

Chapter 6

Agricultural, Natural and Cultural Resources

Introduction

The Agricultural, Natural and Cultural Resources chapter provides an overview of the Town of Wheaton's resources and explores ways to promote and preserve these resources to benefit the community.

The Town's agricultural, natural, and cultural resources are an important part of its identity and uniqueness. Wheaton's natural resources can positively affect resident's health, provide wildlife habitat, increase property values, and spur economic growth. Cultural resources tell the story of early inhabitants, describe events that shaped the development of the area, and provide educational experiences for residents and visitors. Agriculture, a strong symbol of life in Wisconsin, is increasingly seen as a way to meet the food needs of local consumers.

As the Town of Wheaton grows, the protection and promotion of these resources will have a positive impact on the community in many ways.

Agriculture

Agriculture is an important part of the social and economic characteristics of Wheaton, Chippewa County and the State of Wisconsin. Much of Wheaton's land is devoted to farming.

Changes in agriculture due to socio-economic conditions and development pressures to convert agricultural land to other uses can have profound impacts on Chippewa County and its communities. The 2017 Census of Agriculture for Chippewa County provides a snapshot of the state of agriculture and trends. Below are some of the main characteristics of farming in Chippewa County highlighted in the 2017 Census of Agriculture.

- The number of farms and the amount of land in agriculture has decreased since 2012.
- The average farm size has increased since 2012.
- Net case farm income has decreased since 2012.
- Thirty-five percent of farms had sales less than \$2,500.
- Twenty-six percent of farms had sales of \$100,000 or more.
- About 68% of farmland is cropland.
- About 46% of farms are practicing no till or reduced till farming.
- The most popular crops grown are corn, soybeans and forage.
- Milk, cattle/calves and poultry/eggs have the highest sales in the Livestock, Poultry and Products category.
- There are over four times the number of turkeys in Chippewa County than cattle.

As some farms grow larger to better meet their economic needs, smaller farms are growing to support local food needs and develop agritourism.



Map 6-1 shows the general pattern of land used for agriculture in the Town of Wheaton. Farmland can be found throughout the Town. Areas not being farmed typically have a characteristic not conducive to farming (steep slopes, wetlands, etc.) or have been developed over time. Agriculture will remain an important way of life in Wheaton, even as it evolves.

Soils

The Chippewa County Soil Report indicates there are four typical soils in the Wheaton area. The primary soil type is the Elkmound-Plainbo-Eleva association. These soils are characterized as being shallow and moderately deep, gently sloping to very steep, well to excessively drained, loamy and sandy soils on uplands, outwash plains, and stream terraces. The second most extensive soil association in Wheaton is Billet-Rosholt-Oesterle, characterized as being deep, nearly level to sloping, well to somewhat poorly drained, loamy soils on outwash plains and stream terraces. The Menahga- Friendship soil association is seen primarily along the Chippewa River, and is deep, nearly level to sloping, excessively to moderately well drained, sandy soils on outwash plains and stream terraces. The northeast area of the Town also contains Seaton-Gale association soils, which are deep to moderately deep, nearly level to steep, moderately well to well drained, silty soils on uplands.

Soils are also divided into classes to evaluate if farming is a viable use of the land. Soil classes I-III are considered to be the land best suited for farming, while soils IV-VIII have features that make farming difficult, if not impossible (see Map 6-2).

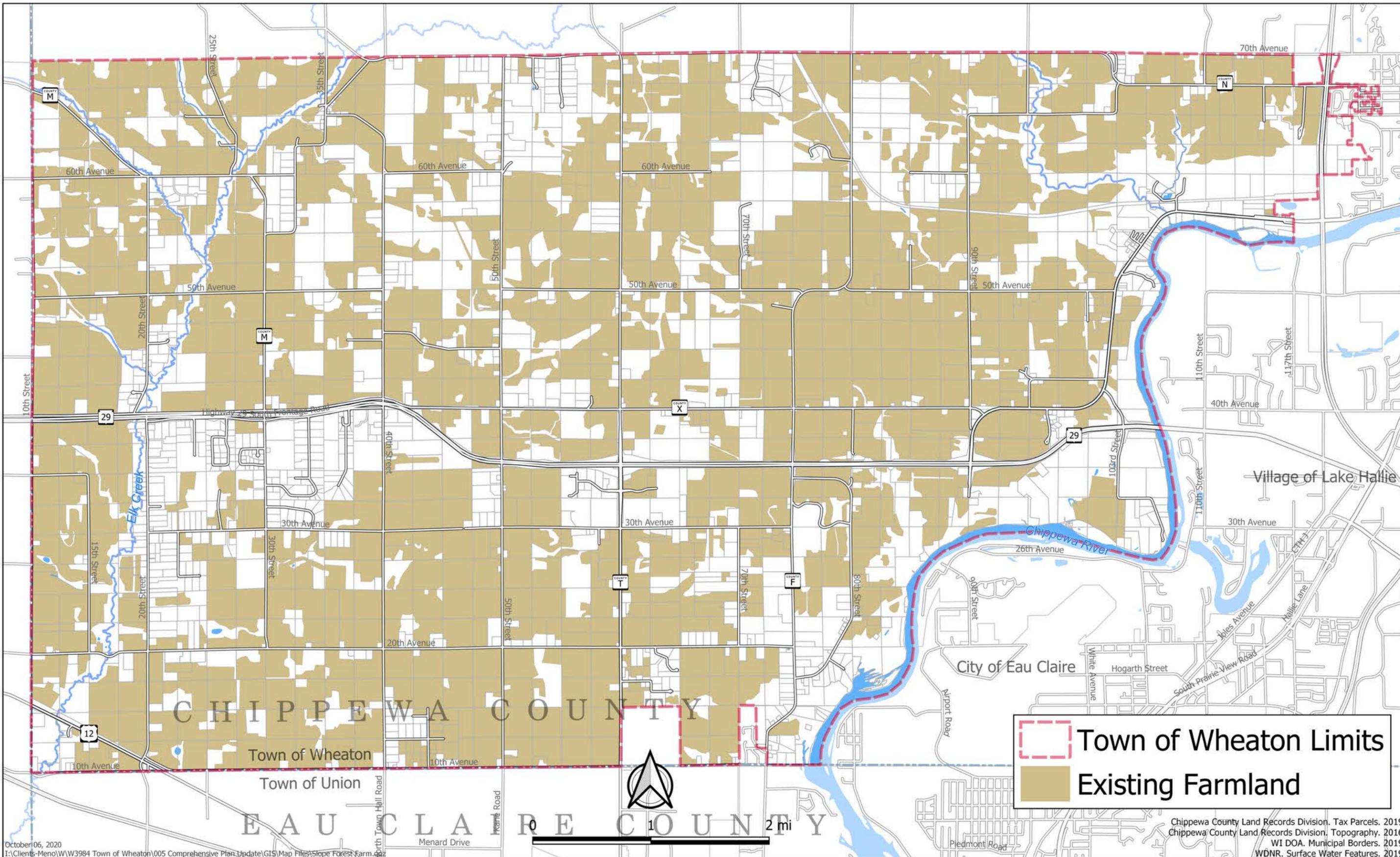
Topography

The topography of the Town of Wheaton area is relatively flat. Elevations range from 795 feet to 1,123 feet above sea level. Surface features have been formed or modified by two distinct periods of glaciation. Pitted glacial outwash covers portions of the County, resulting in many lakes, wetlands, and areas of uneven topography. Major water bodies in the Town of Wheaton include the Chippewa River, Elk Creek, Big Elk Creek, Sherman Creek, Trout Creek, and Beaver Creek.

Bedrock Geology

The Town of Wheaton is underlain by nearly all Cambrian sediments, which overlie an ancient broad plain of granite bedrock. The formations consist of beds, or strata, of sandstones, siltstones, and shales, which vary considerably in thickness and other characteristics.





October 06, 2020
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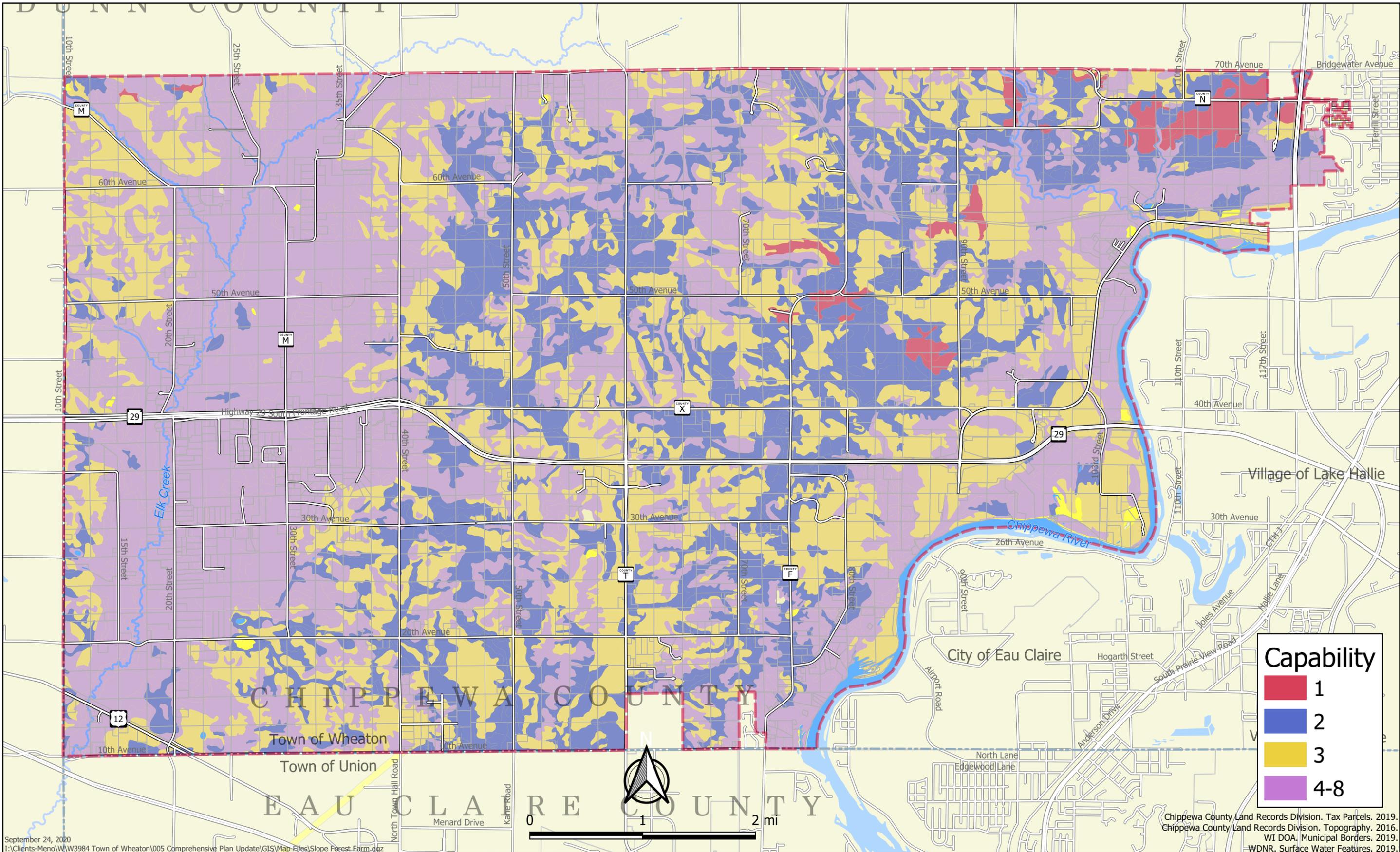
Chippewa County Land Records Division. Tax Parcels. 2019.
 Chippewa County Land Records Division. Topography. 2016.
 WI DOA. Municipal Borders. 2019.
 WDNR. Surface Water Features. 2019.

Existing Farmland

Town of Wheaton
 Chippewa County, WI



Map 6-1
 Existing Farmland



Soil Classifications

Town of Wheaton
Chippewa County, WI



Map 6-2
Soil Classifications

Surface Geology

The surface geology of Chippewa County is primarily the result of glacial deposition over bedrock. The modern landscape was most strongly influenced by the glaciers that invaded the county from about 25,000 years ago, and by a glacier that moved into the County from the west about 12,000 years ago. Since the last period of glacial activity, the landscape has been further sculpted by naturally occurring and man-induced erosion and drainage activity.

Mineral Resources

There are no metallic mines in the Town of Wheaton but there are eight non-metallic mines that are regulated under Chapter NR 135 of the Wisconsin Administrative Code (see Map 6-3). Non-metallic mines are permitted through Chippewa County.

Water Resources

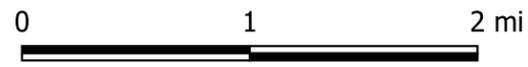
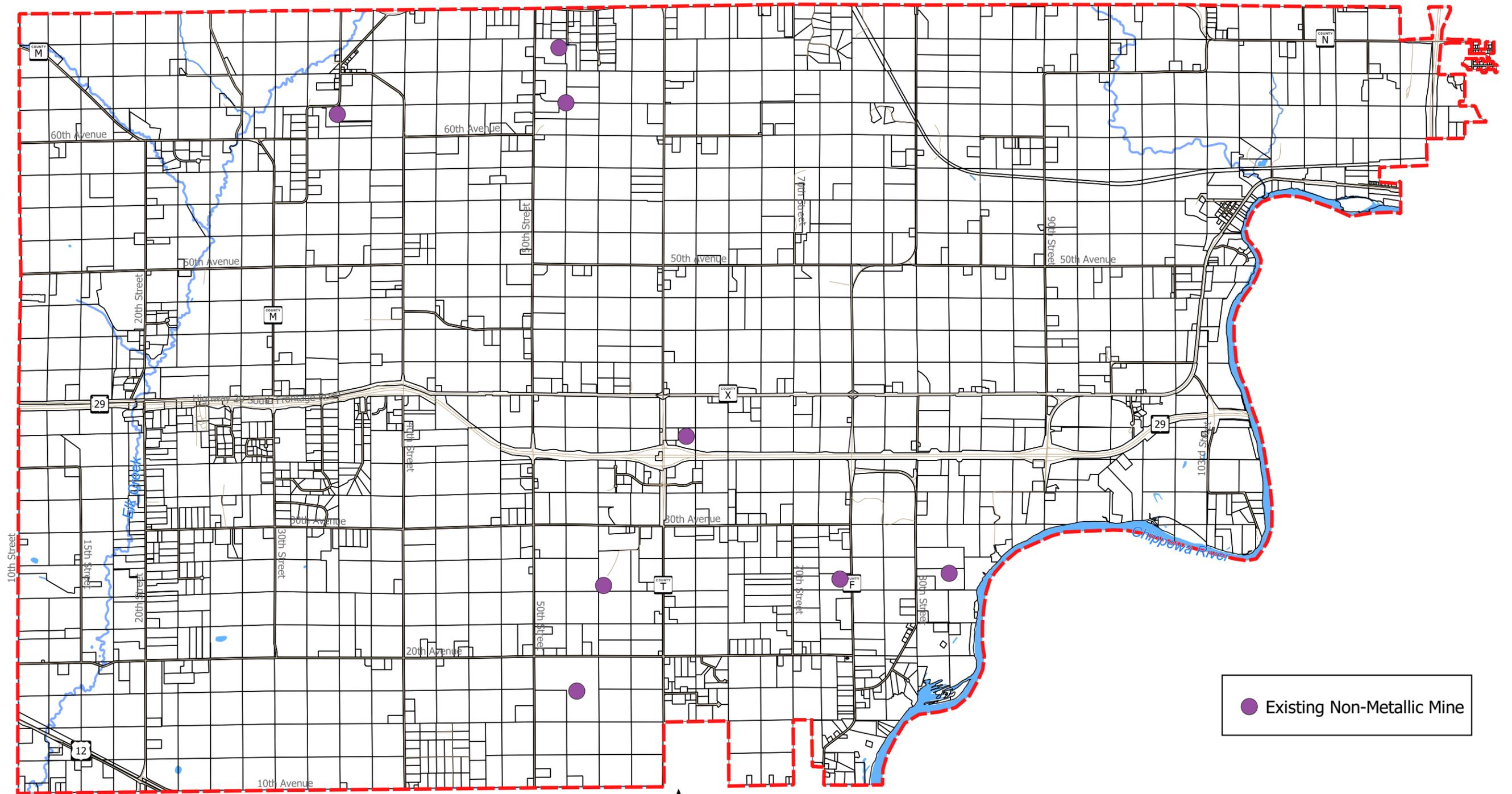
Protection of water resources is critical to maintaining the water quality and diversity of wildlife. This can be complicated because water resources do not adhere to political boundaries.

A watershed is an area of land that drains all the streams and rainfall to a common outlet such as a river, pond, or lake. Development and land use practices in and around the Town of Wheaton within the watersheds should take into account the impact on the function of natural systems, and address potential pollution problems through the use of best management practices such as shoreland buffers, stormwater ponds, swales and the preservation of environmentally sensitive areas.

The Town of Wheaton is located in the Muddy Creek, Elk Creek and Duncan Creek Watersheds. There are several bodies of water that flow through the Town of Wheaton, including the Chippewa River, Elk Creek, Big Elk Creek, Beaver Creek, Trout Creek, and Sherman Creek (see Map 6-4). Best Management Practices (BMP) designed to control stormwater runoff rates, volumes, and discharge quality can be used to protect water resources in the Town. To protect these surface waters, buffer zones along the shores restrict what development activities can occur in these zones. Shorelands are vital components to the relationship between the land and the water. Shoreland areas serve as environmental buffer zones that catch pollutants and filter runoff before it enters the waterway. Shorelands provide valuable habitat for both aquatic and terrestrial animals and vegetation, and also act as buffers and thus serve to protect water quality. However, shorelands are also considered prime residential building areas because of their scenic beauty. Recognizing this conflict, and in order to maintain the environmental, recreational, and economical quality of our water resources, the State of Wisconsin requires counties to adopt and enforce a shoreland ordinance.

As required by the State, shorelands are defined as all land within 1,000 feet of the ordinary high water mark of a lake, pond or flowage or all land within 300 feet of the ordinary high water mark of a river or stream or to the landward side of the floodplain, whichever is greater.





● Existing Non-Metallic Mine

November 30, 2020
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Chippewa County Land Records Division. Tax Parcels. 2019.
 OSM WI Rail Data. 2018.
 OSM. WI Road Data. 2018.
 WI DOA. Municipal Borders. 2019.
 WDNR. Surface Water Features. 2019.

Existing Non-Metallic Mines

Town of Wheaton
 Chippewa County, WI



Map 6-3

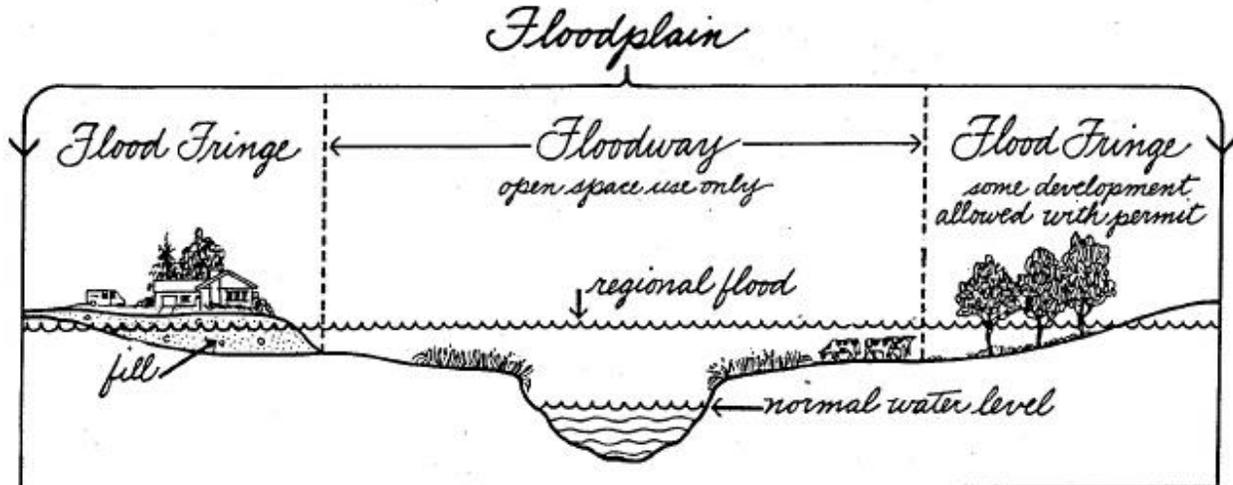
Existing Non-Metallic Mines

Floodplains

Floodplains are areas, which have been, or may become inundated with water during a regional flood. Floodplains are comprised of two components, the floodway and floodfringe. Floodways are areas, which directly adjoin the channel of a stream and are characterized by deep, fast moving water. The floodway is typically the most dangerous part of a floodplain, and uses in this area should be limited to conservation areas or open space.

The floodfringe is generally associated with standing, or slow flowing water adjacent to the floodway. Development within the floodfringe is generally accepted, provided adequate flood proofing measures are in place. Wisconsin statutes direct all Wisconsin counties, cities, and villages to adopt floodplain zoning ordinances. The Federal Emergency Management Agency (FEMA) has mapped flood plains in the planning area. These maps delineate the entire flood plain boundary, and do not distinguish between floodway and floodfringe.

Figure 6-1: Floodplains



Source: Wisconsin DNR

There are a few areas of floodplains throughout the Town, most of which are located along a creek or river (see Map 6-4). It is important to remember that the floodplain maps are no substitute for site specific analysis. Natural and man-made changes in the landscape, and the age and accuracy of flood insurance maps have in some cases limited their reliability for the identification and designation of floodplains.

Wetlands

There are a number of wetland areas within the watersheds that can affect water levels of rivers and creeks flowing through Chippewa County.

Wetlands are defined by the State Statute as “an area where water is at, near, or above the land surface long enough to be capable of supporting aquatic or hydrophytic (water-loving) vegetation and which has soils indicative of wet conditions.” Wetlands may be seasonal or

permanent and are commonly referred to as swamps, marshes, or bogs. Wetland plants and soils have the capacity to store and filter pollutants, replenish groundwater supplies, store floodwaters and maintain stream flows.

There are some wetland areas in the Town, primarily located adjacent to a stream or river (see Map 6-4).

Groundwater

The source of nearly all potable water is groundwater. Groundwater condition in Chippewa County and Wheaton is generally good. However, there are a few wells that have recorded high nitrate levels. Recent testing has indicated that about ten percent of wells throughout Chippewa County are above the standard for nitrates. But, according to the Chippewa County Land Conservation Department, there is no apparent geographic explanation or trend for these levels.

Map 6-5 shows well test sites in Wheaton and their associated nitrate levels. The Wisconsin Department of Natural Resources indicates that water naturally consists of less than 1 milligram of nitrate-nitrogen per liter. Higher levels may indicate that the water has been contaminated. Common sources of contamination include fertilizers, animal wastes, septic tanks, and decaying plant debris. Although the Town of Wheaton does not have public drinking water, the maximum allowable nitrate-nitrogen level in public drinking water is 10 milligrams per liter. The State of Wisconsin does not require periodic testing of private wells and new wells are only tested for bacteria levels. The Chippewa County Land Conservation Department should be contacted for more information about specific well tests and results.

Map 6-6 shows the groundwater contamination susceptibility in the Town of Wheaton. Groundwater contamination potential is influenced by soil characteristics such as chemistry, permeability, slope, and the ability of the unconsolidated materials overlying bedrock to filter contaminants (attenuation capacity).

Steep Slopes

It is generally more desirable, both environmentally and economically, to avoid steep slopes and disrupting natural drainage ways with construction and land development. Problems with erosion and runoff pollution can occur with development on steep slopes, and flooding and wet basements can occur with drainage way disruptions.

Steep slopes are areas with 13 percent or more grade (each percent of slope is measured as one unit of elevation for every 100 horizontal units).

Development on slopes of 13 to 20 percent could cause direct runoff into lakes, rivers, or streams. In order to minimize any negative effects, construction should follow state approved site erosion control standards, and institute best management practices to control runoff and pollution. Land with slopes over 21 percent represents a limiting environmental condition.



Development of these sites will result in high construction costs and severe erosion, often having negative impacts to surface and ground waters. Map 6-7 shows that there are several areas of steep slopes that run through the central and western portions of Wheaton, often near rivers or streams. Additional care should be taken when approving developments on these sites to limit erosion, runoff, and pollution.

Forests and Woodlands

Forests and woodlands provide a wide range of benefits to the Town of Wheaton and its residents. These benefits include:

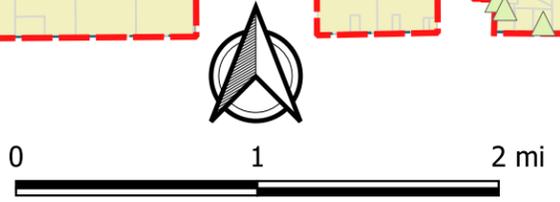
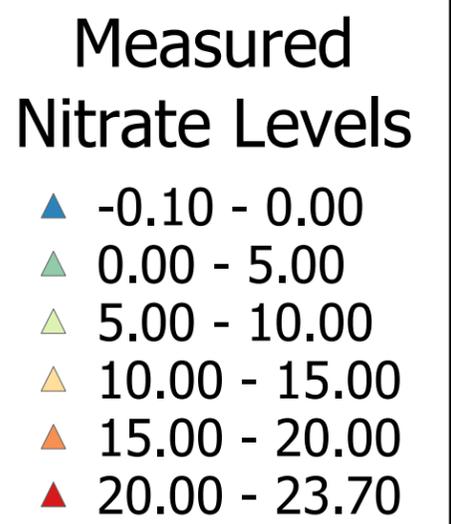
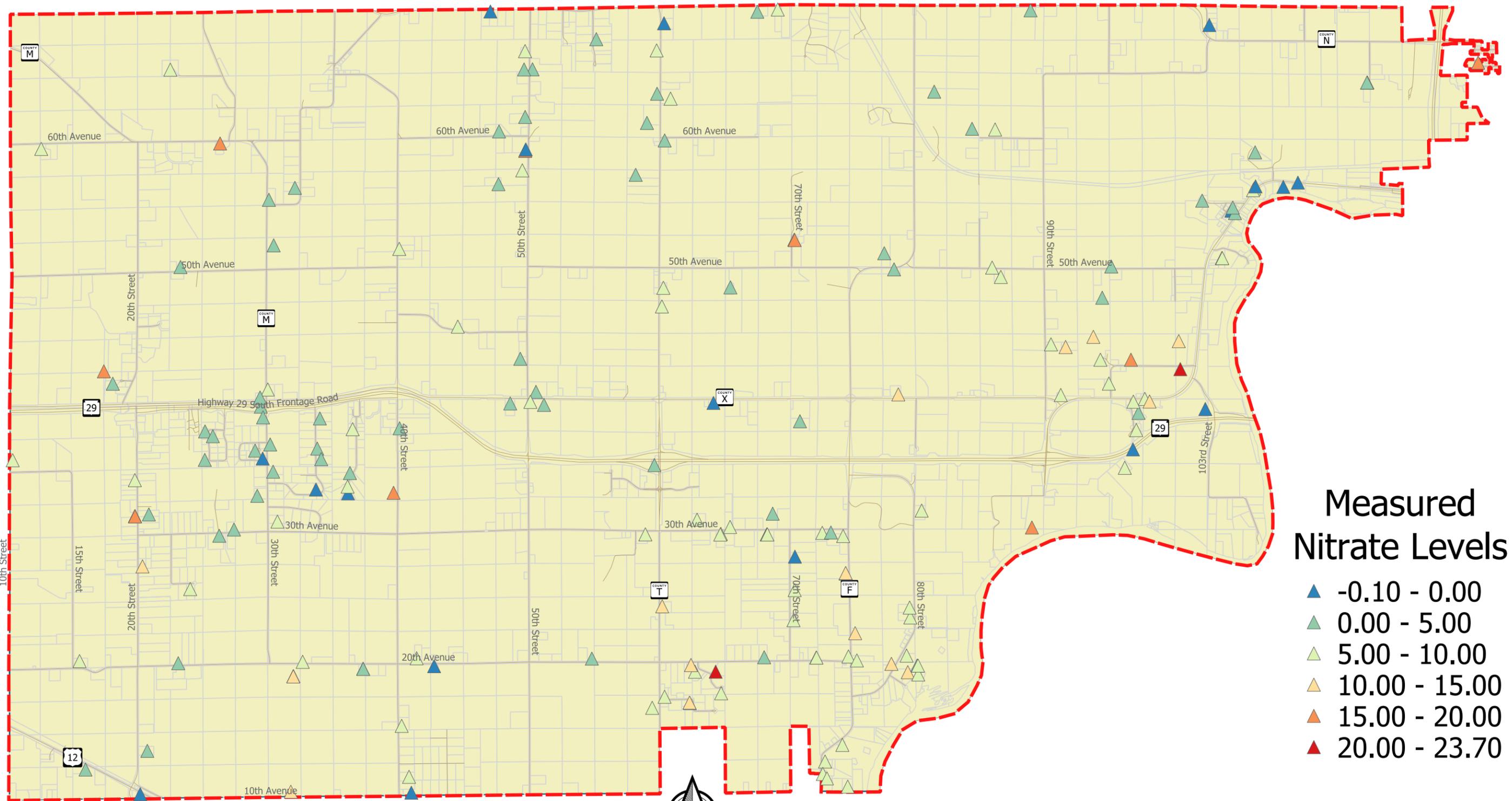
- Harvesting and turning into products and sold. Then replanting
- Providing areas for hiking and camping
- Providing wildlife habitat
- Reducing energy consumption in homes by providing shade and cooling
- Reducing the heating of asphalt and concrete surfaces
- Improving air quality
- Reducing greenhouse gases
- Preventing soil erosion
- Providing food

Map 6-8 shows the existing forests and woodlands in the Town of Wheaton. These areas are typically near water resources, steep slopes and other areas where it is difficult to farm or build.

Grasslands and Prairies

A small amount of Chippewa County was originally covered by prairie, most of which does not remain today. Prairie is the term used to describe the grassland type which dominated Wisconsin prior to Euro-American settlement. Prairies are dominated by grasses and sedges, lack trees and tall shrubs, and are home to a rich variety of plants and animals. Within the prairie designation there are variations due to soils and climate.

There are several areas scattered throughout the Town of Wheaton that have been classified as grasslands. As these areas have been disappearing throughout Wisconsin, prairies are a threatened plant community in Wisconsin. Many species of plants and animals associated with Wisconsin prairies are endangered, threatened, or of special concern. Grasslands can be restored and maintained by preserving open space for this type of land cover as development occurs



Chippewa County Land Records Division. Tax Parcels. 2019.
 OSM WI Rail Data. 2018.
 OSM. WI Road Data. 2018.
 WI DOA. Municipal Borders. 2019.
 WDNR. Surface Water Features. 2019.

September 24, 2020
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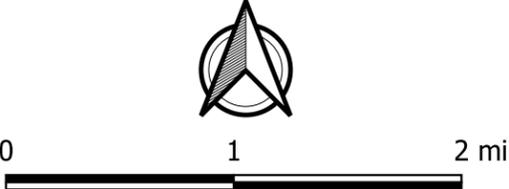
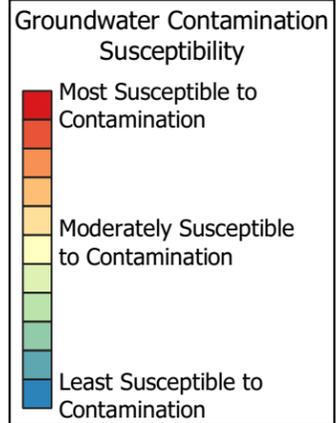
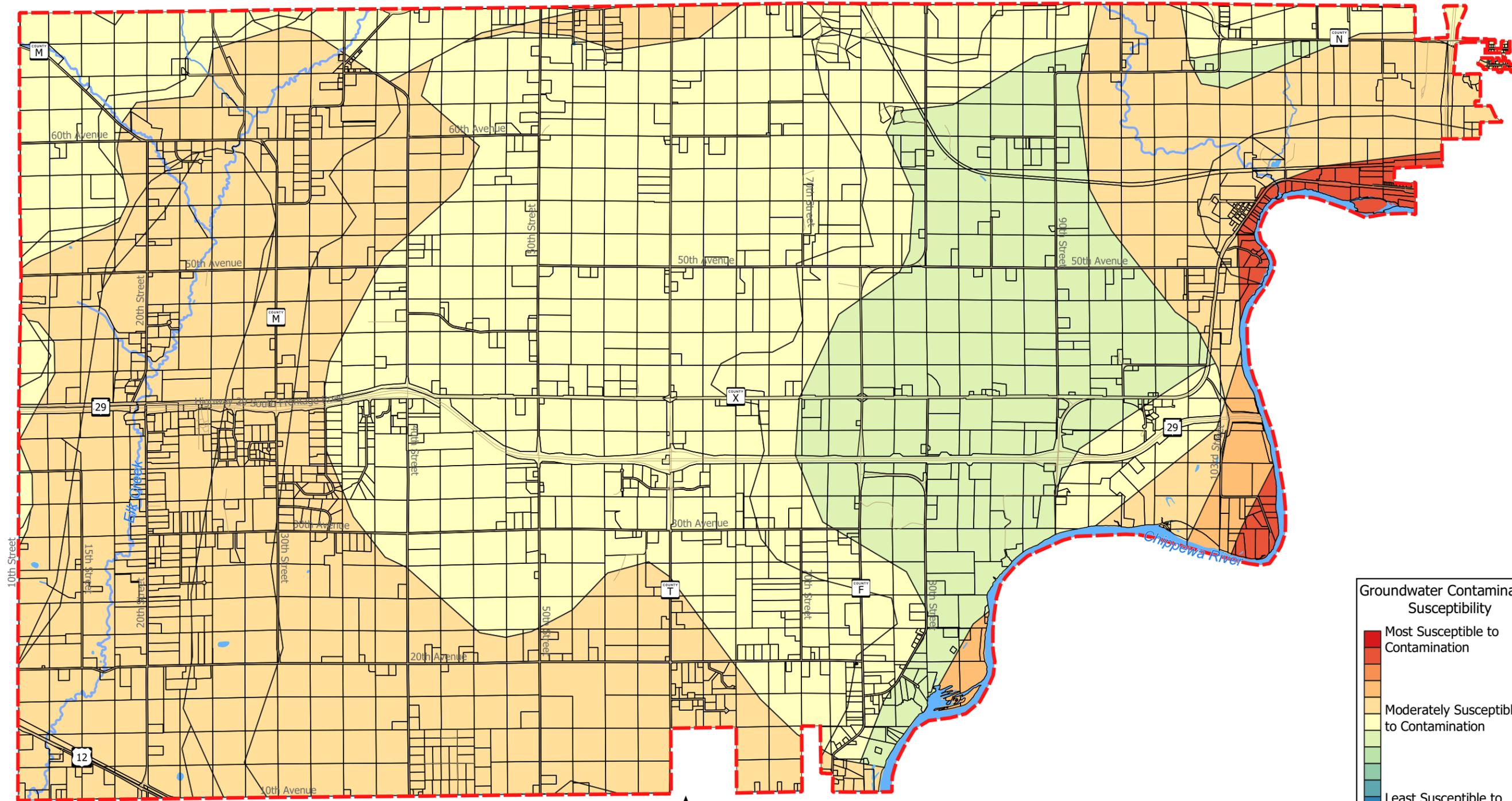
Measured Nitrate Levels

Town of Wheaton
 Chippewa County, WI



Map 6-5

Measured Nitrate Levels



Chippewa County Land Records Division. Tax Parcels. 2019.
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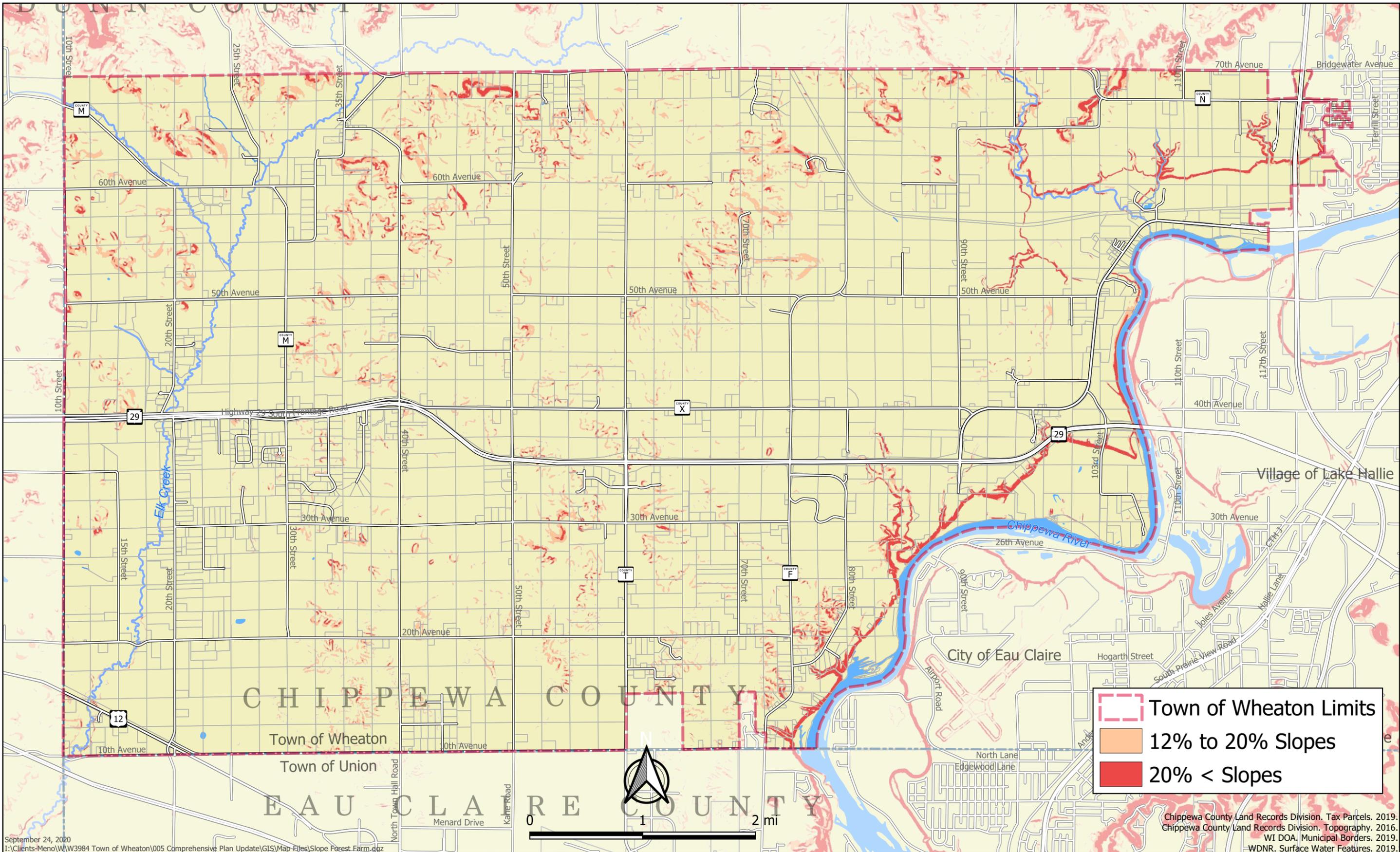
Groundwater Contamination Susceptibility

Town of Wheaton
 Chippewa County, WI



Map 6-6

Groundwater Contamination Susceptibility



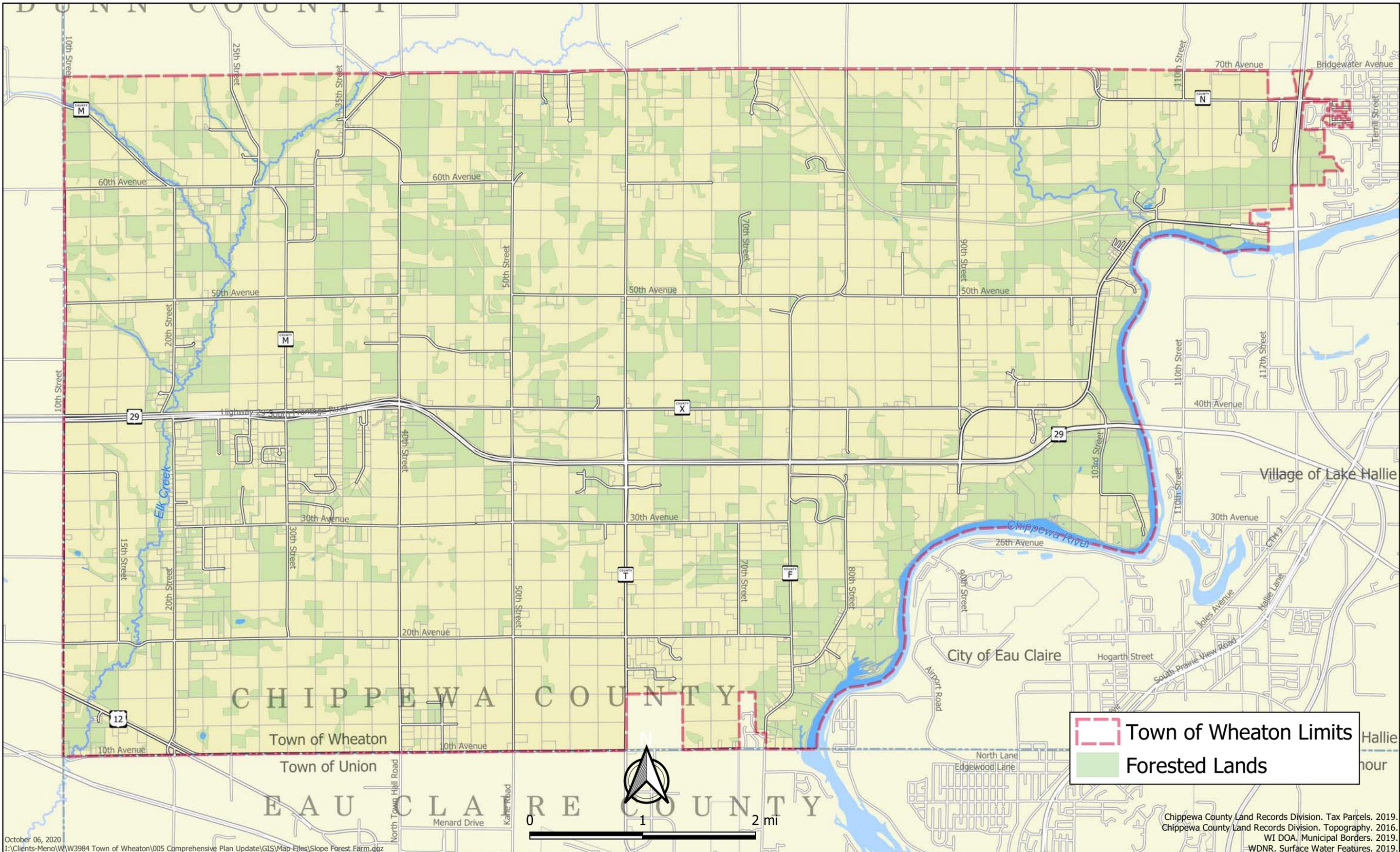
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Steep Slopes

Town of Wheaton
 Chippewa County, WI



Map 6-7
 Steep Slopes



October 06, 2020
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Chippewa County Land Records Division. Tax Parcels. 2019.
 Chippewa County Land Records Division. Topography. 2016.
 WI DOA. Municipal Borders. 2019.
 WDNR. Surface Water Features. 2019.

Forests and Woodlands

Town of Wheaton
 Chippewa County, WI



Map 6-8

Forests and Woodlands

Wildlife, Wildlife Habitat and Open Space

Scattered throughout the Town of Wheaton are various federal, state and local wildlife, fishery, natural and scientific areas, including private conservancy areas. These often encompass one or more of the sensitive land areas discussed previously (e.g., wetlands, forests, shorelands, prairies). These areas are managed as open space to provide important feeding, breeding, nesting, cover and other habitat values to a wide variety of plant and animal species. Agricultural lands can also provide important open space and wildlife habitat, while maintaining the rural character of the area.

Rare and Endangered Species and Natural Communities

According to the WDNR Natural History Inventory, Chippewa County is home to 39 animal species, 27 plant species, and 19 natural communities that can be considered rare or endangered.

The Town of Wheaton lies within multiple town ranges within Chippewa County. The DNR has identified specific species and communities in danger within each town range. The areas where Wheaton lies have been identified as having the following endangered species and natural communities:

- *Asclepias ovalifolia* (Dwarf Milkweed)
- *Clemmys insculpta* (Wood Turtle)
- *Cumberlandia monodonta* (Spectacle Case)
- *Cyclonaias tuberculata* (Purple Wartyback)
- *Eleocharis robbinsii* (Robbins' Spikerush)
- *Emydoidea blandingii* (Blanding's Turtle)
- *Gentiana alba* (Yellow Gentian)
- *Haliaeetus leucocephalus* (Bald Eagle)
- *Lanius ludovicianus* (Loggerhead Shrike)
- Northern wet-mesic forest (Northern Wet-mesic Forest)
- *Platanthera hookeri* (Hooker Orchis)
- Sand prairie (Sand Prairie)
- *Speyeria idalia* (Regal Fritillary)
- *Talinum rugospermum* (Prairie Fame-flower)
- *Lycaides Melissa samuelis* (Karner Blue)

The Karner Blue Butterfly is an endangered species with Federal protection status. The Spectacle Case is a candidate for Federal protection status.

Review of endangered species and natural communities by the WDNR occurs when ground disturbance of over one-acre is proposed.

Cultural Resources

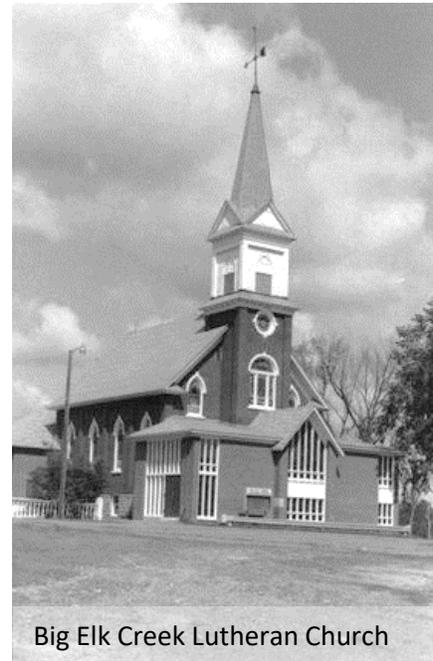
Historical and archeological sites can tell us many things about our past. They add value to your community by providing educational, aesthetics, and economic benefits. The Wisconsin Historical Society estimates that 80% of our state's archeological sites have been severely damaged or destroyed. Currently, Town projects that are state or federally funded must go through a review process to ensure that these sites, if within a project area, are not disturbed.

To protect the sites and landowner rights the locations of archaeological sites are exempt from public disclosure. Under state law it is illegal to remove objects or artifacts or conduct archaeological research of any kind on state and municipal lands (County, Civil Town, City, and Village) without a permit from the State Archaeologist. The law also applies to the bottomlands of lakes and rivers owned by the state or municipal governments and also covers submerged sites such as shipwrecks.

The Town of Wheaton is rich in history. There are 13 items on the Wisconsin Architecture and History Inventory. This list is a collection of structures, sites, objects, and historic districts in Wisconsin. Included in this list are houses, barns, schools, and churches.

The Chippewa River also played an important in the lives of the Native American population before European settlement. Archeological sites are protected by the State of Wisconsin. Development projects typically have to have their projects reviewed to determine if they will have an impact on historical and archeological sites in the Town.

The Chippewa County Historical Society collects records and artifacts related to the County's history. By identifying and preserving historical and archeological sites in the Town of Wheaton, the Town can add to its identity and create opportunities for education.



Big Elk Creek Lutheran Church

Survey Results Related to Agricultural, Natural and Cultural Resources

The Town of Wheaton Comprehensive Planning Public Opinion Report, 2019 contained one questions focused on the protection and preservation of natural resources in the Town of Wheaton (see Table 6-1).

Respondents were presented with a list of ten natural resource items and asked how important it is to protect and preserve each resource. Based on responses from those with an opinion (excluding the "no opinion" responses), Town of Wheaton respondents gave a high level of importance to the protection of all natural resources on the list; large majorities said that it is essential, very important, or important to protect every resource listed. Groundwater, rivers

and streams, air quality, and forested lands were supported particularly strongly (99% rated these resources as essential, very important, or important). This substantial level of agreement was uniform across all demographic groups. There were only minor variations in the high level of importance that each group placed on the protection of these natural resources in the Town. Female respondents were more likely to say that the protection/preservation of air quality, farmland, and forested lands are “essential.”

Table 6-1: Importance for Town of Wheaton to Protect and Preserve Natural Resources

	No Opinion	# With Opinion	Essential	Very Important	Important	Not Important
Groundwater	1%	568	71%	21%	7%	1%
Rivers and Streams	2%	561	53%	33%	13%	1%
Air Quality	1%	564	49%	34%	15%	1%
Wildlife Habitat	3%	557	43%	31%	23%	3%
Forested Land	2%	561	40%	38%	21%	1%
Farmland	2%	564	38%	36%	21%	4%
Wetlands	3%	562	37%	27%	29%	8%
Rural Character	3%	555	35%	36%	25%	3%
Scenic Views and Undeveloped Hills	4%	548	32%	33%	27%	9%
Historic Resources and Cultural Sites	9%	518	12%	26%	49%	13%

Goals, Objectives, and Recommendations

Goal 1: The Town of Wheaton will support continued agriculture and the expansion of small market farms and agritourism.

Objectives:

1. Protect the best farmland from development.
2. Increase the number of young farmers and farms that produce local food.
3. Increase access to healthy locally produced food.

Recommendations:

1. Guide development away from the best farmlands.
2. Avoid the fragmentation of farmland.
3. Work with Chippewa County to create a conservation subdivision or cluster design ordinance for major subdivisions that preserves land for farming.
4. Explore options such as creating a policy allowing for the buying and selling of development rights to preserve farmland.
5. Support agricultural programs that provide incentives for no till farming, cover crops and other methods that reduce the use of herbicides and pesticides and improve the soil quality and protect water resources.



Goal 2: The Town of Wheaton will support development that recognizes and protects the Town's natural resources.

Objectives:

1. Increase awareness of the Town's natural resources and their importance.
2. Maintain or increase the number of acres of land that support wildlife such as deer, birds, butterflies, and bees.
3. Increase awareness of best management practices that promote water resource and groundwater protection.

Recommendations:

1. Encourage residents to regularly test their private wells for nitrates.
2. Support agricultural programs that provide incentives for no till farming, cover crops and other methods that reduce the use of herbicides and pesticides and improve the soil quality and protect water resources.
3. Encourage new development to minimize the removal of trees, prairies and grasslands and incorporate them into their design.
4. Continue to support regulations that limit development in shorelands, wetlands and floodplains.
5. Create an informational page on the Town's website listing its natural resources and how to protect them.
6. Support intergovernmental cooperation to identify ways to protect the area's natural resources.
7. Create a policy to minimize the use of persistent pesticides on public lands and near public buildings in the Town of Wheaton.
8. Support efforts to remove invasive species in the Town.
9. Consider the creation of a sign acknowledging a resident's or business' use of a best management practice to protect or improve the Town's natural resources.
10. Support the regulation and monitoring of the use of high capacity wells or industries with high water usage to protect the groundwater supply.
11. Support the enforcement of the Town's Ordinance to Improve Outdoor Lighting.

Goal 3: The Town of Wheaton will support the continued documentation and preservation of sites and structures of historical and archeological importance.

Objectives:

1. Reduce the loss of buildings of historical or architectural importance.
2. Increase awareness of historical and archeological sites.

Recommendations:

1. Provide a page on the Town's website to promote local history.
2. Work with the State Historical Society to identify, promote and preserve important archeological sites.



3. Support the work of the Chippewa County Historical Society to document and display local history.

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