

# Town of Hartland

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## **Smart Growth Comprehensive Plan: 2005 - 2024**

Adopted March 2005  
Amended ANCR Element (G) 2012  
Amended Land Use Element (J) 2012

Prepared by:  
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**RESOLUTION NO. 2012-1**  
**RESOLUTION APPROVING AN AMENDMENT TO**  
**THE TOWN OF HARTLAND SMART GROWTH COMPREHENSIVE PLAN:2005 - 2024**

**WHEREAS**, the Town of Hartland, pursuant to Sections 62.23, 61.35 and 60.22(3) of the *Wisconsin Statutes*, has established a Plan Commission; and

**WHEREAS**, Town Board adopted a Comprehensive Plan on Nov 8, 2005, following extensive public participation; and

**WHEREAS**, Town of Hartland Planning Commission request to change the Agriculture, Natural and Cultural Resource and Land Use Elements including changes to land use designations as located on the future land use map adopted as part of the comprehensive plan; and

**WHEREAS**, the Plan Commission finds that the comprehensive plan, with the proposed amendment, contains all of the required elements specified in Section 66.1001(2) of the *Wisconsin Statutes* and that the comprehensive plan, with the proposed amendment, is internally consistent; and

**WHEREAS**, the Town has duly noticed and held a public hearing on the proposed amendment, following the procedures in Section 66.1001(4)(d) of the *Wisconsin Statutes* and the public participation procedures for comprehensive plan amendments adopted by the Town Board.

**NOW, THEREFORE, BE IT RESOLVED**, that pursuant to Section 66.1001(4)(b) of the *Wisconsin Statutes*, the Town of Hartland Plan Commission hereby approves the attached amendment No. 1 to the *Town of Hartland Smart Growth Comprehensive Plan: 2005 - 2024*.

**BE IT FURTHER RESOLVED** that the Plan Commission does hereby recommend that the Town Board enact an Ordinance adopting the Comprehensive Plan amendment.

Adopted this 19 day of September, 2012.  
Ayes 6 Noes      Absent 1

  
\_\_\_\_\_  
Chair, Town Plan Commission

ATTEST:

  
\_\_\_\_\_  
Clerk, Town of Hartland

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**ORDINANCE NO. 2012-1**  
**AN ORDINANCE TO AMEND THE COMPREHENSIVE PLAN**  
**OF THE TOWN OF HARTLAND, WISCONSIN REFERRED TO AS:**  
**TOWN OF HARTLAND SMART GROWTH COMPREHENSIVE PLAN: 2005 - 2024**

The Town Board of the Town of Hartland, Wisconsin, does ordain as follows:

SECTION 1. Pursuant to sections 60.22(3) and 62.23(2) and (3) of Wisconsin Statutes, the Town of Hartland is authorized to prepare and adopt a comprehensive plan as defined in sections 66.1001 (1)(a) and 66.1001 (2) of Wisconsin Statutes.

SECTION 2. The Town Board of the Town of Hartland has adopted and followed written procedures designed to foster public participation during the amendment of the comprehensive plan as required by section 66.1001(4)(a) of Wisconsin Statutes.

SECTION 3. The Plan Commission of the Town of Hartland, by a majority vote of the entire Commission recorded in its official minutes, has adopted a resolution recommending to the Town Board the adoption of the amendments to the document entitled "*TOWN OF HARTLAND SMART GROWTH COMPREHENSIVE PLAN: 2005 - 2024*," containing all of the elements specified in section 66.1001(2) of the Wisconsin Statutes.

SECTION 4. The Town of Hartland has held at least one public hearing on this ordinance, in compliance with the requirements of section 66.1001(4)(d) of Wisconsin Statutes, and provided numerous other opportunities for public involvement per its adopted public participation strategy and procedures.

SECTION 5. The Town Board of the Town of Hartland, Wisconsin, does, by enactment of this ordinance, formally adopt the amendments to the Element G; Agricultural, Natural and Cultural Resources and Element J: Land Use and the within the document entitled: "*TOWN OF HARTLAND SMART GROWTH COMPREHENSIVE PLAN*", pursuant to section 66.1001 (4)(c) of Wisconsin Statutes.

SECTION 6. This ordinance shall take effect upon passage by a majority vote of the members-elect of the Town Board and publication/posting as required by law.

Adopted this 19<sup>th</sup> day of September, 2012.

Robert A. Walcott  
Town Chairman

Frank Heller  
Supervisor

Ray Tschetter  
Supervisor

Attest: Maureen Nylke Town Clerk

Posted on Sept 21, 2012

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# AGRICULTURAL, NATURAL AND CULTURAL RESOURCES ELEMENT

## Objective of Element

In an effort to address changing economic and agricultural conditions, the Agricultural, Natural and Cultural Resource Element and the Land Use Element of the *Town of Hartland Smart Growth Comprehensive Plan: 2005 -2024* were updated in 2012. Both of these elements are essential components of the Town’s Comprehensive Plan as agriculture is the predominant use in the town.

The basic purpose of this element is to provide background information on a wide variety of agricultural, natural and cultural resources and features in the Town (Exhibit G-1). This information will help the Town recognize and identify important resources that need to be protected and/or effectively managed. Although many natural resources are slow to visual change and evolution, they are extremely vulnerable to immediate mismanagement which can have a substantial impact on their function. For example, poor cropping practices can lead to the erosion of fertile top soil which is essential for profitable crop production. Likewise, the mismanagement of woodlands and forests can have impacts on area wildlife populations and stormwater quality. This element of the plan will also identify if there is anything that may limit the development potential within the Town (e.g. poor soils, floodplains, wetlands, bedrock, ground water pollution, etc.). Collectively, this information will help the Town “Grow Smart” which is one of the major tenants of this plan and state statutes.

**Exhibit G-1. Basic Objectives of the Agricultural, Natural and Cultural Resources Element**

- Provide background information on a wide variety of agricultural, natural and cultural resources in and around the community.
- Provide maps that document the location and extent of these resources.
- Identify areas for development with the least impact on important resources and features.
- Identify physical limitations, if any, to development.

## Agricultural Resources

### General Overview

Agriculture in the state has long been a significant segment of the statewide economy accounting for just over 2 percent of the gross state product. However recent trends show agriculture gaining significance as an important local and state economic driver. In a time where interest by the public to buy local and support the regional economy has risen, agriculture provides a tremendous opportunity to keep investment within the community, county, the region and state.

Family owned farms, food processors and agriculture-related business generate thousands of jobs and millions of dollars of economic activity while contributing to local income and tax revenues. Dairy is Shawano County’s major industry, ranking among the state’s top counties for milk production. Shawano County is part of Wisconsin’s Central Dairy Belt which includes Clark and Marathon Counties as well. The county ranks in the state’s top five counties for alfalfa and corn silage production which are major forage crops for dairy cattle. Cash crops of wheat, soybeans and corn complement the local livestock industry. Typical crops include: rye, barley, soybeans, oats, hay and alfalfa which are the primary crops grown in the region. Specialty crops, vegetables and potatoes are also grown in the area. Other commodities,

including cattle and calves, sheep and goats, maple syrup, Christmas trees, and hogs round out Shawano County’s agriculture.

According to the University of Wisconsin Cooperative Extension, some interesting facts on how agriculture impacts Shawano County and the trickledown effect to the town include:

- Agriculture provides 4,267 jobs countywide, 22% of the county’s workforce. Every job in agriculture generates an additional 0.37 jobs in the county.
- Agriculture accounts for \$487 million in business sales, 25% of the county’s total business sales. Every dollar of sales from agriculture products generates an additional \$0.33 of business sales in other parts of the county’s economy.
- Agriculture contributes \$175 million to county income, 16% of the county’s total income.
- Agriculture pays almost \$16 million in taxes.
- Shawano County Farmers own and manage 271,718 acres or 47% of the county’s land.

Dairy farming is the major agricultural industry in Shawano County. On-farm milk production generates \$165.5 million in business sale. Processing milk into dairy products accounts for another \$87.1 million. On-farm milk production accounts for 1456 jobs, and dairy procession accounts for another 347 jobs. At the county level, each dairy cow generates \$3425 in on-farm sales to producers.

Every five years, the US Census of Agriculture conducts an intensive inventory of the state of agriculture throughout the state of Wisconsin and the country. Unfortunately, the most recent inventory was not concluded by the writing of this amendment, so the most recent data available was from 2002 to 2007. This window represented an active economic development period in the state and country. Based on this data and information, several trends can be identified but these trends will likely see some adjustments during the next census period.

**Table G-2. Agriculture Characteristics; Shawano County: 2002 and 2007**

	2002	2007	Percent Change
<b>Land in farms (acres)</b>	270,534	271,718	-0.4%
<b>Farms</b>	1,465	1,450	-1.0%
<b>Full-time farms</b>	1,008	792	-21.4%
<b>Part-time farms</b>	457	658	44.0%
<b>Market value of agricultural products (1,000)</b>	\$130,115	\$199,105	53.0%
<b>Market value of agricultural products per farm</b>	\$88,816	\$137,314	54.6%
<b>Farms with milk cows</b>	500	420	-16%
<b>Milk cows</b>	37,635	36,453	-3.1%

Source: U.S. Census of Agriculture

Between 2002 and 2007, the number of farms dropped 1.0 percent to 1,450 farm units. The number of households that rely on farming on a full-time basis has declined from 1,008 in 2002 to 792 in 2007, representing a drop of 21.4 percent.

The gross market value of agricultural products produced in Shawano County increased by 53.0 percent from 2002 to 2007, while the value per farm increased 54.6 percent. Given the strong commodity prices since 2007, it is expected that these totals will continue to show impressive gains. Over the 2002 to 2007, 5-year period, the number of farm operations with milk cows has declined by 16.0 percent and the total number of milk cows in the county decreased by 3.1 percent. This suggests that the number of farms has declined as well as the herd sizes. This trend will likely stop or even reverse given recent dairy prices and activity discussed later in this element.

The size of farms is changing, but in a way unlike what is seen in much of Wisconsin. Statewide, the number of mid-sized farms is decreasing as the numbers of small and large farms are both increasing. There are a growing number of hobby type farms as ex-urbanites move into more rural areas and as farm economics are forcing a relatively small proportion of full-time farmers to increase the size of their operations. Although Shawano County experienced growth with smaller farms, the agglomeration of farm units into mega farms is more limited. In Shawano County (Table G-3.) from 2002 to 2007 the greatest percentage increase, 1.9 percent, was in farms averaging 10 to 49 acres, followed by a 0.9 percent increase in those farms averaging 50 to 179 acres and 1 to 9 acres. One explanation could be that Shawano County has been an attractive Amish settlement location. Farms purchased and owned by the Amish tend to be smaller in size than traditional “for profit” farming operations. There was a 4.3 percent decrease in those farms in the 180-499 acre range. It is likely this size range of farm can be liquidated into smaller operations or sold to be part of even larger operations. The slowest growth rate was for those farms in the 500 or more acre range. Land availability can be a major factor in the inability of large farms to expand even further which could be the case in the town of Hartland.

**Table G-3. Size of Farms; Shawano County: 2002 and 2007**

Size (acres)	2002		2007	
	Number	Percent	Number	Percent
1 to 9	44	3.0%	56	3.9%
10 to 49	302	20.7%	328	22.6%
50 to 179	592	40.5%	601	41.4%
180 to 499	426	29.1%	359	24.8%
500 or more	98	6.7%	106	7.3%
Total	1,462	100.0%	1,450	100.0%

Source: U.S. Census of Agriculture

In 2008, the United States fell into an economic recession, stagnating business and industrial growth throughout Shawano County, the state of Wisconsin and the United States.

An exception to the economic recession during this time was a steady to growing agricultural sector. Wisconsin and local agriculture withstood the recession well benefitting from stable to strong grain prices especially corn and soybeans. Although historically volatile, dairy farmers experienced some of the highest milk prices during the period from 2008 to 2011. Given the stable to strong agricultural economy, farmland prices for agriculture increased contrary to the slumping development market. Although commodity prices were higher than normal, farming expenses, especially fuel and fertilizer increased continuing to challenge farmers with tight profit margins.

Commodity forecasts as of the summer of 2012, predict continued high grain prices, especially for corn and soybeans. Much of the increase brought on by the significant mid-west drought of 2012. In July 2012, the U.S. Department of Agriculture (USDA) announced that the drought in Wisconsin was so severe that 23 counties were declared a federal disaster. Fortunately, it appears as of the writing of this amended element, crop yields in the town of Hartland will not suffer as significantly as other parts of the state giving area farmers the opportunity to maintain or even grow profits. High grain prices will likely drive up the demand of agricultural land over the next several years as farmers will attempt to capitalize on high prices to maximize profits. In areas where dairy farming is significant, like in Shawano County, the competition for land between dairy and grain farmers could further inflate land values. The gap between the historically high value of land for development and the increased value of agricultural land has narrowed significantly and will impact land use throughout the town over the planning period.

As documented by history, trends in the agricultural economy can change, but one vital part of the industry that remains fairly constant are the traits within the land to produce crops. From an economic and land use planning perspective, prime farm soils provide the least amount of nurturing investment to grow good crops so those soils become the most obvious targets to preserve for farming purposes. However, good land for agriculture is good land for most other types of land use. Local evidence of this fact can be witnessed when the STH 29 4 lane corridor was planned and constructed. For the most part, the corridor followed some of the best

working farmland within the town. According to correspondence from the State Department of Transportation, a total of 275.54 acres of farmland were consumed via purchase or easement for the project in the town of Hartland.

Establishing the criteria to define areas for farmland preservation is more complicated than just selecting soil types for preservation. Soil boundaries are irregular while working farmland tends to follow 40 acre parcel and section lines. These parcels often contain several soil types. The farmer manages his or her practices (drainage, fertilizer rates, etc.) accordingly within the field he or she farms. Selecting only a portion of a field for farmland preservation ignores the historical relationship between the farmer and the land. Furthermore, land ownership patterns play a big role in farmland availability. Typically the more fragmented the landscape by smaller parcels, the more difficult it becomes for farmers to assemble and access required acreages needed to run their operations. Also, the potential for land use conflict between farmers and other land owners increase.

A more recent trend is a “leap frogging” effect of farmland purchases. This movement is primarily driven by large dairy or crop farmers that seek the necessary acreage to maintain their operations. It is not uncommon to see land purchased or rented over several towns by one farming operation. Farmers who seek willing land sellers are often limited to fields interspersed between other land use types. This arrangement often leads to a checkerboard pattern of agriculture throughout the landscape.

In addition, many rural properties are purchased for recreation and investment type purposes with no intension for agriculture. Other properties may be handed down to the next generation through family arrangements. Many times the new owners have lost a connection to the land and have little vision for its future use.

Since agriculture is such a predominant use in the Town, many of the trends, factors, and predictions listed above will be utilized in the preparation of the Future Land Use Plan found in Land Use Element. Additional discussion will occur in that element relative to the criteria used for farmland preservation.

## Natural Resources

### Geology

**Exhibit G-4. Sand and Gravel Potential of Selected Glacial Landforms**

Glacial Landform	Sand and Gravel Potential
Outwash (plains, terraces, fans and valley trains)	Likely source of commercial deposits. Generally found in flat-lying formations of varying quality and depth.
Ground Moraine	Low potential. Production is limited to other glacial landforms superimposed on the ground moraine, including gravel-cored drumlins and isolated kames, eskers and similar features.
End Moraine	Low potential. Isolated, small pockets may exist in association with outwash plains and ice contact deposits.

Source: Land Resources Analysis Program, 1976

The bedrock underlying the Town primarily consists of Cambrian sandstone and limestone. Beneath these sedimentary rocks is the crystalline rock, which is impermeable to water. Rhyolite, granite and basalt are common components. The surface geology and landforms in the region (and much of Wisconsin) were formed by continental ice sheets that advanced and retreated from the region several times during the period of time known as the Pleistocene Epoch. Glaciated deposits are grouped into two categories depending on how the materials were moved. If moving water transported the materials, the resulting deposits are referred to as outwash deposits and are

characterized by well-sorted materials and stratified layers. If the ice sheets physically moved or carried the materials, the deposits are unsorted and unstratified and are known as till deposits. Although there are two main types of glacial deposits, they appear in a wide variety of landforms.

The town of Hartland lies within the Central Plain geographical province. The Central Plain of Wisconsin is a crescent shaped belt covering about 13,000 square miles. The weak Cambrian sandstone floors all of it, except in the northwest where the removal of the sandstone has exposed the underlying Keweenawan lavas for a small area. The general slope from place to place is very gradual. The local relief varies considerably, but except for a few isolated hills in the northwestern part of the plain it is nowhere great. The Central Plain is not at all a continuous plain, but in many places is a region of low hills. Parts of the plain are due to smooth river deposits, lake-bottom accumulations, vegetation in swamps, or glacial drifts. In eastern Wisconsin the Cambrian sandstone dips rather steeply and is thinner than in the central part of the state. Rising above the sandstone plain are numerous, usually flat-topped ridges and hills, often bearing the name “mound.” The ice of the continental glacier advanced over the Central Plain of Wisconsin from both the northeast and the northwest. At the eastern edge of the Central Plain where Shawano County is located, the plain is not smooth, but slightly irregular, with gently undulating ground moraines, rough terminal moraines and outwash plains containing deep kettles and many valleys that eroded after the glacial outwash was deposited. The drift deposits of the Central Plain are similar to those in the Western Upland and the Eastern Ridges and Lowlands except they are considerably sandier.

The overall terrain in the town of Hartland area is gently to moderately rolling. The topography is generally characterized with ground moraines with numerous basins and depressions that are remnants of the earlier glacial activity. It is said locally that the original STH 29 corridor was the initial trail corridor through the town as it followed a natural ridgeline that extended east to west through the original landscape.

**Metallic and Non-Metallic Resources**

There are no known remaining metallic mineral deposits of economic value in or near the Town. However, a number of areas in the vicinity have been mined in the past so it is always possible that additional mining could occur. Mineral resources in Shawano County are nonmetallic in nature including sand, gravel, shale and limestone.

Sand and gravel resources are often referred to as “pits.” The term “quarry” is appropriate for limestone because such operations require controlled blasting to remove material. All mineral extraction operations are subject to state rules regarding dust control, blasting, safety and reclamation. The most familiar uses for such nonmetallic mineral resources are road building and maintenance. The materials are also used in the construction of residential, commercial and public buildings, bridges, sewer and septic systems, and use in erosion control measures.

Although most of the commercial sources of sand and gravel are generally associated with the outwash deposits, isolated pockets of sand and gravel can be found as summarized in Exhibit G-4. The Town should expect some continued and potentially new “pit” activity throughout the planning period.

**Soils**

Soils in the region were formed from the Pleistocene deposits transported by continental glaciers that moved across the land many thousands of years ago. According to the Soil Survey of Shawano County produced by the Soil Conservation Service of the U.S.

Department of Agriculture, the primary soils in the town of Hartland are within the Onaway soil association. Even though there are nineteen different soil types within the immediate

**Exhibit G-5. Soil Associations Found in the Town**

Soil Association	General Description
Onaway	Well drained, predominantly sandy, moderate permeability

Source: Soil Conservation Service (1992)

vicinity of the Town, the Onaway series is clearly the dominant one (Exhibit G-5). Onaway soils are well drained with moderate permeability and are found on land slopes ranging from 0 to 15 percent. The remaining soil types include silt loams of the Shiocton, Bach, Solona, Angelica, Fordum and Minocqua series; the sandy loams of the Boyer, Lorenzo and Salter Variants, and the Fairport series, and the Seelyeville, Markey and Cathro mucks constitute the remainder of the existing soils.

Soils within the Onaway series are suitable for growing cultivated crops. Areas within the series that have steep slopes are often used as pastureland or woodland. These soils have moderately low to moderate amounts of organic matter content in the surface layer which is friable therefore easily tilled. These soils have a slight to moderate hazard of erosion which can be easily reduced through proper crop and field management. Overall this series is a prime agricultural soil, well equipped for small grain crops, corn, legumes, alfalfa, grasses, or pasture. As noted in the Agriculture Resource-General Overview Section of this element, soils associations alone cannot be the sole criteria to establish farmland preservation areas. It is often stated that a good farmer can take marginal land and make it good farmland. With the advancements in crop science and soil management, the statement is more accurate today than ever before.

## **Groundwater**

Groundwater in Shawano County is contained in layers of porous bedrock in four geologically distinct aquifers. Water in an aquifer travels underground from its source to a discharge point such as a well, wetland, spring or lake. Groundwater moves through these aquifers in an artesian system and a water table system. In an artesian system the water moves because it is under pressure created by a confining layer of impervious rock. In a water table system the water is not under pressure and flows by gravity. The lowest aquifer is composed primarily of sandstone and is the most productive aquifer. Aquifers closer to the surface tend to yield lesser amounts of water. Large supplies of good quality groundwater for domestic, commercial and agricultural uses are available in Shawano County.

The Department of Natural Resources maintains a database containing well information for many public and private wells in the State. A review of this database found that there are some wells with elevated levels of nitrates and volatile organic compounds. Nitrates can commonly enter the groundwater from individual septic systems and from standard farming practices. However, within the boundaries of the town of Hartland there are no atrazine prohibition areas as designated by the Wisconsin Department of Agriculture.

The town of Hartland is located within the Shiocton River Watershed. The Shiocton River is a tributary to the Wolf River, having its headwaters in Shawano County and flowing south and west to meet the Wolf River in Outagamie County, north of the city of Shiocton. This watershed holds the East, West and Mainstream Shiocton River and is approximately 53 miles in its entirety. The West Branch of the Shiocton River begins in a cedar swamp just north of Bonduel.

In 2000, the Drinking and Groundwater Section of the DNR ranked all of the watersheds in the state for groundwater contamination potential. The rankings are based on the amount of rural and urban land, the presence of confined feeding operations and sample analytical data for nitrate and pesticides from private wells. Based on the methodology selected, the scores could range from 0 (no potential) to 160. The Shiocton River Watershed had a groundwater ranking score of 71.99,

**Exhibit G-6. Major River Basins of Wisconsin**



which is considered moderately susceptible to contamination potential. The watershed is 70 percent agricultural. Of the 6 water samples taken, none exceeded the enforcement standard of 10 ppm for nitrates and one exceeded the preventative action limit of 2 ppm.

### **Surface Water and Wetlands**

The Town is located primarily in the Fox-Wolf River Basin as shown in Exhibit G-6. The Wolf Basin's general topography can be characterized by rolling hills, plain meadows, lush and forested wetlands, numerous lakes and small tributaries. Vegetation consists primarily of hardwood forests mixed with large amounts of hemlock, northern white-cedar swamp, and hardwood-conifer swamp. Many of the small creeks and rivers are sustained by draining numerous wetlands between rocky hills.

Development within the basin is predominately along the Wolf River or its major tributaries. Communities like Shawano, which is 10 miles from Hartland, were developed primarily because they were located on waterways that were used by the logging industry of the early settlers.

Uncontrolled development is one of the most important issues that face the residents and governmental bodies within this basin. With the reconstruction of Highways 29 and 10 to four lanes, east/west travel has been greatly improved, offering increased employment options for residents of the area, increased access to recreational opportunities in the area, and increased use of the basin's natural resources. An important aspect of this increased mobility is that it is causing the price of land in the area to increase significantly. Further, this is creating a situation where it is becoming economically difficult to keep large tracts of land whole. Many farms and land holdings are experiencing economic pressure to sub-divide, which if it occurs, must be handled in a planned, meaningful way in order to effectively manage the resulting pressures on the basin's environmental and natural resources.

Within the Fox-Wolf River Basin, the town of Hartland lies near the headwaters of the West Branch of the Shioc River. The water flowing in the River is very hard and clear and passes from north to south through the northwestern edge of the Town. Within the area, the stream is actually a small creek, offering few recreational opportunities. Lands adjacent to the stream are relatively undeveloped and mostly wooded. A wooded wetland forms the headwaters area of one stream segment in the northwestern portion of the Town. Cedar Park, in the village of Bonduel, is located along the river.

### **Vegetation**

The vast majority of land in the town of Hartland and immediate surrounding area is farmland with a limited number of scattered areas of woodland in the vicinity. Most of these wooded lands are located in proximity to low-lying wetland areas. Lowland vegetation can generally be found on both banks of the West Branch of the Shioc River. The mixed landscape of farmland, wetlands and upland forest provide a habitat unmatched anywhere in Wisconsin for species like white-tailed deer and turkey which are hunted heavily for management purposes.

A significant portion of the SW corner of the Town of Hartland, 559 acres, is part of the Navarino State Wildlife Area. The wildlife area is comprised of sandy uplands and ridges with marshy depressions. Open fields, swamp conifer, lowland scrub, bog, bottomland hardwoods, pine plantations, and aspen/oak forest make up the habitat types. The Navarino Wildlife Area is managed to provide opportunities for public hunting, trapping, fishing and other outdoor recreation while protecting the qualities of the unique native communities and associated species found on the property. The area contains significant occurrences of several natural communities including floodplain forest, sedge meadow, emergent marsh and dry-mesic forest. Share-cropping is used to maintain a mosaic of agricultural land. Populations of invasive species are controlled or eliminated by cutting, pulling, burning, herbicide treatment and/or bio-control. Recent contact with the WDNR as part of the plan amendment process indicated that they have no planned purchases to enlarge the Navarino Wildlife Area.

**Threatened and Endangered Species**

Based on information contained in Wisconsin's Natural Heritage Inventory there are 9 plant species, 22 natural communities, 2 bird species, and 28 various animal species in Shawano County that are threatened, endangered, or a species of special concern.

## Cultural Resources

### Historical Overview

Based on archaeological evidence so far discovered, the first inhabitants to what is now Wisconsin arrived over 10,000 years ago when the continental glaciers retreated northward. To help understand man’s presence in the state, archeologists have defined general time periods as summarized in Exhibit G-7.

**Exhibit G-7. Archaeological Periods in Wisconsin**

Time Period	Name	General Description
10,000 years ago	Paleo-Indians	Paleo-Indian followed the woolly mammoth, mastodon and bison into the region as glaciers retreated.
8,000 years ago	Archaic	As the climate continued to warm, the large mammals of the Ice Age were replaced by many of the animals found in the state today. People lived in small family groups, harvested wild plants, nuts and acorns and hunted small animals such as deer and elk
3,000 years ago	Woodland Period	People tended to live in Towns. The first evidence of agricultural activities, pottery and the use of bows and arrows. Many mounds were built often in the shape of shape of animals, including turtles, birds and bears, which are referred to as effigy mounds.
1,000 years ago	Mississippian Period	The people in this period know as Oneonta, lived in larger Towns with extensive agricultural fields, often growing corn, beans and squash. The Oneonta were part of a complex trading network that extended to both coasts.
1634 to present	Historic Period	The arrival of Jean Nicolet, a French explorer, in 1634 marked the beginning of the Historic period.

Source: The State Historical Society of Wisconsin and others

Unfortunately, much of the evidence from the pre-history has been lost with increased urbanization and land alteration. Isolated prehistoric sites such as temporary or permanent settlements or extractive sites have been identified throughout the state. As noted in the above exhibit, people during the Woodland Period often built burial mounds. Although single mounds have been found, most occurred in groups, in some cases 30 or more in one location. The Town is located in an area of the state where Indian mounds are somewhat less common (Exhibit G-8). Isolated burial mounds may be found in and around the area.

### Archaeological Resources

According to records maintained by the State Historical Society there are approximately seventeen archaeological sites that have been identified and catalogued in the town of Hartland and two cemeteries in the village of Bonduel.

These sites include isolated finds, cemeteries and historic burials, farmsteads, cabins, and houses, and a campsite/village. The various sites are identified below according to the geographic Section of the Town where the site is located:

- Section 6: Schultz Farmstead and burials
- Section 7: Meyer Historic Site Isolated Finds; Zastrow Farmstead and scatter
- Section 8: Westphal Historic Foundation-Cabin/House

- Section 9: St. Paul's Cemetery; Unnamed Cemetery (Bonduel)  
 Section 15: Zion Cemetery  
 Section 16: Harvey Smith #2 Campsite/Village; Harvey Smith #3 Isolated Finds; Kupsky Historic Site Lot; Harvey Smith Historic Burials; Well pump and homestead  
 Section 17: Frieden's Cemetery; Genke Historic Trash Heap; Wilmar Westphal Site Lot  
 Section 21: Isolated Finds  
 Section 24: Moericke Foundation and Depression  
 Section 25: Harvey Smith #1 Isolated Finds  
 Section 34: Isolated Finds

### **Burial Sites**

In 1987, the state passed the Wisconsin Burial Sites Preservation law (s.157.70 Wis. Statutes) to protect historic and prehistoric burial sites from all types of human disturbance. The law gives the State Historical Society of Wisconsin the responsibility for inventorying and cataloguing all prehistoric and historic burial sites in Wisconsin. The law is to assure that all human burials in this state are granted equal treatment without reference to ethnic origins, religious affiliations, or age of the burial site. Once a burial site is registered, it is exempt from property taxes. Aside from exhumations authorized by coroners or by immediate family members, no one may disturb a human burial site without authorization from the Director of the State Historical Society of Wisconsin. The law also authorizes penalties for unauthorized disturbances or the failure to report disturbances.

According to the State Historical Society there are a number of identified archaeological cemeteries and burial sites in the Bonduel/Hartland area. Those that have been recorded, to date, include:

- (1) Frieden's Cemetery (Section 17)
- (2) Zion Cemetery (Section 15)
- (3) Harvey Smith Historic Burials (Section 16)
- (4) Schultz Farmstead and Burials (Section 6)
- (5) St. Paul's Cemetery (Section 9 – Bonduel)
- (6) Unnamed Cemetery (Section 9 – Bonduel)

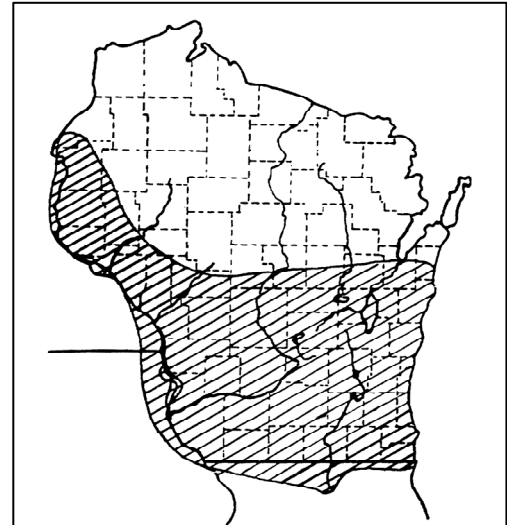
The cemeteries currently in use today include the St. Paul Lutheran Church Cemetery located on East Green Bay Street, the Zion United Methodist Church Cemetery located on STH 47, and the Evangelical Lutheran Church Cemetery located on Maple Road in Cecil.

### **Historic Resources**

There are no historic sites in the Town that are listed on the National Register of Historic Places. However, according to the Architecture & History Inventory (AHI) maintained by the State Historical Society of Wisconsin, there are 18 structures with historical significance in the Town. These include the following:

- (1) Daniel Lemhouse barn located on STH 29; 5 miles east of Shawano
- (2) Cheese factory, utilitarian building located on the NE corner of Sunrise and Valley Roads
- (3) A smokehouse located on the east side of Valley Road .6 mi north of Sunrise Road;
- (4) A shed located on the east side of Valley Road .6 mi north of Sunrise Road;
- (5) Salt City Church located off of STH 55;
- (6) Salt City Church Meeting Hall located off of STH 55
- (7) Carl Ollman House on STH 29;

**Exhibit G-8. Distribution of Paleo-Indian Burial Mounds in Wisconsin**



- (8) A House in Section 2617E-14;
- (9) Charles Sager Farm located in STH 29;
- (10) Frank C. Heller House located in Section 2617E-15;
- (11) Two Houses (unnamed) located in Section 2617E-23;
- (12) Four Houses (unnamed) located in Section 2617E-24;
- (13) The Rueckert House located in Section 2617E-15;
- (14) The Henry Perry House located in Section 2617E-23.

### **Goals, Objectives, Policies and Recommendations**

The goals, objectives, policies and recommendations for this element are found in Chapter B.

# LAND USE ELEMENT

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## ■ General Overview

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In an effort to address changing economic conditions, the Land Use Element of the Town of Comprehensive Plan was updated in 2012 along with the Agricultural, Natural and Cultural Resource Element. Both of these elements are essential components of the Town's Comprehensive Plan as agriculture is the predominant use in the town.

The character of any community is comprised of many interrelated factors. Among these, the character of established land uses often stands out as very significant. Aside from affecting the visual character of a community, land use patterns can affect many other aspects of our daily lives. Just a few examples will help to illustrate. The proximity of schools to residential areas affects how many children can safely walk or bike to and from school and how much is spent on busing. The mix of land use types directly affects local property taxes. Along with population levels, land use densities help to influence the number and types of businesses a community can support. Land use patterns can also affect the cost of providing public services and the cost of housing within a community. How a community grows can affect the viability and desirability of established commercial centers and residential areas. The way in which residential areas and neighborhoods develop can affect the type of relationships we have with our neighbors. Taken together, land use patterns can significantly affect people's perception of a community. Consequently, existing and future land use patterns are very critical components of this plan. In rural areas, such as many Wisconsin towns, the roll of agriculture plays a significant factor in appearance and character. As much as the appearance and quality neighborhoods and business districts define a village or city, the type of agriculture can define a town. The Town of Hartland is no exception as the farms and rural landscape features of the town are predominant.

In 2008, the United States fell into an economic recession, stagnating business and industrial growth throughout the town, state of Wisconsin and the United States. Residential development, especially in more rural areas, came to an abrupt halt significantly reducing the demand for land to accommodate development. When new residential development did take place, houses and lots sizes tended to be smaller in size then what was traditionally experienced in the earlier part of the decade.

An exception to economic recession during this time was a steady to growing agricultural economy. Wisconsin and local agriculture withstood the recession well benefitting from stable to strong grain prices especially corn and soybeans. Although historically volatile, dairy farmers experienced some of the highest milk prices during the period from 2008 to 2011. Given the stable to strong agricultural economy, farmland prices for agriculture increased contrary to the slumping development market.

In addition, the creation of the Wisconsin Working Lands Initiative (WLI) signed into law in 2009, significantly changed the traditional requirements of the farmland preservation program. The WLI also created the Agricultural Enterprise Program designed to increase local investment in Wisconsin agriculture. The WLI will become a significant implementation tool for the Town of Hartland Comprehensive Plan.

As part of the new WLI, counties throughout the state of Wisconsin will be required to update their current farmland preservation plans. Shawano County still administers its farmland preservation program based on a farmland preservation plan that was developed in 1982. By December, 2013, Shawano County must update the 1982 plan and have it certified by the Department of Agriculture, Trade and Consumer Protection (DATCP). As part of the Land Use Element update process, the Town of Hartland Planning Commission and Town Board reviewed

the 1982 Shawano County Farmland Preservation Plan to determine its relevancy to town conditions 30 years later. It is the intent of the Hartland Town Board and Planning Commission to utilize the results of the amended Land Use Element to help guide the Shawano County Farmland Preservation update process.

The 1982 Farmland Preservation Plan map for the Town of Hartland shows over 87% of the town's land area designated for farmland preservation. The plan was developed during a time small family farming operations (40 to 120 acres in size) were still numerous, operational and, for the most part, still profitable in the town as a means to make a living and raise a family. Most landowners throughout the town had some association with agriculture. Much of the marginal land such as woodlots, wetlands and stream corridors were utilized as pasture land, increasing the presence of agriculture throughout the landscape. Most of these lands were recognized as areas for preservation in the 1982 Shawano County Farmland Preservation Plan. Today, pasturing these types of environments is not considered a good land stewardship activity.

However, since 1982, many social and economic factors changed and with it the face of agriculture in the town, state and nation. High interest rates during the early 1980's affected the ability of farmers to replace farm infrastructure, expand operations or purchase additional land. In addition, basic bridge loans to cover fundamental expenses like seed and fertilizer became a challenge to repay for farmers. Farm commodity prices were not high enough to cover the basic carrying cost for farmers. Farms began to disappear via foreclosures and personal frustration. The challenge to farm available land was risky. Farm youth saw little opportunity in agriculture citing long hours, hard work, big debt and low commodity prices as a precarious venture. Many youth left the countryside for urban areas which offered better employment opportunities.

In addition, farmers and financial institutions (many of which held foreclosed land) looked for ways to transition farmland into more profitable land use types such as rural residential and recreational land. Many new land owners were not as dedicated to agriculture as their predecessors. The attitude of the land owner towards agriculture became as important as the land itself and with it so did the apparent need for farmland preservation. Farming culture had changed.

The influx of new landowners, many of which worked in urban centers, brought new ideas and visions to how land use should occur. In many instances, marginal land for agriculture was sold for recreational (i.e. hunting) or large residential lot type purposes. Continued agriculture did not appear a profitable direction in the wake of the farm crisis of the 1980's. Market factors simply pushed the transition to other uses.

Another significant activity which occurred in the Town of Hartland and throughout Shawano County since the 1982 Shawano County Farmland Preservation plan was the realignment and reconstruction of STH 29. Although a vital statewide east-west arterial and economic benefit for the state, the required purchase of farmland to accommodate the four lane highway created challenges for those local farmers that continued to work in agriculture. Not only was farmland removed from production, but the highway split farmland and farming operations. This fragmentation of land made field access more difficult for farmers and created challenges moving farm equipment from one site to another as vehicle access, for safety reasons, was limited to the new highway corridor.

The recent "good news", as previously stated, is that agriculture is gaining improved prosperity. The value of farmland has increased, commodity prices have risen and future commodity price forecasts look promising. However, the drive for farming and even the need farmland preservation is still driven by the intent of each land owner. Agricultural markets, commodity prices and programs can assist in influencing that intent. If the farming economy and markets

stay strong, farmland preservation will occur naturally. Assistance provided by programs appealing to the farmers will be embraced furthering the commitment to farmland preservation. The Town of Hartland officials feel obligated to respect the intentions of the landowners in generating future land use plans.

Other trends which emerged since the adoption of the Town’s Comprehensive Plan in 2005, include the following:

- The gap between the values of land for agriculture versus development is narrowing. An increase in gas prices along with a slumping building economy has reduced the market for rural residential lots and subdivisions.
- Residential growth has slowed considerably, decreasing the demand for agricultural land for development purposes. The recent economic slowdown is the likely cause of this trend. More local and better paying jobs are needed for housing demand to change. Gas prices staying above \$3.00 per gallon will also play a big factor in reducing the demand for rural type development.
- Land prices for agriculture land will increase further as demand and competition for crop land surges. Grain, cash crop and dairy farmer farmers will likely compete for the same available land driving land cost upwards.
- Organic farming will become a more predominant component in Wisconsin agriculture as the public demand grows for this type of product. The town should expect some transition into this form of agriculture. Organic farming typically occurs on smaller sized farms and is often ancillary to other primary employment.
- A growing interest in frac sand mining statewide has had significant rural impacts in the western portions of Wisconsin. Geological information indicates the Town of Hartland does contain a vein of sandstone which might spawn interest.
- Private property rights will continue to be a strong value of residents within rural Wisconsin communities.

## Objective of Element

The intent of this element is to provide background information to develop a future land use plan for the town of Hartland (Exhibit J-1). Existing conditions are also examined, including the following: land use patterns, the presence of waste disposal sites and contaminated sites, land use conflicts and local real estate forces.

Based on the projections for the population and the number of housing units over the next 20 years, the acreage requirements for residential growth are presented along with land requirements for commercial and industrial land uses. However, contrary to the demand for just intensive type land uses like residential and commercial, town leaders must also be concerned over the land requirements for agriculture. Based on the land use projections,

### Exhibit J-1. Basic Objectives of the Land Use Element

- Identify changes, if any, in the municipal boundary due to annexation or detachment.
- Prepare an inventory of existing land uses.
- Identify if there are any places that have been used to dispose of wastes or that have been contaminated with an environmental pollutant.
- Assess local real estate forces.
- Project how much land will be needed to accommodate anticipated growth over the next 20 years.
- Prepare a future land use map based on these projections and on information contained in the Agricultural, Natural and Cultural Resources Element.
- Develop goals, objectives and policies that will accommodate the needs of current and future residents.

different land development scenarios are presented and analyzed. The end product of this element is the preparation of a future land use plan map, which is intended to guide new development and redevelopment over the next 20 years.

### **Existing Land Use**

For the purposes of this plan, existing land uses were grouped into general categories for review and analysis. Individual properties were placed into one or more categories based on information obtained from the town of Hartland. Map J-1 shows existing land uses in the Town as of 2004 and Table J-1 describes the various categories and shows the number of acres in each category and as a percent of the total area.

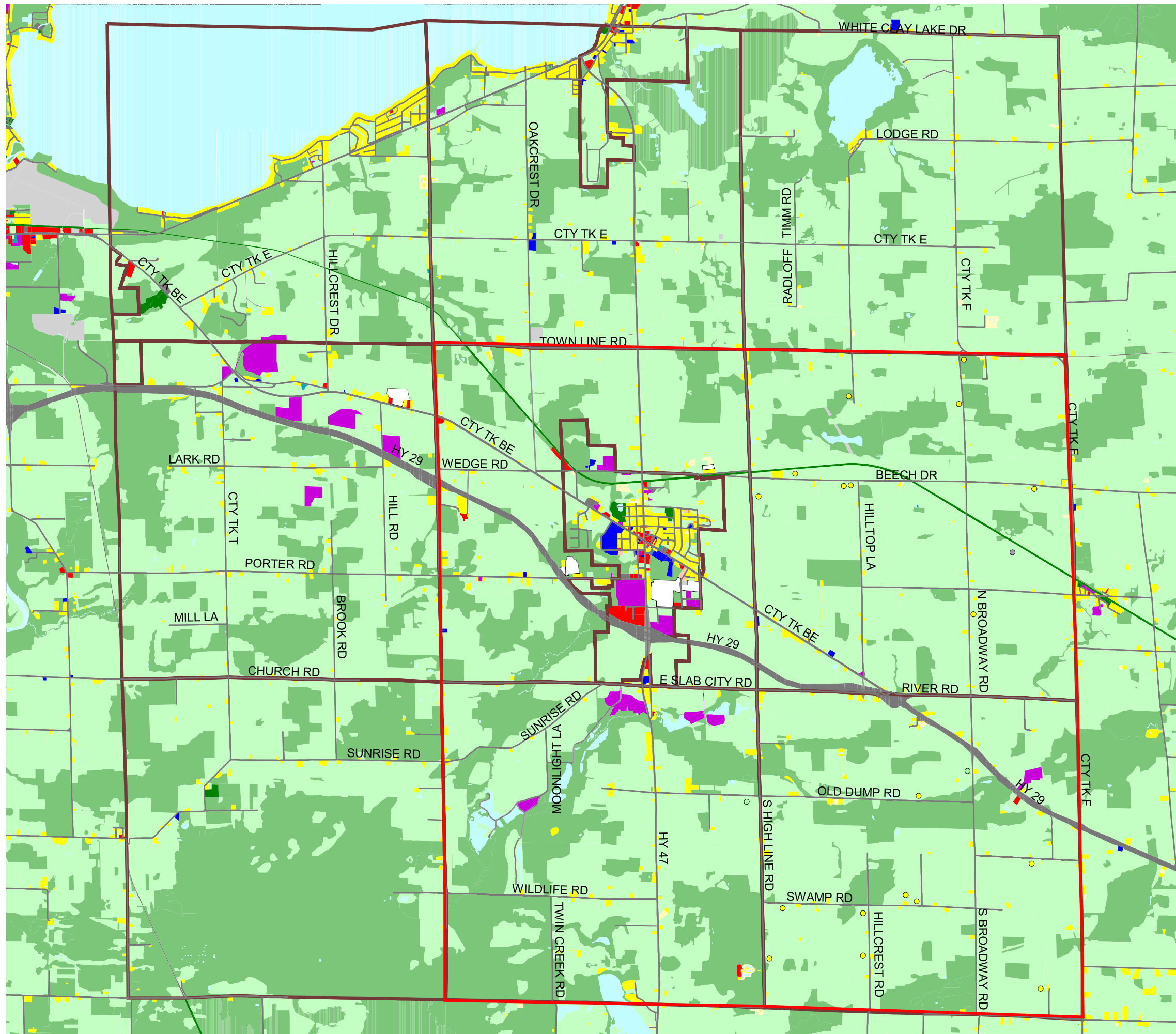
The corporate limits of the town of Hartland encompass approximately 21,947 acres. A significant amount (73.5 percent) remains undeveloped and is predominantly in some type of agricultural use. In addition, there are approximately 4,213 acres, or 19.1 percent of the total land area currently identified as vacant, non-agricultural woodlands. Together, the agricultural and undeveloped lands comprise almost 93 percent of the available acreage in the town of Hartland.

Residential uses represent only 1.5 percent of the land use in the Town. The commercial development in the town of Hartland occupies approximately 14.82 acres and is primarily located in Slab City and along STH 29 in the Town. The industrial businesses, most of which are gravel pits, occupy 82.04 acres or 0.3 percent of the land in the Town.

Map J-1 shows land uses generally within the town of Hartland boundary. As can be seen, the land uses around the town of Hartland are predominantly agricultural. Residential development includes a small concentration in Slab City; otherwise it is dispersed throughout the Town. Due to the recent economic slowdown, very little intensive development occurred in the town since 2005.

# Town of Hartland & Village of Bonduel Existing Land Use Map J-1

August 11, 2004



- Existing land use
- Residential
  - Residential / Vacant / Open Space
  - Two-family Residential
  - Multi-family Residential
  - Industrial including mineral extraction
  - Commercial
  - Public / Institutional
  - Transportation
  - Transportation & Utilities
  - Utilities
  - Agricultural / Vacant / Open Space
  - Woodlands
  - Recreational
  - Water
  - Vacant
  - Residential
  - Transportation & Utilities
  - Large Animal Facility

Roads

Town of Hartland  
Corporate Limits



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**Table J-1. Land Use Summary: 2004**

<b>Category</b>	<b>Typical Uses</b>	<b>Acres</b>	<b>Percent of Total</b>
Single-Family Residential Vacant/Open	single-family detached homes on a single lot	330.43	1.5
Two-Family Residential	any building containing two dwelling units on a single lot regardless of ownership status		
Multi-Family Residential	any building containing three or more dwelling units regardless of ownership status (includes triplexes, four-plexes, apartments, houses and condominiums)		
Group quarters	group homes and nursing homes		
Manufacturing/Industrial	manufacturing/processing plants of all types, quarries and gravel/sand pits	82.04	0.3
Wholesaling & Open Storage	mini-storage, wholesale and open storage operations		
Retail	retail stores		
Commercial/Services	Offices, small businesses	14.82	nil
Public/Institutional Services	churches, municipal buildings, schools and sports assembly	8.97	nil
Utilities	utility lands and communication infrastructure, includes road rights-of-way	6.05	nil
Parks/Recreation	public recreational areas, dedicated open space areas and golf courses, whether public or private	61.95	0.2
Agriculture/Vacant/Open	agricultural operations (farms raising traditional or specialty crops and animals, sod farms, tree farms and nurseries), forestland and other rural land	16,151.54	73.5
Vacant/Residential/Open Space	Undeveloped and non-agricultural	23.05	nil
Surface Water	Lakes and ponds	212.63	0.8
Woodlands	Woods	4213.6	19.1
Roads/Transportation	Public roads	842.1	3.8
<b>Total</b>		<b>21,947.18</b>	<b>100.0</b>

Data: Town of Hartland, 2004

**Waste Disposal Sites and Contaminated Sites**

Throughout the state, properties have become contaminated from accidental spills or improper storage or disposal of solid and hazardous wastes. Likewise, there are many sites that have been used to dispose of solid and/or hazardous wastes. The presence of a contaminated site or a waste disposal site in or near a community may have implications for the continued and future use of the site and for adjoining properties.

To determine if any of these sites are located in or near the town of Hartland, existing sources of information were reviewed. Table J-2 lists various state registries along with a description of each. In addition, the number of sites located within the Town or any in the surrounding planning area\* including primarily the city of Shawano are also represented in these lists. It should be noted these registries only contain those sites that have been identified – others may exist that have not been identified. Likewise, these registries are constantly being updated as new sites are added and cleaned-up sites are removed.

**Table J-2. Known Waste Disposal Sites and Contaminated Sites: 2012**

Name and Description of List or Registry	Sites within the Town	Other Sites within the Planning Area*
<p><b>Registry of Waste Disposal Sites in Wisconsin.</b> A listing of 3,679 sites where solid or hazardous wastes have been or may have been disposed in Wisconsin. Inclusion of a site on this list does not suggest that environmental problems have occurred, are occurring or will occur sometime in the future. (The number indicates both active and closed sites.) Data from the WDNR SHWIMS website.</p>	3	5
<p><b>Bureau of Remediation and Redevelopment Tracking System.</b> This database includes all of the contaminated sites in the state. (The number indicates active sites that have not been reported as closed. <b>Often sites have been closed but not reported as such.</b>) Included here are those sites identified as <b>LUST</b> (leaking underground storage tanks) and <b>ERP</b> (environmental repair) sites.</p>	1	30
<p><b>Superfund Sites in Wisconsin – Wisconsin Sites on the National Priorities List (NPL)</b> This registry identifies those sites that are eligible for clean up under the federal Superfund program. (The number indicates active sites only.)</p>	0	0

As listed in Table J-2 there is 1 known active LUST site within the town of Hartland.

Since it is always possible a site may be identified in the future, it will be necessary to periodically review these lists.

**Land Use Conflicts**

Land use conflicts can arise when different types of land uses are located, or potentially located, in close proximity to one another. People, individually or collectively, may view one of them as incompatible with the other. Localized concerns about the compatibility of certain land uses can vary widely from community to community. The nature of a conflict depends on localized circumstances and the character of the affected individuals or constituents. Conflicts can also develop or subside as demographic characteristics of an area or community change over time.

Regardless of the cause or nature of land use conflicts, they can have significant implications for the residents' quality of life and localized real estate market forces. In addition, the presence of land use conflicts in a community can affect options for future land development patterns. It is therefore appropriate to assess the nature or extent of existing land use conflicts within the community.

Since the development of the Town's Comprehensive Plan, the Town of Hartland has experienced several land use conflicts primarily associated with agricultural activities.

In the future, the town needs to be vigilant to and minimize any new conflicts. An ever-present potential conflict is also the interaction between non-farm urban development and agricultural uses. Both uses have the potential to negatively impact the other. Large animal facilities should retain a buffer between other land use activities to help mitigate future conflicts.

### **Designated Redevelopment Areas**

State law (§ 66.46 Wis. Stat.) allows the creation of tax increment financing (TIF) districts as a means to foster redevelopment of property within a predefined geographic area (the district) by dedicating the revenue from increased property assessments for specified improvements and public infrastructure. Due to recent changes in the TIF law, towns have been given some TIF creation authority. However, those situations are limited to agricultural and recreation based development opportunities. Towns can also form a Community Development Authority to initiate actions of blight removal.

### **Local Real Estate Forces**

The real estate market in the Shawano County area was significantly impacted by the economic recession. Residential and commercial property sales continue to be slow and land values for those types of uses have dropped. Historically, demand for industrial and commercial land has been limited in the town. However if economic conditions improve, interest for land along the STH 29 corridor could increase.

Agricultural land sales should continue to be strong as interest by farmers to acquire the needed land area to support their farming operations will likely increase. Many land transactions will occur between adjoining or neighboring land owners.

## **Development Factors**

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Opportunities for new development and redevelopment over the next 20 years will be directly influenced by any number of factors that currently exist and/or may develop over time. This section is intended to briefly highlight the most important development factors, which have been discussed in more detail elsewhere in this or other elements.

Below are listed some of the significant development factors that have been identified. Many of these are graphically depicted on Map J-2.

- **Environment** – The overall terrain within the town of Hartland is gently to moderately sloping. The rolling hills in the eastern and western portions of the Town are a prominent land relief but they do not pose any significant limitations for development. However, uncontrolled development is an important issue facing the residents and governmental body of the Town. With the reconstruction of STH 29 and STH 47 to four lanes, east/west travel has greatly improved, offering increased employment options for the residents of the area, increased access to area recreational opportunities, and increased use of local natural resources. However, this opportunity was never realized as much as

previously predicted. High gas prices and the economic recession of 2008 stagnated many local investments and interest in recreational activities. Where in the past, large tracts of land experienced pressure for division, development interest has waned since 2008. In contrast, many farmers have gained interest in securing more land to satisfy the growing agricultural demands. Regardless of use, land holdings must be handled in a planned, meaningful way to serve the long term interest of residents and landowners alike.

- **Blighted conditions** – Blighted conditions in the Town are not a major issue. There may be occasional unwanted animal odors from farms in the Town that negatively impact adjacent properties. However, town residents should expect sites, sounds and smells of traditional Wisconsin farming practices.
- **Age/condition of housing stock** – The housing in the Town is dominated by single-family homes and 90% of the existing homes are owner-occupied. Approximately 56.6 percent of the homes in the town of Hartland were constructed prior to 1940. According to the US Census, the Town experienced a growth of 28 housing units from 2000 to 2010, a modest 2.8 annual growth rate. A trend that is not expected to continue given the recent economic slow down. A visual inspection of the Town's housing stock confirms the fact that the majority of the homes are in good repair.
- **Proximity to significant metropolitan areas** – The closest major urban areas within 55-60 miles of the town of Hartland are the city of Green Bay to the east and the city of Appleton to the southeast. Although still a distance away, these cities do impact the Town economically (jobs), socially (Green Bay Packers and other events) or politically (transportation planning and funding). The largest city in Shawano County that is in close proximity to the town of Hartland is the city of Shawano, which is within 10 miles of the Town. Continued effective intra-governmental working relationships should be encouraged for responsible future planning and growth.
- **Groundwater** – Groundwater in the Town is generally of good quality for domestic, commercial and agricultural uses. There are some wells in localized areas that contain limited, elevated levels of nitrates. Agricultural activities and septic tank effluent are likely sources. Within the boundaries of the Town there are no designated atrazine prohibition areas due to the presence of atrazine in some groundwater.
- **Brownfield sites** – There are currently no known sites in the town of Hartland.
- **Infrastructure capacity** – The Town does not have a water or sewer system. The Town Hall is new and large enough to handle most indoor community gatherings. Some Town roads are always in need of repair and required brush cutting along roads is an annual occurrence.
- **Agricultural preservation** – The town of Hartland has a significant amount of farmland, which is of great value for farming purposes. Demand for agricultural land is expected to increase to support area agriculture practices.
- **Land use conflicts** – The residential/non-residential conflicts represent the most critical land use conflict potential within the Town. Given the fact that agriculture dominates the town of Hartland, occasionally there are conflicts between farm operations and non-farm dwellings and their occupants.
- **Cultural resources** – The town of Hartland is located in an area of the state where farmsteads, cabins, campsites/villages, houses, and cemeteries and historic burials have been discovered. Numerous burial sites are also found in and around the area.
- **Archaeological resources** – According to records maintained by the Wisconsin State Historical Society there are approximately seventeen archaeological sites that have been identified and catalogued in the town of Hartland. Additionally, there are four archaeological burials and cemeteries also identified in the Hartland area.
- **Historic resources** – According to the Architecture & History Inventory (AHI) maintained by the State Historical Society, there are 22 structures in the Town with some historical

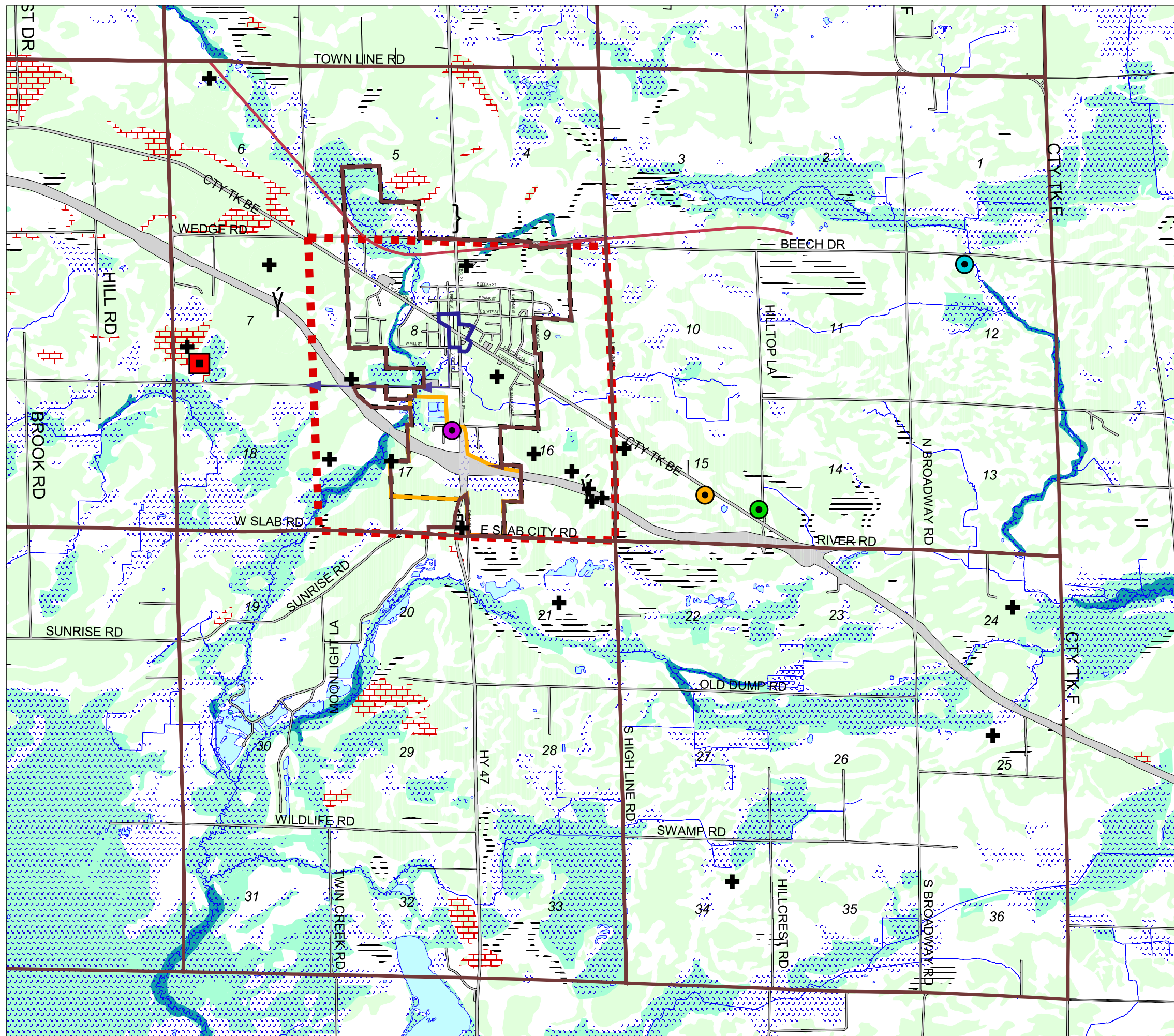
significance. These include houses, farm buildings, a church and meeting hall, and a former cheese factory building.

- **Land use patterns** – Land use in the Town is dominated by agricultural uses. Residential development is scattered with the largest concentration in Slab City. Commercial development is very limited but is expected to follow the STH 29 corridor in the future.
- **Existing commercial centers** – The commercial development for the Town is located in the village of Bonduel. Regional centers include the cities of Shawano, Green Bay and Appleton
- **Traffic patterns** – State Trunk Highway (STH's) 29/55/47 provide the major southeast-northwest arterials for transportation and are located in the southern part of the town of Hartland. These are the most heavily trafficked highways in the Town. The STH 117 provides the major arterial for northbound movement in Hartland and the STH 47 is the major arterial for southbound movement in the Town.
- **Transportation corridors** – The only available freight railroad service operating in proximity to the Town is the former Wisconsin Central Limited, which was acquired by the Canadian National Railroad in 2001. It is now known as the Wisconsin Central Division Railroad of the Canadian National. Amtrak provides the only available rail service for local residents. It offers passenger service between Minneapolis-St. Paul, Milwaukee, and points beyond. However, the access to Amtrak service for residents of the Town is only available by connecting thruway bus service. The closest bus service is in Green Bay. Other bus service locations in Shawano County include Tigerton and Wittenberg. These thruway bus services then connect with Amtrak in Milwaukee. The closest Amtrak station within driving distance is located in Columbus, which is approximately 112 miles from the town of Hartland.
- **Geologic formations** –The overall terrain in the town of Hartland area is gently to moderately rolling. The topography is generally characterized with ground moraines with numerous basins and depressions that are the remnants of the earlier glacial activity. The surface elevations within the Town range from over 940 to under 860 feet above sea level. The rolling hills in the eastern and western portions of the Town are a prominent land relief. These features are often attractive for rural residential development sites or used for recreational purposes. They also provide rural scenic appeal to travelers.

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# Town of Hartland & Village of Bonduel Development Factors Map J-2

September 15, 2004



- Archaeological sites
- Mountain Bay Trail
- TIF boundary
- Blighted Area
- Force Main
- Bonduel Sewer Service Area
- Bedrock within 30" of surface
- Watertable <1' of surface
- Slopes >12%
- Frequent flooding
- Wetlands
- Prime farmland
- Open water
- Village of Bonduel

### Contaminated Sites - Hartland

	Survey Range	Survey Township	Survey Section	Survey Quarter	Qtr/Qtr Section
	ERP	17E	26	8	SW SW
	LUST	17E	26	15	SE SE
	LUST	17E	26	15	SE NW
	LUST	W2757 Beech Drive			
	LUST	N3987 STH 47/55			



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## Future Land Use

### Overview

Recognizing the population of the Town is expected to grow in the future, it is important to determine how much land should be allocated to accommodate the growth and where the growth should occur and when. The goals and objectives contained in this plan were reviewed for guidance in preparing the future land use map. This map will be used to manage growth in the short- and long-term and will form the basis for zoning regulations and other types of development regulations.

### Projections of Population and Households

The effective management of community growth also requires the development of projections that identify the anticipated growth in the number of residents and the resulting number of households. Based on the assumption that the annual growth rate for the town of Hartland during the next twenty years will be a modest 1.0 percent, it is possible to derive projections for the number of households, the number of persons in the households and the number of housing units (Tables J-3A-C). In addition to the growth rate, it is also assumed that the average household size will remain constant at 2.80 from 2010 through 2030 and that the occupancy rate will be 96 percent.

**Table J-3A. Population Change; Hartland & Selected Municipalities, Shawano County and Wisconsin: 2000 to 2010**

Jurisdiction	Population <sup>1</sup>		Numeric Change <sup>2</sup>	Total	Annual
	2000	2010		Percent Change <sup>2</sup>	Rate of Change <sup>2</sup>
Shawano, City of	8,298	9,305	1,007	12.1%	1.2%
Bonduel, Village of	1,416	1,478	62	4.4%	0.4%
Cecil, Village of	466	570	104	22.3%	2.2%
Hartland, Town of	825	904	79	9.6%	1.0%
Washington, Town of	1,903	1,895	-8	-0.4%	0%
Waukechon, Town of	928	1,021	93	10.0%	1.0%
Shawano County	40,664	41,949	1,285	3.2%	0.3%
Wisconsin	5,363,675	5,686,986	323,311	6.0%	0.6%

Source: US Census of Population and Housing

1. As of April 1

2. Between 2000 and 2010

**Table J-3B. Housing Units by Type; Town of Hartland, Shawano County and Wisconsin: 2010**

Housing Type	Town of Hartland Percent	Shawano County Percent	Wisconsin Percent
Single-Family (309)	96.0	77.7	70.6
Duplex (2)	0.6	5.1	7.1
Multi-Family (0)	0.0	9.8	18.5
Manufactured Home (11)	3.4	7.4	3.8
Other (0)	0.0	0.0	0.0
<b>Total (322)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Source: US Census of Population and Housing 2010  
 Note: Percent column may not add up to 100 due to rounding.

**Table J-3C. Population Summary and Projections; Town of Hartland: 2000 - 2030**

	2000	2010	2015	2020	2025	2030
<b>Population</b>	<b>825</b>	<b>904</b>	<b>949</b>	<b>994</b>	<b>1040</b>	<b>1085</b>
<b># Households</b>	<b>280</b>	<b>298</b>	<b>325</b>	<b>341</b>	<b>356</b>	<b>372</b>
<b># Total Housing Units</b>	<b>291</b>	<b>319</b>	<b>339</b>	<b>355</b>	<b>371</b>	<b>388</b>

Assumptions: Average household size remains constant at 2.95 from 2010-2030. Occupancy rate remains constant at 96 percent from 2010-2030. The overall percentage of growth between 2030 and 2010 is 20 percent, a 1 percent annual average

**Projections for Acreage Requirements**

The amount of land needed to accommodate growth can vary widely depending on how a community wants to grow, the preferred development pattern and the number of vacant parcels within the municipal boundary suitable for various types of projects. However, as experienced during the recent economic recession, the housing market plays a huge role in how aggressive land use conversion will take place. Land acreage allocations for the Town were calculated as described below.

**Step 1.** Based on the projected number of households, the number of housing units required was calculated by applying a vacancy rate of 4 percent (Table J-3C). It should be noted that given the recent economic slowdown, the population and housing unit projections appear high for the planning period. However, instead of revising the projections, which are based on historic trends, the Planning Commission has agreed to retain the projections within this element as an “aggressive” development scenario. It is very likely these projections will not be met unless a significant economic rebound occurs, fueling the housing market and new residential development. In addition, new residential home owners will need to be willing to travel the required distances for employment or services. Both scenarios seem unlikely to occur in the near future.

**Table J-4. Housing Mix: 2010 to 2030**

Land Use Type	Percent of Total	Housing Units
Single Family Residential	100.0	+74
Multi Family Residential	0.0	0.0
Total	100.0	

**Step 2.** Next, the preferred housing mix as a percentage of the total was determined. Table J-4 shows the percent of the total number of housing units that will occur for each residential use. As indicated, 100 percent of the households will be single-family residential units.

**Step 3.** In this step, the number of housing units is converted to lots, which also include those lots that are purchased and not developed (Table J-5).

**Table J-5. Additional Dwelling Units & Lots Required by Time Period: 2011 to 2030**

Land Use District	2011	2016	2021	2026	Total
	to 2015	to 2020	to 2025	to 2030	
Single-family Residential	18	18	19	19	74
Multi-family Residential	0	0	0	0	0
Total	18	18	19	19	74

**Step 4.** As the last step, the number of lots was converted to acres by applying an average lot size for the intended residential use. The lot size is shown in Table J-6. The Town recommends a minimum lot size of three (3) acres for new residential development. Please note that three (3) acres average lot size does not constitute the minimum lot size in the town's future ordinance. It only suggests, the average size of lot will be 3 acres meaning it is an average within a range of lot sizes. This average maybe high given a recent trend toward smaller lot sizes. The Town expects zone change requests for scattered development but also does recognize some non-farm residential development will occur in agricultural zoning districts.

**Table J-6. Average Lot Sizes by Land Use Type**

Land Use District	Average Lot Size in Acres
Single-Family Residential	3.0

The total land area requirements based on the type of residential development are shown in Table J-7. Since no multi-family development is anticipated, all future residential development is projected to be single family. A total of 222 acres are projected to be converted out of agriculture, vacant and open space to residential use.

**Table J-7. Acres Needed to Accommodate Residential Growth by Time Period: 2011 to 2030**

Land Use District	2011	2016	2021	2026	Total
	to 2015	to 2020	to 2025	to 2030	
Single-Family Residential	54	54	57	57	222
Multi-Family Residential	0	0	0	0	0
Total	54	54	57	57	222

Table J-8 summarizes the number of acres that need to be designated for future land uses in each of the 5-year increments during the planning period. As shown, a total of 246 acres are projected to accommodate intensive type land uses in the town. Some commercial growth is expected to occur, primarily

**Table J-8. Acres Needed to Accommodate New Commercial, Industrial, and Residential Growth by Time Period: 2011 to 2030**

Land Use District	2011	2016	2021	2026	Total
	to 2015	to 2020	to 2025	to 2030	
Residential	54	54	57	57	222
Commercial	1	1	1	1	4
Industrial	5	5	5	5	20
Total	60	60	63	63	246

along the STH 29 corridor. Industrial development is hard to project in towns. Most is associated with non-metallic mining of some sort like sand and/or gravel operations. For the purposes of this plan, a 20 acre forecast over the planning period appears logical. Specifically, 222 acres for residential growth, 4 acres for commercial growth and 20 acres for industrial growth are projected.

The total acreage in the town of Hartland is approximately 21,947 acres. Of this amount, the existing agricultural, vacant and open space acreage is estimated at 16,151 acres. In order to accommodate the projected growth, only 246 acres are projected to convert, a modest 1.5% of the agriculture, vacant and open land total during the planning period. Please note that this figure may be conversely impacted. Driven by higher land values, marginal land that once accommodated old abandoned buildings, woodlots or fencerows has been cleared to accommodate crop fields.

### **Future Land Use Plan Categories**

As previously stated, the economic recession, the resurgence of agriculture commodity prices, the increase of agricultural land values, and increased speculation over government funded programs were major drivers in the need to update the town of Hartland Future Land Use Plan. It is anticipated that these factors will not change within the near future. All economic indicators point to a slow economic recovery. Agricultural experts envision agricultural products will continue to maintain or increase in price, especially corn and soybeans. Most recently, prices will be impacted even more by the mid-west drought of 2012. Concern over a building national debt has caused many citizens to question the need for many government programs. More locally, town officials wanted a more realistic assessment of how future land use would be determined with respect to the intentions of landowners.

In addition to the drivers discussed above, the following guidelines, along with the goals and objectives of this plan, were used to delineate the various development areas:

1. Improve the basis of review to determine the most appropriate use of land for agricultural production and preservation.
2. Improve the basis of review to determine the most appropriate use of other resource land such as woodlots, wetlands, steep slopes, etc. to support agriculture, forestry, wildlife and recreation functions.
3. Where possible, locate new development in areas with public facilities or in areas that represent a logical extension of those facilities.
4. Recognize and utilize the investment made in improving the STH 29 corridor in accommodating development opportunities,
5. Avoid or minimize land use conflicts and,
6. Utilize and respect public input throughout the planning process.

To address item 6 above, numerous public meetings were held in 2012 by the town of Hartland Planning Commission (April 25, May 9, May 23, and June 7) to provide input into the Future Land Use Plan update process. The participants responded to proposed classifications designed to meet the future direction of the town. The land use classifications presented to build the Future Land Use Plan were as follows:

**Farmland Preservation Agriculture - AFP:** This land use category would include those areas of the town that have a history of activity within the farmland preservation program over the past 30 years. These lands have historically and currently are productive farming areas with good soils and agricultural production. The probabilities of these lands to continue in production agriculture are high. Likewise, the probabilities of these lands to be included for farmland preservation tax credits are also high. Woodlands and open space lands which are under common ownership could also be part of this classification and garner credits as well. Please note that some non-farm residential development would be allowed if consistent with the

provisions established within the Farmland Preservation Program administered by the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) and subsequent certified zoning district.

Land classified as “Farmland Preservation Agriculture” on the Future Land Use Map would likely be the areas designated for farmland preservation on the future *Shawano County Farmland Preservation Plan*.

**General Agriculture – AG:** This land use category would accommodate low density residential, agricultural uses, undeveloped lands, woodlots, grasslands and other open lands in agriculture, aqua culture, commercial and private forestry use. These areas are typically associated with less productive soils and have historically less agricultural predominance. Due to these and other factors, the probability of AG lands to continue in productive agriculture is lower than land located in the Farmland Preservation Agriculture (AFP) land use category. It is anticipated these lands would not be proposed for farmland preservation designation under the *Shawano County Farmland Preservation Plan*. However, it is understood, some adjustments maybe accommodated based on agriculture expansion plans. Land under this land use classification may be part of several zoning district options such as Rural Residential, Forestry, Recreation, etc. The specifics of those zoning districts will be determined through the town zoning ordinance development process.

**Commercial – C:**

This land use category represents where existing and future commercial type land uses are anticipated. Examples of uses that could be found in this category include retail sales & services, repair businesses, truck & auto services, entertainment, visitor accommodations, parking lots and day care facilities. It is very likely this land use category will be supported by the development of a commercial zoning district(s) that would regulate business type, appearance and functionality.

**Industrial/Manufacturing – IM: (Reserved for Future Use)**

This category represents industrial type land uses or where they are anticipated in the future. Manufacturing and production facilities, resource extraction & processing, warehousing, transportation terminals, feed mills and wholesale establishments are some of the examples included in this category. It is very likely this land use category will be supported by the development of an industrial zoning district(s) that would regulate industrial type and functionality.

**Single Family Residential- RSF:**

This category represents those areas where clustered single-family residential land uses already exist or where such uses are planned to be the predominant land use. The density of residential development may vary depending on zoning district development, but only single-family housing is included in this category. It is anticipated that uses would be served by private wells and individual on-site waste water treatment (septic) systems unless provided by the Village of Bonduel through an intergovernmental service agreement.

**General Residential – RG:**

These areas include all types of residential uses, other than single-family residential. Multifamily structures including duplexes, attached condominiums, mobile home parks, and group living facilities are included in this category. It is very likely this land use category will be supported by the development of a general residential zoning district that would regulate residential type, appearance and functionality.

**Home Occupational Business:**

Although not a defined land use category, home occupational businesses (HOB's) and small scale commercial activities are expected to be an on-going activity and use throughout the town of Hartland. Furthermore, it is understood that HOB's are an accessory use and will be clearly incidental and subordinate to the principle use. HOB's should be accommodated within each land use category and subsequent zoning district provided they are accessory only.

**Future Land Use Plan Map**

Based on economic drivers, the local planning guidelines and public input, Map J-3 was developed to guide future development and programs for the town. The map is basically an arrangement of the land use categories across the landscape of the town. The categories represent a clearer direction on future use and density within the respective areas. Map J-2, Development Factors, contributed to the delineations of the land use categories.

As shown by the Map J-C, the Farmland Preservation Agriculture (AFP) land use category accommodates the largest portion of acreage in the town. The predominant AFP location occurs within the eastern portion of the town, east of Bonduel, both north and south of STH 29. In addition, some land has been designated in the NW portion of the town, adjacent the village of Bonduel. Sections 10, 11, 14, 15, 23, 25, 28, 34 and 36, which are home to some of the town's largest and active farming operations, are almost entirely included in this land use category. This category contains well drained, prime farm soils that have a long history of good crop production. These identified areas are also the locations that have stood the test of time in agriculture and contain ownership patterns that are committed to farmland preservation. As documented by the public participation process, production agriculture and farmland preservation is embraced by landowners within the AFP land use category. It is anticipated that the some future farm related commercial development may occur within the AFP, especially along STH 29. These situations can be reviewed as part of the conditional use process within the designated zoning district.

The General Agriculture (AG) is the second largest land use category within the town. AG lands are disbursed more sporadically within the town and, in general, are often associated with lower elevations, natural vegetation, water features and smaller farming operations. Given these features, AG lands contains valuable wildlife habitat, much of which is used for recreational purposes by the landowners. The largest concentration of AG land occurs in the SW portion of the town in and around the Navarino Wildlife Area. Adjacent crop fields are host to many of the wildlife species supported by the wildlife complex which creates a land use conflict at times. Agricultural activities will continue throughout the identified AG areas, but the intensity of agriculture is projected to be less than the AFP areas as documented by landowner input received through the public participation process. Similar to the AFP areas, it is anticipated that the some future farm related commercial development may occur within the AG. Again, these situations can be reviewed as part of the conditional use process within the designated zoning district.

Based on the land use projections, minimal future residential, commercial and industrial type development are planned on Map J-3. Since both the AG and AFP are designed to accommodate some non-farm residential development, most of the future residential development is expected to occur within those two land use categories on a very limited basis. Commercial is identified as a planned use associated with some existing quarry and tree farm operations and along STH 29. Concentrated residential is planned for a small area south of the village in area referred to as Slab City.

Table J-9 shows the total acres and related percentages for the Future Land Use Map J-3. As shown, Farmland Preservation Agriculture is the largest land use category, accounting for over 51% of the town acreage total. This percentage speaks to the continuing town and landowner interest in preserving key agricultural areas of the town.

**Table J-9. Town of Hartland Future Land Use**

<b>Land Use Category</b>	<b>Acres</b>	<b>Percentage of Total</b>
Farmland Preservation Agriculture	11,211.9	51.4%
General Agriculture	10,366.0	47.5%
Commercial	226.5	1.0%
Single-Family Residential	14.1	0.1%
General Residential	5.0	0.0%
<b>Total</b>	<b>21,823.6</b>	<b>100.0%</b>

**Future Land Use Plan Map Implementation**

If the agricultural economy stays strong, it is anticipated some AG land may request an amendment to the Future Land Use Map for the inclusion into the AFP category. Another possibility would be some of the AG land could be included in a petition to the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) to establish an “Agriculture Enterprise Area” or AEA. An AEA is a contiguous land area, devoted primarily to agricultural use, which is locally targeted for agricultural preservation and development. Designation of an AEA does not, by itself, control or limit land use. However, farmers in an AEA may earn state income tax credits by entering into voluntary farmland preservation agreements. An AEA is often part of a broader local strategy to protect farmland and promote agricultural and related development.





It is the intent of the town of Hartland to continue to utilize a certified a farmland preservation zoning ordinance to implement the Future Land Use Map. The ordinance will also ensure that landowners traditionally covered by the A1 district, formerly administered through the Shawano County Zoning Ordinance, are eligible to claim farmland preservation tax credits, (ch. 91, Wis. Stats.). Certification of a town farmland preservation zoning ordinance must be obtained through application to DATCP. Please note that in addition to the farmland preservation zoning requirements, the Town of Hartland Zoning Ordinance will contain district mapping and language that captures the intent all the land use categories shown on Map J-3.

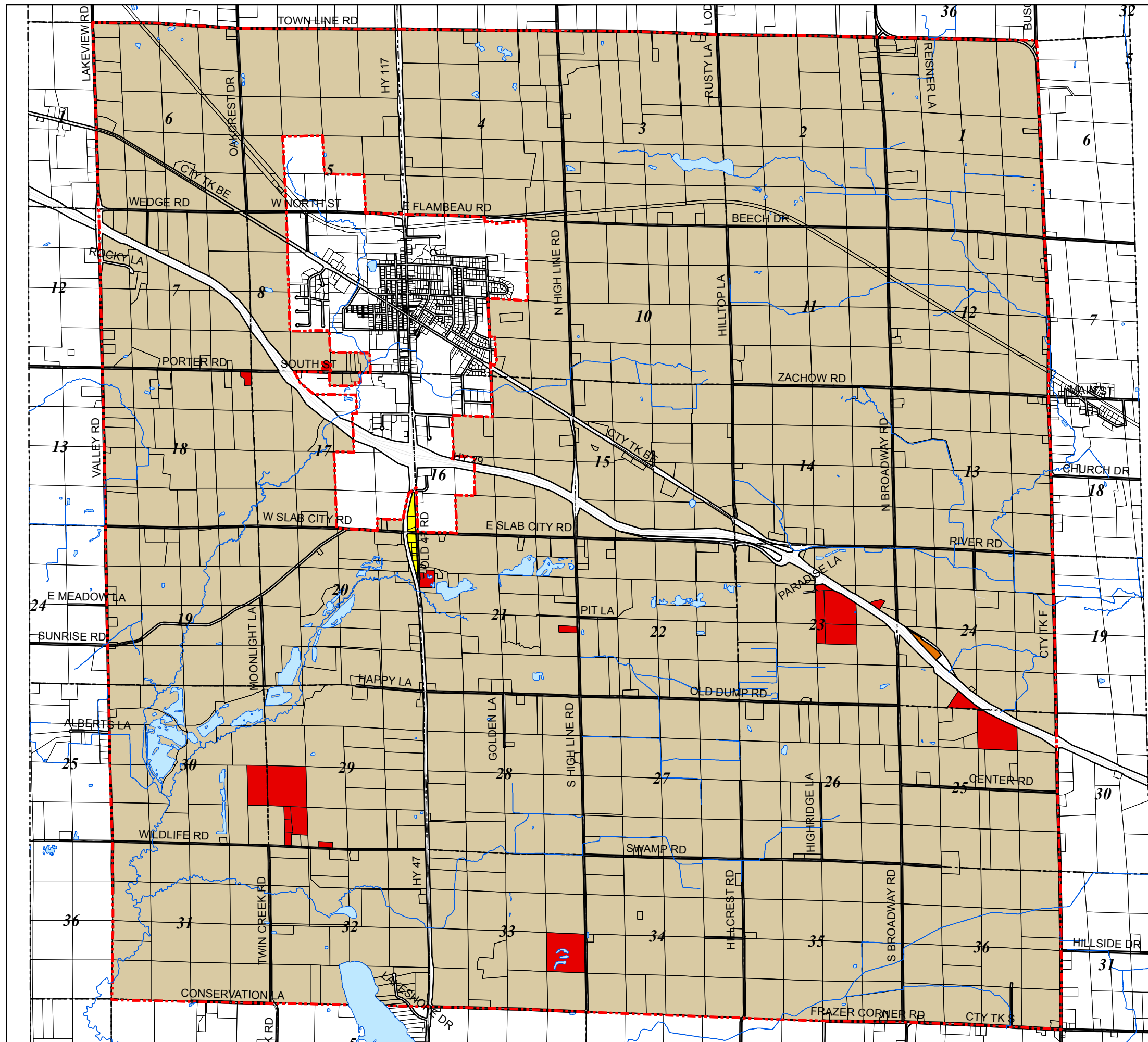
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Town of Hartland  
Shawano County, Wisconsin

Future Land Use Plan  
Map J-3

Adopted September 14, 2015

-  Agriculture
-  Commercial
-  Single Family Residential
-  General Residential



The base map was created with data from the Shawano County Information Services Department who in no event assumes any liability regarding fitness of use of the information and any application by others, is the responsibility of the user.

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## ■ **Goals, Objectives, Policies and Recommendations**

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Goals, objectives, policies and recommendations for this element are found in Chapter B.