Collingwood Pollinator Protection Plan

Table of Contents

Collingwood is a growing community that has attracted visitors and residential growth due to its abundance and diversity of natural features, located along the south shore of Georgian Bay, and surrounded by the Niagara Escarpment and the longest freshwater beach in the world. In October 2019, the Town of Collingwood took a first step towards protecting this unique landscape by declaring a climate crisis. In 2021, Collingwood was designated a Bee City, demonstrating a commitment to protecting and promoting pollinators. This pollinator protection plan is also a step to mitigate the equally important issue of biodiversity loss.

Message from the mayor

I am pleased to see the development of the Pollinator Plan come to fruition after several years of work by staff and volunteers, namely Jessica Lehr, Jeff Young, Carrington Lauzon, Carolyn Davies, and Shannon McCready of Pollinate Collingwood. It is with their support, that the Town of Collingwood was able to achieve a Bee City Canada designation in 2021 from Pollinator Partnership Canada. Collingwood is now home to over 35 native garden projects that provide habitats to pollinators as well as enhance Collingwood's natural beauty and sustainability.

A generous donation from Julie DiLorenzo also allowed Collingwood to run the Canopy Collingwood Bees and Trees program since 2021, a program that encourages residents through a financial incentive to purchase native trees and plants to establish pollinator gardens on private property.

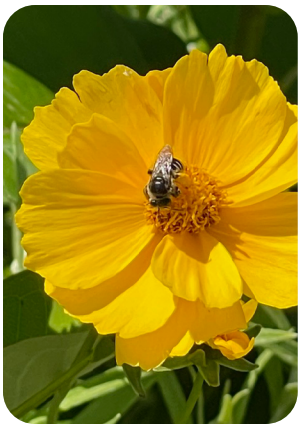
I look forward to seeing the positive environmental and educational outcomes of the Collingwood Pollinator Plan in action!

Yvonne Hamlin
Mayor of Collingwood

Introducing pollinators and their important role

Pollination

Pollination is the movement of pollen from the male parts of flowers to the female parts, allowing for fertilization and the production of seed and fruit. Some plants are capable of self-fertilization and do not require any help to move their pollen, while others produce large amounts of pollen and rely on the wind to distribute pollen. However, the vast majority of flowering plants on earth (an estimated 87%) rely on animal pollinators to move pollen between flowers. Additionally, 75% of the major crops that are grown for human consumption require or benefit from animal pollinators, accounting for 35% of food production by volume; this includes blueberries, apples, almonds, coffee, and many other crops that make our diets diverse, healthy, and enjoyable.



Pollinators

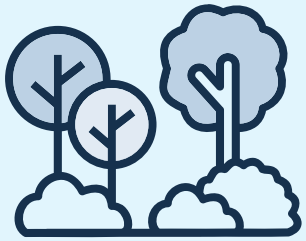
There are an estimated 350,000 species of pollinators worldwide, including bees, butterflies, moths, flies, beetles, wasps, birds, bats, and many more animal groups. While people tend to think of the European honey bee when they think about pollinators, many of these other species contribute critically to pollination in our agricultural systems, and some can even be more efficient pollinators on an individual-by-individual basis. In fact, many crops and wild flowering plants have evolved unique relationships with specific pollinators and depend on them alone for pollination. Therefore, when we talk about pollinator conservation, it is imperative that we do so with the incredible diversity of pollinator species in mind.

Honey beekeeping is not an act of conservation, and currently the Town of Collingwood does not permit the keeping of honey bees in residential areas

Honey bees are an agricultural livestock animal in North America, bred and managed by humans for crop pollination, honey, and other hive products. While they have become essential to modern agricultural systems, they are not of conservation concern because they are neither wild, endangered, or native to North America. In fact, research has shown that urban beekeeping can negatively impact native bee species by increasing competition for limited floral resources, transferring diseases or pests, and changing floral communities. Pollinator conservation efforts should be focused on protecting species that are native, which in North America includes about 4,000 bee species alone.

Threats faced by pollinators

Despite the critical role that they play, many wild, native pollinator species are in decline. Several factors are likely causing these declines, and these factors can work independently or in concert to negatively impact native pollinator populations.



Habitat loss

Pollinators rely on habitat areas for food (pollen and nectar) and nesting opportunities, and humans have eliminated habitat at large scale through agricultural intensification, urban development, resource extraction, and other activities. Providing native plant habitat with flowering plants that bloom across the growing season and nesting resources is critical to reversing declines.

Climate change

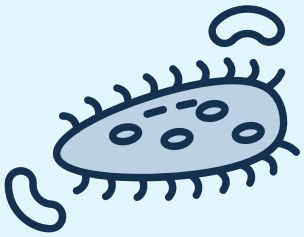
Climate change is impacting plant and pollinator species differently. In some cases, suitable habitat ranges are overlapping less while others are experiencing a mismatch between the activity period of the pollinator and the blooming period of the flowering plant. For specialist pollinators that only collect pollen and/or nectar from just one or a small number of plant species, local populations cannot persist.

Pesticide exposure

Pesticide exposure can be lethal to pollinators, but sublethal impacts, such as the impairment of learning, memory, and motor function, are even more common. Sublethal impacts are of particular concern with systemic pesticides, as pollinators are exposed to these at low levels through the pollen and nectar of treated plants. Pesticides can also act synergistically when there has been exposure to multiple different chemical compounds. The long-term impact of many of these are still unknown.

Invasive species

Non-native, invasive pollinator species may compete with native pollinators for limited food resources, making it more difficult for them to survive. Invasive plant species outcompete native plants, reducing the supply of available floral resources for native pollinators.

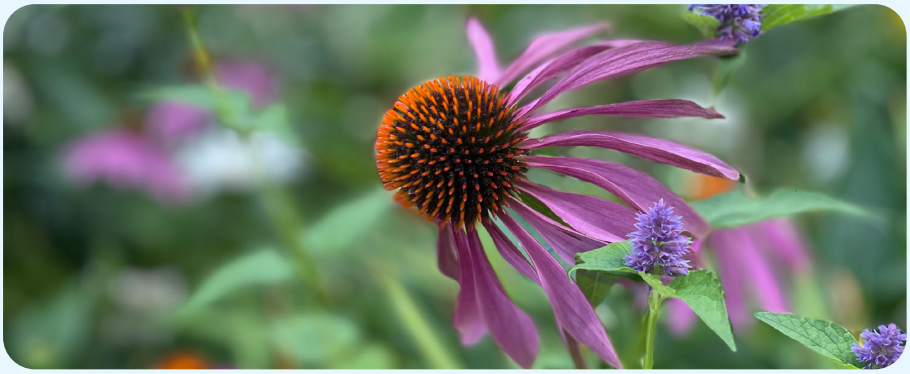


Parasites and diseases

Many parasites and diseases are established threats to both native and managed pollinators. The use and transport of managed bees, including honey bees, bumble bees and others, has been shown to contribute to the spread of parasites and diseases to native pollinator populations.

Selecting plants for pollinators

Not all plants are equal in their benefit to pollinators, and some plants are invasive or noxious. Plant selection does not have to be complicated, but it helps to know commonly used terms, the different types of plants available to you, which plants to prioritize, and which plants to avoid. Use the information on the next page to prioritize which plants are included in pollinator habitat creation efforts.



Native plants

Plants that are part of the natural environment of a region. Native plants have co-evolved over thousands of years alongside their pollinators in a particular location. Selecting plants native to your region is the best way to be sure that you are providing the most benefit to pollinators and the environment. If you don't know which plants are native to your region, check out Pollinator Partnership Canada's Ecoregional Planting Guides and Plant Database - Natural Edge (watersheds.ca) for some options.

Non-native plants

Plants that are not historically part of a region. They arrived in the region either intentionally or accidentally by humans or some other means. Other terms used for non-native plants include exotic, introduced, alien, and non-indigenous. Some non-natives are beautiful ornamentals and some provide resources for pollinators. There are a number of different types of non-native plants and some should never be intentionally planted.

Non-invasive plants

These are non-native plants that originated in a different region, but do not spread into new environments or outcompete native plants. These plants are fine to plant in your garden, and some provide resources for pollinators, but native plants are recommended if your main goal is to support pollinators and biodiversity.

Invasive plants

These are non-native plants that reproduce freely on their own. They invade natural or disturbed areas, outcompete native plants, and disrupt the ecosystem. Unfortunately, some garden centres still offer seed mixes and plants that are invasive in the regions where they are sold. To learn more about invasive species in Ontario, please visit the Invasive Species Centre and the Ontario Invasive Plant Council websites.

Noxious plants

Plants that are particularly troublesome for agriculture, the environment, or public health. Noxious plants should never be planted, and some are illegal to plant in certain areas. Check OMAFRA's noxious plant list to learn more.

Pollinator species at risk in Ontario

Yellow-banded Bumble Bee
(Bombus terricola)
Special concern

Monarch Butterfly
(Danaus plexippus)
Endangered

Rusty-patched Bumble Bee
(Bombus affinis)
Endangered

Gypsy Cuckoo Bumble Bee
(Bombus bohemicus)
Endangered

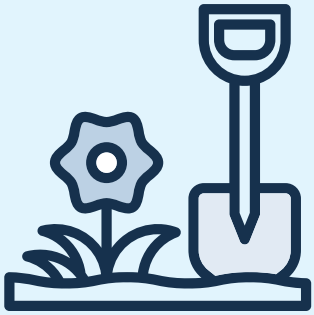
Habitat connectivity

Habitat connectivity is a critically important aspect of protecting pollinators, and municipalities and rural areas play an essential role. Beyond residential gardens, a diversity of opportunities exists for supporting native pollinators, including in wood lots, thickets, hedgerows, rain gardens, roadsides, drainage ditches, wetlands, meadows, grassy areas, and more. It is important that natural features are protected and enhanced when residential development is being planned. Beyond supporting pollinators, reintroducing native plants in these areas can also help to sequester carbon, build soil, mitigate the impact of floods, filter water, and reduce the impact of climate change. Collingwood's new Official Plan contains Environmental Protection designation policies and mapping (Section 3) that identify and protect environmentally sensitive features and buffer areas within the Town's Natural Heritage System, and provide opportunity for enhancement of habitat linkages through further environmental study.

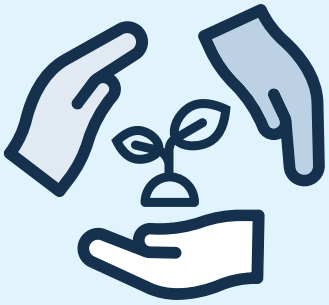
Vision, goals, and actions

Vision: Collingwood is home to a diverse, thriving community of pollinators that supports native ecosystem resilience, food production, and human connectedness to nature.

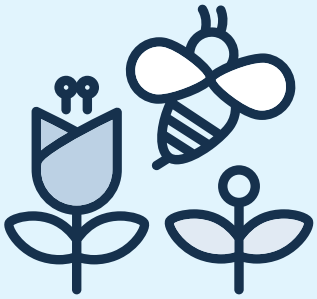
To achieve this vision, Collingwood has identified four key goals and actions within each. The four goals are:



1.0 Create, maintain, expand, and connect native habitat areas



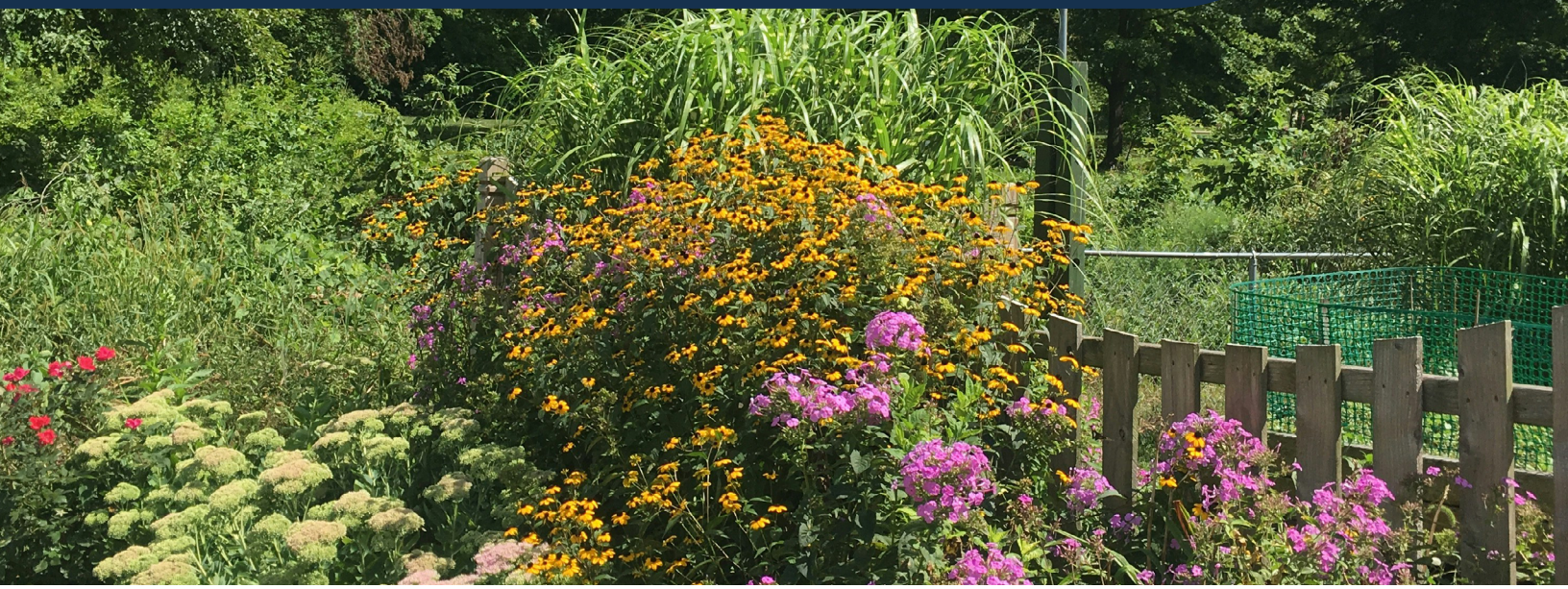
2.0 Empower and incentivize residents to create native habitat



3.0 Minimize direct and indirect harm to pollinators

4.0 Educate and engage the Collingwood community

1.0 Create, maintain, expand, and connect native habitat areas



Pollinators need food to survive and thrive, just as we do. For most pollinators, food is the nectar and pollen from native flowers, and shelter includes bare soil patches, stems, dead stalks, leafy plant and woody debris left on the ground, and wildlife trees. To meet these basic needs of pollinators, it is critical that habitat areas containing flowers and nesting spaces exist throughout Collingwood. Also critical is that flowering species in these areas are native to the region, as these plants have co-evolved with native pollinators and in many cases have evolved unique, specialized relationships, such as the relationship between monarch butterflies and milkweed plants. Collingwood is committed not only to maintaining existing native habitat areas, but also to creating, expanding, and connecting existing ones over time.

1.1 Educate municipal staff about pollinators and their needs to ensure that they are equipped to follow best practices.

Formal training will be provided to appropriate town staff. Through this training, staff will learn basic information about pollinators and technical information about how to support them.

1.2 Set habitat standards for new developments to ensure that pollinators are protected as the town grows.

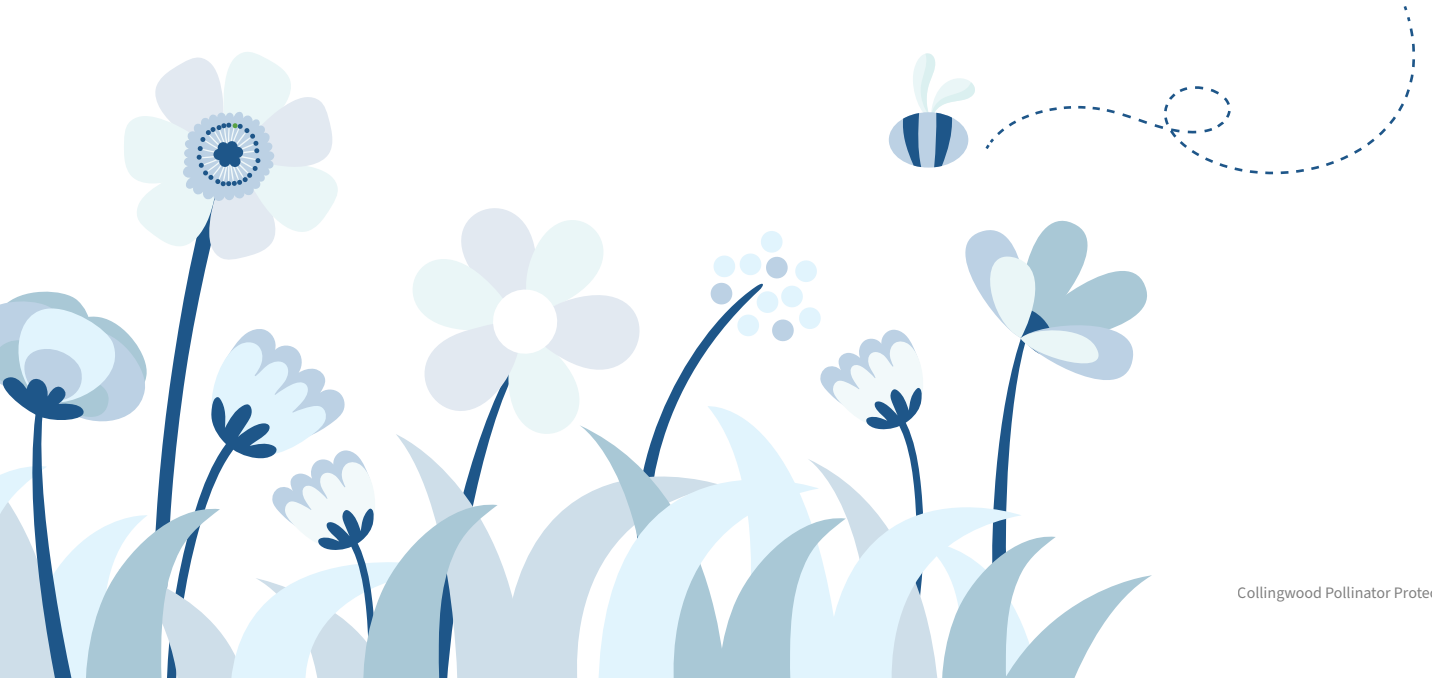
Standards can ensure that thresholds are met for the inclusion of native plants and others that are beneficial to pollinators, that pesticide use is minimized, and that invasive species are prohibited.

1.3 Restore large habitat areas where possible.

These areas provide much needed food and shelter for pollinators, boost biodiversity, and restore landscape functions broadly. Candidate sites include along roadsides and stormwater ponds, at landfills, in areas disturbed by construction, unused greenspace, and other appropriate areas.

1.4 Create multiple demonstration pollinator gardens which showcase best practices for creating pollinator gardens.

Demonstration gardens should be pesticide-free, contain a variety of native flowering plants that bloom at different times, and provide nesting space for pollinators. Critically, these gardens should include extensive signage, highlighting native species, and pollinator gardening principles. Demonstration pollinator gardens will be created at Awen' Gathering Place and Awen' Waterplay, among other locations.



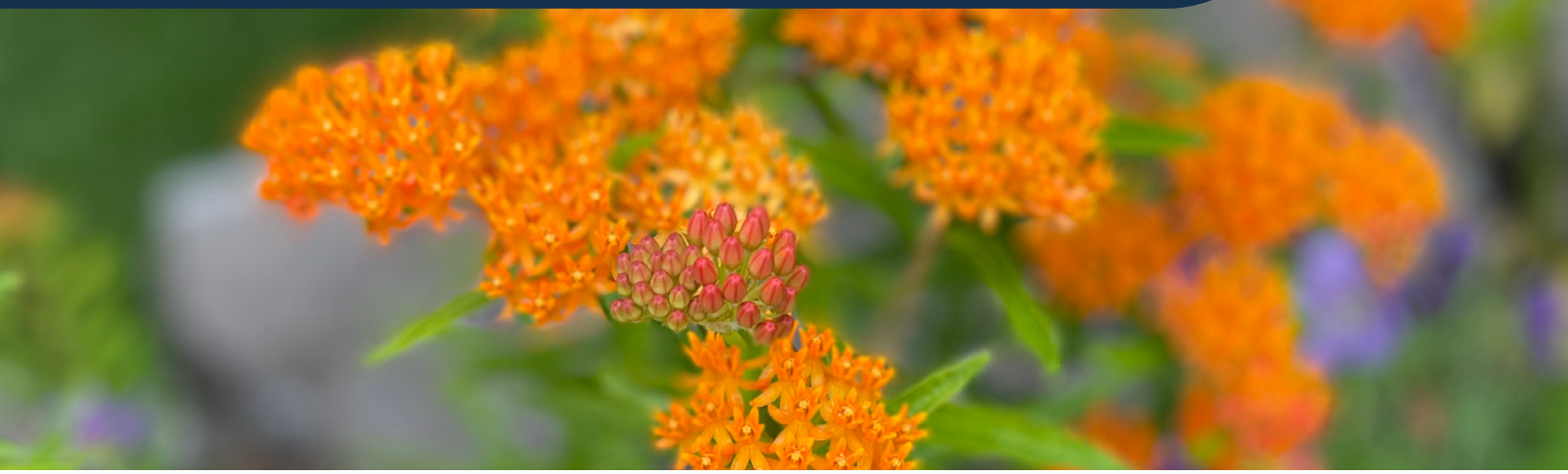
1.5 Increase habitat connectivity for pollinators by prioritizing habitat creation in gap areas.

Creating habitat with connectivity in mind can be greater than the sum of its parts, as connectivity facilitates gene flow, seed dispersal, and many ecological functions. By creating a GIS pollinator habitat map that includes municipal habitat areas and habitat areas created by residents that have participated in Canopy Collingwood's Bees & Trees program, it will be possible to develop a greater sense of where habitat is most needed.

1.6 Plant pollinator gardens on town-owned boulevards.

In many cases, boulevards can be excellent locations for habitat, and these small patches can scale up to contribute to habitat connectivity. Residents can also garden on boulevards with municipal approval in Collingwood, so long as plants are maintained below 45 cm so as not to block driver sightlines. There are many low-growing native plant species that can support pollinators.

2.0 Empower and incentivize residents to create native habitat



Beyond municipally-led efforts to directly create and maintain habitat, it is important to provide residents with the opportunity to do the same at home and contribute toward the success of pollinators in Collingwood. At the most basic, from a policy perspective, this requires allowing residents to create habitat on and around their properties with limited restrictions for the health and safety of people and the environment. At a more advanced level, municipalities can actively encourage residents to create habitat and empower them to do so with educational resources and financial support. Collingwood is committed not only to allowing residents to create habitat at home without excessive restrictions, but also to supporting residents as they do so.

2.1 Revisit Collingwood's Long Grass and Weeds By-law to ensure that residents do not face unreasonable barriers when creating pollinator habitat at home.

It is imperative that clear language is used so that residents are not left wondering what is and is not allowed; for example, words such as 'weed' (aside from reference to the Weed Control Act) and 'unkempt' are subjective and should not be used. Any restrictions should be focused on human and environmental health, not aesthetic preferences; these may include a list of prohibited invasive or noxious plants, and plants that impede driver sightlines. Consult invasive plant resources, such as the Grow Me Instead brochure.

2.2 Provide educational resources to residents about how to create pollinator habitat.

Creating pollinator habitat can be complicated; it is therefore important to provide residents with the knowledge needed to create them. Resources could include general pollinator habitat creation principles, species lists, garden designs, information about local native plant nurseries, and any other information that empowers residents to create habitat and will be promoted on the town website and at local events. Residents can find native plant growers by visiting Find a Native Plant Nursery (networkofnature.org)

2.3 Provide plants and/or funds to residents to create pollinator habitat.

One of the most significant barriers to habitat creation is the cost of native plants. This barrier can be removed or lessened by providing plants to residents directly or subsidizing the cost. Collingwood is currently doing this through Canopy Collingwood Bees & Trees program and with support from Pollinate Collingwood.

3.0 Minimize direct and indirect harm to pollinators

In addition to meeting food and shelter needs of pollinators, it is important to minimize harm to pollinators. Routes of harm can be direct, such as exposure to certain chemicals, pests, and pathogens, or indirect, such as invasive species, which can jeopardize food availability for pollinators as they spread and displace native plants. Collingwood is committed to reducing both direct and indirect routes of harm to pollinators.

3.1 Minimize municipal use of insecticides and educate residents about the harm that they can cause.

Insecticides should only be used as a last resort in limited cases, and certainly should not be applied prophylactically. In the case of pollinator gardens, there is absolutely no need for pesticides. Beyond minimizing insecticides at the municipal level, it is important to educate residents about the harmful effects of some insecticides, when they are not necessary, and if being used, how to use them safely.

3.2 Control invasive species that could otherwise threaten native plant communities.

Invasive species can spread fast, displacing native flowering plants that pollinators are dependent on. Collingwood is currently working with local conservation authorities to control phragmites. Consider inclusion of programs to control garlic mustard, glossy buckthorn, Japanese knotweed, and any other invasive species that present a threat to native plant communities.

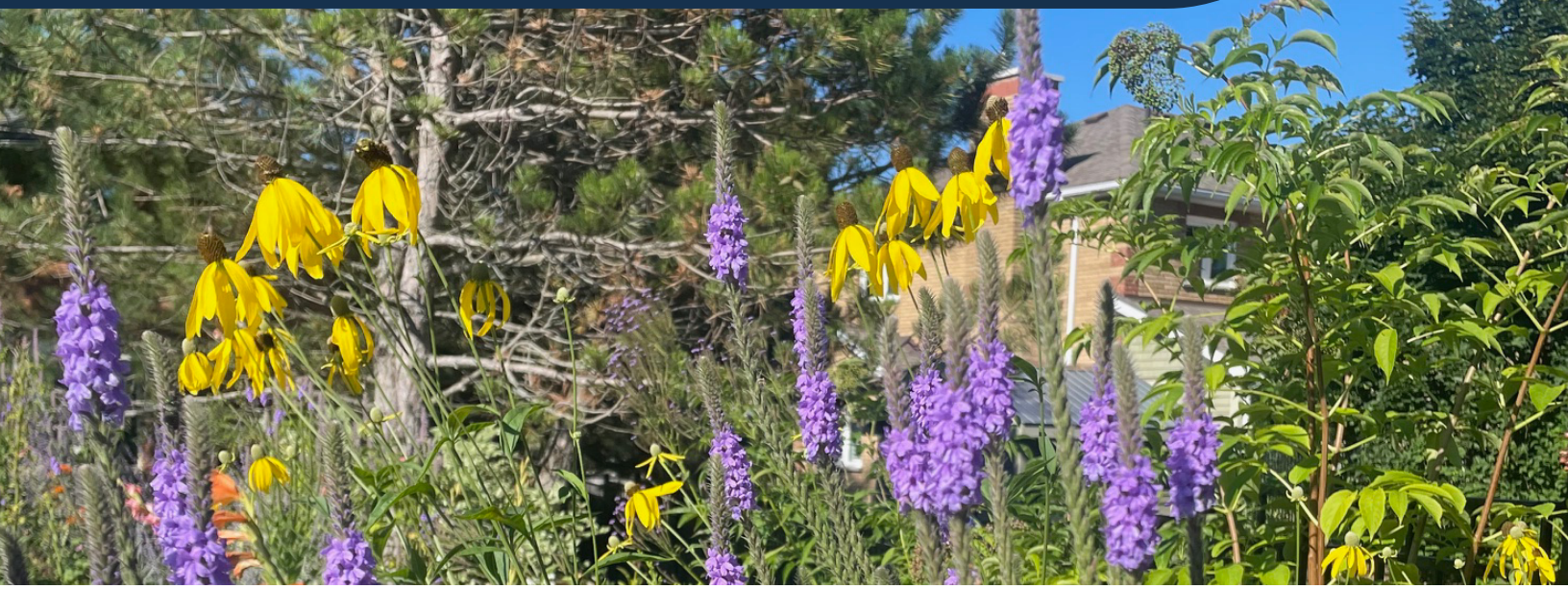
3.3 Educate about responsible honey beekeeping practices.

The European honey bee is an agricultural organism in North America, managed by humans for crop pollination, honey, and other hive products. While honey bees are essential to modern agriculture in North America, they are not of conservation concern. When kept in urban areas, honey bees may negatively impact native pollinator populations by increasing competition for limited floral resources, transferring diseases or pests, and changing floral communities. It is important to communicate to residents that honey beekeeping is not an effective way to protect native pollinators, and that if engaged in, it should be done with caution to limit impacts to native bee populations. Honey beekeeping is not currently permitted in residential areas in the Town of Collingwood.

3.4 Work with Simcoe County to delay yard waste collection and educate residents about the importance of leaving plant material in the fall and early spring.

Pollinators often overwinter in gardens, under leaves, or in hollowed plant stems and dead stalks, to emerge the next year in spring. By removing this plant material in fall and early spring, we risk removing overwintering pollinators with it. It is important to educate residents about the importance of leaving leaves and other plant material until temperatures are consistently above 10 degrees Celsius in spring, and pollinators have safely emerged. Delaying yard waste collection until later in spring can help to reduce risk.

4.0 Educate and engage the Collingwood community



To support pollinators, we need inspired people that appreciate pollinators, understand what pollinators need and are willing to take action to protect them. Municipalities can cultivate a culture of care for pollinators by taking steps to educate and engage community members through websites, signage, and events, such as workshops and community planting events. These efforts can be increased by partnering with nonprofits and local experts that have the knowledge, and respected local groups with the platform to engage a wide range of people. Collingwood is committed to cultivating a culture of care for pollinators by collaborating with local groups to educate and engage residents.

Collaborate with local groups and residents to cultivate a culture of care for pollinators, such as by:

- Hosting habitat planting and maintenance events
- Fostering a community of residents that grow plants to give away to residents
- Initiating and promoting a native plant seed library
- Promoting community science efforts, such as using iNaturalist and Bumble Bee Watch
- Holding an annual pollinator garden contest
- Creating pollinator-themed public art
- Hosting events to celebrate Pollinator Week
- Providing educational information on the Town's website

How to get involved

If you are a Collingwood resident and you want to support pollinators, there is lots that you can do!

One of the best ways you can support pollinators is by planting native plant habitat. Visit Pollinate Collingwood's Plan for Pollinators page for information about planting for pollinators, including plant selection, garden design, and sourcing native plants. Be sure to plant a range of native species that bloom during spring, summer, and fall to support pollinators throughout the entire growing season. Check out Canopy Collingwood Bees & Trees for a rebate on native plants.

If you would like to support pollinators beyond your own yard, consider volunteering with or supporting Pollinate Collingwood. Pollinate Collingwood creates native pollinator habitat throughout Collingwood, and as a habitat steward with Pollinate Collingwood, you can help to ensure that these habitat areas stay healthy, full, and free of invasive species.

Acknowledgements

The Collingwood Pollinator Protection Plan was created by Pollinator Partnership Canada in close collaboration with town staff. The town thanks Pollinate Collingwood for critical feedback on the plan, Collingwood residents for input through the public consultation and survey, and Julie DiLorenzo for generously funding the creation of the plan.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