

Sustainable and Urban-based Garden Planning for the Ypsilanti District Library

By Nikitha Hadya, Lahari Kolluru, Amy McKiernan, Anna Richards,
and Shea Vatararo

Stephanie Posci-Morrison, Ypsilanti District Library System

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Executive Summary

Ypsilanti residents face significant knowledge gaps and confusing policies that limit their ability to engage in sustainable gardening. Many constituents, particularly renters, lack clarity on where gardens can be established, how to manage them, and which native plants are best suited to the region. Recognizing these barriers, our interdisciplinary team developed accessible, locally tailored resources to help residents navigate policy and understand which plants would thrive in Ypsilanti. Improving access to this knowledge supports local food systems and general mental health, two of the many benefits of gardening for individuals and communities. Through collaboration with our community partner and delegating tasks based on our specialties, we created materials designed to make gardening more welcoming and achievable for all Ypsilanti community members.

We completed a total of five deliverables throughout the duration of this project. Through collaboration with our project partner and thorough policy analysis, we created a pamphlet outlining city urban gardening policies. We also conducted extensive research on plant types that residents can grow in community gardens; this research culminated in the creation of a native plant inventory. Furthermore, we recognized the importance of engaging the younger community and getting them interested in urban gardening. We thus designed activity sheets and planned for the recording of TikTok videos that discuss urban gardening and the importance of native plants. We presented all our deliverables during a community event at the Ypsilanti District Library in April 2025, where we were able to engage with local residents and disseminate information about urban gardening to patrons.

Our team anticipates that this project will have impacts in the short term for the Ypsilanti community, as well as impacts that extend far beyond our scope. Our community engagement events and scripts for short-form informational videos will provide Ypsilanti community members with the ability to understand why home gardens are an important source of food security and environmental sustainability. Our work will likely translate into action, as well, as the Policy Pamphlet and the Native Plants Inventory will guide library patrons towards the ability to plan and create their own gardens. Finally, our project could be used as a model for other library systems that act as focal resource points for their communities. Each of our deliverables could be scaled up (for example, to a county level rather than just a municipality for the Policy Pamphlet) or transferred to other library systems (such as keeping the formatting of the Native Plants Inventory but changing the contents based off of local growing conditions wherever it is being used).

Looking forward, we have identified three opportunities for future groups to help further the goal of increasing accessible information and the impact of this project. By creating scenario-specific gardening guides, based on living situation and resource availability, Ypsilanti residents can find information that is most relevant to their situation. Developing a community gardening location map could help individuals who do not have access to private space find areas where they can garden. Finally, the Ypsilanti District Library could hold a “Sustainable Gardening Week” to help disseminate gardening information to the community.

Introduction and Background

Our project was inspired by our community partner, Stephanie Posci-Morrison, who recognized a significant knowledge gap among Ypsilanti residents regarding sustainable gardening practices in their community. The lack of transparency was spurred by confusing policies and municipal codes regarding both private and privately owned community gardens. Constituents lacked clarity on where these gardens could be implemented and how to manage them, given the convoluted legal documentation to review. Resources on native plants in Michigan and what would flourish in these gardens were also few and far between. Ypsilanti's designation as an urban area requires further consideration and support to access the benefits of gardening. Given that many constituents rent and/or live in apartments, a more thorough review of the local situation was critical. Our interdisciplinary team, with backgrounds in ecology, public policy, business, and earth science, was tasked with providing holistic, accessible resources to the library to help fill these gaps. Through regular check-ins with our community partner and by delegating tasks based on our specialities, we created comprehensive pamphlets and spreadsheets for circulation amongst the community.

Gardening and caring for one's own food are essential to supporting a local food system. The people of Ypsilanti lacked critical knowledge about what works for the regional climate and soil conditions, a key failure in many gardening projects. Gardening has a plethora of benefits at both the individual and community-wide levels. It improves health, produces nutritionally meaningful quantities of high-quality food, and provides critical cultural ecosystem services, such as community building. Research suggests that there are multiple benefits of home and community gardening, and that knowledge of how to participate properly is not widely accessible (Porter, 2018). This gap can be addressed by policy change and widespread education programs. While the first requires a longer turnaround and engagement with more bureaucratic processes, the second can be accomplished at the grassroots level. Our group aimed to support the community by planting the seeds of accessible knowledge, promoting engagement to make the system more welcoming to first-time gardeners.

Gardening can be an excellent tool for community building, but it can also address public health considerations related to mental health. People who garden are happier, with research showing daily gardeners have 6.6% higher well-being scores and 4.2% lower stress levels than non-gardeners (Litt et al., 2023). People of all backgrounds should be entitled to garden, regardless of their socioeconomic status or the confusing policies surrounding the practice in their localities. Urban gardening is becoming a more common practice, with online resources available those interested get started. Still, specific resources with the considerations of Ypsilanti are necessary to support community members with context-relevant information. This is the very dynamic we aimed to address throughout our work.

Methods

Ypsilanti Public Library is a vital resource for Ypsi residents. They rely on the library for information, and many members were asking for gardening information. The city itself has extremely convoluted rules and regulations regarding urban gardening. As with many other urban communities, gardening in Ypsi requires knowledge of what is permitted under city ordinances and which plants can be grown in small spaces.

We first approached this project by meeting with our partner and contact at the Ypsilanti Public Library District, Stephanie Posci-Morrison, at the library to understand her viewpoint for carrying out our deliverables.

After this meeting, we started researching Ypsilanti's gardening policies. We researched Ypsilanti municode records of Ypsilanti records for personal and community gardens (Municode Library), and the city of Ypsilanti's website to research code enforcement within city limits (City of Ypsilanti). We contacted popular rental companies and apartment buildings in the area to see if they had any specific rules about what can and cannot be done. Rental companies contacted include Beal, Barnes and Barnes, Red Shield Rental, and McKinley. After translating policies into easily understandable language, we compiled particular rules and regulations into a pamphlet, which was then printed and placed in the library for visitors to take. The library is still printing these pamphlets for members.

In parallel with our work on the city ordinances pamphlet, our team has been creating a comprehensive native planting inventory in Google Sheets that is shared with the library and will be linked to their website. This document was produced by researching various plants native to Michigan that can be grown indoors or outdoors and is meant to serve as an easily accessible database for people to consult before planting in or around their home. Research websites include Prairie Moon Nursery, Everwilde, Gardenia, The Morton Arboretum, and Michigan State University's Native Plants and Ecosystem Services website. We researched grasses, trees, food plants, indoor and outdoor plants, and wildflowers, and included our findings on what to grow and how to grow them.

The third deliverable was helping with the Ypsi public libraries' Earth Day event. For this event, we created native plant coloring sheets and word searches using Canva. With the Ypsilanti Library team, we facilitated this community event by helping kids with activities like beeswax candle-making and native plant seed ball-making.

Lastly, our group created three educational gardening video scripts, which will be created and posted by the Ypsilanti Social Media manager on the Ypsilanti Public Library's TikTok page. We first created three separate scripts/video ideas and filmed these at a later date. We then edited these videos and sent them to the library's media manager to post.

Deliverables

There were five deliverables we completed through the duration of this project that all addressed our goal of creating accessible educational material on urban gardening for residents. Our first and most extensive deliverable was a policy pamphlet that included policy information on the two different garden types: public and private. As described in the methodology, we conducted extensive policy research and analysis to determine what was the most crucial information relevant to residents who are considering creating a community garden. We then compiled this information into the pamphlet pictured below in an easy-to-read language and layout.



The second deliverable included a native plant wordsearch and drawing worksheet. While the above pamphlet was geared towards the adult population looking to create their own community gardens, we recognized the importance of getting children interested and curious about native plants. And the first step to foster this curiosity and interest is to introduce these new concepts and information in a fun and engaging way. Thus, we decided to create a native plants wordsearch and coloring sheets that included drawings of different plants native to Michigan accompanied with factoids. These worksheets are pictured below.

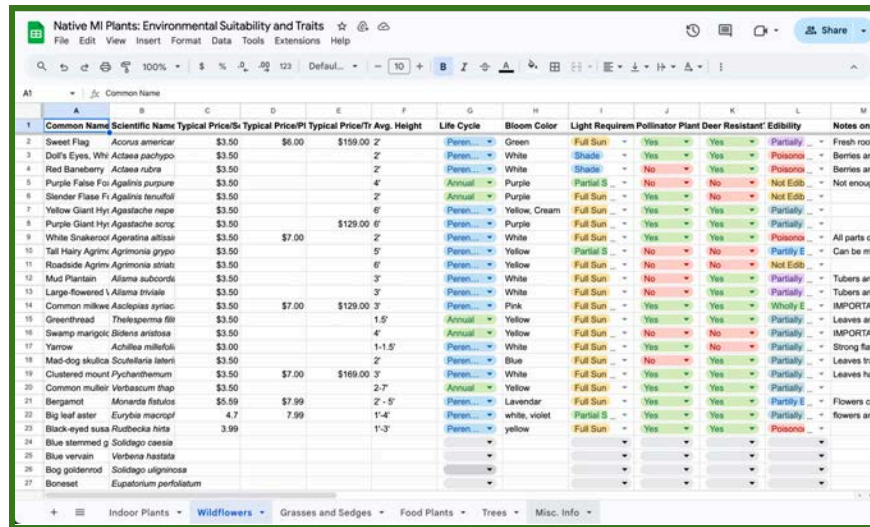


The culminating activity was the community event we participated in that took place in the Ypsilanti District Library on April 20th, 2025. During this event, we were able to present the pamphlets we created and host activity tables featuring the above-depicted worksheets. At this event, we engaged with Ypsilanti residents in person and discussed the benefits of urban gardening.



Photograph of policy pamphlets displayed at the Ypsilanti District Library (above) (Amy McKiernan, 04/20/2025)

Another key deliverable we completed was the native plants inventory, which is a shareable and editable online sheet that patrons can use to decide which plants would do best in their gardens (specifically food plants and wildflowers). In addition to having key information on urban gardening policies, residents interested in creating community gardens must also have information on the various available plant types. This data bank provides key information regarding how much light or water a certain plant needs, when do these plants need to be sowed, whether they are pollinator plants, etc. Additionally, information regarding the cost of purchasing the seeds or sprouted plants is also included, so patrons can make informed decisions on the best plants for their urban gardens. Depicted below is the seed inventory.



A1	Native MI Plants: Environmental Suitability and Traits													
	Common Name	Scientific Name	Typical Price/\$	Typical Price/PI	Typical Price/Tr	Avg. Height	Life Cycle	Bloom Color	Light Requirement	Pollinator	Plant Deer Resistant	Edibility	Notes on E	
1	Sweet Flag	<i>Acorus americanus</i>	\$3.50	\$6.00	\$159.00	2'	Perenn...	Green	Full Sun	Yes	Yes	Partially E	Fresh roots	
2	Dott's Eyes, Whi	<i>Actaea pachyphloea</i>	\$3.50			2'	Perenn...	White	Shade	Yes	Yes	Poisono	Berries are	
3	Rudr Barberry	<i>Actaea rubra</i>	\$3.50			4'	Annual	Purple	Partial S	No	Yes	Poisono	Berries are	
4	Purple False Fo	<i>Agalinis purpurea</i>	\$3.50			2'	Annual	Purple	Partial S	No	No	Not Edib	Not enough	
5	Slender False F	<i>Agalinis tenuifolia</i>	\$3.50			2'	Annual	Purple	Full Sun	Yes	No	Not Edib		
6	Yellow Giant Hy	<i>Agastache nepetoides</i>	\$3.50			6'	Perenn...	Yellow, Cream	Full Sun	Yes	Yes	Partially E		
7	Purple Giant Hy	<i>Agastache scrophularioides</i>	\$3.50		\$129.00	6'	Perenn...	Purple	Full Sun	Yes	Yes	Partially E		
8	White Snake-root	<i>Ageratina altissima</i>	\$3.50	\$7.00		2'	Perenn...	White	Full Sun	Yes	Yes	Poisono	All parts of	
9	Tall Hairy Agrim	<i>Agrimonia eupatoria</i>	\$3.50			5'	Perenn...	Yellow	Partial S	No	No	Partially E	Can be ma	
10	Roadside Agrim	<i>Agrimonia sibirica</i>	\$3.50			6'	Perenn...	Blue	Full Sun	No	Yes	Not Edib		
11	Mud Plantain	<i>Alliaria petiolata</i>	\$3.50			3'	Perenn...	White	Full Sun	No	Yes	Partially E	Tubers are	
12	Large-flowered	<i>Alliaria tripartita</i>	\$3.50			3'	Perenn...	White	Full Sun	No	Yes	Partially E	Tubers are	
13	Common milkwe	<i>Asclepias syriaca</i>	\$3.50	\$7.00	\$129.00	3'	Perenn...	Pink	Full Sun	Yes	Yes	Wholly E	IMPORTAP	
14	Green thread	<i>Thelypodium</i>	\$3.50			1.5'	Annual	Yellow	Full Sun	Yes	Yes	Partially E	Leaves are	
15	Swamp mangoc	<i>Bidens aristosa</i>	\$3.50			4'	Annual	Yellow	Full Sun	No	No	Partially E	IMPORTAP	
16	Yarrow	<i>Achillea millefolium</i>	\$3.00			1-1.5'	Perenn...	White	Full Sun	Yes	No	Partially E	Strong flav	
17	Mad-dog skullc	<i>Scutellaria lateralis</i>	\$3.50			2'	Perenn...	Blue	Full Sun	No	Yes	Partially E	Leaves tra	
18	Clustered moun	<i>Pyrola asarifolia</i>	\$3.50	\$7.00	\$169.00	3'	Perenn...	White	Full Sun	Yes	Yes	Partially E	Leaves har	
19	Common mulele	<i>Verbascum thapsus</i>	\$3.50			2-3'	Annual	Yellow	Full Sun	Yes	Yes	Partially E		
20	Bergamot	<i>Monarda fistulosa</i>	\$5.59	\$7.99		2'-5'	Perenn...	Lavender	Full Sun	Yes	Yes	Partially E	Flowers ca	
21	Big leaf aster	<i>Eurybia macrophylla</i>	4.7	7.99		1'-4'	Perenn...	white, violet	Partial S	Yes	Yes	Partially E	flowers are	
22	Black-eyed susa	<i>Rutbeckia hirta</i>	3.99			1'-3'	Perenn...	yellow	Full Sun	Yes	Yes	Poisono		
23	Blue stemmed g	<i>Solidago caesia</i>												
24	Blue vervain	<i>Veronica hastata</i>												
25	Bog goldenrod	<i>Solidago ulmifolia</i>												
26	Boneset	<i>Eupatorium perfoliatum</i>												

Our final deliverable includes writing scripts for educational tiktok videos regarding the above information we gathered throughout the course of the project. These scripts will be used by the social media team at the Ypsi library to turn into short form video content. These videos will be about native plants, policy information on urban gardening, and tips on how to get started with creating urban gardens. With the popularity and ubiquity of TikTok, we realized that disseminating information on this platform could have the potential of reaching the younger audience.

Recommendations

Our five deliverables provided the Ypsilanti District Library with valuable resources that can be used for years to come. However, there are still many areas where knowledge gaps exist for Ypsilanti residents, especially around sustainable gardening practices. These gaps provide future opportunities for project groups to provide more accessible information for the Ypsilanti community.

One future opportunity could be creating accessible gardening information that is tailored to specific living situations and levels of resource availability. For example, guides could be created for homeowners, renters, apartment owners, or even those with limited gardening space. By keeping into account the resource constraints many Ypsilanti residents face, these guides could include different types of gardening (container gardening, raised bed yard gardening, window-box gardening, etc) along with recommendations for low-cost tools, soil, and native plants that would thrive in each environment. They could also include policy information that is relevant to each situation, including fertilizer use or yard management practices. A similar example of this can be seen on the US Department of Agriculture website, where they have guides on starting a garden, gardening based on space availability, and resources needed for specific plants (USDA, n.d.). Developing these scenario based guides would help Ypsilanti

residents find information that is most relevant to their situations while also decreasing the initial intimidation associated with starting a garden.

Another future opportunity could include helping the Ypsilanti District Library raise awareness for community gardening locations throughout the area for those who do not have access to private gardening space. An example of this is the North Little Rock community garden program, where they have a page dedicated to highlighting community garden locations and resources (North Little Rock, n.d.) By creating a clear and easy-to-read map of the city that identifies community garden plots, relevant contact information, and instructions on how individuals can get involved, future groups could equip the Ypsilanti library with a valuable resource to share with its community. The map could be displayed online or in-person in the library branch, increasing accessibility and allowing residents to easily discover gardening options beyond their home.

During our site visits, we noticed how important library events were for its patrons. Kids and adults alike would show up to events to learn important information in fun and unique ways. Thus, a final opportunity could include creating a “Sustainable Gardening Week” at the Ypsilanti District Library. During this week, the library could hold numerous events surrounding different aspects of gardening. These could include informational sessions on Ypsilanti policies, step-by-step gardening practices, and low-cost gardening resources, or they could be more hands-on events such as native plant seed swaps, youth-focused planting activities, or seed bomb creation. There could also be events held by local environmental groups and partnerships with University of Michigan environmental clubs. By making all gardening information accessible during this week, the library can help disseminate information most effectively to its patrons.

Impact

While “impact” can be difficult to measure without significant post-project evaluation, we anticipate that the short and long term impacts of this project on policy literacy and urban home gardening behavior in Ypsilanti will be significant. Furthermore, our deliverables have been designed to be scalable, transferable, and replicable, indicating opportunities for these tools to become useful resources to communities other than Ypsilanti.

Our Policy Pamphlet, Native Plants Inventory, and informational short-form videos have provided and combined all the information needed to start and maintain at urban home gardens within the community focal point of the Ypsilanti Libraries. Home gardens are an important source of food security and can create modest cost savings on groceries, especially produce (Galhena et al., 2013 and Zasada et al., 2020). They can also produce significant health benefits. These include mild physical exercise (especially for elderly and physically-disabled people who have less access to traditional forms of exercise) and mental health boosts such as feelings of “expression and self-identity” and “calm and relaxation” (Suyin Chalmin-Pui et al., 2021). Both of these studies also mentioned that these effects are observable even within participants who only recently began their home gardens. Thus, we expect that the YDLS will be able to use our deliverables to create pathways to positive monetary and wellness impacts for Ypsilanti Library

patrons. We have good reason to believe these resources will be utilized, as well, as our project contact Stephanie recently informed us that the Policy Pamphlets have already had to be restocked at the Michigan Ave. library branch from their original supply due to patron interest.

In addition to creating positive outcomes for individual community members, urban home gardens have important community sustainability implications, both from a cultural and environmental perspective. Home gardening, especially when done with plants native to the gardener's ecosystem, helps to "create a sense of home" and "increases cultural connection" by developing the participant's sense of place, space, and consumption (Eng et al., 2019). This practice contributes to the gardener's care for home spaces, which in turn can increase their sensitivity to their communities and the people that live around them. There are also significant benefits to urban environmental sustainability from home gardening. A case study on home gardens in Pune, India found moderately high impacts from the presence of home gardens at a sufficient density on local biodiversity conservation and "clean" (i.e. low to no carbon emissions) food and green space production (Zasada et al., 2020). As the YDLS is already a central location with many educational programs and events, we anticipate that incorporating our deliverables into their programming will contribute to long term impacts of increased community and environmental resilience in the Ypsilanti area.

Finally, while our work is first and foremost for the Ypsilanti community, it has the potential to extend in impact to other locations. Our framework for communicating complicated local regulations using online resources such as [Municode.com](https://municode.com) and contacting area-specific rental companies could be easily replicated by other municipalities that are largely composed of renters, as many urban areas are. Furthermore, the Native Plants Inventory has enormous scalability potential. Our's is largely tailored to plants common to SE Michigan, given Ypsilanti's geographical location, but scaling it up to a county or even floristic Growing Zone level would simply be a matter of expanding the plant list included in the current formatting.

The implications of our work are widespread and have not only direct effects but longevity. Overall, we are proud to encourage community connectivity and local greenness in Ypsilanti and beyond by contributing to the vital role of libraries in sustainability literacy, both at the present time and in the years to come.

Acknowledgements

We would like to extend our foremost thanks to our project partner contact, Stephanie Pocsi-Morrison, for her invaluable support throughout this process. Our work truly would not have been possible without her deep understanding of the Ypsilanti community, its people, and existing sustainability protocols. Similarly, we would like to thank the Ypsilanti District Library System as a whole for working with us through a tumultuous time of renovations and the Ypsilanti Library patrons who were generous and welcoming to our team despite us not being residents. Finally, we are very grateful to Bridget Gruber and Carly Silverman for the guidance they provided in their roles as Scholar Program Coordinators, as well as Mackensy King and the



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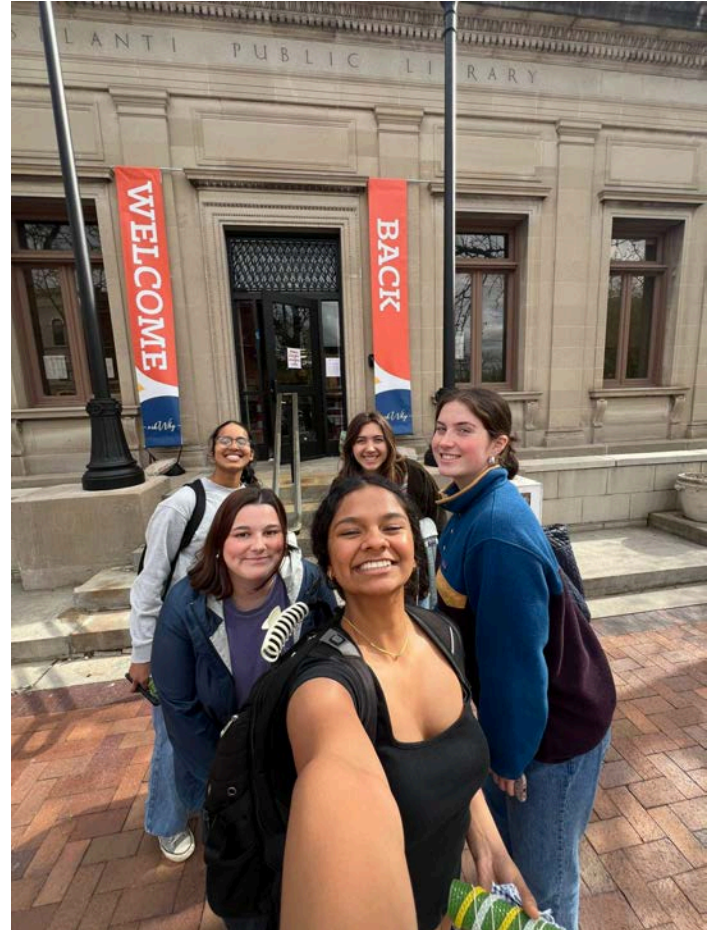
Appendix



Anna at the Earth Day Community Engagement Event (above) (Shea Vatalaro, 4/20/25).



The Michigan Ave. branch's native plants garden during winter (above) (Shea Vatalaro, 11/06/24).



Team picture at the Michigan Ave. branch of the YDLS after its reopening from renovations (above) (Lahari Kolluru, 4/20/25).