

CHAPTER 5

NATURAL, AGRICULTURAL AND CULTURAL RESOURCES

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Chapter 5 - NATURAL, AGRICULTURAL AND CULTURAL RESOURCES

INTRODUCTION

This section provides an inventory of the existing natural, agricultural and cultural resources/features within the Town of Wilson. The inventory provides an understanding of the physical characteristics of the town. Since they are major determinants of future development options, it is important to understand where these resources are located and how they relate to one another to help limit unnecessary public expenditures and to minimize the negative impacts to these valuable environmental/cultural resources as development does occur.

NATURAL RESOURCES

Natural Resources are materials that occur in nature and are essential or useful to humans such as water, air, land, trees, animals, plants, soil, and minerals. Some are replaceable; others are not. Trees and fish are renewable resources and can be replaced. Nonrenewable resources that include groundwater and fossil fuels are not replaceable once they have been consumed. The following text describes the types and locations of these many resources and their suitability for development.

Geology

The Geology that lies beneath the Town of Wilson has important implications for land use. The Dolomite Bedrock provides a pathway for groundwater recharge. The Glacial deposits that lie between the soil and bedrock provide a natural filter for surface water to percolate through before reaching the bedrock. In the town, these layers can range from less than five feet to over a hundred feet thick.

Bedrock

The Dolomite bedrock formation of the town consists of sedimentary deposits. Most formations date back to the Silurian age (approx. 435 – 405 million years ago). There is a small portion next to Lake Michigan that is a bit younger (Traverse Group) and dates to the Devonian age of approximately 417 – 354 Million Years ago (Map 5.1). These sedimentary rocks are solidified marine sediments that makeup the ledge adjacent to Lake Winnebago and slope to the southeast towards Lake Michigan. This “Niagara formation” comprises the bedrock that lies beneath virtually all of the Town of Wilson.

Glacial

Glacial deposits in the area consist of both till and glaciofluvial sediment.

Till, or unstratified drift, is a mixture of unsorted, angular- to round-shaped sediments ranging in size from clay particles to boulders originating directly from glacial ice.

Glaciofluvial deposits consist of course to medium-grained sand and gravel, poorly to well sorted and bedded, with numerous cobbles, boulders and portions of till. They were deposited in ice contact or near-ice positions by glacial melt-water during the last phase of glaciation when glaciers were stagnant or retreating.

The glacial drift in the town consists of clay intermixed with other loam (i.e., sand and silt) deposits. The soils may be less than five feet thick in some areas and up to 200 feet in depth above the bedrock. Map 5.2 illustrates the geology formed during the Pleistocene Epoch (10,000 years ago) of the Quaternary Period within the Cenozoic Era.

The geologic composition (soil depth to bedrock) and the possible implications of development including increased construction costs and the possibility of groundwater contamination should be sufficiently evaluated when planning for development within all areas of the town.

Topography

The topography of the town varies from relatively flat to gently rolling, following the patterns of the glacial geology.

- Map 5.3 illustrates the areas of steep slope (i.e., slope 12 percent or greater) based on the town's soil characteristics. The steep slopes are more susceptible to soil erosion. These areas may require special building and construction considerations such as retaining walls or tiered landscaping. Map 5.4 defines the elevation contours for the town.

Soils

The *Soil Survey of Sheboygan County, Wisconsin* provides information on the suitability and limitations of soils for a variety of natural resource and engineering uses. Listed below are descriptions of the general soil types within the town along with the suitability and limitations of soils for development. The composition and properties of the soils in an area should be evaluated prior to any development taking place.

Soils Description

Soils are grouped into general soil associations that have similar patterns of relief and drainage. These associations typically consist of one or more major soils and some minor soils. The soil types for the Town of Wilson can be divided into two broad categories ranging from poorly drained to well drained:

1. Mosel-Oakville-Hebron - has a subsoil of mainly clay loam to sand and are underlain by medium and fine sand or stratified silt loam;
 2. Kewaunee-Waymor-Manawa - has a subsoil of mainly clay loam to clay and are underlain by loam or silty clay loam glacial till;
- Soils were primarily formed in glacial till and glacial drift and consisting of clays and sandy loams.
 - The soils formed in glacial till are nearly level to moderately steep and range from well to moderately well drained. Soils formed in glacial drift (primarily found along the lakeshore) are nearly level and gently sloping and are somewhat poorly drained.

Soil Limitations

Private Sewage Systems

Private on-site wastewater treatment systems (POWTS) are systems that discharge effluent to groundwater through a subsurface infiltration system. Success of these on-site systems (i.e., drain-fields or mounds) is based on the depth and permeability of the soils where they are installed.

The *Soil Survey of Sheboygan County, Wisconsin*, provides information on the limitations of each type of soil for the usage of these sanitary facilities. Soil ratings of severe, moderate or slight limitations are based on soil properties, site features, and observed performance of the soils.

Severe limitations mean soil properties or site features are so unfavorable or so difficult to overcome that these systems may require a special design that results in a significant increase in construction costs or possibly costly ongoing maintenance.

Moderate limitations mean soil properties or site features that are not favorable for the indicated use and also may require special planning, design, or maintenance to overcome or minimize these limitations.

Slight limitations mean soil properties and site features are generally favorable for the indicated use and limitations are minor and therefore easily overcome.

The revised COMM 83 health and safety code allows new technologies for private sewage systems. The code allows the use of soil absorption systems on sites with at least six inches of suitable native soil. The revised code gives property owners the opportunity and flexibility to meet environmental performance standards with several treatment technologies.

More housing and greater population densities may be a result of the revised COMM 83 code. This, in turn, heightens the need for undertaking land use planning and the drafting of use controls to address the potential impacts on the environment associated with the potential expanded development options.

Basements

The *Soil Survey of Sheboygan County, Wisconsin* provides information on the limitations of each soil for site development including the construction of dwellings with basements. The limitation ratings are identical to those identified in the aforementioned limitations for private sewage systems.

- Most of the severe limitations soils found in the town are wetlands and those locations adjacent to surface water features.

Nonmetallic Mineral Resources

Sand, gravel, and crushed stone are the primary minerals mined in the area. They are needed for constructing the sub-base of roads and serve as the primary components in concrete used for building footings, basement walls, and sidewalks.

- There are several mining sites within and neighboring the town that extract sand gravel and/or crushed stone. In addition, the survey identifies soils that would be the best sources for quality sand, gravel, and crushed stone. These minerals are primarily found in the town near river and stream channels, outwash plains, dunes, and eskers.

Care needs to be taken to ensure that the mining operations do not negatively impact the neighboring properties or other portions of the town. This not only includes noise and odors but adverse affects on groundwater, destruction of critical habitat, and significant wear on local roads.

Nonmetallic Mining Reclamation (NR 135)

Any new mines need to have a permit granted by the Wisconsin Department of Natural Resources (WDNR) and are subject to the requirements of NR 135, which includes a reclamation plan.

- The reclamation plan is a detailed technical document with goals to successfully reclaim the area as well as limit the long-term negative impact to the environment once the mine is abandoned.
- The WDNR defines successful reclamation as “the complete restoration of all areas disturbed by mining activities including aspects of the mine itself, waste disposal areas, buildings, roads and utility corridors.”
- Restoration is defined as “returning of the site to a condition that minimizes erosion and sedimentation, supports productive and diverse plants and animal communities, and allows for the desired post-mining land use.”

Water Resources

Watersheds

The Town of Wilson lies within the Black River, Onion River, and Sheboygan River Watersheds as delineated by the WDNR. These watersheds are part of the Sheboygan Water Management Unit of the Lake Michigan Watershed. Map 5.5 displays these watersheds within the town.

Two of the three watersheds, the Onion and Sheboygan Watersheds, were designated as Priority Watersheds by the Wisconsin Nonpoint Source Water Pollution Abatement Program (NPS Program) in 1980 and 1985 respectively. The program provides financial and technical assistance to landowners and local governments to reduce nonpoint source pollution by addressing land management activities that contribute to urban and rural runoff.

The Onion and Sheboygan Watersheds were designated as Priority Watersheds by the Wisconsin Nonpoint Source Water Pollution Abatement Program in 1980 and 1985 respectively.

It is important to evaluate any new developments and land activities to determine their potential impacts on the watersheds. Nonpoint source activities such as farming, construction, mining, etc. can produce runoff (e.g., sediment, nutrients, pesticides, debris, and toxic chemicals) that enters local waterways and groundwater. Many of these activities may not occur in the town; however, the activities undertaken upstream in neighboring communities can adversely affect the water quality in the area and pose a threat to the environment, economy, and health of the town.

Stormwater

Stormwater refers to rainwater, snowmelt, and other sources of large volumes of water that do not permeate the soil. These waters generally flow over impervious surfaces (e.g., rooftops, driveways, sidewalks, streets and parking lots) of developed areas and from certain agricultural practices into storm sewers, culverts, and open ditches without the benefit of treatment facilities or filtration naturally by soil or vegetation. Stormwater runoff can carry pollution directly into our natural water resources like lakes, rivers, and streams.

Any pollutants carried within the runoff can destroy lake and river ecosystems, contaminate drinking water, and clog streams with sediment increasing the likelihood of flooding.

In October 2002, the state established Runoff Management Administrative Rules to address the uncontrolled runoff from urban and rural land use activities. These administrative rules establish a variety of best management practices, performance standards, regulations, permit issuance, etc. that farms, cities and construction sites are required to follow to reduce polluted runoff.

The following are the eight rules written by the WDNR along with one rule by the Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP):

- Priority Watershed and Priority Lake Program (NR 120)
- Runoff Management (Performance Standards and Prohibitions) (NR 151)
- Model Ordinances for Construction Site Erosion Control and Post-Construction Storm Water Management (NR 152)
- Targeted Runoff Management Grant Program (NR 153)
- Best Management Practices and Cost- Share Conditions (NR 154)
- Urban Nonpoint Source Water Pollution Abatement and Storm Water Management Grant Program (NR 155)
- Storm Water Discharge Permits (NR 216)
- Animal Feeding Operations (NR 243)
- Soil and Water Resource Management Program (ATCP 50)

Groundwater

The Town of Wilson's groundwater reserves are held in the Eastern Dolomite Aquifer located along the Lake Michigan coastline from Door County to the Wisconsin-Illinois border. This aquifer is the most common in the area and the most widely used source of good quality groundwater. Groundwater is also the primary source of water for irrigated agriculture and is very important for industry especially those involved in food processing. Streams, lakes, and wetlands are fed by groundwater; thus fish and other wildlife are as dependent on abundant, clean groundwater as people.

The WDNR has adopted maximum contaminant level (MCL) standards that apply to all public water supplies in the state. The standards regulate concentrations of pollutants in public water supplies (NR 809) and nitrate removal from public drinking water (NR 122).

Under Wisconsin's Groundwater Standards Law (NR 160), state programs for landfills, hazardous wastes, spills, wastewater, septic tanks, salt storage, fertilizer storage, pesticides, and underground storage tanks must comply with the established standards. In addition, Wisconsin Administrative Code chapters NR 140, 141, and 142 regulate groundwater quality, groundwater monitoring, well requirements and water management and conservation.

With aquifer levels declining, increasing demands for water, ongoing implementation of new water quality standards, and the continued high costs of treating drinking water; efforts to protect the town's long-term drinking water supply and quality need to be considered when planning for future growth.

As development in the area increases so does the surface area of impervious surfaces such as roofs and parking lots. It is important to understand that the amount of water that infiltrates to the groundwater depends on such factors as vegetation cover, slope, soil composition, and depth to the water table. Therefore, wise land use decisions, particularly in critical groundwater recharge

areas and areas of shallow soils, could maintain the amount of water being recharged by the aquifers as well as limit contamination. Methods to protect groundwater resources include utilizing local planning and zoning tools, advocating for best management practices, implementing wellhead protection programs, and strictly enforcing regulations on private sewage systems.

Wellhead Protection Planning

Wellhead protection plans can be an effective method of protecting groundwater quality and quantity. Proactively protecting the area's groundwater supply before it becomes contaminated is both wise and cost-effective. Wellhead protection plans manage and protect surface and subsurface land surrounding a well, which is commonly defined as the wellhead protection area (WHPA). WHPAs identify the primary contributing sources of groundwater for the area. It then allows the community to focus management efforts on potential contamination sources and take appropriate step to prevent or mitigate any problems.

Surface Water

The Town of Wilson planning area contains or is bounded by the following water features (Map 5.6):

Lakes

1. Lake Michigan

Rivers/Creeks

1. Black River
2. Onion River
3. Weedens Creek
4. Fisherman's Creek
5. Hartman Creek

The creeks and various unnamed tributaries that drain into Lake Michigan help provide quality habitat for waterfowl and wildlife and the surface waters offer recreational activities such as fishing, boating, and swimming.

Shorelands

Shorelands are areas defined by the following distances from the ordinary high water mark of navigable waters:

- 1,000 feet from a lake, pond or flowage; and
- 300 feet from a river or stream or to the landward side of the flood plain, whichever distance is greater.

There are 5,992 acres of designated shorelands within the town as shown in Map 5.7. These areas are often viewed as valuable environmental resources both in urbanized and rural areas. As a result, the State of Wisconsin requires counties to adopt shoreland/floodplain zoning ordinances to address the problems associated with development in shoreland and floodplain areas.

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The authority to enact and enforce shoreland and other zoning provisions in counties is set forth in Chapter 59.692 of the Wisconsin Statutes and Wisconsin Administrative Code NR 115.

Development within shoreland areas is generally permitted, however specific design techniques must be considered. In more environmentally sensitive locations, any alteration of the shoreland is strictly regulated, and in some cases, not permitted under any circumstances. Refer to Sheboygan County Ordinance Title VIII Chapter 72 Shoreland-Floodplain Ordinance for more information on development regulations within the county.

Coastal Resources



The Lake Michigan coastline offers a variety of natural assets such as sand beaches and wetlands that provide critical and unique habitats for flora and fauna along with cultural resources and recreational resources.

Coastal development can affect the shape and use of the shoreline. Several issues to consider when planning for this area include shoreline erosion, impacts on coastal wetlands, fluctuating lake levels, increases in non-point pollution, adverse affects to recreation, disruption to wildlife habitats, and the alteration to unique historic and archeological resources of the area.

The preservation of coastal resources will go a long way in maintaining/improving community health and safety (clean Drinking water), aesthetics (pristine views) and economic viability (tourism, clean parks and beaches, recreational fishing).

Floodplains

Floodplains are normally defined as those areas, excluding the stream channel, subject to inundation by the 100-year recurrence interval flood event. This event has a one percent chance of occurring in any given year.

- The 679 acres of floodplains within the town are located adjacent to the Black River, Onion River and Weedens Creek. (Map 5.8).

Floodplains, as identified by the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM), provide for storm water retention, groundwater recharge, habitat for various types of waterfowl and wildlife and are considered a valuable recreational resource.

Section 87.30(1) of the Wisconsin Statutes and Wisconsin Administrative Code NR 116 requires counties, cities and villages to adopt floodplain zoning ordinances to address the problems associated with development in floodplain areas. Any development adjacent to or within a designated floodplain should be discouraged, if not strictly prohibited.

Wetlands

According to the WDNR, wetlands are areas where water is at, near, or above the land surface long enough to be capable of supporting aquatic or hydrophilic vegetation. Other common names for wetlands are swamps, bogs, and marshes.

Wetlands serve a variety of functions and roles to include:

- provide scenic open spaces;

- act as natural pollution filters for lakes, streams and drinking water;
- act as groundwater discharge areas to retain floodwaters; and
- provide valuable and irreplaceable habitat for many plants and animals.
- Within the Town of Wilson, there are approximately 1,625 acres of wetlands. The majority of the wetlands are located adjacent to the identified surface water features. Map 5.9 illustrates the WDNR inventoried wetlands greater than two acres.

Because of their importance, there are strict regulations regarding wetlands. Wisconsin Administrative Codes fall under the jurisdiction of the WDNR and mandate that shoreland wetlands be protected in both the rural (NR 115) and urban areas (NR 117) of the state.

Wetlands not in the shoreland zone are protected from development by the federal government through Section 404 of the Clean Water Act and Wisconsin Administrative Code NR 103.

It should be noted that all wetlands, no matter how small, are subject to WDNR and possible federal regulations, if they meet the state definition.

Woodlands

There are approximately 2,247 acres of identified woodlands within the planning area not including the State park. Upland woodlands located in areas of higher ground and lowland woodlands (woodlands within wetlands) are illustrated on Map 5.10. Upland woodlands constitute approximately 1,324 acres and the lowland woodlands cover 932 acres of land.

Woodlands present aesthetic views, provide wildlife habitat, and offer multiple recreational choices. Woodlands also maintain watershed cover, provide shade, serve as a windbreak, help reduce soil erosion, act as a noise barrier, and screen developments.

There are approximately 2,247 acres of identified woodlands within the planning area not including the State park.

Wildlife Habitat

Wildlife habitat can be defined as areas that provide the arrangement of food, water, cover, and space required to meet the biological needs of an animal. Different wildlife species have different requirements, and these requirements vary over the course of a year. Also, an assortment of plants provides fruit and food in different seasons. Maintaining a variety of habitats generally benefits a much desired diverse wildlife. Woodlands, wetlands, floodplains and the water features within the town provide habitat for many species of wildlife. White-tailed deer, turkey, grouse, beaver, muskrat, gray and red squirrel, and chipmunks are some of the more well known species found in the area. Lake Michigan and other surface waters provide habitat for fish. Migratory fowl frequent the surface waters and wetlands during the months of the year that allow for open water.

Threatened and Endangered Species

Many rare, threatened, and endangered species are found within Sheboygan County. Appendix E lists these animals, plants and natural communities in both the aquatic and terrestrial occurrences in Sheboygan County as identified in the Wisconsin DNR Natural Heritage Inventory.

- According to the WDNR, the entire town has experienced threatened and endangered species occurrences with most of these occurrences being aquatic in nature and near Lake Michigan.

Any potential environmental impacts should be discussed before any development occurs in order not to disturb or disrupt habitat for any plant or animal species especially those noted on the threatened or endangered list.

Significant Natural Features

A number of sites located within the town may be considered significant natural features. These areas may be designated as WDNR State Natural Areas, State Wildlife and Fishery Areas, Significant Coastal Wetlands, Land Legacy Places; or be included in the “Natural Areas Inventory,” conducted by the Scientific Areas Preservation Council of the WDNR.

The following text gives a brief description of the Natural Areas that exist in the Town of Wilson, while Map 5.11 illustrates their locations.



Kohler Andrae Park

This area consists of sand dunes, a mixed conifer-hardwood forest which is made up of white and red pine, sugar maple, beech, paper birch and red oak. These sand dunes have been designated as a Land Legacy Place by the DNR. Additionally, Kohler Andrae State Park also contains over 1,200 acres of wetlands which have been identified by the DNR as significant coastal wetlands.

Lake Michigan Pine Hardwoods Dune Forest

White pine dominates this area with red oak, white birch, beech, sugar maple and other dotted throughout. The western side is ash-white cedar swamps and alder thickets.

Onion River Forest

A hardwood forest located in the Northwest Corner of the town that boasts predominately sugar maple, red oak and beech with white oak, basswood white birch and aspen mingled throughout.

Robert Balzer and Ruth Balzer–Schmitt Wilderness Park

Mesic Forest - white pine dominates with red oak red maple sugar maple yellow birch and beech mixed in.

Sheboygan County Memorial Arboretum

A wet lacustrine swamp made up of black ash and American elm with an understory of alder.

Jervig Conservancy

A wetland preservation project along the Black River where it empties into Lake Michigan.

Other smaller natural areas include: **Kleitziem Park, Miller Conservancy, and Sommer Visa Greenspace.**

Environmental Corridors

Environmental corridors are areas in the landscape that contain and connect natural areas, open space, and scenic viewsheds. They often lie along streams, rivers, or other natural features. These corridors protect environmentally sensitive areas by providing linkages in the landscape and potential buffers between natural and/or human communities. They are complex ecosystems that

provide an avenue for wildlife movement, protection of natural resources, and green space buffers for humans. These “lifelines for living” help support human, wildlife, and natural “communities.”

Environmental corridors within the Bay-Lake Regional Planning Commission (BLRPC) region have uniform regulations on the following:

- WDNR wetlands w/50-foot buffer;
- 100-year FEMA floodplains;
- Slopes equal to 12 percent or greater;
- 75-foot lake and river setback; and
- Surface water.

Other features considered part of the environmental corridor definition on an area-by-area basis include:

- designated scientific and natural areas;
 - unique and isolated woodland areas;
 - scenic viewsheds;
 - historic and archaeological sites;
 - unique geology;
 - wetland mitigation sites;
 - isolated wooded areas;
 - unique wildlife habitats; and
 - parks and recreation areas.
- The Town of Wilson contains approximately 2,751 acres of environmental corridors as determined using the BLRPC definition. Map 5.12 illustrates the environmental corridors of the area.

When considering future development, it is important to understand that environmental corridors serve many purposes. They increase the value of natural resource areas - areas of concentrated natural resource activity (“rooms”), such as wetlands, woodlands, prairies, lakes, and other features, become even more functional when linked by environmental corridors (“hallways”). Fish and wildlife populations, native plant distribution, and even the retention of clean water all depend on movement through environmental corridors. For example, wildlife populations isolated in one wooded location can overpopulate, die out, or cause problems for neighbors if there are not adequate corridors to allow the population to move about freely.

In addition to their environmental value, corridors offer social and economic benefits. Environmental corridors can help define a community’s sense of place, or distinctiveness, and provide “services,” such as snow and wind protection, recreational areas, or stormwater detention. They can also provide valuable outdoor educational settings and potential sites for research. Furthermore, corridors may help maintain a community’s aesthetic or historical grounding.

Parks and Open Space

Various natural settings in the town are utilized as recreational sites by the public. Refer to Community Facilities element (Chapter 9) and Map 9.1 of this document for more detailed information of each of the following parks and open space areas.

Town of Wilson

1. Jerving Conservancy
2. Robert & Ruth Balzer – Schmitt Wilderness Park
3. Victor Gruber Memorial Fireman’s Park
4. Jung Bell Tower
5. Sommer Vista Open Space
6. Kaufmann Park
7. Kohler Andrae State Park
8. Mueller Conservancy
9. Landfill site
10. Paradise Valley Parkland
11. Sheboygan Arts Foundation Inc. (Tellen Statues)

AGRICULTURAL RESOURCES

Agriculture has been a major ingredient in shaping Sheboygan County’s heritage for the past 168 years since its inception in 1838. A significant number of working farms still dominate the landscape and help define the county’s rural identity. Sheboygan County farmers own and manage the resources on 195,000 acres of land, or 35.2 percent of all land in the county. These lands include pastures, cropland, woods, and forests.

Climate

The climate of Sheboygan County and Town of Wilson is classified as continental. This climate type is characterized by an extreme disparity between summer and winter temperatures that range from cold, snowy winters and warm summers with periods of hot, humid conditions. According to the Midwestern Regional Climate Center the average annual temperature is 47 degrees with the coldest month being January (17 degrees) and the warmest month July at approximately 70 degrees. The nearby waters of Lake Michigan can have a modifying influence on the town’s climate unlike more inland locations where the cool breezes of the lake have little or no affect.

Over 60 percent of the annual precipitation of 32” falls from April through September with August traditionally being the wettest month. This time period also encompasses the growing season for most crops. Overall, the varied climate is favorable for agricultural purposes and suitable for a number of outdoor activities ranging from biking and camping to snowmobiling and skiing.

Prime Agricultural Lands

Prime farmlands cover approximately 43 percent of the town and are generally located away from waterways and other wet areas.

According to the NRCS, there are three classes of prime farmland identified in the town as shown on Map 5.13:

1. *Prime farmland*: land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and that is available for these uses. Through a combination of factors such as conducive soil properties, ideal growing season, and ample moisture supply, these soils produce annually high yields of crops.
2. *Farmland of statewide importance*: land not identified as prime farmland on a nationwide basis but is important in Wisconsin for the production of various food, feed, fiber, and forage crops.
3. *Prime farmland only where drained*: land where soils have excessive wetness limitations, however can be or are used effectively for agricultural production with installation of a tile drainage system.

The November 2005 Nominal Group exercise identified the preservation of prime farmland as a major issue for the town. (Appendix C). Since agriculture plays an important role in the economic, cultural and social structure of the town and all of Sheboygan County, it will be important to preserve these areas against future unplanned development. Once agricultural land is disturbed or replaced by another land use, it cannot be effectively returned to agricultural production.

Farm Numbers and Types

- According to the United States Department of Agriculture (USDA), there were a total of 1,116 farms in Sheboygan County in 2002. Dairy farms are the primary operations, supported by poultry facilities. Greenhouses, tree farms, nurseries, sod farms, and other horticultural businesses add to the growing diversity of agriculture in the county.
- According to the Program on Agricultural Technology Studies (PATs), Sheboygan County contained 230 dairy farms in 2002. The Town of Wilson accounted for 12 of these farms.
- Approximately 88 percent of the farms in Sheboygan County are owned by individuals or families, another seven percent are owned by family partnerships, and corporations account for slightly more than five percent.
- Sheboygan County is home to approximately 25,300 dairy cattle and a total of 62,000 cattle and calves.

Farm Household Demographics

According to the US Census, fewer than two percent or 1,769 persons of Sheboygan County's total population of 112,646 live on a farm. Two percent (72 residents) of the Town of Wilson's total population of 3,071 lives on a farm. Less than one percent (13 residents) of the town's total labor force of 1,797 is employed in farming, forestry or fishing.

Trends in Agriculture

The 2002 Census of Agriculture indicates that the total number of farms has declined in Sheboygan County from 1,178 in 1997 to 1,116 in 2002. In addition, the average size of a farm in the county in 1997 was 164 acres. By 2002, the average farm size increased to 175 acres.

- The Town of Wilson has experienced a loss of dairy farms going from 51 dairy farms in 1989, to 14 farms in 1997, to 12 farms in 2002.

The reduction in number of farms and increase in average size may be attributed to retirement of farm operators, increasing operational costs or the conversion of traditional dairy farms to other types of farming operations such as those focusing on horticulture.

- Harvested cropland in Sheboygan County increased 7,478 acres or one percent from 1997 to 2002.

The amount of agricultural land sold over a period of time is a good indicator of how much development has taken place. Table 5.1 illustrates 3,085 acres of agricultural land were sold between 2001 and 2004 in Sheboygan County.

- 988 acres or 32 percent of these 3,085 acres was converted to non-agricultural uses.
- 2,097 acres of all acres sold during this four year period continued to be used for agricultural related activities. The average cost per acre continuing as agricultural land during this time span rose over 77 percent.
- The value of each acre diverted from agriculture to non-agriculture use doubled from \$5,056 per acre in 2001 to \$10,119 in 2004.

Table 5.1: Agricultural Land Sales Sheboygan County

Year	Acres Continuing as Agriculture Land	Average Cost per Acre	Acres Diverted from Agriculture Land	Average Cost per Acre	Total Acres Sold
2001	365	\$1,753	57	\$5,056	422
2002	497	\$2,157	250	\$7,928	747
2003	692	\$2,416	386	\$7,123	1,078
2004	543	\$3,116	295	\$10,119	838
Total	2,097	\$2,361	988	\$7,557	3,085

Source: Wisconsin Agricultural Statistical Service - Wisconsin Department of Agriculture, Trade, and Consumer Protection

There needs to be a thorough cost/benefit analysis conducted when converting productive agricultural lands to other uses. For instance, farmlands provide revenues to local governments and require very few services. Conversely, residential, commercial, and industrial land uses may cost communities more to provide services than gained through local property tax increases. This is evident in areas of fast growing and widespread development where road maintenance; water and wastewater treatment facilities, police service, fire protection, etc. will likely increase the overall cost of services throughout the entire community.

Continued planning for areas of concentrated development within the Town of Wilson will not only help keep the cost of services down but will also help preserve the existing valuable farmlands and rural landscape prevalent throughout the town.

Environmental Impacts of Agriculture

Land used for agricultural purposes is dispersed in and amongst the various natural resources that makeup much of Sheboygan County's landscape. In the Town of Wilson, agricultural lands are located adjacent to several water features, wetlands, steep slopes, and other environmentally sensitive areas.

The integration of agriculture within natural resources can increase the risk of pollution to surface and groundwater. Soil erosion from farm fields and the surface runoff of crop nutrients and agricultural chemicals can impact the quality of streams, rivers, lakes and underground aquifers, ultimately impacting drinking water supplies. Rotating crops, livestock management, spreading of manure, fertilizing, and tilling all affect the amount of soil erosion and loss of nutrients. Farm operators are encouraged to work with their local land conservation and UW-Extension staff to identify and implement specific resource conservation practices to better protect the environmental sensitive areas in and around their farms.

Economic Impacts of Agriculture

Agriculture remains an important economic element in Sheboygan County. It includes hundreds of family-owned farms, agriculture related businesses and industries that provide equipment, services and other products farmers need to process, market, and deliver food to consumers. The production, sales, and processing of these farm products generate significant employment, and income opportunities for its residents and increasing tax revenues for the county and communities.

According to the UW-Extension Agriculture Value and Impact Report conducted in 2002, agriculture in Sheboygan County accounts for \$482 million or 12 percent of the county's total income to include wages, salaries, benefits, and profits of farmers and workers in agriculture-related businesses. It is estimated that every dollar of agriculture income generates an additional \$0.73 of county income.

For more detailed information on the economic impact the agriculture industry has on the county and town, please refer to the Economic Development element (Chapter 7) of this document.

Air Quality Issues

According to the U.S. Environmental Protection Agency (EPA), all of Sheboygan County and other adjacent lakeshore counties are identified as “nonattainment” areas, or areas that do not meet the EPA's 8-hour ozone national air quality standard (85 parts per billion).

By law, nonattainment areas may be subject to certain requirements to reduce ozone-forming pollution and requires states to submit plans for reducing the levels of ozone. Several methods to meet the ozone standard may include stricter controls on emissions by industrial sources, transportation emissions, etc.

Designed to protect the public from breathing unsafe air, the EPA's 8-hour ozone standard could have a negative impact on economic development efforts for Sheboygan County and the Town of Wilson. The ozone reducing requirements identified in the state's plan may end up costing potential employers to install pollution reduction equipment or emission-cutting technology rather than allowing them to make investments in expanding their company's operations.

CULTURAL RESOURCES

Cultural resources are typically sites, structures, features and/or objects of some importance to a culture or community for scientific, aesthetic, traditional, educational, religious, archaeological, architectural or historic reasons.

Preserving important aspects of our past gives us a sense of continuity and meaning, plus preservation efforts foster



community pride. Because cultural resources provide an important window to the past, there are many local and statewide efforts underway to preserve and retain culturally significant resources that distinguish each of the state's individual communities. In addition to maintaining a community's distinctive character, cultural resource preservation can lead to tangible economic benefits such as an increase in tourism related businesses and revenues.

Historic and Archeological Sites

The State Historical Society of Wisconsin's Architecture and History Inventory (AHI) is a collection of information on historic buildings, structures, sites, objects, and historic districts throughout Wisconsin. This Inventory is housed at the Wisconsin Historical Society in Madison and is maintained by the Society's Division of Historic Preservation. The AHI is comprised of written text and photographs of each property, which document the property's architecture and history. The list of various historic resources is compiled by individuals who believe they hold historical significance.

The Town of Wilson has 12 structures/sites considered to be of historic significance.

- The Town of Wilson has a number of structures/sites considered to be of historic significance. Several of them date back to the mid-to-late 1800's. The majority of these entries are houses and barns in addition to a school. A complete listing of the historic sites can be found in Appendix F of this document.

Please note that not all these sites are eligible for listing on the historical registry by the State Historical Society of Wisconsin. While every precaution is taken to ensure accuracy of data contained within the inventory, this data is temporally static documentation. Inclusion in the Architecture and History Inventory conveys no special status or advantage; it is merely a record of the property. This inventory may not be sufficient to satisfy official registration requirements of local, state or federal historic preservation statutes. There is a possibility that several structures or sites may not be listed, and some of them may have been altered or completely torn down since the original survey was conducted.

The State of Wisconsin requires any findings of human bones to be reported (*Wisconsin Statute 157.70*), so the State Historical Society can conduct an investigation. Also, land developers trying to obtain state permits from the WDNR or any development involving federal monies, are required to be in compliance with Section 106 of the National Historic Preservation Act and 36 CFR Part 800: Protection of Historic Properties. For further information, please contact the State Historical Society of Wisconsin.

Community Design

Community design (Character) addresses the large-scale lay-out and design of a community, particularly the organization of its buildings and the space around them. An evaluation of community design is often subjective and requires personal judgment. In an effort to remove this subjectivity, the following community design features of Town of Wilson have been inventoried-

Landmarks

Landmarks are important reference points that represent a prominent feature of the landscape and have the ability to distinguish a locality, mark the boundary of a piece of land, or symbolize an important event or turning point in the history of a community. The following landmarks exist within the town:

- “Big Hole” @ Sauk Trail
- Tellen Statues
- Aldrich Chemical
- Kletzien Park
- UW Arboretum
- Church at 6 Corners
- Exit 120
- Fire Station
- Horns RV
- I-43
- United Building Center
- Jerving Conservancy
- Jung Bell Tower
- Kohler/Andrae Park
- Lake Michigan Shoreline
- Town Maintenance Drop-off Site
- Power Plant Smokestacks
- Riverdale Country Club
- Sleep Inn & Suites
- St. George Church
- Town Hall
- Sheboygan County Highway Department -South Shed

Pathways

Pathways are linear features that represent both vehicular and pedestrian movement. Pathways provide connections between places as well as along them. Whether a major arterial, local street, or undefined woodland trail, pathways are hierarchical and represent a degree of usage. The following pathways should be considered important aspects of the town’s character.

Major Pathway: Interstate Highway 43

Secondary Pathways: County Highways KK, V, OK, A, and EE

Minor Pathways:

- Wilson-Lima Road
- Stahl Road
- Frontage Road
- Evergreen Drive

- S. 18th Street
- Lake Aire Drive
- Terry Andrae Avenue
- Sauk Trail – Old 141

Edges

Like pathways, edges are linear. Edges are important organizing elements that represent and distinguish boundaries that can be soft or hard, real or perceived. They become increasingly important as a community grows. These edges do not necessarily coincide with jurisdictional boundaries.

- Lake Michigan shoreline
- City of Sheboygan
- Village of Oostburg
- Village of Kohler
- Town of Lima
- Town of Holland

Districts

Districts encompass areas of commonality. These areas represent buildings and spaces where clearly defined and separate types of activities take place.

- Local Technical College and School Districts
- Black River Area
- Aldrich Chemical
- Exit 120

Building scale, building location, landscaping, signage, lighting, driveway controls, and architectural style need to be considered for consistency within this area to promote a specific community character.

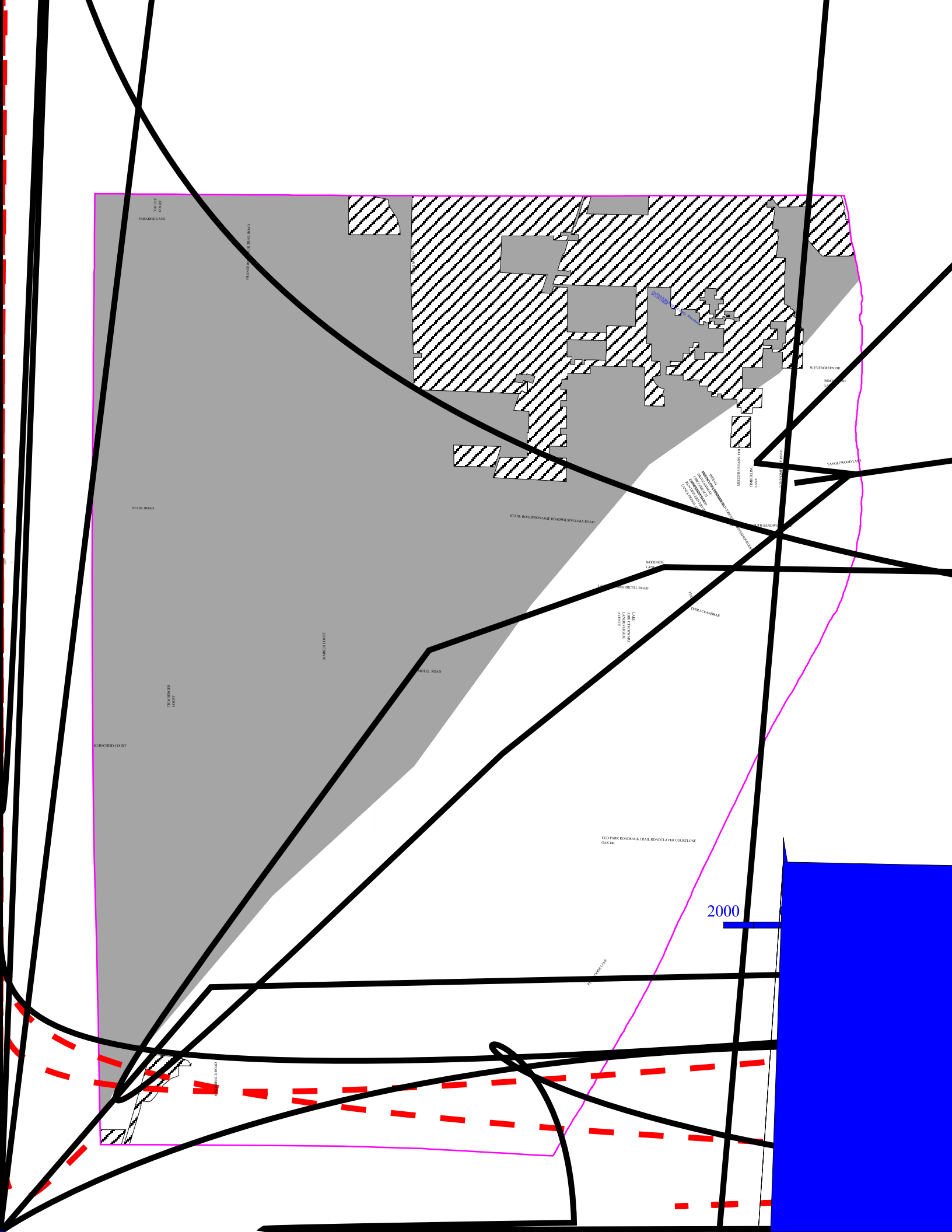
Nodes

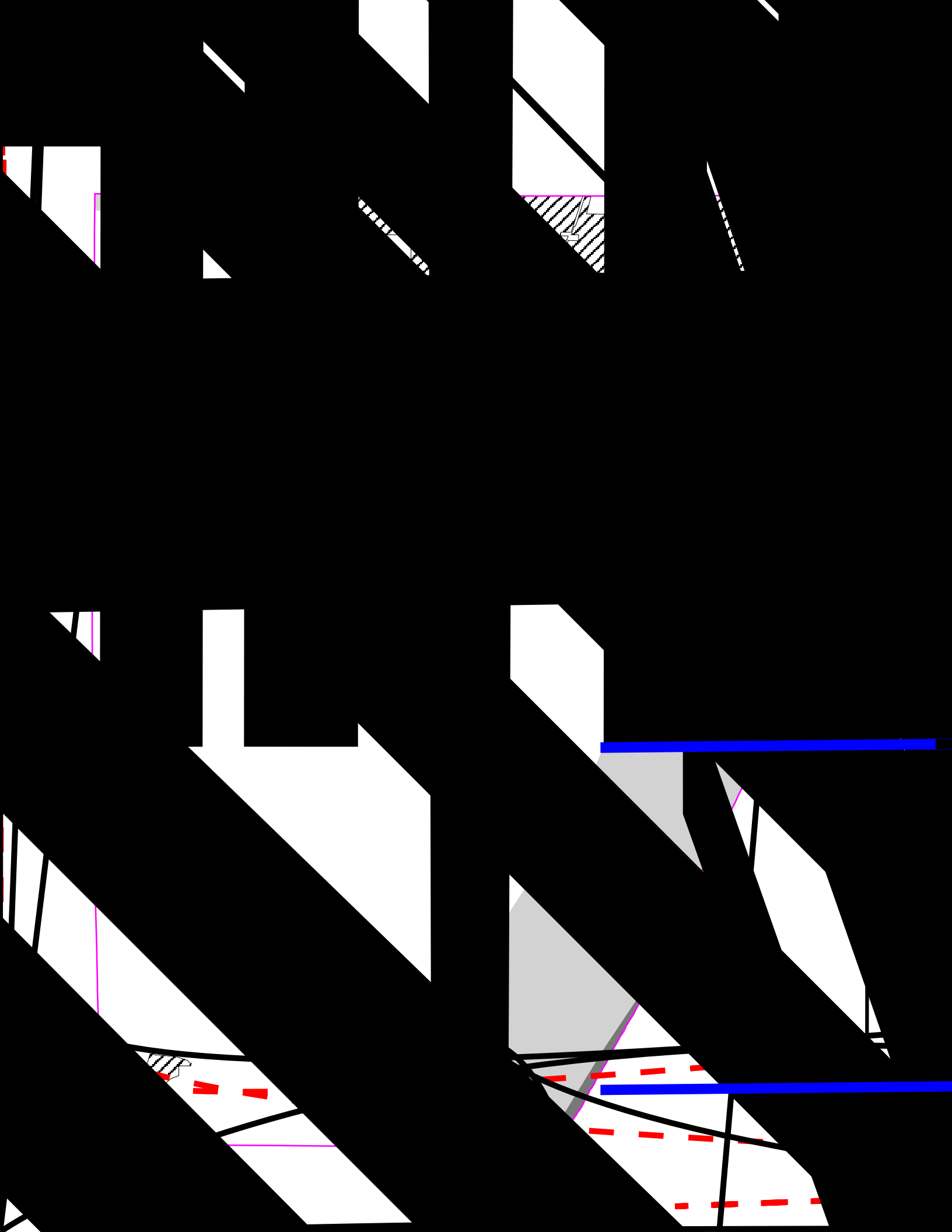
Nodes are specific points of recognition. They are destinations and very often represent the core or center of a district. In addition, nodes are closely associated with pathways as they provide access to and from districts.

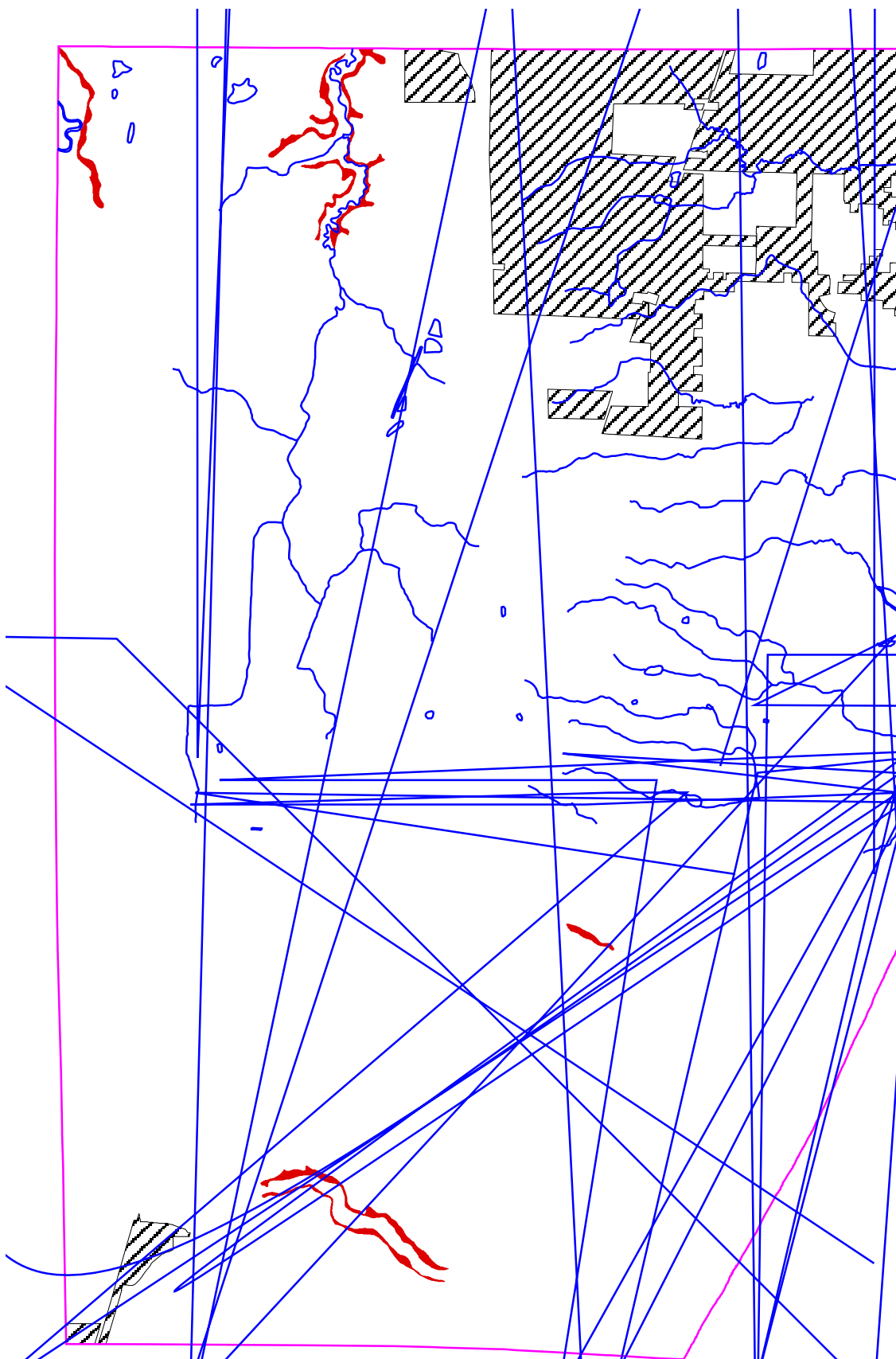
- Cemeteries
- Aldrich Chemical Area
- Lakeshore properties
- I-43 Corridor
- Black River Area
- Agricultural Area

- Kohler Andrae State Park

Special consideration to enhancing existing nodes includes providing additional signage or lighting, installing pedestrian furniture or other streetscape ornaments or informational features such as kiosks or historical information plaques.





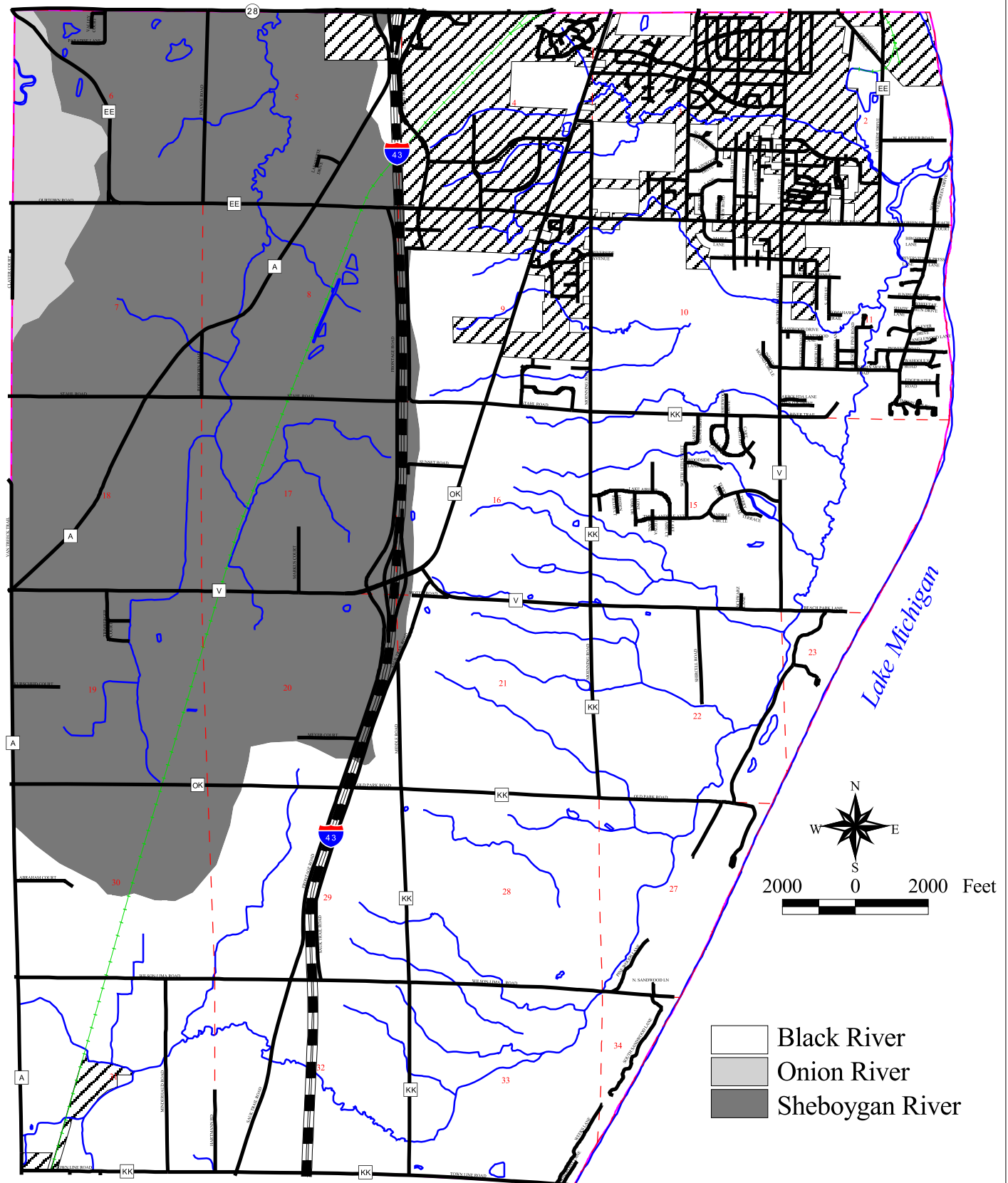


Watersheds

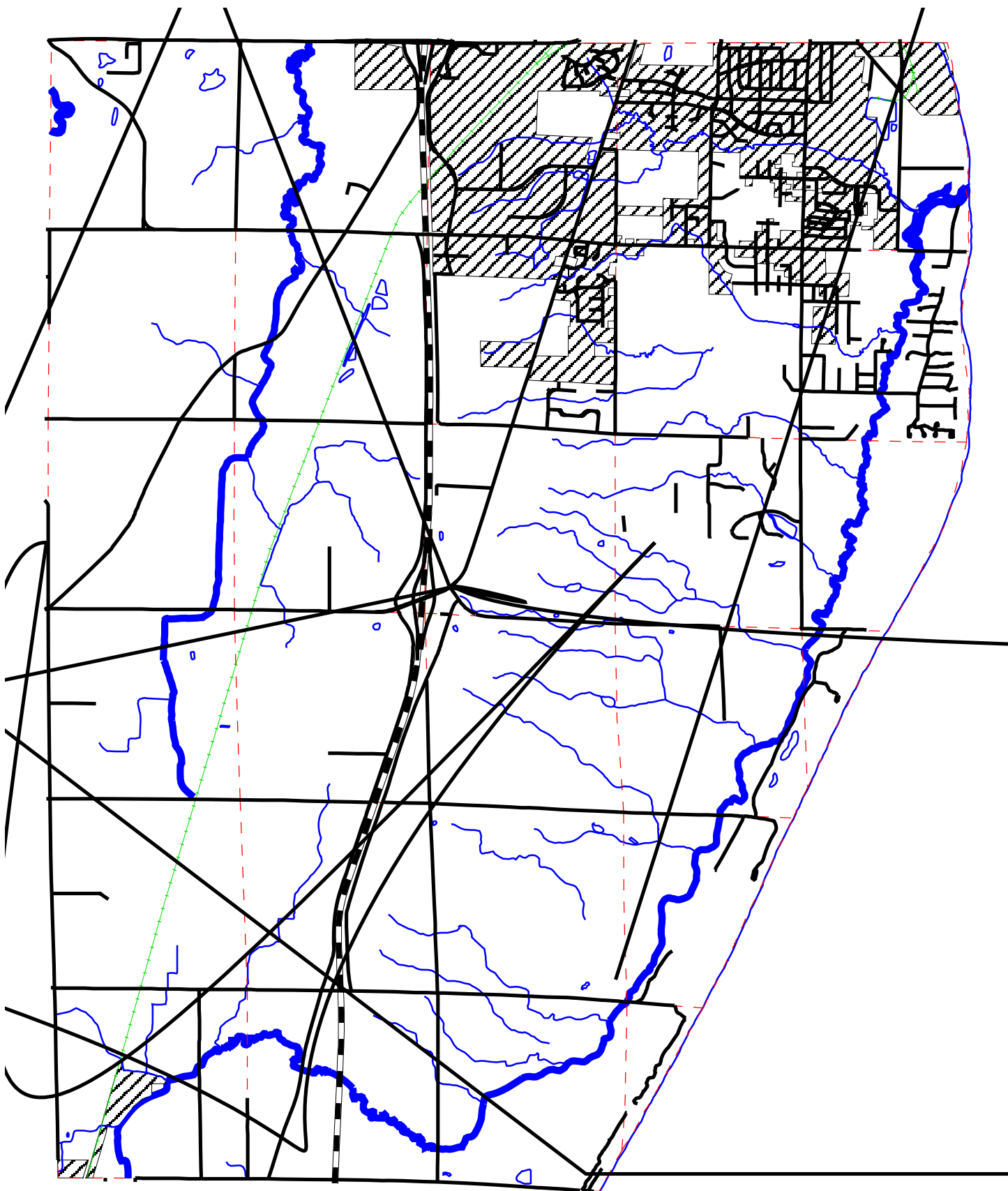
Town of Wilson

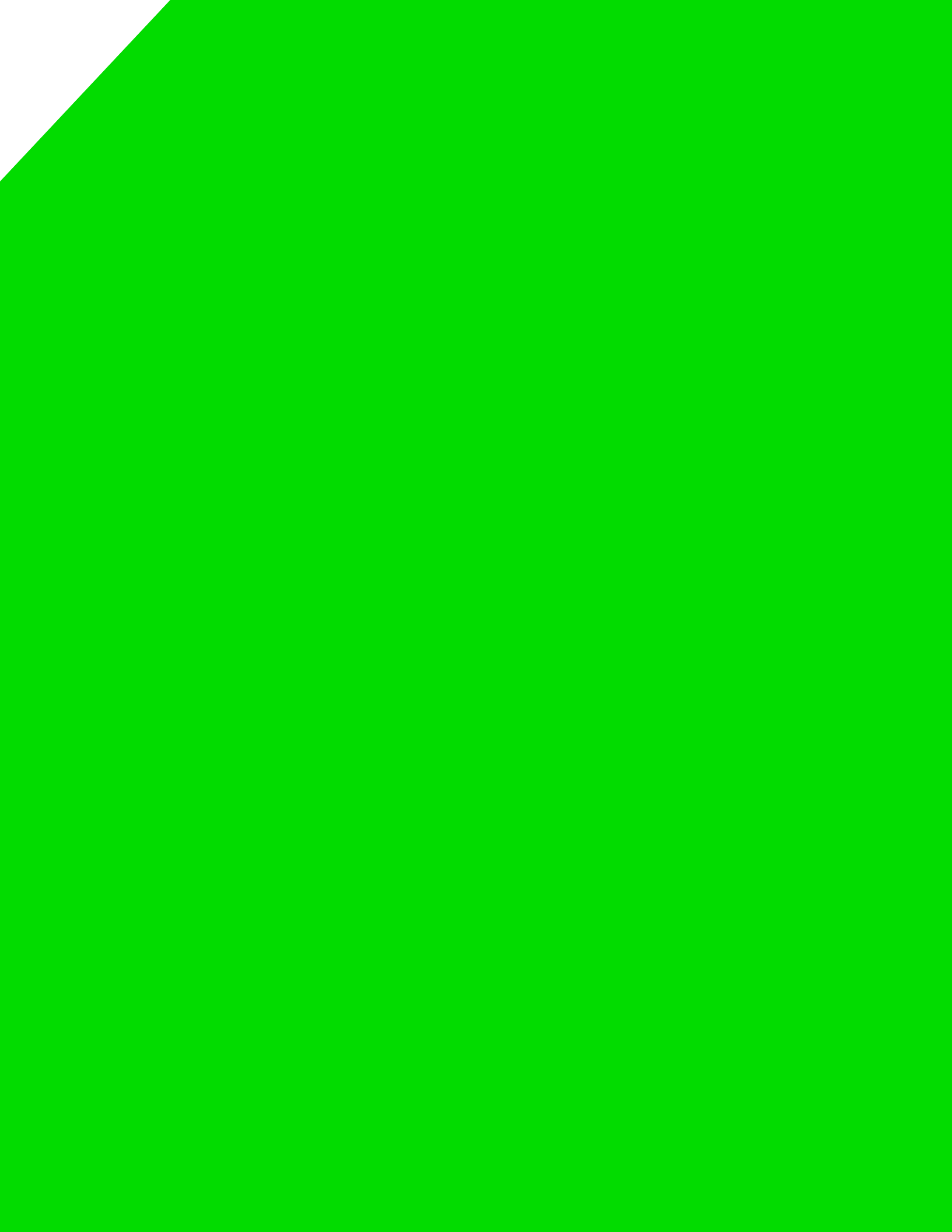
Sheboygan County, Wisconsin

Map 5.5



Source: WDNR; Town of Wilson; Sheboygan County; Bay-Lake Regional Planning Commission, 2007.



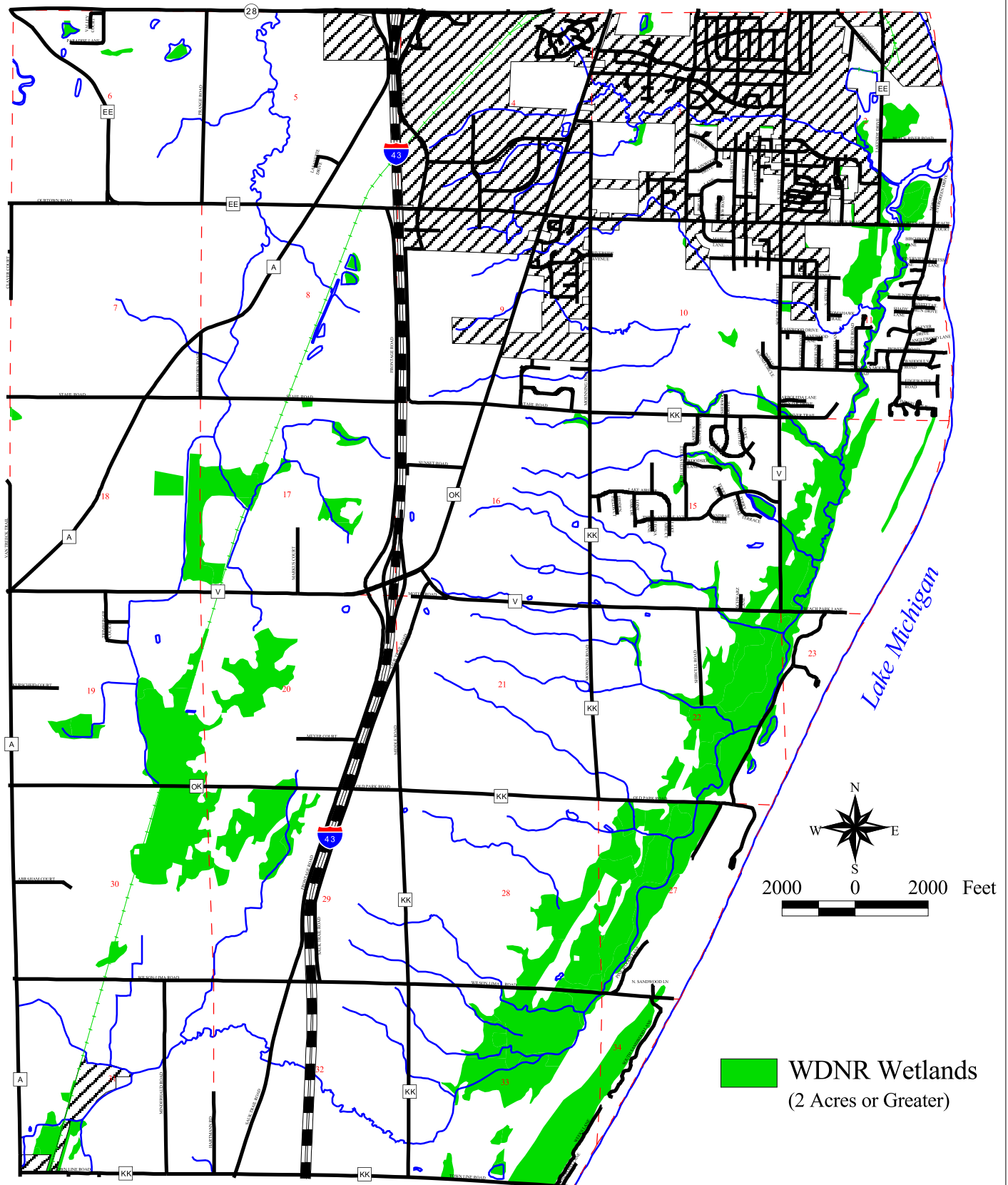


Wetlands

Town of Wilson

Sheboygan County, Wisconsin

Map 5.9



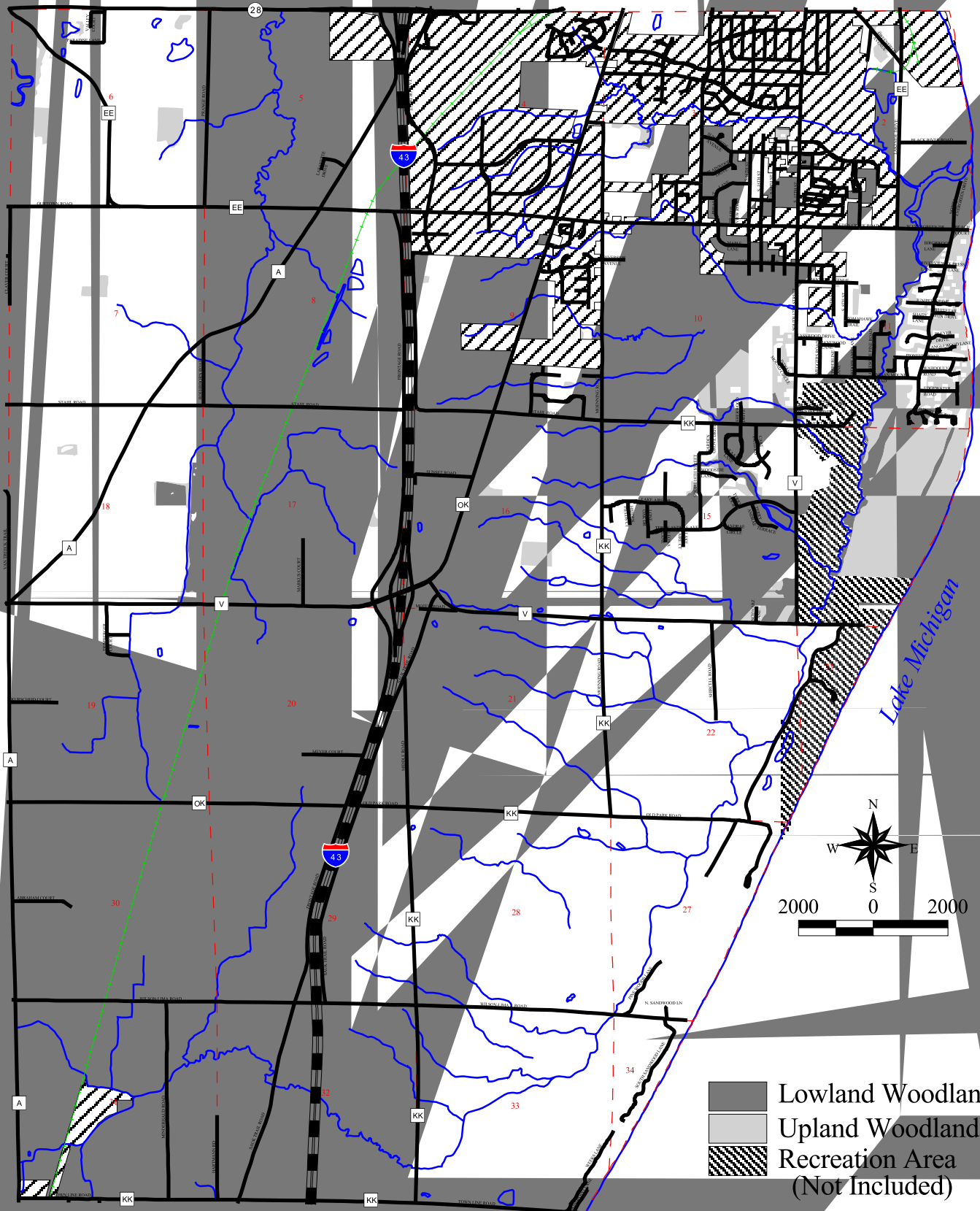
Source: WDNR; Town of Wilson; Sheboygan County; Bay-Lake Regional Planning Commission, 2007.

Woodlands

Town of Wilson

Sheboygan County, Wisconsin

Map 5.10



Source: Town of Wilson; Sheboygan County; Bay-Lake Regional Planning Commission, 2007.

