GREEN COUNTY

Farmland Preservation Plan

September 6, 2012

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Farmland Preservation Technical Advisory Committee

Town of Adams	Evan Lemanager
Town of Albany	Keith Hobson
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Town of Caditz	Ken Goodman
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Town of Decatur	Ron Schwartzlow
Town of Exeter	Ted Fahey
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Town of Jordan	Jeff Falk
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Town of New Glarus	Dean Streiff Jim Hoesly
Town of Sylvester	Terry Reed
Town of Spring Grove	Brad Williams Pat Faessler
Town of Washington	Richard Rufer
Town of York	Dan Truttman

Brian Bucholtz, *Green County Corporation Counsel*
Todd Jenson, *Green County Conservationist*
Tonya Gratz, *Green County Conservation Technician*
Mark Mayer, *UW-EX Agriculture Agent*
Jason Thomas, *NRCS District Conservationist*
Adam Wiegel, *Green County Zoning Administrator*
Dustin Williams, *Farm Bureau Director*
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Roger Truttmann
Calvin Wickline
Jeff Williams
Ron Wolter

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EXECUTIVE SUMMARY

Green County's 2006 Comprehensive Plan deals with the subject of agricultural land use. This Farmland Preservation Plan (which will, when adopted, become part of the County's Comprehensive Plan) echoes many of the goals, objectives, and policies set forth in the 2006 plan with regards to agricultural protection and promotion.

The Comprehensive Plan, through the patch-quilt consolidation of the sixteen Green County town plans, designates areas wherein farm operations are to be protected from non-farm activities, and recommends that farmland beyond potential municipal service areas be maintained.

The 2006 County Comprehensive Plan also recognized the appeal of agricultural lands for residential use and offers strategy for steps when considering the conversion of farmland to non-agricultural uses. The steps are stated in the Comprehensive Plan for each town in the form of "objectives and policy recommendations."

While the 2006 Green County Comprehensive Plan has been, and will continue to be, influential in protecting agricultural areas of the county, cooperation and coordination with towns and municipalities are vital components of protecting agricultural uses throughout the County. The adoption of the Farmland Preservation Plan adds another tool to use for the preservation of the farming industry.

All sixteen towns have reviewed farmland preservation maps, guided the county in formulating as to how and where agricultural lands are to be preserved. Language regarding farmland preservation has been included in both the Farmland Preservation Plan and County Comprehensive Plan — in the case of any inconsistencies, the Farmland Preservation Plan supercedes the Comprehensive Plan.

The Threat to Farmlands

Pressure to develop America's farmlands is growing, and planners and local politicians are struggling with how to ease this pressure and protect their agricultural lands.

This is an important issue because much of America's prime farmland is located within or near suburbs and exurban areas of cities and villages. Unfortunately, residential development and farming are often incompatible land uses. As development encroaches upon agricultural areas, it becomes difficult for farmers to continue their traditional farming techniques. When farmland is taken out of production, that forces the use of marginal farmland to meet demand, at higher economical and environmental costs. Farmland contributes to flood control, air cleansing, and water filtering; those amenities, as well as the inherent societal value of open space, are lost when farmland is development.

Planning Goals, Objectives, and Policies

Oftentimes cohesive and consistent goals, objectives, and policies about agricultural and natural resources are lacking in a plan. Green County has recognized the importance of planning for these resources.

Beyond the obvious quality of life benefits, it is important to understand and realize the vital functions and benefits that preservation of agricultural lands and natural resources provides, which in the long-term saves everyone money. Wetlands, for example, perform a vital function in preserving the quality of groundwater, as well as surface water. Development adjacent to natural resource areas should be done in a well-planned fashion to preserve the natural functions of these resource areas. Such development can be enhanced by melding development features with natural features.

Plan Process Comparisons

This plan, as presented, meets Wisconsin State Statutes (ch. 91, Wis. Stats.) pertaining to farmland preservation plans. The planning process used to develop this plan was similar to that utilized in 1979–1980 for the most recent Green County Farmland Preservation Plan. The process began with the Green County Land and Water Conservation Committee recommending to the County Board to develop a Farmland Preservation Plan. (FPP). The county created a Technical Advisory Committee (TAC) composed of representatives of each town in the county and county Farmland Service Agency (FSA), Natural Resources Conservation Service (NRCS), Land and Water Conservation Department, Planning and Zoning Department, and University of Wisconsin-Extension staff.

Differing from the previous FPP process where the county proposed the plan for review by the towns, the current plan process engaged not only the TAC but also each Town's Plan Commission and Town Boards in the plan development process.Through a series of sub-area meetings (generally consisting of 3 to 5 towns), goals, objectives, policies and implementation strategies were developed. Through both the TAC meetings and sub-area meetings, grassroot input was also garnered for creating farmland preservation maps for each town. After each meeting, town representatives were encouraged to return to their respective Town Plan Commissions and/or Town Board to gather further input and consensus.

In addition to the meetings described above, County staff met one-on-one with each town to draft, review, and finalize each town's Farmland Preservation Map. These sixteen town maps are what compose the Green County Farmland Preservation Map.

Plan Purpose

As with the previous plan, the purpose of the 2012 Green County Farmland Preservation Plan is to identify appropriate lands to be preserved for agricultural purposes and related economic growth. Additionally, appropriate implementation procedures are to be brought forward for use by County and Town officials.

FARMLAND PRESERVATION PLAN
Overall Goal and Objectives

Agricultural Preservation Goal:

1. **Maintain the operational efficiency, viability, and productivity of the County's agricultural areas for current and future generations.**

Agricultural Preservation Objectives:

- Support land use practices that reduce potential conflicts between agriculture and other land uses.
- Strive to reduce the conversion of productive farmland to non-agricultural development.
- Encourage towns to recognize their responsibility in ensuring the future viability of agriculture in their town, such as the identification of agriculture clusters and farmland preservation programs.
- Preserve natural resources, including productive farmland, woodlands, open water, wetlands, and other features in their natural condition, consistent with town plans.

Overall Goals and Objectives

Wisconsin's Comprehensive Planning Law includes 14 goals for local comprehensive planning. The goals listed at the left specifically relate to the County's planning for agricultural and natural resources in the Farmland Preservation Plan:

The Green County Farmland Preservation Plan is intended to meld together goals set forth in the statewide comprehensive planning law with goals, objectives, and policies related to farmland preservation and agriculture that are identified in the Green County Comprehensive Plan in addition to the following:

- **Protecting natural areas, including wetlands, wildlife habitats, lakes, woodlands, open spaces, and environmental corridors.**
- **Protecting economically productive agricultural areas.**
- **Protecting agricultural lands for agricultural purposes.**

INTRODUCTION

Why Agricultural Planning Is an Issue

Advocates of farmland preservation typically emphasize how a community benefits from a vibrant farm sector and an open agricultural landscape. While few communities now depend exclusively on the farm sector, farming and the processing of farm products can still be a significant local source of income and employment. Many citizens — both rural and urban, farming and non-farming alike — view farming as an important occupation that embodies many fundamental American values. From a fiscal standpoint, agricultural lands provide significant revenues to local governments and require relatively few services in return. In contrast, residential land uses often cost municipalities more to service than they return in local property taxes. Though difficult to quantify, the rural and open character of agricultural landscapes also provides the community with attractive views and a high quality of life. Green County is a desirable place for people and businesses to visit, move to, and live in.

Unplanned development can negatively impact the viability of the farming industry. Nonfarm residents living in close proximity to working farms can increase the chance for nuisance, trespass, and vandalism complaints. Commuters, in a hurry to get to work on time, share the road with slow moving agricultural machinery, creating frustration for both sets of travelers. Farm supply dealers need a "critical mass" of farm operations to remain viable within an area. As land gets split into smaller parcels, remaining farmers are forced to deal with more landlords and must travel longer distances to work their fields.

Even when most agricultural properties are not developed, the conversion of significant parcels of land can impact the decisions and planning horizon of the remaining farm operators. Anticipating development, some will reduce long-term investments in their farm enterprises. Reduced investment may eventually lead to a decline in productivity. As productivity declines, farming becomes less profitable, and more farmers are motivated to leave farming. This chain of events that results in loss of critical agricultural landmass is sometimes referred to as the "impermanence syndrome."

PART 1

Background Information

Population, Housing, and Municipal Growth

Planning for Agricultural Protection

Green County's past is deeply rooted in agriculture. The County's rich soils have maintained farming and related businesses as essential components of its modern economy. Agricultural uses dominate the landscape and have helped establish the image of Green County as an exemplar of Midwestern charm and rural tranquility. As the region continues to grow and Green County welcomes more and more families into its setting, it is vital to the health of the community that agricultural fields, and the fertile lands they occupy, remain in production as long as feasibly possible. Once agricultural land has been developed to accommodate other uses, it cannot be restored. Without a plan in place to prevent the conversion of economically viable farmland to other uses, the County risks losing irreplaceable natural and cultural assets forever.

Quality of Life Connection

The benefits of protecting agriculture as a predominant land use within the County are many and touch upon a wide range of issues that have a tangible impact on the quality of life for the estimated 36,000 residents of Green County. A healthy local agricultural base can help improve food security and sustainability, protect water resources and wildlife, provide opportunities for the creation of alternative sources of energy, lessen regional carbon dioxide output, and expand opportunities for recreation. The County's many fields, farm stands, dairies, grain elevators, and cheese factories also combine to have a large impact on the more intangible qualities of living here. These qualities tie every person in the County's municipalities to the agricultural lands that surround him or her, and it is this common bond that helps contribute to a sense of community and pride among Green County residents. If not for the myriad of reasons mentioned, the Farmland Preservation Plan should protect agricultural uses in an effort to help preserve this unique community character.

Population and Housing Forecasts

For the most part, Green County's population has grown at a constant rate for the past four decades (Table 1.1). By 2030, Green County population is expected to range between 40,000 and 50,000 (per the 2006 Green County Comprehensive Plan).

Household projections for the County forecast between 4,000 and 5,000 new households by the year 2030. Based on current land uses, residential property accounts for 4 percent of Green County's land area. Over the past 30 years, development pressure has occurred in the northerly tier of towns and also those on the eastern boundary of the County.

Forecasted future land area needed to accommodate the projected population rise is approximately additional acreage on the low end of 3,845 and on the high end of 9,450. Though some of this acreage will come from agricultural lands, much of the growth will be absorbed by existing, vacant platted lots, marginal lands (slopes, poor agricultural soils) and in-fill development in cities and villages. Further, the percent of residential land area would consist of 5.5% to 7% of the total land acreage of Green County by 2030.

TABLE 1.1: Population

Year	Green County	% Change	Wisconsin	% Change
1970	26,714		4,417,933	
1980	30,012	+10%	4,705,767	+8%
1990	30,339	+1%	4,891,769	+4%
2000	33,647	+10%	5,363,675	+9%
2010	36,842	+9%	5,711,767	+6%

(Source: U.S. Census)

Municipal Growth Strategies

In an effort to increase housing density, thus reducing the number of converted agricultural lands, the Green County Comprehensive Plan recommends a number of objectives and policy actions to accomplish this goal.

HOUSING — GOALS, OBJECTIVES, AND POLICIES
(to increase density in areas not identified for farmland preservation)
Source: Green County Comprehensive Plan

Goals
1. Maintain the quality of existing housing units and developments.
2. Provide an adequate supply of affordable housing for individuals of all income levels throughout the community.
Objectives and Policy Recommendations
• Encourage the location of new residential developments within (infill development) or close to existing residential developments.
• Encourage future residential development in areas that can be served with public utilities and community facilities.
• Encourage clustering rural residential homes away from agricultural operations.
• Encourage housing developers to cluster homes on smaller lots while preserving open space in the development.
• Encourage the location of new housing developments along major roads, around lake areas, and near or within cities and villages.
• Preserve the agricultural land base protecting its aesthetics, rural character, and agricultural heritage for future generations.

For the most part, areas in the northern tier of towns adjacent to Dane County (York, New Glarus, Exeter, Brooklyn) have experienced the greatest pressure for development due in part because of the greater Madison area jobs generator capacity. Other areas under development pressure are the Town of Monroe (surrounds the City of Monroe) and the Town of Decatur near the City of Brodhead. This area is impacted by the Cities of Janesville and Beloit.

Critical to implementing these policies is that villages, cities, and towns follow their respective comprehensive plans regarding expansion of growth boundaries.

Agricultural Resources and Agricultural Land Uses

Agriculture is an industry that contributes significantly to the economic, environmental, and social vitality of the county, particularly in rural communities. At the same time, the conversion of agricultural land has long been considered a necessity for economic development and growth. However, prime farmland often is converted prematurely with little consideration of the impacts to remaining agricultural infrastructure. This leads to speculation on other lands and often removes the incentive for farmers to reinvest into their farming operations. Substantial development in the midst of an agricultural area also may interfere with farming operations, including the movement of farm equipment on local roads. Further, new residents unaccustomed to practices such as manure spreading or nighttime harvesting may seek to limit such activities.

Unrestrained, the conversion of farmland occurs in a haphazard, unplanned pattern that may cause increased demands upon municipal services and infrastructure. Scattered, unplanned development that is not functionally related to adjacent land use is often referred to as "sprawl." Sprawl is costly to taxpayers, erosive to the social values of small and moderately sized towns, and detrimental to environmental concerns such as air and water quality, flooding, stormwater management, open space, and agricultural lands preservation.

Today, more than ever, the farmland base is threatened by competing or conflicting rural non-farm development — development that would be better located where public services can be efficiently provided and conflicts with farm operations can be minimized.

Green County FACT:

Agriculture pays about $40 million in taxes. Economic activity associated with Green County farms and agriculture-related businesses generates $39.6 million in local and state taxes. This figure does not include all property taxes paid to support local schools. If it did, the number would be much higher.

Source: UW Extension

Green County's abundant farmland and rich agricultural heritage have helped make the county a top-ranking producer and exporter in the food and agricultural industry. The county's agricultural land base is an important factor in keeping Green County a competitive force in the agricultural marketplace, in supplying wholesome and affordable foods to meet the world's ever-increasing needs, and in fostering the economies and cultural identity of the county and its rural communities.

The most serious threat to the viability of farmland in the county is residential development. Much of the county's growth in past decades has occurred on former agricultural land. Often residential development occurs first, and then creates demand for more roads, schools, and other services. Though the housing market bubble over the past couple of years has dramatically slowed down the pace of development, it still remains as one of the most significant threats to farmland.

Green County FACT:

Source: UW Extension

Green County agriculture pumps $1.39 billion into the economy. This is about 41% of the County's total business sales. Every dollar of sales from agricultural products generates an additional $0.41 of business sales in other parts of the County's economy.

Following are County and Town goals, objectives, and policies pertaining to Agricultural and Natural Resources.

AGRICULTURAL & NATURAL RESOURCES — GOALS, OBJECTIVES, AND POLICIES

(related to the preservation of agricultural lands and agricultural economy)

Source: Green County Comprehensive Plan

AGRICULTURAL RESOURCES
Goal
1. The protection of economically productive areas, including farmland and forests.
Objectives and Policy Recommendations
• Maintain the rural and agricultural character of the County.
• Where and when appropriate, utilize county, state, and federal programs or grants to conserve, maintain, and protect agricultural resources.
• Encourage programs that educate local residents about the importance of agricultural resources.
• Encourage farmers and landowners to conserve, maintain, and protect agricultural resources.
• Encourage the preservation of the family farm, cropland, and farmland in the community.
• Preserve prime farmland for agricultural uses.
• Preserve agricultural fields in the community from encroachment be incompatible development (limit fragmentation of crop fields).
• Maintain proper separation distances between urban and rural land uses to avoid conflicts.
• Discourage isolated non-agricultural commercial and industrial uses in agricultural areas.
• Encourage residential and commercial development to locate in areas least suited for agricultural purposes.
• Maintain the agricultural infrastructure to support agricultural operations.
• Fragmentation of cropland should be avoided.
• Provide continuing support to existing operations and agriculture activities.
• Preserve and protect agriculturally productive soils.
• Encourage the use of conservation easements and deed restrictions by private landowners to keep prime agricultural land from being developed.

Source: Green County Comprehensive Plan

LAND USE — GOALS, OBJECTIVES, AND POLICIES
(related to the preservation of agricultural lands and agricultural economy)
Source: Green County Comprehensive Plan

Goals	
1.	Protect natural areas, including wetlands, wildlife habitats, lakes, woodlands, open spaces, and groundwater resources.
2.	Protect economically productive areas, including farmland and forests.
3.	Promote the expansion or stabilization of the current economic base and the creation of a range of employment opportunities at the state, regional, and local levels.
4.	Plan and develop land uses that create or preserve varied and unique urban and rural communities.
Objectives and Policy Recommendations	
•	Rural residential development must meet the goals of the community vision.
•	Protect and maintain agricultural lands and woodlands from encroachment and avoid development that would alter its character or vision for the future.
•	Where possible, the fragmentation of tracts of farmland should be avoided.
•	Recognize the critical role that farmland/agricultural land, open space, historical architecture, scenic vistas, landscapes, riverscapes, natural resources and designated features, scenic roads, streams, and archeological and cultural features play in defining and enhancing the community's distinctive rural character and landscape.
•	Protect agricultural facilities and livestock operations that exist in the jurisdiction from encroachment by incompatible uses. (Care should be taken to ensure that development occurs on the least productive soils.)
•	Support land uses that result in the protection of valued resources and recognize existing physical limitations.
•	Recognize that active agricultural lands need to be protected from encroachment of incompatible uses to limit fragmentation of large tracts of crop fields.
•	Recognize that while flat valley bottoms are often the most desirable areas for new development, these areas frequently contain highly productive and irreplaceable agricultural soils. Therefore, care must be taken to ensure that development occurs on neighboring areas and the least productive valley soils.
•	Encourage the use of conservation neighborhood design strategies for rural residential development in appropriate areas and where consistent with community wishes.
•	Protect agricultural land and forestry as they help County residents realize the vision for the future.
•	Protect agricultural and forest lands as this will help maintain a rural, small-town character.
•	The fragmentation of farmland will be discouraged.
•	Preserve agricultural fields in the community from encroachment by incompatible development (limit fragmentation of crop fields).
•	Supplement open space by preserving large tracts of agricultural land when possible.

Source: Green County Comprehensive Plan

Existing Land Uses

The following table approximates the amount of land in each of the major classifications for Green County.

Residential — Residential land includes any land with a residential home that does not fall into the agricultural land classification.

Commercial — Commercial land refers to any parcel that has a retail business or professional business establishment on it, but does not include industrial properties. This may be a convenience store, car wash, bank, grocery store, tavern, etc.

Manufacturing — Manufacturing land refers to business and industry that is engages in processing, manufacturing, packaging, treatment, or fabrication of materials and products.

Agricultural — Agricultural land includes land producing a crop (including Christmas trees or ginseng), agricultural forest (forested land contiguous with agricultural lands), supports livestock, or is eligible for enrollment in specific federal agricultural programs.

Undeveloped — This land classification refers to areas that were formerly classified as swamp/waste. It includes bogs, marshes, lowlands brush land, and uncultivated land zoned as shore land and shown to be wetland.

Forest — Forested land includes production forests and WDNR-MFL.

Other — Remaining land types that do not fall into the above categories, including federal, state, and county lands, school property, and cemeteries.

TABLE 1.2: Green County Land Use

Classification	Parcel Count	Land Area (acres)	Percent of Land Area
Residential	12,155	15,325	4%
Commercial	1,328	1,914	1%
Manufacturing	105	595	0%
Agricultural	9,872	284,542	82%
Undeveloped (formerly Swamp/Waste)	5,345	20,150	6%
Ag-Forest	281	281	0%
Forest	2,588	20,594	6%
Other (Federal, State, County, School, Cemetery)	2,073	4,295	1%
TOTALS	**33,747**	**347,696**	**100%**

Source: Green County Comprehensive Plan

Surprisingly, the number of farms in Green County increased between 2002–2007 (44 new farms) with a slight reduction in average size of farm (206 to 200 acres) (Table 1.3).

TABLE 1.3: Land in Farms — 2002 and 2007

	2002		2007	
GREEN COUNTY	**No. of farms**	**No. of Acres**	**No. of farms**	**No. of Acres**
Number of farms	1,490	—	1,534	—
Land in farms	—	306,946	—	306,859
Average size of farm	—	206	—	200
Approximate total land area	—	373,747	—	373,747
Percent of land in farms	82.1%	—	82.1%	—
Size of farm:				
1 to 9 acres	93	520	92	510
10 to 49 acres	362	9,603	428	10,616
50 to 69 acres	88	5,102	120	6,918
70 to 99 acres	134	11,152	133	11,085
100 to 139 acres	105	12,269	129	15,243
140 to 179 acres	116	18,335	114	17,843
180 to 219 acres	128	25,352	100	19,663
220 to 259 acres	107	25,481	85	19,992
260 to 499 acres	232	81,170	210	75,243
500 to 999 acres	95	63,235	88	58,544
1,000 to 1,999 acres	23	30,685	26	34,299
2,000 acres or more	7	24,039	9	36,903

Source: USDA, National Agricultural Statistics Service, 2007 Census of Agriculture

Green County FACT:

Source: FoodWisconsin.com

Dairy is the largest part of Green County's agriculture. There are approximately 31,000 dairy cows in Green County. Each dairy cow generates about $17,000 annually of economic activity, resulting in a total economic impact of $57 million annually to the local Green County economy from the dairy industry.

Table 1.4 illustrates farm land uses in the County. The most significant changes occurred relative to land used for pasturing. In this instance, cropland used solely for pasture declined sharply from 15,418 in 2002 to 4,883 acres in 2007. This change may be attributed to some acres moving into harvested cropland, taken out of pasture for farmsteads, or more accurate accounting of the land use.

TABLE 1.4: Land in Farms — 2002 and 2007

	2002		2007	
GREEN COUNTY	**No. of farms**	**No. of Acres**	**No. of farms**	**No. of Acres**
Total cropland	1,345	247,639	1,341	240,009
Harvested cropland	1,045	211,097	979	211,543
Cropland used only for pasture or grazing	514	15,418	365	4,883
Total woodland	740	24,343	799	26,203
Permanent pasture (other than cropland or wooded pastured)	612	18,117	856	24,853
Land in farmsteads (buildings, livestock facilities, ponds, roads, etc.)	1,060	14,987	1,161	17,654
Pastureland, all types	964	38,726	1,000	33,141
Land used for vegetables and vegetables harvested for sale	20	592	27	667
Land in orchards	10	43	12	47

Source: USDA, National Agricultural Statistics Service, 2007 Census of Agriculture

Land Values Rising

According to a WASS report, agricultural land values are rising sharply. Table 1.5 depicts value of farm real estate (which includes farm buildings) and farm land (without buildings). Similarly, cash rents have risen steeply.

TABLE 1.5: Green County Farmland Average Price Per Acre, 2000–2010

Year	Ag Land without Buildings	Ag Land with Buildings
2000	$2,345	$1,982
2001	$1,927	$2,123
2002	$1,905	$2,212
2003	$2,775	$2,860
2004	$2,595	$2,696
2005	$3,285	$3,630
2006	$3,505	$4,370
2007	$3,558	$4,323
2008	$4,537	$4,391
2009	$3,661	$4,513
2010	$3,535	$4,643
2011	$4,628	$4,565

Source: Wisconsin Agricultural Statistical Service

Table1.6 illustrates that between the years 2000 and 2010, fewer agricultural acres were changed to other uses and the price per acre more than doubled. Much of this can be attributed to rising commodity prices.

TABLE 1.6: Agricultural Land Sales

GREEN COUNTY	2000	2005	2010
Agricultural land continuing in agricultural use			
Number of acres sold	3,128	4,932	2,062
Dollars per acre	$1,779	$3,281	$3,831
Agricultural land being diverted to other uses			
Number of acres sold	1,266	757	230
Dollars per acre	$2,273	$4,044	$5,784
Total of all agricultural land			
Number of acres sold	4,395	5,689	2,292
Dollars per acre	$1,921	$3,382	$4,027

Source: USDA, National Agricultural Statistics Service, 2007 Census of Agriculture

Green County FACT:

Source: UW Extension

Green County agriculture accounts for $328.2 million, or 26 percent, of the County's total income. This includes wages, salaries, benefits, and profits of farmers and workers in agriculture-related businesses. Every dollar of agricultural income generates an additional $0.97 of County income.

The average market value per farm grew 45% in a five year time period (Table 1.7). This further illustrates a strong agricultural economy in Green County.

TABLE 1.7: Farms Land Value — 2002 and 2007

	2002		2007	
GREEN COUNTY	No. of farms	$ Amount	No. of farms	$ Amount
Market value of land & buildings	1,487	$733,370,000	1,534	$1,095,659,000
Average market value per farm	—	$493,188	—	$714,250
Average market value per acre	—	$2,271		$3,571

Source: USDA, National Agricultural Statistics Service, 2007 Census of Agriculture

Table 1.8 highlights farm values. The greatest number of farms (approximately 33 percent) have a market value of land and buildings between $200,000 and $499,999.

TABLE 1.8: Farm Values — 2007

GREEN COUNTY	No. of farms
Market value of farm land and buildings:	
$1 to $49,999	119
$50,000 to $99,999	98
$100,000 to $199,999	236
$200,000 to $499,999	490
$500,000 to $999,999	315
$1,000,000 to $1,999,999	176
$2,000,000 to $4,999,999	77
$5,000,000 to $9,999,999	15
$10,000,000 or more	6

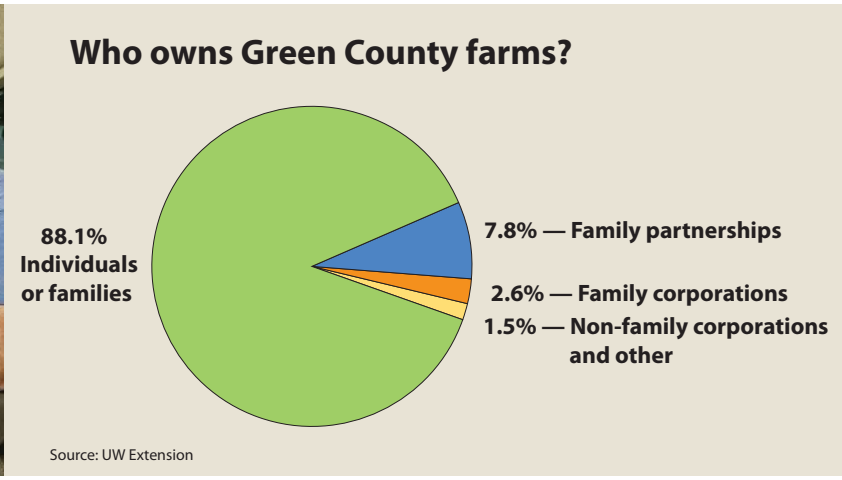
Source: USDA, National Agricultural Statistics Service, 2007 Census of Agriculture

With respect to the type of farming organization, Table 1.9 illustrates that of the over 1,500 farms in Green County, 62 are held in a form of corporation, cooperative, or other.

TABLE 1.9: Type of Farm Organization — 2002 and 2007

	2002		2007	
GREEN COUNTY	No. of farms	No. of acres	No. of farms	No. of acres
Corporation: family-held	45	24,367	40	32,239
Corporation: other than family-held	2	—	3	1,262
Other—cooperative, estate or trust, institutional, etc.	6	—	19	2,038

Source: USDA, National Agricultural Statistics Service, 2007 Census of Agriculture



The Agricultural Economy

Commodity Prices

Prices have a large impact on farm incomes and profits. Even small shifts in prices directly impact the bottom lines.

Corn prices have risen in accordance with increasing demand from ethanol plants. Record or near-record corn acreages have been planted since 2007 in anticipation of high demand.

On a statewide basis, productivity for some commodities increased considerably — the yields for corn, soybeans, and milk all rose more than 80 percent from 1970 to 2005.

Productivity Increases

Although the number of farmers and the total amount of farmland has fallen over the past three decades, those still employed in farming have seen a large increase in productivity. These improvements in productivity have helped offset decreases in the number of farmers and farmland and confirm that the growth in farm incomes is the result of increases in farm efficiency.

Green County FACT:

Green County ranks as the 50th largest dairy-producing county in the United States, out of nearly 2,500 dairy producing counties.

Source: FoodWisconsin.com

Tables 1.10 and 1.11 indicate number of farms by livestock, poultry, and crops in the County.

TABLE 1.10: Livestock and Poultry — 2007

GREEN COUNTY	No. of farms	No. of animals
Cattle and calves inventory	722	82,843
Beef cattle	234	5,830
Milk cows	365	30,390
Cattle and calves sold	659	33,750
Hogs and pigs inventory	60	5,910
Hogs and pigs sold	73	10,834
Sheep and lambs inventory	69	1,583
Layers inventory	156	3,353
Broilers and other meat-type chickens sold	25	2,662

Source: USDA, National Agricultural Statistics Service, 2007 Census of Agriculture

TABLE 1.11: Crops — 2007

GREEN COUNTY	No. of farms	No. of acres	No. of bushels
Corn for grain	643	90,275	13,523,128
Corn for silage or greenchop	345	12,862	228,960 (tons)
Winter wheat for grain	129	6,146	424,234
Oats for grain	174	3,564	233,450
Barley for grain	17	424	25,316
Soybeans for beans	368	36,115	1,741,975
Hay — all hay including alfalfa	784	44,529	134,057 (tons, dry)
Forage — land used for all hay and all haylage, grass silage, and greenchop	811	65,044	253,348 (tons, dry)
Vegetables harvested for sale	27	667	—
Potatoes	7	5	—
Land in orchards	12	47	—

Source: USDA, National Agricultural Statistics Service, 2007 Census of Agriculture

Green County FACT:

Source: FoodWisconsin.com

Green County ranks in the top 10 counties in Wisconsin in the production of corn and alfalfa, and in the top 15 in soybeans and dairy production.

Specialty Crops, Nurseries and Sod Farms

Specialty crop farming may provide one means of maintaining agricultural production within growth pressured areas of the County where large tracts of agricultural lands are not available. Unlike traditional crops such as corn or soybeans, the profitability of farming nontraditional crops is not closely tied to large acreage requirements. For example, a single acre of farmland is capable of producing 36,000 pounds of potatoes, 32,000 pounds of lettuce, 35,000 pounds of strawberries, or 28,000 ears of sweet corn. Speciality crops such as these are capable of yielding substantial revenues to the County's economy while diversifying and stabilizing the agricultural industry in the face of increased commercial and residential development. Smaller specialty crop farms could offer a means of integrating agricultural uses within developing commercial and residential areas. In order to make such a strategy effective, it is also important that agricultural producers have local outlets to market their goods.

In addition to specialty crop farms, nurseries and sod farms could also serve a transitory role in areas under pressure to develop. As an area develops, and traditional agriculture becomes constrained or non-viable, nurseries and sod farms provide a means of taking greater advantage of the undeveloped agricultural lands by generating a profit from smaller areas. It should be noted, however, that when these transitory uses leave a site, the land may not always be suitable for traditional agriculture.

Green County FACT:

Source: UW Extension

Horticulture contributes to Green County diversity.
Green County sales of Christmas trees, fruits and vegetables, greenhouse, nursery, and floriculture products add up to $.49 million annually. Landscape, grounds maintenance, and tree-care businesses create additional full-time jobs and seasonable jobs.

Farming operations, other than dairying, corn, and soybean, include those identified in Tables 1.12 and 1.13.

TABLE 1.12: Nursery, Greenhouse, Floriculture, Sod, Mushrooms, Vegetable Seeds and Propagative Materials Grown for Sale — 2002 and 2007

GREEN COUNTY	2002	2007
Number of farms	11	7
Sq. ft. under glass or other protection	—	24,000
Acres in the open	3	3
Value of sales	—	$119,800

Source: USDA, National Agricultural Statistics Service, 2007 Census of Agriculture

TABLE 1.13: Organic Agriculture — 2007

GREEN COUNTY	No. of farms	No. of acres
Total acres used for organic production	17	513
Acres from which organic crops were harvested	15	491
Acres of organic pastureland	8	82
Acres being converted to organic production	11	676

Source: USDA, National Agricultural Statistics Service, 2007 Census of Agriculture

Table 1.14 identifies Green County farm operations by NAIC classification. Crop farming, dairy, and grain farming compose 67 percent of the farming operations in Green County.

TABLE 1.14: Farms by North American Industry Classification System — 2007

GREEN COUNTY	No. of farms
Total farms	1,534
Oilseed and grain farming (1111)	266
Vegetable and melon farming (1112)	8
Fruit and tree nut farming (1113)	9
Greenhouse, nursery and floriculture production (1114)	13
Other crop farming (1119)	430
Beef cattle ranching and farming (112111)	212
Cattle feedlots (112112)	36
Dairy cattle and milk production (11212)	333
Hog and pig farming (1122)	20
Poultry and egg production (1123)	66
Sheep and goat farming (1124)	43
Other animal production (1129)	98

Source: USDA, National Agricultural Statistics Service, 2007 Census of Agriculture

Forested Lands

Maintaining productive forest lands is an increasing challenge due to land values. The ability of forest land to be productive is in part affected by the size of the forest blocks. As ownership size decreases, the ability to efficiently manage also decreases.

These lands provide economic, environmental, and social benefits, and provide farm income and jobs to the rural areas in both forest products and tourism.

Economic Growth and Business Development

Agricultural-Based Food Manufacturing and Processing

While numbers of people employed directly in agriculture has declined, the county still relies heavily on agriculture as a job-producer. In addition to farm owners and employees, these jobs include veterinarians, crop and livestock consultants, feed and fuel suppliers, food processors, farm machinery manufacturers and dealers, barn builders, agricultural lenders, fencing businesses, custom crop services, crop and livestock transport, and numerous other related areas.

How important is agriculture?

Agriculture provides **5,912 jobs** in Green County.

Agriculture accounts for **$1.39 billion** in business sales.

Agriculture contributes **$328 million** to county income.

Agriculture pays about **$40 million** in taxes.

Source: UW Extension

In Green County, the food industry accounts for $640 million annually in economic activity, and is home to major cheese plants, food processors, and food machinery companies. The Green County Development Corporation works proactively with the State of Wisconsin and local officials to provide meaningful incentives and loans that help to ensure a successful business operation.

Agriculture and the food processing/packaging related businesses represent important economic forces in Green County. This industry cluster includes hundreds of family-owned farms and related businesses and industries that provide equipment, services, and other products needed to process, market, and deliver food and agriculture-based products to consumers. The production, sales, and processing of Green County's farm products generate employment, economic activity, income, and tax revenue.

Green County Attributes

- From corn and soybean production, to goat and cow dairies, Green County is the first link in many food and agriculture-based businesses, and a popular region for processors and packagers.
- Located on the Illinois–Wisconsin border, Green County offers a central point from which to ship and receive products. While rural in nature, Green County is part of the Greater Madison metropolitan area.
- Easy access to raw materials coupled with an abundant fresh water supply, intermodal transportation, and a cooperative pro-business climate are some of the reasons why agriculture-based and food processing and packaging businesses call Green County home.

Dairy Farming

Dairy farming is the major agricultural industry in Green County. On-farm milk production generates $143.5 million in business sales. Processing milk into dairy products accounts for another $794.1 million.

- **31 plants process dairy products in Green County.**
- **On-farm milk production accounts for 1,098 jobs, and dairy processing accounts for 2,510 jobs.**
- **At the County level, each dairy cow generates $3,698 in on-farm sales to producers.**
- **At the State level, each dairy cow generates $21,000 in total sales.**

Source: UW Extension

Green County FACT:

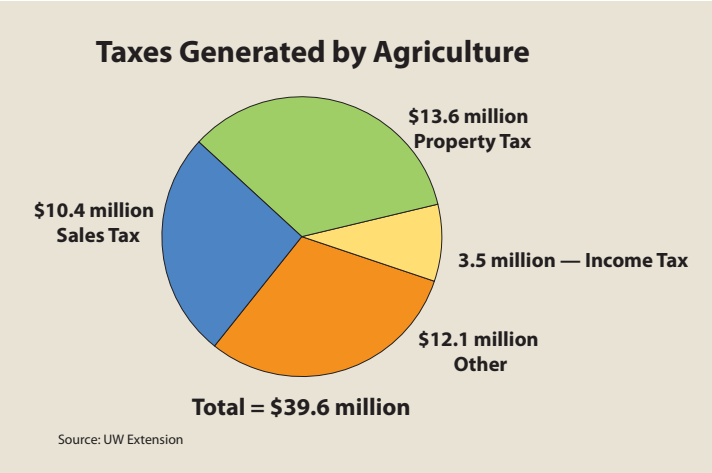
Green County is home to 13 cheese plants—more than any other county in Wisconsin. Many of these cheese plants produce specialty cheeses that are not produced anywhere else in the United States. Supporting the cheese factories are more than 1,500 farms in the region, of which nearly 600 are dairy farms.

Source: FoodWisconsin.com

Economic Contribution

It is often forgotten that farming is an enterprise that operates in much the same way a local business or manufacturing business would. Agricultural producers purchase inputs such as seed, feed, fertilizer, fuel, agricultural chemicals, and equipment from local suppliers, and the commodities they produce with those inputs are then sold at market. In addition to farming enterprises, several agricultural businesses are located within the County such as seed dealers; grain elevators; dairy product processors, sales, and distribution; equipment dealers; roadside farm stands; specialty crop sales; and farm chemical, fuel, and supply dealers. These businesses, like all others fuel Green County's economy through property taxes, sales tax, and employment.

Maintaining this significant component of the local economy is financially beneficial to public service providers such as County and municipal governments. As the number of households within Green County grows, the cost of providing services will increase. It is in the County's best interest to pursue policies that curtail the premature conversion of agricultural land and encourage development patterns that permit the most efficient provision of services possible.



As a significant producer of cheese products, Green County contributes to the strong position held by the U.S. in the world markets.

TABLE 1.15: Dairy Product Export Market Shares for U.S. and Selected Other Countries — 2000–2010

	Percent of Total World Dairy Product Exports		
Product and Country	**2000**	**2005**	**2010**
Cheese:			
U.S.	4.4	4.7	12.0
EU-27	45.2	40.3	42.6
Australia	20.9	18.3	12.1
New Zealand	23.7	21.4	20.9
Butter:			
U.S.	0.6	1.1	7.0
EU-27	26.0	43.2	24.9
Australia	19.5	8.9	8.2
New Zealand	47.5	40.1	56.1
Nonfat Dry Milk/SMP:			
U.S.	11.7	27.6	28.7
EU-27	37.4	18.9	27.4
Australia	20.9	14.1	9.8
New Zealand	14.5	22.0	27.8

Source: USDA, FAS, *Dairy, World Markets and Trade*, EU-25 for 2000 and EU-27 for 2005 and 2010.

Green County FACT:

Source: FoodWisconsin.com

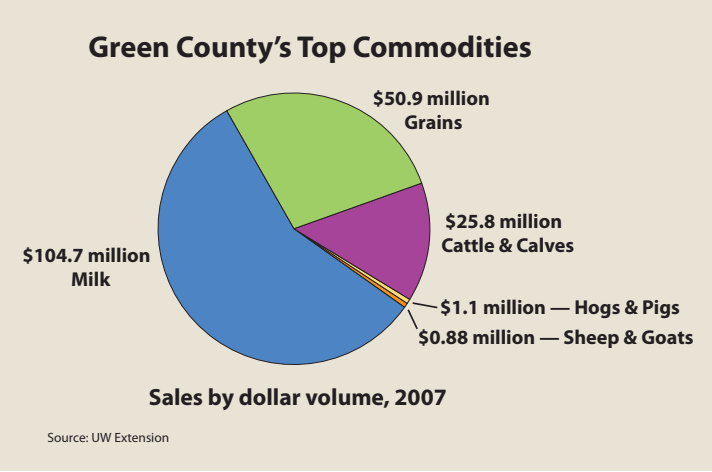
Wisconsin's highest concentration of Master Cheese-makers is in Green County. Thirteen cheese manufacturing plants use milk from over 300 local dairy farms to produce more than 65 specialty cheeses.

The market value of agricultural products sold on Green County farms increased significantly during a 5-year span (2002–2007) (Table 1.16). The average sales per farm increased 36 percent.

TABLE 1.16: Total Market Value of Agricultural Products Sold — 2002 and 2007

	2002		2007	
GREEN COUNTY	No. of farms	$ Amount	No. of farms	$ Amount
Total sales	1,490	$117,216,000	1,534	$188,084,000
Average sales per farm		$78,668		$122,610
Value of sales:				
Less than $1,000	427	$30,000	501	$54,000
$1,000 to $2,499	95	$160,000	99	$169,000
$2,500 to $4,999	74	$251,000	88	$337,000
$5,000 to $9,999	82	$599,000	88	$637,000
$10,000 to $19,999	93	$1,341,000	72	$1,031,000
$20,000 to $24,999	30	$664,000	37	$833,000
$25,000 to $39,999	76	$2,466,000	61	$1,997,000
$40,000 to $49,999	39	$1,728,000	37	$1,638,000
$50,000 to $99,999	190	$14,008,000	105	$8,020,000
$100,000 to $249,999	294	$46,917,000	225	$38,194,000
$250,000 to $499,999	64	$21,134,000	159	$54,714,000
$500,000 or more	26	$27,918,000	62	$80,461,000

Source: USDA, National Agricultural Statistics Service, 2007 Census of Agriculture)



The market value of livestock and poultry products increased over 5 years as shown in Table 1.17. Total livestock and poultry increased 47 percent. Milk and other dairy products from cows grew by 65 percent from 2002–2007 while at the same time seeing 55 fewer dairy operations.

During this same time period, farm production expense increased on an average per farm by 33 percent (Table 1.18).

Similarly, average farm-related income grew by 68 percent (Table 1.19).

TABLE 1.17: Market Value of Livestock & Poultry Products Sold — 2002 and 2007

	2002		2007	
GREEN COUNTY	No. of farms	$ Amount	No. of farms	$ Amount
Total livestock, poultry, and their products	853	$90,192,000	855	$132,858,000
Poultry and eggs	47	$237,000	145	$112,000
Cattle and calves	727	$21,495,000	659	$25,831,000
Milk and other dairy products from cows	428	$63,287,000	373	$104,678,000
Hogs and pigs	79	$3,761,000	73	$1,092,000
Sheep, goats and their products	69	$977,000	81	$878,000

Source: USDA, National Agricultural Statistics Service, 2007 Census of Agriculture

TABLE 1.18: Farm Production Expenses — 2002 and 2007

	2002		2007	
GREEN COUNTY	No. of farms	$ Amount	No. of farms	$ Amount
Total farm production expenses	1,487	$104,096,000	1,534	$143,025,000
Average per farm	—	$70,004	—	$93,237
Property taxes paid	1,312	$5,509,000	1,429	$6,108,000

Source: USDA, National Agricultural Statistics Service, 2007 Census of Agriculture

TABLE 1.19: Income from Farm-related Sources — 2002 and 2007

	2002		2007	
GREEN COUNTY	No. of farms	$ Amount	No. of farms	$ Amount
Total income from farm-related sources, gross before taxes and expenses	688	$3,598,000	817	$7,187,000
Average per farm	—	$5,230	—	$8,797

Source: USDA, National Agricultural Statistics Service, 2007 Census of Agriculture

Tourism

Agri-tourism stands out as one means of aiding the local economy while at the same time providing a healthy economic benefit to small- and medium-sized farms and enhancing the rural image of the County. Though not a new concept within Green County, agri-tourism has been recognized as an economic development engine that supports local businesses by creating demand for new services and providing supplemental income to agricultural operations.

Sales made directly at a farm often result in greater returns to the grower than if agricultural commodities were sold at wholesale prices. As such, the economic impact of agri-tourism is typically more immediate than other commercial enterprises in that it provides a direct connection between locally owned and operated producer and the consumer. Successful agri-tourist destinations can also benefit local restaurants, hotels and inns, shops, and other cultural destinations such as museums.

Green County FACT:

Source: UW Extension

Direct marketing sales add $343,000 annually to the economy. More and more Green County farmers sell directly to consumers through roadside stands, farmers' markets, auctions, pick-your-own operations, and community supported agriculture (CSA). In all, 90 farmers generate $343,000 annually in direct-marketing sales.

Educational Opportunities

Blackhawk Technical College

The Agribusiness program provides local businesses highly qualified, potential employees with hands-on experience and a higher skill set. Graduates of BTC's Agribusiness program are qualified to work in fields such as:

- Farm, ranch, and other agricultural manager
- Chemical/fertilizer applicator
- Farm products purchasing agent
- Crop scouting associate
- Agricultural product sales agent
- Agricultural research technician
- Agricultural marketing specialist
- Nutrient management specialist
- Seed, feed, chemical, fertilizer associate

According to the Agribusiness program description offered by BTC, "The new Agribusiness Specialist program will provide students with the skills and experience needed for future employment in a variety of agricultural settings including production, service and supply, marketing and sales, research, and agricultural tourism. Emphasis will be on career leadership, agribusiness management, safe and sustainable agriculture, and renewable energy."

Source: Green County Development Corporation; UW Extension

Importance of Agriculture on Economic Development

In conjunction with the preparation of the Green County Comprehensive plan, a county-wide survey instrument was developed. With respect to agricultural-related economic development, 96 percent of respondents believed that agricultural-related businesses were considered "essential" to "important" for the economic well-being of the County.

With respect to non-agricultural development (commercial, industrial), between 63 percent and 68 percent of respondents felt that non-agricultural development should take place in or adjacent to cities, villages, and existing services to preserve farm lands.

ECONOMIC DEVELOPMENT — GOALS, OBJECTIVES, AND POLICIES
(related to the preservation of agricultural lands and agricultural economy)
Source: Green County Comprehensive Plan

Goals
1. Promote the redevelopment of land with existing infrastructure and public services and the maintenance and rehabilitation of existing residential, commercial, and industrial structures.
2. Protect economically productive areas, including farmland and forests.
Objectives and Policy Recommendations
• Encourage non-agricultural commercial and industrial development to locate in areas with adequate public services and transportation facilities, and adjacent to existing commercial and industrial developments.
• Direct large-scale economic development projects to urban areas where a full range of utilities, services, roads, and other infrastructure is available, and when possible, locate new development adjacent to existing commercial or industrial developments.
• Encourage agriculture and agriculture-related businesses as a major economic development force in the community.

Source: Green County Comprehensive Plan

Utilities, Infrastructure, and Community Facilities

Utilities and Community Facilities

It is forecasted that the population in Green County will grow by 13–34% over the next 20 years. This increase in population will undoubtedly increase the demand for public utilities and community facilities. However, the exact needs to expand, rehab, or create new utilities and community facilities are difficult to determine. Forecasts for the future utility and community facility needs of Green County will vary across Green County, according to growth pressure and the level of service that is deemed publicly acceptable.

Infrastructure

Infrastructure includes the physical elements of development that directly influence the form function, and quality of growth. They include the broad categories of utilities, transport, and other public facilities, most of which represent a substantial and long-term investment and many of which are underground and, therefore, often unseen or overlooked.

Principles of Infrastructure

- It is essential that all infrastructure, despite being provided by separate agencies, be planned in concert with a single vision of county or regional growth and development.
- A dependable system of safe domestic water sources, treatment, and distribution are fundamental.
- Stormwater management incorporates a coordinated system of waterways, wetlands, detention and retention facilities, sewer pipes, site design, and runoff control, including landscaping, to minimize flooding.
- Wastewater management incorporates a coordinated system of sewer pipes, treatment facilities, on-site systems, and agricultural practices to minimize point and non-point pollution of the region's waterways and groundwater supplies.

- Advanced communications technology is critical to economic development and quality of life in the region, and can be planned, designed, and maintained to avoid disruption of desired land-use patterns, and minimize adverse environmental or visual impact.
- All roadways are intended to serve designated functions as part of a regional system of roadways.

UTILITIES AND COMMUNITY FACILITIES — GOALS, OBJECTIVES, AND POLICIES

(related to the preservation of agricultural lands and agricultural economy)

Source: Green County Comprehensive Plan

Goals
1. Encourage land uses, densities, and regulations that promote efficient development patterns and relatively low municipal, state governmental, and utility costs.
2. Provide adequate infrastructure and public services, and an adequate supply of developable land to meet existing and future market demand for residential, commercial, and industrial uses.
Objectives and Policy Recommendations
• Encourage new development that requires urban services to locate within village or city limits.
• Encourage new growth to locate in areas that are most efficiently served with utilities.
• Discourage utility extensions into areas environmentally unsuitable for urban development due to soils, flooding, and topography.

Source: Green County Comprehensive Plan

TRANSPORTATION — GOALS, OBJECTIVES, AND POLICIES

(related to the preservation of agricultural lands and agricultural economy)

Source: Green County Comprehensive Plan

Goals
1. Provide an integrated, efficient, and economical transportation system that affords mobility, convenience, safety, and meets the needs of all citizens, including transit-dependent and disabled citizens.
Objectives and Policy Recommendations
• Utilize the existing road network to the greatest extent possible, in order to minimize future road maintenance costs and avoid the fragmentation of woodland and farmland.

Source: Green County Comprehensive Plan

Agricultural Infrastructure

Farming infrastructure includes businesses and services such as a feed mills, equipment vendors, farm supply businesses, and food processing facilities. A listing of this infrastructure for Green County by Town is included in the Green County Comprehensive Plan.

Table 1.20 provides a small sampling of one aspect of infrastructure capacity available in Green County, showing the latest numbers for grain storage capacity in the County, with capability of over 9 million bushels of storage.

TABLE 1.20: Grain Storage Capacity — 2007

GREEN COUNTY	2007
Number of farms	445
Number of bushels	9,601,060
Average bushels per farm	21,575

Source: USDA, National Agricultural Statistics Service, 2007 Census of Agriculture

Natural Resources

It is common practice for agricultural producers to intentionally provide wildlife habitat and natural areas within their land holdings. These areas serve a vital function in maintaining the populations of several species such as deer and fowl and as links between larger areas of open space that connect different wildlife populations. These areas also help protect the County's water supply and provide year-round recreation opportunities such as bird watching, bicycling, scenic walks and drives, hunting, snowmobiling, and cross-country skiing.

Planning, from an environmental perspective, can be defined as the process of directing the type, intensity, quality, and timing of changes in land use to achieve balanced and self-sustaining communities that nourish and expand human opportunities. To make this work, jurisdictions must plan for the area beyond the corporate limits and consider a long-term time perspective. Planning should project a desired picture or vision of what the planning jurisdiction will look like in full development. If it is a good plan, it will achieve the County's objectives regardless of the exact rate or ultimate extent of growth.

A good plan will reflect local conditions, concerns, resources, priorities, and opportunities in its proposals and design standards. The following principles for natural resources planning are widely accepted and provide a guide for the development of a plan.

- Protect, enhance, and integrate natural resources into the life and future of the County.
- Maintain diversity and balance in land uses. Diversity is particularly needed in the housing stock and economic base, and in the relationship of the distribution of jobs and housing, and of housing and other daily needs such as schools, parks, and shopping.
- Create efficiency and order in the phasing and design of infrastructure and public service systems.
- Require quality of design that reinforces individual and community identity and character, minimizes maintenance and environmental costs, adds delight to living, and relates to the natural environment of the site, streetscape, and landscapes.

Stream and Wetland Protection

Streams and wetlands are valuable natural features in Green County, providing picturesque variations and buffers. While the principal natural function of stream systems is to drain runoff and floodwaters from the landscape, streams and rivers also provide for fishing, aquatic and wildlife habitat, water supply, nature study, and aesthetic enhancement. Further, streams and rivers served as the principal transportation route of the region's settlers and continue to serve commercial and recreational navigation needs.

Wetlands—swamps, marshes, bogs, meadows, and fens—are also common elements of the landscape, often bordering lakes and streams. Wetlands function as nature's kidneys, filtering contaminants from agricultural and urban runoff. Wetlands store vast quantities of floodwater, releasing it slowly to protect downstream areas. Wetlands also help to maintain consistent baseflows and water levels in streams and lakes, and some recharge underground aquifers. Finally, wetlands are highly productive ecological systems, providing habitats for exceptionally diverse communities of plants and wildlife.

Environmental Impact

Local officials increasingly recognize that economic development and environmental quality are equally important components of growth. Unfortunately, this awareness comes after decades of environmental neglect: sprawling development beyond urban boundaries, rapid and irreversible conversion of prime agricultural land, loss of unique plant and animal communities, and increased pollution of water and air resources. It goes without saying that development often has substantial impacts on the quality and quantity of an area's air, land, water, and biological resources. Yet, economic development has often taken precedence over environmental protection.

The benefits of economic development are often more immediate, important, and obvious to community members and local officials. The creation of good-paying jobs, provision of affordable housing, and diverse shopping opportunities address many of the priority needs and desires of local consumers. The benefits of environmental protection are often less evident and immediate, but are nonetheless important as natural resources continue to become scarce and threats to environmental and human health are ever-present.

NATURAL RESOURCES — GOALS, OBJECTIVES, AND POLICIES
(related to the preservation of agricultural lands and agricultural economy)
Source: Green County Comprehensive Plan

Goals
1. Protection of natural areas, including wetlands, wildlife habitats, lakes, woodlands, open spaces, and groundwater resources.
2. Protection of economically productive areas, including farmland and forests.
Objectives and Policy Recommendations
• Encourage programs that educate local residents about the importance of natural resources.
• Avoid disturbance to wetlands, shorelands, and other environmentally sensitive areas.
• Encourage the maintenance and expansion of wildlife habitat.
• Encourage tree preservation and sustainable forestry practices.
• Where and when appropriate, utilize state and federal programs to conserve, maintain, and protect natural resources.
• Preserve and protect environmental corridors for wildlife, water quality values, habitat protection, ecosystem, and ecology purposes.
• Work in cooperation with the Green County Land and Water Conservation Department to implement its water quality and conservation programs locally, encouraging their use by local residents and property owners.

Source: Green County Comprehensive Plan

Resources to Assist in the Preservation of Agricultural Lands

Federal Resources

- Conservation Security Program (CSP)
- Conservation Reserve (CRP) and Conservation Reserve Enhancement (CREP) programs
- Wetlands Reserve Program (WRP)
- Farm and Ranch Protection Program (FRPP)
- Environmental Quality Incentive Program (EQIP)
- Wildlife Habitat Incentives Program (WHIP)
- Technical Service Provider (TSP)

University of Wisconsin–Extension, Cooperative Extension Resources

- UW-Extension Farmer to Farmer Corn and Forage List
- UW Dairy Marketing & Risk Management Program
- Daily LDP Rates, PCP Data, Milk & Grain Futures—Farm Service Agency's Website
- Buying and Selling Hay and Straw FAQ Webpage

Programs Administered by the Green County Land & Water Conservation Department

- Soil conservation
- Water quality improvement
- Groundwater protection
- Nonpoint water pollution abatement
- Erosion control
- Wildlife habitat improvement and damage abatement
- Farmland preservation
- Animal manure management
- Streambank improvement cost sharing
- Conservation reserve enhancement

PART 2

Challenges/Trends Analysis

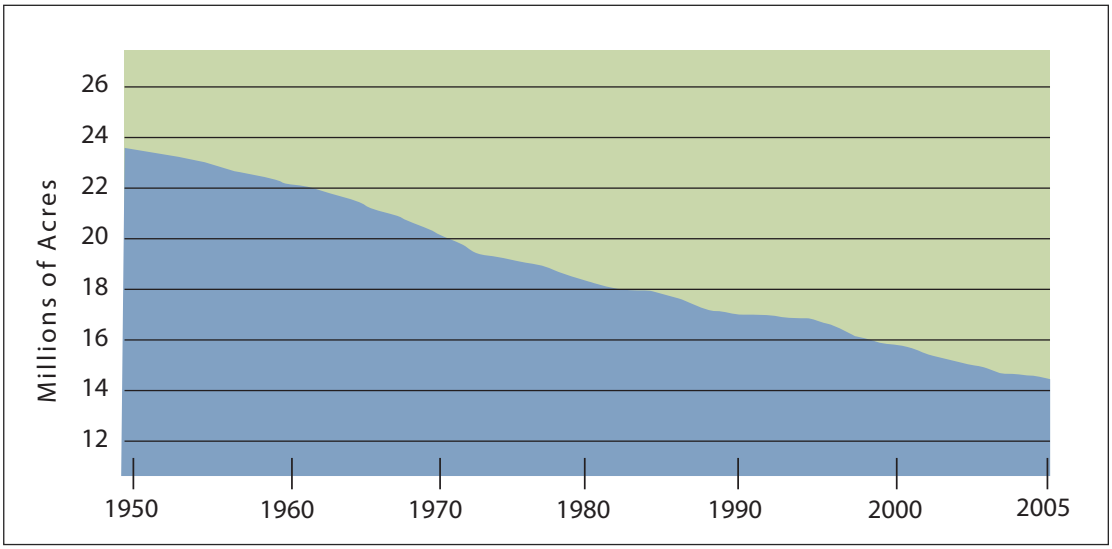
Green County farmers and farmland are a diverse resource. Dairy farmers, livestock operators and grain farmers all contribute to the County's economy and culture. Farming has in no small measure shaped Green County's landscape and its people. Not surprisingly, the county's citizens feel a special bond with the land and their agricultural traditions. Increasingly, too, there are worries about the loss of productive agricultural lands in a changing economy and an ever-increasing demand to convert farmland to other uses.

Like other agricultural areas, Green County is losing farmland to a variety of forces, most notably to development and community change. In some areas this change has been desirable and in the best interest of community development and orderly growth. But when farmland conversion occurs on prime soils, in areas of substantial agricultural investment, in sensitive environmental areas, or in a leap-frog, haphazard pattern conversion has serious consequences.

Unplanned and poorly managed growth threatens farmland and environmental resources. Such trends have the potential to disrupt the social and cultural character of rural communities. Green County residents clearly want their county and communities to grow and prosper, but not at the expense of the rural economy and significant agricultural resources. They want to manage and direct growth so that agriculture will endure and prosper as the county's overall economy continues to diversity.

Figure 2.1 illustrates, on a statewide basis, the loss of agricultural lands over a 55 year period.

FIGURE 2.1: Declining Agricultural Acreage in Wisconsin (1950–2005)



Source: Wisconsin Agricultural Statistics Service

Agricultural land preservation is not a single-issue topic, with all concerns somehow linked to runaway, unregulated growth. Some rural communities, in fact, have serious concerns over population losses. In these communities, farmers may lack the necessary support network of neighbors and service providers. Land preservation is inextricably linked with the economics, demographics, and sociology of Green County.

Trends/Challenges

A number of trends and challenges point to the need for farmland preservation.

Changing Demographics

- The average age of the county's farmers is increasing. As farmers retire or pass on, farmland is sometimes sold for residential, commercial, industrial, or recreational development.
- Urban expansion and commuting from Green County rural areas to the Madison area is a daily reality.
- Nonfarmers looking for rural quality of life, lower taxes, and other perceived benefits are developing nonfarm residences in agricultural areas.

Infrastructure

- Public and private investment in infrastructure such as roads, sewers, water systems, and other improvements make development feasible in areas that were once considered inappropriate and undesirable for non-agricultural uses.
- The availability of such services stimulate a market for development, increase property values, and drive up property taxes.

Changing Nature of Agriculture and Agricultural Economics

- The once-traditional "family farm" is no longer diversified, but specialized.
- The large scale of some modern farms requires substantial economic investments and financial uncertainties.
- Agricultural activity may not be as directly linked to the land and its resources as it was traditionally. Today's feedlots and animal confinements, for example, have different needs and characteristics than traditional farming operations.
- Nonfarm growth pressures have increased the opportunities to "cash-out" through farm sales or farmland conversion.
- In areas where there is rapid growth, farmers may feel that development is inevitable.
- As some farmers abandon farming or sell for development, an "impermanence syndrome" may develop with an associated decline in productivity as farmers hold off on investing in new equipment and making other improvements. In

this context, the perceptions of urban encroachment can be disruptive as actual encroachment and have the same effect on discouraging agricultural land preservation.

- Some areas may have lost or are in danger of losing a critical mass of closely located or contiguous farms. A farmer whose adjacent land uses are no longer agricultural is more likely to abandon farming or alter agricultural practices.
- As prime land is lost to nonagricultural uses, less productive, marginal lands may be brought into production at increased financial and environmental costs that may include erosion; increased need for irrigation, fertilizer, and pesticides; and increased distances from markets and services.
- The rush to corn-based ethanol production has the potential to change the availability and cost of feed grains for milk and meat production. There is concern that placing greater acreage in row crops may compromise conservation practices that have long facilitated land preservation and water quality.

Land Use Conflicts and Issues

- The distinction between town and countryside is blurring; in many areas, the urban core has deteriorated, while other areas have thrived. Nonfarming residents have moved into rural areas. As development begins to occur in rural areas, there is considerable potential for adjacent nonfarmers and farmers to become “nuisances” to each other.
- Agricultural activities such as aerial spraying, equipment noise, lights from the night-time use of equipment during cultivation and planting, and odors from livestock and chemicals may be objectionable to nonfarm neighbors.

The Future

Studies conducted by the UW Extension particularly relevant to Green County find:

- Trends show recent stability in farm and food processing employment. Advances in technology have allowed farmers and food processors to gain significant cost savings through economies of scale. Many of these advances have come in the form of labor-saving technologies. Trends suggest that agriculture is not a declining industry, but that it is becoming less labor intensive.
- In mostly larger, more urban counties, agricultural economic impacts (employment, business or industry sales and income) are large but as a percentage of the entire county economy, not as large as many more rural counties. In more rural counties, agricultural economic impacts may or may not be large, but as a percentage of the local county economy they are large.
- In the past few years there has been a growth in the number of smaller specialty food processors (for example, craft cheeses and breweries). These smaller food processors also tend to be more labor-intensive, thus representing a potential source of employment growth.
- In many rural counties, agriculture's economic impact may be more modest in terms of total jobs, income or business sales, but as a percentage of the local county economy agriculture becomes much larger. In general, these counties are not heavily populated, do not have large city centers, and are more distant from population centers and interstate transportation infrastructure. Counties where agriculture counts for a larger share of total economic activity includes Green County.

As a result of current identified trends, there are no anticipated changes in Green County agricultural production or processing operations in the next 15 years.

**The Economic Impacts of Agriculture in Wisconsin Counties;* Steven Deller, Department of Agricultural and Applied Economics, University of Wisconsin-Madison/Extension; David Williams, Agricultural and Natural Resources Program Area, University of Wisconsin-Extension, Cooperative Extension

PART 3

Implementation

The Role of Implementation in the Farmland Preservation Process

It has been said that a plan is only as good as its implementation. The people of Green County have worked diligently to develop this plan as a vision of their future farmland preservation. Whether or not that vision is realized depends upon the degree to which implementation steps of the plan are put into place by County and Town government.

Governmental bodies (elected and appointed) make decisions that determine whether or not the farmland preservation plan can be realized. All of this affects how the plan relates to the future of agriculture in Green County. Over the fifteen year life of the plan, hundreds of decisions will be made that will impact its success. Therefore, it is important that each of these decision making bodies accept the basic recommendations of the plan and make decisions and recommendations based upon it.

This section looks at those tools available to help decision making bodies in their work. It should be stated at the outset that the plan can be implemented using existing tools and regulations. What it requires is the commitment of all of the decision making units to the ideals of the plan.

Farmland Preservation Implementation Tools

An essential tool in protecting farmland is to better educate stakeholders and local governments about the economic benefits of farming and the public costs of converting farmland to non-agricultural uses. It is also important to give farmers information on how they can better protect their land while at the same time better secure their financial well-being. Improving public awareness can also help protect farmland. Marketing agricultural products can increase the economic benefits of farming and in turn enhance public perception of the overall value of a large agricultural base.

Specific tools that have proven effective in helping ensure the economic viability of agriculture are described below.

Agricultural Conservation Easements (PACE Program)

Agricultural Conservation Easements are deed restrictions that landowners voluntarily place on their properties to protect productive agricultural land. They sell a conservation easement to a government agency or private conservation organization. Landowners retain full ownership and continue to pay property taxes, and manage and operate the farm. Conservation easements are tailored to each property: purchasers and landowners decide which activities, such as residential development, should be restricted or limited. When the landowner eventually sells the farmland, the development restrictions are passed on to the new owner.

Purchase of Development Rights (PDR)

In a similar program, Purchase of Development Rights (PDR), government agencies buy up the development rights to a property. The program does not give the government agency the right to develop the agricultural land (such rights may be eligible for use by the purchaser in a Transfer of Development Rights program). It simply permits it to extinguish those rights in return for appropriate compensation.

Transfer of Development Rights (TDR)

TDR programs allow landowners to transfer the right to develop one parcel of land to a different parcel of land. The programs are usually established by local zoning ordinances, and they are used to shift development from agricultural areas to designated growth zones closer to municipal services. The parcel of land where the rights originate is called the "sending" parcel. Once the development rights are transferred from a sending parcel, the land is restricted with a permanent conservation easement. The rights are transferred to a "receiving" parcel, which

allows an owner purchasing the rights to build at a higher density than ordinarily permitted by the base zoning. Most TDR transactions are between private landowners and developers. Local governments approve transactions and monitor easements. Some jurisdictions have created "TDR banks" that buy development rights with public funds and sell them to developers and other private landowners. TDR programs can prevent non-agricultural development of farmland, reduce the market value (and tax burdens) of protected farms and provide farmland owners with liquid capital that can be used to enhance farm viability.

Farmland Preservation Zoning

Agricultural protection zoning ordinances (Farmland Preservation Zoning) allow some residential development but can restrict density. Such constraints on development potential can limit land speculation and keep land affordable to farmers. Keeping large areas relatively free of non-farm development can reduce the likelihood of conflicts between farmers and their non-farming neighbors. Jurisdictions can use this zoning to conserve a critical mass of agricultural land, to keep individual farms from becoming isolated among residential neighborhoods and also ensure there will be enough farms to support local agricultural service businesses.

Tax credits for land under Farmland Preservation Zoning:
- $10/acre if under zoning and located in an Agricultural Enterprise Area.
- $7.50/acre if the land is under zoning.

Agricultural Enterprise Areas (AEA)

AEA is a new tool for farmland preservation set forth in Chapter 91 of the Wisconsin State Statutes. Designation of an AEA identifies the area as valuable for current and future agricultural use. Eligible farmers in an AEA can receive income tax credits per an agreement with DATCP.

General eligibility requirements are:
- Five eligible land owner petitioners.
- All land in the proposed AEA must be in a farmland preservation area.
- Land must be contiguous.
- Land must be primarily in agricultural use.

Benefits of the AEA designation are that the land is identified as important for agricultural preservation. This designation provides reassurance about future farmland use and may encourage investment in agriculture.

Eligible landowners can enter into a voluntary Farmland Preservation Agreement that allows them to claim a tax credit in exchange for keeping land in agricultural use for 15 years and meeting conservation standards. (See Appendix A for soil and water conservation standards.)

Mitigation Ordinances

Another farmland-protection technique is to establish a mitigation ordinance. One example would be an ordinance that requires developers to permanently protect one acre of farmland for every acre of agricultural land they convert to other uses. Developers can place an agricultural conservation easement on farmland in another location or pay a fee to satisfy mitigation.

Comprehensive Land-Use Planning

The County and Towns can use their comprehensive plans as the basis for farmland preservation zoning ordinances that identify areas to protect for agricultural use and areas where growth will be encouraged.

Principles, Benefits, and Policy Statements

To effectively implement farmland preservation efforts, the following principles, benefits, and policy statements have been identified in the Green County Farmland Preservation Plan.

PRINCIPLES

- Agriculture is the largest industry in the county and supports a lifestyle of historic and future importance; farmlands are not simply a holding zone for future urban development.
- Agricultural productivity depends on the scale and connectivity of activities and landmasses; encroachment of incompatible land uses reduces productivity.
- Agricultural requires a sensitive application of regulations to control adverse impacts, yet not unduly restrict productivity.
- Crop farming is especially dependent on the protection of prime agricultural soils and the application of soil conservation practices.
- Livestock production requires special attention to provide for safe disposal of solid and liquid wastes.
- Rural roadways and traffic management patterns should reflect priorities for farm implements and characteristics of the countryside.

BENEFITS

- Perpetuation of agriculture as a viable economic industry and lifestyle in Green County.
- Extended life of family farms.
- Compact, cost-effective urban form.
- Reduced impact of farming on air, waterways, and wildlife.
- Reduced pressure on public facilities and services.

POLICY STATEMENTS

- Discourage residential subdivision development on productive agricultural land.
- Protect land best suited for farming from leap-frog development and maintain agriculture as an integral part of Green County's economy, landscape, and natural resource base.
- Parcels with the greatest potential for productive agricultural use and lying in a contiguous area with other parcels, should be discouraged from being converted to nonagricultural uses.
- Support planning initiatives that favor contiguous, clustered development in agricultural areas that are to be developed.

PART 4

The Planning Process

Farmland Preservation Plan Requirements

Requirements for participation in the Wisconsin Farmland Preservation Program are identified in Chapter 91, Wis. State Statutes. According to provisions of that chapter, farmland preservation plans must address specified elements. Although the required plan elements are mandatory for counties intending to make farmland preservation benefits available to eligible producers, some flexibility exists in how counties prepare their farmland preservation plans.

The requirements suggest that in order to prepare a sound preservation program, jurisdictions need to consider the extent of local agricultural resources; analyze existing and future growth trends; coordinate with other entities who have a role in planning; and formulate common-sense, workable strategies for preserving valuable agricultural land.

Benefits of Participation

Perhaps the greatest benefit of participation in the farmland preservation program is the solid policy foundation that will be built from the planning work required under the law. It suggests to counties and local governments an orderly, thoughtful, and comprehensive planning process—a method of organized and focused thinking about existing issues and future possibilities. It provides both county and town governments an opportunity to access the importance of agriculture to the local economy and identify and design methods to protect their agricultural resources. The character of rural areas has changed over the years, and farmland preservation planning offers an opportunity to manage that change.

In addition to the benefits to farmers, farmland preservation planning provides the following benefits to local governments:

- Tools for agricultural land preservation at the local level, including guidelines for agricultural land preservation planning and official controls, voluntary "agricultural preserve" restrictive covenants, and tax incentives for their creation;
- A program of technical assistance to local government; and
- A program to foster awareness of agricultural land preservation and conservation issues.

Plan Integration and Consistency

From the beginning of the farmland preservation planning process, the foremost goal was to attain integration and consistency with the Green County and individual Town Comprehensive Plans. This farmland preservation plan stresses the importance of plans and planning policies that work together to arrive at mutually agreeable goals and objectives. It is consistent with all of the goals of individual comprehensive plans, and is consistent with the various tools used to implement those plans.

In order to apply fairness and equality county-wide, Green County has adopted criteria for determination of land eligible for the Farmland Preservation Program. The standards are applicable to each Town and are reflected on the individual Town Farmland Preservation Plan maps in this document (see Appendix D).

The following criteria were determined over a number of Technical Advisory Committee meetings, sub-area meetings, and individual meetings between Town representatives and County staff.

Criteria for Determination of Farmland Preservation Areas

Criteria for Determination of Farmland Preservation Areas

- Lands depicted on Town and County future land use maps as agriculture
- Lands that have historically been in agricultural, forestry, or other agricultural related use.
- Lands containing soils compatible for agricultural use (soil classes 1, 2, and 3 as depicted on map 3.1.1 of the Green County Comprehensive Plan and Town Proposed future land use maps).

Criteria for Determination of Non-Farmland Preservation Areas

- Any plotted subdivisions
- Any group of parcels that resemble a subdivision (small parcels typically less than ten (10) acres, access road to all parcels, road frontage to all parcels)
- Clusters of four (4) or more adjacent parcels (share a side of the polygon, not just the corner) of less than ten (10) acres
- Parcels that are surrounded by land ineligible for farmland preservation. (This determination was a geographical assessment — if the area was completely surrounded, it was determined to be ineligible. These lands could be properties not eligible for the program because of lack of gross farm revenue, residential estates, or non-agricultural lands. This criteria was applied equally to all Towns in the County.)
- Any parcels that are tax exempt, such as churches, cemeteries, non-profit entities, government-owned lands, utilities, and railroads
- All incorporated (villages, cities) areas in the County

Definitions of Map Legend Categories

- **Subdivided or Non-Agricultural Parcel**—Recorded plats, certified surveys, and parcels locally identified as not used for or appropriate for agriculture.
- **Tax Exempt Parcel**—Churches, cemeteries, non-profit entities, utilities, and railroads.
- **Incorporated Area**—Incorporated villages and cities in Green County.
- **County/Town/City Property**—Lands that are owned by the County, Town, or City.
- **State Property**—Wisconsin Department of Natural Resources property.

Green County Public Participation Process

Green County's Public Participation Process formed the basic framework for achieving an interactive dialogue between local decision makers, County staff, the planning consultant team, and the citizens of Green County. This section outlines the public participation strategy used for soliciting public review and input for the development, evaluation, and eventual adoption of the Green County Farmland Preservation Plan. The creation of this Public Participation Process was the first step in meeting the requirements of Wisconsin's Working Land Initiative for the development of a farmland preservation plan.

Objectives for Public Involvement

The following is a list of objectives for public participation that Green County followed throughout the development and subsequent adoption of the Green County Farmland Preservation Plan:

- All residents of Green County become fully aware of the importance of participating in the development of the plan.
- The public participation process is designed to engage people of all races, ethnic backgrounds, and income levels.
- The public has opportunities to provide their input (both formally and informally) to the County, their local Plan Commission, and local governing body.
- Members of the County have input from the broadest range of perspectives and interests in the community possible.
- Such input is elicited through a variety of means (electronic, printed, and oral) in such a way that it may be carefully considered and responded to in a timely fashion.
- This process of public involvement strengthens the sense of community present in the farms of Green County and furthers the vision of active and positive participation by all aspects of the County in the decision making and civic life of the County over the long-term.

Public Participation Guidelines

The main goals of the Public Participation Process were to make all the citizens of Green County aware of the progress of the countywide Farmland Preservation planning process occurring in the County, and to offer the public opportunities to make suggestions or comments during the process. Taken individually, the activities described in this plan were not expected to reach and inform each and every resident of Green County. Collectively, however, the plan activities were designed to effectively and efficiently provide a broad-based dissemination of information and maximize the opportunity for citizen involvement and comment. Public meetings provided opportunities for the public to openly discuss farmland preservation planning issues with local decision makers, County staff, and the hired planning consultant. A formal public hearing was also conducted as part of the plan adoption process to allow public testimony to be made regarding the Green County Farmland Preservation Plan. During the countywide planning process, every effort was made to ensure that public meetings were held at a public location, central and convenient to all citizens of Green County.

Written Comments

- The public hearing notice included the name and address of whom written comments should be sent.
- At the public hearing, the facilitator or chair clearly announced any deadline for submitting written comments, if such comments were allowed subsequent to the meeting or hearing.
- Persons speaking or testifying were encouraged to concisely express their comments and provide specific details in written format.

Provisions for Open Discussions

- Agendas were established that clearly defined the purpose of the public meeting or hearing, the items to be discussed, and any actions that may be taken.
- The scheduled date, time, and place were convenient to encourage maximum participation by residents.
- A clearly identifiable facilitator or chair conducted the meeting or hearing in an orderly fashion to ensure that all attendees had an opportunity to offer comments, discuss issues, or provide testimony.
- The facilitator or chair provided opening remarks that clearly outlined the purpose of the meeting or hearing, described procedures attendees should use

during the meeting or hearing when offering input, and described how the public input would be used.

- As appropriate, an overview of documents or proposals to be considered were discussed.
- All persons attending the meeting or hearing that desired to participate were allowed to do so. However, specific factors (such as the meeting or hearing purpose, number in attendance, time considerations, or future opportunities to participate) might have required that appropriate constrains were applied. These constraints were clearly outlined by the facilitator or chair when the need arose.
- Special arrangements were made under the provisions of the Americans with Disabilities Act (ADA) with sufficient advance notice.

Public Meeting Notices

Green County placed a Class 1 notice in the *Independent Register,* which is the official county newspaper. It was recommended that any meeting notice be published at least one week prior to the meeting. The following information was provided to make the public aware of such meetings:

- Name of the governmental body that will meet.
- Date, time, and location of the meeting.
- General description and purpose of the meeting.

Table 4.1: Public Meetings Throughout the Farmland Preservation Process

Type of Meeting	Meeting Description
Sub-Area Group Meetings	The purpose of these sessions were to: a. Provide introductions to the planning team; b. Educate and answer questions and concerns about the Farmland Preservation planning law; c. Discuss the process and timelines; and d. Establish roles and responsibilities.
	Two sub-area meetings were held for each of the four sub-areas for a total of eight meetings. The consultant led each meeting and facilitated the following activities: 1. Review the planning process; 2. Conduct a review of the County Comprehensive Plan and its relationship to the Farmland Preservation Plan; 3. Review countywide goals; 4. Review future County Farmland Preservation Plan implementation policies and actions; 5. Review of the drafts of the map; and 6. Review the draft of the Farmland Preservation Plan.
County Technical Advisory Committee	This committee was responsible for the planning process and development of the draft Farmland Preservation Plan. The committee conducted six meetings and one public hearing. The meetings were open to the public and the public could comment openly about the plan and process
Green County Board	The County Board was responsible for final adoption, by ordinance, of the Farmland Preservation Plan.

APPENDIX A

Soil and Water Conservation Standards

For farmers who grow agricultural crops

- Meet tolerable soil loss ("T") on cropped fields.
- Follow a nutrient management plan designed to limit entry of nutrients into state waters (groundwater and surface water)

For farmers who raise, feed, or house livestock

- Prevent direct runoff from feedlots or stored manure into state waters.
- Limit livestock access to state waters to avoid high concentrations of animals and maintain adequate or self-sustaining sod cover along waterways.
- Follow a nutrient management plan for manure application.

For farmers who have, or plan to build, a manure storage structure

- Maintain structures to prevent overflow.
- Repair or upgrade any failing or leaking structures that pose an imminent health threat or that violate groundwater standards.
- Close abandoned structures according to accepted standards.
- Meet technical standards for newly constructed or substantially altered structures.

For farmers with land in a Water Quality Management Area

(300 feet from a stream, 1,000 feet from a lake, or in areas susceptible to groundwater contamination)

- Do not stack manure in unconfined piles.
- Divert clean water away from feedlots, manure storage areas, and barnyards located within this area.

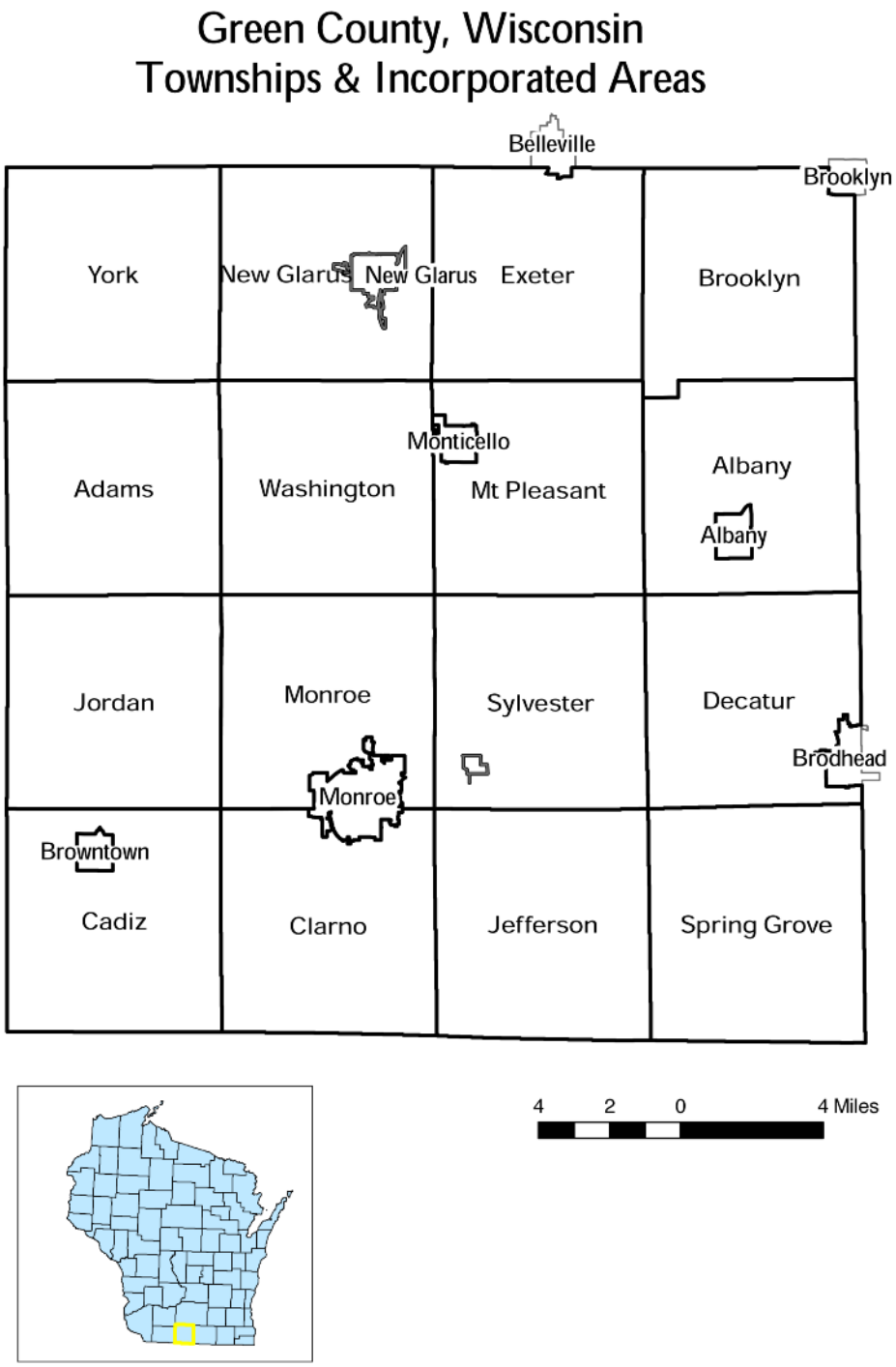
NUTRIENT MANAGEMENT PLANS

To meet the new nutrient management standards, farmers may hire an agronomist or prepare their own nutrient management plans if they complete a DATCP-approved training course or otherwise demonstrate that they are qualified. These plans must:

- Rely on soil nutrient tests from a DATCP-certified laboratory.
- Comply with current NRCS Nutrient Management Standard 590.

APPENDIX B

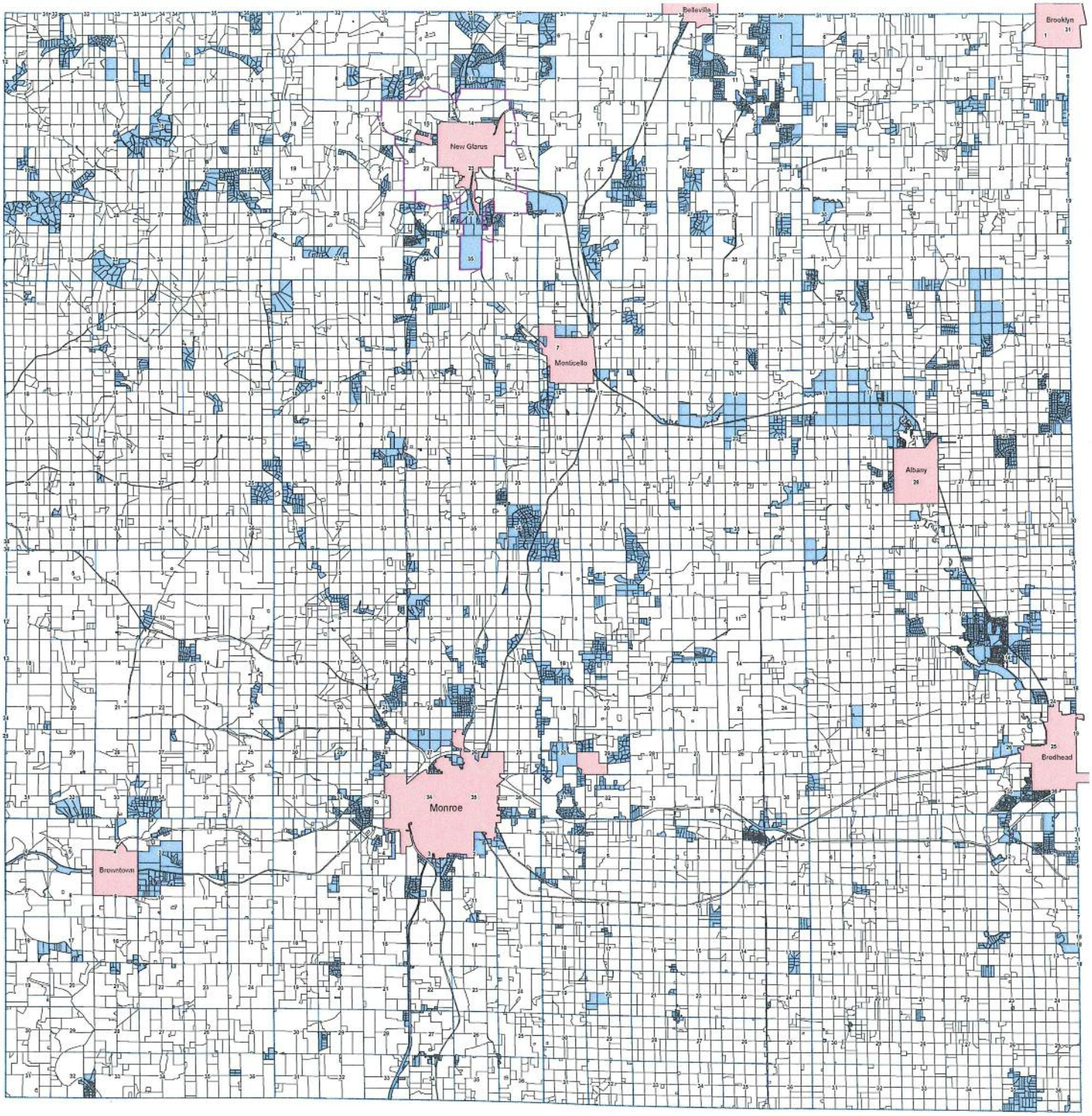
Green County Map



APPENDIX C

County Farmland Preservation Map

Green County
Farmland Preservation



APPENDIX D

Individual Town Farmland Preservation Maps