

Pocket Forests of Sterling Heights

shpocketforest.com



**GRAHAM SUSTAINABILITY
INSTITUTE**

**CENTER FOR
EMPOWERING COMMUNITIES**

UNIVERSITY OF MICHIGAN



MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY



Our Vision

Make urban forestry more accessible by creating a guide in a modern digital format.

Improve Sterling Heights' communities through reforestation.

Share our work with other Michigan communities.



Introductions



Paloma Calvin
CLC Fellow, Project Manager



Alexis Weinberg
Sterling Heights Sustainability



Ryan Fox
Sterling Heights Sustainability



William Francois
Logicalis Software Engineer



Matt Sharp
Sterling Heights Arborist





Pocket Forests...?

Highly dense: 3-7 plants per 10 sq. ft.

Biodiverse: Requires variety.

Only plants native to SE Michigan.

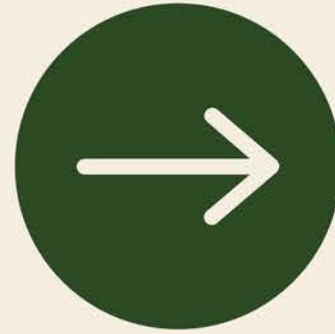
Quick growth: can grow up to 10x as quickly as a regular forest due to nutrient competition.





Why Pocket Forests?

Increased
canopy
cover



Air quality
Shade
Habitats





Why Pocket Forests?

Pathway to Play and
Preservation millage



Process



Research



Native plants, Miyawaki method, planting methods, urban forestry.

Process



Development



Building the website, testing
and iterating, hosting
the site.

Process



Access



Cleaning the code, creating the code guide, sharing deliverables.

Process

Initial Designs and Research



About / Homepage



Pocket Forests of Sterling Heights



[About](#)

[Guide](#)

[Resources](#)

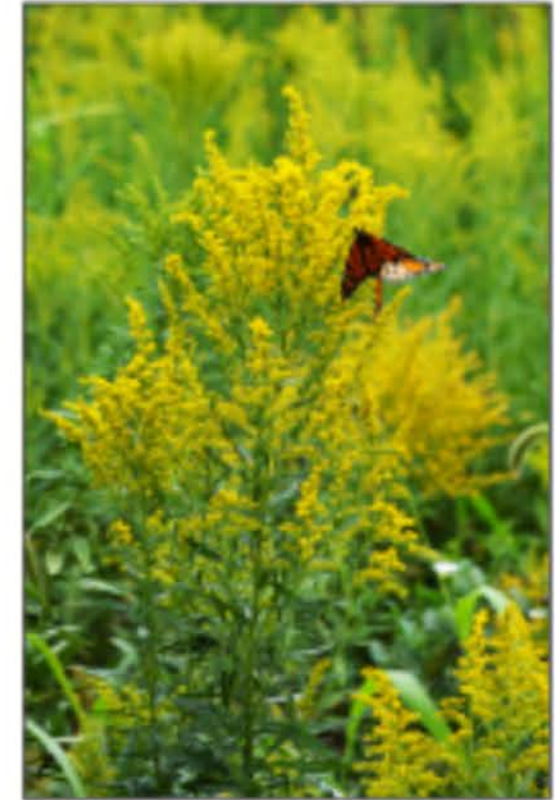
[Plot your forest](#)

Welcome to the Pocket Forests project of Sterling Heights, Michigan!

Pocket Forests, otherwise known as Microforests or Miniforests are areas of densely-packed, highly biodiverse vegetation. Pocket forests are a tool in urban forestry used to combat deforestation and provide ecological benefits, such as lowering an urban area's heat index, improving air quality, and increasing carbon sequestration.

This website builds off of the work of Akira Miyawaki, a botanist and ecologist who pioneered the Miyawaki Method which describes the process of creating a Pocket Forest. Based off of work by LA Microforests designer Katherine Pakrodouni, this website features plants native to Southeast Michigan and prioritizes cultivating a variety of indigenous vegetation. A benefit of increasing biodiversity means that Michigan's native plants are protected from the effects of climate change.

On this website, read [step-by-step instructions](#) for how to build a Pocket Forest, use our [Plant Calculator tool](#) to pick out your plants and figure out how many you will need, and visit our [Plot your forest](#) page to design a layout of your Pocket Forest.



Background

Recently, the city of Sterling Heights passed a millage that includes efforts to promote reforestation. As a community with one of the lowest tree canopies in the state, prioritizing relatively quick tree growth, along with high levels of biodiversity to prevent further deforestation is essential. That's where Pocket Forests come into play.

Pioneered by the renowned botanist Akira Miyawaki, Pocket Forests use the Miyawaki Method to plant small, dense, and highly biodiverse forests that grow up to 10 times as quickly as a regular forest. Their quick growth is attributed to the competitive nature resulting from their density.

Another benefit of Pocket Forests is that they quickly become self-sustaining, meaning that they can be cultivated with only about a year of maintenance. Pocket Forests also feature all-native plants, helping to restore ecological balance in different communities.

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Pocket Forests of Sterling Heights

[About](#) [Build your forest](#) [Resources](#) [Plant Calculator](#)

Welcome to the Pocket Forests project of Sterling Heights, Michigan!

ts, otherwise known as *Microforests* or
s are areas of densely-packed, highly
vegetation. These forests are unique



Deliverables

Guide

Tools

Resources



Plant Calculator

Choose the forest type that interests you and best suits your space.



Oak Forest

The Oak Forest is Michigan's most common ecological system. Oak Forests are strong, beautiful, and support a variety of wildlife. As maples become more common in Michigan, Oak Forests



Pollinator Forest

Pollinator forests are not just great for the environment—they're



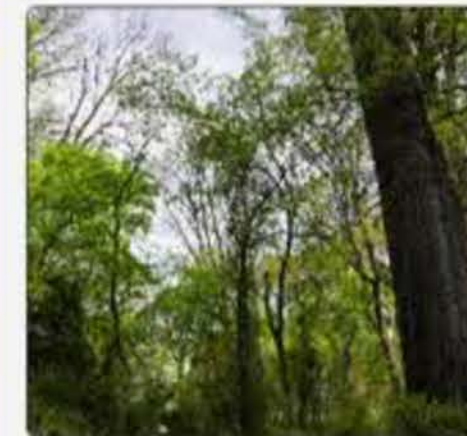
Dry Prairie

Prairies were once abundant in Michigan, spanning most of the



Wet Prairie

Prairies were once abundant in Michigan, spanning most of the



Challenged Site Forest

Got stubborn soil or demanding dirt? Consider building a Challenged Site Forest, best for areas that are suitable for only the most resilient of plants. This forest type is ideal

Your Selections

No plants recommended yet.

	A	B	C	D	E	
1	Species Name	Common Name	Forest Type 1	Forest Type 2	Forest Type 3	Forest Ty
2	Quercus rubra	Red Oak	Oak Savanna	Challenged Site		
3	Quercus macrocarpa	Bur Oak	Oak Savanna	Challenged Site	Dry Prairie	Pollinator
4	Quercus bicolor	Swamp White Oak	Wet Prairie	Oak Savanna		
5	Quercus alba	White Oak	Oak Savanna	Dry Prairie	Challenged Site	
6	Ulmus americana	American Elm / White Elm	Wet Prairie	Oak Savanna	Dry Prairie	
7	Celtis occidentalis	Hackberry	Wet Prairie	Oak Savanna	Challenged Site	
8	Betula alleghaniensis	Yellow Birch	Oak Savanna	Dry Prairie		
9	Fagus grandifolia	American Beech	Wet Prairie	Challenged Site	Oak Savanna	
10	Carya ovata	Shagbark Hickory	Oak Savanna	Dry Prairie		
11	Liriodendron tulipifera	Tulip Tree	Pollinator	Oak Savanna		
12	Platanus occidentalis	Sycamore	Wet Prairie	Challenged Site	Oak Savanna	
13	Angelica atropurpurea	Purplestem Angelica	Pollinator	Wet Prairie	Oak Savanna	
14	Anemone canadensis	Canada Anemone	Pollinator	Dry Prairie	Challenged Site	
15	Symphyotrichum novae-ar	New England Aster	Pollinator	Dry Prairie		
16	Coreopsis lanceolata	Sand Coreopsis	Pollinator	Oak Savanna	Challenged Site	
17	Eupatorium perfoliatum	Common Boneset	Pollinator	Wet Prairie	Challenged Site	
18	Helianthus strumosus	Paleleaf Woodland Sunflow	Pollinator	Oak Savanna	Dry Prairie	Wet Prairie
19	Lobelia siphilitica	Blue Lobelia	Pollinator	Wet Prairie		
20	Monarda punctata	Horsemint / Spotted Bee B	Pollinator	Oak Savanna	Challenged Site	Dry Prairie

Deliverables

Spreadsheet

Resources

palomacalvin More changes to the plant calculator and throughout 83b2ecf · 3 hours ago 8 Commits

public	Work on Plant Calc. PDF generation stable. Needs styling an...	4 days ago
src	More changes to the plant calculator and throughout	3 hours ago
.gitignore	Initial commit	last month
LICENSE	Initial commit	last month
README.md	Tweaks	last month
index.html	Progress - many changes. New files added. Plant Calculator i...	2 weeks ago
package-lock.json	Work on Plant Calc. PDF generation stable. Needs styling an...	4 days ago
package.json	Work on Plant Calc. PDF generation stable. Needs styling an...	4 days ago
templ_readme.md	Tweaks	last month
vite.config.js	Initial commit	last month

Deliverables

Codebase

Code Guide



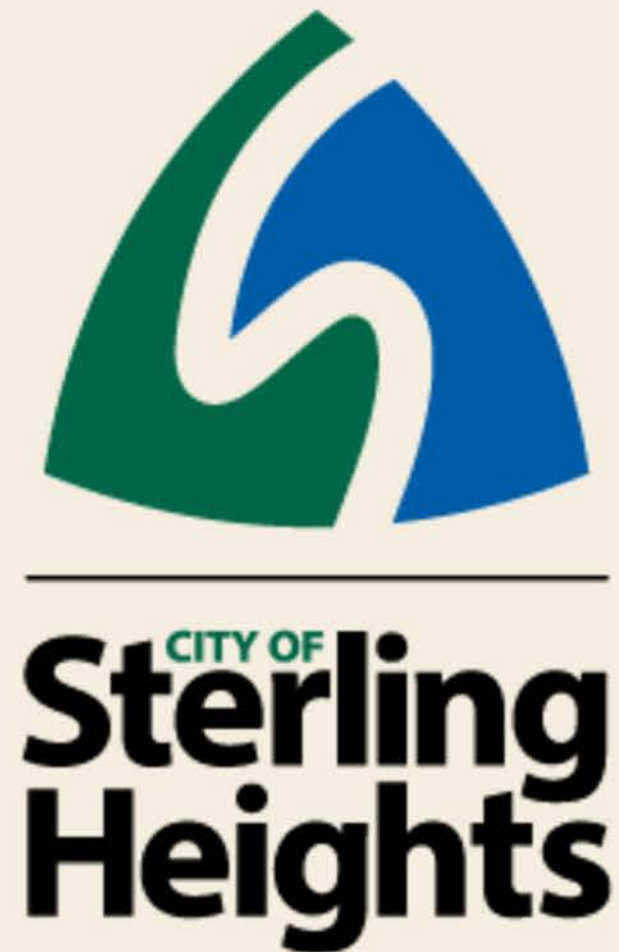
Conclusion

Let's improve our cities
one tiny forest at a time.



We need your help!

What should go on our
FAQ page?



Thank you!

Questions?

