

## 7.0 AGRICULTURAL, NATURAL & CULTURAL RESOURCES

### Introduction

This chapter provides an inventory of existing agricultural, natural, and cultural resources in the Town of Oshkosh. In addition, issues associated with these resources are discussed and a vision, with supporting goals and objectives, is presented.



### Vision

*Primary agricultural areas, woodlands, wetlands and other natural areas in the Town of Oshkosh are protected from development and are primarily located within conservation subdivisions.*

*Commercial farming operations consist mainly of small, niche farms and rented cropland which are an integral part of the town's open space network and conservation subdivision developments. Farmland and natural areas enhance the rural character of the town by maintaining open vistas and providing buffers between residential areas to maintain the low, rural density of development pattern desired by residents.*

*As has been the tradition, cultural and entertainment venues are easily accessible in nearby urban centers via USH 41 and USH 45 in the greater Oshkosh/Fox Cities region.*

#### COMMUNITY SURVEY RESULTS

90% of respondents felt maintaining rural character is important. 81% of survey respondents support efforts to preserve farmland.

### Agricultural Resources

The Town of Oshkosh has a farming history and tradition that has attracted many residents to the area. At one time, farming operations were the primary base of the local economy and defined the rural character of the town. As the population has increased, as more homes have been built, as more non-residential development has occurred, as highways have been developed, and as more land has been annexed to the City of Oshkosh, farming operations have been disappearing from the landscape.



This trend is of great concern to town residents. In the Town of Oshkosh Community Survey conducted in the fall of 2000, the majority of residents (81%) felt that farmland

preservation is important. Likewise, an overwhelming majority (90%) of residents felt that maintaining the town's rural setting is very important or important to the future of the Town of Oshkosh. Furthermore, 79% of the respondents either strongly agreed or agreed that growth should be managed to preserve farmland in the town. Similar priorities are also clearly reflected in the Value Statements and SWOT results as presented in the Introduction and Issues and Opportunities Chapters of this plan. Therefore, preservation of farming is an important consideration when planning for future growth in the Town of Oshkosh.

## SOIL ASSOCIATIONS<sup>1</sup>

Primary farmlands are best understood based on soil types. Soils support the physical base for development and agriculture within the town. Knowledge of their limitations and potential difficulties is important in evaluating crop production capabilities and other land use alternatives, such as residential development.

A map of soil types in the Town of Oshkosh is provided on the following page. The town consists of five main soil types: Kewaunee Silt Loam, Manawa Silty Clay Loam, Poygan Silty Clay Loam, Korobango Silt Loam, and Hortonville Silt Loam. Appendix G provides building and sanitary limitation maps based on soil characteristics.

The majority of the soils in the town are of the **Kewaunee** association (shown in pink). These soils are gently sloping and well drained. Typically the surface layer is silt loam or loamy fine sand. Development, with or without basements in these soils, faces severe risk due to low bearing strength. Due to their slow perking qualities, these soils are not recommended for septic tank absorption fields. Most areas of this soil classification are farmed.

**Manawa** soils (shown in lime green) are classified as nearly level to gently sloping, somewhat poorly drained and slowly permeable. Typically, the surface layer is silty clay loam and the subsoil is mostly silty clay. Development, with or without basements, faces the potential for severe wetness, flooding and subsidence. Due to their slow perking qualities, Manawa soils are not recommended for septic tank absorption fields. With respect to farming, these soils have slow permeability and surface runoff. If drained, and timely conservation tillage is practiced, these soils can overcome their limitations to support cultivated crops, hay and pasturelands. Yields on undrained soils are limited by excessive wetness.

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<sup>1</sup> The information presented in this section is based on information from the *Winnebago County Soil Survey* and the *Winnebago County Land and Water Management Plan*. It has been the experience of the Planning Advisory Committee that the soils maps available for the town are not always accurate. As a result, the conditions these soils indicate (i.e. building suitability) are not always true. In many instances, residents have successfully constructed homes without basements in areas of "unsuitable" soils. The town would encourage the county and appropriate state agencies to invest in new soil association mapping of the Town of Oshkosh. Moreover, based on existing requirements, any areas to be developed without sewer and water are required to conduct a site specific soil survey to verify soil types.

**SOIL MAP HERE**

The **Poygan** Silty Clay Loam soils are located adjacent to USH 41 in Sections 26, 27 and 34. As an agricultural soil, the Poygan Silty Clay Loam faces several limitations. This soil is subject to frequent flooding and ponding. In addition, permeability is slow and available water capacity is moderate. The shrink swell potential is also moderate. If drained, these soils have the potential for cultivated crops, hay and pastureland. Timely conservation tillage can help overcome limitations. Returning crop residue or regularly adding manure improves tilth and increases water infiltration. Obtaining suitable drainage outlets is a problem in many areas.

The **Korobago** Silt Loam soils (shown in gray) are located mainly in section 25 and 30, east of USH 41 in the Town of Oshkosh. These soils are considered somewhat poorly drained and are found in drainage ways. The soil is subject to occasional flooding and ponding. It has good potential for cultivated crops, hay and pasture. If drained, the soil is suited to corn, soybeans, and small grain.

Finally, the **Hortonville** Silt Loam soils (shown in lavender) are found in the northernmost portion of the town near Lake Winnebago and Lake Butte des Morts. Like the Korobago, Hortonville Silt Loam soils are classified as having good potential for farming of cultivated crops, including corn, soybeans and small grains. The soil is also productive for hay and pastureland.

#### **FARM OWNERSHIP**

The primary issue with farmland preservation in the Town of Oshkosh is that much of the remaining farmland is owned by a very small group of individual farmers. Faced with development pressures, retirement needs, and a worsening farm economy, farmers see the sale of their land for development as an attractive financial opportunity. There seems to be an endless supply of urban dwellers that want to fulfill their dream of living in the “country”. In order to maintain open areas of farmland in the township, which are large enough to support either a small family farming operation or serve as rental fields, creative development options must be explored.

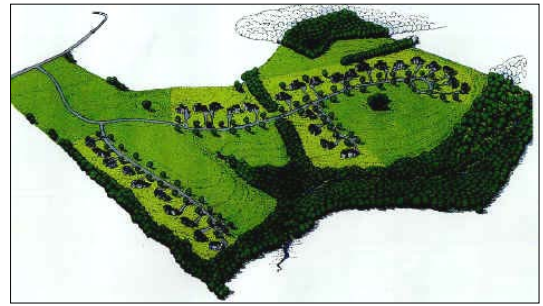


#### **PURCHASE AND TRANSFER OF DEVELOPMENT RIGHTS PROGRAMS**

Information about PDR and TDR programs, as tools for protecting farmland and natural areas, is provided in the Implementation Chapter of this plan.

## CONSERVATION SUBDIVISIONS – A TOOL TO PROTECT FARMLAND

One method to protect farmland, while minimizing conflicts with residential development, is the use of conservation subdivisions. Conservation subdivision designs encourage the preservation and protection of open space, natural areas and farmland resources. In a conservation subdivision, homes are “clustered” together on smaller lots so that a greater proportion of the land is protected from development. In areas of the Town of Oshkosh where municipal sewer is unavailable, innovative sewer treatment systems permissible through COMM 83 may make this clustering possible.



### COMMUNITY SURVEY RESULTS

Conservation subdivision is a land use tool that residents feel is important. Sixty-two percent (62%) of survey respondents favored use of this tool, while another 10% were willing to consider it.

Typically, a conservation subdivision will require at least 50% of a site be protected from further development. Protection and maintenance of the conserved area can be accomplished through a conservation easement with an appropriate conservation organization, land trust, neighborhood association or government body, or through deed covenants. The areas to be conserved must be protected in perpetuity. The land designated for protection should either be left as natural habitat, open space, or farmland. In conservation subdivisions, the development of walking and bicycle trails is encouraged, particularly to provide limited access to protected natural areas.

## THE RIGHT TO FARM

Wisconsin has a right-to-farm law protecting farms from nuisance lawsuits related to typical farm noise and odors. As residential development expands into farmland areas, it is inevitable that these issues develop. Often the issues relate to manure spreading and storage. People who move to rural areas near farmland are not aware of these and other potential nuisances. To minimize conflicts, education is strongly recommended. By educating new landowners about potential conflicts, “surprise” nuisances can be avoided.



### CONCENTRATED ANIMAL FEEDING OPERATIONS (CAFOs)

Concentrated Animal Feeding Operations (700+ cattle), or mega farms, are increasing in number in Wisconsin. In 1985, there was 1 such operation in the state. By 1990, 24 operations and by 2000 there were 77 mega farms in Wisconsin. Generally, CAFOs locate in rural areas where conflicts with neighboring property owners can be minimized. The farmland in the Town of Oshkosh is in close proximity to USH 41 and residential development. Moreover, land prices are higher than similar farmland prices in neighboring, more rural, towns. As a result, **it is**

**NATURAL FEATURES MAP**

not likely that a mega farm will be established in the town. Furthermore, given the developing environment and residential character of the town, mega farms would not be feasible. Should such a farm be proposed, the Winnebago County Zoning Ordinance, as well as the Wisconsin Department of Natural Resources, have extensive standards and permit requirements that must be met, however the WDNR permit does not have any control over the location of a CAFO.

## Natural Resources and Environmental Concerns<sup>2</sup>

Natural resources help to determine the potential for land development. Likewise, environmental characteristics indicate the ability of the land to support various types of development. Geology, topography, drainage patterns, floodplains and wetlands are among the natural and environmental features, which determine if an area is physically suitable for specific types of uses.

Preservation of natural resources (wetlands, surface and ground water, woodlands, shorelines) is an important priority for the Town of Oshkosh. These resources enhance the quality of life for residents, while also providing recreational opportunities to help sustain the local economy.

### GEOLOGY, TOPOGRAPHY, AND DRAINAGE

The entire landscape of Winnebago County reflects the influences of glacial activity. The most recent glacier to cover the county occurred about 10,000 year ago. It covered all but the southwestern part of the county and deposited the reddish, clayey till.

The topography in the town can best be described as nearly level or gently rolling, with slopes of 6% or less covering 90% of the terrain. Not surprisingly, the lowest areas of the town are found along the Lake Winnebago and Lake Butte des Morts shorelines, where the elevations are approximately 750 feet above mean sea level. The elevations in the town rise approximately 40-50 feet toward the northern portions of the township adjacent to the Town of Vinland.

Winnebago County, which is in the Lake Michigan drainage area, is within the drainage basin of the Fox River and its principal tributary, the Wolf River. The Fox River rises in Columbia County, enters Winnebago County near Eureka, flows northeastward through Lake Butte des Morts and Lake Winnebago, leaves the county north of Menasha and then flows northeastward to the Bay of Green Bay where it empties into Lake Michigan. Lake

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<sup>2</sup> Information used to develop this section was obtained from:  
*Soil Survey of Winnebago County*, United States Department of Agriculture Soil Conservation Service, 1980.  
*Winnebago County Land & Water Resource Management Plan*, Winnebago County Land and Water Conservation Department, 1998.

#### COMMUNITY SURVEY RESULTS

91% of survey respondents felt that managing the natural environment is important or very important.

87% of respondents either strongly agree or agree that growth should be managed to prevent flooding.

Winnebago divides the river into the upper and lower Fox River. The Wolf River rises in Forest County, enters Winnebago County in the northwest corner, and then flows south and east through Lake Poygan and Lake Winnebago to Winneconne. It flows into Lake Butte des Morts just south of the Village of Winneconne. Drainage in the Town of Oshkosh flows to Lake Butte des Morts to the South and West and Lake Winnebago to the East.

### **SURFACE WATER (NAVIGABLE WATERS)**

Winnebago County has more surface acres of water than any other county in Wisconsin. About 23 percent of the county, or 84,000 acres, is water. Lake Winnebago is the largest lake in Winnebago County and the State of Wisconsin. It forms most of the eastern boundary of Winnebago County and is the eastern boundary of the Town of Oshkosh. About 28 miles long and 10 ½ miles wide, Lake Winnebago covers 137,708 acres. Its maximum depth is 21 feet. The other significant water feature in the area is Lake Butte Des Morts. Lake Butte des Morts has a maximum depth of 11 feet and covers 4,505 acres.



The Winnebago Pool System of lakes, rivers, and streams is one of Wisconsin's most significant water resources, representing 17% of the State's total surface water acreage. Given the abundant water resources in the area, water-based recreation is a major industry in Winnebago County. Recreational use for fishing, boating, swimming, hunting and trapping are common. In addition, some aquatic plants are harvested commercially from the lakes and an active commercial setline fishery for catfish also exists in the county. Lake Winnebago is host to many fishing tournaments in the surrounding area. These tournaments result in a multi-million dollar benefit to the local economy. In Winnebago County, Lake Winnebago alone provides drinking water to over 100,000 people in the cities of Oshkosh, Neenah and Menasha. Therefore, quality surface water resources are important to the economic well being of the county.

The surface water in the Winnebago System has historically been fertile, and can best be described as highly eutrophic. This is the direct result of runoff from nonpoint pollution sources (i.e. lawn fertilizer). Excessive nutrient and sediment delivery into the surface waterways from agricultural and urban sources contributes towards massive algae blooms that occur with increasing frequency. The algae and sediments increase turbidity, hinder growth of beneficial aquatic plants, and deplete important fish spawning areas. It also significantly increases the treatment costs for potable and industrial use water.

The Winnebago County Land and Water Conservation Department and the Wisconsin Department of Natural Resources work together to protect the quality of surface water in the county. The town supports water-based habitats, such as cane beds, natural shorelines, and, where appropriate, rock rip rap. The town believes water quality is important in order to ensure the continued success of recreational activities such as fishing and duck hunting. The town also feels it is important to protect water quality and

integrity of fishing hot spots within the Winnebago Pool system. This would include the natural vegetation that supports good fish habitat, such as coves along the Lake Butte Des Morts shoreline, Garlic Island, deep water marshes, etc.

The County Land and Water Conservation Department also has cost-share opportunities for local communities to help protect and enhance water quality. Grant money exists for shoreline protection/stabilization projects.

## **GROUNDWATER & AQUIFERS**

Groundwater is the primary source of drinking water for residents of the Town of Oshkosh. The main water supply aquifer in the area is the St. Peter sandstone aquifer. Lesser quantities of groundwater are found in the overlying Platteville-Galena dolomite.

Recharge to the sandstone aquifer percolates through the glacial drift and semi-permeable dolomite from above, and also enters the sandstone from areas northwest of the Town, since the sandstone dips to the southeast. The shallow groundwater in the Town of Oshkosh flows to the east into Lake Winnebago.

The overall quality of groundwater in the Town of Oshkosh is generally considered to be of good quality. Groundwater from the St. Peter sandstone aquifer is saline and very hard, with hardness ranging from 600 to 2,200 ppm, increasing from west to east in the town. Sulfate concentrations are also elevated in the eastern part of the town.

Elevated arsenic levels have been found in groundwater samples from the town. It is strongly suspected that these concentrations are associated with the mineralogy of the upper St. Peter sandstone. The DNR has established an Arsenic Advisory Area in Outagamie and Winnebago Counties, which encompasses the Town of Oshkosh. The DNR recommends that supply wells within the Arsenic Advisory Area be cased through the upper portion of the St. Peter sandstone, and that water be sampled, and treated, if necessary.

As more development occurs, the potential for arsenic in wells increases. Private well owners in the town can take several steps to reduce their exposure to arsenic.

- First and foremost, wells should be tested regularly – at least once per year and anytime a change in watercolor, taste or odor is noticed.
- If the test exceeds 10 parts per billion for arsenic, water from the well should not be used for drinking or cooking.
- In these situations, residents can buy bottled water, rebuild their well to more stringent specifications than required under current well codes, or pursue a treatment option.

The Wisconsin Department of Commerce has approved two categories of devices for the removal of arsenic – **Point of Use (POU)** and **Point of Entry (POE)**.

- POU devices are used to treat water at the point of use such as a single tap. Distillation units provide safe water in batches while Reverse Osmosis (RO) units can be installed on a single tap.
- POE treatment systems treat all water entering the home. Either type of system must be properly installed and maintained to reliably remove the arsenic from drinking water.

Contamination risks from land use practices are also a threat to groundwater resources. Potential contaminant sources include nitrates from failed septic systems or farm runoff, pesticides, fertilizers, leaking underground storage tanks, quarry sites and road salt. Old and unregulated landfills are also a threat to groundwater. There are no landfills in the town, but two exist immediately adjacent to the Town in the City of Oshkosh (one closed landfill on Snell Road and the Winnebago County Landfill on CTH Y). These facilities are potential threats to the groundwater quality. The town does not support the establishment of new landfills in the town. Fortunately, all of these potential groundwater threats are presently regulated or are being addressed through ordinances or technical assistance services by various county and state agencies.

Over-pumping of the aquifer does not seem to be an issue, since the Winnebago Mental Health Facility and the state prison, which were formerly the two largest groundwater users in the Town, have been annexed by the City of Oshkosh. The City supplies municipal water, drawn from Lake Winnebago, to these users.

### **WATERSHEDS**<sup>3</sup>

The Town of Oshkosh is included in three water basins (Wolf River, Upper Fox River and the Lower Fox River) and four watersheds. What follows is a profile of each watershed. The locations of the water basins and watersheds are depicted on the *Natural Features Map* provided in this chapter.

The **Lake Winnebago West Watershed** is a long, narrow watershed, located on the west shore of Lake Winnebago. It includes a drainage area of approximately 16 square miles. The primary use of land is urban/developed. It includes the entire City of Oshkosh north of the Fox River and extends north to Davis Point in the southeast part of the City of Neenah. The Towns of Oshkosh, Vinland, and Neenah stretch between.

There are no major streams in the watershed, but there are several unnamed tributaries that drain directly into Lake Winnebago. The extent of urban development is expected to increase in this watershed; consequently, the significance of urban runoff can be expected to increase in the future.

The **Lake Butte des Morts Watershed** encompasses much of the central portion of the Town of Oshkosh. The entire watershed encompasses approximately 73 square miles.

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<sup>3</sup> Source: Winnebago County Land and Water Resource Management Plan, 1998. Copies are available from the Winnebago County Land and Water Conservation Department.

The most dominant land use is agriculture, but this watershed is rapidly urbanizing due to its close proximity to the City of Oshkosh.

The **Arrowhead/Rat River/Daggets Creek Watershed** includes a small portion of the Town of Oshkosh immediately south of the Butte des Morts Community in the Town of Winneconne. In this area, Daggets Creek is the primary water feature. It has a drainage area of 11.5 square miles and is primarily adjacent to agricultural land. Daggets Creek flows southeasterly for 4.3 miles before entering Lake Butte des Morts just north of Plummers Point Road. In the Town of Oshkosh, much of this stream has been converted to a dredged channel up to 50 feet wide. Lands adjacent to this channel have been largely subdivided and developed.

A small central portion of the town along the boundary shared with the Town of Vinland is in the **Little Lake Butte des Morts Watershed**. This is the only watershed in the county within the Lower Fox River Basin. It has a drainage area of about 50 square miles and includes large portions of the cities of Neenah and Menasha.

Additional information about the care, management, and plans for the watershed is available from the Winnebago County Land and Water Conservation Department. The department has adopted a *Land and Water Resource Management Plan* to address habitat, water quality, and other issues in these watersheds.

## SHORELINES

Residents of the Town of Oshkosh enjoy **Lake Winnebago and Lake Butte Des Morts shoreline**. Shoreline areas are critical to the overall quality of life in the town and contribute significantly to the character of the community. The town has approximately 4 miles of Lake Winnebago shoreline and 6 miles of Lake Butte Des Morts shoreline.



According to the Winnebago County Land and Water Conservation Department, the Lake Winnebago and Lake Butte Des Morts shorelines include a mixture of undeveloped (natural, forested, and wetland) areas and rural residential development. The Lake Winnebago shoreline in the Town of Oshkosh is fairly well stabilized by comparison to the number of breeches in the Town of Oshkosh along Lake Butte des Morts. According to the most recent inventory of the Winnebago System (completed in 1996), about 10,000 feet of Lake Butte des Morts shoreline in the Town of Oshkosh is experiencing some level of damage through erosion. Wave action caused by increased boat and jet ski traffic/wakes, wind, artificially high water levels and weather are factors for the erosion. Winnebago County has grant money available for municipalities to help pay for shoreland protection measures.

The **Shoreland/Wetland Ordinance** adopted by Winnebago County regulates shoreland uses and development within 1,000 feet from the ordinary high water mark of a lake, pond or flowage, and within 300 feet from the ordinary high water mark of a river or stream. The Wisconsin Department of Natural Resources (WDNR) regulates the stabilization and fill of shorelines in the town. The WDNR has a strong history of working well with residents on these issues.

The Town of Oshkosh supports the **preservation of natural shoreline** areas versus man-made seawalls. Undeveloped and restored natural shorelines, with woods, meadows, and marshy areas provide recreational opportunities, including hunting and fishing. Natural shorelines help protect water quality by slowing runoff, reducing erosion, and filtering nutrients that can result in algae blooms. They also provide habitat for wildlife. In addition, natural shorelines add beauty and color to a property and increase privacy.

## WETLANDS & FLOODPLAINS

**Wetlands** act as a natural filtering system for sediment and nutrients such as phosphorus and nitrates. They also serve as a natural buffer, protecting shorelines and stream banks from erosion. Wetlands are essential in providing wildlife habitat, flood control, and groundwater recharge. Due to these benefits, county and state regulations place limitations on the development and use of wetlands and shorelands. Wetlands in the town are shown on the *Town of Oshkosh Natural Features Map*.



For almost three decades, the U.S. Army Corps of Engineers has had the authority over the placement of fill materials in virtually all wetlands of five (5) acres or greater. However, on January 9, 2001, the U.S. Supreme Court limited federal jurisdiction over isolated wetlands under the Clean Water Act of 1972. This Court decision now limits the jurisdiction of the U.S. Army Corps of Engineers to cover only wetlands that are directly associated with navigable waterways-lakes, streams and rivers. Since the State of Wisconsin's jurisdiction over wetlands is tied to federal statutes, as many as 4 million acres of wetland were affected by this decision, including some wetland areas in the Town of Oshkosh.

### BENEFITS OF WETLANDS

- Wetlands act as a natural filtering system for sediment and nutrients such as phosphorus and nitrates.
- Wetlands serve as a natural buffer, protecting shorelines and stream banks from erosion.
- Wetlands are also essential in providing fish & wildlife habitat, flood control, and groundwater recharge.

In response to this U.S. Supreme Court Decision the State of Wisconsin recently passed legislation giving the Wisconsin Department of Natural Resources (WDNR) authority to regulate those wetlands that were formerly tied to federal legislation. As in the past, anyone interested in filling a wetland is required to obtain a permit.

**Floodplains** serve many important functions related to flood and erosion control, water quality, groundwater recharge and fish and wildlife habitats. The *Town of Oshkosh Natural Features Map* illustrates floodplain areas found in the town. The map clearly

shows that most of the town's floodplain areas are located adjacent to Lake Winnebago, Lake Butte Des Morts and the numerous inland creeks, streams, and ditches which flow through the town. Generally, areas susceptible to flooding are considered unsuitable for development due to potential health risks and property damage. Therefore, the *Future Land Use Maps* discourage development in these areas.

## WOODLANDS

Prior to settlement, the vegetation of Winnebago County was mostly forest and oak savanna. As people moved to the area, most of the forests were cleared for agricultural crops. Today, approximately 20,000 acres of land are still in woodland cover.

Several small areas of woodlands are scattered around the Town of Oshkosh. The *Town of Oshkosh Natural Features Map* delineates the location of many of these areas. Because woodlands are an important natural feature to town residents, the remaining woodland areas should be protected from future encroachment through the use of easements, conservation subdivisions, land trust activities, and other preservation techniques. Part of this protection effort should include education for private landowners and developers about the importance of woodlands.

The WDNR **Managed Forest Law** provides opportunities for conservation of contiguous woodland environments for wildlife and plants inhabiting these areas. For more information visit : [www.dnr.state.wi.us/org/land/forestry/publications/](http://www.dnr.state.wi.us/org/land/forestry/publications/).

## WILDLIFE HABITATS

Resident observation is the best available local resource to identify wildlife habitat areas. Primary wildlife habitat areas correspond to the forested areas, wetland areas and shorelines shown on the natural resources map. These areas provide food for deer, raccoons, fox, herons, bald eagle and other small creatures common in the area. The local farm fields also serve as a food source for deer, geese, sandhill cranes, and waterfowl in the area. Farmland is also a very important local wildlife habitat that provides travel corridors between waterways, woodlands and grasslands. Farmland also provides cover opportunities and large contiguous open spaces needed by wildlife.



Urban nuisance wildlife (i.e. skunk, raccoon) is becoming more common in the town due to urban sprawl.

The remaining areas of the town (i.e. residential areas, road corridors, and other developed areas) are not classified as primary wildlife habitat areas - though certainly animals do wander into these areas. Lake Butte des Morts and Lake Winnebago are also major waterfowl, fish spawning, reptile and amphibian habitat areas.

### WILDLIFE HABITAT FRAGMENTATION

A primary threat to wildlife is **fragmentation** -- the breaking up of larger habitat areas into smaller sections. Fragmentation decreases wildlife population sizes, isolates habitat areas and creates more edges -- where two dissimilar habitats meet (i.e. grassland and residential subdivisions).

An integral part of the wildlife habitat is wildlife corridors. These areas provide vital connections between habitat areas that have been fragmented due to road construction, development, etc. The Town of Oshkosh considers wildlife corridors an important part

of the natural environment and supports efforts to create and maintain these areas. Fragmenting the wildlife habitat can decrease the population size, isolate habitat and result in more vehicle-animal accidents. It can also create edges, in which case, the outcome results in conflicting land uses on adjacent properties.

### **EXOTIC AND INVASIVE SPECIES**

Non-native, or exotic, plant and animal species have been recognized in recent years as a major threat to the integrity of native habitats and species, as well as a potential economic threat (damage to crops, tourist economy, water quality etc). The WDNR requires that any person seeking to bring a non-native fish or wild animal for introduction in Wisconsin obtain a permit. The town can help combat exotic species by educating residents about non-native species and encouraging residents to use native plants in landscaping. Of particular concern to the Town of Oshkosh are the zebra mussels that are now present in Lake Winnebago and Lake Butte des Morts. They have the potential to change the entire ecosystem of the lakes. The WDNR is currently studying their impact in the area. **Purple loosestrife** is an invasive plant species that is also very common in the town and continues to threaten native species. The town supports research and control of this aggressive plant species.

### **THREATENED AND ENDANGERED SPECIES**

There are **many threatened and endangered plant and animal species in Winnebago County**. Specifically, the Forster's Tern, Red-Necked Grebe, Wood Turtles, Blanding's Turtles, Marsh Blazing Star (plant), Broad-Winged Skipper (butterfly), Banded Killfish, and the Lake Sturgeon are just a few. Due to the sensitivity of locating these species, specific locations are not available to the general public. The town supports protecting both the habitat and the species themselves. The WDNR is attempting to identify and catalog endangered plant and animal species across the state. For a complete, up-to-date list of endangered plant and animal species in the town, refer to [www.dnr.state.wi.us](http://www.dnr.state.wi.us). A Winnebago County Map of endangered species available on-line at: [www.dnr.state.wi.us/org/land/er/workinglists/countymaps/winnebago.2002.pdf](http://www.dnr.state.wi.us/org/land/er/workinglists/countymaps/winnebago.2002.pdf)

### **METALLIC AND NON-METALLIC MINING RESOURCES**

The town does not promote expansion of present nor development of new quarries.

The geologic and glacial history of the county is reflected in its mineral resources that provide a substantial volume of total aggregate material used in construction activities throughout the county and the region. Some of the best quality limestone is found in Winnebago County. This material is an excellent source of rock riprap that is used extensively for shoreline and stream bank protection throughout the county.

The town has one active non-metallic mining operation. This facility is called the Grundy Quarry and is located off County Road Y. This limestone quarry is registered with the Wisconsin Department of Commerce as pit number 01523 operated by Michels

Materials (WDC, March 2001). No other metallic or non-metallic mining operations are found in the town, nor are there plans to establish such a use in the future.

As part of **NR 135**, Wisconsin Administrative Code, adopted in December 2000, any community in Wisconsin could adopt an ordinance to establish requirements for reclamation of non-metallic mines, such as gravel pits and rock quarries. If a town decided not to develop its own ordinance, a county could develop one, which would also regulate operations in the town. Likewise, regional planning agencies could develop ordinances for counties within their region. The ordinances must establish reclamation requirements to prevent owners and operators of quarries and gravel pits from abandoning their operations without proper reclamation of the mines.

The East Central Wisconsin Regional Planning Commission (ECWRPC), under an agreement approved in July, 2001 will be the Regulatory Authority for administering five individual, county-adopted, Non-Metallic Mining Reclamation Ordinances for Winnebago, Calumet, Outagamie, Waupaca and Shawano Counties. This agreement transfers permit issuance and reclamation plan review/approval authority to the ECWRPC for the program, however, the individual counties will still be responsible for the actual enforcement of the ordinance requirements should any problems arise with a site/operator/landowner. It is important to understand that the ECWRPC only oversees the reclamation aspect of active sites in these counties as it relates to the NR-135 requirements. Zoning or other operational issues of sites are still handled by the counties, including Winnebago, under their existing zoning regulations.

The process of siting a mine continues to be a local matter governed under existing zoning procedures by local authorities. The new reclamation requirements through NR 135 add to the status quo but do not replace or remove any other current means of regulation. The requirements neither regulate active mining process nor have any effect upon local zoning decisions like those related to the approval of new mine sites.

The **Grundy Quarry**, operated by Michels Materials, has grand-fathered status with respect to the Winnebago County Zoning Ordinance. The quarry has received a reclamation permit from the East Central Wisconsin Regional Planning Commission under NR-135 (Permit No. 7102701). The permit identifies 23 "active" (un-reclaimed) acres for the year 2001 with a possible 7 acres remaining in the western portion of the site for future extraction (this 7 acres would require approval from the Town of Oshkosh and Winnebago County). The permit application stated that there are at least 20 years worth of material remaining in the quarry. A reclamation plan will need to be prepared to the standards of the new ordinance and be submitted to the East Central Wisconsin Regional Planning Commission for review by May 15, 2004. The Town of Oshkosh will be notified at that time for comments.

## **AIR QUALITY**

The following information is from the Wisconsin Department of Natural Resources:

“A few common air pollutants are found all over the United States. These pollutants can injure health, harm the environment and cause property damage. EPA calls these pollutants **criteria air pollutants** because the agency has regulated them by first developing health-based **criteria** (science-based guidelines) as the basis for setting permissible levels. One set of limits (**primary standard**) protects health; another set of limits (**secondary standard**) is intended to prevent environmental and property damage. A geographic area that meets or does better than the primary standard is called an **attainment area**; areas that don't meet the primary standard are called **nonattainment areas**.”

Winnebago County is an attainment area. This situation is not expected to change in the future. County, state and federal air quality protection standards are in place to maintain and improve the local air quality. The nearest air quality monitoring station is located in the City of Oshkosh.

The local transportation network can also influence air quality. Condensed development (conservation subdivisions) and sound land use decisions regarding development and the need for roads must be considered to help reduce air emissions.

## Historical and Cultural Resources

Cultural resources, like natural resources, are valuable assets, which should be preserved. At this time, there are no officially designated historic districts or properties in the town. The Winnebago County Historical and Archeological Society is charged with identifying and protecting historic properties and sites in the area.

### CHURCHES

While there are no churches located in the town, numerous facilities exist in nearby communities. Town residents have **easy access to these nearby facilities** via town and county roads and the USH 41 and USH 45 corridors.

### MUSEUMS/HISTORIC RESOURCES

Museums protect valuable historic resources for community enjoyment. There are several museums and other historic resources **located in nearby communities**. Residents of the town are welcome to visit these facilities and enjoy the exhibits and other amenities they have to offer. While the town would welcome a local museum and encourage residents who want to establish a historic or special district, there are currently no plans to do so.

### NATIVE AMERICAN ARTIFACTS

Winnebago County, including portions of the Town of Oshkosh, was once home to the **Winnebago Indians** (known today as the Ho-Chunk). In fact, one of the tribe's villages was located in the town, near the shores of Lake Butte des Morts. The Winnebago left behind many artifacts in the area. The Wisconsin State Historical Society has inventoried some of the collections.

## **Current Policies/Trends**

### **COUNTY ZONING**

Like many other towns in the county, the Winnebago County Zoning Ordinance regulates zoning in the Town of Oshkosh. Therefore, land uses within the town, including agricultural and natural areas, must adhere to the zoning requirements (bulk, height, density, etc.) stipulated in the Winnebago County Zoning Ordinance (Refer to the *Existing Zoning Map* provided in Chapter 9).

The Town of Oshkosh does have village powers under Wis. Stats. Ch. 60, Sec. 60.62. This allows the town to adopt its own subdivision regulations, provided they are at least as restrictive as the provisions of the Winnebago County Subdivision Ordinance. The town has adopted its own subdivision ordinance (for additional information refer to Chapter 9).

### **SHORELAND/FLOODPLAIN ZONING**

Shorelands and floodplains are often viewed as valuable recreational and environmental resources. These areas provide for storm water retention and habitat for various type of wildlife. Development that is permitted to take place in these areas may have an adverse effect on water quality, wildlife habitat and stormwater drainage. In addition, it may also result in increased development and maintenance costs when providing for protection from the occurrence of flooding and high water, increased flood insurance premiums, extensive site preparation, and maintenance and repairs of roads and sewers. As a result, the State of Wisconsin requires every county adopt a shoreland/floodplain zoning ordinance to address the problem associated with development in these areas. Development in shoreland areas is generally permitted, but specific design techniques must be considered. Development in floodplain areas is strictly regulated and in some instances, not permitted. The authority to enact and enforce these types of zoning provisions is set forth in Ch 59.97 Wis. Stats. and Wisconsin Administrative Codes NR115.116 and 117, and is established in the Winnebago County Zoning Ordinance.

Winnebago County is currently administering its Shoreland/Floodplain Ordinance in unincorporated areas of the county. The ordinance regulates shoreland and navigable waters of the county that are 1,000 feet from the normal high water elevation of a lake, pond, or flowage; and 300 feet from the normal high water elevation of a river or stream, or to the landward side of a 100 year floodplain boundary.

### **FARMLAND PRESERVATION PLAN/EXCLUSIVE AGRICULTURAL ZONING**

Maintaining productive land for agricultural uses has been a long-time goal of Wisconsin. To achieve this goal, the state has enacted several types of legislation that provide monetary incentives to eligible landowners to keep their land in a productive state.

Winnebago County has adopted a Farmland Preservation Plan so that local farmers are eligible for tax credits through the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) Farmland Preservation Program and provide for exclusive agricultural zoning. However, at this time, the county is considering eliminating the Farmland Preservation Program in Winnebago County because the Farmland Preservation Plan is not working as it was intended. (There is current debate regarding the county's ability to unilaterally eliminate the program without agreement from the towns.) Not only has the amount of tax credits been reduced significantly over the last several years, but farmland is being lost in Winnebago County as more and more people seek to develop rural residences. Winnebago County will address this farmland preservation and protection issue through a county comprehensive plan that will be developed prior to 2010.

Winnebago County does have an exclusive agricultural zoning classification to delineate agricultural lands. The exclusive agricultural areas of the Town of Oshkosh are seen on the *Zoning Map* provided in the Land Use Chapter.

### **WINNEBAGO COUNTY LAND AND WATER RESOURCE PLAN**

The Winnebago County Land and Water Resource Plan was developed in 1998 in accordance with Chapter 92.10 Wis. Stats. The plan:

- Serves as a guide for resource management planning and decision making
- Assesses land and water resource conditions
- Identifies problems and priorities

## **Coordination with Other Comprehensive Plan Elements**

The development of the Agricultural, Natural and Cultural Resources Element required coordination with all of the required plan elements. For example, when considering economic development strategies, the future role of agricultural operations in the town, as well as the importance of natural resources, was important to consider. Below is a description of the critical issues addressed with respect to the Transportation, Land Use and Housing Elements. These elements are profiled because their coordination with the Agricultural, Natural and Cultural Resources Element is critical to the success of the plan.

### **TRANSPORTATION**

The proposed expansion of the USH 41 corridor may impact the natural resources and wetland areas adjacent to the highway corridor. To minimize this impact it will be important for the town to continue to participate in the development process. Also, transportation improvements in other areas of the town may support additional development. As a result, transportation improvement may lead to impacts on wildlife habitats as more people move into the town. Again, it will be important for the town to monitor this situation.

Of similar concern is the town's desire to keep CTH A as a rural two-lane roadway with a bike path as opposed to a four-lane roadway. This will help to minimize the impact on natural resources and wetland areas adjacent to this roadway.

The town should also consider development techniques that offer greater environmental protection (i.e. conservation subdivisions, easements, mixed use development, etc.). These types of developments seek to offset the impact of dispersed development patterns that force people to make more automobile trips each day. The increased vehicle trips generate pollutant emissions, greenhouse gas emissions and noise.

## **LAND USE**

Residents of the town have clearly indicated through the community survey and at public meetings that the preservation of agricultural operations and the protection of natural resources is a priority. As a result, when the *Future Land Use Maps* were developed special consideration was given to these two priorities.

## **HOUSING**

Housing, if not carefully located and planned for can have a severe impact on natural resources and farming operations. Housing development can fragment farming operations and wildlife habitat areas. If not carefully planned, additional traffic, people, and services associated with housing development can quickly destroy rural character. The Town of Oshkosh desires a rural development pattern that protects natural resources and farmlands, while still accommodating some residential development. To achieve this, the use of conservation subdivisions and other non-traditional techniques should be encouraged in the town. This strategy is reflected in the *Future Land Use Maps*.

## **Goals and Objectives**

It is the vision of the Town of Oshkosh that the community will retain its rural character by continuing to enjoy a mix of scenic, open, natural, undeveloped areas and farming operations through 2020. Natural resources will be protected and serve as an environmental, recreational, and economic asset to the town. Residential and commercial development will be in harmony with the town's natural environment. The town will support the continued efforts of neighboring communities, school districts, Winnebago County, and the State of Wisconsin, to provide cultural and historic resources that can be used by town residents. The town will also work, in accordance with the Intergovernmental Coordination Element, with neighboring communities, Winnebago County, the East Central Wisconsin Regional Planning Commission and the State to ensure that natural resources are adequately protected for future generations.

## GOALS

1. Preserve agricultural operations and natural areas in the Town of Oshkosh to maintain the town's rural character.
2. Maintain recreational opportunities in the Town of Oshkosh.
3. Protect stream banks, Lake Winnebago and Lake Butte des Morts shores, wetlands and floodplains from harmful uses.

## OBJECTIVES

1. Identify and protect areas of prime agricultural land in the town through appropriate land use controls, cluster developments and conservation subdivision designs. Coordinate these efforts through Winnebago County and, as necessary, develop local subdivision regulations to further the town's vision.
2. Educate local farmers and builders about the potential for conservation subdivisions, cluster development and mixed-use development in the Town of Oshkosh.
3. Continue to support effective farmland preservation programs at the county and state levels.
4. Support the efforts of Winnebago County to enforce stream and lake setback requirements by enforcing local zoning requirements and policies established in the Winnebago County Land and Water Resource Management Plan.
5. Educate developers and landowners about the "right-to-farm." Coordinate with local realtors and builders associations to disseminate information. Possibly develop a brochure. If, in the future, the town decides to develop a web page or town newsletter include information there as well.
6. Create, maintain and enhance natural buffers along stream banks and the lakeshores.
  - a. Work with Winnebago County and the Wisconsin DNR and DATCP to promote and help fund buffer strips along streams and the lakeshores.
  - b. Educate residents about the importance of environmental corridors and support efforts by the East Central Wisconsin Regional Planning Commission to identify and protect these areas.
7. Coordinate with local quarry operators to ensure that operations adhere to the requirements of NR 135.
8. Participate in the planning efforts of Winnebago County to ensure that the county comprehensive plan represents the interests, visions, and expectations of the Town of Oshkosh.
9. To protect wildlife habitat areas in the town, beyond regulated wetlands, floodplains and shorelands, identify natural areas in the town. Using this information:
  - a. Seek grant-funding sources available through the WDNR and other agencies to help protect wildlife habitat areas for future generations to enjoy.
  - b. Build partnerships with local habitat conservation organizations (ducks unlimited, trout unlimited, etc.) to help with wildlife protection and education.

## POLICIES (for definition see Page 163)

It is the policy of the Town of Oshkosh to protect and preserve farmland to maintain rural character and a regional buffer between the City of Oshkosh and neighboring rural towns.

It is the policy of the Town of Oshkosh to prevent wildlife habitat fragmentation whenever feasible through education efforts.