

CHAPTER 7

Natural, Cultural, and Agricultural Resources

In dynamic communities like the Village of Ashwaubenon, planning often focuses on such issues as land use, transportation, and infrastructure. Issues pertaining to natural, cultural, and agricultural resources tend to receive less attention, and sometimes cohesive and consistent goals and policies regarding these features are lacking in a growing community's plan. However, these resources are critical to the long-term health, vitality, and sustainability of every community. Since these resources also help define a community and strongly affect its quality of life, they must be examined as a part of the planning process.

Because of the vital functions performed by natural, cultural, and agricultural resource features, unplanned urban development into these areas is often inappropriate and should be discouraged. The incompatibility of urban development within natural resource areas, for instance, can be evidenced by the widespread, serious, and costly problems such as failing foundations and structures, wet basements, excessive operation of sump pumps, excessive clear water infiltration into sanitary sewers, and poor stormwater drainage.

Significant natural features within the Village include those associated with the Fox River, Dutchmans Creek, and Ashwaubenon Creek and their many tributaries. In order for the Village to sustain these features that make Ashwaubenon desirable to both new and existing residents alike, it must strike a balance between development and the natural environment. This chapter will examine ways to build upon these resources to establish and promote a community identity, while at the same time preserving the land and character that the residents enjoy.



Inventory and Analysis

This section of the Village of Ashwaubenon Comprehensive Plan identifies the natural, cultural, and agricultural resources within the Village, notes current and future issues associated with each resource, and proposes actions and programs that the Village should undertake to address those issues.

Soils

Soil is one of the major building blocks of the environment. It is the interface between what lies above the ground and what lies underneath. The relationship between soil and agriculture is obvious. However, the relationships between soil and other land uses, while almost as important, are often less apparent. In most places little attention is generally given to soils in regard to the location and type of future development. Among the reasons for this is that modern engineering technology can typically overcome most problems associated with soils; however, the financial and environmental costs associated with overcoming certain soil limitations can be prohibitive.

According to the Soil Survey of Brown County, the dominant soil types in Ashwaubenon include Kewaunee Silt Loam (2-6 percent slopes) and Oshkosh Silt Loams (2-6 percent slopes). Both soils are generally well-drained and do not create issues for development. However, there are relatively large areas of somewhat poorly drained soils, including Alluvial Lands along the Dutchmans Creek tributaries, and Manawa Silty Clay Loam (1-3 percent

slopes in areas southeast of Lambeau Field, I-41/Waube Lane Interchange, and I-41/Lombardi Avenue Interchange. Manawa Silty Loam Soils are generally very deep, somewhat poorly drained soils formed in clayey till, while alluvial soils are deposited by surface waters and found along streams, rivers, and in floodplains. Manawa Silty Clay Loams may be indicative of a higher groundwater level in these areas.

Agricultural Lands

Active agricultural lands within the Village of Ashwaubenon account for only 383 acres or 4.65 percent of the land within the Village. The largest contiguous areas of agricultural lands remaining in the Village are located in the far southwestern corner of the Village, northeast of the Packerland Drive (CTH EB)/Grant Street (CTH EE) intersection. Other smaller agricultural areas include individual properties along West Main Avenue (CTH GF) and STH 172 near the airport. Considering the Village of Ashwaubenon is almost completely developed, it can be reasonably expected that the remaining agricultural lands in the Village will likely be developed over the twenty-year timeframe of this comprehensive plan.



Surface Waters

Within the State of Wisconsin, waterways are generally governed as a component of the State's Public Trust Doctrine, as described in Article IX Section 1 of the Wisconsin Constitution and interpreted over time by Wisconsin Courts and the State Attorney General's office. According to the Wisconsin Department of Natural Resources (WDNR), the public trust doctrine declares that all navigable waters are "common highways and forever free" and are held in trust by the WDNR for the public¹. As a result of subsequent citizen action and court decisions, the public interest, once primarily interpreted to protect public rights to transportation on navigable waters, has been broadened to include protected public rights to water quality and quantity, recreational activities, and scenic beauty².

Wisconsin's Public Trust Doctrine requires the state to intervene to protect public rights in the commercial or recreational use of navigable waters. The WDNR, as the state agency charged with this responsibility, may do so through permitting requirements for water projects, through court action to stop nuisances in navigable waters, and through statutes authorizing local shoreland zoning ordinances that limit development along navigable waterways. The court has ruled WDNR staff, when they review projects that could impact Wisconsin lakes and rivers, must consider the cumulative impacts of individual projects in their decisions. In the 1966 Wisconsin Supreme Court Case, *Hixon v. PSC*, the justices wrote in their opinion the following: "A little fill here and there may seem to be nothing to become excited about. But one fill, though comparatively inconsequential, may lead to another, and another, and before long a great body may be eaten away until it may no longer exist. Our navigable waters are a precious natural heritage, once gone, they disappear forever."³

¹


https://dnr.wisconsin.gov/topic/Waterways/about_us/whyRegulate.html#:~:text=The%20Public%20Trust%20Doctrine%20protects,trapping%20and%20swimming%20in%20waterways.

² Quick, John. 1994. *The Public Trust Doctrine in Wisconsin*. *Wisconsin Environmental Law Journal*, Vol. 1, No. 1.

³ Quick, John. 1994. *The Public Trust Doctrine in Wisconsin*. *Wisconsin Environmental Law Journal*, Vol. 1, No. 1.

Figure 7-1

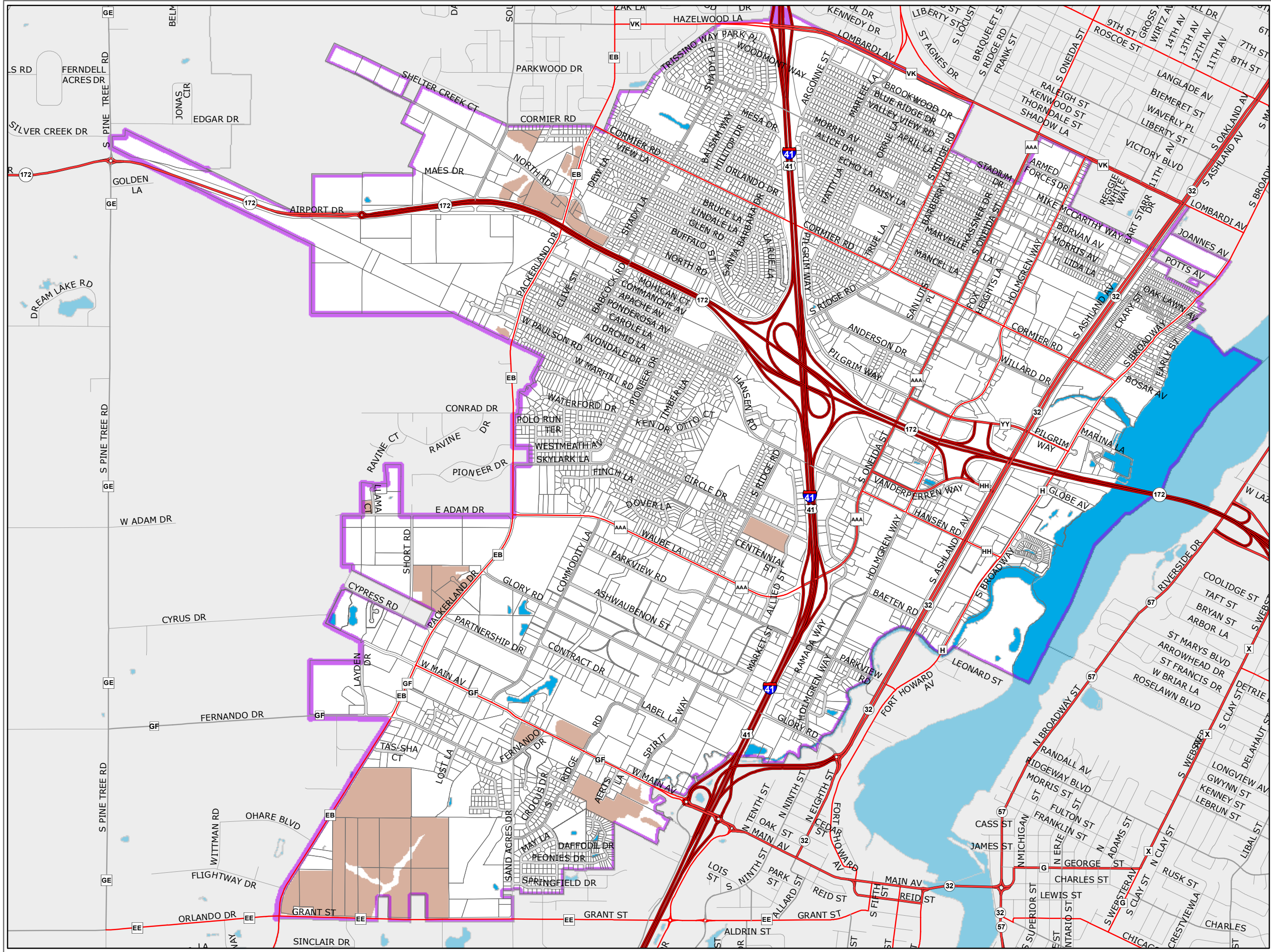
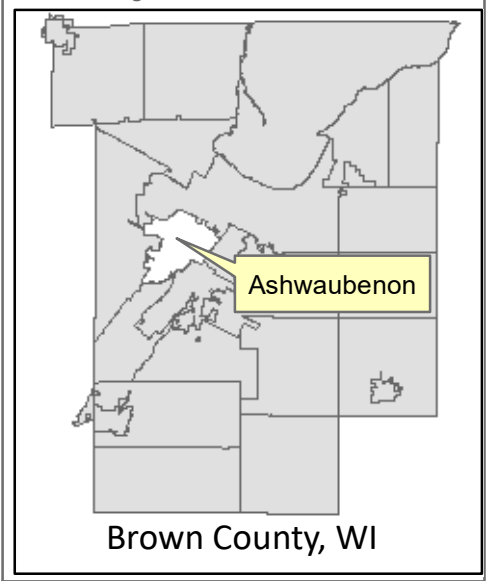
2023 Agricultural Lands

 Agricultural Lands



0 550 1,100 2,200 3,300 4,400 Feet

Map Prepared: 11/2023 AMS
Source: Village of Ashwaubenon



Surface water is one of the most important natural resources available in a community. Lakes, rivers, and streams offer enjoyment, peace, and solitude. Surface waters provide recreational and tourism opportunities to anglers, boaters, hunters, water skiers, swimmers, sailors, and casual observers alike. Additionally, surface waters provide an end source for drainage after heavy rains, provide habitat for countless plants, fish, and animals, are a source of drinking water for many communities, and are a source of process water for industry and agriculture. Lands immediately adjacent to such waters have an abundance of cultural and archeological significance because they were often the location of Native American and early European settlements. For all these reasons and more, surface water is typically the most important natural resource a community contains.



Because of this importance, numerous federal, state, and local laws and regulations have been created to protect surface waters. Such laws range from the commerce clause of the United States Constitution to county shoreland and floodplain zoning regulations. The most heavily regulated waters are those that are determined to be natural and “navigable”. All lakes, rivers, flowages, ponds, and streams, no matter how small, should be assumed to be navigable until determined otherwise by the Wisconsin Department of Natural Resources (WDNR). According to the WDNR, “*Navigable waterways are defined in Wisconsin law as a waterway that has defined bed and banks, carries enough water to float a canoe on a recurring basis, and needs only to be navigable during spring runoff to be considered navigable.*”⁴ The online [WDNR Surface Water Data Viewer](#) includes a layer that identifies waterways that have a formal navigability determination. Absent a formal navigability determination, waterways should be assumed to be navigable until determined otherwise by the WDNR.

The Village of Ashwaubenon contains three significant areas of surface water, including the Fox River, Dutchmans Creek, and Ashwaubenon Creek. In addition to the named river/creeks, there are several unnamed tributaries to both creeks that extend throughout the Village.

- Fox River – flows south to north along the eastern boundary of the Village. Ashwaubenon’s Fox Riverfront is very developed with a mixture of recreational, industrial, and residential development. The Fox River has experienced a remarkable turnaround following the enactment of the Clean Water Act and subsequent multi-year clean-up of polychlorinated biphenyls (PCBs). The Fox River is now a well-known walleye fishery in spring and muskellunge fishery in late fall, bringing in thousands of anglers every year. However, untreated nonpoint source stormwater runoff from developed areas,



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https://dnr.wisconsin.gov/topic/Waterways/about_us/whyRegulate.html#:~:text=The%20Public%20Trust%20Doctrine%20protects,trapping%20and%20swimming%20in%20waterways.

active construction sites, and agricultural runoff outside the urbanized area still severely impacts the Fox River's surface water quality, which is why the Fox River is still considered to be impaired under the federal Clean Water Act standards.

- Dutchmans Creek – generally flows west to east through the Village from its headwaters in rural Outagamie County, near the community of Freedom. Of the two main tributaries to Dutchmans Creek, one flows west to east through the residential area just north of STH 172, and the second flows south to north from the Town of Lawrence and through the industrial park to its confluence near Hansen Road. According to the WDNR Surface Water Data Viewer, Dutchmans Creek typically dries up during the summer and is generally considered to have poor aquatic habitat. Dutchmans Creek is classified as an impaired water as not meeting the standards of the federal Clean Water Act due to poor habitat and very low dissolved oxygen levels. The Village is partnering with the WDNR to improve the aquatic and shoreline habitat of Dutchmans Creek near the National Railroad Museum.
- Ashwaubenon Creek – generally flows south to north from its headwaters in rural Outagamie County and continues along Ashwaubenon's southeastern municipal boundary with the City of De Pere and joins the Fox River at Ashwaubomay Memorial Park. Similar to Dutchmans Creek, the WDNR Surface Water Data Viewer indicates that Ashwaubenon Creek is impaired under the federal Clean Water Act due to upstream agricultural runoff and low dissolved oxygen levels. Low or no upstream flow during the summer months also limits aquatic habitat opportunities. The Village has partnered with the WDNR and US Fish and Wildlife Service to improve Ashwaubenon Creek near Ashwaubomay Park with the addition of fish cribs, bird nesting platforms, invasive exotic plant removal, and aquatic habitat restoration.

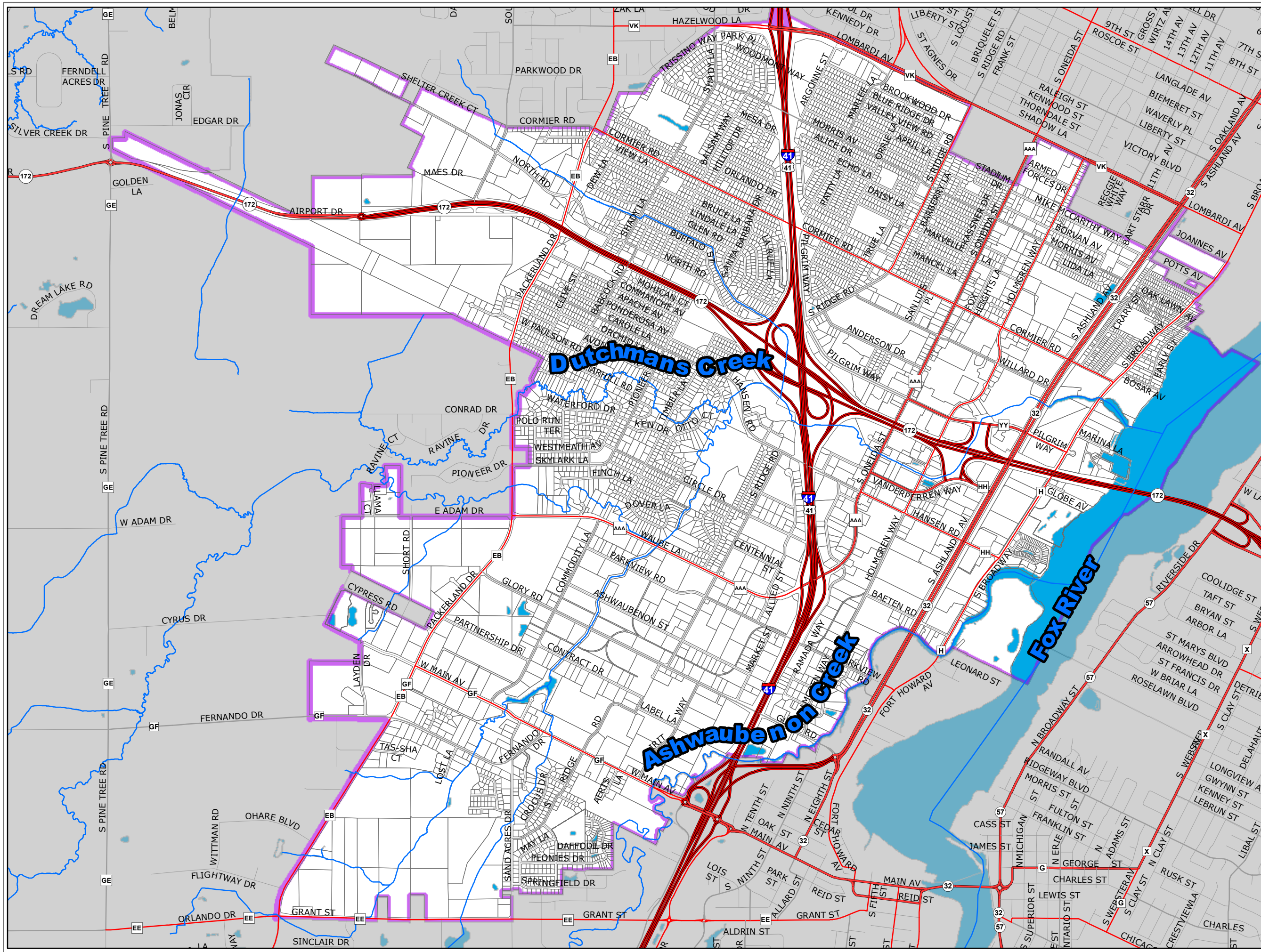


Although the Village's smaller tributaries to Dutchmans and Ashwaubenon Creeks are generally considered intermittent, or ephemeral, waterways, they provide for the infiltration of surface water into groundwater reservoirs and provide habitat for many plants and small animals. Intermittent waterways and wetlands are also where most nutrients and many contaminants enter the waters.

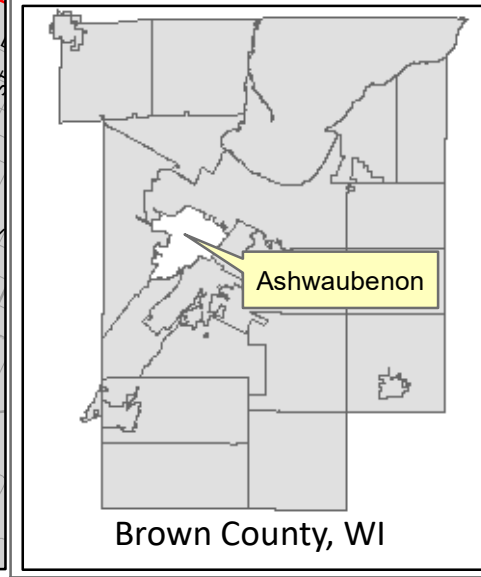
Sheet flow, which is simply water that flows across the land surface after a rainfall, can also be considered a surface water resource, and how it is managed is very important. As water flows across the surface of the land, it picks up nutrients and contaminants, and these dissolved substances are then carried into larger surface water bodies and into groundwater. As a result, anything applied to the land's surface eventually enters surface waters and, over time, groundwater.

Figure 7-2

Surface Water Features



Map Prepared: 1/2024 AMS
Source: Village of Ashwaubenon



Vegetative buffers along waterways can serve to help filter out sediments, pollutants, and nutrients prior to sheet flow entering the waterway. Studies have indicated that vegetative buffers of varying width can remove up from 60 to 90 percent of sediments⁵, as well as significant levels of nitrogen and phosphorus which promote harmful algae growth and deplete dissolved oxygen. Vegetative buffers also serve as shade for waterways which help keep the water cooler, thereby maintaining dissolved oxygen levels necessary for aquatic life, and serve as critical microhabitats for butterflies, songbirds, reptiles, and amphibians.

In order to improve the quality of the water in Ashwaubenon's waterways, and in particular Dutchmans Creek and Ashwaubenon Creek, the Village should avoid cutting vegetation (unless it is dead, diseased, or is impeding the flow of water) along these waterways on Village property. A public educational component explaining the benefits of maintaining native vegetation in these areas should also be developed in order to inform Village residents that may live along these waterways. The Village's surface water features are depicted in Figure 7-2.

Floodplains

Floodplains are natural extensions of waterways. All surface waters possess them, but the size of the floodplain can vary greatly, and it may or may not be mapped. Floodplains store floodwaters, reduce flood peaks and velocities, and reduce sedimentation. They also provide critical habitat for wildlife and serve as filters for pollution. Floodplains generally consist of two parts – the floodway and flood fringe. The floodway is the area of a river or stream, which during a flood, typically contains moving water and accordingly has the most restrictions for development. The flood fringe is the area outside the floodway where floodwaters may rise, but typically serve as storage areas and do not contain fast moving water. Development, including fill, may be permitted within the flood fringe; however, strict engineering and design requirements must be met in accordance with the Village's Floodplain Ordinance (Chapter 14) prior to any construction activity, including cutting, filling, or grading. It is important to note that all waterways have a floodplain and are subject to flood events, even though it may not be mapped.



Figure 7-3 presents a basic diagram of a floodplain and identifies its constituent parts, including both the floodway and flood fringe, and Figure 7-4 depicts the mapped 100-year floodplains for the Village of Ashwaubenon.

There are several threats to floodplains and the resource values that they represent:

- **Filling**, which might diminish the flood storage capacity of the floodplain. This could have the effect of raising the flood elevation or increasing flow velocities to the detriment of upstream or downstream properties.
- **Grading**, which can degrade the resource functions of floodplains, such as filtering pollutants or providing habitat.
- **Impediments**, which include encroachment of buildings or undersized culverts, vegetation, and bridge openings. These manmade and natural impediments affect the size and proper functioning of floodplains and pose potential hazards to adjacent residents and passersby.
- **Impervious surfaces**, which can increase the velocity of the flood flows, increase the number of

⁵ Daniels, R.B. and J.W. Gilliam. 1996. Sediment and chemical load reduction by grass and riparian filters. *Soil Science Society of America Journal* 60:246-251.

pollutants, reduce the amount of natural wildlife habitat, and limit the amount of infiltration of stormwater into the ground.

Like surface waters, the importance of floodplains is also recognized and regulated by federal, state, county, and local governments. The State of Wisconsin mandates floodplain zoning for all communities under Wisconsin Administrative Code NR 116. These minimum standards must be implemented by local municipalities in order to meet eligibility requirements for their residents and businesses to qualify for federal flood insurance.

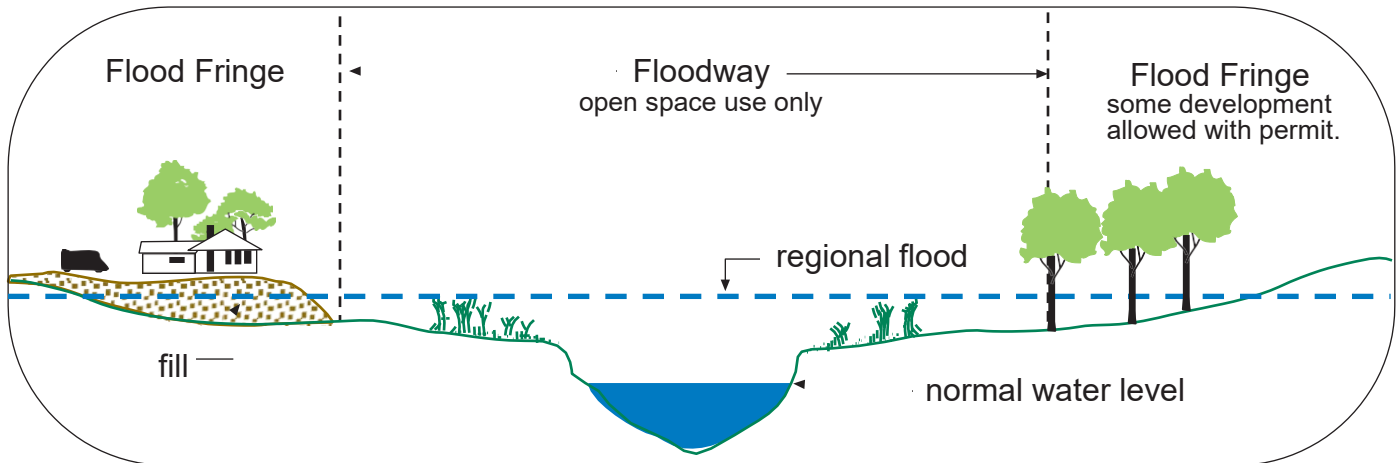
For regulatory, insurance, and planning purposes, the 100-year recurrence interval flood hazard area (also referred to as the regional flood) is most often used. This is the land that is estimated to have a one percent chance of being flooded in any given year based upon historic trends. The Federal Emergency Management Agency (FEMA) maintains maps depicting the floodways and floodplains for most major rivers and streams across the United States. FEMA floodplain maps were updated for all of Brown County, including the Village of Ashwaubenon in 2009 and to a more limited area along the Fox River in 2023. The 2009 updated maps showed large portions of the Village along S. Oneida Street, Vanderperren Way, and Hansen Road that were previously outside of the floodplain as now being within the floodplain. Many of the structures within the 2009 identified floodplain are now considered to be legal, nonconforming structures under the Village's Floodplain Ordinance, and as such have restrictions on improvements that may be made to the properties. As indicated in the red cross-hatch areas in Figure 7-4, some property owners have performed additional site-specific surveying and engineering to determine if their property is truly in or out of the floodplain. Where these studies have taken place, Letters of Map Revision (LOMR) have been issued by FEMA to clarify the floodplain status of the property.

Within Ashwaubenon the primary floodfringe/floodway areas are associated with the Fox River, Dutchmans Creek (and its tributaries), and Ashwaubenon Creek. As both the Fox River and Ashwaubenon Creek are generally contained within its shoreline and adjacent slopes, neither has a dramatic impact on development in the Village. However, Dutchmans Creek and its tributaries generally traverse areas of the Village with less elevation and therefore, the floodplain spreads out. This is specifically the case in the area of S. Oneida Street, Hansen Road, Vanderperren Way, and Holmgren Way. This area developed before the 2009 floodplains were updated and, prior to 2009, was not considered to be within the 100-year floodplain. The 2009 floodplain mapping utilized improved techniques and found many of these buildings and lands to now be within the floodplain, and subject to floodplain zoning rules. Additionally, areas of new development in the far southwestern part of the Village are also subject to floodplain zoning due to the two tributaries to Dutchmans Creek that extend across the area.

Ashwaubenon regulates floodplains within its municipal boundaries through its Floodplain Zoning ordinance as specified in Chapter 14 of the Ashwaubenon Municipal Code. The floodplain regulations, last updated in 2023, identify permitted and prohibited uses, allowable accessory uses, and floodproofing standards for development activity and occupied structures when located within the floodfringe district. By virtue of the Village of Ashwaubenon having a floodplain zoning ordinance that meets Wisconsin Department of Natural Resources and FEMA standards, Ashwaubenon residents are eligible to purchase flood insurance through the National Flood Insurance Program.

Figure 7-3

Floodplain Zoning



Definitions

Floodplain - That land which has been or may be covered by floodwater during the regional flood. The floodplain includes the floodway and flood fringe areas.

Floodway - The channel of a river or stream and those portions of the floodplain adjoining the channel required to carry the regional flood discharge. The floodway is the most dangerous of the floodplain. It is associated with moving water.

Flood Fringe - The portion of the floodplain outside of the floodway, which is covered by floodwater during the regional flood. It is associated with standing water rather than flowing water.



Regional Flood - That area where large floods are known to have occurred in Wisconsin, or which may be expected to occur, at a frequency of one percent during any given year. Also referred to as the 100-year floodplain or 100-year recurrence interval flood hazard area.

Source: Wisconsin Department of Natural Resources


Figure 7-4

Floodplains

Flood Hazard Areas

-  Flood Fringe
-  Floodway

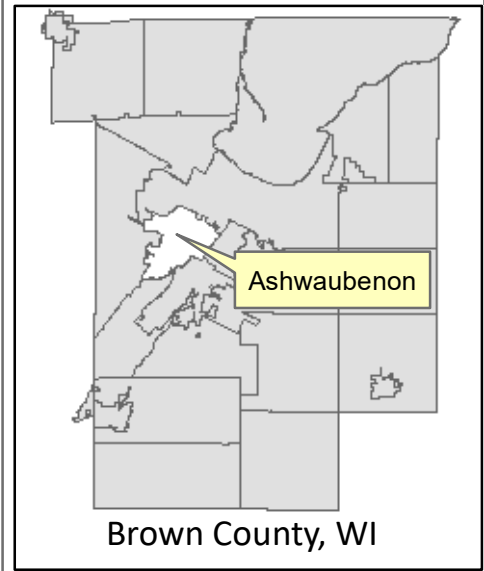
Approved Flood Revisions

-  Letter of Map Revision

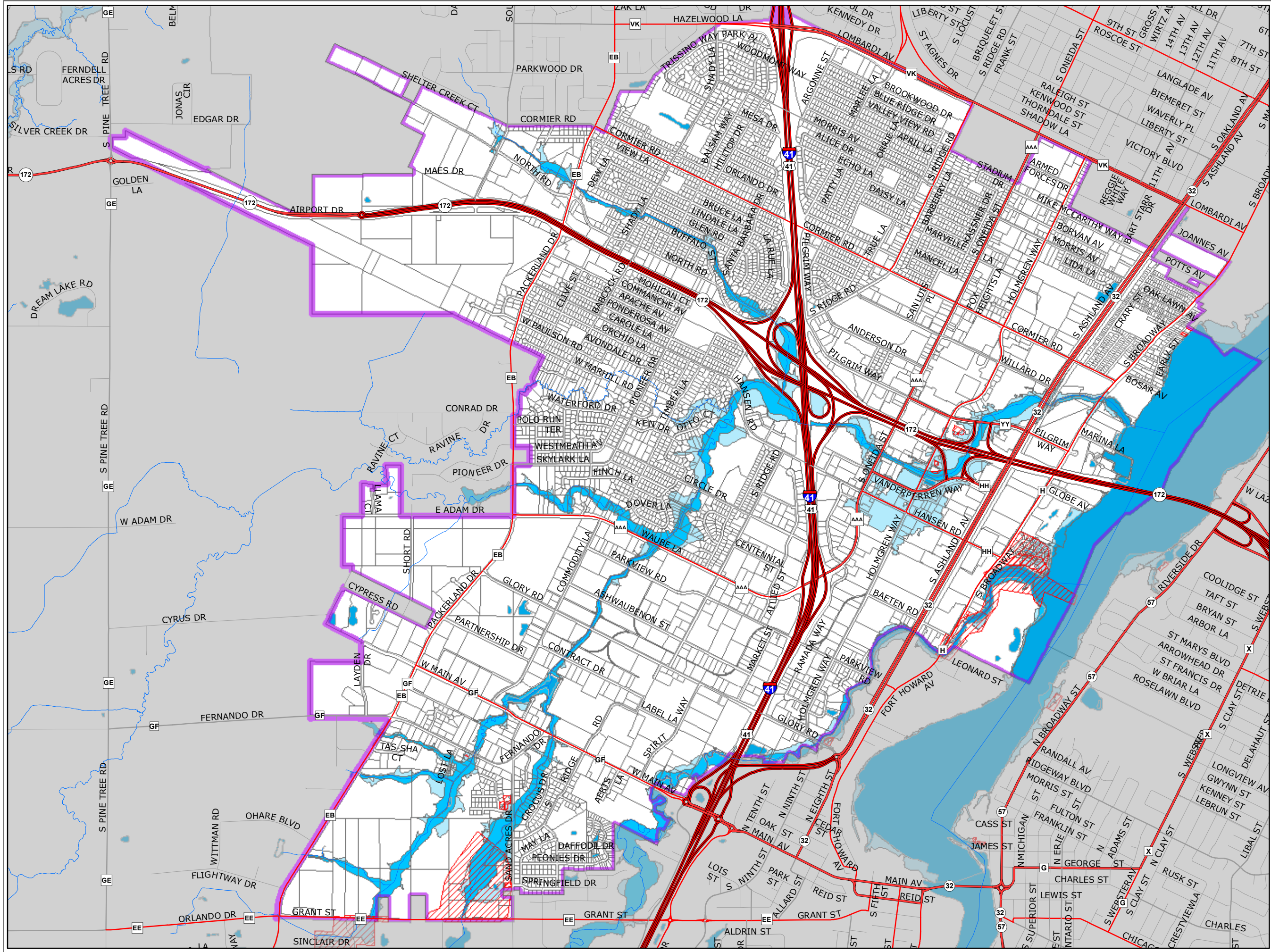


0 550 1,100 2,200 3,300 4,400 Feet

Map Prepared: 1/2024 AMS
Source: FEMA, Village of Ashwaubenon



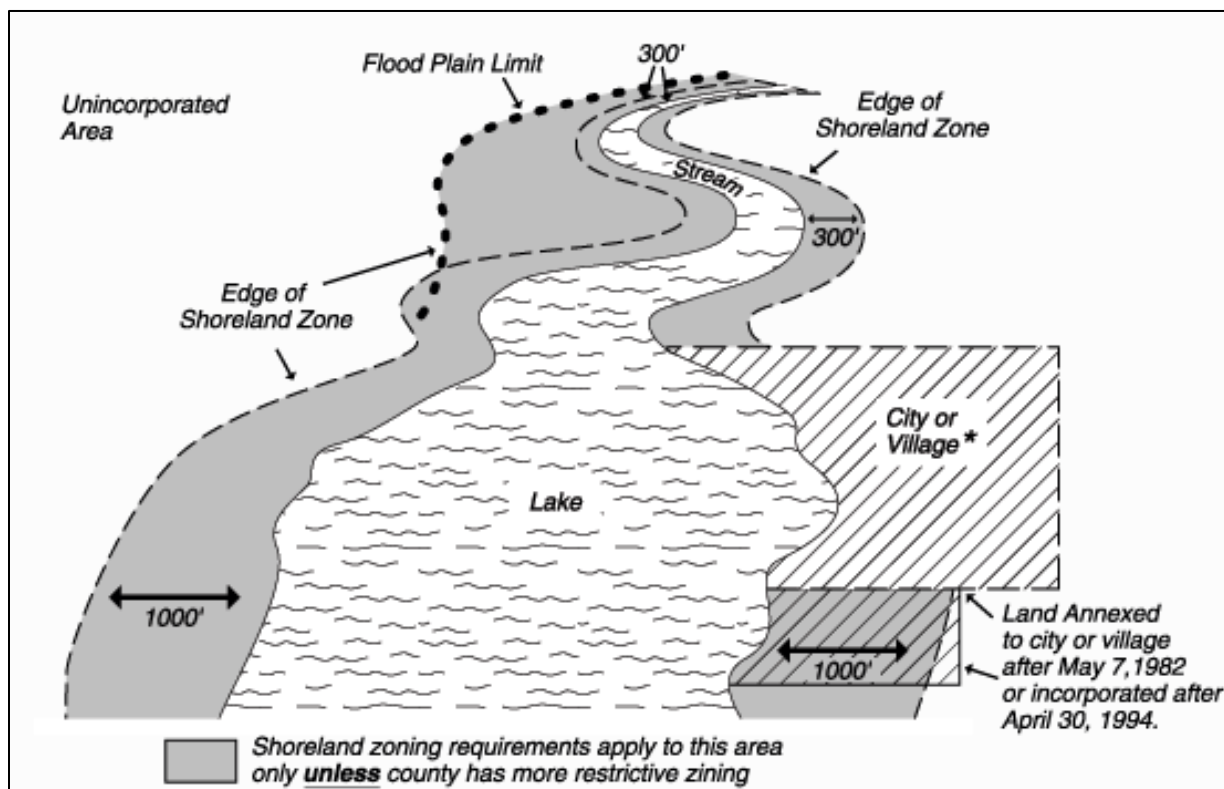
Brown County, WI



Shorelands

Shorelands are the interface between land and water. In their natural condition, shorelands are comprised of thick and diverse vegetation that protect surface waters such as lakes, rivers, and streams. If shoreland areas are developed into standard grassed lots down to the water's edge, this vegetation is lost, and fish, wildlife, and water quality are damaged. As shorelands are closely related to floodplains, so are the threats to the resource values shorelands represent. Like floodplains, the importance of shorelands around navigable lakes, ponds, flowages, streams, and rivers is recognized and is regulated by state and local governments through shoreland zoning.

Shoreland zoning is primarily intended to control the intensity of development and to create a protective buffer around navigable lakes, rivers, and streams in the unincorporated and newly annexed or incorporated areas of the State of Wisconsin. The buffer is intended to remain an undeveloped, natural strip of land that protects the water from the physical, chemical, hydrological, and visual impacts of nearby development. Since May 7, 1982, any unincorporated areas that were annexed into a village or city, or town that incorporated into a new village or city after April 30, 1994, had to at a minimum maintain the existing county shoreland zoning requirements. Areas subject to shoreland zoning generally include lands within 300 feet or to the landward side of the 100-year floodplain of the ordinary high water mark of any navigable stream or river; or within 1,000 feet of a lake, pond, or flowage. Historically, incorporated communities, such as the Village of Ashwaubenon were required to administer either their own shoreland zoning ordinance that was at least as restrictive as the county's or continue to administer the county's ordinance within areas that were annexed after May 7, 1982. The areas of the Village subject to Shoreland Zoning are those annexed after this date, which are generally those properties located south of West Main Avenue, including the Highland Ridge Subdivision.



Source: Wisconsin Dept. of Natural Resources: <https://dnr.wisconsin.gov/topic/ShorelandZoning/Programs/program-management.html>

Wisconsin 2013 Act 80 required cities and Villages to enact their own shoreland zoning ordinances by July 1, 2014 (if they did not already have one) that apply to any shoreland area annexed by a city or Village after May 7, 1982,

and any shoreland area that was subject to a county shoreland zoning ordinance prior to being incorporated as a city or village. At a minimum, such municipal shoreland ordinances must contain a provision establishing a shoreland setback area of at least 50 feet from the ordinary high-water mark. There is an exception for averaging the setbacks of existing principal structures that are located closer than 50 feet to the ordinary high-water mark. It is important to note, that in most instances, a 75-foot setback from the ordinary high-water mark or to the landward side of the floodway, whichever is greater, is required under Brown County's environmentally sensitive area (ESA) regulations. ESAs are generally depicted on recorded subdivision plats or certified survey maps. In addition to Wisconsin 2013 Act 80, Wisconsin 2015 Act 55 made substantial changes to how shoreland zoning ordinances are administered. The Village currently enforces shoreland zoning through Chapter 23 Shorelands and Wetlands, Ashwaubenon Municipal Code, which was most recently revised based on the WDNR model ordinance in 2023. Prior to allowing for development within the shoreland zone area, a shoreland zoning permit must be applied for and approved by the Village.

Wetlands

Wetlands are characterized by water at or near the ground level, by soils exhibiting physical or chemical characteristics of waterlogging, or by the presence of wetland-adapted (hydrophytic) vegetation. Wetlands are significant natural resources that have several important functions. They enhance water quality by absorbing excess nutrients within the roots, stems, and leaves of plants, and by slowing the flow of water to let suspended pollutants settle out. Wetlands help regulate stormwater runoff, which minimizes floods and periods of low flow. They also provide essential habitat for many types of wildlife and offer recreational, educational, and aesthetic opportunities to the community. As depicted on Figure 7-5, the Wisconsin Department of Natural Resources Wetlands Inventory Map identifies wetlands within the Village, primarily associated with Ashwaubenon Creek and Dutchmans Creek/tributaries, but also located in the Sherwood Forest Park and Argonne Park/Lombardi Avenue, area. It is important to note, however, that just because an area is not identified as a wetland on the map, does not mean the area is not a wetland. If there is any potential that an area could be a wetland, it is critical the property owner obtain a wetland delineation from a qualified wetland delineator to avoid potential fines and restorative requirements when developing property.

The primary threat to wetlands is filling, either directly through the placement of fill within the wetland, or indirectly from sediments washing into the wetland. Although an array of federal, state, and local regulations help protect them, wetlands (especially smaller ones) are still lost to road construction and other development activities. The draining of agricultural wetlands can also occur through tilling and rerouting of surface water. Even if wetlands are not directly filled, drained, or developed, they still can be impacted by adjacent uses. Siltation from erosion or pollutants entering via stormwater runoff can destroy the wetland. Previously healthy and diverse wetlands can be severely degraded to the point at which only the hardiest plants like cattails can survive. Invasive plant species, such as phragmites and purple loosestrife can also have a significant negative effect on wetlands by overrunning the native wetlands species and creating monocultures of unusable wetland habitat. Where such invasive exotic plant species are found in wetlands, they should be removed using WDNR recommended methods, and these areas then replanted with native species. The Argonne Park / Lombardi Avenue wetland is an example of a wetland area overrun with phragmites that is currently the subject of a Village-led, multi-year effort to remove the phragmites and restore the wetlands with native plantings.

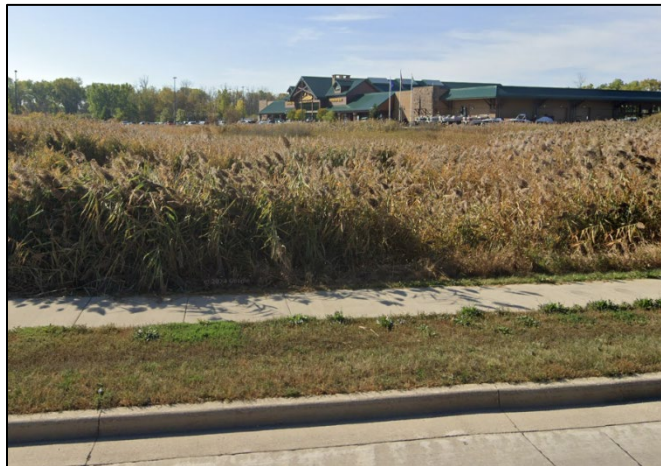




Figure 7-5

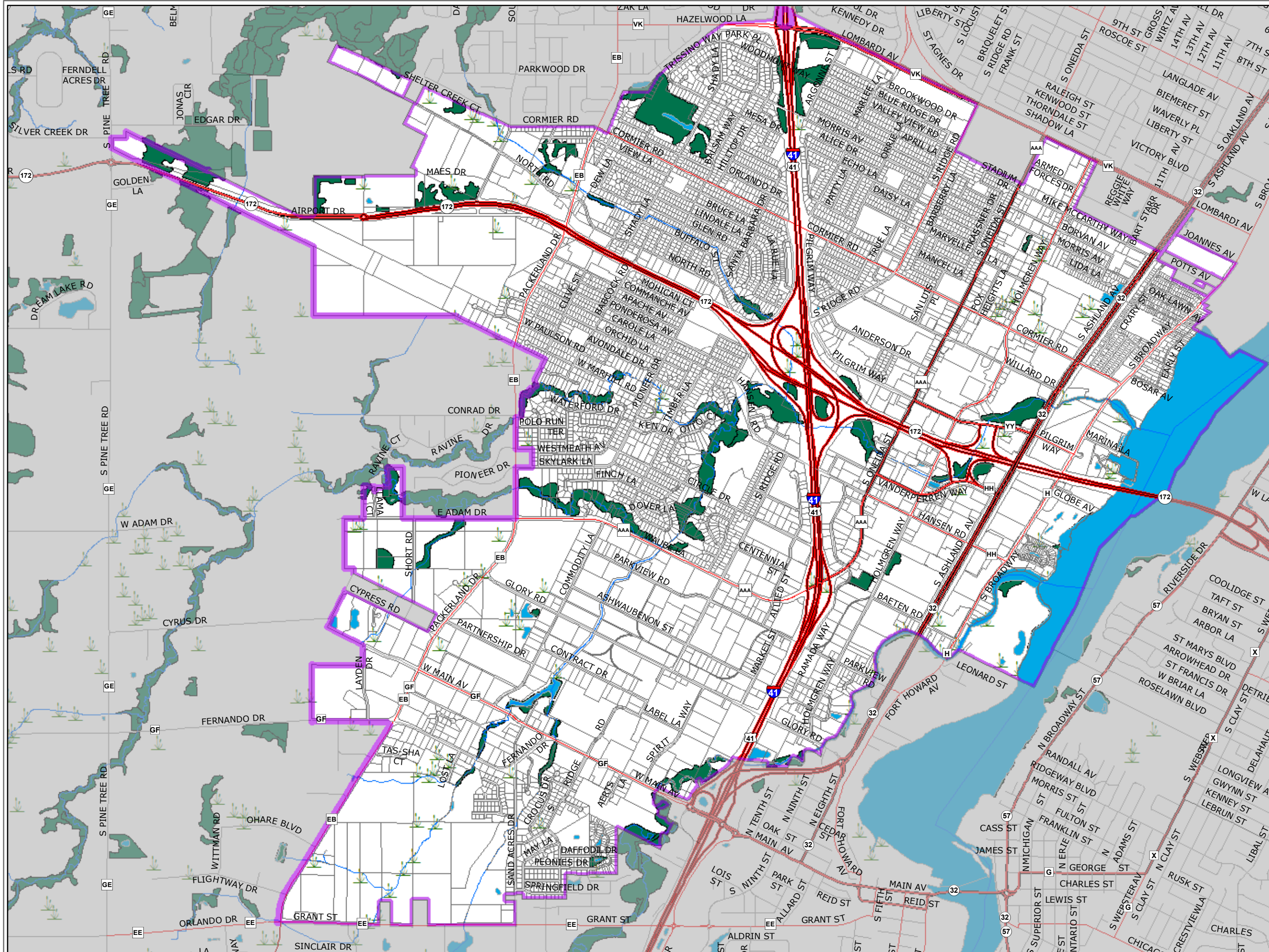
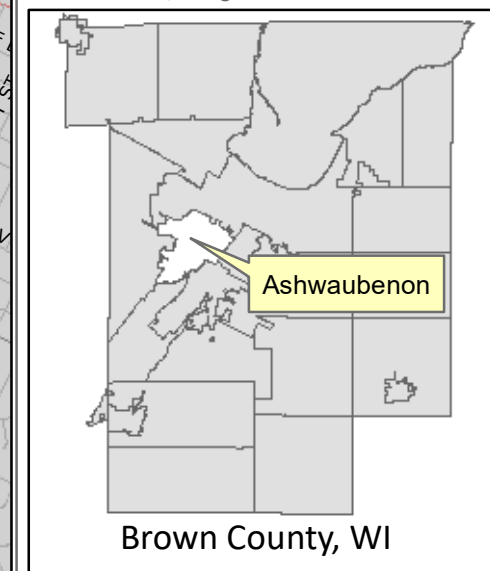
Wetlands

-  Wetlands 2 acres or greater
-  Wetlands less than 2 acres



0 550 1,100 2,200 3,300 4,400 Feet

Map Prepared: 1/2024 AMS
Source: WDNR, Village of Ashwaubenon



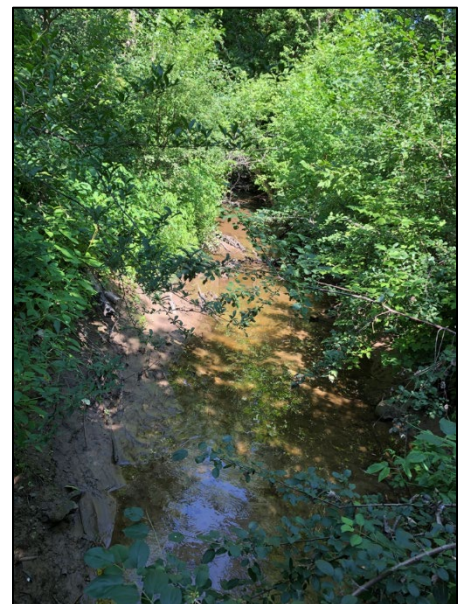
Under current regulatory requirements, all wetlands are off-limits to development unless appropriate permits and approvals are first obtained. In the Village of Ashwaubenon, wetlands five acres or larger within the shoreland zone of navigable waterways, as identified on the Wisconsin Wetland Inventory maps are also protected by the Shorelands and Wetlands Ordinance (Chapter 23) of the Village of Ashwaubenon Municipal Code. Wetlands within this zone are generally unavailable for development unless a wetlands zoning map amendment is also reviewed and approved by the Village of Ashwaubenon and the State of Wisconsin Department of Natural Resources. In order to have a viable case for a shoreland-wetland rezoning, a property owner would need to hire a certified wetland delineator to identify the wetland boundaries, submit the delineation to the WDNR, and then document that the proposed development activity would not have a significant adverse impact on any of the following:

1. Stormwater and floodwater storage capacity;
2. Maintenance of dry season stream flow or the discharge of groundwater to a wetland, the recharge of groundwater from a wetland to another area, or flow of groundwater through a wetland;
3. Filtering or storage of sediments, nutrients, heavy metals, or organic compounds that would otherwise drain into navigable waters;
4. Shoreline protection against soil erosion;
5. Fish spawning, breeding, nursery, or feeding grounds;
6. Wildlife habitat; or
7. Areas of special recreational, scenic, or scientific interest, including scarce wetland types of habitat for endangered species.

Wetlands within the Village of Ashwaubenon are also regulated by the Brown County Planning Commission through Chapter 21 of the Brown County Code of Ordinances (Land Divisions) and the Brown County Sewage Plan. In addition to the wetland itself, a 35' environmentally sensitive area (ESA) setback from the wetland boundary is in place to ensure the ecological functions of the wetland remain intact. Within the wetland and ESA setback, no filling, cutting, grading, or development may occur. The wetland and ESA setbacks are identified on the recorded land division map (certified survey map or subdivision plat map) to make future owners of the parcel aware of the building limitations on the site. In addition to the Brown County requirements, potential developers and landowners should be aware that the Wisconsin Department of Natural Resources and U.S. Army Corps of Engineers also regulate activity in wetlands.

Environmentally Sensitive Areas

Environmentally sensitive areas (ESAs) are defined by the Brown County Planning Commission as *"...portions of the landscape consisting of valuable natural resource features that should be protected from intensive development."* Identification and protection of ESAs are required by both state and county regulations under Wisconsin Administrative Code NR 121 and the Brown County Sewage Plan, as well as Chapter 21 Brown County Code - Land Division and Subdivision Ordinance. ESAs include lakes, rivers, streams, wetlands, floodways, and any locally designated significant and unique natural resource features. ESAs also include a setback or buffer from the natural feature, as well as areas of steep slopes (slopes 20 percent or greater) when located within or adjacent to any of the surface water/wetland features previously noted (see Figure 7-6 for ESAs in the Village of Ashwaubenon). Landowners within the Village with water-related natural resource features on their property are encouraged to contact the Brown County Planning Commission for information about regulations involving ESAs when considering dividing land for sale. The Village zoning administrator should also contact the Brown County Planning Commission about enforcement and regulation of ESAs that



appear on subdivision plats and certified survey maps.

Development and associated filling, excavation, grading, and clearing are generally prohibited within ESAs unless an amendment to the ESA is prepared and approved by the Brown County Planning Commission staff, and depending on the size of the amendment, the WDNR. Farming and natural landscaping are allowed within ESAs and certain non-intensive uses, such as public utilities and passive public recreation, are often allowed within these areas. Research and experience indicate that the potential exists for significant adverse surface water quality impacts if these areas are developed, such as increased levels of nutrients, sedimentation, and resultant algae blooms in surface water features. Additionally, development in these areas may lead to surface or ground water infiltration in basements.


Threats to ESAs are similar to those of floodplains, wetlands, and shorelands. The quality and effectiveness of ESAs can be severely reduced should adjacent development change drainage patterns or native vegetation be removed from the lands within or immediately adjacent to the ESAs. Such disturbances may also introduce invasive plant species to the ESAs, which results in loss of native vegetation, diversity, and wildlife habitat. In conjunction with proper erosion control and stormwater management practices, protection of the ESAs provides numerous benefits, including:

- Recharge of groundwater.
- Maintenance of surface water and groundwater quality.
- Attenuation of flood flows and stages.
- Maintenance of base flows of streams and watercourses.
- Reduction of soil erosion.
- Abatement of air pollution.
- Abatement of noise pollution.
- Favorable modification of micro-climates.
- Facilitation of the movement of wildlife and provision of game and non-game wildlife habitat.
- Facilitation of the dispersal of plant seeds.
- Protection of plant and animal diversity.
- Protection of rare, threatened, and endangered species.

In addition to regulation of ESAs by Brown County, components of ESAs, including floodplains, wetlands, and navigable waterways are regulated by various other governmental agencies, including the Wisconsin Department of Natural Resources, Federal Emergency Management Agency (FEMA), U.S. Army Corps of Engineers, and Village of Ashwaubenon. When development activity may impact a designated ESA within Ashwaubenon, the property owner should first contact the Ashwaubenon Community Development Department to assist in making determinations as to whether a proposed development would impact an ESA or shoreland area.

Figure 7-6

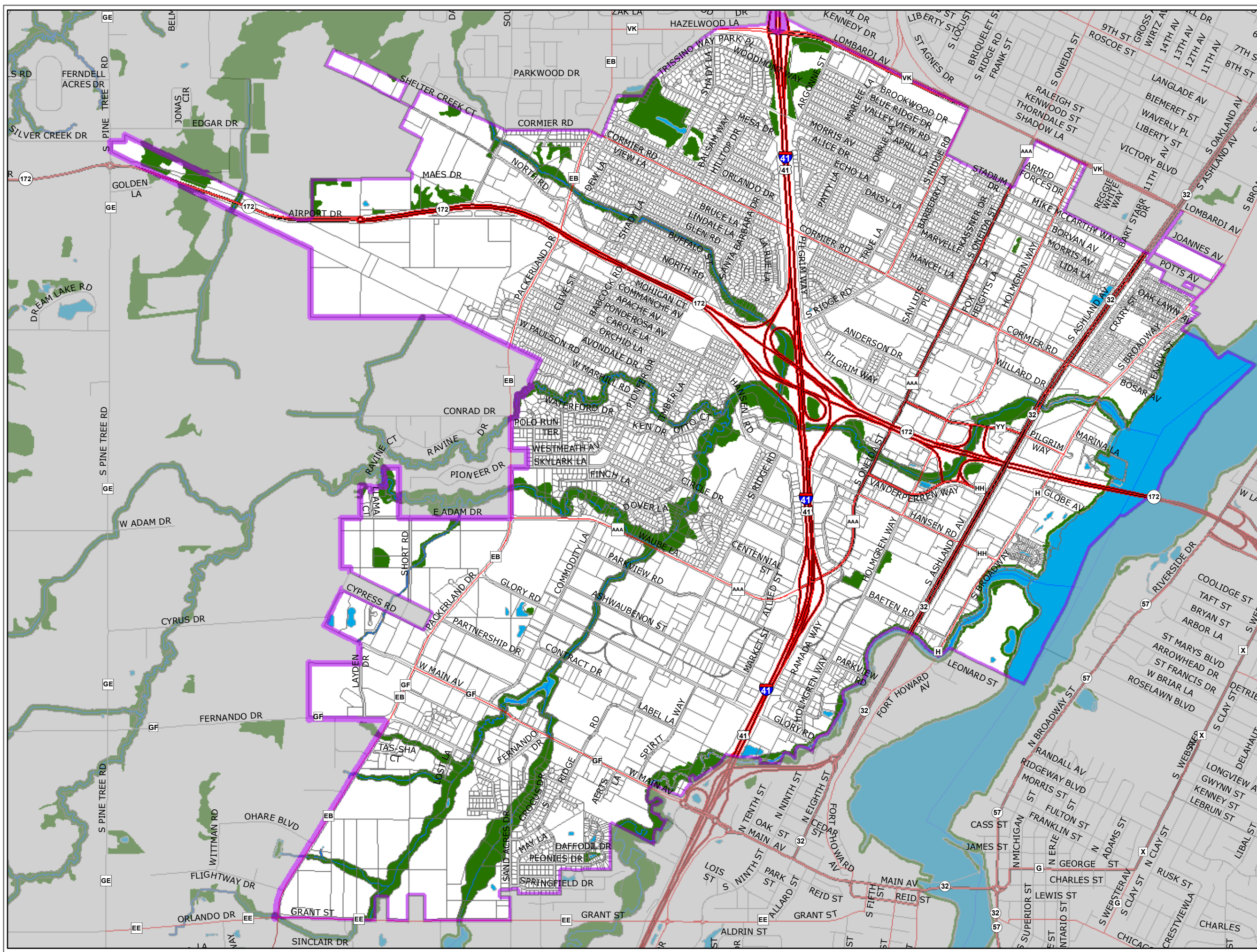
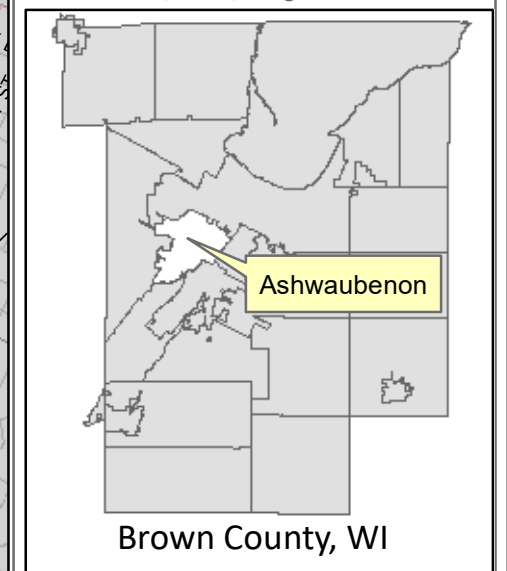
Environmentally Sensitive Areas

 Environmentally Sensitive Areas



0 550 1,100 2,200 3,300 4,400 Feet

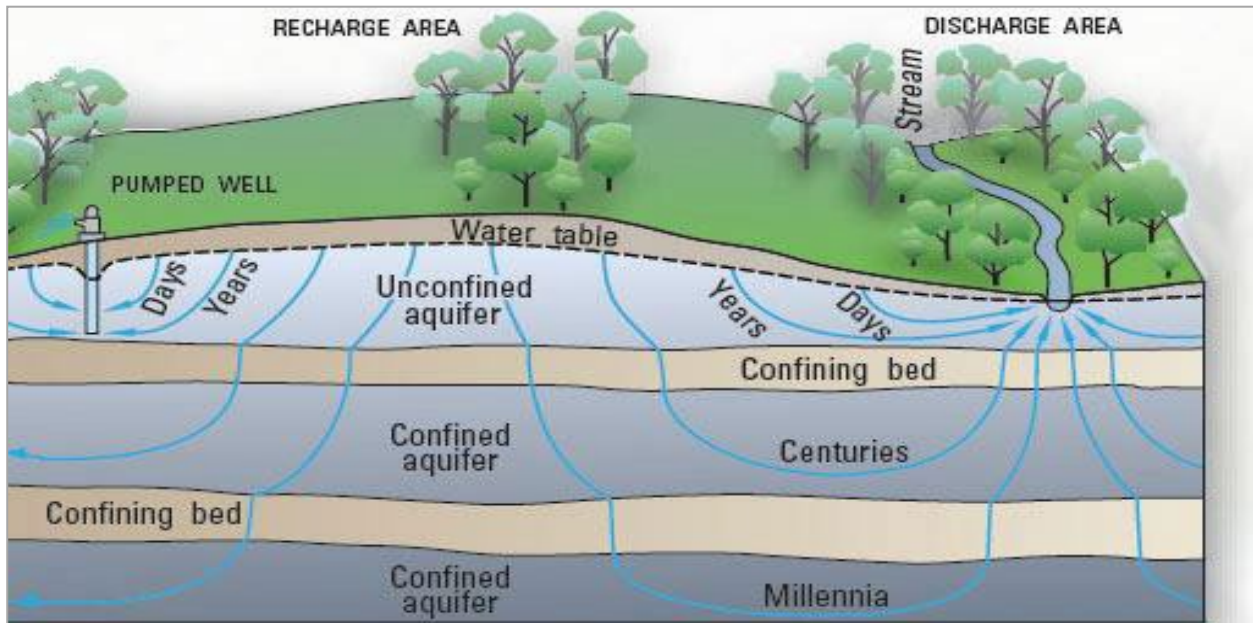
Map Prepared: 1/2024 AMS
Source: WDNR, FEMA, Village of Ashwaubenon



Groundwater

Groundwater begins as precipitation (rain or snow) that falls upon the land (see Figure 7-7). Some of it runs off into lakes, rivers, streams, or wetlands, some evaporates back into the atmosphere, and some is absorbed by plants. Groundwater results from the precipitation that soaks into the ground past plant roots and down into the subsurface soil and rock. A layer of soil or rock that is capable of storing groundwater and yielding it to wells is called an aquifer. There can be a number of aquifers within an area, one above another. The top of the aquifer closest to the ground's surface is called the water table. It is the area below which all the openings between soil and rock particles are saturated with water. Like surface water, groundwater moves from high areas to low areas. It discharges at those places where the water table intersects the land's surface, such as in lakes, streams, springs, and wetlands.

Figure 7-7: Groundwater



Source: United States Geological Survey

Although groundwater serves as the source of drinking water for many Wisconsin residents, the Village of Ashwaubenon receives its drinking water from Lake Michigan via a connection with the City of Green Bay.


Woodlands

Woodlands within and around the Village are generally small in size and fragmented from larger stands. The largest area of contiguous woodlands is located in the far northwestern part of the Village, near the Oneida Casino. Other smaller woodlands are associated with the tributaries to Dutchmans Creek and Sherwood Forest Park.



Figure 7-7

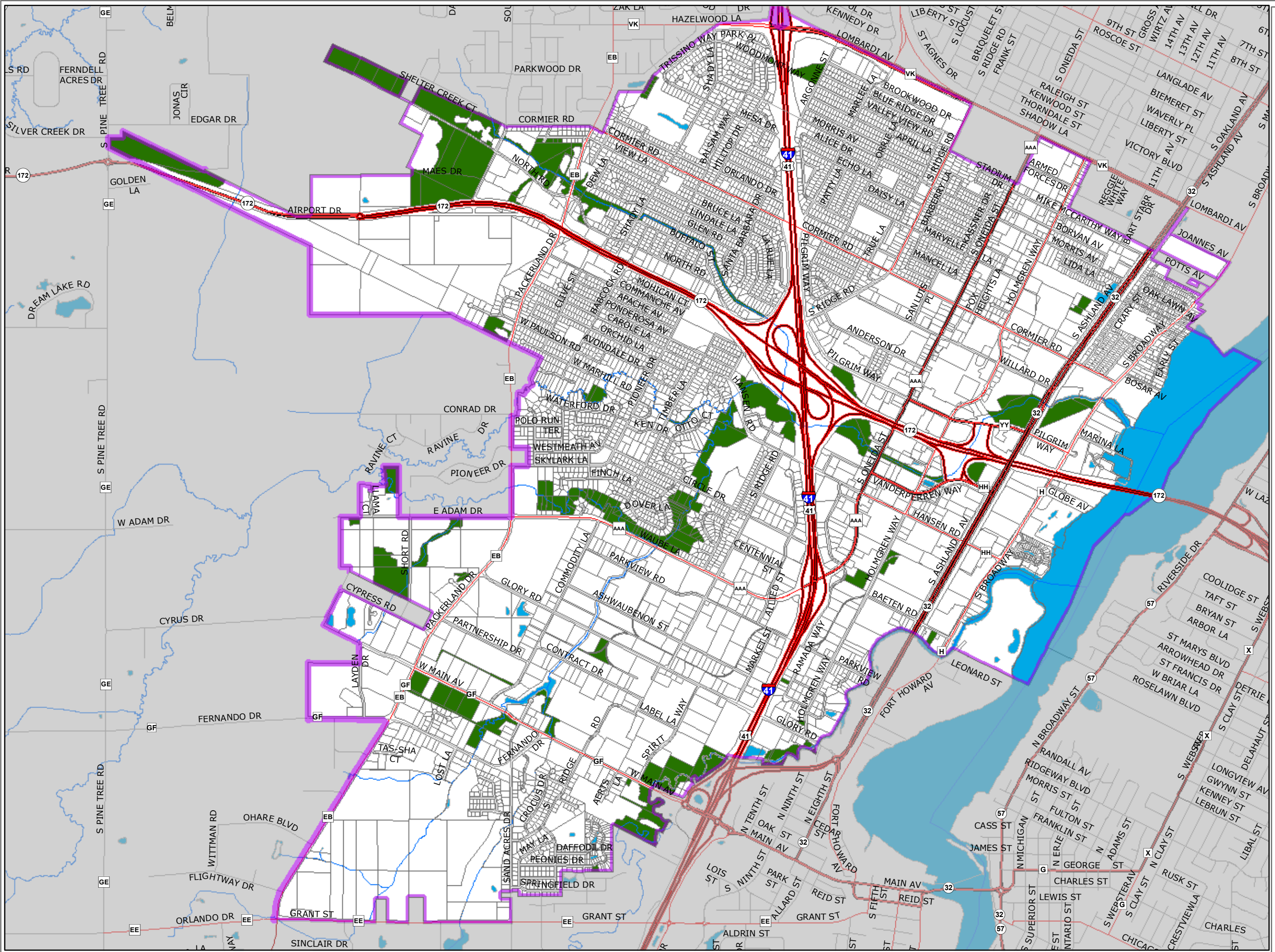
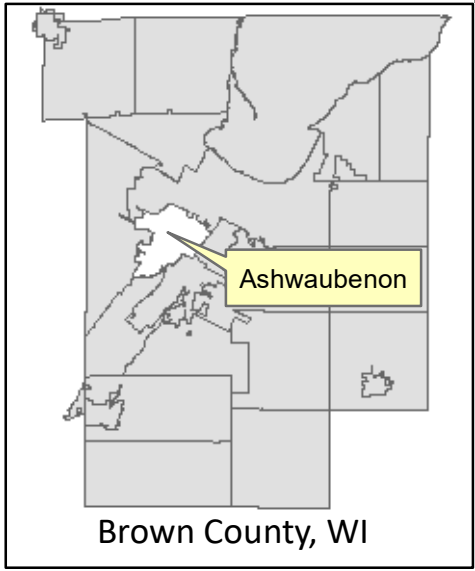
Woodlands

 Woodlands



0 550 1,100 2,200 3,300 4,400 Feet

Map Prepared: 1/2024 AMS
Source: Village of Ashwaubenon



The aforementioned wooded areas are not likely to be developed for a variety of reasons, due to public ownership (Sherwood Forest Park) or the fact that they are along water courses or wetlands (Dutchmans Creek tributaries and northwest corner of Pilgrim Way and S. Ashland Avenue). Even small areas of woods as are present in Argonne Park, Ashwaubomay Memorial Park, or in other isolated pockets of the Village, provide vital habitat for songbirds and small mammals, as well as enjoyment for the general public. Figure 7-8 depicts the woodlands in the Village of Ashwaubenon.

Wildlife Habitat

Since much of the land in Ashwaubenon is already developed or in the case of the far southwestern part of the Village, actively farmed, the best remaining wildlife habitat within the Village is generally located in corridors along Ashwaubenon Creek and Dutchmans Creek and its tributaries. Additional wildlife habitat can be found in park areas, including Sherwood Forest Park, Hidden Valley Park, and along the Fox River at Ashwaubomay Memorial Park. The Village has partnered with the Wisconsin Department of Natural Resources and U.S. Fish & Wildlife to enhance wildlife habitat along and within Ashwaubenon Creek near Ashwaubomay Memorial Park, including installing heron/egret nesting platforms and performing aquatic habitat restoration efforts. Additionally, the Village of Ashwaubenon is undertaking a process in partnership with the Green Bay Packers and Cabela's to remove invasive phragmites from Argonne Park and restore the wetland area fronting along Lombardi Avenue.

Endangered and Threatened Species

Federal and state law protects endangered and threatened species. Both levels of government prepare their own separate lists of such plant and animal species but do so working in cooperation with one another, as well as with various other organizations and universities. An endangered species is one that is in jeopardy and may become extinct. A threatened species is one that is likely, within the foreseeable future, to become endangered. A special concern species is one about which some problem of abundance or distribution is suspected but not yet proven. The main purpose of the special concern category is to focus attention on certain species before they become endangered or threatened.

The Bureau of Endangered Resources within the Wisconsin Department of Natural Resources monitors endangered and threatened species and maintains the state's Natural Heritage Inventory (NHI). This program maintains data on the general locations and status of rare species in Wisconsin by township/range. The locations are purposefully vague to prevent the disturbance of threatened or endangered resources. According to the NHI, there are two aquatic species of special concern within Ashwaubenon, including the American Eel and Lake Sturgeon. The endangered Peregrine Falcon is the only avian species, while the threatened Snow Trillium and species of special concern Wafer-Ash are two plant species. All are potentially found within aquatic or upland habitats within the Village. Should any of these species be found on a potential development site, it is critical the developer of the site contact the WDNR Bureau of Endangered Species prior to beginning any cutting, filling, or grading activity.



Scenic Resources and Topography

The Village's topography is generally flat, with the only notable areas of elevation change associated with the Ashwaubenon Creek ravine in the far southeastern part of the Village. Smaller elevations changes are noted along Dutchmans Creek and its tributaries. Views of the Fox River from Ashwaubomay Park and Ashwaubomay Memorial River Trail are also notable.

Mineral Resources

There are no metallic or non-metallic mines/quarries within Village boundaries, and no new mines/quarries are expected to be developed in the Village over the course of this comprehensive plan.

Historic Buildings

Historic sites are those sites or places worthy of preservation and determined to be significant to the nation, state, or local community's heritage in terms of history, architecture, archaeology, engineering, and/or culture. To be listed on a national or state registry of historic sites, the site or place must be nominated, and it must meet applicable federal and/or state requirements. Although listing does not place any restrictions on the site or place, it does enable it to become eligible for special income tax credits for rehabilitation and for other grant and aid programs. However, special restrictions to the site or building may apply if a unit of government owns it.

The Wisconsin Architecture & History Inventory (AHI) is an official inventory maintained by the Wisconsin Historical Society (WHS) for tracking historically significant structures, sites, or objects. These structures collectively display Wisconsin's unique culture and history and, therefore, should be noted and protected/preserved when feasible. There are eleven records listed in the AHI for the Village of Ashwaubenon, although none are listed on the State or National Historic Registers. AHI listed structures vary greatly and include such structures as Cormier School, various private homes, CN rail bridge over Dutchmans Creek, the Naval & Marine Corps Reserve Center, National Railroad Museum station, Ashwaubenon Moravian Church, and former Sky-Lit Motel sign, which was removed.



Many communities in Wisconsin have a historic preservation ordinance to identify the process for historic buildings and/or sites identification, and a level of protection afforded to such buildings and/or sites. A historic preservation ordinance is tool for Ashwaubenon to consider as a means to protect the potentially historic buildings within the Village, and build the community's identity. Both the State of Wisconsin and the federal government provide income tax credits for rehabilitating structures listed on the State or National Register of Historic Places.

Archeological Resources

Archeological sites provide a window to the past. They provide information and insight as to the culture, activities, and beliefs of the previous residents of the Village of Ashwaubenon. Current state law gives protection to all human burial sites, in addition to a number of programs and restrictions relating to other archeological sites. Developing these sites before they can be catalogued and studied is the major threat to this resource. In the Village of Ashwaubenon there are two identified cemeteries, including the Moravian Church Cemetery at STH 172 and Babcock Road and the Scandinavian Church Cemetery located near the western end of North Road. Considering the Village's location along the Fox River, it is also likely there are undocumented Native American burial sites along the river or tributaries. If archeological artifacts are found during development activities, all work should stop, and the Neville Public Museum and/or Wisconsin Historical Society should be notified immediately.

Community Identity and Design

Issues related to community identity and design generally pertain to maintaining or enhancing the Village's identity and utilizing design elements, such as signage, landscaping and architecture to reinforce Ashwaubenon's

desired character. Specific objectives from Chapter 1 related directly to community identity and design include the following:

Economic Development Objective: Address ways to improve the appearance of Ashwaubenon’s gateways and thoroughfares to foster its unique identity in the Green Bay Metropolitan Area.

Agricultural, Natural, and Cultural Objective: Enhance the appearance and community identity of the Village at its entryways and along main thoroughfares through streetscaping, signage, and wayfinding.

Agricultural, Natural, and Cultural Objective: Continue to build Ashwaubenon’s community identity through the hosting of Village-wide and regional events.

One trend many communities fall into is allowing new developments that do not contribute to their unique identities. Rather, developments are approved that oftentimes have the exact same designs, materials, and site plans as other communities. This leads to a sameness of design across the country rather than design that is sensitive to the context of the specific community within which it is located. In order to attain the pertinent objectives, Ashwaubenon will have to utilize the tools at its disposal, such as its site plan and design review ordinance to continue to build its unique history and character.

Recommended Policies, Programs, and Actions

There are many avenues the Village of Ashwaubenon can take to achieve the natural, cultural, and agricultural resources goal and objectives listed in the plan’s Issues and Opportunities chapter. They range from specific one-time actions to broad ongoing programs. The recommendations from this chapter are summarized in this section.

Agricultural Resources Recommendations

- Work with the owners of the remaining agricultural lands in the Village to transition to land uses consistent with the long-term vision of this comprehensive plan.

Natural Resources Recommendations

- Support plant and animal habitat restoration efforts in the Village’s remaining wetlands, Fox River, Dutchmans Creek, Ashwaubenon Creek, and its tributaries.
- Ensure development in proximity to rivers, streams, and wetlands meet applicable requirements of floodplain zoning, shoreland zoning, and environmentally sensitive area regulations.
- Coordinate with the Oneida Nation regarding long-term natural resource restoration efforts in areas that are within the reservation and Village boundaries.
- Evaluate opportunities to use green infrastructure to assist in managing stormwater runoff.
- Work with property owners, conservation organizations, school groups, volunteer groups, and the WDNR to remove invasive exotic plant species, such as phragmites or buckthorn, when they appear in wetland or shoreland areas.



- Coordinate with the Brown County Planning Commission regarding the identification and protection of environmentally sensitive areas (ESAs) early in the development planning process.

Community Design / Cultural Resources Recommendations

- The Village’s primary local entrance corridors (Lombardi Avenue, S. Oneida Street/Waube Lane, Holmgren Way, W. Main Avenue, Grant Street, S. Ashland Avenue, Packerland Drive) should be a focal point of Ashwaubenon’s efforts to set the tone for the Village’s identity and provide a “welcome mat” to visitors which include potential new residents and entrepreneurs.

- Implement new, modern “Welcome to Ashwaubenon” signage at key entry points to the Village.
- Continue to utilize banners and holiday decorations on utility poles.
- Develop unique wayfinding signage to reinforce Ashwaubenon’s unique community identity.
- Evaluate opportunities to bury overhead powerlines during street reconstruction projects within the corridors.
- Ensure litter and other debris along these main corridors is picked up in a timely manner.
- Determine techniques to manage invasive plants and beautify these corridors with regular grass cutting and native, perennial plantings.



- The Titledown, Sports & Entertainment, and Village Center districts should be priorities for building Ashwaubenon’s identity.

- Continue to enforce urban design standards, including minimal building setbacks, increased building heights, minimizing vehicular parking and promoting pedestrian accessibility through the Village’s site plan and design review ordinance, zoning ordinance, and Titledown Planned Unit Development ordinance.
- Continue to enforce building and property maintenance codes to ensure all structures are kept safe, weathertight, and attractive.
- Ensure vacant lots are kept clear of clutter and weeds or are otherwise screened from view.
- Work with the Ashwaubenon Community Development Authority to selectively purchase parcels of land for redevelopment.



- The Fox River provides a unique natural resource asset which the Village should continue to capitalize.
 - Maintain existing and strive to create additional public access points to the Fox River.
 - Identify the public right-of-way access points to the Fox River at Collette Avenue and Bosar Avenue.

- Support continued extensions of the Ashwaubomay River Trail.
- Encourage the relocation of businesses and redevelopment of land uses that do not benefit from a riverfront location.
- The Village’s residential neighborhoods serve as a cornerstone element of Ashwaubenon’s character.
 - Continue to provide the high-quality public services that long-time residents of Ashwaubenon expect and serve as a draw to new residents.
 - Support efforts to maintain residential properties through code enforcement and housing rehabilitation programs.
 - Resist efforts at commercializing the residential neighborhoods by ensuring state and local governmental policies are consistent with the comprehensive plan and long-term vision of the community.

