CULTIVATING POLLINATOR FRIENDLY LANDSCAPES

Program Design for NYS 2162: The New York State Pollinator Promotion Act of 2025

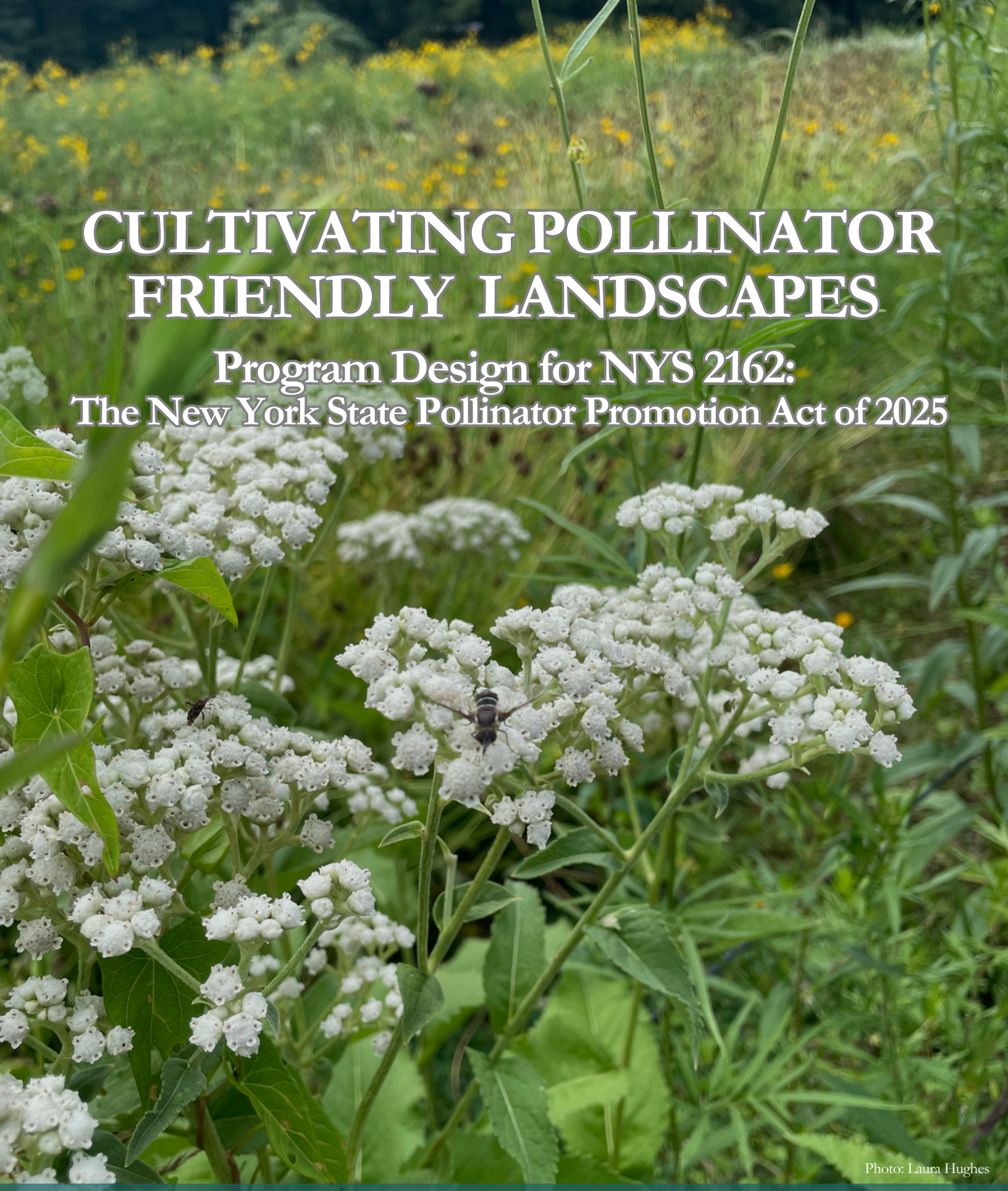

Photo: Laura Hughes

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WORKSHOP IN APPLIED EARTH SYSTEMS MANAGEMENT

Photo: Laura Hughes

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Table of Contents

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Executive Summary

Pollinators are the unsung heroes of Earth's ecosystems–they enable the reproduction of flowering plants, support countless other species, sustain food webs, support biodiversity, and provide the foundation for human agricultural systems. In New York State alone, wild pollination services are worth over $400 million each year, yet the species that provide them are quietly in crisis.[1]

Across the globe, insect populations are declining at unprecedented rates as a result of habitat loss, pesticide use, climate change, and harmful land management practices.[2] New York is no exception: a 2022 study found that endemic pollinator species statewide have declined between 38 and 60 percent since 1980.[3] Without insect pollination, all terrestrial ecosystems are at risk of collapse. Despite these alarming trends, data on pollinator health remain limited, and public understanding of insects' ecological importance is low. This gap in research, monitoring, and awareness makes it difficult for policymakers and land managers to meaningfully address pollinator decline.

The 2025 New York State Pollinator Promotion Act (PPA) proposes statewide guidance for pollinator-friendly land management across public lands, schools, and highway corridors, to reverse these trends. The PPA amends New York's Environmental Conservation, Education, and Highway Laws to encourage native plantings, reduce pesticide use, reform mowing schedules, and expand public education. However, the bill's impact is constrained. Most provisions are voluntary, rely on third-party implementation, and do not address the major drivers of decline, such as agricultural pesticide use or the persistent lack of scientific data.

To ensure effective implementation of the PPA, our team proposes a two-pronged program. First, the establishment of a statewide Pollinator-Friendly Land Management (PFLM) Registration, Certification, and Monitoring Program through the Department of Environmental Conservation (DEC). Second, the program will expand funding eligibility for the existing Climate Smart Communities (CSC) Grant Program to include climate-resilient, pollinator-supportive land projects.

Our program creates a structured, transparent system that:

- Certifies lands managed according to DEC pollinator-friendly standards
- Expands access to state funding for pollinator habitat projects through the CSC program
- Provides municipalities and land managers with technical assistance, templates, and training
- Establishes statewide monitoring and reporting systems to strengthen scientific data on pollinator populations
- Promotes public awareness through signage, outreach, and a public registry of certified lands and funded projects

This report focuses on the Year 1 implementation of the program, which builds internal capacity, drafts DEC guidelines, develops a public-facing tracking platform, prepares application materials, launches outreach, and opens certification and grant portals. This approach leverages existing DEC infrastructure, minimizes new staffing needs, and centers inter-agency collaboration.

Program objectives include the establishment of a minimum of 50 new acres of pollinator-friendly habitat annually, improved statewide pollinator data availability, expanded education and public engagement, and incentivized continued participation through public recognition and funding access.

While long-term challenges remain, especially those related to pesticides, agricultural land management, and data scarcity, this program lays essential groundwork for expanding pollinator habitat, strengthening scientific understanding, and fostering public stewardship across the state. By integrating statewide standards with local autonomy and robust technical support, New York can transform fragmented landscapes into connected corridors of pollinator-friendly habitat and lead the way in protecting one of its most essential natural resources.

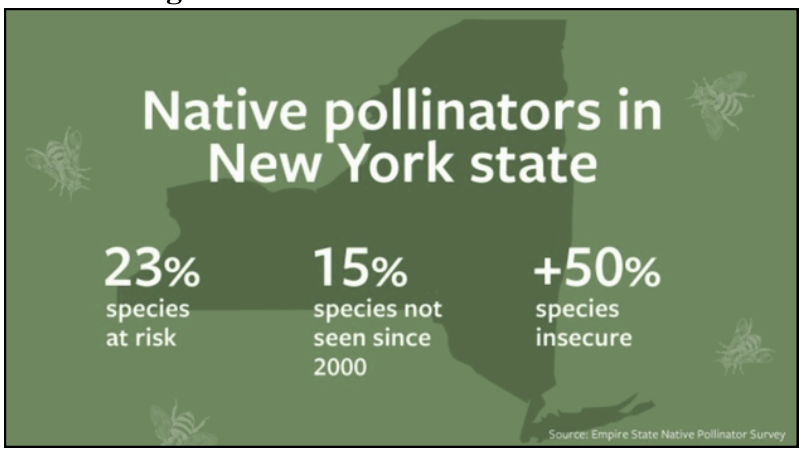
Introduction

Photo: Laura Hughes

The Importance of Pollinators

Pollinators are defined as any animal that transfers pollen between plants, enabling fertilization and the production of fruits and seeds.[4] Pollinators are keystone species, meaning they are foundational and crucial for the functioning of most natural ecosystems. Many flowering plants cannot reproduce without the help of foraging pollinators.[5] According to the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) report on Pollinators, Pollination, and Food Production, as much as 90% of all flowering plants rely on animal pollination to reproduce.[6] Pollinators' vital role in plant reproduction means they are key to both the evolution and maintenance of global plant diversity and national food security.[7] Approximately 75% of global food crops rely on pollination services, a service valued at up to $577 billion per year.[8,9] In New York, more than one-fifth of the state is farmland.[10]

Fig. 1: NYS Pollinator Declines since 1980



The Problem

Pollinator Decline in New York State

Human activity has led to massive losses in natural habitat, and threaten wildlife populations globally. Insects, particularly pollinators, are disproportionately impacted by habitat destruction, featuring a rate of extinction eight times higher than that of mammals, birds, and reptiles.[11] The result has been an approximate 41% decline in global insect populations over the last 40 years, with many pollinating taxa showing even faster rates of decline.[12] Declines in pollinator populations can be largely attributed to habitat fragmentation, loss of native/host plants, and land management practices like mowing and pesticide usage, which reduce resource availability and disrupt natural life cycles. In New York State, a three-year survey found that between 38 and 60% of monitored pollinator populations are in decline.[13] Furthermore, relatively limited research into pollinator health and abundance suggests these figures might underestimate the total decline of native pollinators within the state.

Case Study:
The Decline of the Golden Digger Wasp

An illustrative example of the threats of habitat loss, pesticide use, and harmful land management practices is the population decline of the Golden Digger Wasp. The Golden Digger Wasp (*Sphex ichneumoneus*), a pollinator wasp species common in NYS, is considered to be a specialist species; it is very selective in what flora it gathers nectar from.*13*14 Examples of flowers that these types of wasps pollinate include beardtongues (*Penstemon digitalis)*, borage (*Borago officinalis*) and tansy (*Tanacetum vulgare*). Certain flora species have a mutualism relationship with pollinator wasps.[15] The pollinator wasp gathers nectar from the flower while the flower gets pollinated in the process, benefiting both parties. A specialist pollinator species can become less resilient to habitat destruction if their primary resource is destroyed.[16] Aggravating factors to the pollinator wasps in NYS from urban development, urban transport, agriculture and rapid use of pesticides within agriculture can be directly related to its population decline. While the Golden Digger Wasp is one case of a declining pollinator species, these aggravating factors are interconnected and may be impacting thousands of other pollinator species.

Photo: Kris Kristovich

Lack of Data

Despite reports of alarming declines, there is a significant dearth of reliable, long-term data about insect populations. Insects are incredibly diverse and are found in nearly every ecosystem on the planet, yet historically, they have been underrepresented in scientific research.[17] Attention has typically focused on insect species with aesthetic appeal or agricultural value such as the monarch butterfly and honeybees, respectively. While recent discussions about an 'Insect Apocalypse' have sparked new research initiatives into insect populations, data is still critically lacking. With limited data on species behavior, population dynamics, etc, it is difficult to aid a population when data remains scarce.[18] Consistent, long-term monitoring is essential to understand population trends and how human activity impacts these species.

Lack of Public Knowledge & Education

The lack of scientific research and data is a reflection of and an additional hindrance to the public attention/awareness of the importance of pollinators. While the data deficiency contributes to the lack of publicity, the underlying issue is that people have a general distaste for most insects. The widespread loss of pollinator habitat, harmful land management practices, and a lack of scientific study have been accelerated by a general human aversion to insects.[19] Insects, especially in large quantities, are undesirable to the human population in urbanized areas. Rather than vital parts of the ecosystem, they are frequently seen as pests, and their quick removal is conducted through insecticides, or other harsh killing mechanisms. Despite reports of alarming declines, there is a significant dearth of reliable, long-term data about insect populations. In addition to a lack of data, pesticides were applied 329,438 times by New York City agencies in 2023.[20] Although the bill aims to promote insect education, the existing lack of insect awareness may make it difficult for the bill to pass Congress.

Given the limited but concerning evidence surrounding pollinator health and abundance within New York, there's been a growing interest in proposing legislation to support pollinators by limiting many of the threats they face. Key threats include frequent mowing practices, pesticide usage, planting of non-native plants, and little education regarding pollinators and the services they provide.

Photo: Laura Hughes

New York S2162: The Pollinator Promotion Act

Photo: Laura Hughes

Legislative Overview

NY Senate Bill S2162, or the 2025 Pollinator Promotion Act (PPA) of 2025, supports native pollinator health by amending existing NYSlaws. The latest iteration of the bill was referred to the Senate Environmental Conservation Committee in January 2025 alongside its companion bill, which was referred to the State Assembly Environmental Conservation Committee in March 2025. As of November 2025, both bills await committee votes. Once enacted, they would take effect 90 days later. Together, the amendments aim to create a uniform, statewide standard for how public agencies engage with, plan, and manage land while being conscious of pollinators. The PPA is focused on three key priorities: pollinator-friendly management of state-owned lands, development of pollinator-friendly landscaping guidelines for public schools and other educational institutions, and increased education and on-site signage to improve public awareness. To address the aforementioned priorities, the bill amends New York's current Environmental Conservation Law, Education Law, and Highway Law.

Education

Amendments to the NY Education Law direct each State University of New York (SUNY) campus to consider:

- Development of a standing committee of students, faculty, and staff (grounds/landscaping) to evaluate and recommend pollinator-friendly habitat
- Increased use of native plants on campus
- Development of an integrated pest management program to reduce pesticide use in favor of non-chemical methods
- Establishment of yearly community service-learning habitat projects

Additionally, the bill directs the State Education Department, alongside the DEC, to create non-binding guidelines for pollinator-friendly landscaping and groundskeeping on school grounds, to prioritize native plants and PFLM practices, and to reduce pesticide use as much as possible. In concert, the SUNY provision and school ground requirements seek to use educational institutions as test and demonstration sites for pollinator-friendly land-use and awareness for students, staff, and surrounding communities.

Highways

Amendments to the Highway Law expand the state's current mowing practices from applying exclusively to medians to including highway verges —strips of land adjacent to the road—as well, increasing the amount of native, pollinator-friendly plant species in these areas adjacent to highways. Under the new provisions, the Commissioner of Transportation and the DEC would create policies and procedure that guide a pollinator-friendly

highway system. They would also provide technical assistance to municipalities and local governments seeking to increase pollinator-friendly plantings, and would adjust maintenance services to minimize cutting highway green space while still adhering to safety standards for road users. Ultimately, the intent is to reduce habitat fragmentation caused by highways by integrating PFLM into highways, medians, and verges. This would turn previously uninhabitable land into continuous habitat corridors, while maintaining visibility and clearance for drivers and road crews.

Pollinator Friendly Land Mangement

The Environmental Conservation Law amendments encourage pollinator-friendly landscaping practices on public lands, specifically increased native plantings, reduced chemical and pesticide use, and changes to harmful mowing practices and schedules. Such changes would reroute maintenance decisions away from aesthetic mowing and planting to create contiguous habitats that provide food and shelter for native pollinators. The bill further encourages incorporating educational signage that explains the importance of pollinator-friendly spaces to raise public awareness.

The bill's final amendment to the Conservation Law requires that climate-resilient landscaping projects, such as connecting green spaces, using native species, and planting for pollinators, qualify for state climate action and mitigation grant funding.

Key Limitations

The potential impact of the PPA is primarily limited by the bill's lack of mandatory provisions and absence of measures addressing pollinator habitat disruption caused by agricultural land and pesticide use.

There are four binding actions within the PPA. First is the expansion of the Climate Smart Communities grant program to include pollinator-friendly projects. This means that municipalities would now be able to receive funding for initiatives that expand pollinator habitat. Second, the PPA would require the creation of guidelines for pollinator-friendly adaptation of school campuses. However, the implementation of these guidelines for individual schools would be voluntary. Third, the Commissioner of the DOT would extend the encouraged use of pollinator-friendly policies and procedures to verges on state highways. Fourth, lands owned and maintained by the state shall adopt pollinator-friendly management practices.

However, each mandatory provision is dependent on the cooperative actions of a third party. While the grant scheme for municipalities incentivizes pollinator-friendly management adaptation, it is not guaranteed, nor is the adoption of the guidelines for schools or procedures for highways. This limitation is particularly exemplified by the wording of the proposed amendment to the conservation law, which concludes by stating that "This paragraph shall not apply to any lands where practices are deemed impractical by the department or other appropriate authority, that have a dedicated use incompatible [...]" with the proposed amendments.[21] The notions of impractical and appropriate authority are unclear and thus leave interpretation and compliance up to individual land managers.

Still, local actors may benefit from the knowledge and direction given through the latter, but actual enactment remains a hurdle as additional costs for staffing, procurement of equipment, and implementation are not covered by the bill and are not guaranteed without further motivation to follow the guidelines. As for the encouraged pollinator-friendly initiatives on SUNY campuses, no guidelines or assistance are foreseen.

The second main limitation of the Pollinator Promotion Act is that it does not tackle some of the main drivers of pollinator decline. Agricultural practices like mono-cropping and pesticides, as well as the significant data and research gap about pollinators, are not addressed by this bill. These are missed opportunities. Better information could inform more specific and effective protection of pollinator populations. For instance, altering traditional agricultural practices in NYS would relieve some of the pressures on pollinators in rural areas and allow for spaces of population regeneration.

Program Design & Implementation

Photo: Laura Hughes

Guiding Principles

After an analysis of the Pollinator Promotion Act, the proposed programs for bill implementation include: developing and implementing guidelines for school ground maintenance, prioritizing land management and funding access, and developing SUNY pollinator-friendly campuses. To determine which of these options to utilize, the team focused on provisions that were both enforceable and included a funding mechanism. Only one provision of the PPA is at least partially mandatory with funding available, which makes additional categories, relevant to pollinators, a grant-eligible category under New York State's Climate Smart Communities Grant program. The PPA amends the grant eligibility to include "climate-resilient landscaping and land maintenance and land maintenance such as connecting green spaces, use of native species, and pollinator-friendly planting." The team chose to focus on this, leading us to a program focused on land management and funding access

In order to continue compliance with the mandatory and funded aspects of this provision, the team proposed the development of a certification and grant program. The grant program utilizes preexisting climate mitigation and resilience funding categories, both ensuring funding for an aspect of this program and complying with the mandatory provision stated above. The overarching goal of this program is to allow communities and land owners to develop their own Pollinator Friendly Land Management (PFLM) projects through certificate and grant programs. Stakeholders understand the needs of their communities best and are best equipped to develop programs that serve their communities' needs. Community-driven projects also reduce the potential costs of oversight and project development that would otherwise be incurred by the DEC. Furthermore, this program design takes advantage of existing interests in pollinator habitat to transition New York State lands to PFLM.

Program Overview

Our proposed plan under the PPA is a dual program that establishes a Registration, Certification, and Monitoring (RCM) Platform for lands following DEC-aligned pollinator-friendly land management (PFLM) practices and expands an existing DEC grant program to include eligibility for pollinator-friendly habitat projects. Under the Pollinator Promotion Act, PFLM requires the implementation of practices such as planting native species, limiting or eliminating mowing, and reducing pesticide usage. The RCM platform creates a transparent mechanism to recognize and track lands managed for pollinator health while also providing a framework for accountability. The grant expansion program incentivizes public and private projects by providing a pathway for funding. Both branches of the program supply land managers with technical assistance and training, and establish a mechanism through which the state can track, report on, and monitor projects.

This program will follow the same eligibility guidelines used by the DEC for the pre-existing Climate Smart Communities (CSC) Grant Program, which provides funding for municipalities in New York State to implement climate action projects.[23] The CSC program allows public and private landowners to participate as partners, though an eligible municipality must serve as the lead applicant. Grants require a local cost match, and allowable expenses include staff salaries, contractual services, municipal travel, equipment, supplies, and materials. Any infrastructure funded through the program must remain under original ownership. Projects must be completed within five years of the contract start date, and the program operates on a reimbursement basis, with regular progress and metrics reporting required. Applicants working on property they do not own must secure a Climate Change Mitigation Easement (CCME) with the landowner.[24] The minimum requirements include that all state-owned and private lands are eligible, no funding provided two acres of land required, and trainings and technical assistance provided during as well as after certification process

We propose this program because it allows the DEC to set clear parameters for pollinator-friendly projects and green spaces; incentivize action through grant eligibility and public recognition (e.g., promoting certified municipalities as leaders in green practices); centralize expertise and technical assistance for participating entities; and create a robust system for monitoring and reporting. Such a system not only supports the Pollinator Promotion Act's goals but also contributes valuable data for scientific research on pollinator health and habitat across the state, all while leaving project-specific decisions to the discretion of local land managers and executives.

Photo: Michelle Cimino

Photo: Hannah Bates

Case Study:
Pollinator Conservation in Maryland

In 2017, the Maryland Department of Natural Resources (DNR) prepared and implemented the "Pollinator Habitat Plan".[22] This plan stands out as a leader in its field, and some aspects of this proposed program design were modeled after this plan. The DNR manages 480,000 acres in the state, and outlines methods to transform each type of land area (forests, parks, wildlife management areas) into pollinator-friendly lands. Since 2017, the department has established pollinator gardens, edge habitat for pollinators, and placed priority on creating contiguous, large-scale lands for pollinator habitat (over 2 acres). The department conducts frequent pollinator surveys to better understand the impact of this work and has posted signage throughout its lands to educate the public on the necessity of this work. The program lists its major challenges as: lack of resources to maintain habitats for the 3-5 years it takes for the ecosystem to fully develop, and lack of technical expertise and funding. Learning from this program, the outlined program design draws from the successes of Maryland's program and also makes strategic decisions to remedy the major challenges it has faced.

Program Objectives

50 Acres	Bolster pollinator data and provide	Increase public awareness	Motivate PFLM lands
minimum PFLM added from grant projects	opportunities for research	of pollinator significance with signage	via funding, public certification and grantee registry

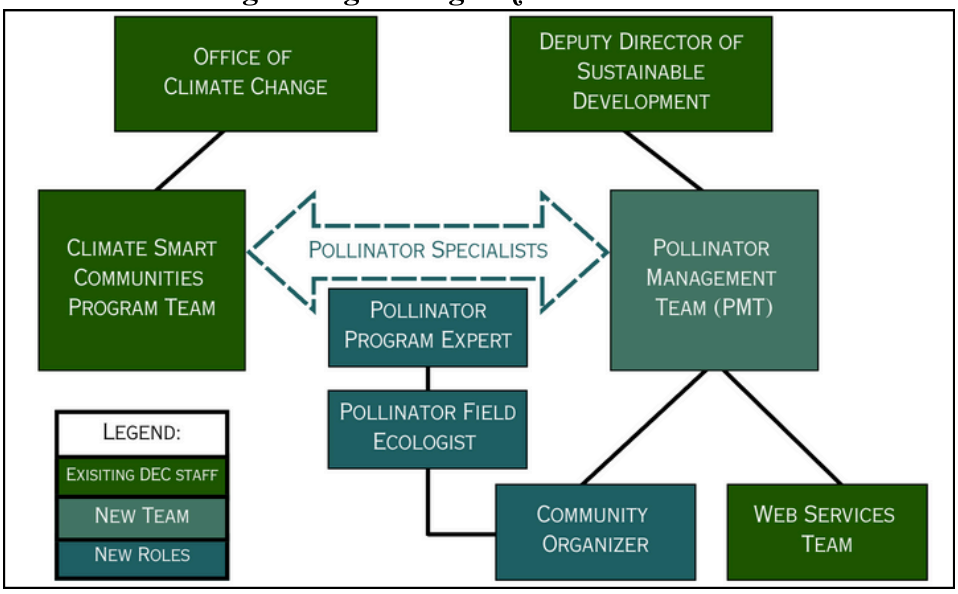
A minimum of 50 acres of PFLM lands will be established each year, based on acreage requirements for the grant program (5 acres) and the number of grants given out annually (10). An emphasis will be placed on contiguous land restoration to maximize benefit to pollinators.[25] The DEC should maintain annual cycles of grants, certificates, training, and technical assistance programs. The DEC will also have the authority to adjust the program as they see fit after the first full year of program implementation.

In addition to the facilitation of the creation of pollinator friendly habitat, the certification and grant program aims to bolster available data on pollinators. Insects are significantly under-researched, despite being critical for human development and ecological survival.[26] Through this program, the DEC will build habitat that can support future pollinator research. We recommend partnerships with ecology departments of public and private universities in NYS, including SUNY ESF and Cornell University for this work. Projects are completed along communities and land managers, helping in increasing public awareness of PFLM techniques and the necessity of these creatures. The final program objective is that, through the availability of this information on the DEC website and the planned increase in prominence of PFLM lands in New York, the public will have more opportunities to be educated about pollinators, their significance, and how best to protect them.

Organizational Structure

The program design established above will be run entirely within New York State's Department of Environmental Conservation. The design and management of the certification program will be managed by the Deputy Director of Sustainable Development. The Climate Smart Communities grant program, amended by our program design, will maintain its current structure within the DEC.

Fig. 2: Program Organizational Chart



Pollinator Management Team

The majority of tasks necessary for the implementation of this program such as the guideline creation, application review, site analysis, and community outreach will be completed by the new Pollinator Management Team (PMT). This project team will be a taskforce composed of around 10 existing employees from across the DEC (~3,000 employees).[27] Given an anticipated weekly time commitment of 2-4 hours, this plan will reallocate about 0.025% of the Department's current person-hours.

The structure of the PMT minimizes the need for new salaries and training. This is caused by two factors: the quick turnaround time between the start of the program and the implementation of the first projects, and a lack of funding mechanisms within the PPA.

Pollinator Specialists

Our program design advocates for the addition of two new full-time roles of the Pollinator Specialists– one which would manage the PMT, and the other a field-ecologist who would be able to assist on-site. Developing a pollinator-friendly land management program requires a deep scientific understanding of pollinator needs and services. The two research scientists who will be brought on as Pollinator Specialists are necessary for effective guideline creation, site analysis, and technical assistance. They will also lead internal and community pollinator education efforts.

While both Pollinator Specialists are intended to work together across all role mandates, their day-to-day duties will differ as a way to develop individual expertise and minimize redundancy. The senior specialist will mostly work out of the DEC's main office in Albany. Being the more experienced hire, they will have final authority on the scientific aspects of Certification/Grant guidelines and internal trainings. The junior Pollinator Specialist will take the lead in field work. They will be the first expert sent to project sites, leading technical assistance and monitoring efforts. As a result, this role is anticipated to incur more travel expenses.

Other Staff

Rather than expanding the staffing of the CSC, our program design foresees training for CSC team members led by the PMT and senior pollinator specialist. The web development also requires no further recruitment, as the current DEC designer will be able to develop additional web pages based on the CSC platform.

The Climate Smart Communities (CSC) programalready has sufficient staff, currently structured under the Office of Climate Change within the DEC. Our program design does not require any new hires. Instead, current CSC team members will undergo trainings led by the Pollinator Management Team and the senior Pollinator Specialist. Additionally, there are no further staff needs for web development as the current DEC designer should be able to develop the online application for the certification program.

Photo: Laura Hughes

Year 1 Program Implementation

Calendar Design Approach

The dual program would likely take more than a year to fully implement, but the first year will lay critical groundwork for long-term pollinator protection. Some recommended components—such as training programs, technical assistance, and monitoring systems—would require significant time, funding, and expertise to develop, and could eventually be expanded into standalone programs. The following section concentrates on the program implementation throughout its first year. We designed our calendar with a fiscal quarter model. Within these fiscal quarters, we define:

1) **Phase**, the major goals being accomplished
2) **Description**, detailed text describing each phase;
3) **Task Leader**, party responsible for completing the phase.

The overall goal of the Year 1 Primary Calendar is "setting the stage," which involves four major phases: prepare, develop, implement and announce. The NYS DEC follows a different method of fiscal quarters; quarter 1 is April to June and quarter 4 is January to March. For simplicity purposes, we have decided to start quarter 1 from October to December of the previous year. This would align with the NYS DEC's quarter 3. These four phases will be seen within the fiscal quarters of the calendar. We can break these pillars down into a brief description: the first two quarters are focusing on preparing: hiring, constructing frameworks and building capacity, the last two quarters are developing and implementing programs and tracking mechanisms and then the last third of the year is focusing on launching programs and announcing future projects.

Phase 1: Prepare	Phase 2: Develop	Phase 3: Implement	Phase 4: Announce

Phase 1: October to June (Q0-Q2)

Fig. 3: Phase 1 Gantt Chart

	DESCRIPTION	TASK LEADER	Q0			Q1			Q2		
			OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
1.1	Review strategies improving pollinator health practices	Department of Environemntal Conservation (DEC)									
1.2	Designate Deputy Commissioner of Sustainable Development Department as surpervisor for the program's creation and operation	DEC									
1.3	Undergo vetting process and hire for two pollinator specialists	Deputy Commissioner, Sustainable Development									
1.4	Begin hiring for Community Outreach Organizer	Deputy Commissioner, Sustainable Development									
1.5	Pollinator specialists begin working fulltime	Pollinator Management Team (PMT)									
1.6	Familiarize pollinator specialists with the program goals and guidelines	Deputy Commissioner, Sustainable Development									
1.7	Review the Maryland program and the New York Pollinator Protection Plan in-depth for framework modeling	PMT									

Phase 1 will involve the preparation for the beginning of the program's operations and the first quartal. Key tasks include general review of existing information and guidelines regarding pollinator health, and establishing who will be responsible for our program's oversight. We have designated the Deputy Commissioner of Sustainable Development to oversee the new Pollinator Management Team, where they will hire the necessary Pollinator Specialists and Community Outreach Organizer. After the hiring process is complete, two pollinator specialists will begin working full time in Q1, where the Deputy Commissioner of Sustainable Development will brief them of their duties for the coming year and go over similar programs to set expectations for what the certifications may look like.

Phase 2: January to June (Q1-Q2)

Fig. 4: Phase 2 Gantt Chart

	DESCRIPTION	TASK LEADER	Q1			Q2		
			JAN	FEB	MAR	APR	MAY	JUN
2.1	Develop initial draft for clear and concise certificate guidelines for applicants	Pollinator Specialists						
2.2	Higher management reviews the draft of guidelines	Deputy Commissioner, Sustainable Development; Chief Resilliency Officer, Environmental Bond Act						
2.3	Receive approval on guidelines from higher management	Deputy Commissioner, Sustainable Development; Chief Resilliency Officer, Environmental Bond Act						
2.4	Advertise preliminary PLFM Certification guidelines for public view on website	DEC Digital Services Team						
2.5	Define key performance indicator and requirements for data for the project tracking website and monitoring plan (e.g. land management, surveys, staffing feedback)	PMT						
2.6	Develop the website for project tracking and include a public registry of certified and grant recipients to track engagement with certificates and grant pages	DEC Digital Services Team						
2.7	Build monitoring protocols (e.g. land-management surveys, pollinator surveys, digital analytics, staff feedback collection) and connect this to the tracking system	PMT						
2.8	Higher management reviews the draft of website and monitoring protocols	Deputy Commissioner, Sustainable Development; Chief Resilliency Officer, Environmental Bond Act						
2.9	Receive approval on guidelines from higher management	Deputy Commissioner, Sustainable Development; Chief Resilliency Officer, Environmental Bond Act						

Within phase 2, pollinator specialists will draft the initial guidelines for certification standards over the course of Quarter. These will then be sent in for review by the beginning of Q2 and edited until they receive approval from senior DEC management, including the Deputy Commissioner as well as the Chief Resiliency Officer for the Environmental Bond Act, who oversees the Climate Smart Communities grant system. The approved guidelines will be published on the DEC's website for the public to see, while the Pollinator Management Team will move on to work on defining key performance indicators and data needs for measuring the success of the program.

Simultaneously , the DEC's existing Digital Services Team will develop a new web-page for tracking of future pollinator-friendly grant projects and certified PFLM lands . The web-page will include a public registry of both grant recipients to help advertise their success. The Pollinator Management Team will expand upon their previous work which will be approved by the Deputy Commissioner and the Resiliency Officer before being finalized by the end of Q2.

Phase 3: July to September (Q3)

Fig. 4: Phase 3 Gantt Chart

	DESCRIPTION	TASK LEADER	Q3		
			JUL	AUG	SEP
3.1	Implement tracking website and monitoring plan and establish recurring cycles	PMT			
3.2	Draft PFLM grant application materials that match the eligibility criteria for the CSC program	PMT			
3.3	Send the PFLM subcategory criteria and applicatio to the CSC team to formalize and approve	Deputy Commissioner, Sustainable Development			
3.4	Finalize evaluation and scoring standards, eligibility checks, reporting requirements, and the five-year completion and reimbursement procedures	PMT			
3.5	Higher management reviews the PFLM grant application draft	Deputy Commissioner, Sustainable Development; Chief Resilliency Officer, Environmental Bond Act			
3.6	Receive approval on the PFLM grant application draft	Deputy Commissioner, Sustainable Development; Chief Resilliency Officer, Environmental Bond Act			

Phase three will start in Q3 by finalizing the standards for performance metrics of the program and success of accepted grant projects including scoring measures, eligibility reporting, and five-year completion and reimbursement procedures for the program. The Pollinator Management team will draft initial pollinator-friendly land management grant application materials using the criteria for the CSC program. These materials will then need to be reviewed by the Deputy Commissioner and the Resiliency Officer to assure that both sides of the program are approved. After finalization and approval of the documents for the PFLM grant

application, the next step will be the implementation of the tracking website and monitoring plan in Q3. This will measure early interest in the program and provide useful data for future improvements to the website design. Once all the necessary materials and data collection tools are created, the Deputy Commissioner of Sustainable Development will officially submit the PFLM subcategory to the CSC program on the DEC by the end of Q3.

Phase 4: October to December (Q4)

Fig. 5: Phase 4 Gantt Chart

	DESCRIPTION	TASK LEADER	Q4		
			OCT	NOV	DEC
4.1	Develop communications plan for announcement of PFLM grant	PMT			
4.2	Higher management reviews the communication plan	Deputy Commissioner, Sustainable Development; Chief Resilliency Officer, Environmental Bond Act			
4.3	Receive approval on the communication plan	Deputy Commissioner, Sustainable Development; Chief Resilliency Officer, Environmental Bond Act			
4.4	Inform municipalities of the benefits of CSC to garner interest in the program.	Seasonal Outreach Coordinator			
4.5	Visit viable sites to offer individual guidance and ensure minimum qualifications are met.	Field Ecologist			
4.6	Execute the accouncement campaign and track engagement via digital analytics	Department of Environemntal Conservation (DEC)			
4.7	Launch certification program and publish application materials/portal	Department of Environemntal Conservation (DEC)			
4.8	Advertise and publish preliminary CSC grant guidelines for public view on website	DEC Digital Services Team			
4.9	Begin reviewing certification applications	Pollinator Management Team			

In the final Phase 4, the Community Outreach Organizer will begin working to support the advertisement of the program and assist municipalities with any questions they may have about the certification process. To support this, the Pollinator Management Team will develop a communication plan and materials for the certification and grant process. Upper management will review the promotion campaign for approval , upon which the Community Outreach Coordinator will begin traveling across the state taking meetings, tabling and otherwise promoting the certification and grant programs/opportunities. On-Site Pollinator Specialists will begin visiting viable and interested sites to offer guidance regarding pollinator-friendly land management techniques, helping to ensure that applicants are aware of the requirements for program approval. The announcement campaign will be shortly followed by the launch of the certification program and application portal by the end of Q4. This will include new information regarding the guidelines for the upcoming/forthcoming grant roll-out through the CSC website page. Finally, the Pollinator Management Team will begin reviewing certification applications as they begin to roll in at the start of Year 2.

Performance Mangement

One year after program implementation, the DEC will be responsible for executing program changes. The proposed program incorporates a monitoring and reporting system which enables the DEC to evaluate and track the efficacy of the program design effectively. The purpose of this monitoring and reporting system is to allow the proposed program to adapt on a consistent basis in response to its environment and succeed in properly achieving its annual benchmarks. This system includes three key components: Measurement and Collection, Reporting, and Feedback.

Measurement and Collection

1) Measurement and Collection – What performance-relevant information should be collected, and how that information should be collected: It deals with such issues as who collects the information, methods of data collection, data collection frequency, and how the information is stored and retrieved.

The data collected by the DEC for this program should include: land management data, direct pollinator surveys, digital monitoring, and staffing feedback. Determined measurement categories are derived from a similar program in Maryland. The Maryland Department of Natural Resources Pollinator Habitat Plan is a program that prioritizes native pollinator health through public education

and changes to state-owned land management. To measure program success, the plan collects data on public program attendance, pollinator populations from surveys, and total land acreage.31 32This program measurement design implements the best practices of those in the Maryland program, one of the leading plans in the field.

Reporting

2) Reporting – How the performance measures are presented, to whom and in what form: It covers the level of need for decision-makers, degree of detail, and the frequency this information is relayed.
Since the PPA introduces a new dimension within New York State's environmental governance, its reporting process can most effectively operate by aligning with the existing CSC Grant Program. The framework manages annual and multi-year reporting cycles for municipal projects addressing climate resilience, waste reduction, and energy efficiency.32 33 Integrating the PPA into that structure ensures that pollinator-related measures follow established timelines and documentation standards instead of creating a new parallel bureaucracy.

Every three years, the DEC Pollinator Program Team will prepare a comprehensive progress report summarizing verified results since the previous cycle. The three-year interval reflects both ecological and administrative logic: pollinator populations respond slowly to habitat restoration, while CSC-funded municipal projects generally span multiple fiscal years. This schedule allows for detectable ecological outcomes while providing legislators and program administrators with timely updates for budget deliberations and policy evaluation.

Feedback

3) Feedback – How the information will be used to modify organizational behavior: how mid-course corrections will be made, under what circumstances, and who can make them.

After the projects have been established and running for a year, the first round of significant revisions can begin. A year's worth of event attendance information will allow the Community Organizer to isolate factors that led to a higher attendance, and will reveal if the program is being properly publicized or if changes need to be made to increase outreach. Staff training and happiness will be assessed after a year to make sure all staff feel comfortable with their new pollinator training and are effectively supporting and incorporating PFLM practices in their work. At this time, digital tracking information will also be available, so the DEC can measure awareness and engagement with the PFLM program. The DEC can also compare engagement with that of other DEC programs in order to suggest improvements for boosting overall engagement. Changes to increase engagement could include lightening the criteria for eligibility or decreasing the intensity of reporting. Finally, land management surveys will be analyzed at the end of each year to track total PFLM acreage and to gain a better understanding of the program's impact. The land management surveys will be compared to one another and used to inform and alter future PFLM practices.

Budget

Photo: Laura Hughes

Funding Methodology

One of the PPA's biggest implementation challenges and any program design is that the legislation does not provide any direct funding for the management and operation of the tasks it mandates or recommends. Therefore, any program design has to operate within the existing budget of the DEC and must rely on the reallocation of funds from other expenditures. With these limitations in mind, our program design has taken significant steps to limit excessive spending and hiring.

Our proposed program is based on programs the DEC already manages, and many of our expenditures can be reasonably assumed to be covered by existing departments or resources. These include areas such as website design, technical assistance, and public resource creation, all of which are already incorporated into the DEC's operation structure and can easily be repurposed or amended to include this new certification program. This overlap allows the program to utilize existing infrastructure to keep our cost footprint low, enabling a simple implementation and roll-out to support communities across New York starting in Year 2.

Taking into account existing infrastructure and a lack of external or dedicated funding, we have estimated our overall cost for the first year of our program to be between $250,000 and $300,000. Most of the possible fluctuations stem from costs associated with marketing the program to the public, namely the DEC hosting events to raise awareness of this new certification and grant funding opportunity, which has high potential expenses for the rental of venues and the organization of conferences.

Funding Breakdown

We have identified three main categories for meeting our funding goals: new staffing requirements, marketing and community outreach initiatives, and travel costs to facilitate the former two categories. These costs are broken down in Figure 6, and calculations for travel and miscellaneous costs can be found in the Appendix. The majority of these expenditures come from new full-time and part-time staff, and these salaries are in line with existing estimates of graduate and post-graduate educated environmental scientists with sufficient professional experience in relevant industries, academia, or government.[28,29,30]

Marketing and outreach expenditures include attending conferences to discuss and highlight the program, training to show what PFLM looks like, and hosting meetings with interested municipalities and land owners. There are also associated travel expenses, such as compensation for gas, meals, lodgings, and various travel-related reimbursements including parking and tolls — these were identified from existing minimum rates established by the US General Services Association for various jobs each year.[31]

In total, our initial estimates of predicted expenditures for the Year 1 period come to $263,820, on the lower end of our original range of $250,00 to $300,000. As seen in Figure 6 below, approximately 70% of the Year 1 costs are for personal services, with the remaining 30% dedicated to facilitation of community outreach and training initiatives. This budget represents 10.67% of the total costs to New York State to facilitate PFLM developments each year, with the remainder coming from the $2.2 million in grant funding under the CSC program. Overall costs are intentionally low to accommodate future spending and hiring needs to facilitate the long-term operations of the program. Additionally, low costs reduce the burden on the DEC's existing budget, allowing the agency to continue other critical operations with minimal budget cuts to compensate for the program's funding needs. Future authentication and monitoring work will also provide useful data on native pollinators and their habitats across the entire state, which will support the DEC's other projects and NY's broader goals of supporting pollinators.

Fig. 6: Final Line-Item Budget Breakdown

Item	Category	Total Amount	Personal Service (Annual Salaried)	Non-Personal Costs	Percentage Breakdown
In-Office Pollinator Specialist Salary	Staffing	80,000	80,000		30.32
On-Site Pollinator Specialist Salary	Staffing	70,000	70,000	-	26.53
Community Organizer Salary	Staffing	30,000	30,000	-	11.37
Conferences	Marketing	40,250	-	40,250	15.26
Trainings	Marketing	10,250	-	10,250	3.89
Drive	Travel	13104	-	13104	4.97
Meals	Travel	4896	-	4896	1.86
Transport-related reimbursements	Travel	1680	-	1680	0.64
Lodging	Travel	8640	-	8640	3.27
Miscellaneous	Misc.	5,000	-	5000	1.9
Total Costs		**263,820**	180,000	83820	100

Program Analysis

Our proposed program offers environmental strengths by encouraging climate-resilient landscaping that directly supports biodiversity and improves pollinator habitat quality. The program would potentially incentivize the use of native plant species, reduced mowing, and lower pesticide use. Socioeconomically, the Registration, Certification, and Monitoring Platform (RCMP) will create a transparent mechanism for securing external funding, strengthening grant application, and potentially generating green jobs in training, monitoring and ecological restoration. However, the environmental benefits may take years to become visible, as ecological restoration is a gradual process and pollinator populations tend to respond slowly to habitat restoration. Moreover, the design and implementation of training, as well as new technical assistance programs, will also require significant time due to administrative constraints. Importantly, the financial constraints necessary to develop the program will require upfront investment in technical infrastructure and staffing, which are not required or outlined in the PPA.

The proposed program provides environmental opportunities by consolidating fragmented statutory provisions into a single framework. The establishment of a centralized monitoring system will contribute to the collection of scientific data for research on pollinator health and habitat across the state. Socioeconomically, the program will strengthen public accountability through open and transparent certification, which will contribute to increased public trust and awareness of pollinator protection. However, the program offers limited environmental benefits due to its reliance on municipal initiative and land manager discretion, which may result in inconsistent ecological outcomes. Finally, unequal access to funding could highlight disparities between well-resourced municipalities and those unable to engage, potentially reinforcing socioeconomic inequalities. Additionally, the program does not explicitly incorporate broader public education initiatives, limiting improvements to public awareness and the ability to build long-term behavioral change, as well as the adoption of pollinator-friendly practices.

Fig. 7: Program Environmental and Socioeconomic SWOT Analysis

Strengths	Weaknesses
• Incentivizes the use of native plant species • Leads to reduced mowing and pesticide use. • Supports biodiversity and improves pollinator habitat quality. • Registration, Certification, and Monitoring Platform creates a transparent mechanism. • It also facilitates securing external funding, and strengthening grant applications.	• Environmental benefits may take years to become visible. • Need for significant time for the design and implementation of training, and technical assistance programs. • Required upfront investment in technical infrastructure and staffing. • Costs may be difficult to sustain for resource-constrained municipalities.
Opportunities	**Threats**
• Establishment of a centralized monitoring system. • Contributes to the collection of scientific data for research on pollinator health and habitat. • Incentivized participation by rewarding municipalities with grant eligibility. • Increased public trust and awareness of pollinator protection.	• Possible uneven distribution of ecological outcomes. • Over-reliance of municipal initiative and land manager discretion. • Underlined disparities between well-resourced and less-resourced municipalities. • Reinforced socioeconomic inequalities.

Conclusion

Photo: Laura Hughes

Pollinator species are in decline in New York State as a result of habitat loss, pesticide usage and the lack of native plants in urbanized areas. The Pollinator Promotion Act (PPA) would address this issue by incentivizing pollinator friendly land management (PFLM) on public lands, certified municipalities, highways, and in public schools as well as SUNY campuses. The proposed solutions utilize the provision of guidelines and a grant mechanism for pollinator friendly projects in municipalities. Our program design would create a PFLM certification scheme and expand the scope of the current Climate Smart Communities grant program to allocate 12% of its funds to PFLM projects. These solutions will improve land management practices, increase the acreage of pollinator-friendly land, and encourage native species protection. If implemented appropriately, the Pollinator Promotion Act will be a significant step towards an efficient restoration of New York State's native land, and a powerful support system for the state's native pollinators.

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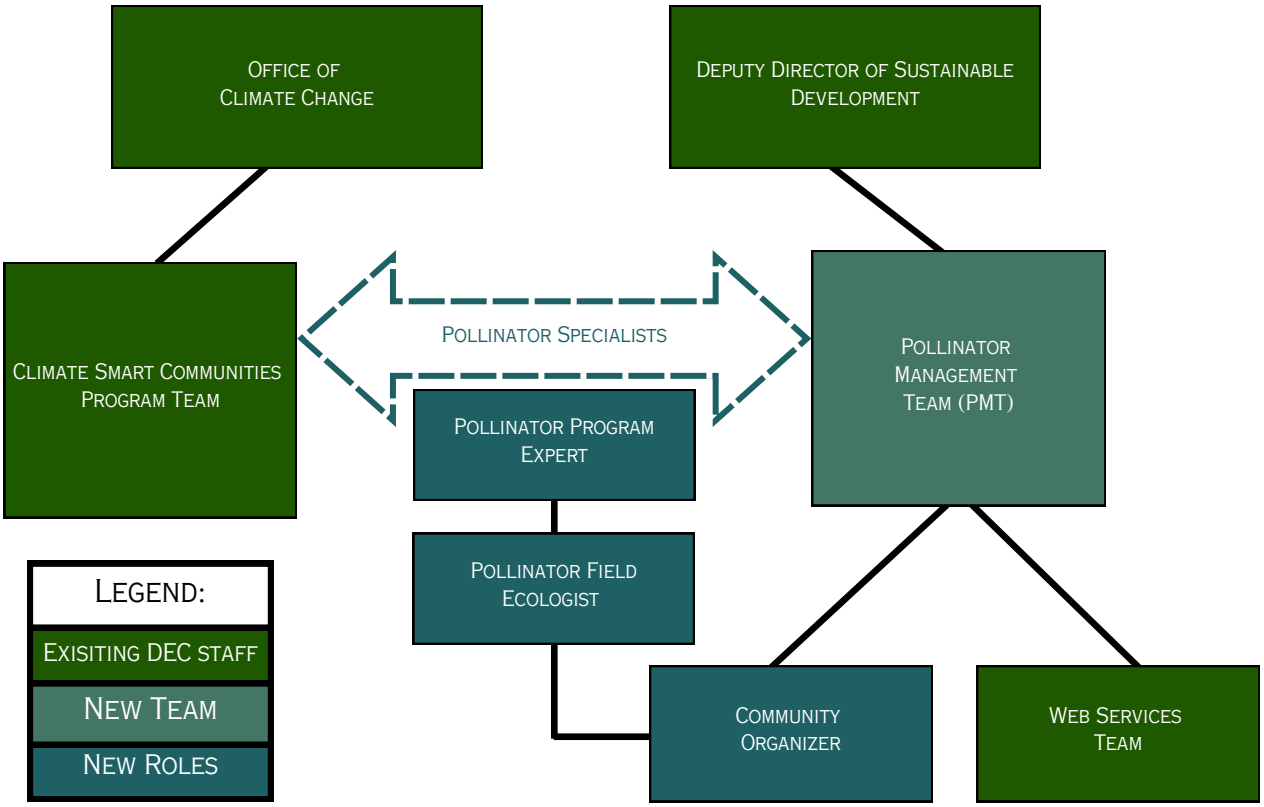
Appendix

Figure A1: Mock Up for Pollinator -Friendly Land Management Certification Logo

Figure A2: Organizational Chart



Appendix cont.

Figure A3: Travel Cost Calculations Table

	Item?	Per diem	Weekly Travel	Avg. Miles	Total $ per wk	Total $ for 6 Months
Travel Costs for Community Organizer	Drive	0.7	3	200	420	13,104
	Meals	68	3	-	204	4,896
	Transport-related reimbursement	-	-	-	70	1,680
	Lodging	180	2	-	360	8,640
Total Travel Costs						**28,320**

Sources: U.S. General Services Administration. (2024). POV mileage rates., Paychex Inc. (2022). Employee expense reimbursement.

Figure A4: Total Miscellaneous Cost Calculations Table

	DEP Misc. Cost	DEP Total Budget	Misc:Budget %	Our Budget (pre-misc)	**TOTAL Misc. Budget**
Misc.	42,390	1,607,018	0.026	194,208	**5,122.83**

Source: New York City Council, Finance Division. (2024, March 22). Fiscal 2025 preliminary plan and the fiscal 2024 preliminary mayor's management report for the Department of Environmental Protection

Figure A5: Final Line-Item Budget Breakdown

ITEM	CATEGORY	TOTAL AMOUNT	PERSONAL SERVICE (ANNUAL SALARIED)	NON-PERSONAL COSTS	PERCENTAGE BREAKDOWN
In-Office Pollinator Specialist Salary	Staffing	80,000	80,000		30.32
On-Site Pollinator Specialist Salary	Staffing	70,000	70,000	-	26.53
Community Organizer Salary	Staffing	30,000	30,000	-	11.37
Conferences	Marketing	40,250	-	40,250	15.26
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Lodging	Travel	8640	-	8640	3.27
Miscellaneous	Misc.	5,000	-	5000	1.9
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