



## Pittsfield Charter Township

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### Office of the Supervisor

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Date: November 2018

#### 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 impermeable 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.

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. Extensive research (SEMCOG, HRWC) outlines the benefits of preservation/green infrastructure to include:

- 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.
  - GI 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
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- 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 by 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, also seems apparent if we are to, in any meaningful manner, implement the 2020 Sustainable Vision.

Hence, this document and the Preservation Plan. 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 policy recommendations to both the Board of Trustees and Planning Commission to adopt via the adoption of the updated 2020 Sustainable Vision Master Plan.

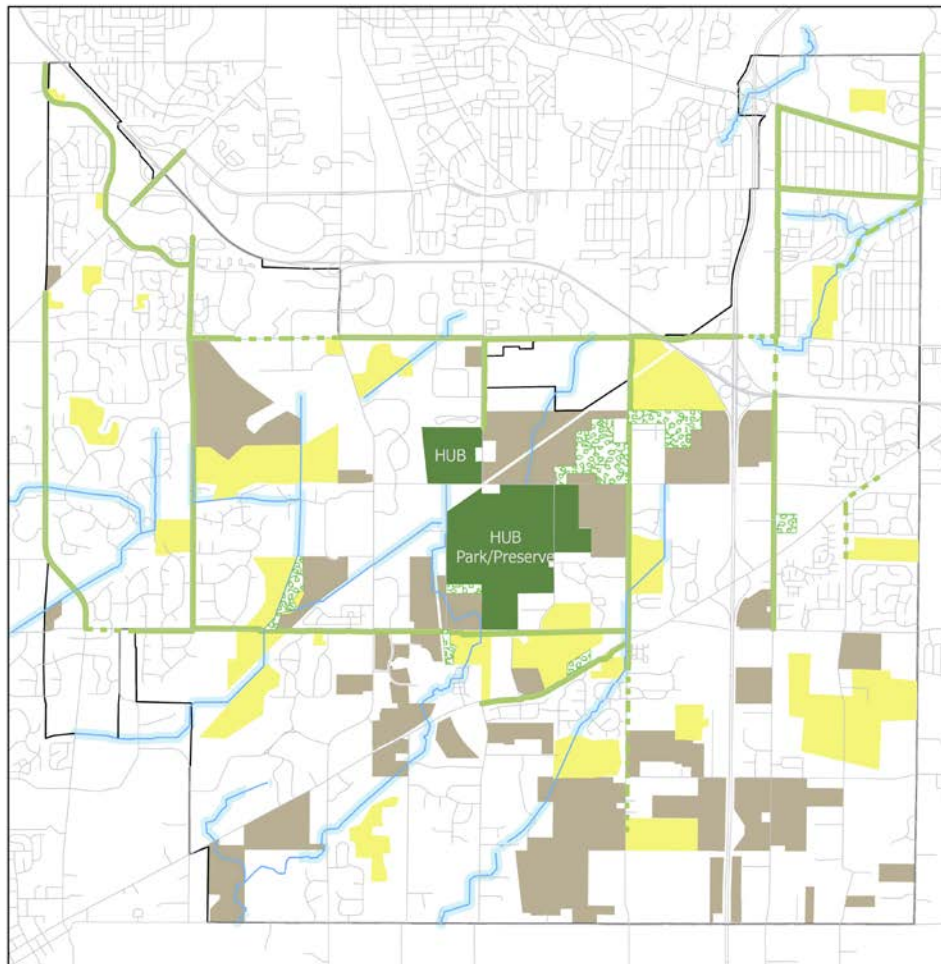
## **Section I**

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.

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 or '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.

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



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



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. Southeast Michigan Council of Governments (SEMCOG) adopted its “Green Infrastructure Vision for Southeast Michigan” in May 2014. This document 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 with 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.
- 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.

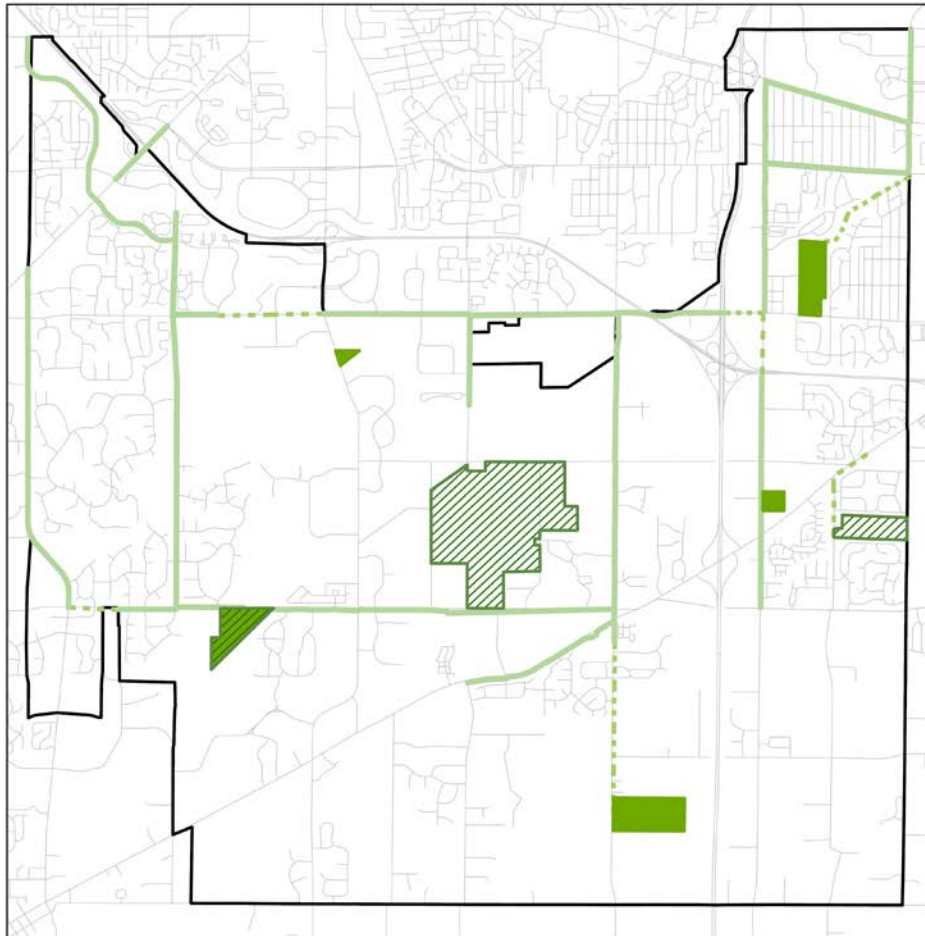
As such, our Preservation Plan may be equated with the preservation of existing green infrastructure by way of agricultural areas, parks, conservation easements, trails/greenways, and tree canopies along with establishment of built green infrastructure by way of pollinator gardens, community gardens, 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 that doesn't use impervious surface 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 (see Preservation Map)
- Install tree canopies at Wall Park, Montibeller Park, Woolley Park and at the donated parcels to Pittsfield Township on Carpenter Rd. and State St. (see Green Infrastructure Map)



Map 11/21/2018

Pittsfield Charter  
Township

### Green Infrastructure

0 0.5 1 2 Miles

Community Development

- Existing Link
- Proposed Link
- Tree Canopy Installation
- Native and Pollinator Garden Expansion



### 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 greater than . . . .
- Expand native and pollinator gardens at the Pittsfield Preserve, Hickory Woods Park, Woolley Park

#### 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 be conducted for every new development with the aim of inventorying existing natural features and mitigation/replacing their loss, if any, as a result of the proposed development. In particular, developers, at their own expense, will be required to provide for a 1:1 replacement of tree canopies, either on- or off-site (but within the boundaries of Pittsfield Township), whenever an agriculturally zoned property or any other 'Site' (as identified in the Preservation Map) is developed for non-agricultural use. The requirements would be specified in a Tree Canopy Conservation ordinance.
- Sliding scale development density for large, agriculturally zoned parcels
- Based on the Green Space Analysis, if soil conditions are deemed receptive for porous pavement, the parking areas within the new development must use permeable materials.
- 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\\_2558-10301--,00.html](https://www.michigan.gov/mdard/0,4610,7-125-1599_2558-10301--,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.