TORONTO

REPORT FOR ACTION

Supporting Biodiversity in Toronto: Changes to Spring Yard Waste Schedule

Date: June 17, 2021
To: Infrastructure and Environment Committee
From: General Manager, Solid Waste Management Services and Chief Planner and Executive Director, City Planning
Wards: All

SUMMARY

This report proposes an amendment to Toronto Municipal Code Chapter 844, Waste Collection, Residential Properties (MC 844). Specifically, the proposed amendment to MC 844 would delay the City of Toronto's yard waste collection from single family residential and multi-residential properties by four weeks, to start yard waste collection in late April instead of late March, as an effort to help support biodiversity in Toronto and align with the City of Toronto's Biodiversity Strategy. The Biodiversity Strategy includes an action item to review policies and bylaws for opportunities to support biodiversity, and the Pollinator Protection Strategy.

This report is jointly submitted by the Solid Waste Management Services and City Planning Divisions in consultation with the Environment and Energy and Parks, Forestry and Recreation Divisions. It details the impact of early spring collection of yard waste on the overwintering and nesting habitats of beneficial insects such as pollinators.

RECOMMENDATIONS

The General Manager, Solid Waste Management Services, and Chief Planner and Executive Director, City Planning, recommends that:

1. City Council amend § 844-6.A. of the City of Toronto Municipal Code Chapter 844, Waste Collection, Residential Properties, by deleting the month of "March" from when the City collects yard waste from single family residential properties and multi-residential properties.

2. City Council authorize the City Solicitor and the General Manager, Solid Waste Management Services to make such technical and stylistic amendments to the City

of Toronto Municipal Code Chapter 844, Waste Collection, Residential Properties, as required and to introduce the necessary bills to delete the month of "March" from when the City collects yard waste from single family residential properties and multi-residential properties.

3. City Council direct that the amendment to § 844-6.A. of the City of Toronto Municipal Code Chapter 844, Waste Collection, Residential Properties, to delete the month of "March" from when the City collects yard waste from single family residential properties and multi-residential properties, come into force on January 1, 2022.

FINANCIAL IMPACT

There are no financial implications resulting from this report.

The Chief Financial Officer and Treasurer has reviewed this report and agrees with the financial impact information.

DECISION HISTORY

At its meeting on June 11, 2021, the Planning and Housing Committee adopted item PH24.3, entitled "Modernizing Chapter 489, Grass and Weeds to Streamline Processes and Support Biodiversity" which recommends bylaw amendments to Toronto Municipal Code, Chapter 489, Grass and Weeds, in efforts to modernize regulations, streamline enforcement efforts, and enhance public education to support the City of Toronto's efforts to protect pollinators and biodiversity. This item will be considered by City Council on July 14, 2021.

The Planning and Housing Committee document can be viewed at:
http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2021.PH24.3

At its meeting on October 2 and 3, 2019, City Council adopted item IE7.8, entitled "Toronto Biodiversity Strategy" which aims to support healthier, more robust biodiversity and increased awareness of nature in Toronto and to further advance the City's role as a leader in protecting and restoring urban biodiversity.

The City Council Decision document can be viewed at:
http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2019.IE7.8

At its meeting on April 24, 25, 26, and 27, 2018, City Council adopted item PE26.7, entitled "Pollinator Protection Strategy" which includes principles to prioritize actions that support and sustain native pollinator biodiversity in Toronto, to create, enhance, and protect habitat in natural and urbanized areas and to engage and support the community in taking action to help sustain Toronto's native pollinators.

The City Council Decision document can be viewed at:
http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2018.PE26.7

COMMENTS

Proposed Amendments to the Yard Waste Collection Schedule to Support Biodiversity in Toronto

The City of Toronto's (the City's) Pollinator Protection Strategy[1] (the Strategy) was designed to support and sustain Toronto's diverse native community of pollinators and is one component of the broader Council-approved Biodiversity Strategy.[2] The Biodiversity Strategy includes a number of action items, one of which states to review policies and bylaws for opportunities to support biodiversity. Recently, there have been other Divisional efforts to support the Biodiversity Strategy, such as a report currently being brought forward by Municipal Licensing and Standards to City Council for consideration, which recommends bylaw amendments to Toronto Municipal Code, Chapter 489, Grass and Weeds, in efforts to modernize regulations, streamline enforcement efforts, and enhance public education to support the City of Toronto's efforts to protect pollinators and biodiversity.[3]

Pollinators are under increasing stress and some populations are in decline. The Strategy identifies overwintering and nesting habitat loss as a threat to local pollinators and their offspring, who are vital to maintaining biodiversity and a healthy and resilient ecosystem. Overwintering and nesting habitats are shelters of yard debris (such as dead, brown leaves and stems) remaining on properties and in garden beds where pollinators such as bees, butterflies and moths, take refuge in the colder months. Their continued presence in our local ecosystem is an important factor influencing populations of native pollinators.[4] The majority of butterfly species in Toronto overwinter in the city rather than migrating south and require overwintering habitats such as fallen leaves for winter protection of

[1] Live Green Toronto. (May 2018). *Toronto Pollinator Protection Strategy.* City of Toronto. https://www.toronto.ca/wp-content/uploads/2018/05/9676-A1802734_pollinator-protection-strategy-booklet.pdf

[2] Toronto City Planning and Parks, Forestry & Recreation, Toronto and Region Conservation Authority. (September 2019). *Wild, Connected and Diverse: A Biodiversity Strategy for Toronto.* City of Toronto. https://www.toronto.ca/legdocs/mmis/2019/ie/bgrd/backgroundfile-136906.pdf

[3] Municipal Licensing and Standards. (May 6, 2021). *Modernizing Chapter 489, Grass and Weeds to Streamline Processes and Support Biodiversity.* City of Toronto. https://www.toronto.ca/legdocs/mmis/2021/ph/bgrd/backgroundfile-167885.pdf

[4] Sarah Foltz Jordan, Jennifer Hopwood, Sara Morris. (2020). *Nesting & Overwintering Habitat for Pollinators & Other Beneficial Insects.* Xerces Society for Invertebrate Conservation. https://xerces.org/sites/default/files/publications/18-014.pdf

eggs, caterpillars, chrysalises and adults.[5] Some overwintering queen bumblebees also benefit from leaves for protection from the elements. Many of Toronto's native bee species are cavity-nesters and rely on shelters made of debris such as dried hollow or pithy stems, branches and wood.[6]
Overwintering and nesting habitats also provide food sources for some pollinators when they emerge, such as caterpillars.[7] Other wildlife also relies on remaining yard debris for food sources, such as leftover fruits and seeds, which are a source of food for some birds.[8]

The Strategy states that overwintering sites should be left undisturbed until pollinators emerge in spring or early summer.[9] Best practices for pollinator habitat conservation recommend leaving overwintering habitat undisturbed for as long as possible to support a diversity of bees and other beneficial insects.[10] This concept is also supported by conservation organizations such as the Xerces Society for Invertebrate Conservation[11] and Nature Conservancy Canada.[12]For example, bee phenology shows that some species do not emerge until April.[13] In addition, soil temperature has a strong influence

---

[5] Sarah Foltz Jordan, Jennifer Hopwood, Sara Morris. (2020). *Nesting & Overwintering Habitat for Pollinators & Other Beneficial Insects.* Xerces Society for Invertebrate Conservation. https://xerces.org/sites/default/files/publications/18-014.pdf

[6] Live Green Toronto. (May 2018). *Toronto Pollinator Protection Strategy.* City of Toronto. https://www.toronto.ca/wp-content/uploads/2018/05/9676-A1802734_pollinator-protection-strategy-booklet.pdf

[7] Sarah Foltz Jordan, Jennifer Hopwood, Sara Morris. (2020). *Nesting & Overwintering Habitat for Pollinators & Other Beneficial Insects.* Xerces Society for Invertebrate Conservation. https://xerces.org/sites/default/files/publications/18-014.pdf

[8] Nature Conservancy Canada. (October 17, 2019). *Conservation group encourages people to leave their leaves on the ground.* [Press Release]. https://www.natureconservancy.ca/en/where-we-work/quebec/news/leaves-on-the-ground.html

[9] Live Green Toronto. (May 2018). *Toronto Pollinator Protection Strategy.* City of Toronto. https://www.toronto.ca/wp-content/uploads/2018/05/9676-A1802734_pollinator-protection-strategy-booklet.pdf

[10] Sarah Foltz Jordan, Jennifer Hopwood, Sara Morris. (2020). *Nesting & Overwintering Habitat for Pollinators & Other Beneficial Insects.* Xerces Society for Invertebrate Conservation. https://xerces.org/sites/default/files/publications/18-014.pdf

[11] Sarah Foltz Jordan, Jennifer Hopwood, Sara Morris. (2020). *Nesting & Overwintering Habitat for Pollinators & Other Beneficial Insects.* Xerces Society for Invertebrate Conservation. https://xerces.org/sites/default/files/publications/18-014.pdf

[12] Nature Conservancy Canada. (October 17, 2019). *Conservation group encourages people to leave their leaves on the ground.* [Press Release]. https://www.natureconservancy.ca/en/where-we-work/quebec/news/leaves-on-the-ground.html

[13] Park, M., et al. (2015). *Wild Pollinators of Eastern Apple Orchards and How to Conserve Them.* 2nd ed. Cornell University, Penn State University and the Xerces Society. https://xerces.org/sites/default/files/2018-05/15-036_02_XercesSoc_Wild-Pollinators-Eastern-Apple-Orchards-2nd-Ed_web.pdf

on bumble queen emergence in the spring with emergence occurring at temperatures between 13 and 17 °C.[14] Emergence dates are relatable to thermal cues, such as degree day accumulation, soil temperature at nesting depth, and the first pulse of warm spring air temperatures.[15]

The City's collection of yard waste from residential properties currently begins towards the end of March each year and ends in mid-December. There is an opportunity to modernize the yard waste collection operations to better support the City's biodiversity goals as early collection of yard waste in March may encourage and motivate residents to start cleaning up yard debris in early spring. This disrupts the overwintering and nesting habitats and threatens the survival of the pollinators and their offspring. Delaying the yard waste collection schedule to start four weeks later, into April, when the weather is warmer, gives overwintering pollinators a greater chance of survival as they are more likely to have emerged from their overwintering shelters.

Impacts to the City's Operations and Contracts

A jurisdictional scan of Ontario municipalities was conducted which showed that while the spring start dates varied, the majority begin collection in April. Operationally, Solid Waste Management Services can accommodate a delay by four weeks and recommends beginning collection in the last two weeks of April. Collection of leaf and yard waste would still be offered until mid-December. It is expected that the annual amount of yard waste tonnages being collected and processed will remain approximately the same despite the later start date of collection. Therefore, as the collection and processing contracts are tonnage-based, they also will not be impacted.

The delay of yard waste collection by four weeks will have a minimal impact in the hiring of seasonal staff needed to collect the yard waste from single family residential and multi-residential properties and haul the material to processors. There will be sufficient time to allow staff to prepare for these changes including the adjustment of hiring schedules and seasonal staff contract periods. For seasonal Collections staff dedicated to yard waste collection, the start date for staff would be delayed by four weeks resulting in a cost savings of approximately $120,000 inclusive of staff and vehicle operating costs. These savings will be allocated to further driver and safety training and enhanced seasonal litter collection. There will be no financial impacts for seasonal Haulage staff as the additional four weeks prior to the start of yard waste collection will be used for onboarding and to provide in-service training.

---

[14] Amanda R. Liczner, Sheila R. (August 10, 2019) *A systematic review of the nesting and overwintering habitat of bumble bees globally.* Journal of Insect Conservation. https://doi.org/10.1007/s10841-019-00173-7

[15] James Cane. (May 16, 2021). *Global Warming, Advancing Bloom and Evidence for Pollinator Plasticity from Long-Term Bee Emergence Monitoring.* Insects 2021, 12, 457. https://www.mdpi.com/2075-4450/12/5/457

Implementation timelines and communicating program changes

The proposed amendment to the yard waste collection schedule, which will push the start of the City's collection of yard waste to April, is proposed to take effect on January 1, 2022. Upon receiving Toronto City Council approval of the proposed changes to Bylaw 844-6.A. and the passing of the bylaw amendment, Solid Waste Management Services staff will develop a communications plan, in consultation with the Environment and Energy, City Planning and Parks, Forestry and Recreation Divisions, to effectively promote and educate residents on changes to the yard waste collection schedule and the protection of pollinator species.

City staff have engaged with the Pollinator Advisory Group to provide advice on key messaging for residents. This Group includes conservation biologists, academic researchers, pollinator specialists, native plant experts, and community based organizations. Recommendations from this Group formed the basis of the Pollinator Protection Strategy.

The campaign will begin in the fourth quarter of 2021 and information will be included in the 2022 collection schedules to be distributed with the utility bill. Various additional promotion and education tactics and tools will be utilized, including but not limited to news releases, social media, the City's website, City Councillor communications, newsletters, and multi-lingual advertising. The campaign’s key message will encourage residents to delay the cleanup of yard debris to at least April, when yard waste collection will start, in order to protect the pollinators in their overwintering habitats. Drop off services for yard waste will remain unchanged and residents will have the option to take yard waste to City Drop-off Depots at any time during the year according to Depot operating hours if they choose to clean up yard debris before collection begins.

Staff will also work to communicate this change to internal City Divisions, including Municipal Licensing and Standards and 311, and will provide updated program information and key messages, as it is likely that these Divisions will receive program change related inquiries from residents. Toronto City Councillors will also be provided with program information to respond to inquiries that may come from their constituents.

Next Steps

Upon adoption of the amendment to §844-6.A. of the City of Toronto Municipal Code Chapter 844, Waste Collection, Residential Properties, Solid Waste Management Services staff will develop a communication plan and begin to communicate the change to appropriate City Divisions and residents beginning in the fourth quarter of 2021.

CONTACT

Annette Synowiec, Director, Policy, Planning & Outreach, Solid Waste Management Services, Telephone: 416-392-9095, Fax: 416-392-4754, Email: Annette.Synowiec@toronto.ca

Michael Skaljin, Acting Manager, Solid Waste Policy & Planning, Policy, Planning & Outreach, Solid Waste Management Services, Telephone: 416-392-8517, Fax: 416-392-4754, Email: Michael.Skaljin@toronto.ca

Kerri Voumvakis, Director, Strategic Initiatives, Policy & Analysis, City Planning, Telephone: 416-392-8148, Fax: 416-392-3821, Email: Kerri.Voumvakis@toronto.ca

Jane Welsh, Manager, Strategic Initiatives, Policy & Analysis, City Planning, Telephone: 416-392-9709, Fax: 416-392-3821, Email: Jane.Welsh@toronto.ca

SIGNATURE

Matt Keliher
General Manager
Solid Waste Management Services

Gregg Lintern
Chief Planner & Executive Director
City Planning