sort of encouragement to the planting of native species, implementation of

green infrastructure, support for pollinator-friendly habitats, and yet, this by-law remains to be in contradiction of each of those priorities and action items.

The fifth problem is that the current enforcement and exemption process excludes many by favouring gardeners and environmentalists that have strong familiarity with government processes, the problematic nature of colonial garden aesthetics, and disposable time and income to fight their case against City Hall (Donnelly Law, 2020). The exemption process requires gardeners and environmentalists to defend the plant species in their gardens, however, does not require the person submitting a complaint to identify which species is offensive and why.

Lastly, the by-law currently proposes forced mowing to a height regulation that does not exceed 20 centimeters as a solution. Forced mowing serves two main purposes; the first is to maintain a visually appealing yard. The second purpose is to make sure that there is no seeding or flowering so that there is no production of pollen, which is an allergen. However, forced mowing does not rid the yard of "weeds" and rather, makes them spread at excessive rates, and increases the likeliness of introducing new weed species that can be produced by soil disruption and contamination through the mowing process (Donnelly Law, 2020). The City is very much aware of this evidence as the *Biodiversity Strategy* outlined the seventeen key benefits of urban biodiversity. Explicitly outlined by the City in regard to these benefits are climate regulation, controlling environmental disturbances such as flooding and drought, water regulation that can be controlled through vegetated landscapes, erosion control that can be prevented by discouraging the loss of soil through the promotion of vegetation coverage, and nutrient cycling (City of Toronto, 2019).

Aside from the strong legislative evidence provided by Donnelly Law, Professor Lister has been recognized as an expert in the field. First, she was invited by City staff to act as an expert advisor for the City of Toronto's *Biodiversity Strategy* which this by-law inherently ignores. She received support from the Steering Committee of Project Swallowtail who advocates that the By-law poses a number of difficulties that aim to disincentivize natural gardens in the City by requiring every individual to apply for an exemption due to the complaint-driven process that is currently enforced.

Donnelly Law's letter regarding the legal framework supports the initial letter written by the Project Swallowtail Steering Committee that states that there are a number of difficulties related to the By-law including (Project Swallowtail Steering Committee, 2020, p.3):

1. No definition of "grass", which must be kept below 20 centimetres;
2. The failure of by-law officers to be able to accurately identify "noxious weeds" as opposed to non-harmful, natural garden plants;
3. The frequent complaints under the By-law which have no basis, and are purely "aesthetic" in nature; and
4. The prohibition against "noxious weeds" within an urban environment, that are only prohibited because of their risk to crops of livestock.

The Steering Committee also provided a number of recommendations for improving the By-law such as only prohibiting plants that harm ecological and human health, require that complaints about a garden must provide justification about how the garden is non-compliant with the By-law, and removing language from the By-law that is subjective or based solely on aesthetics grounds (Project Swallowtail Steering Committee, 2020).

Lastly, in support of Lister's case, a letter was sent to the City which was signed by 79 leading academics, ecologists, and plant experts that describes that exemptions favour some gardeners over others, further supporting the argument made by Donnelly Law. Moreover, the intent of the legal analysis performed by Donnelly Law with support by many others is intended to justify that the By-law can be changed simply by only prosecuting landowners that possess Noxious Weeds, per the *Ontario Weed Control Act,* on their property that pose actual threat to human and ecological health (Donnelly Law, 2020).

It is important to recognize that while the focus of this paper has been on the City of Toronto thus far, the evolution of weed and grass by-laws in municipalities across Ontario have historically limited property owners' and occupants' rights to express environmental and cultural beliefs through the planting of natural landscapes that differ from the traditional-style lawn. The next section will analyze five comparative case studies in Canada of municipal grass and weeds by-laws to understand where similar barriers exist across each by-law, or where progressive differences exist.

Multiple Case Study Analyses

To better understand the implications of modelling a new Grass and Weeds By-law for the City of Toronto, four Ontario case studies were referenced, along with the addition of the City of Fredericton in New Brunswick, Canada. The four Ontario municipalities were chosen for their close proximity to the City of Toronto and their relation in size and character, as well as a similar legal and institutional decision-making framework. The five case studies that are referenced are: the City of Vaughan, the City of Burlington, the City of Ottawa, and the City of Oakville, and the City of Fredericton. By examining the similarities and differences of each of the municipalities Property Standards and Weed and Grass by-laws, informed recommendations on how the City of Toronto can implement a more progressive Weed and Grass by-law can be made. This section will include a descriptive overview of each of the municipality's approaches followed by analysis.

City of Vaughan, Ontario

Section 5.1 of the City of Vaughan's *Property Standards By-law 231-2011* pertains to the Maintenance of Yards. Within Section 5.1, 1 C, D, E, and N, all relate to the keeping of plants on your property. As outlined in Section 5.1:

1. Every yard shall be kept clean and free from:

   (c) Weeds and grass exceeding eight inches (8") in height;

   (d) Noxious weeds as defined in the *Weeds Control Act*, R.S.O 1990, c. W.5 as amended;

   (e) Damaged or dead Ground Cover;

   (n) Any unsafe or unsightly condition out of character with the surrounding environment.

Section 5.1 (2) then goes on to say that "Ground cover shall be maintained so as to not create an unsightly appearance" (City of Vaughan, 2011). The webpage summarizing the purpose of the by-law explicitly states that, "this by-law is to set out standards for properties so they are not an eyesore or nuisance to neighbours or affect the enjoyment of one's own property" (City of Vaughan, 2011, n.d.). There is no mention of the by-law's purpose being to eliminate human or environmental health risks or concerns.

The City of Vaughan's by-law is relative to what is outlined in the City of Toronto *Municipal Code Chapter 489, Grass and Weeds;* this comes from the relation between the height restriction on weeds and

grass that is purely aesthetics, as can be seen from 5.1 (2) in the City of Vaughan's by-law. Secondly, the City of Vaughan does not include an exemption process for natural gardens differing from the City of Toronto. Section 4.3 (2)(e) of the City of Vaughan's by-law indicated that property owners will have to pay for expenses for plant testing and sampling regarding suspected Noxious Weeds on their property (City of Vaughan, 2011). For the City of Vaughan's enforcement process, the burden of proof lies with the property owner to defend their choice of plants rather than on the complainant to prove that there are noxious weeds on the subject property.

City of Burlington, Ontario

The City of Burlington's *By-law 59-2018* is slightly more progressive than the City of Vaughan and City of Toronto. Section 2, *Maintenance of Property*, explicitly outlines the standards in which each property owner shall adhere to in relation to grass, weeds, and ground cover (City of Burlington, 2018).

Section 2.4 of *By-law 59-2018,* City of Burlington, states:

> For property that is equal to or less than 0.4 ha in area, all grass and ground cover shall be equal to or less than 20 centimeters in height between May 1 and October 15 in each calendar year, except:
>
> - Ornamental plants;
> - Shrubs or trees;
> - Cultivated fruits or vegetables; or
> - Plants buffering or otherwise protecting a natural feature such as a watercourse.

Section 2.5 indicates that for properties that are greater than 0.4 ha in area, a buffer strip shall be cut to a height of equal to or less than 20 centimeters between May 1 and October 15 with the exceptions that were previously listed in Section 2.4 (City of Burlington, 2018).

The City of Burlington defines ornamental plants as "plants or flowers that are either purposefully planted or left to grow naturally, but that are maintained on the property and shall include wildflowers, pussy willows, typha (cattails), wild or ornamental grasses and do not include noxious weeds or ground cover" (City of Burlington, 2018, n.d.). Thus, by explicitly stating the appropriate plant species that are exempt within the by-law, it removes the need for an exemption process that is included in the City of Toronto's *Municipal Code*

Chapter 489, Grass and Weeds. However, the height restriction on grass still exists for aesthetic purposes and the list of ornamental plants provided is not exhaustive, and so implicitly excludes plants that may pose no ecological or human harm from the list—plants that could very well be included in a natural garden. Secondly, the enforcement process has no indication that the examination, if needed, will be performed by someone possessing special or expert knowledge of the natural species. This leaves uncertainty about the possibility of actually being able to identify what is a noxious weed or what is an ornamental plant as outlined in their definition.

City of Ottawa, Ontario

The City of Ottawa's *Property Standards By-law 2013-416* is vague in nature and not an exemplary by-law for the City of Toronto. While there is no height restriction measurement, their by-law once again focuses on aesthetics and is explicit in their language. Section 6, *Yards*, pertaining to this research, states (City of Ottawa, 2013):

> 3) Heavy undergrowth shall be eliminated from the yard so as to be consistent with the surrounding environment.
>
> 6) Lawns shall be kept trimmed and not overgrown or in an unsightly condition out of character with the surrounding environment.
>
> 7) Subsection (6) shall not apply to yards which have been landscaped or maintained with materials such as:
>
> a) Trees, shrubs, ornamental grasses, or flowers;
>
> b) Decorative stonework, walkways, or screening;
>
> c) Any other horticulture or landscape architectural elements.

The City of Ottawa does not have any mention of noxious weeds in their by-law and rather emphasizes plants and grasses that are visually appealing rather than pose ecological or human health concerns. The language included in their by-law is subjective and arbitrary, as was the issue in *Bell v. Toronto (City)* and the City of Ottawa uses language such as "excessive overgrowth" or "excessive undergrowth" which is undefined in their by-law. Their enforcement process is similar to that of Toronto's beginning with a Notice of Violation.

This can then be appealed to the License and Property Standards Committee where a decision of the Committee is made resulting in either a Certificate of Compliance or refusal (City of Ottawa, 2013). However, like the other municipalities, they do not have an exemption process or any mention of natural gardens in their by-law.

City of Oakville, Ontario

The City of Oakville has the most progressive by-law of the four municipalities of Ontario that were reviewed. *By-law 2017-008* refers to elements of property standards and as stated under sub-section 3, *Lot Maintenance Standards* (City of Oakville, 2017):

> 1. No Owner or Occupant shall have, or permit to have, Undesirable Material on their Lot.

This very simple, yet explicit regulation, is grounded in what the City of Oakville defines as undesirable material which includes the following pertaining to growth and yards (City of Oakville, 2017):

> f) Growth of grass in excess of 20.33 cm (8”);
>
> g) Giant hogweed (Heracleum mantegazzianum);
>
> h) Ragweed (Ambrosia spp.);
>
> i) Poison ivy (Rhus radicans L.);

From this list, the City of Oakville follows suit with the other municipalities that place height restrictions on grass for aesthetics. However, rather than defining an allowed list of plants (as is done by the City of Burlington for example), or stating that all noxious weeds are prohibited, the City of Oakville has defined the noxious weeds from the list that pose ecological and human health harms in a local context, and only excludes three plant species from what is permitted on private lots. Rather than providing an exhaustive list of restrictions, this by-law is intended to provide flexibility by only prohibiting what is absolutely forbidden. Their enforcement measures are similar to other municipalities where if it is suspected that contravention of the by-law has occurred, a by-law officer may perform an inspection. The test and sampling process, however, is not at the owner’s expense like the City of Vaughan, but if the officer finds grounds in order to discontinue activity, this must be done at the owner’s expense (City of Oakville, 2017).

City of Fredericton, New Brunswick

The final by-law reviewed from the City of Fredericton was intended to showcase the most progressive by-law found through this research. The City of Fredericton's by-law, *Regulation 84-86,* under the *Municipalities Act, O.C. 84-346*, includes reference to residential property maintenance. Section 4 explains the maintenance of residential yards and states (City of Fredericton, 2005):

> 4) A yard shall
>
> (c) be maintained free of rag weed, poison ivy, poison sumac and other noxious plants.

The City of Fredericton is the only by-law that was studied that **does not** pose height restrictions on plants and grass, or use subjective and arbitrary language around growth and aesthetics. This is a key difference from the other four by-laws examined in this study. The City of Fredericton structures their by-law only around human and ecological health and does not include any regulations on plants and grass that would be interpreted on aesthetic grounds. The by-law places emphasis on the prohibition of three specific noxious plants and indicates that yards shall be free of noxious plants in their entirety. However, noxious plants are not defined in their by-law which leaves some uncertainty about what plants are included.

Moreover, it is recognized through the case study comparison that there is not a consistent standard across municipalities and regulations vary tremendously. Some by-laws are more progressive such as the City of Oakville and the City of Fredericton, while many others still follow suit with the same concerns addressed in *Bell v. Toronto (City),* such as the City of Vaughan and the City of Ottawa. It is evident from reviewing the case studies that there is hesitancy in most municipalities to remove references to aesthetics and implications for managing these from the by-law. Secondly, there is inconsistency between municipalities in terms of what plants species are regulated and to what standard. Lastly, there is also inconsistency regarding the enforcement process. No municipality studied, other than the City of Toronto, has an exemption process for natural gardens.

It is important to note that at the time that this paper was authored, the City of Toronto was undertaking a review of *Municipal Code Chapter 489, Grass and Weeds*, and the Natural Garden Exemption, thus, the following section regarding recommendations for the model by-law is timely, and includes observations about perceived resistance to bylaw changes from City staff.

CHAPTER 6
RECOMMENDATIONS

The Model By-law

Upon review of *Municipal Code Chapter 489, Grass and Weeds* and the City of Toronto's environmental strategies, it is clear where the current by-law contradicts the vision the City of Toronto has regarding biodiversity and enhancing ecological integrity in the City. The section of this paper, *Barriers in the By-law*, outlined six fundamental problems that this model by-law is intended to provide solutions to. While the model by-law is developed specifically for the City of Toronto, I am hopeful that this research will result in more careful review of the adoption and enforcement of by-laws in a broader North American context to ensure that they are appropriate and fair to all residents of the municipality. The multiple case study analyses was intended to identify potential solutions that exist within policy frameworks of similar municipalities to the City of Toronto. This is intended to provide certainty that what is being recommended for the City of Toronto can easily be adopted with less or minimal political resistance. The City of Oakville's *By-law 2017-008* and the City of Fredericton's *Regulation 84-86*, under the *Municipalities Act, O.C. 84-346* are being used as inspiration for this model by-law, along with solving the fundamental issues that were presented by both the Project Swallowtail Steering Committee and Donnelly Law. The recommendations for the model by-law are separated into four sections and upheld by actionable items for writing the new by-law. The model by-law addresses the issue of aesthetics, regulating plant species in Toronto, exemptions, and enforcement.

AESTHETICS

Problem #1: The first problem is that the by-law is clearly unconstitutional as found in *Bell v. Toronto (City)*. The complaints-driven process that informs the enforcement of the by-law is based solely on aesthetic concerns. As found in *Bell v. Toronto (City)*, terms such as 'excessive growth' are both "completely subjective and essentially arbitrary" leading to judgements that are based on "personal taste or aesthetic preference" (Donnelly Law, 2020, p.5).

Problem #6: The by-law currently proposes forced mowing to a height regulation that does not exceed 20 centimeters as a solution. This serves no greater purpose than to maintain a "visually pleasing" yard and in fact, exacerbates the issue (Donnelly Law, 2020).

Figure 14-16. Various images of Douglas Counter's garden the day after the complaint was received. Source: Douglas Counter

The first recommendation for the model by-law is the removal of any aesthetic language within the by-law. From both leading cases, *Bell v. Toronto (City)* and *Counter v. Toronto (City)*, Justice Fargrieve and Justice Pitt ruled that it is a violation of freedoms of expression by s.2(b) and s.2(a) of the *Canadian Charter of Rights and Freedoms* to prevent residents to express their environmental beliefs through the planting of a natural garden. Aesthetic language such as 'excessive growth' has been removed from the by-law, however, 'well maintained' still remains in addition to the height restrictions placed on the growth of grass and weeds.

The height restriction in itself is based solely on aesthetic concerns and should be removed from the by-law in its entirety. It is important to remember that weed control legislation in Ontario first appeared as a response to the growing concern among agriculturalists of the spreading of thistles that inherently infested their farms, and somehow, evolved into the grass and weeds by-law we see today. If there is no concern to public or environmental health or safety, there should be no mention of it in the by-law. Regulating yards and gardens for aesthetic purposes is both unconstitutional and unenforceable.

The City of Fredericton is one of the **only** municipalities in Canada that leads by example with the absence of both aesthetic language and height restrictions in their by-law. Brad Cameron, the Assistant Director of Public Safety Communications and Safety Services at the City of Fredericton, explains that while they receive some complaints from surrounding neighbours regarding the growth of yards, **"our feeling is if it's intentionally grown that way then it can't be unsightly, it isn't up to us to dictate what people may like"** (Cameron, 2020, [personal communication via email dated December 22, 2020]). Cameron also notes that native flowers and wild plants that may be two or three feet in height are also becoming more widely recognized in the City and it is not their intention to tell residents what they can and cannot grow aside from noxious weeds that may pose health and safety concerns (Cameron, 2020, [personal communication via email dated December 22, 2020]). The complaint-driven process based on aesthetic appeal in itself is the problem, not the height of the grass or 'weeds'.

Secondly, if the City of Toronto remains to keep the by-law in its current form, the City's leading environmental strategies may be questioned. It is within the City's own words of the *Biodiversity Strategy* that encourages property owners to engage in landscaping that is made up of native plant species wherever possible and states, "Every yard can make a difference, and many yards together can make a significant contribution" (City of Toronto, 2019, p.27). As noted in the *Bell v. Toronto (City)* case by Mr. James Hodgins, an expert in naturalistic landscaping, approximately 90 per cent of native plant species grow beyond the 20 centimetre height limit imposed by the City (Shield, 1996); thus, if the City is encouraging landscaping practices that promote the growth of native plant species, there should not be a height limit.

Furthermore, the *Pollinator Protection Strategy* urges the City to review its landscaping practices, including mowing and mulching activities, for the preservation of pollinator habitats (City of Toronto, 2018).

The question remains, why should the City be reviewing their landscaping practices including mowing and mulching while residents are still subject to a 20 centimetre height restriction, thereby devastating naturalized gardens and front yard meadows ecologically? If the City wants to stand on these excellent environmental strategies they have in place, the height restriction and aesthetically-based language needs to be completely eliminated from the by-law.

However, from an observational point of view during the Natural Garden Exemption review process being undertaken by the City currently (March 2021), the perceived resistance to eliminate the height restriction is quite clear. If the City wants to maintain the cut order for the lawn, the by-law must be specific to the certain plant species being targeting. An interim, though less desirable step to revising the by-law would be to have the City impose a 20 centimetre height restriction on plant species identified as turf grass, and any other species is considered to be *as-of-right* as part of a naturalized landscape or garden. This is in addition to restricting those plant species on the Noxious Weeds List.

REGULATING PLANT SPECIES IN TORONTO

Problem #2, Donnelly Law: The by-law does not define "grass"; there are over 12,000 named grass species, yet the by-law fails to define which species are "offensive". Donnelly Law suggests that "an easy "fix" to the By-law is to restrict enforcement to the 25 species of plants identified on the Noxious Weed List, and only in circumstances where a real threat to human health and safety, or ecological health (from invasive species) is posed, as in the case with Giant Hogweed and Dog-Strangling Vine" (Donnelly Law, 2020, p.5).

Problem #4, Project Swallowtail Steering Committee: The prohibition against "noxious weeds" within an urban environment, that are only prohibited because of their risk to crops of livestock (Project Swallowtail Steering Committee, 2020).

The second recommendation for the model by-law is to adopt an alternative method of regulation plant species in Toronto. This section will provide two methods that are suitable for the City to adopt for regulating plant species.

The first of the two methods is to simply restrict growth of the 25 plant species listed on the Noxious Weed List. These plants were included on the Noxious Weed List due to the concern for human health and safety or ecological health; thus, they should ultimately be the only plants that are restricted from growing. However, as Project Swallowtail Steering Committee argues, the Noxious Weed List provides a list of 25 plant species that are prohibited because of their risk to crops and livestock rather than risks that would be present in an urban context, such as the City of Toronto (2020).

Due to the problem identified by the Project Swallowtail Steering Committee, another option for the City is presented to regulate their plant species by developing a specialized list for the City of Toronto. This approach is similar to the approach taken by both the City of Oakville and the City of Fredericton.

The City of Oakville regulates only three plants that pose human health and ecological health concerns: giant hogweed, ragweed, and poison ivy (City of Oakville, 2017). The City of Fredericton regulates three plants: ragweed, poison ivy, and poison sumac, and regulates against "other noxious plants" under their by-law (City of Fredericton, 2005).

Lorraine Johnson, author and expert gardener, compiled a draft list of plant species for regulation in the City of Toronto (attached in Appendix 1). The draft list of plant species is provided by Johnson as preliminary basis for consideration by experts and is "proposed for regulation in a revised Toronto "long grass and weeds" by-law, based on health and safety considerations (human and ecological health and safety)" (Johnson, 2020, p.1). There are eleven proposed species to regulate in the City of Toronto on the list and the list includes their description and specific posed risk. Most of the species are already included on the Noxious Weeds List, however additional species include: garlic mustard, common buckthorn, Japanese knotweed, purple loosestrife, and phragmites. These species are in addition to those on the Noxious Weeds List because they pose specific concerns for the urban context of Toronto. In addition, four species are also listed which are not specific threats to Toronto yards but could be regulated due to health and safety concerns. Two of the four species, kudzu and poison hemlock, are already included on the Noxious Weeds List. The draft species list also includes a note on grasses specifying that:

> "Other than Phragmites, Miscanthus, and Glyceria, no grasses in Ontario are currently generally considered to be an ecological threat (i.e., invasive in natural areas) or a threat to human health. The current "long grass and weeds" by-law does not clarify which species of grass are to be kept at 20 centimetre maximum height. Many horticultural species of grass widely available in nurseries and commonly planted in gardens grow taller than 20 centimetres. Most native species of grass (e.g., big bluestem, Indian grass, switch grass), widely promoted by the City of Toronto and by the Toronto and Region Conservation Authority, grow taller than 20 centimetres. Commercially available ecological grass mixes (e.g. EcoLawn) include grass species that grow taller than 20 centimetres" (Johnson, 2020, p.4).

Thus, it is necessary to identify clearly which plants should be regulated in the City of Toronto, either through the use of a specialized plant list or restricted to the 25 noxious plants on the Noxious Weeds List, in addition to eliminating the 20 centimetre height restriction in the by-law for reasons stated by Lorraine Johnson above.

EXEMPTION PROCESS

Problem #5, Donnelly Law: The current enforcement and exemption process excludes many by favouring gardeners and environmentalists that have strong familiarity with government processes, the problematic nature of colonial garden aesthetics, and disposable time and income to fight their case against City Hall (Donnelly Law, 2020).

Project Swallowtail Steering Committee: The Project Swallowtail Steering Committee advocates that the By-law poses a number of difficulties that aim to disincentivize natural gardens in the City by requiring every individual to apply for an exemption due to the complaint-driven process that is currently enforced (Project Swallowtail Steering Committee, 2020).

The third recommendation for the model by-law is to remove the need for an exemption process for a natural garden and have the ability to form a natural garden be as-of-right. The exemption process was introduced into the by-law after the successful ruling of the *Bell v. Toronto (City)* case, appearing in the by-law in 1997. While the exemption process may have been a favourable solution at the time, much has changed since 1997 over the course of approximately 25 years. As both, Brad Cameron, from the City of Fredericton, and Nina-Marie Lister have observed, natural gardens and the growing of native plant species is becoming more popular and widely recognized as an activity than it was 25 years ago (Cameron, 2020 [personal communications via email dated December 22, 2020]; Lister, 2020).

Upon review of various by-laws in the multiple case study analyses, it appears to be quite unusual for a city to impose an exemption process on natural gardens and the planting of native species. Further, the exemption process does not remove or mitigate the complaint-driven process. Those who complain about a yard to the By-law Department are not required to ground their complaint in evidence of which plant species pose a health or safety risk to humans or the environment, thus, an investigation is triggered solely based on aesthetic appeal. Gardeners are then required to defend their choice for planting species that deviate from the traditional lawn (Lister, 2020). It is strongly recommended that when engaging in enforcement of the by-law that the burden of responsibility be reversed.

The burden should fall with the complainants to identify which species are offensive and for what purpose, related specifically and only to, health and safety.

It's clear that the exemption process is not an effective means of ensuring property maintenance out of the concern for public and ecological health, but rather, it is a way to disincentivize gardeners from deviating from the lawn and asserting their ecological and cultural beliefs which both Justice Fargrieve and Justice Pitt have identified as being protected as freedoms of expression by s.2(b) and s.2(a) of the *Canadian Charter of Rights and Freedoms*. The exemption process associated with weed and grass by-laws is typically an issue of socio-economic status, favouring gardeners and environmentalists or ecologists that are familiar with government processes and have the economic means to fight the process (Donnelly, 2020); it is inequitable, unjust, and is an indirect means of ensuring that only yards that City deems to be visually appropriate are authorized, regardless of whether or not public or ecological health concerns are at the forefront. The City's strategies should not promote and encourage the planting of natural gardens and native species if they require residents to go through a timely and financially exhausting process that allows them to do so. If the City wants to continue to encourage and promote environmentally-and culturally-friendly landscaping practices in the City, the exemption process should be removed in its entirety and growing a natural garden or native plant species in one's yard should be *as-of-right*. While the exemption process does provide an opportunity for City staff to review the species occurring in the garden to ensure that they do not pose environmental or human health risks, it is important to remember that most if not all, gardeners, ecologists, environmentalists, and landscape architects are acting in the best interest of the environment and human health and likely have extensive training and knowledge of plant species beyond that of City staff, enforcement, and those authorizing the exemption for the natural garden.

Most importantly, the recommendation to remove the exemption process from the by-law should be concomitant with the other recommendations listed thus far. If the exemption process is removed from the by-law without removing the limitations on height restrictions, arbitrary language, and further regulation of plant species in Toronto, it will be retrogressive, and weaken protection for natural gardens and be most similar in nature to the by-laws studied in this paper, such as the City of Ottawa, which is not encouraged. If the exemption process is removed without removing the height restriction, arbitrary or vague language

around grass and 'weeds', and further regulation of plant species, this will eliminate one's ability to grow anything that deviates beyond the traditional lawn. Therefore, the exemption process must only be eliminated by the City if it is working in tandem with the other recommendations proposed, including reversing the burden of responsibility so that complainants are required to identify exactly which harmful species are present and the specific risk or harm they pose.

ENFORCEMENT

Problem #2, Donnelly Law: By-law enforcement staff do not undergo training in identifying plant species, nor are they required to, posing strong uncertainty that an officer would be able to identify a grass species let alone one of the 25 noxious plants outlined by the *Ontario Weed Control Act* (Donnelly Law, 2020).

Problem #2, Project Swallowtail Steering Committee: The failure of by-law officers to be able to accurately identify "noxious weeds" as opposed to non-harmful, natural garden plants (Project Swallowtail Steering Committee, 2020, p.3).

The final recommendation for the model by-law is regarding the enforcement procedures undertaken by City staff. In addition to the second recommendation for the model by-law, by-law officers should be required to undergo extensive training on identifying the 25 plants on the Noxious Weeds List or identifying plants on the specialized plant list for the City of Toronto if the City decides to adopt this method for regulation. It is not reasonable to expect by-law officers to be able to identify every plant and grass species that may grow in a yard, however, it is reasonable to expect that those enforcing regulations on yards be required to accurately identify species and make the distinction from those that are prohibited and those that are non-harmful, natural garden plant species. It is recommended that by-law officers are accompanied by an expert for identifying plant species or receive a second professional opinion if clarification on identifying a species is required. All property inspections for noxious weeds or regulated plant species should be performed free of expense to the owner or occupant. However, by regulating plant species through one of the two methods proposed in these recommendations, along with the removal of the height restriction and need for a natural garden exemption, expectations for the responsibilities of

City staff and by-law officers will become clearer and allow for better identification of species that require regulation and maintenance (i.e. Noxious Weeds or City of Toronto Regulated Plant Species).

CHAPTER 7
PLANNING IMPLICATIONS AND CONCLUDING REMARKS

It is crucial for planners to advocate for best practices in planning that result in inclusionary policies for a diversity of citizens – including their various cultural beliefs, environmental beliefs, economic status and varying needs. Furthermore, it is critical that planners engage in responsible planning for land-based practices that include ecologically diverse landscaping practices and elements that sustain and promote a healthy and thriving environment for both people and ecosystems at large.

There remains to be far more benefits of growing natural gardens and native plants than disadvantages. Natural gardens promote habitats and protection for native and endangered wildlife species, they provide eco-education opportunities, restore our landscapes to be less conducive to environmental threats, require less, if any, harmful chemicals or fertilizers, and add naturally occurring beauty to the landscape. All of these benefits are apparent from the four cases presented in this paper of Sandy Bell, Douglas Counter, Deborah Dale, and Nina-Marie Lister. Most gardeners and landscapers are highly aware of the risks that noxious weeds and harmful plant species pose to the environment and the public, so when a natural garden or alternative form of environmentally-friendly landscaping is done correctly, there are no disadvantages other than what one's personal preference may find to be visually appealing, which is not a basis on which to prohibit alternative landscaping practices that deviate from the lawn.

The City of Toronto has a growing library of environmental strategies that promote landscaping alternatives, the protection of habitat, protection against the spread of invasive species, and encourage both residents and City staff to partake in activities that promote ecological integrity and urban biodiversity. The City's strategies recognize that urban biodiversity can have key benefits in addition to the protection of the environment such as benefits that promote a sense of place and attractive living environments, encourage cultural beliefs to be expressed, and create opportunities for outdoor recreation and education.

However, this paper revealed that the City's approach to managing property maintenance through *Municipal Code Chapter 489, Grass and Weeds*, remains less than satisfactory and discredits the progressive environmental strategies the City has adopted. The City has the opportunity to lead by example in promoting a progressive grass and weeds by-law by incorporating the recommendations made in this paper, including the elimination of aesthetic language and height restrictions, regulating harmful plant species, removing the exemption process, and rethinking enforcement procedures.

Some cities such as the City of Oakville and the City of Fredericton already have more progressive by-laws in place that are demonstrated to work. The City of Toronto should take lead by adopting similar by-law regulations and tailoring them to Toronto's urban context. By leading with progressive policies, there is hope that it will lead to a decline in the complaints City staff receives. If residents are aware that the City is promoting and utilizing their strategies to inform their policies through best-practice, there is hope that residents will gain a better understanding of the co-benefits that come from the growth of natural gardens and spaces.

As dense settlement structures in urban areas are ever-increasing, the scope in which green spaces and green infrastructure are being implemented is lessening. Natural gardens can serve as vital contributions to the biodiversity of the City, and it is the responsibility of both planners and politicians to create and support policies that allow the City's remaining natural spaces, whether that be public green spaces or private yards, to thrive and produce benefits for both the environment and the public. The City has the option to follow through with the action items encouraged in the City's environmental strategies and adopting a new grass and weeds by-law that supports those strategies, based on the recommendations in this paper, or, to remain grounded in policies that support practices of English landscape architecture rooted in our colonial past. This paper is concluded with a practical example of how the recommendations made in this paper can be formatted into to the by-law.

MODEL BY-LAW EXAMPLE

Note: *The following example amends Municipal Code, Chapter 489, Grass and Weeds, with the recommendations made in this paper. This model by-law is to be used as an example for how the City of Toronto can revise Municipal Code, Chapter 489, Grass and Weeds in their by-law review.*

TORONTO MUNICIPAL CODE CHAPTER 489, LANDSCAPE STANDARDS

Chapter 489 Landscape Standards

§ 489-1. Definitions.

§ 489-2. Landscape Regulations.

§ 489-3. Notice to comply.

§ 489-4. Failure to comply; removal by City; costs.

§ 489-5. Offences.

GENERAL REFERENCES

Weed Control Act - See R.S.O. 1990, c. W.5.

§ 489-1. Definitions.

As used in this chapter, the following terms shall have the meanings indicated:

EXECUTIVE DIRECTOR – The Executive Director, Municipal Licensing and Standards, or his or her designate.

[Added 2013-02-21 by By-law No. 238-2013]

LOT – Means a parcel of land in the City

OFFICER - A City employee whose duties include the enforcement of this chapter.

OWNER - Includes:

A. The person for the time being managing or receiving the rent of the land or premises in connection with which the word is used, whether on the person's own account or as agent or trustee of any other person, or who would receive the rent if the land and premises were let; and

B. A lessee or occupant of the land who, under the terms of a lease, is required to repair and maintain the land.

TURFGRASS – Any of the various grass species typically grown for lawns; of a type that forms a dense, even turf when mown (i.e. Kentucky Bluegrass, Perennial Ryegrass, Fine Fescue).

WEEDS – any of the 25 species currently designated in the *Ontario Weed Control Act, R.S.O. 1990, c. W.5*, and/or any of the species designated as local weeds by the City of Toronto.

§ 489-2. Landscape standards.

A. No owner or occupant of private land shall have, or be permitted to have, any noxious weeds designated under the Ontario Weed Control Act and/or any designated local weeds by the City of Toronto on their Lot.

B. The owner or occupant of private land on which Turfgrass is grown, as defined in this by-law, shall cut Turfgrass on their Lot whenever the growth of the Turfgrass exceeds 20 centimetres in height.

489-3. Notice to comply.

A. Any complainant who claims that a private land is in contravention of this by-law is required to identify which harmful species are present and the specific risk or harm they pose. An officer who finds private land in contravention of this chapter may give written notice to the owner or occupant of the land requiring compliance with this chapter within the time period specified in the notice but no sooner than 72 hours after the notice is given.

B. The notice may be served personally on the person to whom it is directed or by registered mail to the last known address of that person, in which case it shall be deemed to have been given on the third day after it is mailed.

C. If there is evidence that the person in possession of the land is not the registered property owner, the notice shall be served on both the registered property owner and the person in possession of the land.

D. If the address of the owner or occupant is unknown or the City is unable to effect service on the owner or occupant under Subsection B, a placard stating the terms of the notice and placed in a conspicuous place upon the land shall be deemed to be sufficient notice.

TORONTO MUNICIPAL CODE CHAPTER 489, LANDSCAPE STANDARDS

§ 489-4. Failure to comply; removal by City; costs.

A. If an owner or occupant fails to comply with a notice given under § 489-3, the Executive Director may enter upon the lands at any time between sunrise and sunset for the purposes of doing the things described in the notice. [Amended 2013- 05-10 by By-law No. 582-2013]

B. Costs incurred by the City in doing the work required to be done by the notice may be recovered by action or adding the costs to the tax roll and collecting them in the same manner as taxes.

§ 489-5. Offences.

Any person who contravenes any provision of this chapter is guilty of an offence.

Source (All): Douglas Counter

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APPENDIX 1. Draft List of Plant Species – Lorraine Johnson, November 15, 2020. Preliminary list for discussion purposes.

DRAFT LIST OF PLANT SPECIES proposed for regulation in a revised Toronto "long grass and weeds" bylaw, based on health and safety considerations (human and ecological health and safety)

Draft compiled by Lorraine Johnson, November 15, 2020

Circulated for additions, deletions, editing and comments (to date, circulated to Nina-Marie Lister, David Donnelly, Carly Murphy, Steve Smith, Patricia Landry, Colleen Cirillo...)

PROPOSED SPECIES TO REGULATE IN TORONTO (i.e., prohibit on private property):

Poison ivy (*Toxicodendron radicans*):

- native woody, climbing or trailing vine (also a shrub subspecies)
- causes severe itchy rash (contact dermatitis) in people who are not immune to the compound (urushiol) that causes the rash
- common in natural areas and some parks
- extremely unlikely that it will seed/spread into tended or untended home landscapes unless from a nearby natural area where it is common
- not sold by nurseries

Ragweed (*Ambrosia artemisiifolia*):

- native annual
- wind-borne pollen is an allergen for ragweed sufferers
- common in disturbed areas
- readily seeds/spreads into tended and untended home landscapes
- not sold by nurseries

Giant hogweed (*Heracleum mantegazzianum*):

- invasive non-native perennial
- sap causes severe contact dermatitis (including burns if skin is exposed to sunlight) and possibly long-term sensitivity to sunlight
- extremely unlikely that it will seed/spread into tended or untended home landscapes unless from a nearby natural area where it is growing

- easy to confuse with native plants such as angelica (*Angelica atropurpurea*) and cow parsnip (*Heracleum maximum*); somewhat easy to confuse with non-native plants such as wild parsnip (*Pastinaca sativa*) and Queen Anne's lace (*Daucus carota*)
- listed as Uncommon in Toronto (ecoregion 7E4) according to Michael Oldham's vascular plant list of the region (2017)
- not sold by nurseries

Dog-strangling vine, aka black swallowwort and pale swallowwort (*Cynanchum rossicum and Cynanchum louiseae*):

- invasive non-native vining perennial degrades natural areas by creating monoculture and inhibiting the growth of native species through allelopathy
- extremely common in the wild and in disturbed areas in Toronto
- readily self-seeds/spreads into tended and untended home landscapes
- not sold by nurseries

Garlic mustard (*Alliaria petiolata*):

- invasive non-native biennial
- degrades natural areas by creating monoculture and inhibiting the growth of native species through allelopathy
- extremely common in the wild and in disturbed areas in Toronto
- readily self-seeds/spreads into tended and untended home landscapes
- somewhat easy to confuse with Thaspium, Zizia, Senecio and Viola
- not sold by nurseries

Common buckthorn and Glossy buckthorn (*Rhamnus cathartica and Frangula alnus*):

- invasive non-native woody shrubs
- degrade natural areas by creating monoculture and inhibiting the growth of native species
- agricultural threat (alternate host for the fungus which causes leaf and crown rust of oats) not an issue in Toronto
- extremely common in the wild and in disturbed areas in Toronto

- readily self-seeds/spreads into tended and untended home landscapes
- not sold by nurseries

Wild parsnip (*Pastinaca sativa*):

- invasive non-native biennial (sometimes perennial)
- causes severe blistering/burning and potentially photosensitivity in humans
- recently (summer 2020) found in Toronto at Taylor Creek Park in East York and downtown's Lower Don Trails
- unlikely to seed and spread into tended or untended home landscapes
- easy to confuse with Zizia
- not sold by nurseries

Japanese knotweed (*Reynoutria japonica var. japonica*):

- invasive non-native perennial
- degrades natural areas by creating monoculture and outcompeting the growth of native species
- readily self-seeds/spreads into tended and untended home landscapes
- not sold by nurseries

Purple loosestrife (*Lythrum salicaria*):

- invasive non-native perennial
- degrades natural areas, primarily wetlands, by creating monoculture and inhibiting the growth of native species in wetlands and wet areas
- unlikely to seed/spread into tended or untended home landscapes unless from nearby natural area where it is growing
- a cultivar available from nurseries that is sold as sterile is not necessarily sterile

Cow parsley, aka wild chervil (*Anthriscus sylvestris)*:

- invasive non-native biennial (sometimes perennial)
- sap causes severe contact dermatitis (including burns if skin is exposed to sunlight)
- unlikely to seed/spread into tended or untended home landscapes
- easy to confuse with Queen Anne's lace, poison hemlock, giant hogweed

- not sold by nurseries

Phragmites (*Phragmites australis subsp. australis*):

- invasive non-native perennial grass
- creates monoculture and suppresses the growth of native plants in wetlands, where it offers little habitat value to wildlife
- almost entirely a problem in moist areas or wetlands, where it is common in Toronto
- unlikely to seed/spread into tended or untended home landscapes unless from a nearby wild population
- easy to confuse with native Phragmites (*Phragmites australis subsp. americanus*)
- not sold by nurseries

REALISTICALLY NOT A THREAT IN TORONTO YARDS, BUT COULD BE INCLUDED FOR REGULATION DUE TO HEALTH AND SAFETY CONCERNS:

Poison sumac (*Toxicodendron vernix*):

- native woody shrub/small tree
- causes severe itchy rash (contact dermatitis) considered worse than poison ivy
- wetland plant (e.g., swamps)
- a Carolinian species listed as Rare in Toronto (ecoregion 7E4), according to Michael Oldham's vascular plant list of the region (2017)
- extremely unlikely that it will seed/spread into tended or untended home landscapes
- not sold by nurseries

Tall ragweed (*Ambrosia trifida*):

- native annual
- wind-borne pollen is an allergen for ragweed sufferers
- listed as Uncommon in Toronto (ecoregion 7E4), according to Michael Oldham's vascular plant list of the region (2017)
- unlikely to seed/spread into tended or untended home landscapes

- not sold by nurseries

Kudzu (Pueraria montana):

- invasive non-native perennial vine
- degrades natural areas by creating monoculture and inhibiting the growth of native species
- only one location for this species in Ontario (near Leamington, 350 km from Toronto), identified in 2009 but has not spread from this one location
- virtually impossible that it would just appear in tended or untended home landscapes in Toronto
- not sold by nurseries

Poison Hemlock (*Conium maculatum*):

- non-native biennial
- poisonous for humans and animals
- easy to confuse with water hemlock (*Sium suave*)
- unlikely that it would seed/spread into tended or untended home landscapes
- not sold by nurseries

GRASSES:

Other than Phragmites and Miscanthus, no grasses in Ontario are currently or widely considered to be an ecological threat (i.e., invasive in natural areas) or a threat to human health.

The current “long grass and weeds” bylaw does not clarify which species of grass are to be kept at 20cm maximum height.

Many horticultural species of grass widely available in nurseries and commonly planted in gardens grow taller than 20cm.

Most native species of grass (e.g., big bluestem, Indian grass, switch grass), widely promoted by the City of Toronto and by the Toronto and Region Conservation Authority, grow taller than 20cm.

Commercially available ecological grass mixes (e.g. EcoLawn) include grass species that grow taller than 20cm.

The 20cm height limit is an arbitrary aesthetic standard.

Grass pollen is an allergen, as are the pollens of numerous tree species (e.g., willows, birches). Unmowed turfgrass will flower and produce pollen. According to the Asthma and Allergy Foundation of America, the most common types of grass that cause allergies are:

- Bermuda
- Johnson
- Kentucky
- Orchard
- Rye
- Sweet Vernal
- Timothy

All of these are non-native grasses, and some of them (e.g., timothy and Johnson) are significant agricultural weeds.

It would be possible for the bylaw to prohibit the flowering of these grass species (i.e., not with an arbitrary height restriction but with a flowering restriction), but it would be extremely difficult (if not impossible) to train bylaw officers to distinguish between grass species--a highly specialized skill that even trained botanists don't necessarily have.

NOTE:

IF THE CITY WANTED TO REGULATE THE INVASIVE NON-NATIVE SPECIES POSING THE GREATEST THREATS TO NATURAL AREAS, THE LIST OF REGULATED SPECIES COULD BE EXPANDED TO INCLUDE SOME COMMONLY AVAILABLE HORTICULTURAL SPECIES. HOWEVER, SUCH REGULATION IS UNLIKELY. AS WELL, THIS PROPOSED LIST OF PLANT SPECIES FOR REGULATION IS INTENDED TO BE MINIMAL NOT EXPANSIVE...AS AN ALTERNATIVE TO REGULATION FOR THE SPECIES BELOW, THE CITY COULD REINFORCE AN EDUCATION CAMPAIGN REGARDING THESE SPECIES (current materials on the City's website are minimal regarding invasive species):

Norway maple (*Acer platanoides*):

- invasive non-native tree
- creates monoculture in natural areas by suppressing (through allelopathy and other means) the growth of native plants
- common in natural areas
- readily self-seeds into tended and untended home landscapes
- commonly available in nurseries

Periwinkle (*Vinca minor, Vinca major*):

- invasive non-native perennial groundcover
- creates monoculture in natural areas by outcompeting native plants
- common in natural areas
- spreads from intentional garden plantings to natural areas
- commonly available in nurseries

English ivy (*Hedera helix*):

- invasive non-native perennial vining groundcover
- creates monoculture in natural areas by outcompeting native plants
- spreads from intentional garden plantings to natural areas
- commonly available in nurseries

Goutweed (*Aegopodium podagraria*):

- invasive non-native perennial
- creates monoculture in natural areas by outcompeting native plants
- spreads from intentional garden plantings to natural areas
- commonly available in nurseries

Miscanthus (*Miscanthus sinensis*):

- invasive non-native grass
- creates monoculture in natural areas by outcompeting native plants
- spreads from intentional garden plantings to natural areas

- commonly available in nurseries

Amur honeysuckle and Tartarian honeysuckle (*Lonicera maackii and Lonicera tatarica*):

- invasive non-native shrub
- common in wild areas
- creates monoculture in natural areas by outcompeting native plants
- will self-seed/spread into tended and untended home landscapes
- easily confused with other honeysuckle (*Lonicera*) species
- not sold by nurseries

Multiflora rose (*Rosa multiflora*):

- invasive non-native shrub
- common in wild areas
- creates monoculture in natural areas by outcompeting native plants
- will self-seed/spread into tended and untended home landscapes
- easily confused with other rose (*Rosa*) species
- not sold by nurseries

Asian bittersweet (*Celastrus orbiculatus*):

- common in wild areas
- creates monoculture in natural areas by outcompeting native plants
- will self-seed/spread into tended and untended home landscapes
- easily confused with native bittersweet (*Celastrus scadens*), with which it hybridizes and/or crosses
- sold by nurseries (often erroneously sold as the native species)