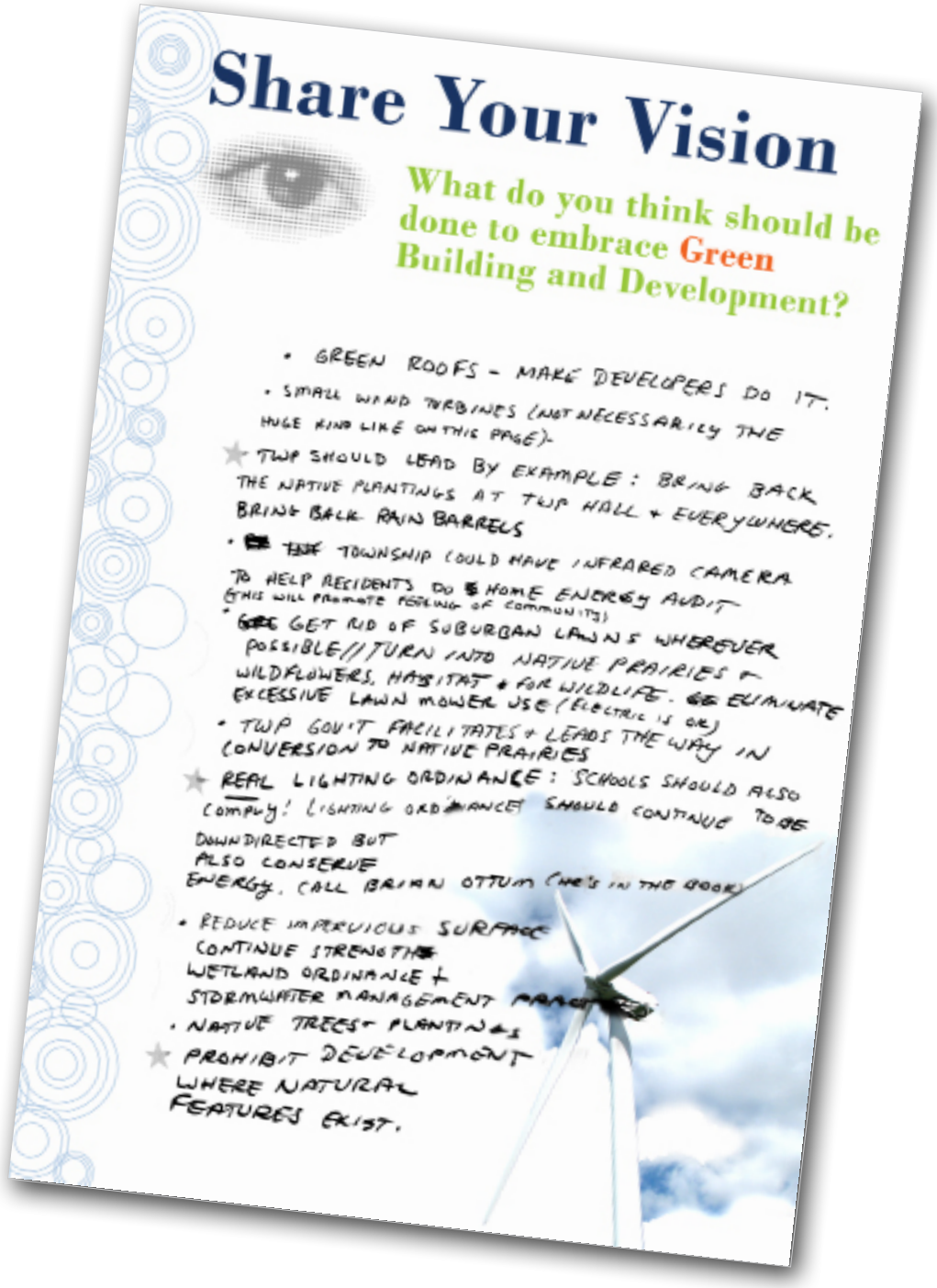
# A Green Pittsfield

## INTRODUCTION

This plan outlines and defines a set of tools and policies that will promote stewardship in Pittsfield. This defined approach is beneficial for preserving our environment, enhancing the overall quality of life for residents, and creating predictability for businesses with building standards and codes. This approach requires a comprehensive inclusion of a 'green' perspective in all our endeavors whether these are in the area of economic development, the creation of recreational opportunities, determining viable land use patterns, or expanding transportation options.

A commitment to conserving and preserving our natural resources and features is an integral concept throughout this Plan. This commitment extends from adding density in existing developed regions to preserving valuable open spaces, creating a multi-modal transportation network that gives people the opportunity to use non-motorized transportation, promoting alternative energy sources and the establishment of 'green' businesses in the Township. The above mentioned items are only some of the measures that promote a greener Pittsfield.

Pittsfield Township is committed to working with its residents and regional partners, including neighboring jurisdictions, to develop standards (e.g., a Complete Streets Ordinance, Green Building Standards) and continuing to explore new technologies (e.g., Electric Vehicle charging stations) for integration into the Township with the aim of ensuring not just local but regional stewardship of our environment.



## PITTSFIELD GONE GREEN

Beginning with the receipt of the *Energy Efficiency and Conservation Block Grant (EECBG)* in 2010, Pittsfield Township has begun translating this initiative into action. This grant assists in implementing energy efficiency and conservation strategies to reduce fossil fuel emissions and total energy use, and improve energy efficiency in the transportation, building, and other sectors. A primary goal for Pittsfield was to use these grant monies to develop an educational energy conservation campaign for the public to inspire residents to initiate energy conservation techniques in their homes and businesses.

As we move forward, the goal is to have the Township continue being a demonstration base for promoting conservation and energy efficiency protocols. The 'Pittsfield Gone Green' website will be a focal point providing residents and stakeholders with information and resources.

The work of the Township's Stormwater Management Committee further reinforces our 'Pittsfield Gone Green' approach through local and regional cooperation efforts which: reduce general stormwater runoff pollution; promote the use of low impact development (LID) techniques to reduce stormwater runoff and increase infiltration; promote environmentally responsible maintenance activities (such as reducing the use of pesticides, herbicides and fertilizers); eliminate illegal dumping and improper disposal of common waste products that could adversely affect water quality; control erosion and sedimentation associated with construction and post-construction stormwater management; educate the public about the adverse affects of pollution and the negative impacts associated with impaired water quality; and initiatives that reduce pollution while promoting 'good housekeeping.'

*Elements of the EECBG Energy Grant Display located at the Township Administrative Building*

## Key Concepts

### REDUCE PITTSFIELD'S CARBON FOOTPRINT

Reducing the overall consumption of fossil fuels in the Township is key to going green.

> Pittsfield's carbon footprint is measured by the daily activities of our residents, businesses, and visitors and the impact those activities have on the environment, and on climate change. A carbon footprint is measured by the amount of greenhouse gases (carbon dioxide) produced through burning of fossil fuels for electricity, heating, transportation, etc.

#### ENERGY EFFICIENCY

The Township is committed to continue promoting increased energy efficiency in its own public buildings, business sector, and residents' homes. The Township began its internal analysis with the *EECBG* grant, and will continue to study energy use within Township facilities and the Township as a whole. The Township will set further benchmarks for reduced energy consumption and more efficient energy use that go above and beyond the requirements of the current building code.

#### RENEWABLE ENERGY

The Township's commitment to energy efficiency will further manifest itself in the exploration of available renewable energy sources. We will periodically evaluate the feasibility and economic impact of using these renewable sources for energy generation. Our rich agricultural lands could be explored as a source of biomass energy production as well as be used to generate renewable energy from other sources. Another way to continue these efforts is for the Township to create policies and ordinances that encourage residents and businesses to use alternative energy sources. New policies and ordinances regarding solar and wind energy and access, in particular, would simplify the process for installing these technologies and make it easier for businesses and residents to begin to more widely use these sources. These policies and ordinances will be updated regularly to reflect technological advancements and innovative new sources of energy generation.

#### RECYCLE

In 2009, Pittsfield Township became the first jurisdiction in Washtenaw County to offer single-stream recycling. This major overhaul of our rubbish and recycling services offers an extensive curbside residential recycling program. The program allows residents to place all recyclable materials in one bin and accepts all types of plastics. The Township will continue to educate residents on the importance of recycling, and work towards making the service more user-friendly and more widely available through expansion of the customer base to include businesses and multi-unit dwellings. In addition, the Stormwater

*2010 Spring Clean Up Day*

Management Committee will continue to engage with residents and businesses, directly and through Township seminars, to promote pollution prevention and environmentally responsible methods of waste disposal.

#### PUBLIC EDUCATION

The Township intends to continue focusing on educating its businesses and residents about the importance of incorporating green practices into their business operations and day-to-day lives. The Township uses a multi-faceted approach to educating its residents on green issues. The Township will continue to use events such as informational sessions and Township Clean-Up Days as venues for distributing educational materials. The 'Pittsfield Gone Green' website will continue to be expanded and enhanced to serve as an portal for information about relevant issues/policies/initiatives.

### MIXED-USE AND MULTI-MODAL CONNECTIVITY

As outlined within the Land Use & Transportation chapter, a goal of the Township is to reduce dependence on automobiles by promoting land use patterns that focus development in specific areas that are linked through multiple modes of transportation including public transit and non-motorized networks. The Township has begun to incorporate these elements of connectivity through recent projects such as the inclusion of non-motorized facilities as part of regular maintenance and preventative work on Township roadways; the completion of Phase I of the Platt Road Greenway; and the virtual completion of the sidewalk network in the Northeast portion of Pittsfield.

A focus on developing mixed-use nodes allows the Township to maximize the use of its established infrastructure network of utilities, roads, institutions, and public services that effectively serves our current and future populations. Furthermore, the conceptual designs for the mixed-use nodes promote the use of bioswales and community gardens.

> Community survey respondents stated that if they had $100 to spend on capital improvements, they would spend only $10.44 on expanding the public water and sewer system.

Through concentrating new development in areas of the Township which have already been developed, the Township is able to effectively preserve open space to create a harmony between development and the preservation of the natural environment.

### DEMONSTRATION PROJECTS

Beginning with the *EECBG* initiative, the Township is committed to engaging the community to preserve and protect our environmental resources. The use of more energy efficient appliances, lighting, and building materials (e.g., windows, plumbing, and insulation) can have a significant impact on the size of our carbon footprint. The Township will continue to support the incorporation of energy efficient alternatives into existing homes and businesses and will create regulations and policies to require their use in all new construction.

The Township Administration will also continue to study itself, evaluate its policies and establish benchmarks for reducing the Township administration's individual carbon footprint. The Township should incorporate new sustainability measures whenever possible, and periodically re-evaluate its approach as new green technologies become available. Some of the techniques the Township Administration should explore to reduce its carbon footprint are: the use of renewable energy sources (e.g., biomass, solar, and wind power), efficient transportation, energy efficiency in its existing buildings and any new construction, and explore low-impact landscaping techniques (such as installing a rain garden at the Administration building). Incorporating green techniques into the Township Administration's practices will enable the Township to lead by example and educate its residents and businesses.

## ESTABLISH GREEN BUILDING STANDARDS

The materials used to construct buildings and houses and the appliances used within these structures are integral components for improving and greening our community, and reducing our carbon footprint. The Township will lead by example and install energy efficient building materials and appliances into our facilities.

Pittsfield will also update its Land Development Standards and Ordinances to require and incentivize the use of alternative energy sources, energy efficient materials and appliances, and regularly examine its standards to ensure that they remain current and in alignment with new strategies and green technologies as they are developed. The Township will research and evaluate best practices and integrate these concepts into green building standards. The table *on the following page* contains examples of possible green building recommendations that could be integrated into the Land Development Standards.

*House with photovoltaic panels on the roof*
SOURCE: http://community.mynorth.com/forum/topics/2345865:Topic:5517

| | |
|---|---|
| **INTEGRATED DESIGN** | |
| | **GREEN DEVELOPMENT PLAN**<br>Submit a Green Development Plan outlining the integrated design approach used for this development that demonstrates involvement of the entire development team. |
| **SITE LOCATION AND NEIGHBORHOOD FABRIC** | |
| | **SMART SITE LOCATION PROXIMITY TO EXISTING DEVELOPMENT (NEW CONSTRUCTION)**<br>Provide site map demonstrating the development is located on a site with access to existing roads, water, sewers and other infrastructure within or contiguous to [having at least 25 percent of the perimeter bordering] existing development. |
| | **COMPACT DEVELOPMENT (NEW CONSTRUCTION)**<br>Achieve densities for new construction of at least six units per acre for detached/semi-detached houses; 10 for town houses; 15 for apartments. |
| | **WALKABLE NEIGHBORHOODS: SIDEWALKS AND PATHWAYS**<br>Connect project to pedestrian grid. Include sidewalks or other all weather pathways within a multi-family property or single-family property subdivision linking residential development to public spaces, open spaces and adjacent development. |
| | **SMART SITE LOCATIONS: PASSIVE SOLAR HEATING/COOLING**<br>Orient building to make the greatest use of passive solar heating and cooling. |
| **SITE IMPROVEMENTS** | |
| | **LANDSCAPING**<br>Provide a tree or plant list certified by the architect or landscape architect that the selection of new trees and plants are appropriate to the site's soils and microclimate and do not include invasive species. Locate plants to provide shading in the summer and heat gain in the winter. |
| **WATER CONSERVATION** | |
| | **WATER CONSERVING APPLIANCES AND FIXTURES (NEW CONSTRUCTION)**<br>Install water conserving fixtures with the following minimum specifications: toliets 1.3 GPF; showerheads 2.0 GPM; kitchen faucets 2.0 GPM; bathroom faucets 2.0 GPM. |
| **ENERGY EFFICIENCY** | |
| | **EFFICIENT ENERGY USE (NEW CONSTRUCTION)**<br>Meet Energy Star standards for single-family and low-rise residential(4 stories or less). New construction for low-rise buildings will be required to have a 5-Star Energy Rating. New construction for mid-rise and high-rise residential structures are rated by ASHRAE. Mid and high-rise structures will be required to exceed the ASHRAE 90.1-2004 standard by 15 percent. |
| | **RENEWABLE ENERGY**<br>Install PV panels, wind turbines or other renewable energy source to provide at least 10 percent of the project's estimated electricity demand. |
| **MATERIALS BENEFICIAL TO THE ENVIRONMENT** | |
| | **RECYCLED CONTENT MATERIAL**<br>Use materials with recycled content; provide calculation for recycled content percentage based on cost or value of recycled content in relation to total materials for project. Minimum recycled material must be 5 percent. |
| | **WATER PERMEABLE PARKING AREAS**<br>Use water-permeable materials in 50 percent or more of paved parking areas. |
| | **REDUCE HEAT-ISLAND EFFECT: ROOFING**<br>Use energy star-compliant and high-emissive roofing or install a "green" (vegetated) roof. for at least 50 percent of the roof area; or a combination of high-albedo and vegetated roof covering 75% of the roof area. |

SOURCE: Based on the Enterprise Green Communities Criteria 2008.
For more information on the Green Enterprise Standards see: http://www.greencommunitiesonline.org

## NURTURE A 'GREEN' PRIVATE SECTOR

Pittsfield Township recognizes that sustainability has an economic development component. Not only does Pittsfield have a number of businesses that are at the cutting-edge of developing and promoting energy-efficient and alternative energy technologies, the Township also has the ability to partner with local universities to establish 'incubators' that will allow for small-scale research and continued development of 'green' technologies and protocols.

Nurturing a green private sector will require the Township to proactively engage with its existing businesses and educational partners to determine how to best assist them. Strategies may include the development of an outreach campaign that highlights opportunities for public-private partnerships.

In addition, the Township must engage more directly with its agricultural businesses to ensure their economic success and viability. Revisions to the Township's agricultural preservation land use category will allow for an expanded number of economic activities. This information must be disseminated to the agricultural community through platforms designed to engage with agri-businesses. This same venue could be used to boost the Township's 'green' efforts by providing information and opportunities for environmentally-friendly agricultural practices, promoting local food, and encouraging farm-based cultural activities and events.

The goal, then, is to nurture a 'green' business base that complement's Pittsfield Township's goal of 'going green' while, at the same time, assisting the entire region to become more sustainable both environmentally and economically.

## PROTECT OUR WATER RESOURCES

### REGIONAL COLLABORATION

Pittsfield Township is located in four major watersheds – the Huron River (Middle Huron), River Raisin (Upper River Raisin), Mallet's Creek, and Stony Creek watersheds. The preservation of water resources is imperative to a healthy environment. Water resources are an integral component of natural areas in the Township and are part of the community's character, recreation network, economic success, and general quality of life.

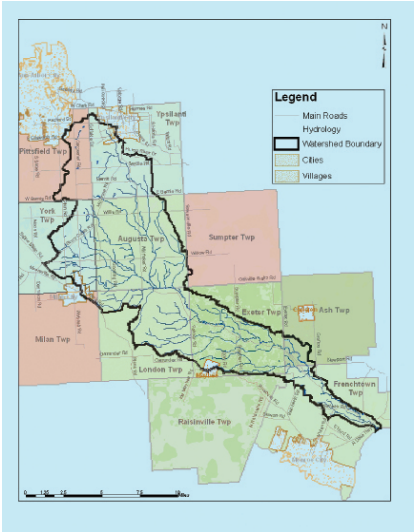
> 86% of community survey respondents said the Township should continue to manage stormwater in a manner that respects nature and does not overburden the natural systems or built environment.

The Township's development decisions have lasting impacts on not only the residents and businesses located within the Township boundaries but also residents and businesses in these watersheds. The Township will continue to collaborate with these watershed organizations and implement recommendations from each of the individual watershed management plans: *Watershed Management Plan for the Huron River in the Ann Arbor-Ypsilanti Metropolitan Area*; *River Raisin Watershed Management Plan*; *Stony Creek Watershed Management Plan*.

Ongoing and future collaboration efforts are outlined in the Township's updated 2010 Stormwater Management Plan. This plan includes the following key components: Public Education Plan, a Public Involvement & Participation Plan, an Illicit Discharge Elimination Plan, a Post-Construction Controls for Development and Re-Development Program, a Construction Storm Water Runoff Control Program, and a Pollution Prevention and Good Housekeeping for Municipal Operations Plan. The Township will work both locally and regionally to implement these plans for the purpose of ensuring preservation of our watershed districts and water resources.

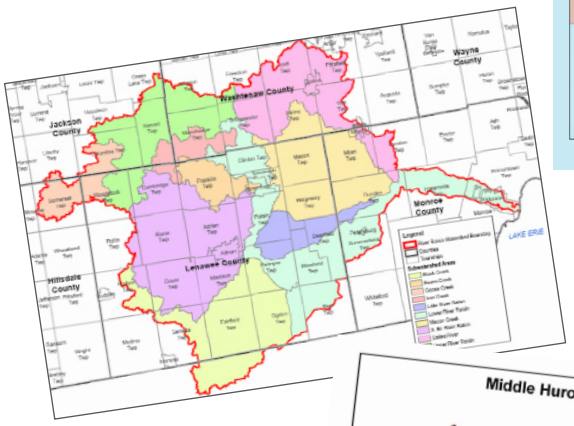
### GREEN STORMWATER MANAGEMENT TECHNIQUES

Additionally, the Township will help protect our water resources by coordinating efforts with other local and regional agencies to promote low impact development (LID) techniques for stormwater management systems. The *Low Impact Development Manual for Michigan*, a joint project by MDEQ and SEMCOG, could be used as a resource, and provides design standards for systems such as bioswales, rain gardens, and green roofs that help purify our stormwater before it reaches our rivers.



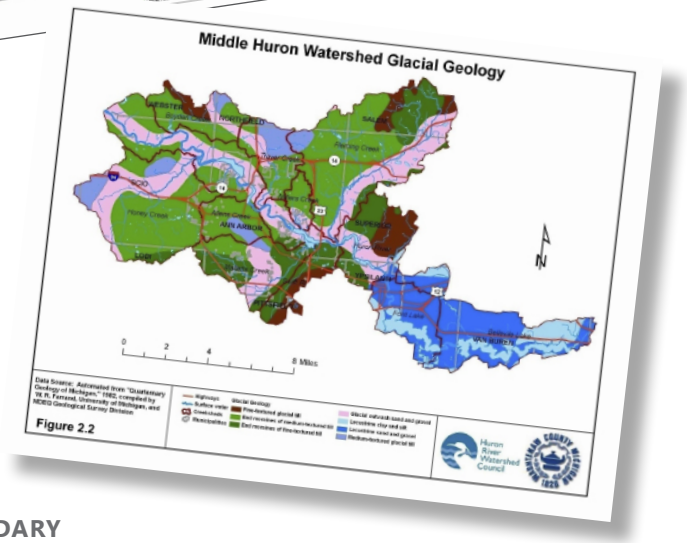

**STONY CREEK WATERSHED BOUNDARY**

Source: Stony Creek Watershed Management Plan, June 2005, Eastern Michigan University




**RIVER RAISIN WATERSHED BOUNDARY**

Source: River Raisin Watershed Management Plan, September 2009, River Raisin Watershed Council




**MIDDLE HURON WATERSHED BOUNDARY**

Source: Watershed Management Plan for the Huron River in the Ann Arbor-Ypsilanti Metropolitan Area, September 2008, Huron River Watershed Council

## GREEN STORMWATER MANAGEMENT CONCEPTS

### RAIN HARVESTING

Directing water from the roof into a holding container saves rainwater for using in the lawn and garden preventing excess runoff.

### PERMEABLE PAVEMENT

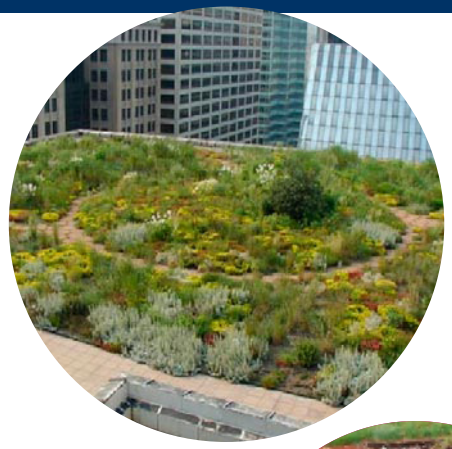
Permeable pavement allows water to absorb into the ground rather than flowing into storm drains.

### INFILTRATION PLANTERS

Infiltration planters are structures or containers with open bottoms that allow stormwater to infiltrate into the ground.

### RAIN GARDENS

Rain gardens collect water in low lying areas and allow it to settle slowly into the ground while taking the place of traditional planters



### GREEN ROOFS

Green roofs absorb water, provide excellent insulation, and prevent sunlight from reflecting into the atmosphere and raising temperatures

### BIOSWALES

Bioswales positioned around wetlands slow the flow of water and allow harmful materials to settle out before entering sensitive ecosystems.

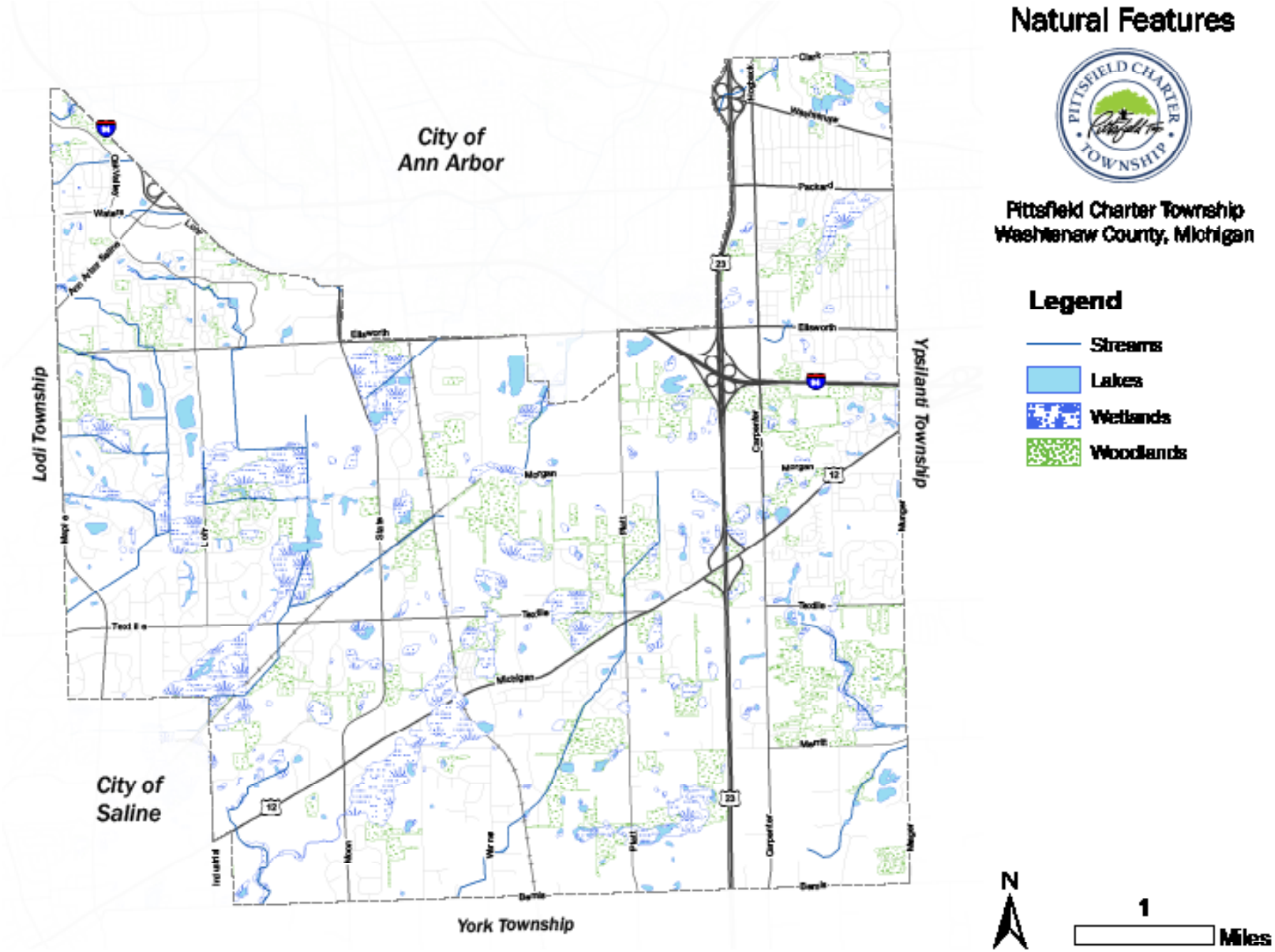
### NATURAL FEATURE PRESERVATION

One of the easiest LID techniques, preserving natural features, maintains a site's natural hydrology and minimizes runoff through infiltration.

### FLOW-THROUGH PLANTERS

Flow-through planters are planter boxes that temporarily store stormwater before it is filtered through vegetation and soil and drained to a disposal point.

Contributing source. University of Michigan Master of Urban Planning Students


Natural Features
Pittsfield Charter Township
Washtenaw County, Michigan
Legend
Streams
Lakes
Wetlands
Woodlands
City of Ann Arbor
Lodi Township
Ypsilanti Township
City of Saline
York Township
N
1
Miles

## KEY CONCEPTS

*Reduce Pittsfield's Carbon Footprint*

GOALS

| The Township should strive to make its buildings and neighborhoods more energy efficient and sensitive to the natural environment. | Educate and change the culture of the population (residents and businesses) in the Township regarding sustainability issues and practices. | The Township should lead by example through greening its facilities and practices and supporting sustainability objectives. |
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OBJECTIVES

1. Ensure Township Ordinances and Land Development Standards encourage the use of alternative energy sources (e.g., wind, solar, geothermal, biomass).
2. Expand the Township's single-stream recycling program to include businesses and multi-unit residential developments.
3. Encourage developers to utilize energy efficient building practices and materials and provide incentives for their use.
4. Promote alternative modes of transportation, such as mass transit, bike paths, and trails throughout the Township.

1. Provide information to the community regarding existing programs and practices available for energy efficient home building and renovation.
2. Prepare informational materials to distribute to local businesses to encourage them to study their practices, resource consumption, and energy use.
3. Create a public relations campaign that shows businesses how they will save money by incorporating a consciousness of sustainability practices into their businesses practices.
4. Establish a program that recognizes businesses that make strides in becoming more sustainable.
5. Host forums and presentations for residents, businesses, and agricultural operations aimed at promoting the preservation of our natural resources and the environment.

1. Actively solicit available grant monies to become 'greener'. The Township can set an example by continuing to participate in established programs.
2. All new construction initiated by the Township should incorporate sustainable best practices and other environmentally friendly best practices.
3. Conduct an assessment of the Township and make modifications to its current practices to promote reduced energy consumption, additional recycling, materials conservation, and native landscaping practices.
4. Establish benchmarks to track progress and survey the Township's current use of resources and anticipate future use.
5. Develop a strategic plan dedicated to accomplishing the Township's greening goals.
6. Share our own best practices with other communities and continue coordinating with regional partners.

## KEY CONCEPTS

| | *Establish Green Building Standards* | *Protect our Water Resources* | *Nurture a Green Private Sector* |
|---|---|---|---|
| **GOALS** | Reduce the Township's consumption of fossil fuels and reduce waste in both the public and private sectors. | Protect and preserve the quality of our water resources. | Promote sustainability as a component of economic development. |
| **OBJECTIVES** | 1. Establish green building standards and incorporate them into Township Ordinances and Land Development Standards.<br>2. Actively solicit available grant monies to assist existing businesses in their efforts to become 'greener'.<br>3. Encourage developers to utilize energy efficient building practices and materials and provide incentives for their use in new construction. The Township might do this by asking for LEED certification or incentivizing based on a comparable standard.<br>4. Consider incentives for businesses looking to rehabilitate their buildings and integrate green features into their modifications. | 1. Continue efforts to collaborate with regional partners to ensure that our water resources are protected.<br>2. Educate the public about best practices to prevent water pollution.<br>3. Encourage native landscaping and natural stormwater management systems (e.g., bioswales, rain gardens, green roofs) to be used in new development and the rehabilitation of developed sites.<br>4. Create/adopt guidelines for low impact development design and maintenance standards.<br>5. Proactively address potential code enforcement issues with a program where people can register their low impact development and maintenance plans with the Township. | 1. The Township should establish a business 'incubator' program in conjunction with local universities to foster the growth of green businesses within Pittsfield.<br>2. Develop an outreach campaign that highlights the opportunity for public-private partnerships in the green sector.<br>3. Establish a program that recognizes businesses that make strides in becoming more sustainable and businesses that are developing green technologies.<br>4. Create an agricultural zoning category that would expand the number of economic activities that can be undertaken on agricultural lands to make our agricultural businesses more viable. |

As noted in the introduction, a review of our work since 2009, highlighted the fact that we have operated within a sustainability framework. For the purposes of this document and Pittsfield Township's past and future prioritization of projects/initiatives, we are defining 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.

In fact, we have compiled a A-Z list that outlines the various successes we have had in furthering sustainability in Pittsfield and our region (www.pittsfield-mi.gov/sustainability). This attests to our ongoing commitment, first delineated in the 2010 Pittsfield Master Plan, to be good stewards of our environment. We have a strong understanding that our community demands environmental stewardship. This is evident not just through the 72% approval of the Park Millage renewal in March 2016, but also through consistent prioritization in a multitude of surveys and public forums of green/park and open space maintenance and acquisition. Our vision, however, is to go beyond the greening of our landscape by hard coding sustainability into the DNA of Pittsfield Township.

As such, this chapter encapsulates the feedback from the Sustainability Conference and completely revises the Goals and Objectives, which are now reflective of the challenges posed to Pittsfield Township at the Conference. The keynote speaker at the Conference, Washtenaw Water Resources Commissioner Evan Pratt, spoke about not only instituting sustainable or 'green' initiatives but also ensuring long-term financial sustainability of the same. To that end, Pittsfield Township is partnering with the WCWRC to develop a Stormwater Management Plan that will provide: (1) A summary of

the Inventory and Condition Assessment of existing drainage infrastructure; (2) Analysis of the impact of a land use "build-out" 20 years into the future on this drainage infrastructure; (3) High level strategy recommendations to mitigate both existing drainage and water quality issues as well as those that are anticipated; (4) Preliminary recommendations and a process for making capital planning decisions for drainage infrastructure over the next 5 to 20 years. As Pittsfield moves toward a sustainable future, working with regional stakeholders and residents to address, among other things, water quality, detention/retention and stormwater management is going to be an important goal.

GOALS

OBJECTIVES

| Transportation | Land Use | Grounds |
|---|---|---|
| 1. Further expand public transit, especially for seniors.<br>2. Further expand non-motorized amenities with an aim to connecting destinations and linking to regional networks.<br>3. Coordination between land use and transportation planning. | 1. Provide a permanent venue that can be used for Farmers Market and general public gathering space.<br>2. Purchase park on the west side of Pittsfield.<br>3. Provide non-motorized connections to the regional B2B Trail.<br>4. Regional Stormwater Management; Coordinate with the Washtenaw County Water Resource Commission's Stormwater Management Plan.<br>5. Establish requirements that provide for mixed use as percent of new development. | 1. Establish community gardens at Township parks<br>2. Promote native landscaping and public outreach/ education about the same<br>3. Universal accessibility, especially at public parks |

## KEY CONCEPTS

| GOALS | Capital | Economic Development | Miscellaneous |
|---|---|---|---|
| OBJECTIVES | 1. Adopt an Infrastructure Business Plan.<br>2. Outline a capital improvement plan for the Township that includes parks and preserves and promotes renewables (e.g., solar).<br>3. Set up a replacement fund for infrastructure maintenance. | 1. Promote environmentally friendly and sustainable businesses.<br>2. Provide sustainable incentives for business.<br>3. Emphasize building re-use and flexibility.<br>4. Public/Private partnership to address development challenges.<br>5. Advocate for and promote local and small businesses. | 1. Install public art and gateway signage along major corridors such as State St, Michigan Avenue, Ellsworth, Carpenter Road and Ann-Arbor Saline Road.<br>2. Expand single-stream recycling to commercial and multi-unit residential areas.<br>3. Increase outreach to young citizens through schools.<br>4. Install historic markers along non-motorized pathways. |