

CHAPTER 8: LAND USE

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CHAPTER 8: LAND USE

INTRODUCTION

Land use directly influences all the various elements presented in the previous chapters. Many aspects of daily life within the planning area are impacted by elements of the previous chapters. The choices for housing type, location, transportation alternatives, decisions on employment locations, recreational opportunities, and the quality of the man-made and natural environments are all intricately woven together into land use. Land use policy decisions can have far-reaching repercussions for factors including housing growth and the protection of natural resources. For example, rural areas in Waushara County are under pressure from scattered rural residential and vacation home development. Large lot development in rural areas has fragmented farmland and forests and placed greater stress on the lakes, streams, and other environmentally sensitive areas.

This chapter describes existing land use patterns and current zoning ordinances. Development trends over the past 20 years were analyzed, and future land use needs were extrapolated. Finally, the chapter discusses the land use policy context and the need for additional intergovernmental cooperation. Several potential land use conflicts are identified, and issues that must be addressed are discussed.

INVENTORY AND ANALYSIS

Existing Land Use

The Town of Plainfield existing land use map was last updated by the Town in 2001. Land use information was compiled into the general land use categories summarized below and is presented in Table 8-1 and Exhibit 8-1. *The land use categories are agricultural, residential, commercial, industrial, transportation, utilities/communications, institutional facilities, recreational facilities, water features, woodlands and other open land.*

Land Use Categories

Agricultural. Agricultural land is broadly classified as land that is used for crop production. Agricultural uses include farming, dairying, pastures, apiculture (bees), aquaculture (fish, mussels), cropland, horticulture, floriculture, viticulture (grapes), and animal and poultry husbandry. Agricultural land is divided into two sub-categories: irrigated and non-irrigated cropland. Irrigated cropland is watered by artificial means, while non-irrigated cropland is watered by natural means (precipitation).

Residential. Residential land is classified as land that is used primarily for human habitation. Residential land uses are divided into single family residential, farmsteads, and multi-family residential and mobile home parks. Single family residential includes single family dwellings, duplexes, and garages for residential use. Within platted subdivisions, residential land use encompasses the entire lot. In rural areas where lots are typically larger, single family includes the primary residence, outbuildings, and the mowed area surrounding the structures. Single family also includes isolated garages and similar structures on otherwise undeveloped rural lots.

Farmsteads include the farm residence, the mowed area between the buildings and the associated outbuildings (barn, sheds, manure storage, abandoned buildings). Multi-family includes apartments of three or more units; condos; room and boarding houses; residence halls; group quarters; retirement homes; nursing care facilities; religious quarters; and the associated parking and yard areas. Mobile home parks are classified as land that is part of a mobile home park. Single standing mobile homes are classified under single family residential.

Commercial. Commercial land uses represent the sale of goods and services and other general business practices. Commercial uses include retail and wholesale trade (car and boat dealers; furniture, electronics and appliance stores; building equipment and garden equipment; grocery and liquor stores; health and personal care stores; gasoline stations; clothing and accessories, sporting goods, hobby, book and music stores; general merchandise; miscellaneous store retailers; couriers; and masseuse), services (publishing; motion picture and sound recording; telecommunications; information systems; banks and financial institutions; real estate offices; insurance agencies and carriers; waste management; accommodations; restaurants and drinking places; repair and maintenance; personal and laundry; social assistance, etc.) and other uses (warehousing and automobile salvage and junk yards).

Industrial. Industrial land uses represent a broad category of activities which involve the production of goods. Industrial is divided into two separate categories: industrial and quarries. Industrial uses include construction; manufacturing (includes warehousing with factory or mill operation); mining operations and quarries; and other industrial facilities (truck facilities).

Transportation. Transportation includes land uses that directly focus on moving people, goods, and services from one location to another. Transportation is divided into two separate categories: transportation and airport. Transportation uses include highway and street rights of way; support activities for transportation (waysides, freight weigh stations, bus stations, taxi, limo services, park and ride lots); rail related facilities; and other related categories. Airports included areas that are dedicated specifically to air traffic.

Utilities/Communications. Utilities and communications are classified as any land use which aids in the generation, distribution, and storage of electric power (substations and transformers); natural gas (substations, distribution brokers); and telecommunications (radio, telephone, television stations and cell towers). It also includes facilities associated with water distribution (water towers and tanks); water treatment plants; wastewater processing (plants and lift stations); landfills (active and abandoned); and recycling facilities.

Institutional Facilities. Institutional uses are defined as land for public and private facilities dedicated to public services. Institutional land uses include educational facilities (schools, colleges, universities, professional schools); hospitals; assemblies (churches, religious organizations); cemeteries and related facilities; all governmental facilities used for administration (city, village, town halls, community centers, post office, municipal garages, social security and employment offices, etc.); and safety services (police departments, jails, fire stations, armories, military facilities, etc.). Public utilities and areas of outdoor recreation are not considered institutional facilities.

Recreational Facilities. Recreational facilities are defined as land uses which provide leisure activity opportunities for citizens. This category encompasses both active and passive activities. Recreational activities include designated hunting and fishing areas; nature areas; general

recreational parks; sports facilities (playgrounds, ball diamonds, soccer fields, tennis courts, etc.); city, county and state parks; fairgrounds; marinas; boat landings; spectator sport venues; hiking trails; mini-golf; bowling; bicycling; skiing; golf courses; country clubs; performing arts centers; museums; historical sites; zoos; amusement parks; gambling venues; and other related activities.

Water Features. Water features include all surface water including lakes, streams, rivers, ponds, and other similar features. Intermittent waterways are also incorporated into this category.

Woodlands. Woodlands are forested areas which are characterized by a predominance of tree cover. Woodlands are divided into two subcategories: general woodlands and planted woodlands. General woodlands are naturally occurring; this category includes forests, woods, and distinguishable hedgerows. Planted woodlands include forestry and timber track operations where trees are typically planted in rows; this category includes tree plantations, orchards and land dedicated to Christmas tree production (nurseries are not included).

Other Open Land. This category includes land which is currently vacant and not developed in a manner similar to the other land use categories described within this section. Open land includes areas that are wet, rocky, or outcrop; open lots in a subdivision; or rural parcels and side or back lots on a residential property that are not developed.

Current Land Use Inventories

Developed land has been altered from its natural state to accommodate human activities. Although agricultural areas are considered undeveloped by land classification systems, these uses have different impacts on land use decisions than urbanized uses; thus, agricultural uses have been separated to obtain an accurate total of all related activities.

The Town of Plainfield encompasses approximately 21,512 acres (Table 8-1, Figure 8-1 and Exhibit 8-1). ***Approximately 6 percent (6.2%) of the total area is developed.*** The primary developed uses include Transportation (55.9%), Single Family Residential (22.7%), and Commercial (12.1%). Collectively these uses account for 91 percent (90.7%) of the developed area.

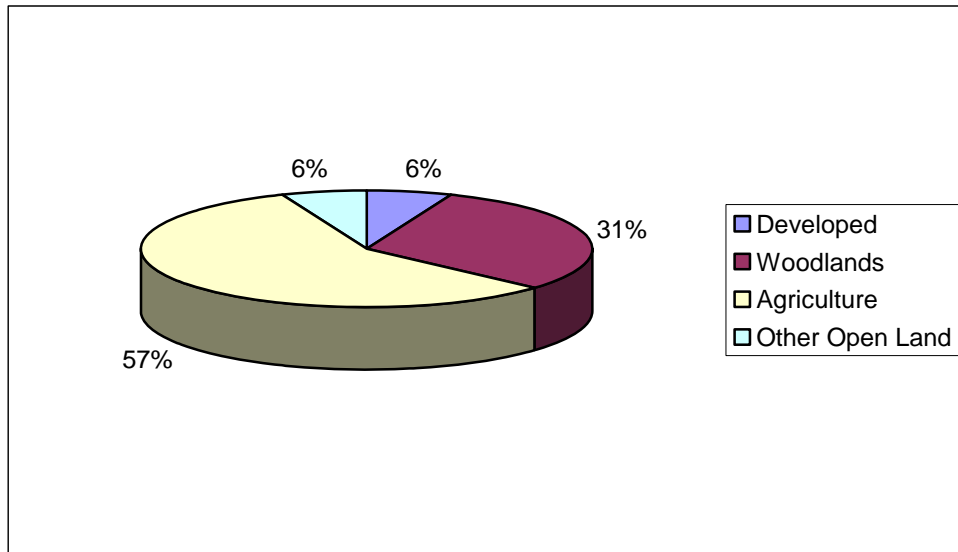
Overall, cropland (irrigated and non-irrigated) accounts for 57 percent (56.6%) of the total land use, while woodlands (planted and unplanted) make up another 30 percent (30.2%). Other open land (6.0%), water features (0.8%), and active quarry (0.3%) comprises the remaining seven percent (7.1%) of the remaining land uses.

Table 8-1. Town of Plainfield Existing Land Use, 2001

Land Use	Total Acres	Percent of Developed Land	Percent of Total
Single Family Residential	300	22.7%	1.4%
Farmstead	85	6.4%	0.4%
Multi-Family Residential	4	0.3%	0.0%
Mobile Home Parks	0	0.0%	0.0%
Industrial	0	0.0%	0.0%
Recreational Facilities	0	0.0%	0.0%
Commercial	160	12.1%	0.7%
Institutional Facilities	26	1.9%	0.1%
Utilities/Communications	9	0.7%	0.0%
Transportation	739	55.9%	3.4%
Total Developed	1,323	100.0%	6.2%
Non-irrigated Cropland	1,088		5.1%
Irrigated Cropland	11,078		51.5%
Planted Woodlots	965		4.5%
Unplanted Woodlots	5,528		25.7%
Active Quarry	55		0.3%
Other Open Land	1,301		6.0%
Water Features	174		0.8%
Total Acres	21,512		100.0%

Source: Town of Plainfield, 2001

Figure 8-1. Town of Plainfield Existing Land Use, 2001



Source: ECWRPC, 2001

Zoning

Zoning is a major tool used to regulate land uses. A zoning ordinance regulates the use of property in order to advance public health, safety, and welfare through orderly development. Zoning is performed at several levels in Waushara County. Each incorporated city or village has

general zoning powers.¹ Waushara County has general zoning jurisdiction within most unincorporated areas of the county; the ordinances are administered by the Zoning and Land Conservation Department (WCZLC).² The Town of Plainfield has adopted the general Waushara County Zoning ordinances. Towns with “village powers” can adopt their own zoning ordinances as long as they are at least as restrictive as the general county ordinance.³

Waushara County

The Town of Plainfield adheres to Waushara County Zoning.⁴ All zoning district information is contained within the Waushara County Zoning Ordinance adopted in 2003. A summary of the usage requirements and restrictions of the districts found within the area is listed below.

- *(A-G) General Agriculture Zone:* This zone is designed primarily for large-scale agricultural uses of land related to growing of crops and the raising of livestock. Permitted uses include airstrips, general farming, single family residential homes, home occupations, and other uses. Residential lot sizes vary. Minimum lot sizes are indicated by the suffix. For example, lots zoned AG-5 must be a minimum of 5 acres.
- *(A-R) Agricultural Residential Zone:* This zone is intended to provide a semi-rural type of environment which allows general agricultural use. Single family residential development on minimum one acre lots, general farming, and home occupations are permitted under this classification.
- *(C-G) General Commercial:* This zone provides for uses found in small commercial areas located throughout the county. Permitted uses include banking; bed and breakfast establishments; professional offices; medical clinics; funeral homes; laundromats; storage garages; restaurants; semi-public uses; warehouses; and retail stores. Single family dwellings are permitted only as accessory to a principal use.
- *(C-C) Community Commercial:* This zone provides for uses found in the central business districts of small communities. Permitted uses include banks, bed and breakfasts, professional offices, medical clinics, funeral homes, laundromats, storage garages, restaurants, semi-public uses, warehouses, and retail stores. Single family dwellings are permitted only as accessory to a principal use.
- *(C-S) Service Commercial:* This zone is designed for small commercial service businesses which are oriented toward the traveler, tourist or vacationer. Lots sizes must be a minimum of 10,000 square feet. Permitted uses include bed and breakfasts; boat sales and service; clubs or lodges; and public swimming pools.
- *(M-G) General Manufacturing Zone:* This zone is intended for any manufacturing or industrial operation which, on the basis of actual physical and operational characteristics, would not be detrimental to the surrounding area or the county as a whole by reason of

¹ *Wisconsin Statutes* 62.23 for cities and *Wisconsin Statutes* 61.35 for villages.

² *Wisconsin Statutes* 69.69.

³ *Wisconsin Statutes* 60.22.

⁴ WCZLC. 2003. *Code of Ordinances: Waushara County, Wisconsin.*

noise, dirt, smoke, odor, traffic, physical appearance, or any other similar features. Automotive-heavy repair and upholstery; cleaning, pressing, and dyeing establishments; commercial bakeries, greenhouses, and recycling operations; distributors; farm machinery sales and/or service; food locker plants; laboratories; machine shops; manufacturing and bottling of nonalcoholic beverages; manufacturing, fabrication, processing, packaging, and assembly of selected products; printing or publishing; storage and sale of machinery and equipment; trade and contractors' offices; warehousing and wholesaling; offices, storage, power supply, and other such uses normally incidental to the principal use are permitted uses that fall under this classification. Lot sizes must be a minimum of 20,000 square feet.

- *(M-I) Intensive Manufacturing Zone:* This zone is intended to provide for uses which by their nature can exhibit characteristics harmful, noxious, or detrimental to surrounding uses. Permitted uses include all those permitted under General Manufacturing Zone, as well as freight yards and depots, breweries, and inside storage. Lot sizes must be a minimum of 20,000 square feet.
- *(O-N) Natural Resource Preservation Zone:* This zone provides for the conservation and protection of natural resources. Generally this zone includes swamps, marshlands, river and lakeshore and other land of natural aesthetic value. Residential development is a conditional use and is only allowed as an accessory to a principal use within these areas on one-acre lots. Permitted uses include agriculture, wildlife preserves, fish hatcheries, and farm ponds. Camping trailers, mobile campers, and houseboats are permitted for temporary living quarters within the district.
- *(GWPOD) Groundwater Protection Overlay District:* The purpose of this district is to institute land use regulations to protect the municipal water supplies and to promote the public health, safety and general welfare of the residents of the county. The residents of the county depend exclusively on groundwater for a safe drinking water supply. Certain land use practices and activities can seriously threaten or degrade groundwater quality.
- *(O-F) Forest Zone:* This zone provides for the continuation of forestry practices and related uses in those areas best suited to this activity. This zone is further intended to encourage forestry and to recognize the value of the forest as a recreational resource. Permitted uses include all uses within the O-N zone; debarking operations; maple syrup processing plants; and portable sawmills. Single family dwellings are allowed as a conditional use. Residential lot sizes must be a minimum of one acre.
- *(O-P) Park and Recreation Zone:* This zone provides for the orderly and attractive grouping of recreational oriented service establishments and is further intended to encourage the maintenance and protection of natural resources. Permitted uses include all agriculture, wildlife preserves, fish hatcheries, and farm ponds. Camping trailers, mobile campers, and houseboats are permitted for temporary living quarters within the district.
- *(O-SW) Shoreland/Wetland Zone:* This purpose of this zone is to maintain safe and healthful conditions; to prevent water pollution; to protect fishing and spawning grounds and aquatic life; and to preserve shore cover and natural beauty.
- *(RS-10) Residential Single-Family:* This zone provides a suitable environment for single-family residential development on moderate size lots in areas with public sewer systems.

Permitted uses include agriculture and single-family dwellings. The minimum lot size is 10,000 square feet.

- *(RS-20) Residential Single-Family Zone:* This zone is intended to provide a suitable environment for single-family residential development on large lots in areas without public sewage systems. Permitted uses include single-family residential lots of a minimum of 20,000 square feet and agricultural uses.
- *(R-M) Residential Multiple-Family Zone:* This zone provides for multiple-family dwellings in a residential environment. Permitted uses include single-family dwellings, duplexes, and multiple-family dwellings and duplexes. The regulations for this zone apply to multiple-family dwellings served by public sewer systems. Multi-family dwellings not served by a public sewer must have an approved septic system. Sewered lot sizes must be a minimum of 12,000 square feet.
- *(RS-P) Residential Single-Family Planned Development Zone:* The purpose of this zone is to provide the means whereby land may be planned and developed as a unit for residential uses under standards and conditions which encourage good design and promote a stable living environment.
- *(RM-P) Residential Multifamily Planned Development Zone:* The purpose of this zone is to provide the means whereby land may be planned and developed as a unit for residential uses under standards and conditions which promote a stable living environment. This zone is intended to permit flexibility and variety in development at increased densities, to encourage the preservation of natural features and open space, and to minimize present and future burdens on the community as a whole which result from poor planning.

Several generalizations can be made about zoning in the Town of Plainfield (Table 8-2 and Exhibit 8-2). ***The predominant zoning district in the Town is General Agriculture. This category comprised 93.8 percent of the area in the Town of Plainfield.*** Agriculture Residential accounted for 1.0 percent of the total area in the Town of Plainfield. About one percent of the Town is zoned general commercial (0.5%), general manufacturing (0.2%), residential single family, RS-20 (0.2%), and natural resource preservation (0.1%). Roads and water make up the remaining 4.1 percent.

Table 8-2. Town of Plainfield Zoning

Zoning Classification	Acres	Percent
General Agriculture (A-G)	20,184	93.8%
Agricultural Residential (A-R)	219	1.0%
General Commercial (C-G)	102	0.5%
Community Commercial (C-C)	0	0.0%
Service Commercial (C-S)	0	0.0%
General Manufacturing (M-G)	40	0.2%
Intensive Manufacturing (M-I)	0	0.0%
Natural Resource Preservation (O-N)	32	0.1%
Forestry (O-F)	0	0.0%
Park and Recreation (O_P)	0	0.0%
Shoreland / Wetland (O-SW)	0	0.0%
Residential Single Family (10,000 SF min.) (RS-10)	0	0.0%
Residential Single Family (20,000 SF min.) (RS-20)	46	0.2%
Residential Multiple Family (R-M)	2	0.0%
Residential Single Family Planned Development (RSP-10)	0	0.0%
Residential Mult-Family Planned Development (RM-P)	0	0.0%
NA (NA)	0	0.0%
Water	135	0.6%
Roads*	751	3.5%
Total Acres	21,512	100.0%

Source: Waushara County, 2008

*Waushara County does not include roads in zoning data

Development Trends

The growth and development of Waushara County has been influenced by a number of factors. These factors include the topography, the abundance of navigable surface waters, wooded lands and natural resources, the ability of the soils to support crops and the central location of the county in the state, and its proximity to the Fox Cities, Oshkosh, Stevens Point and Madison.

The earliest inhabitants of Waushara County were Native Americans. Considerable evidence of their civilization has been found throughout the county and still exists today. The Whistler Mound group, in the Village of Hancock, is included on the National Register, but many other sites are still present in the county.

On October 18, 1846, the Menominee Tribe ceded their land, including Waushara County to the U.S. Government. ***By the late 1840's and early 1850's, farming communities centered around small villages and hamlets could be found in the county.*** Many of these communities were established along existing logging and old military roads, and at creek and river crossings. A typical early farming community usually included a tavern, sawmill, stage house (a place for overnight accommodations), church, houses and a few commercial establishments.

In the 1880's, the county experienced a surge of activity with the coming of the railroad and the discovery of red granite. Overnight houses and businesses materialized in the Redgranite/Lohrville area as skilled workers, their families and others made Waushara

County their home. The boom ended in the 1920's as concrete replaced stone as the nation's preferred paving material.

Today, agriculture and tourism has grown to become the county's major industries.

While the county has seen a decline in the number of farms over the years, in 1997 over half of the county was taxed as farmland. Waushara County's 136 lakes make up about 7,000 acres of surface water. The greatest concentration of lakes is found among the moraines and drumlins in central and western portions of the county. These lakes, along with over 500 miles of rivers and streams and 185,000 acres of woodlots provide for a diversity of boating, fishing, hunting, hiking and other recreational opportunities.

Similar to other rural areas in the state, Waushara County has faced development pressures. ***Large portions of farm and woodlands are being converted to small parcel residential development.*** Easy access to STH 21 and the expansion of USH 10 has shortened the time/distance between Waushara County and the Fox Cities and Oshkosh. As a result, towns along the eastern tier have experienced growth in housing starts by people working outside the county. While communities along the western tier of the county, have closer ties to Stevens Point, Westfield and other areas along the I-39 corridor.

As growth occurs, land use changes in intensity and net density. Analyzing the patterns in land use provides valuable information to local communities in determining how the community has changed and assessing current needs. This information can be used to plan for the appropriate development in the future. To analyze land use changes, East Central Wisconsin Regional Planning Commission (ECWRPC) looked at a number of different data sources, including its own land use inventories of the area, revenue data from the Wisconsin Department of Revenue (DOR), and building permit records from the Wisconsin Department of Administration (DOA).

Several limitations with the information in the data sets necessitate utilizing general summaries for land use trends. A brief discussion of the limitations follows.

ECWRPC conducted land use inventories in 1980 and again in 2000. This information was updated by the local communities when the land management plans were developed. Two distinct classification systems were used in the 1980 and in 2000 and the subsequent land use updates. This made it difficult to compare specific categories between the two inventories. Secondly, computer technology has changed the degree of specificity in which data is collected. In 1980, computerized parcel data was not available. Current land use utilizes parcel data; therefore if a house is located in a subdivision, the entire parcel may be included as residential. Residential areas in 1980 may have included only a portion of these areas.

A comparison of Wisconsin Department of Revenue (DOR) data was used to analyze land use changes between 1990 and 2005⁵ The DOR collects information by real estate class for each minor civil division in the state.⁶ Acreage figures from DOR do not include Department of Natural Resource (DNR) lands or other tax-exempt properties.⁷ Acreage data for incorporated communities is also incomplete, as their information is frequently provided in number of parcels, as opposed to the total acreage of the parcels. Beginning in 1996, the DOR also

⁵ DOR. 1980. *1980 Statistical Report of Property Values Waushara County, Wisconsin.*

⁶ DOR. 1990, 2000, and 2005. *Statement of Equalized Values.*

⁷ DOR. 1990, 2000, and 2005. *Statement of Assessments.*

changed their classification system. Wisconsin Act 27 mandated that agricultural land was categorized from a standard based on use value instead of a standard based on full market value.⁸ Therefore, some land use changes between 1990 and 2005 are a direct result of Act 27 and do not necessarily reflect a change in land use but a change in the way that the land was classified. Following the implementation of the use value standard, agricultural land with improvements was moved to other categories. If these improvements included residential, then the agricultural land with improvements was moved to residential. Additionally, following the use value assessment, less productive land was moved out of agriculture and reclassified as swamp and waste land. Furthermore, the increasing popularity of privately owned recreational land caused a shift of lands from agriculture to both forestland and swamp and wasteland.

The Wisconsin Department of Administration (DOA) collects building permit information for new construction as well as demolition information from communities within the state.⁹ This data is annually reported by communities and includes single-family, two-family, multi-family and mobile homes. The data is an inventory of the net change in the number of residential units for each community that were reported to DOA. This data set includes information that is reported by individual communities to the DOA. If a community does not accurately report its building permit information, it is infeasible to determine actual land use changes.

While the historical data from ECWRPC, DOR and DOA gives us an incomplete picture of the total amount of land historically devoted to the various land uses, it does give us a picture of land consumption patterns within the communities. According to these data sources, several trends can be seen. The collective summary utilizing all three sources is presented below; general trends are discussed.

Land Use Trends

As stated above, some of the changes in land use trends utilizing ECWRPC data can be directly attributed to changes in technology and changes in the way land use data was categorized. To determine overall trends in land use between the 1980 and 2001 years the following land use categories were grouped together:

- Residential: Single family, multi-family, farmsteads, mobile homes, mobile home parks, duplex, group quarters, part-time and seasonal;
- Industrial: Industrial and quarries;
- Parks and Recreation: Parks, recreational activities, conservation and preservation areas, resorts and camps;
- Institutional Facilities: Educational, public assembly, government facilities, cemeteries, churches, hospitals, libraries and institutional;
- Cropland: Irrigated cropland, pastureland, and non-irrigated cropland; and
- Residual: Residual, streets, highways, water features, utilities, planted woodlots, unplanted woodlots, other open land and transportation.

After grouping the land use categories, certain trends were evident: ***commercial, residential, and institutional facilities increased, while parks and recreation, industrial, and cropland decreased between 1980 and 2001*** (Table 8-3). While the table below indicates

⁸ Wisconsin State Assembly. 1995. *Wisconsin Act 27 (Assembly Bill 150)*.

⁹ Wisconsin Demographics Service Center. 1990 to 2004. *Annual Housing Units Surveys*.

acreage totals as collected by ECWRPC, due to changes in methodology, the reader should be looking at trends only that these numbers represent.

Table 8-3. Land Use Trends (ECWRPC), 1980 to 2001

Existing Land Use	1980 Acres	2000 Acres	Change Acres	Percent Change
Residential	268	389	121	45%
Commercial	39	160	121	311%
Industrial	122	55	-67	-55%
Parks and Recreation	387	0	-387	-100%
Institutional Facilities	20	26	5	26%
Cropland	13,410	12,165	-1,244	-9%
Residual	7,427	8,717	1,289	17%
Total	21,674	21,512		

Source: ECWRPC: 1980 and 2001

Even though land use trends utilizing Department of Revenue data does not include WDNR data or tax exempt properties, certain broad trends can be seen and correspond to trends apparent in the data from ECWRPC. **Commercial acreages are increasing, while agricultural and forest land acres are decreasing** (Table 8-4). The difference in total acreage in the Town is related to the property that is tax exempt.

Table 8-4. Land Use Trends (DOR), 1980 to 2005

Land Use	1980 Acres	1990 Acres	2000 Acres	2005 Acres	Percent Change		
					1980-1990	1990-2000	2000-2005
Residential	220	605	1,094	1,081	175%	81%	-1%
Commercial	35	117	142	158	234%	21%	11%
Manufacturing		8	5	5	-	-38%	0%
Agricultural	14,047	14,797	13,195	13,073	5%	-11%	-1%
Undeveloped	665	218	1,909	1,926	-67%	776%	1%
Forest Land	5,768	4,594	3,629	3,419	-20%	-21%	-6%
Other			63	84	0%	-	33%
Total	20,735	20,339	20,037	19,746			

Source: WI DOR Final Statement of Assessment Report. 1980, 1990, 2000, 2005.

Building Permits

As stated above, net building permit data is available from the DOA. This data has been submitted by the jurisdictions that issue building permits. Net building data indicates the net change, not the total number of building permits. Therefore, if a building is demolished within a community, this information is subtracted from the new permit numbers. **Between 1990 and 2007, 56 net units were added within the Town of Plainfield. This averages to about 3.1 units per year (units/yr)** (Table 8-5). The largest growth in single family units occurred during 2004 to 2006. During these three years, an average of six units was added per year. It is important to note that the accuracy of the data source is dependent on timely reporting by local officials.

Table 8-5. Residential Building Permits, 1990 to 2007

Year	Additions Number	Deletions Number	Net Number
1990	6	0	6
1991	5	0	5
1992	0	0	0
1993	4	0	4
1994	4	0	4
1995	3	2	1
1996	3	0	3
1997	2	1	1
1998	0	1	-1
1999	1	1	0
2000	6	2	4
2001	5	0	5
2002	2	0	2
2003	1	1	0
2004	7	1	6
2005	7	0	7
2006	5	0	5
2007	4	0	4

Source: State of Wisconsin Demographic Services Center
Annual Housing Unit Surveys.

Utilizing ECWRPC, DOR and DOA data, the following trends are apparent between 1980 and 2000/2001: residential land use and commercial land uses are increasing while agricultural land uses are decreasing.

Density and Intensity

Density

Density is broadly defined as “a number of units in a given area”.¹⁰ For the purposes of this report, residential densities are defined as the number of housing units per square mile of total land area (units/square mile), excluding water. **Between 1990 and 2000, residential densities increased throughout the county, state, and the Town of Plainfield.** As the population of the area has grown, so has the overall housing density (Table 8-6). ***Within the Town of Plainfield, residential densities increased by less than one percent from 6.72 units per square mile to 6.77 units per square mile during this time period.*** Residential densities in Waushara County increased by about 12 percent from 19.56 units per square mile to 21.83 units per square mile. While residential densities in Wisconsin increased by about 13 percent from 37.85 units per square mile to 42.74 units per square mile.

¹⁰ Measuring Density: Working Definitions for Residential Density and Building Intensity, November 2003. Design Center for American Urban Landscape, University of Minnesota.

Table 8-6. Residential Density, 1990 to 2000

Jurisdiction	Land Area Sq. Miles	1990		2000	
		Total Units	Units/Sq. Mi.	Total Units	Units/Sq. Mi.
Wisconsin	54,313.7	2,055,774	37.85	2,321,144	42.74
Waushara County	626.1	12,246	19.56	13,667	21.83
Town of Plainfield	34.0	228	6.72	230	6.77

Source: U.S. Census, 1990, 2000.

Intensity

Intensity is the degree of activity associated with a particular land use. Generally, higher intensity land uses also have higher environmental impacts. Due to limited information available, this report will compare the intensities of single-family versus multi-family developments in the various communities. To calculate land intensities, the ECWRPC categorizes single and two-family residential, farmsteads, and mobile homes as "single family."

Incorporated communities or areas served by public sewer often have more intense development patterns than rural towns. Single-family residential development is typically a less intense land use than multi-family (3 or more units) which is typically restricted to areas on public sewer. According to the 2000 U.S. Census, there are three structures within the Town of Plainfield that have 3 or more units. Second, incorporated areas in Waushara County are smaller in overall land area than the surrounding towns, resulting in a more intensive land use. Finally, incorporated municipalities, in the county, have areas of older development that were constructed during a period when society was less dependent on cars for transportation. This necessitated the need for smaller lot development that allowed for closer proximity to neighbors and services.

Utilizing 2000 U.S. Census data and adding four net single family units per the data from DOA, in 2001 there were 231 single family units in the Town of Plainfield on a total of 385.11 acres (Table 8-7). ***This resulted in a single family intensity of less than 1 unit per acre in the Town in 2001. There were three multi-family units in the Town of Plainfield in 2001 on a total of 3.99 acres. Therefore the multi-family intensity in 2001 was 0.7 units per acre.***

Table 8-7. Intensity, 2001

Municipality	Single Family			Multi-Family		
	Units	Acres	Units/Ac.	Units	Acres	Units/Ac.
Town of Plainfield	231	385.11	0.60	3	3.99	0.71

Source: Town of Plainfield Land Use data, 2001. U.S. Census, 2000. State of Wisconsin Demographic Services Center, Annual Housing Unit Surveys.

DEVELOPMENT CONSIDERATIONS

Recommended State, Regional, and County Goals

State, regional, and county goals were developed to provide communities with a framework on which land use decisions could be based. These goals make the planning process and decision

defensible to the general public when formulating alternate scenarios for developing parcels within a community.

State of Wisconsin

The State of Wisconsin requires that communities address 14 specific goals in their comprehensive plans.¹¹ These goals encourage development to occur in an orderly well-planned manner. The goals are:

- Promoting the redevelopment of lands with existing infrastructure and public services and the maintenance and rehabilitation of existing residential, commercial, and industrial structures.
- Encouraging neighborhood designs that support a range of transportation choices.
- Protection of natural areas, including wetlands, wildlife habitats, lakes, woodlands, open spaces, and groundwater resources.
- Protecting economically productive areas, including farmlands and forests.
- Encouraging land uses and development patterns that promote cost-efficient government services and utility costs.
- Preserving cultural, historic, and archaeological sites.
- Encouraging coordination and cooperation with neighboring communities.
- Building community identity by improving overall appearance and attractiveness to visitors.
- Providing an adequate supply of affordable housing for all income levels.
- Providing adequate infrastructure, public services, and a supply of affordable land to meet existing needs and accommodate future growth.
- Promoting the expansion or stabilization of the current economic base and the creation of additional and better employment opportunities.
- Balancing individual property rights with community interests and goals.
- Planning and developing a pattern of land use that preserves and creates a pleasing and unique setting.
- Providing all citizens, including those that are transportation dependent, a variety of economical, convenient, and safe transportation options adequate to meet their needs.

East Central Wisconsin Regional Planning Commission

East Central Wisconsin Regional Planning Commission has developed a regional comprehensive plan.¹² As a part of this planning process, East Central has identified several key land use goals:

- Educate the public on potential conflicts and trade-offs associated with alternative development patterns.
- Encourage efficient development in order to reduce land use conflicts and contain community costs.
- Encourage actions and incentives which preserve and protect natural and cultural resources.

¹¹ *Wisconsin State Statutes 66.1001.*

¹² ECWRPC, 2008. *Milestone Report #3: Goals, Strategies and a Plan for Action.*

- Educate all decision makers regarding what their property rights are and how they can influence the public arena.
- Educate the public on potential cultural, economic and land use conflicts.
- Encourage intergovernmental cooperation and coordination.
- Encourage building code standards which preserve historical and cultural character.
- To protect and improve the aesthetic qualities and high-value scenic resources of the region and its communities while balancing the needs of private industry, government, and the general public.
- Identify techniques, which can be used to preserve local community character.
- Encourage a balance between individual property rights and community interest and goals.
- Encourage public participation in comprehensive planning.
- To ensure the region and its communities develop in a manner which is sustainable in nature.
- Comprehensive plan updates have considered the voluntary incorporation of sustainable concepts.
- Communities are informed and educated on the benefits of developing sustainable plans and regulations.

Waushara County

The Waushara County Zoning Ordinance has identified the following criteria for all unincorporated areas within the county:

- Promote and protect public health, safety, comfort, convenience, prosperity, aesthetics, and other aspects of general welfare.
- Establish reasonable standards to which buildings and structures shall conform.
- Regulate and restrict lot coverage and population density.
- Conserve the value of land and buildings.
- Guide the proper distribution and location of land use patterns.
- Promote safety and efficiency of transportation networks.
- Provide adequate light, air, sanitation, and drainage.
- Prevent the uncontrolled use of shorelands and pollution of the navigable waters of the county.
- Encourage the preservation, conservation, and development of land areas for a wide range of natural resources.
- Minimize expenditures of public funds for flood control projects; rescue and relief efforts undertaken at the expense of the taxpayers; business interruptions and other economic disruptions; damage to public facilities in the floodplain; and minimize the occurrence of future flood blight areas.
- Discourage the victimization of unwary land and homebuyers.

Local Land Use Issues

Environmental and Public Utility

Development costs vary based on density, design, social, economical, political and environmental constraints. Public opposition can increase costs through project delays. Development often necessitates the expansion of public infrastructure such as sewer, water,

streets, schools, parks and services such as fire and police protection. Increased development can infringe on wetland and floodplain areas, destroy wildlife habitat, and increase runoff to streams and lakes.

To protect and enhance the natural resource base, communities should identify and protect environmental corridors found within the planning area. Environmental corridors are areas in the community that contain and connect natural areas, open space, and other resources. They often lie along streams, rivers, and other natural features. Environmental corridors provide a beneficial buffer between sensitive natural resources and human development. These areas can provide flood control and valuable wildlife habitat and can significantly benefit the aesthetic appeal of the community.

Land Supply

The amount of land available for development within the Town of Plainfield is finite. Factors that limit the amount of developable land include environmental restrictions (floodplains, high groundwater, wetlands, steep slopes, and water quality), zoning (setbacks, conservancy and development easements, permitted uses), and conflicts between uses.

Market Trends

The price of developable land varies depending on the surrounding land uses, location, access, services, and other subjective factors. Natural amenities such as water frontage, forests, and open space may increase the overall value. Land prices are subject to market demand and fluctuations. As such, land values show periodic variations. Housing affordability is dependant on land prices.

Table 8-8. Equalized Values, 1998 to 2008

Year	Town of Plainfield Land Value	Percent Increase	Waushara County Land Value	Percent Increase
1998	19,831,500	-	494,927,000	-
1999	19,674,800	-1%	531,492,800	7%
2000	13,239,500	-33%	532,430,300	0%
2001	15,513,700	17%	649,433,500	22%
2002	14,771,900	-5%	684,983,500	5%
2003	14,465,100	-2%	737,864,100	8%
2004	14,074,300	-3%	758,648,000	3%
2005	13,261,900	-6%	774,526,900	2%
2006	14,412,800	9%	838,017,300	8%
2007	15,482,800	7%	890,245,700	6%
2008	17,806,600	15%	1,003,757,200	13%

Source: WDOR: Statement of Equalized Values; 1998 - 2008.

The Wisconsin Department of Revenue (DOR) annually reports equalized value as set by the department by real estate class per municipality in Wisconsin. Table 8-8 shows the equalized value of all classes of land in the Town of Plainfield and Waushara County. While Waushara County experienced increases in land value between 1998 and 2008, overall the Town of Plainfield experienced a decrease. ***During this time period, the value of land in the Town***

of Plainfield decreased by 10 percent, while land values in the County went up by 103 percent. Years of largest increases for both the Town of Plainfield and Waushara County occurred in 2001 and 2008. In 2001, land values in the Waushara County increased by 22 percent compared to 17 percent in the Town of Plainfield. While in 2008, land values increased by 15 percent in the Town and by 13 percent in the County. More recently (2006 to 2008) land values in the Town of Plainfield are increasing at a faster rate than the County. **From 2006 to 2008, the town's land value increased by 23.6 percent, while the County increased by 19.8 percent. This indicates that land in Plainfield may be in greater demand.**

State of Wisconsin housing statistics provided by the Wisconsin Realtors Association's provide information on the number of home sales and median price over a period of time. **Between 1998 and 2008 there were 2,666 home sales in Waushara County, with an average of 242 home sales per year** (Table 8-9). **During this time period the median sale price increased from \$81,800 in 1998 to \$105,000.** This represents a 28 percent increase.

Table 8-9. Waushara County Home Sales, 1998 to 2008

Year	Number of Home Sales	Median Sale Price
1998	176	\$81,800
1999	226	\$82,100
2000	235	\$86,600
2001	198	\$98,600
2002	234	\$95,700
2003	250	\$107,700
2004	314	\$97,100
2005	261	\$131,100
2006	296	\$121,800
2007	278	\$109,100
2008	198	\$105,000

Source: Wisconsin Realtor Association Consumer Resources

[Http://www.wra.org/Consumer_Resources/about/housingstats.asp](http://www.wra.org/Consumer_Resources/about/housingstats.asp)

Note: Fourth quarter information note available for 1998 and is not included in total.

Energy Demands

Development is dependant on the availability of a cost-effective, abundant, efficient energy supply. Industry needs to know that reliable energy will be available to run equipment and people rely on affordable energy to heat and power their homes. Not only is energy important for heating and power, but the cost and availability of gasoline may also impact development in Plainfield. Tourism is a major revenue generator for the county, and many people within the county also regularly commute to work. Over half the people in the county regularly travel further than 27.1 minutes to work. In 2000, there were about 643 seasonal units in Plainfield. **An increase in gas prices may cause some residents to move closer to their place of employment and out of Waushara County or cause others to consider closer locations from home for their vacation destinations.** Therefore, energy availability can have an impact on new and sustained development in the town.

FUTURE LAND USE PROJECTIONS

Wisconsin statutes require comprehensive plans to include five year projections for residential, commercial, industrial, and agricultural uses over the length of the plan.¹³ A summary of future land use projections and criteria follows.

While projections can provide extremely valuable information for community planning, by nature, projections have limitations which must be recognized. First and foremost, projections are not predictions. Projections are typically based on historical growth patterns and the composition of the current base. Their reliability depends to a large extent on the continuation of those past growth trends. Second, projections for small communities are especially difficult and subject to more error, as even minor changes can significantly impact growth rates. Third, growth is also difficult to predict in areas which are heavily dependent on migration, as migration rates may vary considerably based on economic factors both within and outside of the area.

The actual rate of growth and amount of future growth communities experience can be influenced by local policies which can slow or increase the rate of growth. Regardless of whether communities prefer a no growth, low growth or high growth option, it is recommended they adequately prepare for future growth and changes to provide the most cost-effective services possible. Furthermore, individual communities can maximize the net benefits of their public infrastructure by encouraging denser growth patterns which maximize the use of land resources while minimizing the impact on the natural resource base.

Expected increases in residential and commercial acreage and resulting decreases in agricultural acreage can be estimated by analyzing and projecting historical data into the future. An anticipated range of population and housing growth and the amount of land that would be required to accommodate that increase in growth were made using past housing and population trends and future population and household projections.

In 2000, 533 permanent residents resided in the Town of Plainfield. A total of 230 dwelling units (227 single family and 3 multi-family) existed in the Town.¹⁴ Of these units, 198 dwelling units were occupied year round and 32 were vacant. Vacant units are comprised of seasonal units and other (for rent, for sale, other). Eighteen units or 56.3 percent of the vacant units were considered seasonal in 2000. The 198 occupied dwelling units (households) had an average household size of 2.69 people. Based on ECWRPC projections, ***the population is expected to increase to 585 people by 2025, before declining to 580 people in 2030.*** Although the population is expected to decrease after 2025, the number of households is predicted to continue to rise as the population ages and the number of people per household declines. ***In 2030, ECWRPC projections indicate that there will be 245 households with an average size of 2.37 people per household.*** It is important to remember that the number of total dwelling units does not equal the total number of households. The total number of dwelling units in the Town is a combination of occupied units and vacant units (for sale, rent, seasonal and other), while the total households is equal to the number of dwelling units times a vacancy rate. ***Assuming a constant vacancy rate of 13.9 percent (vacancy rate from 2000 Census held constant), it is anticipated that there***

¹³ Wisconsin State Statutes 66.1001.

¹⁴ U.S. Census 2000.

will be a total of 285 dwelling units in the Town of Plainfield by 2030. Maintaining the current split between single family and multi-family, it is assumed that ***there will be a total of 281 single family and 4 multi-family units in the Town of Plainfield by 2030.*** ***Over a 30 year period, an additional 54 single family units or 1.8 units per year will be added in the Town. One multi-family unit will be added during this same time period.***

Historical building permit data from the DOA indicates that between 1990 and 2007, a net total of 56 units (Table 8-5) were added in the Town of Plainfield (3.1 dwelling units per year).¹⁵ According to U.S. Census data, a total of 2 additional dwelling units were built in the Town between 1990 and 2000 (0.2 dwelling units per year). While historical building permit data from DOA and the U.S. Census indicates that Town averaged 0.2 to 2.3 dwelling units per year between 1990 and 2000, these trends are not expected to continue (Appendix A: Table A-20 and Table A-22).

Based on existing information, there are approximately 231 single/two-family residential units in the Town¹⁶ that occupied approximately 385 acres.¹⁷ As a result, the average size of a residential parcel in the Town of Plainfield is approximately 1.67 acres. According to the 2000 U.S. Census and ECWRPC existing land use, there are three multi-family units in the Town that occupied about 3.99 acres. Consequently, there were 1.3 acres per multi-family unit. The Town of Plainfield Community Management Plan does not specify a future residential lot size. Therefore ***future single family residential land use was calculated utilizing one dwelling unit per acre (Table 8-10, minimum lot size one acre per existing agricultural zoning); 0.6 units per acre (Table 8-11, minimum lot size 1.67 acres per existing density); and 0.2 units per acre (Table 8-12, minimum lot size 5 acres).*** ***This means that the Town of Plainfield would likely experience an increase of about 67 to 337 acres of new residential growth, depending on the density chosen.*** This assumes a 15 percent infrastructure and 20 percent market factor.

Multi-family land use was calculated assuming that one additional unit of multi-family would be added at the same density as the existing (0.7 units per acre). Assuming a ***15 percent infrastructure and 20 percent market factor 1.7 acres of multi-family will be added.***

Future commercial and industrial growth was estimated using a ratio of existing population to existing commercial and industrial land use and projecting it forward based on future population estimates. Consequently, ***19.1 acres of commercial and 6.6 acres of industrial will be added over the life of the plan.*** This assumes a 15 percent infrastructure and 20 percent market factor.

Future agricultural land use was calculated based on the assumption that the majority of future development would occur in areas that are currently wooded or farmed. The 2001 land use indicates that if these two land use categories are compared, about 35 percent would be wooded and 65 percent would be in agricultural uses. Based on these assumptions, ***approximately 62 to 237 acres of agricultural land would be lost over the life of the plan.***

¹⁵ DOA indicates that between 1990 and 1999, a net total of 23 units were added or 2.3 per year.

¹⁶ U.S. Census 2000 plus DOR net building data.

¹⁷ ECWRPC existing land use 2001.

Table 8-10. High Density Residential Land Consumption (Min. Lot Size 1 Acre)

	2005 Acres	2010 Acres	2015 Acres	2020 Acres	2025 Acres	2030 Acres
Residential	403	427	433	440	446	452
Multi-Family	4	5	5	5	5	6
Commercial	163	166	169	173	176	179
Industrial	55	57	58	59	60	62
Agriculture	12,151	12,133	12,125	12,118	12,111	12,104

Source: ECWRPC 2001 land use, household projections. U.S.Census 2000. DOA

Table 8-11. Mid Density Residential Land Consumption (Min. Lot Size 1.7 Acres)

	2005 Acres	2010 Acres	2015 Acres	2020 Acres	2025 Acres	2030 Acres
Residential	414	455	465	476	487	497
Multi-Family	4	5	5	5	5	6
Commercial	163	166	169	173	176	179
Industrial	55	57	58	59	60	62
Agriculture	12,144	12,115	12,105	12,095	12,085	12,075

Source: ECWRPC 2001 land use, household projections. U.S.Census 2000. DOA

Table 8-12. Low Density Residential Land Consumption (Min. Lot Size 2 Acres)

	2005 Acres	2010 Acres	2015 Acres	2020 Acres	2025 Acres	2030 Acres
Residential	403	427	433	440	446	452
Multi-Family	4	5	5	5	5	6
Commercial	163	166	169	173	176	179
Industrial	55	57	58	59	60	62
Agriculture	12,151	12,133	12,125	12,118	12,111	12,104

Source: ECWRPC 2001 land use, household projections. U.S.Census 2000. DOA

Land Use Issues and Conflicts

In order to avoid future land use conflicts, neighboring towns should establish a communication process to determine the potential effects of new developments within 300 feet of their common border. By doing so, the impacts of the development will be more likely to be minimized.

Waushara County communities, sanitary districts, school districts, planning commissions and others should monitor and provide comments to communities and the County during the ongoing comprehensive planning process which is currently underway. Potential land use conflicts may arise as new development occurs. Local officials and county employees will need to collaborate to ensure that the overall density of development within the town is consistent with the overall land use visions.

Natural resource preservation and development may be in conflict with each other. High quality wetlands, floodplains, and other features comprise the natural resource base. Increased

development near these resources could lead to displacement of wildlife; degradation of surface and groundwater; and loss of forest, farmland and other open lands and resources.

Incompatibilities may arise between adjacent land uses as development continues. Future land use maps designate specific areas for various uses. To minimize these conflicts, other land use controls such as setbacks, screening, and buffering should be utilized to limit potential conflicts. Many of these controls are detailed within the respective zoning ordinances. Any subdivision that is approved should be designed in a manner that preserves the rural character of the area while enhancing the natural resource base.

Key Findings

Existing Land Use

- The Town of Plainfield existing land use map was last updated by the Town in 2001.
- The land use categories are agricultural, residential, commercial, industrial, transportation, utilities/communications, institutional facilities, recreational facilities, water features, woodlands and other open land.
- The Town of Plainfield encompasses approximately 21,512 acres. Approximately 6 percent (6.2%) of the total area is developed.
- Overall, cropland (irrigated and non-irrigated) accounts for 57 percent (56.6%) of the total land use, while woodlands (planted and unplanted) makes up another 30 percent (30.2%).

Zoning

- The Town of Plainfield adheres to Waushara County Zoning.
- The predominant zoning district in the Town is General Agriculture. This category comprised 93.8 percent of the area in the Town of Plainfield in 2008.

Development Trends

- The earliest inhabitants of Waushara County were Native Americans.
- By the late 1840's and early 1850's, farming communities centered around small villages and hamlets could be found in the county.
- In the 1880's, the county experienced a surge of activity with the coming of the railroad and the discovery of red granite.
- Today, agriculture and tourism has grown to become the county's major industries.
- Large portions of farm and woodlands are being converted to small parcel residential development.

Land Use Trends

- According to data collected by ECWRPC, commercial, residential and institutional facilities increased, while parks and recreation, industrial, and cropland decreased between 1980 and 2001.
- According to data collected by the DOR between 1980 and 2005, commercial acreages are increasing, while forest land acres are decreasing.

Building Permits

- According to the DOA, between 1990 and 2007, 56 net units were added within the Town of Plainfield. This averages to about 3.1 units per year (units/yr).

Density and Intensity

- Between 1990 and 2000, residential densities increased throughout the county, state, and the Town of Plainfield.
- Within the Town of Plainfield, residential densities increased by less than one percent from 6.72 units per square mile to 6.77 units per square mile during this time period.
- This resulted in a single family intensity of less than 1 unit per acre in the Town in 2001.
- There were three multi-family units in the Town of Plainfield in 2001 on a total of 3.99 acres. Therefore the multi-family intensity in 2001 was 0.7 units per acre.

Local Land Use Issues

- Development costs vary based on density, design, social, economical, political and environmental constraints.
- The amount of land available for development within the Town of Plainfield is finite.
- Between 1998 and 2008, the value of land in the Town of Plainfield decreased by 10 percent, while land values in the County went up by 103 percent.
- From 2006 to 2008, the town's land value increased by 23.6 percent, while the County increased by 19.8%. This indicates that land in Plainfield may be in greater demand.
- Between 1998 and 2008 there were 2,666 home sales in Waushara County, with an average of 242 home sales per year. During this time period the median sale price increased from \$81,800 in 1998 to \$105,000.
- Development is dependant on the availability of a cost-effective, abundant, efficient energy supply.
- An increase in gas prices may cause some residents to move closer to their place of employment and out of Waushara County or cause others to consider closer locations from home for their vacation destinations.

Future Land Use Projections

- In 2000, 533 permanent residents resided in the Town of Plainfield. A total of 230 dwelling units (227 single family and 3 multi-family) existed in the Town.¹⁸ Of these units, 198 dwelling units were occupied year round and 32 were vacant.
- The population is expected to increase to 585 people by 2025, before declining to 580 people in 2030.
- In 2030, ECWRPC projections indicate that there will be 245 households with an average size of 2.37 people per household.
- Assuming a constant vacancy rate of 13.9 percent (vacancy rate from 2000 Census held constant), it is anticipated that there will be a total of 285 (single family and multi-family) dwelling units in the Town of Plainfield by 2030.
- There will be a total of 281 single family and 4 multi-family units in the Town of Plainfield by 2030.

¹⁸ U.S. Census 2000.

- Over a 30 year period, an additional 54 single family units or 1.8 units per year will be added in the Town. One multi-family unit will be added during this same time period.
- Future single family residential land use was calculated utilizing one dwelling unit per acre (Table 8-10, minimum lot size one acre per existing agricultural zoning); 0.6 units per acre (Table 8-11, minimum lot size 1.67 acres per existing density); and 0.2 units per acre (Table 8-12, minimum lot size 5 acres).
- This means that the Town of Plainfield would likely experience an increase of about 67 to 337 acres of new residential growth depending on the density chosen.
- During the life of the plan, based on 15 percent infrastructure and 20 percent market factor, about 1.7 acres of multi-family will be added.
- It is anticipated that 19.1 acres of commercial and 6.6 acres of industrial will be added over the life of the plan.
- Approximately 62 to 237 acres of agricultural land would be lost over the life of the plan.

INTERRELATIONSHIPS WITH OTHER PLAN ELEMENTS

Land use cannot be considered in isolation from other elements. Economic development; housing; transportation; community and public facilities; and agricultural, natural and cultural resources all interact with one another. A vibrant economy brings people to the area in search of jobs and housing. Additional jobs may require the construction of more businesses, while additional people may demand other housing and services. Infrastructure such as roads and sewer and water extensions may be needed to serve these areas and people. This development may impact existing farm lands, forest areas, and other natural features.

Economic Development

Commercial and industrial land uses should be located in areas that are compatible with adjacent land uses, minimize environmental impacts, and utilize existing infrastructure. Additionally, industrial and concentrated commercial land uses should be situated in areas, if possible, where public sanitary sewer and water are available. While public sewer is not available in the Town of Plainfield, commercial and light industrial uses should be concentrated near similar land uses.

Housing

It is critical that an adequate supply of reasonably priced land be available for residential development. The amount of land that is required depends on the density, design, and placement of development. Residential development should be placed to minimize environmental impacts and utilize existing infrastructure. Scattered residential development increases the cost to provide public services such as fire, police and emergency protection; consumes and fractures large tracts of agricultural and forested areas; and increases conflicts between agricultural and residential uses.

Demand for property with access to natural resources has driven up land values and the cost of housing in the area. New residential development may not be affordable to residents who depend on the area for jobs. The provision of a mix of residential units must be available for all income ranges. Affordable housing including smaller homes on smaller lots and reasonably

priced rental properties must be provided for individuals on low or fixed incomes. These areas should be located within walking distance of schools, stores, and other services.

Transportation

A well planned transportation system provides access to housing, schools, work and through traffic. As part of this transportation system, bike and pedestrian facilities should be expanded in existing areas to provide safe access to schools and business. When new subdivisions or roads are built or existing roads are reconstructed, pedestrian and bike access should be incorporated into these new designs.

Communities should carefully consider the creation of a system of recreational trails for both non-motorized and motorized traffic. Bicycling and pedestrian trails provide alternative transportation methods for local residents and potential tourist attractions.

Utilities and Community Facilities

New development should occur in proximity to existing infrastructure. Unsewered development should not be allowed to occur in areas that can be cost effectively and readily served by public sewer. In rural areas, scattered residential development increases the cost or makes costs prohibitive for services such as fire, police and emergency protection and public transportation (school bus and elderly/disabled). The road network should provide easy access to all areas as valuable time is lost when emergency vehicles must travel on winding local roads.

Agricultural Resources

Agriculture not only supports the economy of the county, but also defines the rural character that residents of the area value. The county is experiencing a decrease in the number of farming operations as farmland is converted to other uses. Farmland areas are being fragmented by scattered residential development which often results in agriculture operational conflicts and limits farm expansion for farmers who wish to remain in farming.

Natural Resources

An abundance of natural resources including Lake Poygan, Willow Creek, the Fox River, streams, woodlands, wetlands, wildlife habitat, agricultural land and other open spaces can be found in the County. People who visit and live in the County value these resources. Increased development can adversely affect these very resources that drew people to the area and caused them to remain. New development should be directed away from sensitive environmental areas including floodplains and wetlands. Care should be taken to minimize the effects of new construction on the existing environment by strictly enforcing erosion control practices. Older septic systems should be inspected regularly to minimize the consequences of failing systems on water quality.

Cultural Resources

The historical past of the area helps to define the present. Care should be taken to preserve, protect, and enhance the cultural resources, historic areas, and buildings that remain. New

development should be incorporated into existing development so that it enhances the historic components that remain.

Intergovernmental Cooperation

Land use decisions that are made within one municipality often affect the decisions and land use of another. For example, the development of a heavy industrial activity near the border of one community has the potential to affect the land use, natural resources and economy of an adjacent community. In this example, a residential use may not be compatible with the heavy industrial use, the industry may pollute a stream that flows through another community, or the business may purchase raw products or supplies from a business in an adjacent community. To minimize conflicts, communities should solicit input and find an effective form of communication with neighboring communities and residents.

POLICIES AND PROGRAMS

Regional, County and Local Policies

Zoning Ordinances

The Wisconsin enabling legislation requires that zoning ordinances must be reviewed and modified if necessary to be consistent with a community's comprehensive plan.

Local municipalities and counties can enact wind energy zoning ordinances to proactively plan for siting future wind energy projects.¹⁹ Wind energy zoning ordinances can establish setbacks from property lines, roads, communication and electricity transmission systems, and residential structures. Additionally, setbacks can be established for undeveloped residential properties. Although noise level effects may be difficult to determine due to differences between individuals, it is possible to establish maximum allowable decibel levels at residential dwellings and specific public facility sites. Height restrictions can be placed on individual turbines. Height restrictions must be used cautiously since a restriction could lead to an increased number of turbines and decreased land use efficiencies. Several safety features can be incorporated into a zoning ordinance. For example, restrictions can be placed controlling the accessibility (lockable, non-climbable towers), electrical connection systems, and appropriate warning signage installation to cite a few examples. Ordinances can also include specific plans for site reclamation if a turbine is abandoned or its use is discontinued.

Other zoning tools can also be utilized to limit the number of potential sites for wind energy facilities. Extra-territorial airport zoning can restrict the maximum height of structures to a distance of three miles from a public airport facility. In addition, overlay zoning can be utilized to further protect significant natural or cultural resources by limiting the conditional uses within a specific area.

¹⁹ *Wisconsin State Statutes 66.0401.*

County Policies

County Zoning. The Waushara County Code of Ordinances regulates private on-site wastewater treatment systems, land divisions and land uses. A few of the chapters that relate to land use are summarized below.

Waushara County Utilities Ordinance is contained within Chapter 54 of the Waushara County Code of Ordinances. This ordinance regulates all private on-site wastewater treatment systems within the county. Although this ordinance does not directly determine land uses, it influences the location of future development according to soil suitability.

Waushara County's Subdivision Ordinance is contained in Chapter 42 of the Waushara County Code of Ordinances. The ordinance facilitates division of larger parcels of land into smaller parcels of land. Land divisions create less than three lots of 15 acres or less. Land divisions can be classified as either major or minor subdivisions. A major subdivision creates five or more lots which are each 5 acres or less in area by successive divisions within a 10-year period. A minor subdivision contains three or more lots that are 15 acres or less in area by successive divisions within a 10-year period. The ordinance also contains design standards for streets, setbacks, utility easements, stormwater management techniques, and erosion control.

The **Floodplain Zoning Ordinance** is contained within Chapter 18 of the Waushara County Code of Ordinances. The purpose of the floodplain ordinance is to protect life, health, and property; to minimize the costs associated with flood control projects; and to minimize the costs associated with relief and reconstruction efforts. The ordinance regulates residential uses, storage of hazardous materials, sewage disposal, wells for drinking water, and uses mentioned in NR 116.

The **Shoreland Zoning Ordinance** is contained within Chapter 58 of the Waushara County Code of Ordinances. Shorelands are defined as unincorporated areas which are: 1,000 feet from the ordinary high water elevation mark of navigable lakes, ponds, or flowages; or 300 feet from the ordinary high water elevation mark of navigable rivers or streams. If the landward side of the floodplain exceeds either of these two measurements, this is used as the zoning standard. This ordinance controls the lot size, building setbacks, landfills, agricultural uses, alteration of surface vegetation, sewage disposal, filling, grading, lagoons, and other uses which may be detrimental to this area.

Chapter 58 also addresses **wind energy generation facilities**.²⁰ The existing ordinance permits wind energy facilities for on-premise consumption in areas that have been zoned for either general agricultural (A-G) or forestry (O-F) uses. Off-premise consumption requires a conditional use. As such, the landscape within these areas must be dominated by agricultural practices or woodlots. Several setbacks, safety restrictions, and ground clearance requirements have been established. The County and local municipalities may wish to collaborate to designate specific sites appropriate for future wind energy facilities.

Farmland Preservation Plan. Waushara County adopted the county Farmland Preservation Plan on June 9, 1981.²¹ The goal of the plan is to preserve productive and potentially

²⁰ WCZLC. 2006. *Code of Ordinances: Waushara County, Wisconsin 58.236 (20)*.

²¹ WCZLC. 1980. *Waushara County Farmland Preservation Plan*. http://www.co.waushara.wi.us/more_lcd.htm.

productive agricultural land, forest land, and environmentally sensitive areas while providing other areas for well planned growth in other appropriate areas of the county. Agriculturally productive areas are defined as existing farms consisting of a minimum of 35 contiguous acres of productive farmland. This plan allows farmers in preservation areas to sign agreements on a voluntary basis under the state's Farmland Preservation Act for tax credits.

Pine River/Willow Creek/Poygan South Priority Watershed Plan. The Pine River/Willow Creek/Poygan South Priority Watershed was selected as a priority watershed in 1995.²² The watershed drains 308 square miles in Waushara and Winnebago Counties. Both waterways are clear, hard water streams that drain the southern two-thirds of Waushara County. The local soils, geology, and other physical resources present in the watershed are highly susceptible to groundwater and surface water contamination from poor land use practices. The high occurrence of agricultural uses exacerbates this vulnerability. The overall goal of the High Priority Watershed program is to reduce sedimentation and nutrient loading to local water resources. The project will end in 2009. In 1997, the Pine River/Willow Creek/Poygan South Priority Watershed Plan was adopted to protect these watersheds.

Land and Water Resource Management (LWRM) Plan. The Waushara County LWRM plan was written in 1999.²³ In 2005, it was revised in response to a legislative call to redesign Wisconsin's programs to reduce pollution from unknown sources. The revised plan was adopted in February 2006. The plan identifies long term goals and implementation strategies to reduce non-point source pollution into rivers, streams, and lakes in Waushara County. The four goals that were identified include: 1.) Reduce soil erosion and continue to protect natural resources; 2.) protect and enhance in-stream, riparian, wetland and upland habitat; 3.) protect surface waters from construction site erosion control & non-metallic mining; and 4.) implement the animal waste prohibition.

Local Policies

Official Map. An official map is intended to implement a master plan for a city, village, or town. The master plan helps direct development by designating areas for streets, highways, parkways, floodplains, and other pertinent land uses. Official maps direct development away from sensitive areas which are designated for future public use. The Waushara County parcel map may serve as a basis for Plainfield's official map.

Existing Comprehensive/Land Management Plans. A Community Management Plan for the Town of Plainfield was completed in 2004. Waushara County is in the process of developing a Comprehensive Plan that will be completed in 2009.

²² WDNR. 1995. *Pine River and Willow Creek Watershed*.
<http://dnr.wi.gov/org/gmu/wolf/surfacewaterfiles/watersheds/wr02.htm>.

²³ WCZLC. 2005. *Waushara County Land and Water Resource Management Plan*.
http://www.co.waushara.wi.us/more_lcd.htm.

Federal, State and Regional Programs

State of Wisconsin

Land and Water Resource Management Planning Program (LWRM). The land and water resource management planning program (LWRM) was established in 1997 by Wisconsin Act 27 and further developed by Wisconsin Act 9 in 1999.²⁴ Although both Acts are designed to reduce non-point pollution, Wisconsin Act 27 regulates rural and agricultural sources while Wisconsin Act 9 regulates urban sources.²⁵ Counties are required to develop and periodically revise LWRM plans. Citizens and professionals in each county identify local needs and priorities in regards to conservation needs through watershed based planning. All LWRM plans must be approved by the Wisconsin Department of Agriculture, Trade, and Consumer Protection.

Wisconsin Act 204. Recent blackouts and other incidents throughout the United States have raised concerns regarding both the supply of energy and the adequacy of the transmission grid. Wisconsin Act 204 mandates that a portion of electricity generation facilities be from renewable resources. To ensure that the renewable energy goals set forth in Wisconsin Act 204 are not unduly hindered, the State passed additional legislation restricting the ability of local governments to prohibit or curtail the development of wind and solar energy systems.²⁶ Municipalities can only impose restrictions on the construction and operation of wind turbines to protect public health and safety. Furthermore, communities cannot impose regulations which increase construction/operation costs, decrease the efficiency of wind generation systems, or specifically prohibit installation of alternate energy systems.

Although traditional approaches such as coal and natural gas are still utilized, other options are being explored that include renewable resources. Under this mandate, other sources of energy such as wind are currently being proposed at several locations throughout Wisconsin. While there is an extensive review process for the placement of large electrical generation facilities, smaller facilities, such as wind turbines, often fall below the size limitation and bypass this review process. Thus, many communities find themselves unprepared to handle future wind turbine proposals.

²⁴ Wisconsin Legislative Reference Bureau. 1997. *Budget Brief 97-6*.

²⁵ Wisconsin Legislative Reference Bureau. 2000. *Budget Brief 00-7*.

²⁶ Wisconsin Statutes 66.0401

Exhibit 8-1

Existing Land Use

Exhibit 8-2
Existing Zoning