

RESOLUTION NO. 17-07

RESOLUTION ADOPTING THE MIDDLETOWN SUSTAINABILITY COMMITTEE AND GREEN TEAM RESOLUTION ON ISSUES AND RECOMMENDATIONS CONCERNING POLLINATORS

WHEREAS, the Middletown Sustainability Committee recommends the Town of Middletown support pollinator populations by modeling pollinator friendly practices and by educating its citizens about pollinators, including disseminating information about the ways residents can help, due to currently unsustainable threats to the survival of these pollinators; and

WHEREAS, the Town of Middletown is applauded by the Sustainability Committee for having already adopted many safer, less expensive, and more effective Integrated Pest Management practices for pest control; and

WHEREAS, in order to spare pollinators, the Town and its residents can avoid purchasing “pest-free” plants, which may contain systemic poisons harmful to pollinators; and

WHEREAS, the Town and its residents can boost both pollinator food and habitat by decreasing the size of lawns and increasing more diverse garden areas; and

WHEREAS, the Town and its residents can help many pollinator species by installing plants that provide nectar (food) and habitat.

NOW THEREFORE, BE IT RESOLVED by the Burgess and Commissioners of Middletown that recognizing the importance of pollinators to the well-being of all, the Town of Middletown resolves

to:

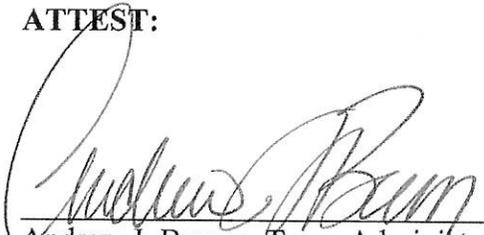
- Continue managing land it owns or operates following best Integrated Pest Management (IPM) practices. The town will continue to avoid the use of pesticides, will purchase and apply only pollinator-safe products, and will continue to seek new pollinator-safe methods of control and management. The town will seek sustainable means of controlling all 'pests' including weeds, insects, and diseases.
- Support efforts to educate the broader community about these actions and stress their importance.
- Urge all businesses, homeowners, and homeowner associations within the jurisdiction to avoid the purchase and application of pesticides and other products hazardous or lethal to pollinators.
- Discourage those within its jurisdiction from the unnecessary cosmetic use of hazardous lawn and garden chemicals and instead encourage and support Integrated Pest Management Practices for control, including appropriate plant selection and maintenance.
- Review its mowing practices in order to raise grass to the IPM recommended 2.25 to 4" height in areas used for recreational purposes and raise grass to the legal 8" height in appropriate non-recreational areas.
- Add fewer exotic non-native plants, which may choke out and replace native plants and/or provide inadequate nutrition for pollinators, and, instead, install more native perennial plants; identify and dedicate potentially pollinator-friendly areas, such as the new Wiles Branch Pollinator Meadow currently under construction; continue creating habitat by replacing unnecessary turf grass with trees, shrubs, subshrubs and herbaceous plants known to shelter pollinators; and leave some areas with brush piles, bare earth patches and fallen trees so that native pollinators can nest.
- Review its bid solicitation documents so as to insert specifications for pesticide materials; assure pesticides, when used, are applied by Maryland Department of Agriculture Certified Applicators¹¹; review existing contracts, service agreements and de-centralized purchase of products to screen for unsafe chemicals; and request IPM in bids and contracts with landscapers, pest-management companies, and other independent contractors engaged by the town.

INTRODUCED ON THE 23rd DAY OF October, 2017

PASSED ON THE 13th DAY OF November, 2017

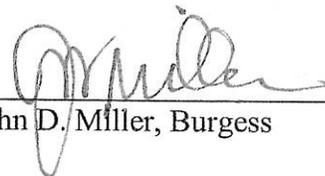
EFFECTIVE DATE: November 13, 2017

ATTEST:



Andrew J. Bowen, Town Administrator

BURGESS AND COMMISSIONERS
OF MIDDLETOWN

By: 

John D. Miller, Burgess

Middletown Sustainability Committee and Green Team
A Resolution on Issues and Recommendations Concerning Pollinators

*"The consequence of a dying bee population impacts man at the highest levels on our food chain, posing an enormously grave threat to human survival. . . Mankind will not survive the honey bees' disappearance for more than five years."*¹

Albert Einstein

GLOSSARY

- Cosmetic Pesticide Use - pesticides used for non-essential applications to alter the appearance of landscape features such as lawns, trees, and gardens.
- Essential Pesticide Use - pesticides used for serious infestations, e.g, rampant invasive species, health concerns, poisonous, structural damage (termites, etc.),
- IPM (Integrated Pest Management) - a scientific approach to plant management based on prevention, monitoring, and other techniques that limit the use of pesticides to essential use.
- Pesticide - a broad term that refers to chemicals used to kill insects, plants and fungi
- Pollinator - an animal that moves pollen in a way that enables plants to reproduce, i.e., pollinators cause plants to make fruit or seeds.

Approximately 87.5 percent of the earth's flowering plants depend on pollinators such as butterflies, moths, bees, beetles, other insects, and some birds and mammals.² We humans depend on pollinators for one in every three bites of food we consume. Due to currently unsustainable threats to the survival of these pollinators, the Middletown Sustainability Committee recommends the town of Middletown support pollinator populations by modeling pollinator friendly practices, many of which the town already practices, and by educating its citizens about pollinators, including disseminating information about ways we can help.

Global attention focussed on pollinators when alarming honey bee losses were first noted in 2006. (Because honey bees are an agricultural commodity, they are more easily counted than many other pollinators). In 2017, we continue to see the whole earth's bee population shrink. A recent study of 1437 native (North American) bee species found more than half are in decline, with one in four slipping toward extinction.³ The UN's 2016 IPBES report predicts that globally more than 40% of insect pollinators - particularly bees and butterflies - will soon face extinction.⁴ Many of Maryland's important agricultural crops, valued at \$2.3 billion (2012), depend on

¹<http://www.globalresearch.ca/death-and-extinction-of-the-bees/5375684#sthash.A2Xk8lHF.dpu>

² <http://onlinelibrary.wiley.com/doi/10.1111/j.1600-0706.2010.18644.x/abstract>

³ http://www.biologicaldiversity.org/campaigns/native_pollinators/pdfs/Pollinators_in_Peril.pdf

⁴ <https://www.ipbes.net/article/press-release-pollinators-vital-our-food-supply-under-threat>

pollination for their productivity. Last year, our state suffered the fifth highest honey bee loss in the United States, at a huge 60.9%.⁵

The iconic North American migrating Monarch butterfly population is also suffering a precipitous decline. Hundreds of other native pollinators species, although more difficult to quantify, are known to be disappearing as well. Many land birds rely on pollinator larvae to feed their young. U.S. breeding land bird populations have dropped by over one billion individuals since 1970.⁶

CAUSES

Suspected causes for declines in pollinator populations include toxic chemicals, habitat loss, changes in weather patterns (climate change), diseases, and parasites. Modern gardens, farms, and lawns are often treated with fungicides, insecticides, and herbicides which are top suspects in recent catastrophic pollinator loss. Decorative exotic (non-native) landscape plants, popular in our gardens, replace native plants and often provide little or no nutrition or habitat for pollinators. Some are systemically pre-treated with chemicals lethal to insect pollinators..

INTEGRATED PEST MANAGEMENT (IPM)

Integrated Pest Management is an effective and safe scientific approach to pest management based on prevention, pest identification, monitoring, use of safe alternatives to pesticides, and the use of pesticides only when appropriate. The UN's [Food and Agriculture Organisation](#) says that by considering the best techniques and integrating controls, interventions “discourage the development of pest populations and keep pesticides and other interventions to levels that are economically justified.” These controls also “reduce or minimize risks to human health and the environment.”⁷

Middletown’s Sustainability Committee applauds the town of Middletown for having already adopted many safer, less expensive, and more effective Integrated Pest Management (IPM) practices for pest control. IPM on the town’s land uses a variety of effective natural control techniques that reduce risks to human, pet, and pollinator populations.

ROLE OF HABITAT LOSS

Roadways, chemically treated lawns, development, and agricultural mono-cropping contribute to habitat loss, a critical factor in pollinator disappearance. Turf grass is commonly mowed too short to provide habitat, and, when cultivated as a monocrop (one species only, unmixed with other low-growing and flowering species), provides no nectar to feed pollinators either. Seventy percent of native bee species are ground nesters, unable to nest in short, dense turf or thick mulch. By decreasing the size of lawns and increasing more diverse garden areas, the town of Middletown and its residents can boost both pollinator food and habitat. A number of

⁵<http://www.baltimoresun.com/features/green/blog/bs-md-honeybee-decline-20150514-story.htm>

⁶<http://www.partnersinflight.org/wp-content/uploads/2016/08/pif-continental-plan-final-spread-single.pdf>

⁷ <http://www.fao.org/agriculture/crops/core-themes/theme/pests/ipm/en/>

organizations provide easy-to-use planting guides. The Xerces Society, Pollinator Partnership, and the USDA have excellent, regional plant lists broken down by season. In accordance with IPM guidelines, maintaining a grass height of at least 2.25" to 4" encourages root growth, shades out weeds, increases water retention, and protects habitat for some pollinator species.

ROLE OF CHEMICALS

Commonly used fungicides, insecticides, and herbicides are top suspects in catastrophic butterfly and bee losses. Bodies of honey bees recovered from collapsing colonies in the U.S. are found to contain large amounts of toxic chemicals frequently used by home gardeners and farmers.

Neonicotinoids (neonics) are a relatively new class of insecticides. They affect the central nervous system of insects, resulting in paralysis and death. They are absorbed into every cell of a treated plant, making every part of the plant toxic. Neonicotinoids include imidacloprid, acetamiprid, clothianidin, dinotefuran, nithiazine, thiacloprid and thiamethoxam. Ornamental plants may be systemically treated with neonics, in which case the whole plant is toxic. Visits to neonic pre-treated plants can be lethal to butterflies (including monarchs), beetles, bees, and other insects. Ornamental garden plants pretreated with neonic pesticides may far exceed lethal chemical amounts recommended for agricultural application.⁸ These chemicals should be reduced or avoided altogether, especially for cosmetic application.

Cosmetic use of lawn chemicals is the use of chemicals on properties simply for appearance, rather than for reasons commonly deemed necessary. Control is typically considered necessary for invasions of noxious growths such as poison ivy, poison sumac, etc.; for highly invasive weeds such as Johnson Grass, kudzu, mile-a-minute, etc., and for venomous or disease carrying insects.

The Sustainability Committee notes with pleasure that the town of Middletown does not use toxic chemicals cosmetically on most of its park properties. In order to spare pollinators, the town and its residents can also avoid purchasing "pest-free" plants, which may contain systemic poisons harmful to pollinators.

The Maryland legislature passed the Pollinator Protection Act of 2016 to reduce the use of 'neonics,' neonicotinoid pesticides. Neonics are strongly implicated in pollinator population losses. Beginning in 2018, stores cannot legally sell neonics, except to those with certification and proof of necessity. Homeowners who possess banned or unwanted compounds can drop these chemicals off during annual county-wide Hazardous Waste Collection events.

PLANT SELECTION

The Sustainability Committee is pleased to see the town installing native trees and shrubs. By decreasing the size of mowed lawns and increasing more diverse garden areas, Middletown

⁸ <http://ento.psu.edu/publications/are-neonicotinoids-killing-bees>

and its residents can add more native plants, which provide both pollinator food and habitat, reducing the need for costly 'treatment.' The town of Middletown and its residents can help many pollinator species by installing plants that provide nectar (food) and habitat. By choosing selective native plants with 'built-in' pest control and by using more informed landscaping practices, local lawns and gardens can encourage natural pest controls (IPM) with little effort.

IN CONCLUSION

Local pollinator losses can be reversed when communities plant safe, chemical-free native plants which thrive naturally without requiring expensive treatments with hazardous chemicals. The use of lawn and garden chemicals solely for cosmetic purposes should be avoided. Integrated pest management (IPM) practices in establishing and maintaining properties are encouraged. Responsible hobby bee-keeping, as directed by and in compliance with Maryland Department of Agriculture⁹ and Frederick County¹⁰ codes, can help the declining honey bee population. Gentle cultivation and intentional plantings can protect many small bees living in our backyards.

Middletown's Sustainability Committee applauds the town's efforts in practicing sustainable land management. Residents are urged to learn as much as they can about the unsustainable plight of our pollinating species and to pursue the many simple ways to help. The Middletown Green Team and Sustainability Committee would like to share with the community more detailed information about how to make the transition to sustainable garden and lawn care practices.

NOW, THEREFORE, RECOGNIZING THE IMPORTANCE OF POLLINATORS TO THE WELL-BEING OF ALL, THE TOWN OF MIDDLETOWN RESOLVES TO:

- Continue managing land it owns or operates following best Integrated Pest Management (IPM) practices. The town will continue to avoid the use of pesticides, will purchase and apply only pollinator-safe products, and will continue to seek new pollinator-safe methods of control and management. The town will seek sustainable means of controlling all 'pests' including weeds, insects, and diseases.
- Support efforts to educate the broader community about these actions and stress their importance.
- Urge all businesses, homeowners, and homeowner associations within the jurisdiction to avoid the purchase and application of pesticides and other products hazardous or lethal to pollinators.
- Discourage those within its jurisdiction from the unnecessary cosmetic use of hazardous lawn and garden chemicals and instead encourage and support Integrated Pest

⁹ http://mda.maryland.gov/plants-pests/Pages/apiary_inspection.aspx

¹⁰ <http://frederickbees.org/wp-content/uploads/2012/12/ordinance.pdf>

Management Practices for control, including appropriate plant selection and maintenance.

- Review its mowing practices in order to raise grass to the IPM recommended 2.25 to 4" height in areas used for recreational purposes and raise grass to the legal 8" height in appropriate non-recreational areas.
- Add fewer exotic non-native plants, which may choke out and replace native plants and/or provide inadequate nutrition for pollinators, and, instead, install more native perennial plants; identify and dedicate potentially pollinator-friendly areas, such as the new Wiles Branch Pollinator Meadow currently under construction; continue creating habitat by replacing unnecessary turf grass with trees, shrubs, subshrubs and herbaceous plants known to shelter pollinators; and leave some areas with brush piles, bare earth patches and fallen trees so that native pollinators can nest.
- Review its bid solicitation documents so as to insert specifications for pesticide materials; assure pesticides, when used, are applied by Maryland Department of Agriculture Certified Applicators¹¹; review existing contracts, service agreements and de-centralized purchase of products to screen for unsafe chemicals; and request IPM in bids and contracts with landscapers, pest-management companies, and other independent contractors engaged by the town.

ADDITIONAL RESOURCES

IPBES (2016): S.G. Potts, V. L. Imperatriz-Fonseca, H. T. Ngo, J. C. Biesmeijer, T. D. Breeze, L. V. Dicks, L. A. Garibaldi, R. Hill, J. Settele, A. J. Vanbergen, M. A. Aizen, S. A. Cunningham, C. Eardley, B. M. Freitas, N. Gallai, P. G. Kevan, A. Kovács-Hostyánszki, P. K. Kwapong, J. Li, X. Li, D. J. Martins, G. Nates-Parra, J. S. Pettis, R. Rader, and B. F. Viana (eds.). Secretariat of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, Bonn, Germany. 36 pages. *Summary for policymakers of the assessment report of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services on pollinators, pollination and food production.*

Pollinator Partnership and NAPPC. *Selecting Plants for Pollinators: A Regional Guide for Farmers, Land Managers and Farmers in the Eastern Broadleaf Forest Oceanic Province*; <http://pollinator.org/assets/generalFiles/EasternBroadleafOceanicrx20FINAL.pdf>

USDA Natural Resources Conservation Service, *Plants for Pollinators* (https://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/plantsanimals/pollinate/?cid=NRC_S143_022326)

¹¹http://mda.maryland.gov/plants-pests/Pages/pesticide_regulation.aspx

Xerces Society for Invertebrate Conservation. *Xerces Model Policy to Protect Pollinators from Harmful Pesticide Exposures*, <https://xerces.org/pesticide-local-policy/>