

**WORCESTER TOWNSHIP COMPREHENSIVE PLAN UPDATE TASK FORCE
WORCESTER TOWNSHIP COMMUNITY HALL
WEDNESDAY, JULY 28, 2021 7:00 PM**

CALL TO ORDER by Stacy Crandell at 7:01 PM

ATTENDANCE

STEPHANIE BAILEY	[X]
ART BUSTARD	[X]
WINNIE HAYES	[X]
BURT HYNES	[X]
JAY MCKEEVER	[X]
BRIAN NEWHALL	[X]
ROBERT PACE	[X]
PATRICIA QUIGLEY	[X]
TONY SHERR	[X]
CHRISTINE STEERE	[X]

APPROVAL OF THE MINUTES

- June 23, 2021 Meeting Minutes – Stacy Crandell called for any comments or objections to the minutes. A motion by Wini Hayes to approve the minutes and it was seconded by Art Bustard and it was passed unanimously.

PUBLIC COMMENT

- There were no public comments.

FOCUS AREA OF COMP PLAN FOR DISCUSSION

- Discussion on Open House in October
 - There was a brief discussion regarding the open house on October 27th. The Task Force will discuss it further at their next meeting regarding the roles of the Task Force Members and the event details.
- Draft Chapters – Community Character
 - Brian Olszak went over the draft chapter which covered Community Character. There was some discussion regarding the chapter.
 - § Brian shared a visual concept for a gateway signage at Fairview Village. There was a discussion about design. Stephanie Bailey noted that she saw similar signage in Lower Providence and thought it was a nice addition. The Task Force agreed that the signage was a good idea but felt further discussion outside of this committee was required to discuss design elements.
 - § There was a discussion about the goals. Robert Pace and Wini Hayes noted that the order of the goals should have the third goal be the first goal and the members agreed on this.

- § In addition, Wini Hayes stated that she felt both first and last goal involving the mix of housing, densities and land uses could be put into one goal and there was discussion on that. Art Bustard commented that he did not like the term types and the Task Force members agreed that it should be deleted.
- § Robert Pace suggested that this section was included earlier in the Comp Plan and that a description of sense of place should be in the beginning of the chapter. Wini Hayes added that she believes that this could be a vision statement that she had brought up in an earlier meeting. Robert also stated that it would be helpful if the principles of Universal Design chart was explained more in-depth or to reconsider the placement of that chart.
- § There was a discussion on the types of housing that was suggested in the chapter. The Task Force members were not in agreement with the co-housing example and it was suggested to remove it. It was felt it was not the right fit for the community. The other examples of housing were discussed and the group felt that the examples needed more explanation.
- § Burt Hynes asked for clarification on the Diverse and Attainable Housing Choices section. He felt it came across negativity towards the older population and felt a better explanation should be included. Wini Hayes added that the graphic below was very small in this section and asked that it be made bigger.
- § There was a discussion about signage and benches. Stacy Crandell commented that the Township already has upgraded their signage around parks and facilities recently with branding that symbolic of Worcester Township. Wini Hayes commented that the bench example for the Recreation/Trail did not really reflect the rural character of the Township and would like to see if there are other alternatives.
- § There was discussion regarding encouraging younger families to the Township. Wini Hayes stated that while the Township wants to encourage younger families to the community, it is important that the rural characteristics are maintained and that people moving from the city do not come out expecting the same amenities they have there. Art Bustard and Wini Hayes both stated that it was important that the higher densities were to be included in the villages. It was suggested that this was clearly stated.
- § As a whole, the Task Force members felt that chapter could use some more explanation so that rural and historic characteristics that the Task Force members feel is important to the Township is presented clearly.

NEXT STEPS AND NEXT MEETING

- September 22, 2021 meeting – The next meeting will cover the chapter for Parks, Open Space & Preservation; Environmental Resources & Infrastructure. There is no August meeting.

PUBLIC COMMENT

- There were no public comments.

ADJOURNMENT

There being no further business before the Comprehensive Plan Update Task Force, Stacy Crandell adjourned the meeting at 8:40 PM.

Respectfully Submitted:

Stacy E. Crandell
Assistant Township Manager

DRAFT

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SCOTT FRANCE, AICP
EXECUTIVE DIRECTOR

SUBJECT: Preservation, Open Space + Parks Chapter and Environmental Resource + Infrastructure Chapter Cover Memo, and Open House Notes

TO: Worcester Comprehensive Plan Task Force

**CC: Tommy Ryan, Township Manager
Stacy Crandell, Asst. Township Manager**

FROM: Brian J. Olszak, Senior Planner, MCPC

DATE: September 22, 2021

Please find attached for your review the proposed Preservation, Open Space + Parks Chapter and Environmental Resource + Infrastructure Chapter of the Comp Plan Update.

As always, I wanted to remind you that, in the final version of these chapters as with all others, MCPC will either cite the source of graphics utilized or create our own graphics illustrating the same underlying concept as is shown in these Chapters. Additional photos will be placed throughout the plan.

Also below, please find a quick summary of the tables and stations we are planning for the Comp Plan Update Open House for October 27, 2021.

Open House Table/Station Plan and Inventory

WELCOME & SIGN-IN

Locate this station near the entrance (inside or out, as weather and space allows). This station should have a table where attendees sign-in and pick up any materials/brochures. This station may be paired with a food and refreshments table.

- Clipboards and sign-in sheets (2 sets)
- Table-top easel or self-supporting welcome sign
- Adhesive nametags, if needed
- Assorted felt-tip markers, nametags are provided
- "I Live Here" map poster (participants place a dot on a large map of Township to indicate where they live)
- Sticker dots
- Poster stand (1)

PLAN INTRODUCTION & BACKGROUND

This station will be the starting point for attendees. It provides a summary of the comprehensive plan's contents and an overview of the planning process (with emphasis on public outreach).

- Examples of the public survey and any other outreach materials
- Poster stand (1)
- Plan introduction and overview poster

COMMUNITY CHARACTER

This station presents the goals and objectives for housing and introduces housing/residential development types both familiar and unfamiliar to residents.

- Poster stand (2)
- Goals & Objectives/introduction poster
- Visual preference poster (examples of architecture/building design that people can vote on)
- Sticker dots

ENVIRONMENT & INFRASTRUCTURE

This station presents the goals and objectives for environmental protection and infrastructure. This may be a good opportunity to provide land stewardship information.

- Poster stand (2)
- Goals & Objectives poster
- Priorities list poster
- Sticker dots

PRESERVATION, OPEN SPACE & PARKS

This station presents the goals and objectives for land preservation, open space, and parks.

- Poster stand (2)
- Goals & Objectives poster
- Visual preference poster (examples of recreational/OS amenities that people can vote on)
- Sticker dots

TRANSPORTATION & MOBILITY

This station presents the goals and objectives for vehicular transportation and other forms of mobility.

- Poster stand (2)
- Goals & Objectives poster
- Mode map poster (using post-it notes to indicate where people would like to bike/walk/drive to)
- Sticker dots

GOVERNANCE & PUBLIC SERVICES

This station presents the goals and objectives for governance and public services in the township.

- Poster stand (1)
- Goals & Objectives/priorities poster
- Half-sheet funding/priorities exercise slips (an exercise to demonstrate theoretical funding priorities among participants)
- Collection box
- Pens

LAND USE & GROWTH MANAGEMENT

This station presents the goals and objectives for land use and growth management.

- Poster stand (2)
- Goals & Objectives poster
- Land use activity map (using post-it notes to indicate geographic preferences for amenities and resources)
- Sticky notes
- Pens
- Sticker dots

FOOD AND REFRESHMENTS TABLE

If possible, providing a food and refreshments table would help to promote attendance and encourage participation.

- Light refreshments
- Small paper plates
- Napkins
- Disposable cups
- Water bottles
- Soft drinks

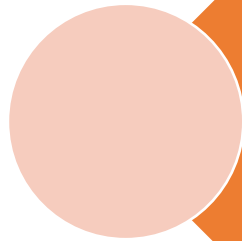
Preservation, Open Space + Parks

*Keeping the unique and beautiful things
we love in our community*

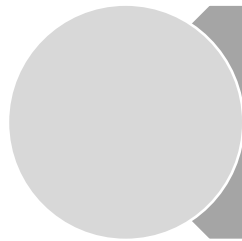
POLICY STATEMENT

Worcester will support and encourage the preservation of the Township's history, culture and environment, while supporting an interconnected network of active and passive recreation.

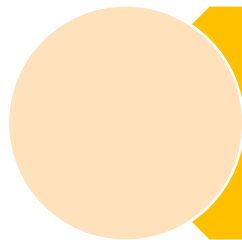
GOALS



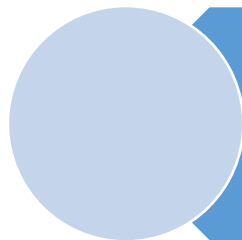
Support and encourage the preservation of the unique and rare aspects of the Township's history, culture and environment which are emblematic of community character



Provide for the passive and active recreational needs of Township residents



Enhance connectivity between parks and neighborhoods



Provide a degree of public access at properties acquired or eased for preservation purposes, as appropriate

Themes that have returned among Worcester residents again and again is the numerous, high-quality open spaces and the agricultural character of the Township. While paying attention to how the built environment evolves in the Township is incredibly important to serve the needs of the community, paying attention to the existing environment—the existing features of both the built *and* the natural environment—is just as important to residents, if not more so. This chapter will accomplish this effort by focusing on: cultural and historic preservation, and open space preservation. Significant to open space is its recreational value, as well as the natural values which are bestowed on citizens.

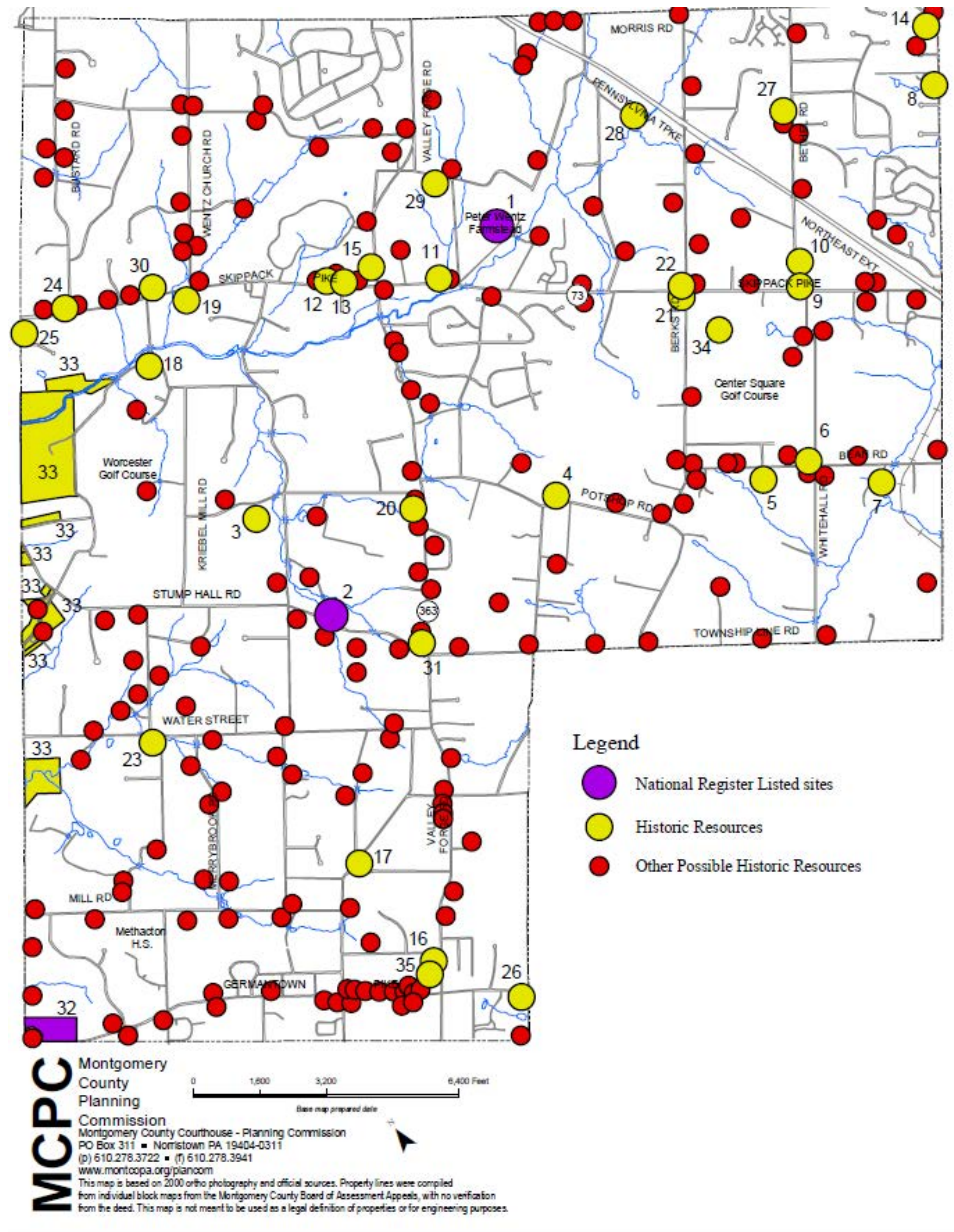
Historic and Cultural Preservation

The historic and cultural forms of the Township can be preserved in numerous ways. The process of preservation is not just the freezing in time of a building, a place, or a community in time, but to reflect and understand how our environment changes over time, and how those changes reflect back on the story of us as a society. Preservation and interpretation of the past need not be limited to physical structures. For example, the Worcester Historical Society interprets the past on behalf of the community through lectures, events and exhibits.

While any individual may take steps to protect, restore or rehabilitate an historic property, Worcester may desire a more structured or systematic approach to assure that the historic assets of the community remain intact. Apart from the Township making direct investments in historic properties to preserve them, ordinances regulating development to historic properties tend to be the most effective means of retain historic resources in a community. Historic preservation requirements, in the vast majority of cases, comes down to the actions of individual municipalities. So far, the Township has not passed any sort of historic preservation ordinances.

Below is a map and table indicating which properties are listed on the National Register of Historic Places (purple), which have been identified as resources worth protecting (yellow), and which properties may be worth further investigation (red). However, it's important to note that inclusion on the National Register does not, in and of itself, preserve or protect a property from demolition: only designation on a local, municipal register as a part of a larger preservation ordinance framework, or an individual owner's desire to place an easement on their own property, can protect a resource.

Worcester Historic Resources, as per 2006 Open Space Plan. Source: MCPC.

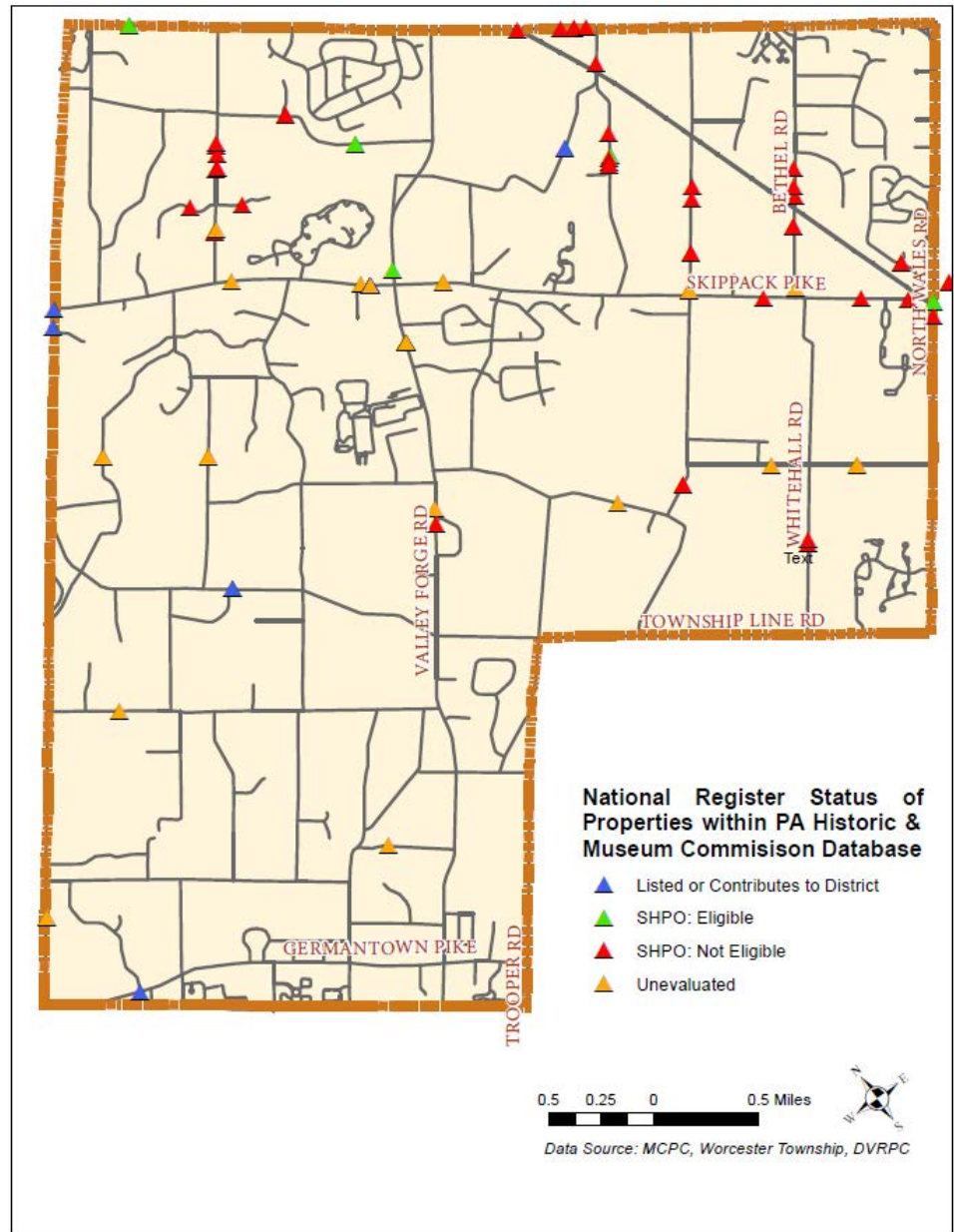


Map #	Name of Historic Resource	Location	Date Built	National Register Status
1	Peter Wentz Farmstead	Schultz Rd	1758	Listed
2	Anthony Morris / Bean House	Stump Hall Rd	1717	Listed
3	Heebner Farmstead	Heebner & Frog Hollow Rds.	1840	undetermined
4	Bookheimer Farm	Potshop & Trooper Rds.	1860	undetermined
5	Beyer (Boyer) / Smith Farmstead	2632 Bean Rd.	1840	undetermined
6	Torres (Cassel) House	2600 Bean Rd. (Whitehall & Bean)	1865/1870	undetermined
7	Garrett Bean (Gerhard Bun) Farmstead	2568 Bean Rd	1780	undetermined
8	Joseph Supplee (Haines) Farmstead	North Wales Rd	1820	Eligible
9	Bethel Hill Church	Skippack Pike & Bethel Rd	1845 / 1904	undetermined
10	Worcester Public School Building #6	2000 Bethel Rd	1891	undetermined
11	Dr. Meschter House	2917 Skippack Pike	1890	undetermined
12	Detwiler Residence	3103 Skippack Pike	1855	undetermined
13	Geyer Residence	3027 Skippack Pike	1865	undetermined
14	Reinwald Property - Brunner House	2508 Morris Rd	1800	Eligible
15	Farmers' Union Hall	Valley Forge Rd	1895	Eligible
16	Fairview Village Assembly Hall (Community Hall)	Valley Forge Rd	1918	undetermined
17	Worcester (Methacton) Mennonite Church & Cemetery	3069 Mill Rd	cem: 1739, church: 1873	undetermined
18	Old Mill Farm (Kriebel Mill Barn)	Kriebel Mill Rd	1800	undetermined
19	Wentz United Church of Christ (and Parsonage - 1870)	Skippack Pike	1878	undetermined
20	Evangelisches Versemmlangs Haas (German Evangelical Church)	Valley Forge Rd	1845	undetermined
21	Thompson Orchards (Jesse Humsher House)	Skippack Pike & Berks Rd	1851	undetermined
22	Brunner House	2003 Berks Rd	1831	undetermined
23	Water Street School (Worcester Public School #2)	Kriebel Mill Rd and Water St	1885	undetermined
24	Cedars Country Store (Cassel's Store)	Skippack Pike & Bustard Rd.	1849	undetermined
25	Little Residence	Skippack Pike (parcel #670003331004)	1875	undetermined
26	(David) Rittenhouse Farm	Trooper Rd & Germantown Pike	1750	undetermined
27	Hance Supplee Homestead aka: Ellis-Supplee House (Maj. Gen. Greene's HQ)	2110 Bethel Rd	1753	Eligible
28	Dresher/Kibblehouse Farmstead	2160 Weber Rd	1857	Eligible
29	Worcester Public School (Anders)	Shearer Road	1879	undetermined
30	Worcester Public School (Metz)	Skippack Pike	1849	undetermined
31	Worcester Public School (Stump Hall)	Stump Hall & Valley Forge Roads	1857 / 1881	undetermined
32	Evansburg Historic District	Germantown Pike & Grange Road	from 1700's	Listed
33	Evansburg Historic District (boundary increase)		from 1700's	Eligible
34	Clepsysaurus (dinosaur) fossil	quarry near Whitehall Rd	Triassic Era	undetermined
35	Heyser Field	Griffith Road	—	NA

The next map illustrates historic property data from the PA Historic and Museum Commission (PHMC), which maintains records on preservation surveys, applications, and archeological findings which have been performed since the commission's inception in the 1970s. PHMC is tasked with evaluating and accepting applications for National Register status of properties, but they can also be a resource for individuals and municipalities seeking to preserve historic resources and properties with their own municipal ordinances. The

map below shows which properties have key information to potentially move to the Register (Eligible properties), which are not eligible, and which are still not fully evaluated or do not have enough research or data attached to conclusively rule on a property's Register status. While being on the National Register can be a point of pride for a property owner or a community, it is not required in order for an individual or community to preserve it or add it to a local register, especially if a property has uniquely local significance. In sum, even properties ruled ineligible or unevaluated may have enough value for the Township to place on a local register of its own. The Township can therefore use this information to build out a plan to prioritize historic resources

National Register Status of Properties in PHMC Database, 2020. Source: MCPC, Worcester Twp.



Historic Preservation Methods

Scattered Site/Overlay Preservation (Municipalities Planning Code [MPC])

The most common method of municipal historic preservation efforts involves adding properties to a local register, enacted in a zoning ordinance through a Historic Overlay, which can provide some manner of protection. An overlay can incentivize preservation of an older building by permitting additional, low-impact uses to give flexibility to an owner. Architectural changes are generally not restricted, but if demolition is proposed there is usually a waiting period and review by the governing board, in which alternatives to demolition are sought. However, in only rare cases can demolition be stopped against the will of the owner.

Local Historic Districts (Historic District Act)

Unlike a Historic Overlay, local historic district ordinances are not found in the zoning ordinance, but in their own body of law. Enabled by the state Historic District Act, historic districts generally provide greater protections to properties within a small area or neighborhood. Architectural changes are reviewed by a separate advisory body, in order to maintain the architectural and historic integrity of the district. This method also has the greater power to restrict unjustified demolitions. However, the creation of a local district requires greater documentation, as well as approval from the Pennsylvania Historical and Museum Commission (PHMC). This method is also not recommended for isolated historic resources across a municipality.

Design Standards and Guidelines (MPC)

While not strictly a historic preservation method, creating design standards and guidelines in a zoning ordinance for development can help maintain the visual character of the existing built environment without the perceived onerousness of strict historic preservation regulations. These standards can be the most flexible of any available; however, they would provide no protection for resources vulnerable to demolition.

Parks and Open Space

Parks and open space can take many forms, as well as the relative degree to which land can be preserved or conserved. Open space can be acquired outright (i.e. *fee simple*) or can be through a conservation easement, where a private owner still retains ownership. When land is acquired, either in fee simple or through an easement, governmental entities (including both the Township and County) are by law only permitted to pay up to the *appraised value* of the land, which is oftentimes much lower than a private developer could pay on the open market. However, open space can also be dedicated to the Township through the land development process, gifted to the Township or other governmental body, or dedicated or eased to a separate nonprofit or homeowners association who manages the property.

The degree to which this land is public accessible can also vary according to the scheme used. Lastly, there are tax incentive programs which keep land temporarily from being developed, although typically not in *perpetuity*, which will be discussed further below. No single method described above is better than any another, although there are specific circumstances where cost, legal feasibility and maintenance capacity need to be considered. However, the trend

Preserved Open Space in Worcester	
Township Area, Total Acres (16.22 Sq Miles)	10,381
Percent Preserved	17.59%
Percent Preserved And ASA-Enrolled	27.25%

has been toward HOAs owning the required open space in land developments. Passive recreational open spaces, such as naturalistic, relatively undeveloped areas, are generally much less intensive to maintain than active open spaces and sports fields, which require much more rigorous and frequent maintenance such as mowing, seeding, fertilizing, and structural repairs to facilities. Ultimately, HOA ownership and maintenance reduces the burden upon Township resources to manage and maintain such a widely distributed network of spaces spread out among several separated developments.

Municipalities in the state also have the power to require the paying of fees in lieu of providing open space during the development process, if certain conditions are met. In this case, a developer would be charged a fee equal to the value of the open space they would otherwise be required to provide, which would then go to a dedicated Township fund for future open space acquisition and development. However, this funding would be restricted solely for these purposes. Such a program would permit the Township to redirect resources to nearby properties which may have higher-value preservation priorities or be more central and accessible to Worcester residents.

Land use planning involves the balancing of competing interests, between the public interests in preservation and the private property rights of individuals to lawfully develop their lands. Open space planning is no different, and so we generally must respect the fact that the law entitles—and in certain cases *requires*—a certain level of residential and nonresidential development to occur in all communities of the Commonwealth. Municipalities have the best chance of successfully preserving land when there is a predictable zoning and development process tied to rational and well-considered planning goals, which can also permit reasonable levels of accommodation and compromise between developers and communities.

When municipalities litigate against a development and lose, opportunities to leverage ordinance requirements and compromises for open space amenities are also lost. However, when a municipality works with a developer in a collaborative fashion, backed up by ordinance and planning priorities, the preservation of greater open space than the minimum required can occur, as was the case with the Whitehall Estates development on Whitehall Road (shown below). Public open space was dedicated to the Township, an agricultural property was preserved through a conservation easement, and a trail easement was secured, allowing a future trail connection to be built.



Open Space Resources by Type

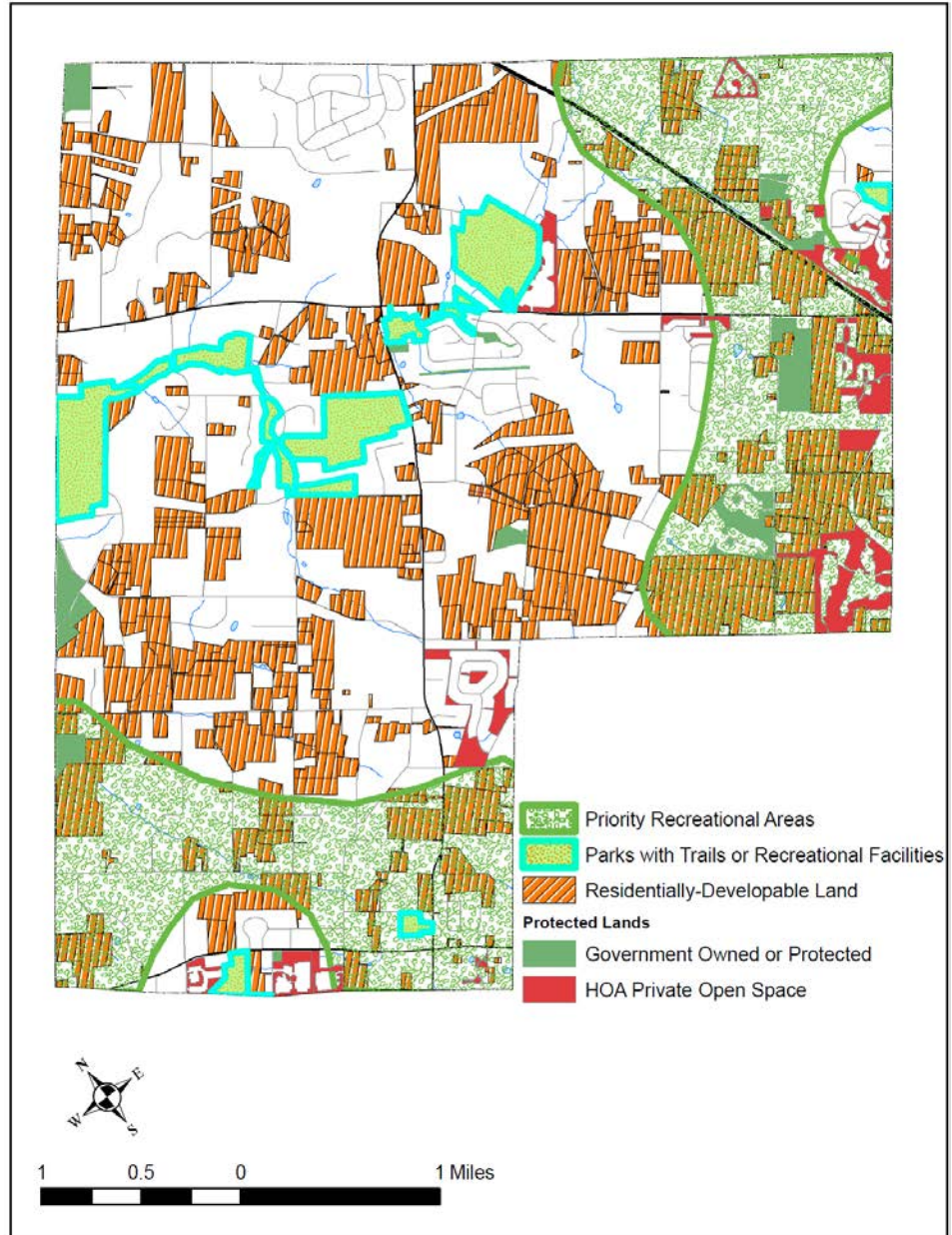
While it is possible for any one piece of land to meet multiple open space types, there are management priorities of each type which may be contradictory and incompatible with one or more other types.

Recreation

Active and passive recreation land is *specifically* designated and designed for the use of residents and visitors for their enjoyment and leisure. Landscapes of this type are usually the most intensively managed and frequently involve structural or engineered features or amenities which must be installed and routinely maintained, such as baseball fields or playgrounds. Because recreation land is the most heavily used by people, the ongoing mitigation of human impacts will be a serious consideration.

Park and Recreational Development Priority Map. Source: MCPC, Worcester

This map adapts and updates the “Priority Park Strategic Areas” from the 2006 Open Space Plan, which describes the existing gaps in proximity to major parks in the Township. Even though the Township has open space within the gap areas, many of these parcels are not accessible for recreational uses or do not accommodate any trails or recreational amenities. The Township should focus on existing or new open space opportunities in these areas to invest in recreational amenities.



Greenways

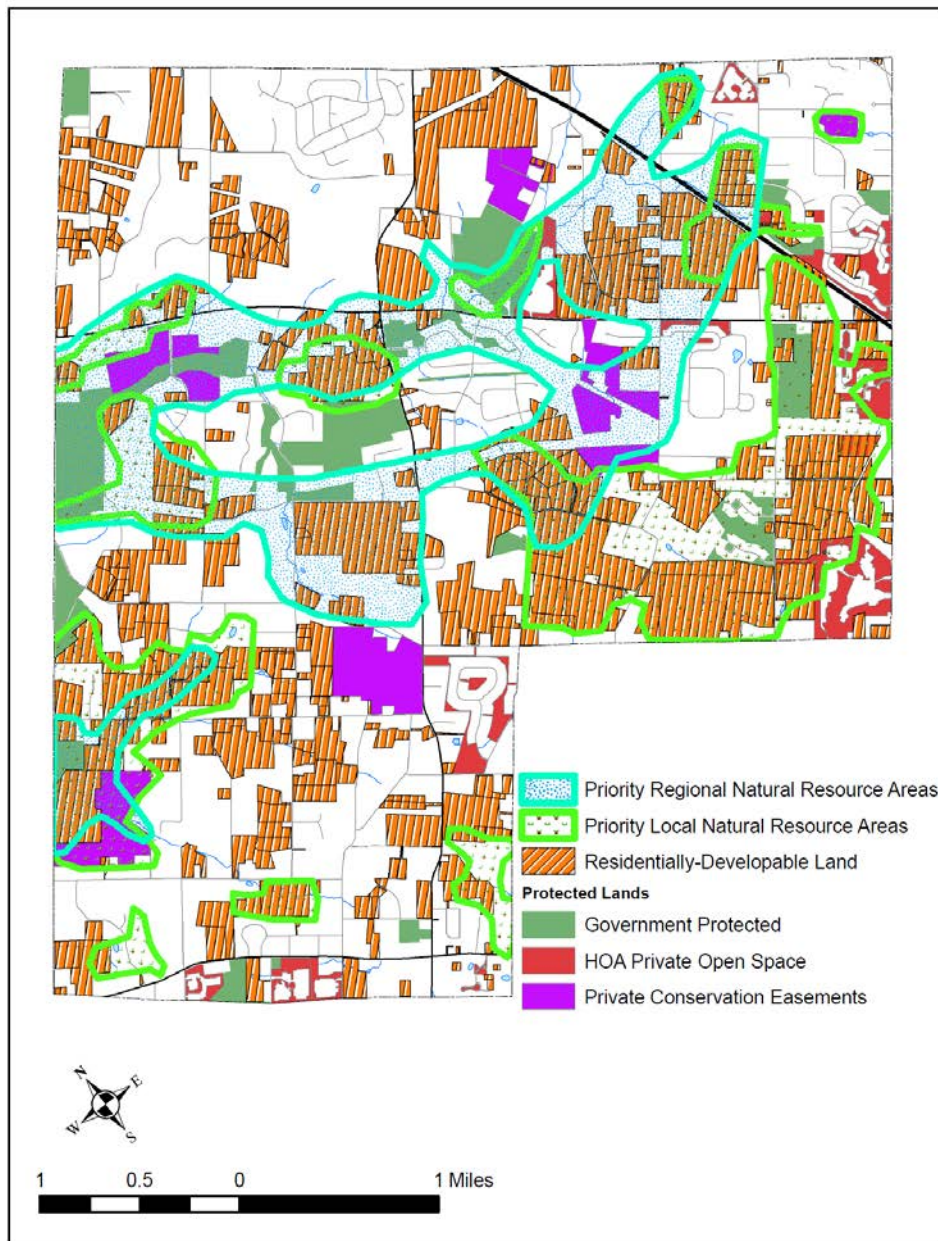
Greenways are simply linear parks, the purpose of which are to create connected corridors of greenspace. Frequently assembling parcels along a natural corridor such as a stream area, greenways connect people and places by way of trails, as well provide wildlife migration potential and watershed health. The lands and trail along the Zacharias Creek are an example of a greenway.

Habitat and Natural Resources Conservation

Lands which are preserved primarily for their environmental sensitivity, such as riparian buffers, floodplains and wetlands, as well as for their benefits to wildlife and promotion of biodiversity. Considerations for passive recreation or access by people generally should be kept secondary, or should be restricted entirely based on the resources at issue. Management of this type of land is typically the least intense, and is kept in a naturalized state, unless there is an active restoration plan in place. The Frank A. D'Lauro Preserve is an example of this type of open space, which is further indicated by its being closed to the public.

Habitat and Natural Resources Conservation Priority Map. Source: MCPC, Worcester Twp.

This map adapts and updates the "Priority Natural Resource Areas" from the 2006 Open Space Plan, which summarizes the priority ecological conservation values in the Township, including intact interior forest, habitat and sensitive resources like floodplain areas. The Township should focus on primarily habitat and natural resources conservation in these areas.

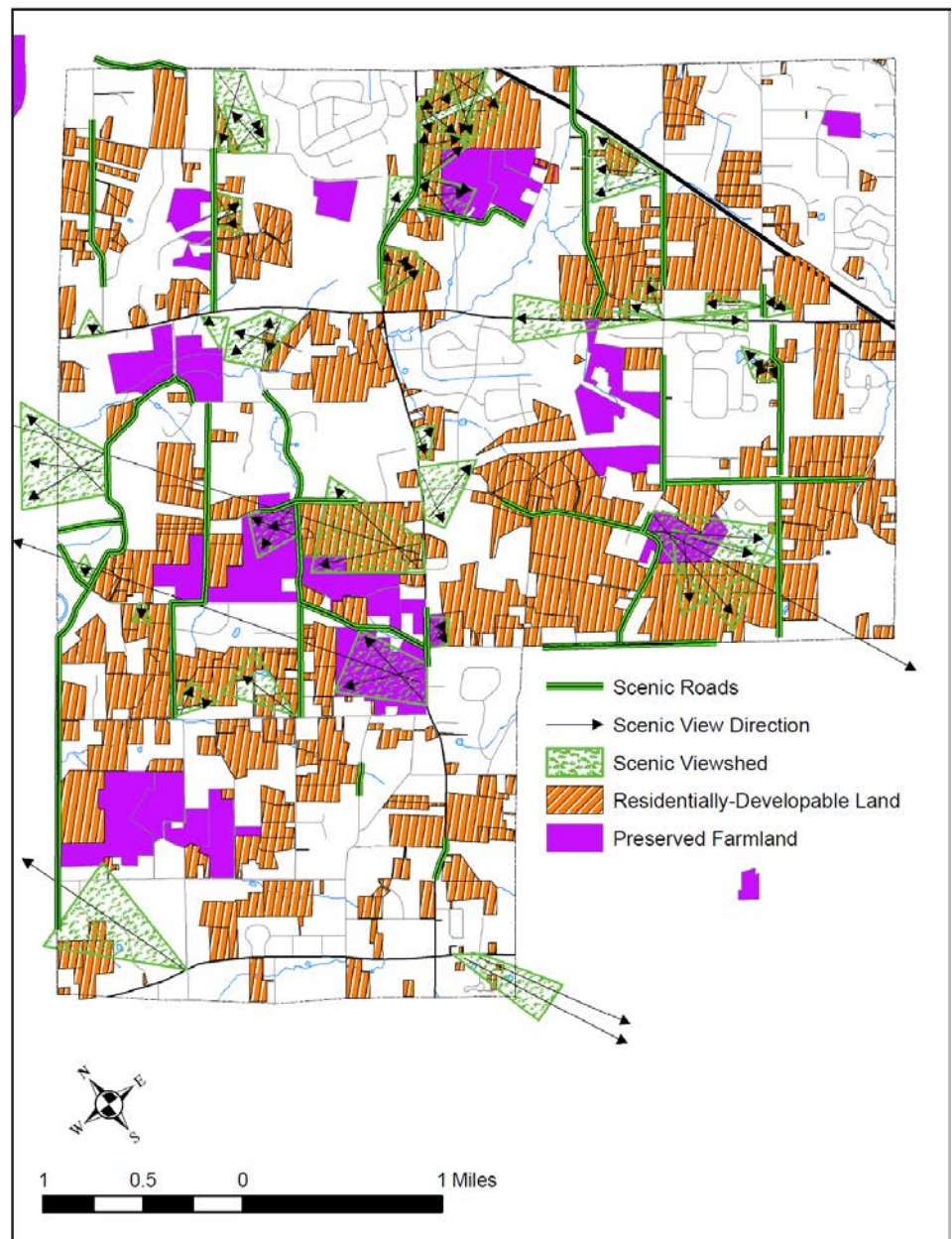


Scenic Resources

Lands which are valuable for their scenic value are those which maintain a wide and dramatic viewshed, usually from the vantage point of a public road, or maintain rare or unique geologic features or landscapes like mature trees. These lands with scenic resources may not need to be accessible to the public; they may also have additional resource value beyond their scenic value. Many preserved farms along Valley Forge Road offer attractive scenic views to the west from the roadside.

Scenic Resources Conservation Priority Map. Source: MCPC, Worcester Twp.

This map adapts and updates the “Priority Scenic Resource Areas” from the 2006 Open Space Plan, which summarizes the priority scenic views and roads in the Township. The Township would likely not acquire or ease land purely for its scenic value, but it can add extra conservation value to a project which might be “on the fence” of qualifying for priority.

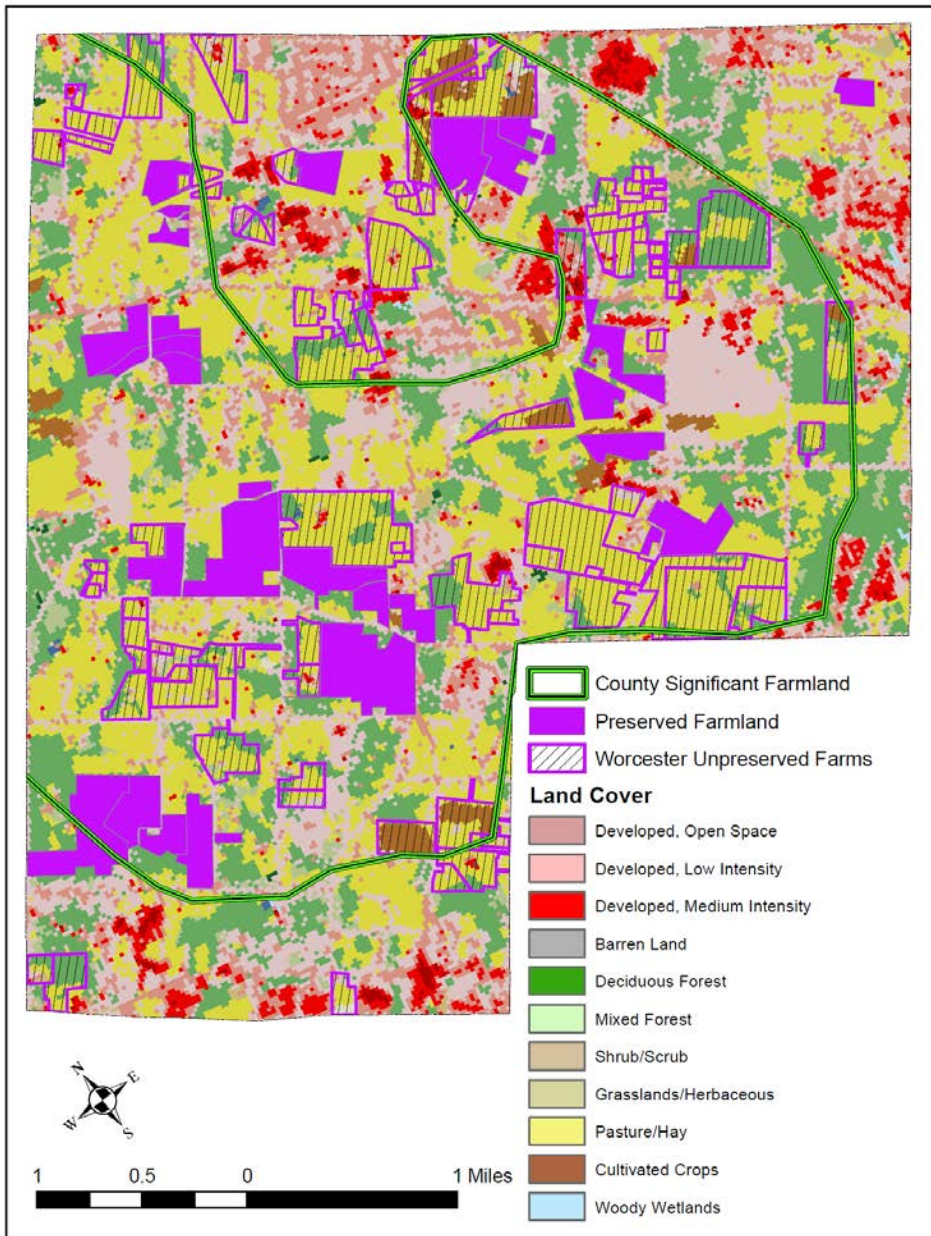


Farmland

Agricultural properties are those which are actively cultivating crops or livestock, or contain a commercial equine activity. Such properties will almost always remain in private ownership, and will not be generally accessible to the public. While an agricultural operation usually intensely manages a landscape, which generally does not contribute by itself to biodiversity, it can be a compatible buffering land use of a more naturalized open space.

Agricultural Conservation Priority Map. Source: MCPC, Worcester Twp.

This map compares existing unpreserved farms (i.e. those not perpetually conserved by a conservation easement), current preserved farms and existing land cover in the Township, which can help determine which unpreserved properties are being actively cultivated and therefore qualify for the county and state programs.



County Farmland Preservation Program

To apply to the program, a farm must:

- *Contain the greater of 50 percent or 10 acres of land in agricultural production*
- *Join [Worcester's] Agricultural Security Area (ASA)*

To be eligible for state funding:

- *A farm must contain at least 50 percent of soils that are available for agricultural production or a commercial equine activity and are of Land Capability Classes I through IV, as defined by the USDA-NRCS.*
- *A farm less than 35 acres needs to be adjacent to preserved farmland or grow a crop unique to the area, as defined by the Montgomery County Agricultural Land Preservation Board, including sweet corn, tomatoes, floriculture crops, eggplants, orchard crops, melons, and others.*
- *Farms 35 acres or greater do not need to be adjacent to preserved land*

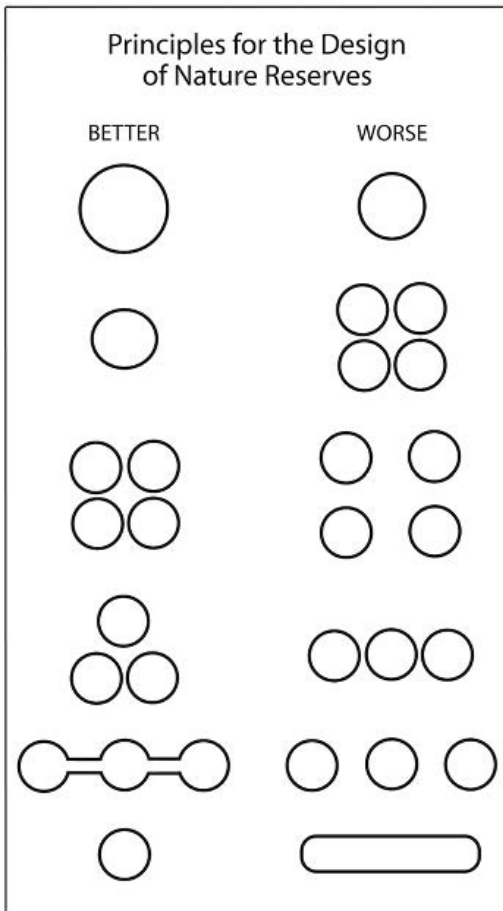
Open Space Priorities

We live in a world of limitations, in which financial and legal resources are finite and, consequently, it is important to state upfront that it would be impossible to purchase and preserve every lot or parcel in the Township that has even nominal conservation value. Recognizing these limitations allows us to consider how to prioritize the time, funding and effort available to apply the appropriate methods to the open space type. Overall, the Township prioritizes most highly that open space which meets multiple criteria for preservation and serve multiple purposes. For instance, a large park like Heebner Park provides ample recreation facilities such as fields, courts and picnic areas, while also containing ecological and habitat value in the meadow and forest lands.

Acquisition-Based Preservation

Acquisition-based methods are achieved through government actions, such as Township or County accepting or purchasing interest in land. The following open space types ideally pair with the following methods:

- Acceptance of donations or dedications of parcels for **any open space land** offered to the Township *gratis*
- Purchase of development rights (or conservation easement) of **farmland**
 - *Criteria for prioritization shall include:*
 - *Size*
 - *Soil quality, i.e. whether the soils are considered prime farmland soils of nationwide importance or of statewide importance*
 - *Proximity and adjacency to other preserved farmland*
 - *Potential for trail easement access over unleased land*
 - *Inclusion in the scenic resource priorities map*
- Purchase in fee of parcels for **park/recreation land**
 - *Criteria for prioritization shall include:*
 - *Size*
 - *Location in a “recreation facility gap” area in the Township*
 - *Potential to accommodate needed recreational facilities and improvements*
 - *Adjacency to existing municipal parkland*
 - *Inclusion in the scenic resource priorities map*
- Purchase in fee or conservation easement of parcels for **habitat conservation/natural resource land and greenway land**
 - *Criteria for prioritization shall include:*
 - *Size*
 - *Shape*
 - *Maximize interior land for habitat and natural resource land*
 - *Maximum edge land for greenways and trail easement, if conservation easement*
 - *Quality and size of the resources present, including floodplain, wetlands, meadows, water bodies and woodlands*
 - *Inclusion in the scenic resource priorities map*



Above is a visual representation of preferable designs in open space parcels prioritizing habitat and natural resources conservation. Larger, connected and clustered parcels with greater interior area are preferable over smaller, disconnected and narrow parcels. Source: Benedict & McMahon, Green Infrastructure: Linking Landscapes and Communities, 2006.

Non-acquisition-Based Preservation

Preservation priorities using non-acquisition-based methods are achieved through zoning and subdivision regulations, as well as transfers of development rights. The following open space types ideally pair with the following methods:

- Land Development Process
 - Protection of **habitat conservation/natural resource land** and **greenway land** on parcels which, taken comprehensively, may only partially meet criteria for preservation. Ideally, land and features which are reserved from development should be judged using similar criteria as whole parcels of **habitat conservation/natural resource land** and **greenway land**, as described in the previous section. Features which can be reserved from development through ordinances include:
 - *Steep slopes*
 - *Riparian corridors, wetlands and floodplain districts*
 - *Required open space dedication through the Conservation Subdivision provisions in zoning and subdivision ordinances.*
 - Dedication of **park/recreation land and facilities** which are open and accessible to the public.
 - Reservation of **any other undeveloped open space**, held by and for the use of a condominium or homeowners association (HOA) created in a land development, which may not have high existing conservation value but can be incrementally restored. *HOAs hold most of the land preserved through the land development process in the Township. However, such land frequently is composed of turfgrass lawns and stormwater management BMPs, which can degrade the overall use and conservation value of the land preserved.*
 - Reservation of **trail easements**, in favor of the Township
- Transfer of Development Rights (TDR). *TDRs are an especially attractive tool because no public money need exchange hands—it can be an entirely market-driven process between two or more private parties. The development rights of a “sending parcel” in a preservation area of the Township can be sold to a “receiving parcel” in a designated-growth area of the Township. The sending parcel is then restricted from further development, while the growth is redirected to a part of the Township with the necessary infrastructure and planning in place.*
 - **Farmland**
 - **Habitat or natural resource land**
 - **Greenway land**

Recommendations

Support and encourage the preservation of the unique and rare aspects of the Township's history, culture and environment which are emblematic of community character

- Consider creating a Township Historic Commission or hire an Historic Preservation Consultant. *Such a commission would be composed of individuals, appointed by the Board of Supervisors, who could advise the Supervisors on matters related to historic preservation. A commission's responsibilities can vary and be flexible according to the Township's goals: it is the typical body which can provide advisory opinions on properties to add to a historic register, or alterations made to historic structures. A Consultant could similarly advise the Township on preservation issues.*
- Determine what level of historic protections with which the Township may be comfortable enacting through ordinance amendments.
- Consider creating a Township Open Space or Conservancy Advisory Board, or hire an Open Space Consultant. *Such an advisory board would be composed of individuals, appointed by the Board of Supervisors, who could advise the Supervisors on matters relating to acquiring or preserving open space. A consultant could similarly advise the Township on open space issues*
- Consider creating dedicated funding sources for open space preservation, such as implementing an Open Space Tax.
- Create and support a preservation decision-making process which is transparent, data-driven and based on documented justification.
- Support the increased usage of TDR in the Township by, among other things:
 - *Adding additional areas of the Township as "receiving areas" to receive additional development rights, as appropriate. These receiving areas should generally be restricted to village and designated-growth areas.*
 - *Consider using "bonuses" to incentivize the usage of TDRs in certain areas of the Township, such as 3x densist at Fairview Village MR Overlay District.*
 - *Increase public awareness and outreach on the TDR program.*
- Consider amendments to the Conservation Subdivision and open space development regulations, which could include, among other things:
 - *Increasing the quality and usability of open space preserved in land developments*
 - *Requiring the use of Conservation Subdivisions in more parts of the Township.*
 - *Limit structural stormwater BMPs allowable in required open spaces*
- Provide greater guidance or incentives for HOA-owned common open space areas to be maintained more sustainably and in a more naturalized state.

Provide for the passive and active recreational needs of Township residents

- Commission a review and analyze the suitability of current recreational facilities and future recreational needs by a recreational professional
- Consider ordinance amendments which require the provision of specific recreational facilities and amenities during the land development process, and permit alternative compliance through the payment of fees in lieu of such facilities. *Fees in lieu are collected at land development approval and can only be used by the Township for the development of recreational facilities at a later date.*

Enhance connectivity between parks and neighborhoods

- Prioritize the ability of residents to walk or bike to Township parks, especially through sidewalk or trail improvements. *Planning frameworks like the Safe Routes to Parks program, sponsored by the Safe Routes Partnership and the National Recreation and Parks Association, provide tools and guidance on best practices implementing connectivity improvements. More information can be found here: <https://www.saferoutespartnership.org/healthy-communities/saferoutestoparks>.*
- Prioritize connectivity of new land developments' open space to existing adjacent neighborhoods.

Provide a degree of public access at properties acquired or eased for preservation purposes, as appropriate

- When the Township is a party to an agricultural preservation deal, consider reserving trail easements or additional reservations for public use.

Environmental Resources + Infrastructure

Managing our natural and built systems

POLICY STATEMENT

Worcester will strive to maintain sustainable natural systems and the built environment to ensure the Township's quality of life is maintained for future generations.

Worcester will ensure the functionality and maintenance of relevant infrastructure systems are sound and sustainably provided.

GOALS

Preserve and conserve sensitive environmental features

Restrict development from environmentally sensitive areas

Support practices which address climate change and promote sustainability

Provide for the sustainable management of stormwater throughout the Township

Provide and maintain sewer and water infrastructure in line with reasonable needs

Plan for public sewer in areas at risk for malfunctioning systems

The systems that work unnoticed and behind the scenes, both manmade and natural, are vital to our quality of life. Water and sewer systems, stormwater management, and buildings and energy infrastructure contribute to our daily life in frequently unseen ways, but have significant implications for our larger way of life both locally and globally. However, stewarding natural systems and improving our use of finite resources is also important. For Worcester to continue to be a resilient and picturesque community for many years to come, it is incumbent upon us to plan, design and maintain our developed areas and natural environments in a manner where they are mutually supportive, balanced, efficient, and functional. This includes not only focusing development in areas with existing infrastructure and excess capacity first, but also permitting new development incrementally and in a more sustainable pattern.

Natural Resources

As has been previously discussed, the residents of Worcester appreciate the open, natural spaces of their community. Because Worcester is not yet as built out as its neighboring municipalities are, there are still numerous opportunities to guide development and protect and enhance the many natural elements which still exist in the Township. Not only will scenic elements be retained and enhanced, but the natural systems will remain functional regarding air and water quality, flood abatement, and ecosystem resilience. One of the frameworks through which to see and understand the importance of natural systems is through the idea of green infrastructure.

Green Infrastructure

Green infrastructure is the interconnected network of green spaces, waterways and naturalized systems that, together, provide natural regulation of several natural systems dealing with flooding, the quality of air and water, and weather and climate extremes. Green infrastructure systems provide the most services when preserved at a watershed or regional scale by linking together stream networks, mature and fertile vegetation, conservation areas, parks, and greenways. Beyond their importance to wildlife populations, healthy green infrastructure systems generate a host of benefits for both Worcester and the larger region:

- Water and air quality
- Flood attenuation
- Urban heat island effect reduction
- Aesthetic value
- Financial savings (from reduced flood damage and decreased energy costs)
- Economic resilience
- Enhanced quality of life

Steep Slopes

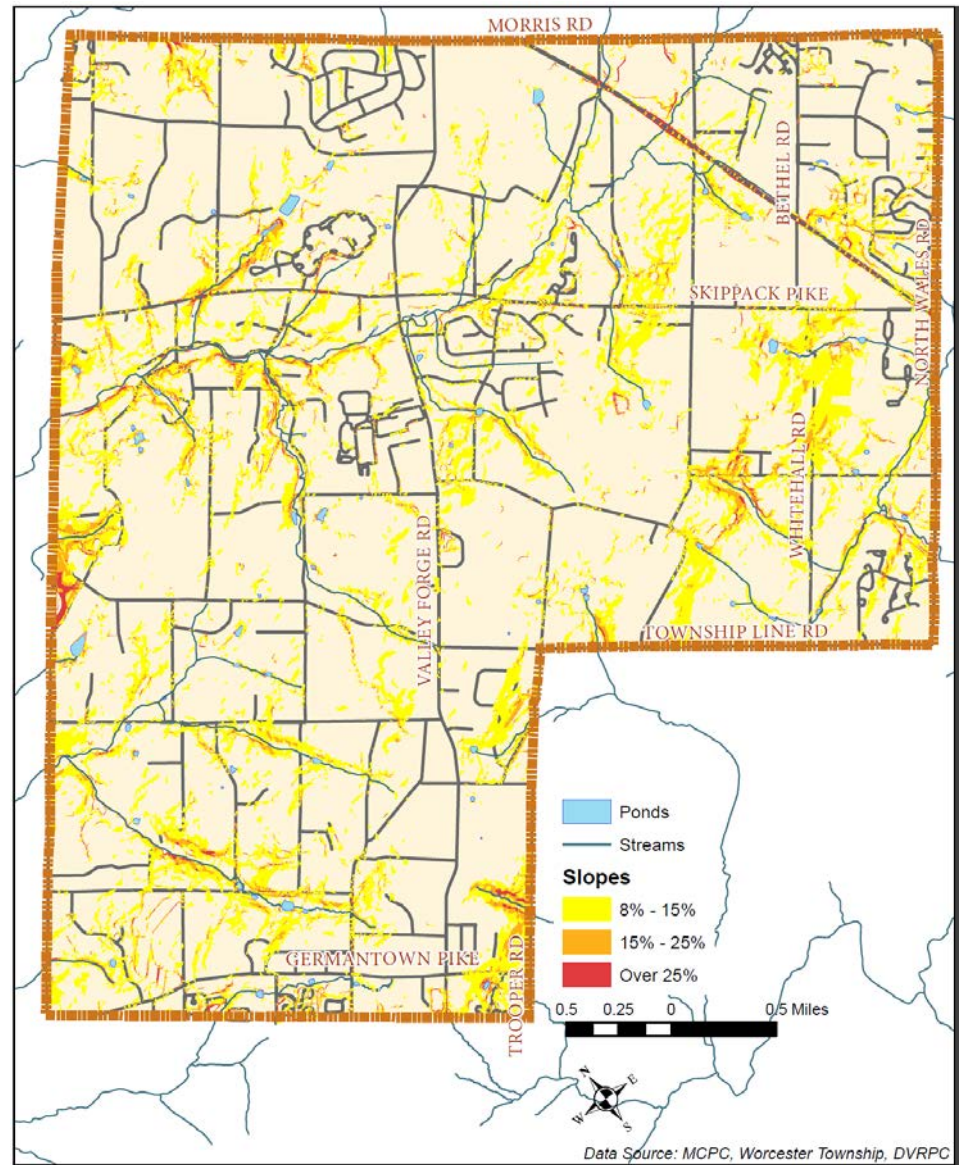
Steep slope preservation is performed for two general reasons: to prevent the uncontrolled disturbance of slopes in a manner which will cause excessive erosion and unstable soils, and to protect the natural geology and ecology which steep slopes afford. Shown in the below map, such steep slopes tend to correspond with the stream corridors. While slopes of 8-15% are still considered developable, the development of slopes 15% or over should largely be minimized or avoided. Even though steep slopes themselves might not be considered technically a part of the green infrastructure of the community, the

Worcester residents rated the quality of the Township Natural Resources in the Township among the highest in the whole community

QUESTION 7... Please rate the present quality of the following in Worcester Township... (select all that apply)	
Fire Service	3.67
Overall Quality of life	3.54
Natural Resources	3.37
Athletic Field & Courts	3.31
Ambulance Service	3.29
Preserved Open Spaces	3.25
Playground & Tot Lots	3.22
Internet Service	3.14
Trails	3.12
Water Systems	2.96
Housing Choices	2.94
Cellular Service	2.86
Noise Control	2.86
Housing Affordability	2.79
Stormwater Management	2.76

vegetation and ecological communities they host are a significant part of the system.

Worcester Steep Slopes. Source: MCPC



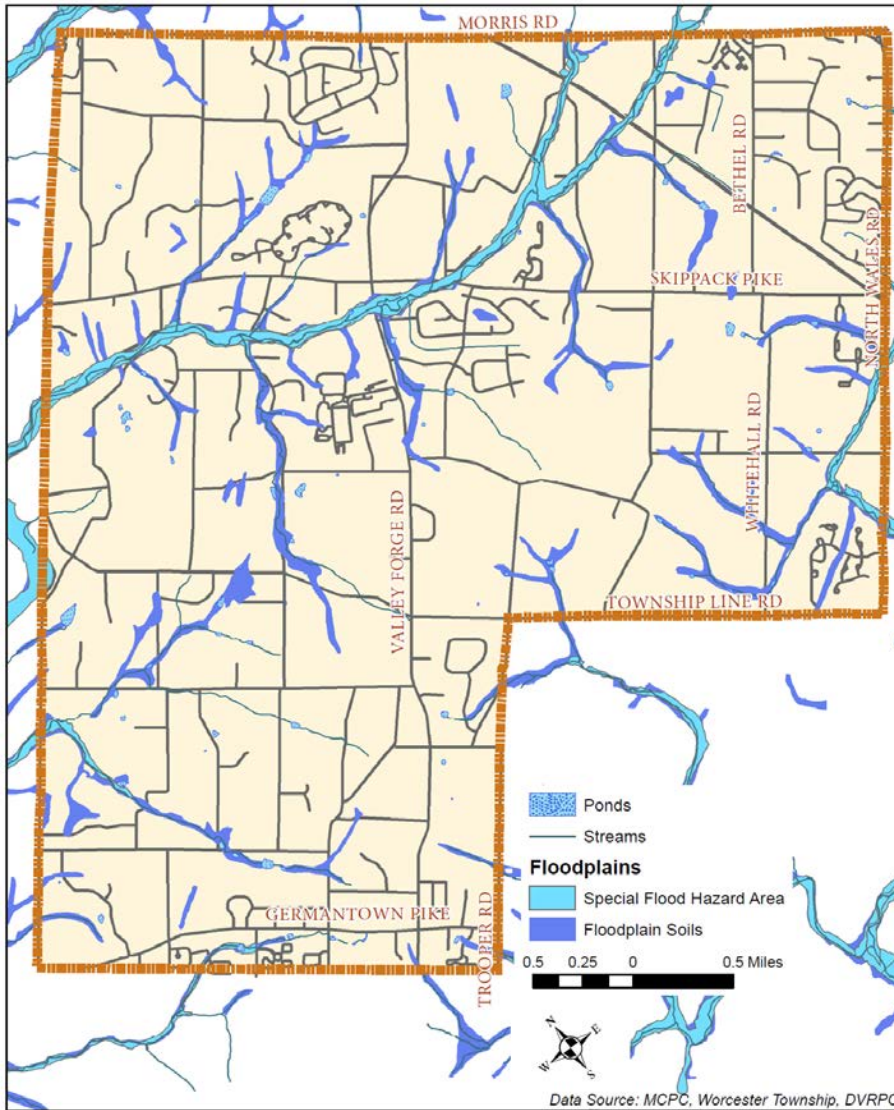
Floodplains and Wetlands

When FEMA certified updates to the official floodplain maps that govern development restrictions (in 2016); all municipalities in Montgomery County were then required to adopt updated ordinances. The next map indicates the mapped “special floodplain hazard areas,” which are identified through hydrologic and hydraulic modeling, and are present on FEMA’s Flood Insurance Rate Maps (FIRM). “Floodplain soils” are also identified on the below map; floodplain soils form when rain events deposit sediment from upstream and can be poorly drained, the presence of which can also signify future flooding risk, although no base flood elevation has been established through modeling. Floodplains are relatively flat, low-lying areas adjacent to a stream or river which are regularly inundated during rain events which are formed over time as floodwaters deposit sediment in layers. Floodplains serve as water storage during high-rain events as well as reducing the energy of high-rate flow situations. Because of the presence of nutrient-rich sediment,

floodplains support especially abundant and diverse ecosystems. Maintaining natural, vegetated floodplains free of structures is vital to the health of riparian areas and the absorption of flood waters..

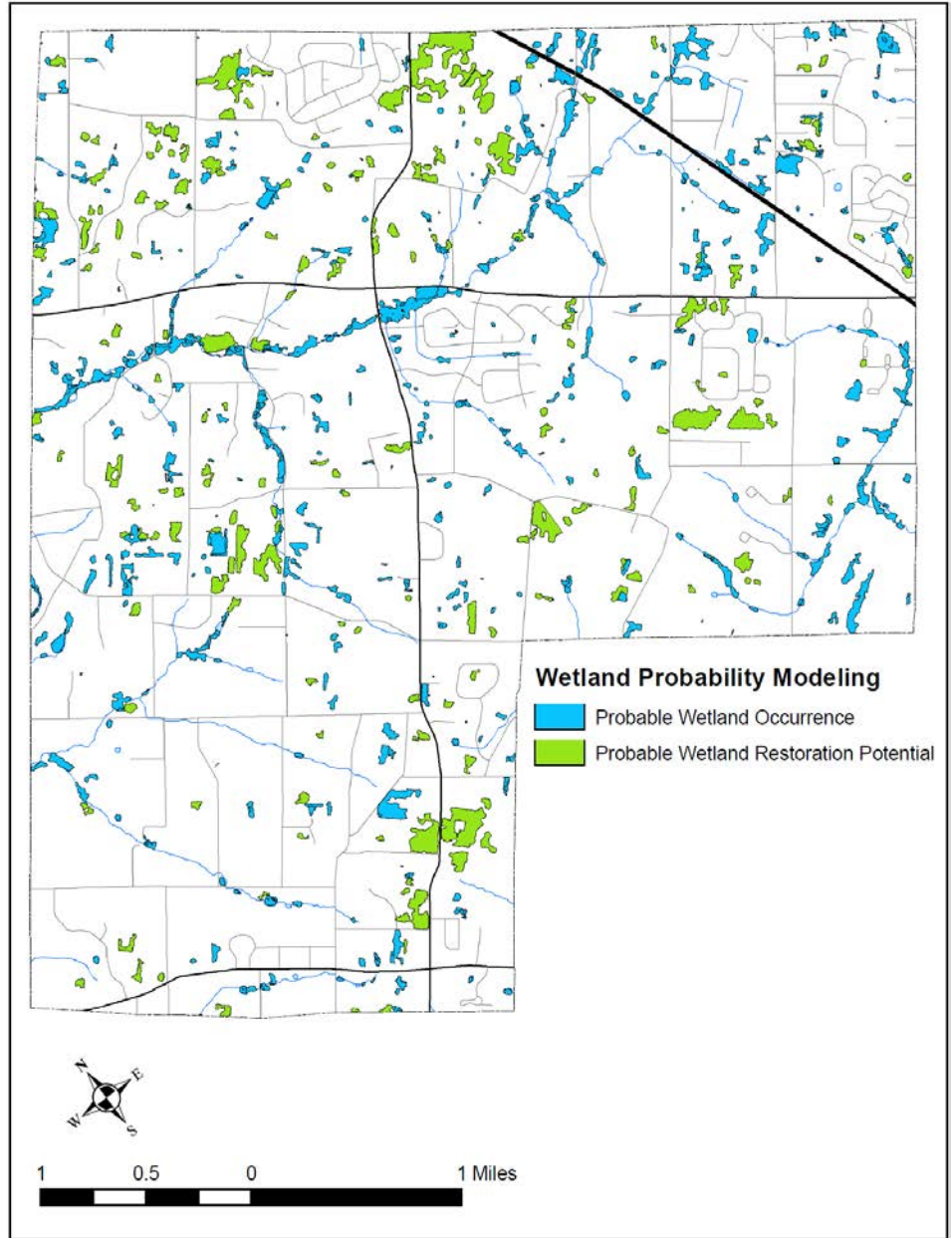
Worcester Special Flood Hazard Areas (SHFA) and Floodplain Soils.

Source: FEMA, MCPC, Worcester.



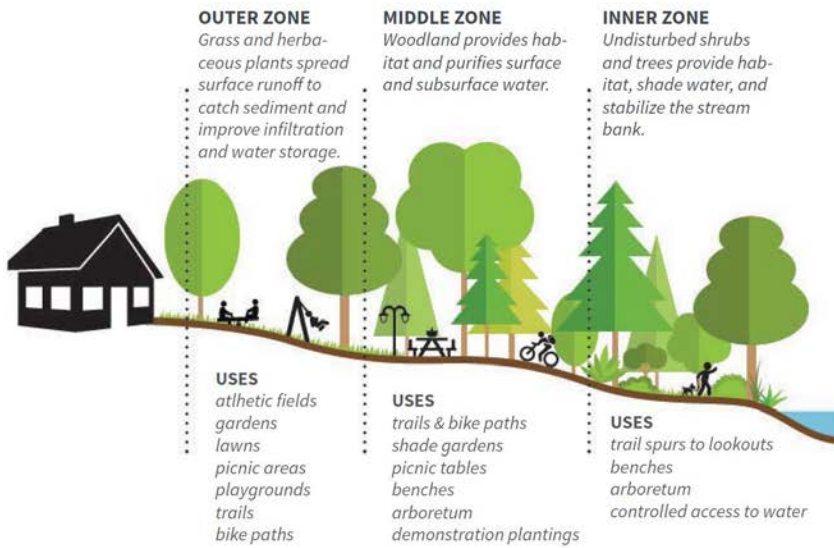
While wetlands are often collated in places subject to flooding and adjacent to stream corridors, they can just as easily occur in isolated areas with poor-draining soils. Wetlands act as natural sponges, absorbing flood waters and slowly releasing it. Wetlands also maintain the water cycle balance above and below the ground, while also purifying the water that passes through them as well. This is particular important since so many homes in the Township use private well water.

Worcester Modelled Existing Wetlands, and Potentially Restorable Wetlands. *Source: University of Vermont, WeConservePA.*



Riparian Buffers

Riparian areas are those corridors that run along a stream or river, which sometimes coincide with floodplains but often extend beyond them. These fertile corridors become densely forested with diverse understory, and they host a wide variety of wildlife. Healthy, vegetated riparian zones improve water quality by providing quick water infiltration, which prevents against erosion and filters pollutants, which also stabilize stream banks and maintains natural levels of stream flow. A 100-foot vegetated buffer on both sides of a stream, composed of both shrubs and trees, is generally recommended as much as possible, and will generally perform much of the functions that preserve stream health.

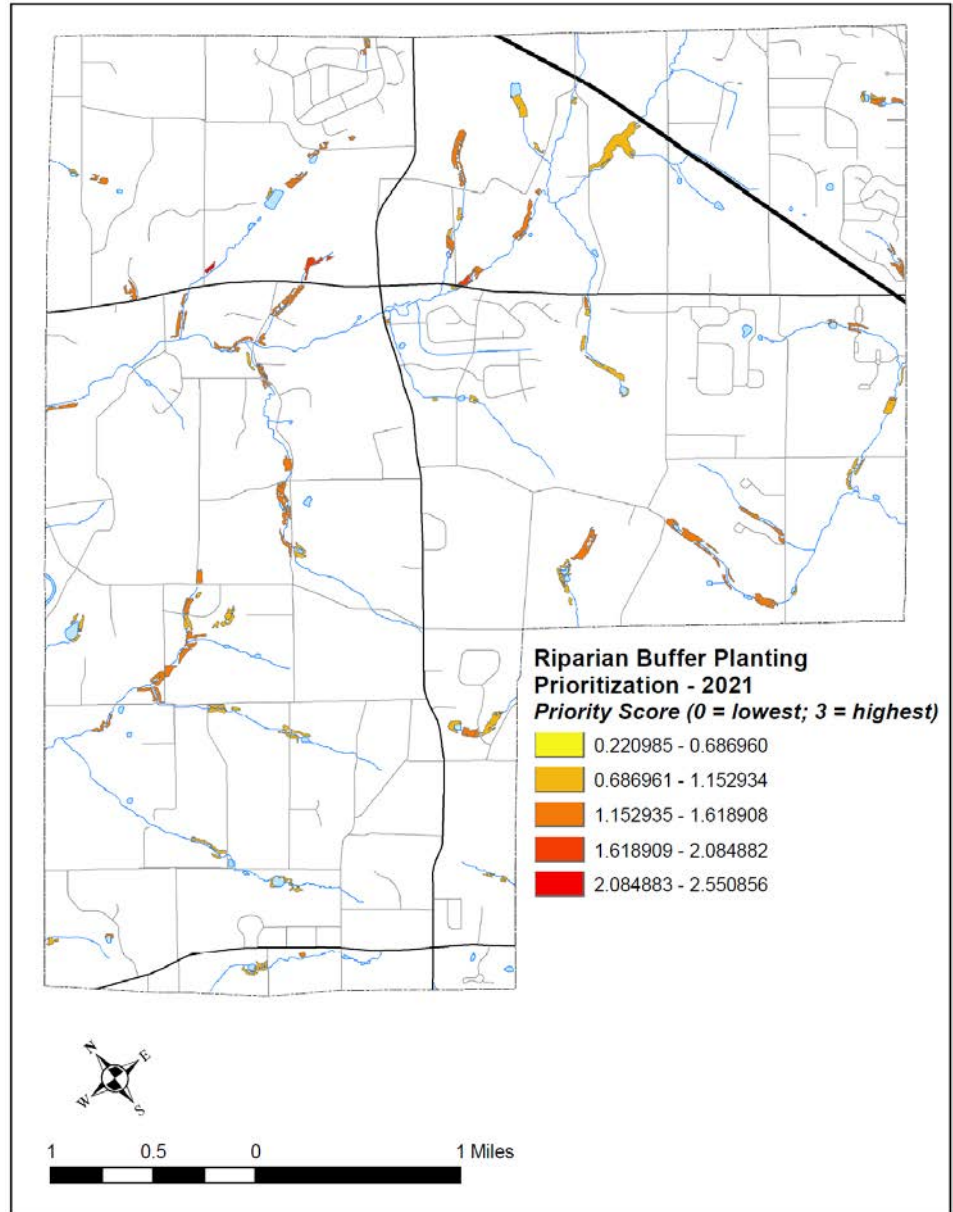


RIPARIAN BUFFER ZONES

Riparian zones—the fertile areas running along streams—are sensitive to development, but they can serve a number of recreational uses. Appropriate uses differ for each of the three zones within riparian buffers, with the area closest to the stream being the most restrictive.

Priority Riparian Buffer Restoration

This map uses the results of a sophisticated calculation, provided by WeConservePA, which factors in missing riparian buffers, as well as the soil type and slope types most favorable to riparian plantings, to prioritize the best places for buffer restorations.



What is Sustainability?

Sustainability is based on a simple principle: Everything that we need for our survival and well-being depends, either directly or indirectly, on our natural environment. To pursue sustainability is to create and maintain the conditions under which humans and nature can exist in productive harmony to support present and future generations.

Source: US EPA

Stewardship and Sustainability

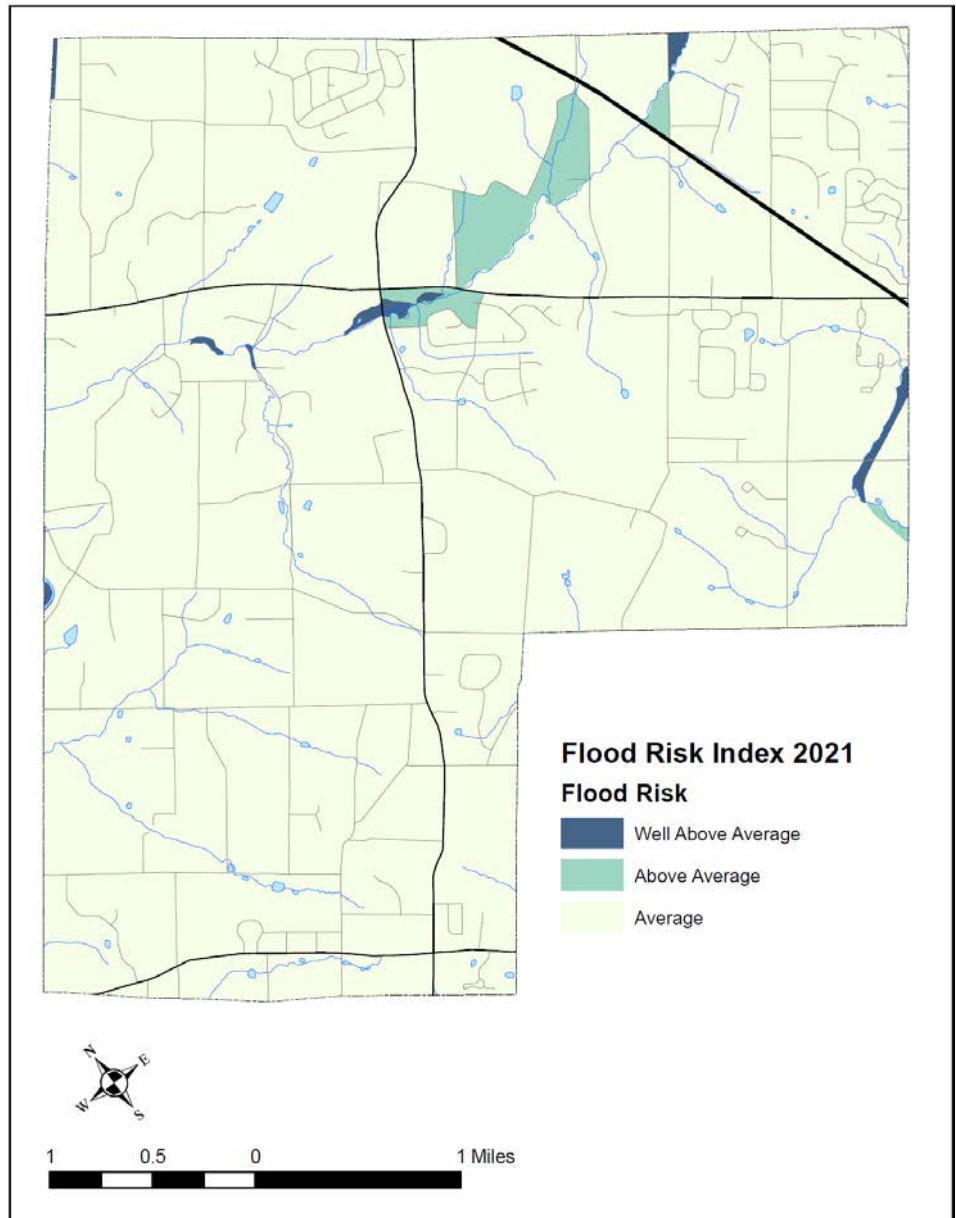
Maintaining the efficacy and viability of our natural resources and environment does not only involve stewarding the physical assets in the community; practicing sound building practices and lifestyles, enacted through both behavior and policy interventions, are just as important. Designing our buildings, neighborhoods and landscaping to be more energy efficient and water conscious, reducing the impacts derived from our vehicle and mobility choices, reducing and redirecting our waste products, and decreasing our negative impact on the climate are all part of the larger effort to steward our earth and manage our resources so that future generations may enjoy them and prosper. The impacts of our daily actions upon the environment are often so interrelated and complex that they require a more thorough planning framework to understand and address them. Several communities in Montgomery County have opted to conduct Sustainability Audits and Plans to

understand the impact of existing policies and development patterns on their communities' sustainability, which Worcester may find advantageous to commission as well.

While there are systemic changes that individuals and the community can make to enhance the sustainability of life in the Township, there are additional considerations which must be made on the local level to mitigate impacts that are already happening due to climate change. In planning for how to address these impacts, MCPC has created a number of indices to project which areas of the County will receive likely increases in flooding due to increased precipitation, as well as those areas which likely be vulnerable to increased high-temperature days. The County, as well as each municipality (including Worcester) can use this information to propose data-driven neighborhood-specific mitigation projects and implement scenario planning

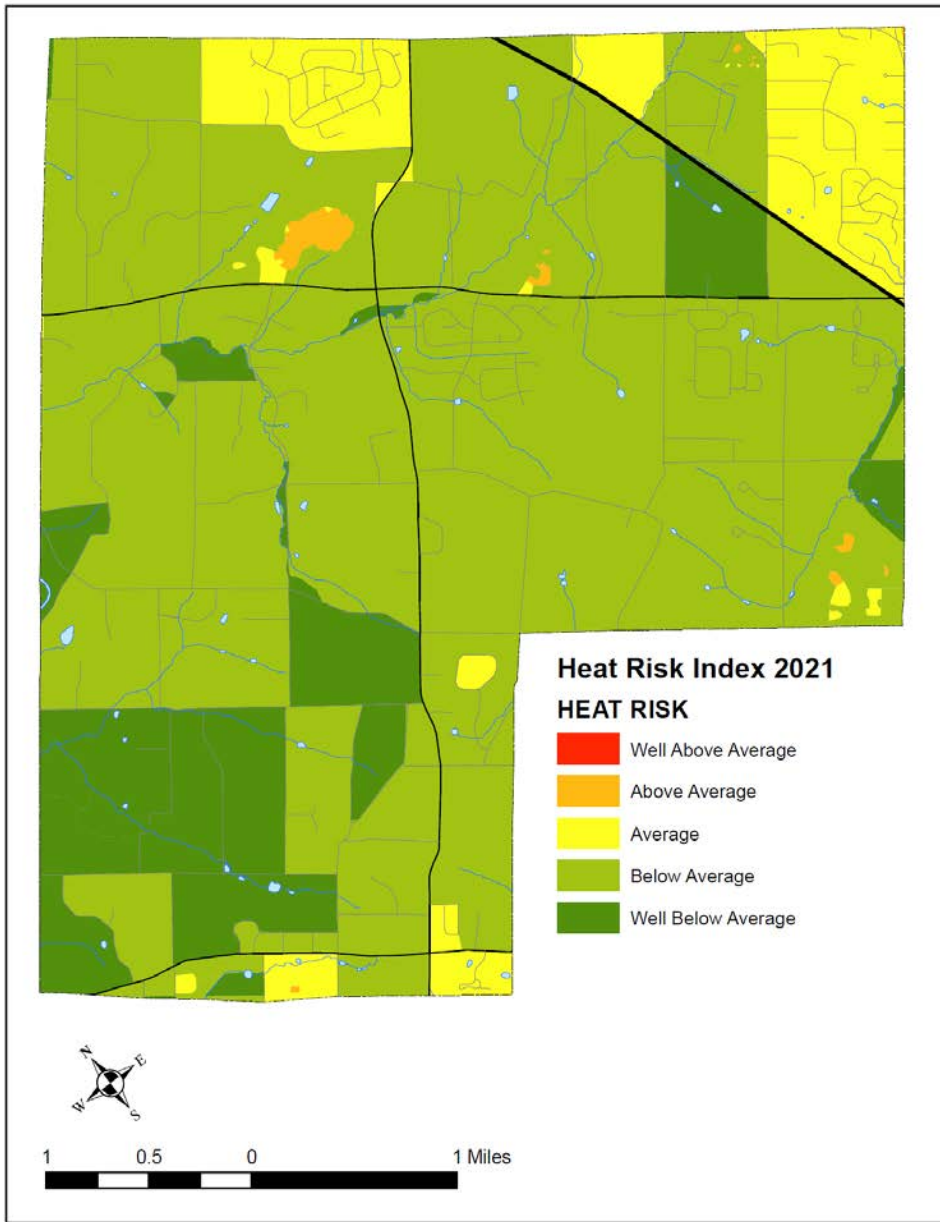
The flood risk index uses data from two sources: FEMA and Montgomery County Office of Emergency Management. These data sources provided the Planning Commission with seven indicators available on the census block scale: 100-YR floodplain area, 500-YR floodplain area, NFIP-insured structures with repetitive damage, compensation received by NFIP-insured structures, flood damage events reported to Montgomery County, degree (minimum to impassible) of property damaged from floods reported to Montgomery County and 911 calls received by Montgomery County related to flooding.

The Pennsylvania Department of Environmental Protection (PA DEP) projects that by end-of-century, the Commonwealth will see 36 percent more days with observed historical "very heavy" precipitation amounts and 67 percent more days with observed baseline "extremely heavy" precipitation. The amount of rainfall during "extremely heavy" precipitation events (which occur less than 1 percent of the time) is projected to rise by a 13 percent. In other words, climate projections show a notable increase in extreme rainfall events, at the same time duration and magnitude of these events will also increase.



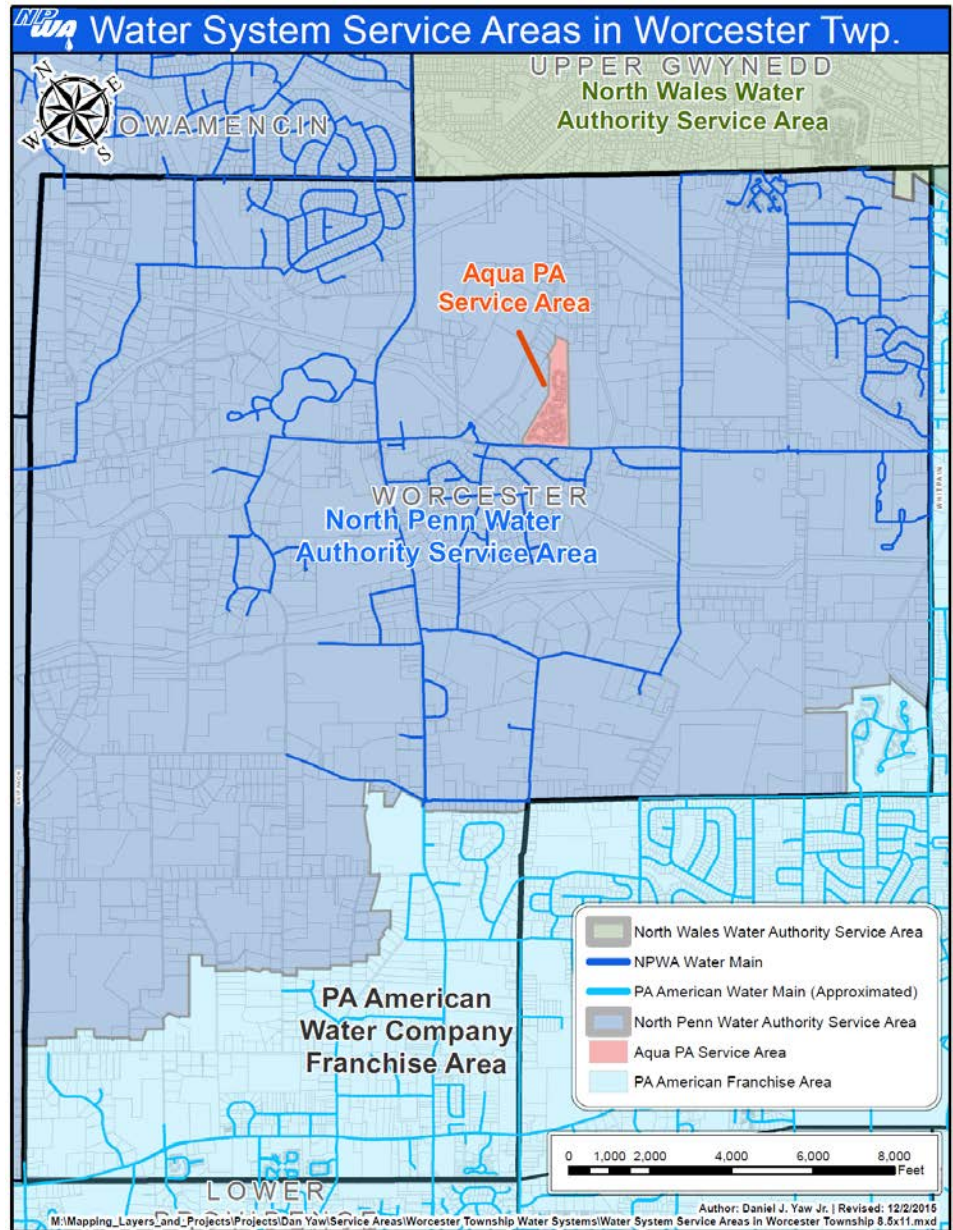
The heat risk index map utilizes difference in average surface temperature of each census blocks from the County-wide mean. The mean surface temperature of census blocks was determined by Landsat satellite imagery of the eight hottest, most cloud-free, days over the past 5-years. Risks from very more prolonged and more frequent high-temperature days don't just include the direct risks to human health, but also include worse air quality, increased maintenance costs to transportation infrastructure and increased loads on utilities and household energy costs.

Increased surface temperatures can frequently be attributed to the absence of tree cover, building and roof system materials, and the density of impervious surface coverage in an area, such as large parking lots or clusters of buildings. Localized patterns of higher surface temperatures caused by the absorption and re-release of heat by impervious surfaces is called the "urban heat island effect."



Water and Sewer Improvements

In the past, in order to restrict or limit development, it was a traditional strategy to limit the expansion of municipal sewer and water service to outlying parcels far away from the needed infrastructure. While it is still a best practice overall to not overburden and overextend municipal systems, if a developer can fund the provision of such services, then the extension of these services tends to be approved. Nonetheless, the Township has less control over systems it does not own, such as the public water system which, when provided, are covered by the North Penn Water Authority, North Wales Water Authority, Aqua PA, and PA American Water Company, as illustrated in the map below. All others in the Township are served by private wells.

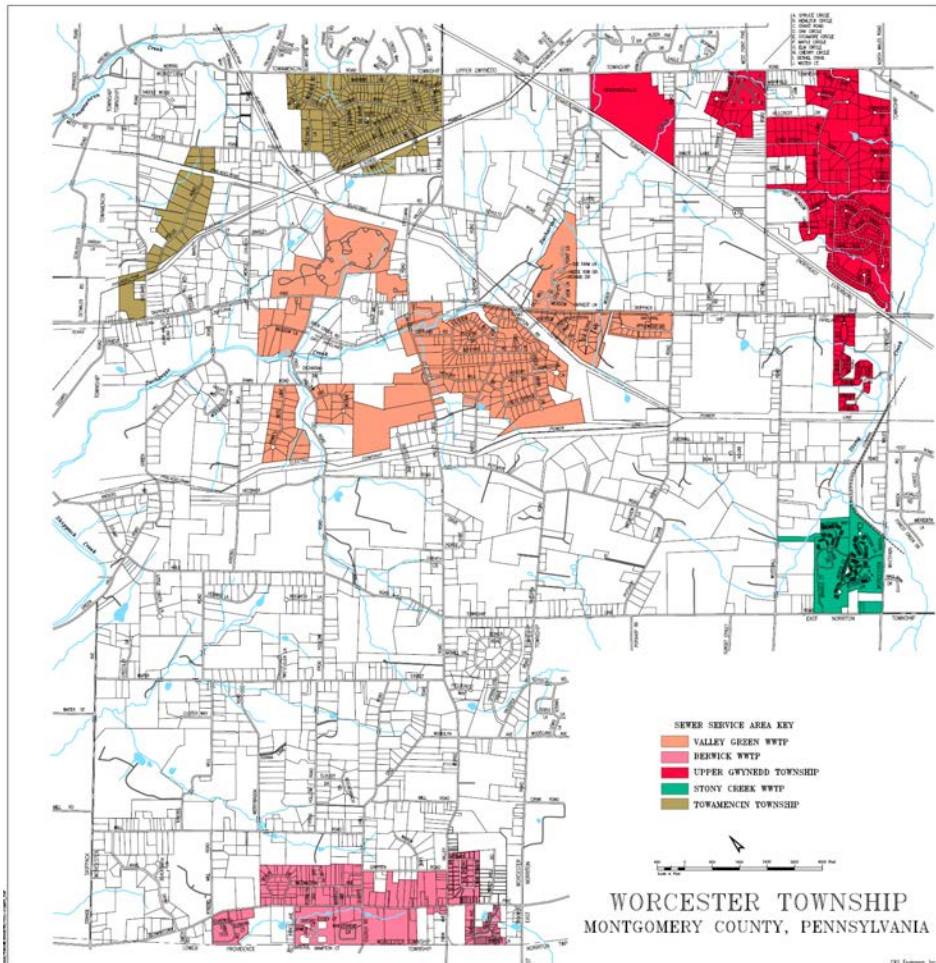


What is more within the Township’s purview is the public sanitary sewer system. The Township owns two sewer treatment plants, Berwick Place and Valley Green, and their respective conveyance systems, although the rest of the Township is served by other providers, including Towamencin, Lower Providence and Upper Gwynedd townships, as well as Aqua PA’s Stony Creek WWTP. as the below map shows. All others are served by private on-lot septic systems.

Existing Sewer Flows and Capacity of Township WWTPs. *Source: Worcester Twp, MCPC*

	Berwick Place	Valley Green
2015 Average Annual Plant Capacity	150,000 gallons per day	220,000 gallons per day
2015 EDU Flow by Worcester	81,000 gallons per day	101,000 gallons per day

Public Sanitary Sewer Service Providers in Worcester. *Source: MCPC, Worcester.*



Stormwater Management

Stormwater is generated when precipitation from rain and melting snow flows over land and impervious surfaces and does not infiltrate into the ground. The runoff from streets, lawns, farms, and construction and industrial sites collects fertilizers, loose soil, chemical pesticides, oils and grease and many other pollutants and eventually make their way into our ponds, creeks and rivers.

This untreated discharge is detrimental to the quality of both habitats as well as drinking water. Many Best Management Practices (BMPs) such as detention/retention/infiltration basins, are already in place to help keep our water clean. Stormwater BMPs also work to slow water, holding the water back to prevent the overloading and failure of municipal systems, as well as forcing water to infiltrate into the soil before it ever makes it to a drainage system—this helps to reduce flooding and drainage issues downstream.

The Township regulates stormwater management which goes above and beyond typical BMPs through a permit obtained from the PA DEP through the National Pollution and Discharge Elimination System Phase II (NPDES)/Municipals Separate Storm Sewer System (MS4). This is a Federal requirement from the US EPA that is administered by the PA DEP. There are target requirements to achieve within the 5-year permit timelines, and municipalities are required to administer six minimum control measures, which include:

- Construction site runoff control
- Illicit discharge detection and elimination
- Pollution prevention
- Post-construction runoff control
- Public education and outreach
- Public participation and involvement

Overall the management of stormwater in the Township should adhere as closely as possible to the natural processes that attenuate stormwater.

Incidentally, strategies to restore or improve natural resources, such as streambank restorations and riparian buffer plantings, are important measures to improve water quality which might be degraded by stormwater runoff and protect against erosion and sedimentation. Additionally, stormwater planning should be done on a regional or watershed basis: Worcester is currently implementing this strategy through its participation in the Skippack Watershed Alliance with Lower Providence, Skippack, Towamencin and Hatfield townships.

While the Township must consider community-wide stormwater, new land developments and earth disturbances are still required to implement stormwater management BMPs independently of Township planning projects.

Recommendations

Preserve and conserve sensitive environmental features

- Review zoning and land development ordinances to identify areas to improve natural resource preservation and stewardship.
- Preserve open space with habitat or natural resource conservaiton value, as described in the *Preservation, Open Space + Parks* Chapter.
- Improve tree canopy coverage through tree-planting programs or enhanced tree-planting requirements in land development review.

Restrict development from environmentally sensitive areas

- Continue to enforce floodplain, wetland, riparian corridor and steep slopes regulations.

Support practices which address climate change and promote sustainability

- Investigate ordinance provisions which could incentivize the use of green building practices, such as conformance to LEED standards,
- Consider conducting an energy efficiency audit of existing Township facilities and develop a plan to address inefficiencies.
- Consider commissioning a Township Sustainability Plan or Sustainability Audit. *Sustainability planning is an innovative way for municipalities to develop strategies that will reduce environmental and energy impacts while attaining benefits for the local ecology, community and economy. Audits can assess how the Township currently contributes to greenhouse gas emissions or increased energy costs and can suggest ways to mitigate those impacts.*

Provide for the sustainable management of stormwater throughout the Township

- Implement mitigation measures to address the Township's MS4 planning requirements.
- Incentivize and encourage the use of green infrastructure and low-impact development practices across the Township, in lieu of more traditional means.
- Prioritize streambank restoration and riparian buffer planting projects in the Township.
- Retrofit existing, older-generation detention basins and other BMP structures to become vegetated and reflective of current best practices.

Provide and maintain sewer and water infrastructure in line with reasonable needs

- Maintain current sewer and water services areas, as shown above.
- Focus on sewer capacity improvements to areas where the Township intends to accommodate growth

Plan for public sewer in areas at risk for malfunctioning systems

- Produce study to identify and address failing or malfunction septic systems in the Township.