



# Preservation Plan

Addendum to 2020 Sustainable Vision Master Plan  
[www.pittsfield-mi.gov/masterplan](http://www.pittsfield-mi.gov/masterplan)





## Pittsfield Charter Township

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### Office of the Supervisor

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Date: May 2019

#### Introduction

Since the adoption of the 2020 Sustainable Vision Master Plan (SVMP) in June 2017 and the subsequent establishment of the Pittsfield Township Sustainability Committee, we have been working toward identifying and prioritizing projects/initiatives to promote sustainability in our community.

The 2020 SVMP defines sustainability to mean: (a) the preservation and expansion of open/green/park spaces wherein native habitats, rain gardens, pollinator gardens and local farming are supported; (b) expansion of a multi-modal transportation network that reduces emissions and promotes public gathering spaces; and (c) development that relies on infill and density to minimize expansion of grey and impervious surfaces.

While, in the last decade, Pittsfield Township has made tremendous progress on (b) and (c) via the implementation of a robust multi-modal network and directing development within the defined mixed-use areas that promote density and infill, the lack of financial resources have not allowed us to move the needle significantly when it comes to open/green/park space acquisition. Even though Pittsfield has leveraged partnerships with the private sector and regional stakeholders like the Ann Arbor Green Belt and Natural Area Preservation programs to expand open/park/green spaces by about 200 acres in the last decade, we feel it is critical to have specific and more expansive plans for the future. This need to expand and preserve our open/green spaces is immediate because of the development pressure our community has experienced since the end of the Great Recession, especially in the last 2-3 years.

The 2020 SVMP, in the Open Space, Agriculture and Natural Features chapter, articulates such objectives as the need to develop a natural features protection plan; require a natural features analysis for new developments; establish green infrastructure; and protect view sheds, open spaces and natural features on large tracts of land (over 50 acres) in rural areas of the Township. However, the 2020 SVMP does not provide specificities on how to accomplish these goals/objectives. It is the intent of this Preservation Plan to provide such guidance.

Before providing these specificities, however, it is important to understand why it is critical to adopt a Preservation Plan as an addendum to the 2020 Sustainable Vision Master Plan. Research by both the Southeast Michigan Council of Governments (SEMCOG) in their *Green Infrastructure Vision for Southeast Michigan* and the Huron River Watershed Council's (HRWC) Green Infrastructure master plan's for various communities outline the benefits of preservation/green infrastructure such as:

- Improves water quality
- Lessens flood risk by slowing and reducing stormwater runoff into waterways
- Improves quality of life by providing for a greener and more pleasing community aesthetic
- Provides recreational opportunities by way of trails, greenways, bird watching, hiking in forests, etc.
- Improves value of residential properties, especially those proximate to trails, parks and green spaces.

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- Green Infrastructure techniques along roadways not only reduces stormwater pollution but can also be used to slow traffic and provide a buffer between the road and pedestrians.
  - Supports habitat
  - Improves air quality through carbon sequestration, in addition to the reduction of fugitive dust and air pollution

The SEMCOG report notes that “the connection between constructed green infrastructure techniques and improved water quality, higher economic value, reduced infrastructure costs, enhanced recreational opportunities, and advanced social benefits is demonstrated through numerous comparisons. The overarching theme for achieving these benefits starts with incrementally implementing green infrastructure in highly impervious areas. Priority areas for constructed green infrastructure techniques include roadways, institutional properties, downtown areas, and public and private parking lots.” (p.14)

The report outlines the benefit, specifically, of tree canopies by researching numerous studies to find that “urban trees within the United States remove approximately 800,000 tons of air pollution on an annual basis with a single tree removing 10 pounds of air pollutants each year. Additionally, trees and forests absorb carbon dioxide and produce oxygen. Approximately 260 pounds of oxygen can be produced by a healthy, mature tree every year.” (p. 37)

The report further notes that one acre of roadway impervious surface can generate between 0.5 to 1 million gallons of stormwater runoff annually.

As such, the need to preserve and expand Pittsfield Township’s green infrastructure is critical if we want to: (a) mitigate the impact of development; (b) reduce future expansion of impervious surfaces and protect natural areas.

It is the intent of this document to provide for specificities through a Preservation Plan that will be included as an addendum to the 2020 SVMP. The purpose of this Preservation Plan is not only to identify areas in Pittsfield Township that are currently open/green but also to retain them as such into the future. So, if a development or change in land use is proposed at one of the open/green areas (Site) identified in the Preservation Plan, preservation mitigation by way of restoration of trees, wetlands, natural features along with green infrastructure installations will be required.

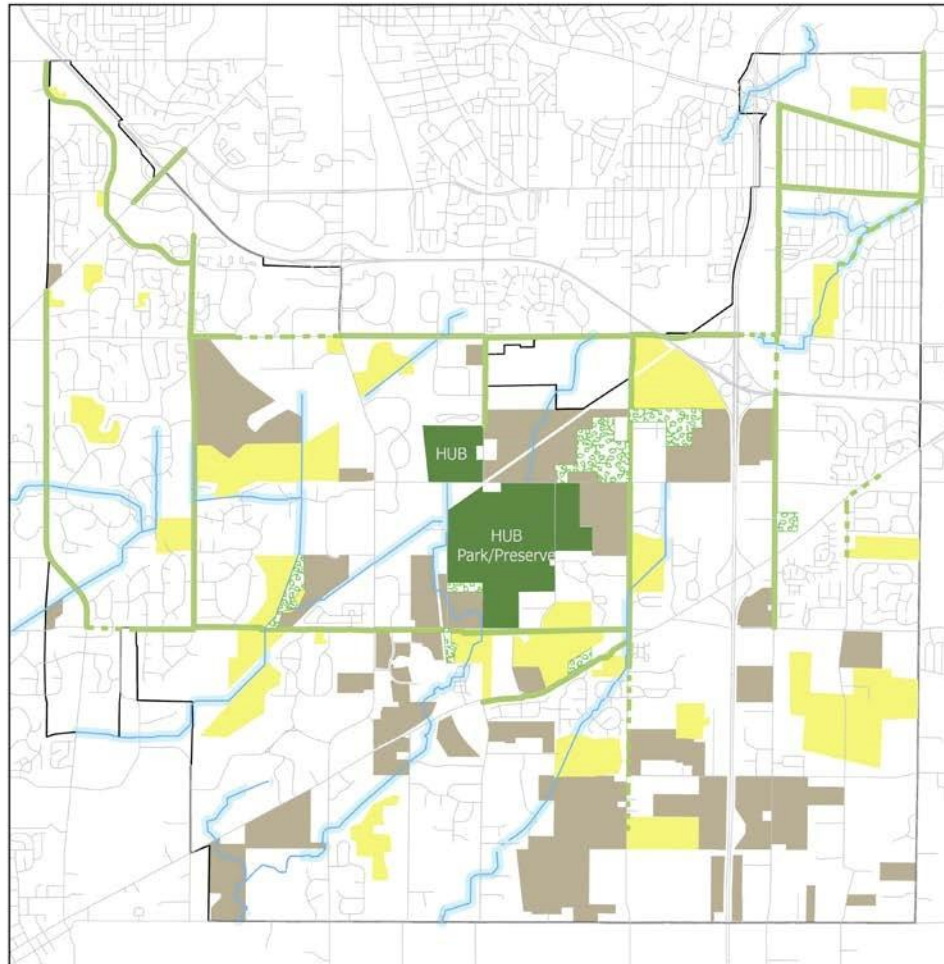
This document is compiled in three sections. Section I documents existing land uses, inventories open/green/park spaces that currently exist in Pittsfield Township, and outlines a Preservation map and a Green Infrastructure map. Section II articulates the policy background for the Preservation Plan. Section III outlines specific recommendations to be used as policy guidelines by the Planning Commission to implement requisite changes to the Land Development standards.

## **Section I**

In order to inventory Pittsfield Township’s existing open/green/park spaces, we followed the following steps:

1. Identify park (Township parks) and green (tree canopies) areas as ‘Sites’ along with identification of existing Conservation Districts and Agricultural spaces. The ‘Sites’, shown in yellow on the Preservation Map, are single or clustered properties with existing tree canopy that is 35% or greater and/or parcels designated for public recreational/park use or agricultural use.

2. Define the 535 acres of the Pittsfield Preserve as the 'Hub.' The Hub is a large natural area that serves as an anchor for preservation in the community.
3. Identify, both existing and proposed, non-motorized connections as a 'Link' between the 'Sites' and 'Hub.' These links serve to both inter-connect open/green spaces and can also be leveraged for green infrastructure installation such as rain gardens.
4. Drains have been identified as opportune areas to mitigate impacts and provide natural areas through green infrastructure installation, mainly via rain gardens and riparian buffers.



Map 11/21/2018

Pittsfield Charter  
Township

## Preservation Plan



Community Development

### Network

Link (Bike Lane, Greenway, Sidewalk)

Site (Existing Canopy, Park)

Agriculture (Active, Zoned)

Conservation Districts

Proposed Link Drains



The categorization and use of the terms 'Site,' 'Hub,' and 'Links' is based on HRWC's Green Infrastructure master plans (<https://www.hrwc.org/wp-content/uploads/2015/07/GreenInfrastructureOverview1.jpg>).

This Preservation Plan builds, as noted in the Introduction, upon the narrative articulated in the Open Space, Agriculture and Natural Features chapter of the 2020 SVMP. In other words, it seeks to provide greater clarity and specific recommendations for natural features protection, establishment of green infrastructure, and protection of existing open spaces and natural features. This map serves as the starting point for natural features protection. The Hub, Pittsfield Preserve, sits in the center of the Sites and agricultural areas that are targeted for protection. The question, of course, is how this protection occurs. How do we avoid the conversion of agricultural areas into suburban residential sprawl? How do we keep the tree canopies that currently existing on the Sites? How do we better protect other natural features such as wetlands and steep slopes? How do we require environmentally sensitive development? How do we leverage our expansive multi-modal network to serve as Links to the Sites and Hub in the Preservation Map?

## Section II

Clearly, the answers center around preservation but what does that look like? In recent years, green space preservation is being equated with green infrastructure. The SEMCOG report (*Green Infrastructure Vision for Southeast Michigan*, May 2014), defines green infrastructure in two broad categories. First, it includes ecosystems that are present in the natural, undisturbed environment such as wetlands, woodlands, prairies and parks. The second category includes constructed or built green infrastructure such as rain gardens, bioswales, community gardens, and agricultural lands.

In other words green infrastructure of green/open/park space is defined to include:

- Agricultural lands: Rural land used for pastures and the growing of food as the primary function, but can also provide ecological benefits;
- Community gardens: Urban and/or residential land used to grow food, but can also provide ecological services.
- Conservation easements: Public and private land designated for conservation in perpetuity
- Rain gardens/bioswales/green roofs/pollinator gardens/native gardens: Techniques that follow the natural water cycle. Manages rainfall by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to its source and along drains.
- Trails/greenways: Designated trails designed for walking, biking, hiking and other recreational activities.
- Woodlands, trees, street trees, urban forests: Areas of tree canopy cover that exist in multiple forms such as woodlands, private landscapes, street trees, urban forests.
- Parks: Public areas designated for recreational use.

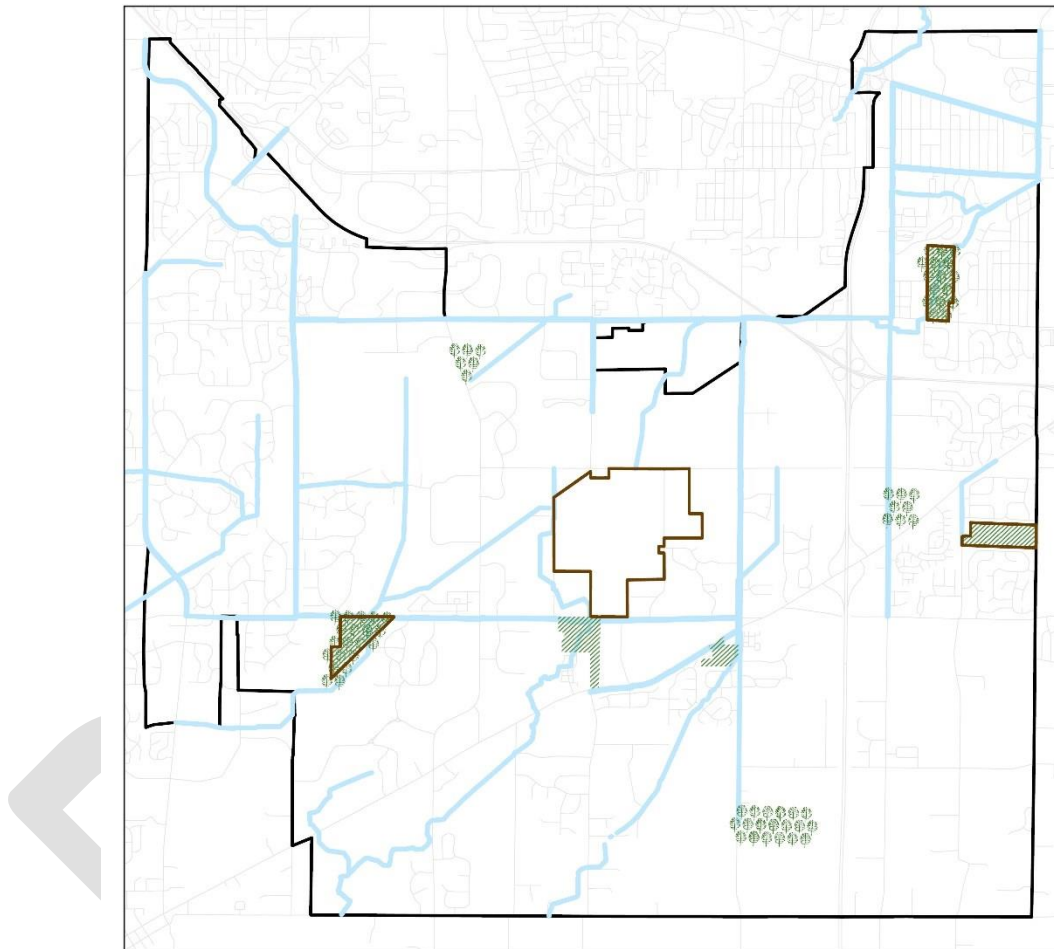
As such, our Preservation Plan may be equated with the preservation of existing green infrastructure by way of agricultural areas, parks, conservation easements, trails/greenways, steep slopes, and tree canopies along with establishment of built green infrastructure by way of pollinator gardens, community gardens, and the continued expansion of rain gardens, trails/greenways, tree canopies and parks.

## Section III

The idea, then, is the: (a) Preservation of agricultural areas and tree canopies; (b) Preservation and expansion of public parks, trails/greenways, tree canopies; and (c) Building of green infrastructure such as rain gardens, community gardens, and pollinator gardens. The specific recommendations on how we can accomplish these objectives are outlined below.

## Preservation and Expansion of Public Parks, Trails/Greenways, Tree Canopies

- Expand Pittsfield's trail network such as an internal trail network connecting Montibeller Park to Washtenaw Avenue and through Seyfried/Bella Vista connecting residential areas to a recreational trail network; Encourage the use of pervious pavement and surfaces.
- Install tree canopies at Wall Park, Montibeller Park, Woolley Park and at the parcels donated to Pittsfield Township on Carpenter Rd. and State St.
- Promote soil health, as defined by the United States Department of Agriculture "as the continued capacity of soil to function as a vital living ecosystem that sustains plants, animals, and humans." This might require such practices as soil aeration and spreading of compost to increase the soil's organic health. Research indicates that a 1% increase in the organic health of soil quality, increases water absorption from 10,000 to 22,000 gallons.



Map 1/15/2019

Pittsfield Charter  
Township

### **Green Infrastructure**

0 0.5 1 2 Miles

Community Development

-  Tree Canopy Installation
-  Native and Pollinator Garden Expansion
-  Community Gardens
-  Rain Gardens



## Build Green Infrastructure to Reduce Impact of Development

- Establish community gardens at Prairie, Hickory Woods, Woolley, Marsh View Meadows and Montibeller parks in public parks

- Install rain gardens along existing drains, greenways, and major road corridors such as Carpenter, Washtenaw, Ellsworth and Maple roads
- Establish a program to partner with the private sector to install green infrastructure features such as bioswales and rain gardens at parking areas that are 0.25 acres or larger.
- Expand native and pollinator gardens at the Pittsfield Preserve, Hickory Woods Park, Woolley Park, and Montibeller Park. In addition, the cultivation of essential oils and botanicals, native to our area, will be explored and supported.

### Preservation of Agricultural Areas & Tree Canopies

- While Pittsfield Township Ordinance 14.08 Tree and Woodland Protection, requires for the protection of Heritage trees, it does not require mitigation of tree canopies. As such, we recommend that a Green Space Analysis (a subcomponent of the Tree Canopy Conservation Ordinance) be conducted for every development proposal that comes before the Planning Commission. The aim would be to preserve tree canopies along with inventorying existing natural features and mitigation/replacing their loss, if any, as a result of the proposed development. The specific requirements for preservation and replacement would be specified in a Tree Canopy Conservation Ordinance, to be drafted by the Planning Commission.
- Sliding scale development density for large, agriculturally zoned parcels
- Require new developments to conduct a soil test for the purpose of determining permeability with the more porous soils being required to implement porous/permeable rather than impervious surfaces at, among other things, their parking areas.
- Review of parking space requirements with a focus on reducing the size of parking areas.
- Minimize infringement on existing wetlands by any new development or change in land use. If there is any infringement variance granted, the mitigation must be conducted on-site, i.e., on the same parcel of land as the development.
- Purchase land currently zoned agricultural, especially south of Michigan Avenue (see Agricultural & Natural Open Space Preservation Map, 2020 Sustainable Vision Master Plan, p. 172), to provide for, among other things, organic farming
- Work with the Michigan Department of Agriculture & Rural Development to implement the Farmland and Open Space Preservation Program ([https://www.michigan.gov/mdard/0,4610,7-125-1599\\_255810301--,00.html](https://www.michigan.gov/mdard/0,4610,7-125-1599_255810301--,00.html)). This program provides for purchase of development rights and preservation of land for agriculture (PA 116) along with allowing local governments to work with property owners to designate easements for open space preservation.

### **Conclusion**

The vision, guidelines and recommendations outlined in this document will allow Pittsfield Township to, pro-actively, begin working more aggressively toward preservation and expansion of its green and open spaces. The policy guidelines outlined in this document are intended to coordinate with the goals/objectives of related documents also committed to furthering sustainability in Pittsfield, including the Stormwater Management Plan, Invasive Species Plan and Energy Management Plan.

We look forward to the Planning Commission using the policy guidelines and recommendations of the Preservation Plan to make requisite changes to the Land Development Standards.

As always, we look forward to partnering with our stakeholders and community members to prioritizing specific projects to manifest the Green Infrastructure map into reality.