



Agricultural Resources

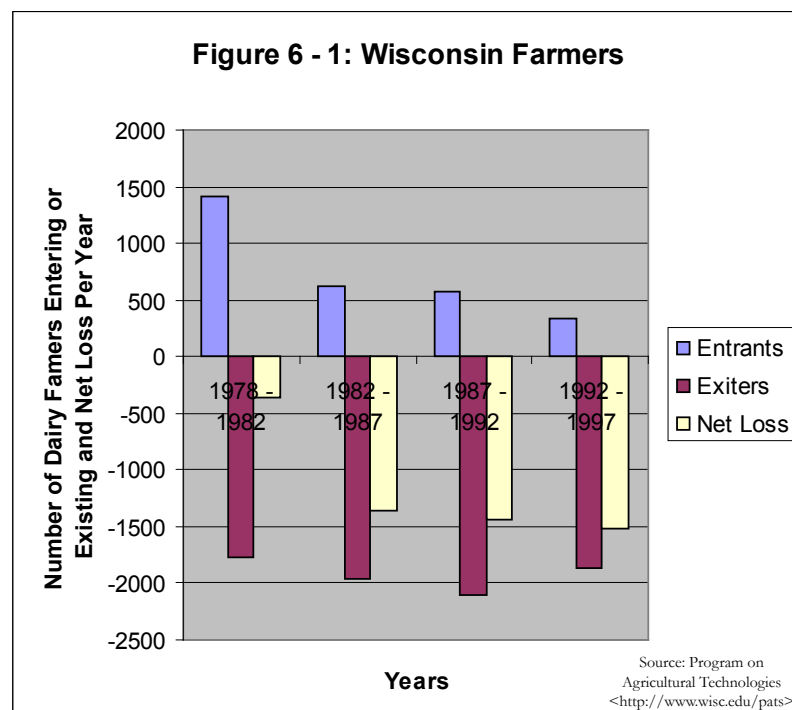


Introduction

As the United States continues to urbanize, the conflict between agricultural and nonagricultural uses of land will continue to intensify. Strong economic growth, in combination with numerous other factors that influence land use, has pushed urban development even further from the centers of cities, consuming agricultural land in traditionally rural areas. This can be seen locally in Dane County with the growing Madison Metropolitan area increasing the pressure on Madison and surrounding municipalities to develop subdivisions and the supportive economic/business to support a growing population. Other factors that influence land use may include agricultural product prices, technology, consumer demand, and land prices. With the accelerated shift of agricultural land to urban land, the agricultural industry may be negatively impacted.

Farmer Demographic

The age of the average farmer in Dane County has been increasing and in 1997, the average farmer was 53 years old. Only eight percent of farmers fall under the age of 35 and 33 % of farmers are over the age of 60. Some concerns are present with not enough young farmers entering into the occupation to replace retiring farmers. According to the Program on Agricultural Technology Studies, in Wisconsin from 1992 to 1997, there were only 344 dairy farm entrants and 1,860 dairy farm exiters, producing a net loss of 1,516 farmers (Figure 6 - 1). The increase in net dairy farm losses is primarily the result of significantly fewer younger people entering dairy, and not a product of more farm closings. Since fewer farmers are looking to enter into farming, and as many of the current farmers are reaching retirement age, the pressures to find a use for agricultural land other than farming will increase, over the coming years.



Farm Demographic

With increasing pressures placed on land to urbanize, the acres of available farm land are decreasing. According to the Wisconsin Agricultural Statistics Service (WASS), between 1990 and 1998, Dane County had a seven percent decrease in farm land from 611,000 acres to 568,000 acres. Not only have the acres in farmland decreased, but the rate of conversion of farmland to a nonagricultural land use has increased. From 1988 to 1998, sales of farmland converted to a non-farming use has doubled from 21 percent to 47 percent, with annual average sales of 2,128 acres increasing to 3,243 acres annually. The farmland sales remaining in an agriculture use only account for 53 % of total farmland sales. The amount of farmland in Dane County being sold for a non-agricultural use is increasing.

In the South West (SW) Wisconsin District, consisting of Crawford, Grant, Iowa, Lafayette, Richland, Sauk, and Vernon counties, sales of agricultural land are increasing. Agricultural land sales converted to non-farming uses have doubled over the last decade for the SW district. Sale of converted land increases from 12 % to 25 %, with an annual average of 6,475 acres sold increasing to 13,241 acres annually. Agricultural land sales have 75 % of sales remaining in agricultural uses. The SW District lacks the same growing metropolitan area as Dane County. Therefore, the pressures for farm land to convert to nonagricultural uses in the SW District are not seen as strong as the pressures placed on Dane County through sales of converted farmland.

Despite the trend that acreage of farmland has decreased, the total number of farms increased from 3,010 to 3,130, approximately four percent, in Dane County. This can be explained in two ways. The first reason is retiring farmers splitting the land between family members, resulting in an increase of farms but the acreage remains the same. Several examples of this can be found in Fitchburg, for example the Gorman and Lacy families. The second reason is an increase in “hobby” farms, small farms that are not the primary livelihoods of the owner/operator. The definition of a farm used by the WASS includes all operations selling as little as \$1,000 of farm products per year, which may include such hobby farms. In addition, the Dane County Ordinance limits the division of land zoned agriculturally to 35 acre or less parcels. Therefore, a larger farm could go out of production and the land could be divided into 35+ acre parcels resulting in several hobby farms. Like the previous reason, the total number of farms would increase, but the acreage of land remains the same. Such divisions of farms are likely to increase over the next few years due to the rising price of land, retirement age farmers splitting the land between family members, the lack of younger farmers entering into farming to take over the large acres of farm land, and the demand for large parcel house sites.

The increase in the pressure to develop has also impacted farming financially. In Dane County the price of farmland sold for agriculture increased per acre from \$1,064 to \$2,584 between 1989 and 1999. During the same time period, the price of farmland per acre sold for a nonagricultural use increased from \$1,982 to \$5,122. In 1999, the sale of farmland for a nonagricultural use would make twice the value than a sale remaining in an agricultural use. The average value of all farmland and buildings per farm in 1997 was \$366,967. With the increasing average cost of land

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and buildings, fewer farmers will be able to enter into farming. In addition, farmers looking to leave agriculture will produce a greater value by selling the land for a nonagricultural use.

The SW District follows a similar trend. The price of farmland sold for agriculture increased per acre from \$758 to \$1,162 between 1989 and 1999. The price of farmland sold for a nonagricultural use in the SW District increased per acre from \$731 to \$1,343 over the same decade. In 1999, the sale of farmland to a nonagricultural use is worth roughly \$180 or more per acre than if the sale was to an agricultural use. The value of all farmland and buildings per farm in 1997 was \$266,190. The profitability of selling farmland to non-agricultural verses agricultural uses in the SW District is not as great as Dane County. A farmer looking to purchase farmland would pay less in the SW District since the pressure to urbanize has not driven the prices of land as high as in Dane County.

Farm Productivity

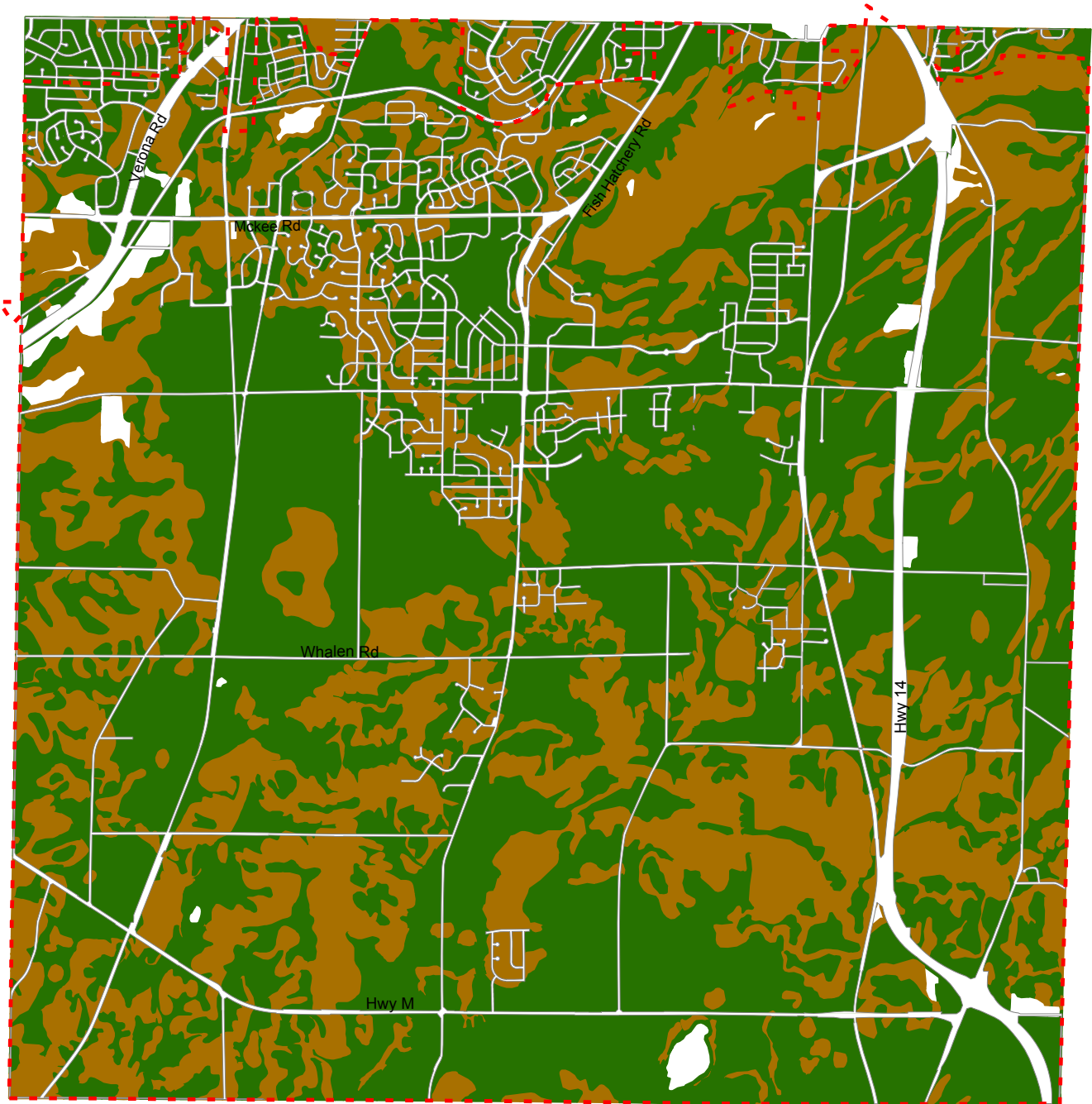
Farm productivity can be determined by using Statewide Significant Soil, Prime Soil and Soil Class (Figures 6 - 2, 6 - 3, and 6 - 4). Each method was used in determining the farm productivity of soil found in Fitchburg.

Prime Soil is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops (Figure 6 - 2). The land must also be available for crop land, pastureland, forest land, or other land, but not water. Prime farmland has the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed, including water management, according to acceptable farming methods.

Statewide Significant Soil is land other than prime farmland that is used for production of specific high-value food and fiber crops (Figure 6 - 3). It has the special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high quality or yields of specific crops. For example, farmland classified as significant may include soils used for apple orchards that are too steep and erodible to qualify for prime farmland. These categories of farmland are used in administering the Farmland Protection Policy Act and the Farmland Protection Program.

Land capability classification is a widely used system to classify soils for agricultural purposes (Figure 6 - 4). The system is based on the most intensive long term use for this land. The criteria used to classify Land Capability are slope, texture of soil, depth of soil material, and drainage. Soils are grouped according to their potentials and limitations, if any, for sustained production of common crops. This classification system places all soils in eight capability classes. With good soil conservation management, soils in Classes I, II, III, and IV are suitable for cultivation. Soils in Classes V, VI and VII with good soil conservation management are suited for pasture, woodland, and wildlife. Soils in Class VIII generally are non-productive for agricultural purposes and are recommended for wildlife habitat.

Figure 6 - 2
PRIME SOIL



SOIL DESIGNATION

 Prime

 Not Prime

 City Boundary

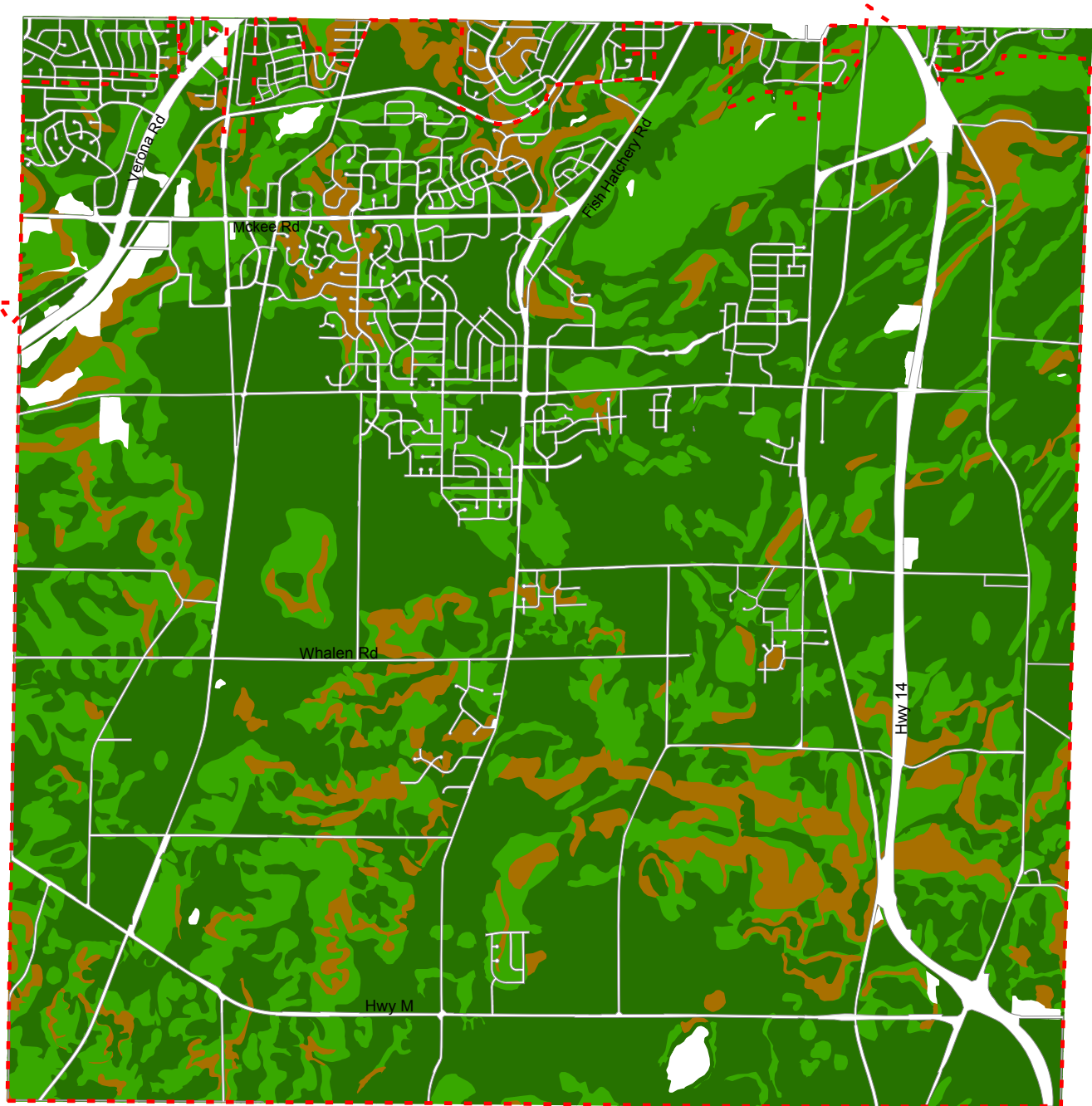


Prepared by: Planning/Zoning
 Source: Planning/Zoning,
 Dane County Land Conservation Dept.
 Revised: 7/2008



Figure 6 - 3

STATEWIDE SIGNIFICANT SOIL



SOIL DESIGNATION

-  Significant
-  Somewhat Significant
-  Not Significant

 City Boundary

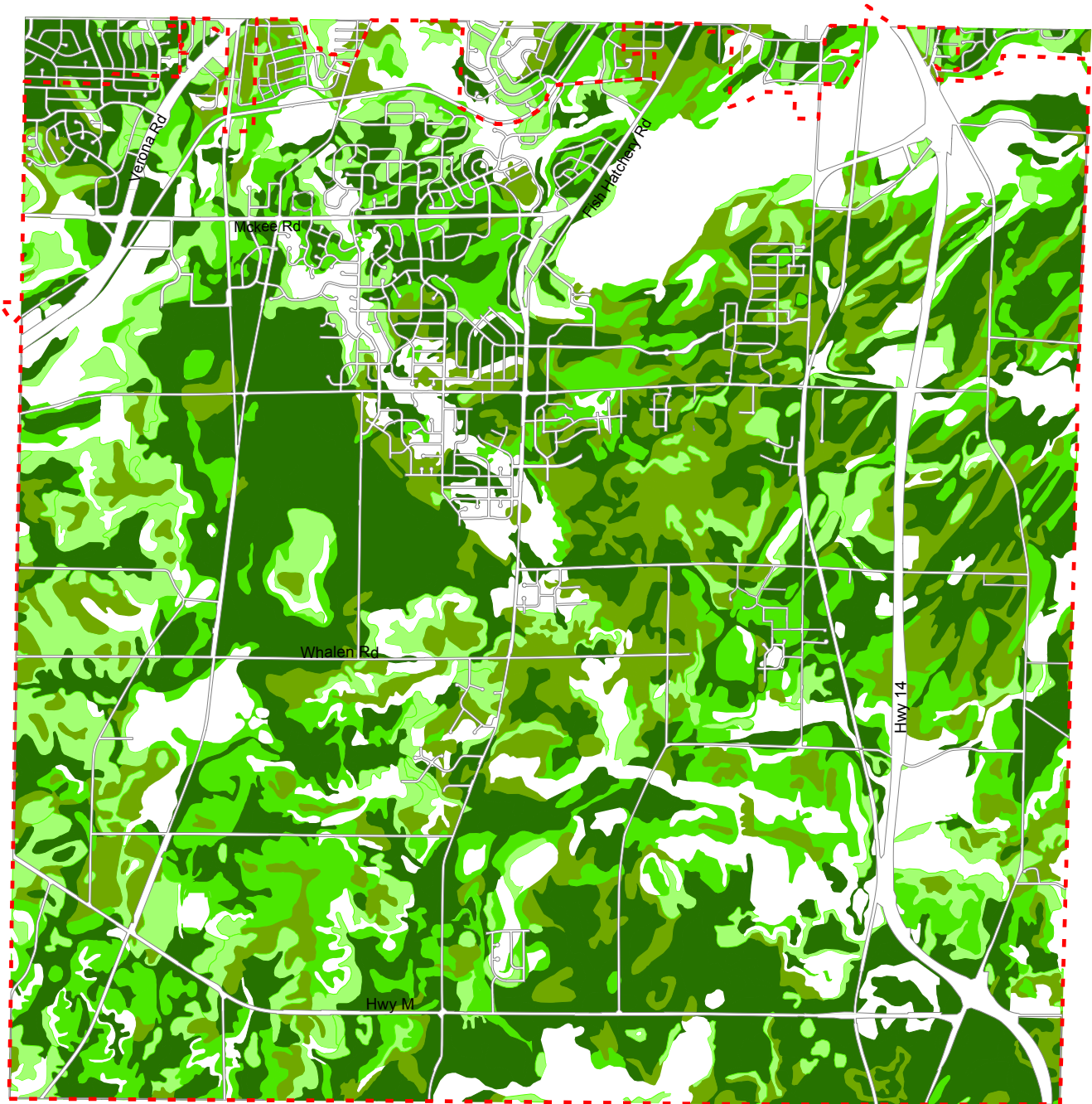


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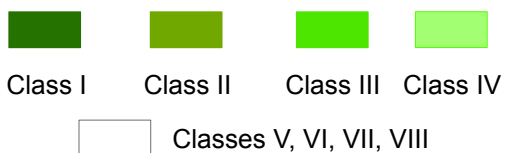


Figure 6 - 4

SOIL CLASS



SOIL CLASSIFICATION



 City Boundary



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 Source: Planning/Zoning,
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Farm Products

Cash Crop

Crop land makes up a majority of farmland. These crops can either be sold or used to feed livestock. In general, the South Central (SC) District, consisting of Columbia, Dane, Dodge, Green, Jefferson, and Rock counties, produces more corn and soybean based on percentage of major crops grown and the SW District produces more forage. Both SC and SW produced relatively the same amount of small grains. The different crop production is a result of glaciation. The SC District falls within the Glacial Till region, area where glacial debris was deposited, where better topsoil was left behind. The SW District falls within the Driftless region, no evidence of glaciers, are subject to erosion over greater periods of time resulting in less topsoil and more varied topography. This difference in topsoil from the glaciation is the reason why certain crops grow better in one district than the other.

When looking at the change in harvested acres of major crops between 1990 and 1999, Dane County and the SW District showed similar trends except in soybean production. Dane County's acres of soybean production nearly tripled where the SW District's acres of soybean quadrupled. Crop rotation plays an important factor in the increase in acres of soybeans.

The Wisconsin Natural Resources Conservation Service (WNRCS), part of the US Department of Agriculture (USDA), puts years of experience to work in assisting owners of America's private land with conserving soil, water, and other natural resources. Many times the WNRCS, Wisconsin Department of Agriculture, Trade, and Consumer Protection (WDATCP), UW - Extension, and Dane County Land Conservation Department (DCLCD) work individually or together to deliver technical assistance for the specific needs of farmers or other private land owners. These groups encourage the use of crop rotation to help protect soil quality of farmland. Crop rotation can increase yields, increase profitability and reduce risk through diversification, decrease environmental hazards by reducing chemical inputs, and reduce nutrient depletion in soils from crop production.

Dane County also plays an important role in tobacco production. The sale of Wisconsin tobacco is used primarily for the wrap leaf of cigars and for chewing tobacco. Tobacco is the most valuable crop in price per weight. A farmer growing tobacco can make \$3,635/acre, while corn, soybeans, and barley have less than 1/10 the value of tobacco, at \$251, \$182, and \$74/acre respectively according to the University of Wisconsin Comprehensive Cancer Center Monitoring and Evaluation Program. However, over the last decade there has been an 83 % decline in the number of acres in tobacco harvesting from 6,900 acres in 1990 to 960 acres in 2000. This decline is attributed to the decrease in cigarette sales and tobacco corporations increase in foreign tobacco imports over the last decade. If patterns persist, tobacco farming in Dane County will continue to decline.

Dairy

In addition to cash crops, several dairy farmers are found in Dane County. With the average farm size decreasing, the number of cows per farm is also decreasing. During 1991-1999, dairy farms total number of cattle and calves decreased by approximately 18 %, from 168,000 to 129,000. Despite the decrease in cattle, milk production has increased by 7 %, 868,560,000 pounds/year in 1991 to 929,200,000 pounds/year in 1999. Herd size can impact total milk production for a farm. Total milk production of larger farms, 100 cows or more, increased almost 4.9 billion pounds, from 5.8 billion pounds in 1993 to roughly 10.7 billion pounds in 2001 (Jones, 2002). The increase in milk production for Dane County is due largely to increases in the average milk production of those cows that remain in herds of 100 cows or more. Dairy farms within Fitchburg follow the same trend. Farms with larger herd sizes have efficiency of scale; larger operations can perform tasks with minimal unnecessary effort. Larger farms' productions are able to do things such as hire additional farm hands, buy supplements to add to feed, or put more time into harvesting feed more frequently when the crops have the best nutrients (Jones).

Urban Agriculture and Community Gardening

Urban agriculture is the practice of cultivating, processing and distributing food in and around the central market. It contributes to food security and food safety by increasing the amount of locally produced food available to people living in cities and allows fresh products to be made available to consumers.

Community gardening is one form of urban agriculture that is typically organized by nonprofits or local governments. The nonprofits or local governments own a piece of land that is divided into plots and gardened by different citizens or groups to grow their own food.

Urban agriculture and community gardening are seeing an increase in popularity. Major American cities offer community gardens as a way to encourage a local food system, build community, green neighborhoods and bring people together. As of 2008, known locations of community gardens serving Fitchburg residents are the All Saints Lutheran Church Gardens, 2951 Chapel Valley Rd with 15 plots, Drumlin Gardens, 2849 Oregon Rd with 15 plots, Rimrock Gardens, also known as Green Gardens, 65 Braeger Dr with 102 plots, and Marlborough Park Gardens, located in the City of Madison just north of Marlborough Park with 145 plots (Community Action Coalition, 2008). In addition to these community plots, The Gardens at Swan Creek Condominium, S. Gardens Way, offer garden plots to their residents.

Farm Markets

With so many different agricultural products, various markets can be used to sell agricultural products. Direct marketing, agricultural products going from the farmer to the consumer, can be used so the farmer receives more from the consumer's dollar. Some approaches include:

- Pick your own - the customer picks his own produce on the farm.
- Community supported agriculture - consumers buy shares and during the course of the growing season, receive a weekly bag of produce that has been harvested.
- Farmers' market - farmers gather at a common location to sell their produce. Currently, there is one farmers' market in Fitchburg and there are 12 others throughout Dane County.
- Roadside stands - the farmer sells his produce at a site along the road or directly out of his barn.

Pesticides

Certain pesticides are restricted or prohibited in Wisconsin under ATCP 30 (<http://www.legis.state.wi.us/rsb/code/atcp/atcp030.pdf>, Wisconsin Administrative Code). A pesticide is any substance used to control or repel a pest, or to prevent damage that pests may cause. Pests can be insects, mice and other animals, unwanted plants (weeds), fungi, or microorganisms like bacteria and viruses. The term "pesticide" includes insecticides, herbicides, fungicides, and other substances used to control pests.

Several routes can lead to a compound being restricted through ATCP 30. Each compound listed in the existing rule was either canceled by Environmental Protection Agency, exceeded limits stated in groundwater standards, or demonstrated other human health or environmental risk. For example, to protect groundwater quality, the department conducts well testing and annually proposes responses to findings, typically expansion of atrazine prohibition areas through ATCP 30 (Wisconsin Administrative Code, 2007), based on well results that exceed the enforcement standard of 3 micrograms per liter. The enforcement standard is a health-based concentration of a substance that DNR adopts in its rules (NR140 Groundwater Standards).

Currently, the Wisconsin Department of Agriculture, Trade and Consumer Protection (WDATCP) prohibits anyone from selling, distributing, purchasing or using any of the following pesticides in the state: DDT (DDE or TDD); TDE (DDD); Endrin; Cadmium; Thallium sulfate; Aldrin; Chlordane; Dieldrin; Heptachlor; 2,4,5-Trichlorophenoxyacetic acid (2,4,5-T); 2-(2,4,5-Trichlorophenoxy) propionic acid (silvex); Dinoseb; Kelthane; Ethyl parathion. The previously listed pesticides can be used only under an emergency permit issued by the department, under an experimental use permit, for laboratory research, or as laboratory standards. The department has also restricted the use of the following pesticides by limiting application rates, location of application sites, timing of applications, or other restrictions as listed in ATCP 30: Aldicarb; Atrazine; Metam Sodium.

According to the Wisconsin Department of Agriculture, Trade and Consumer Protection the majority of Dane County is located in an atrazine prohibited area. Atrazine is a popular corn herbicide that is used to control weeds in corn fields. Atrazine has been used in Wisconsin for more than 25 years. A map of the prohibited area is available from Wisconsin Department of Agriculture, Trade

and Consumer Protection. An updated 2004 list will be available in fall. The US Environmental Protection Agency is researching the health effects of atrazine in water. Drinking water that contains atrazine will not cause an immediate sickness or health problems (acute toxicity). However, consuming low levels of atrazine over time may cause health problems (chronic toxicity). The EPA is also concerned that atrazine may be an endocrine disruptor which can cause unintentional hormone-like activity in the body. Atrazine when released into the environment can result in microbial activity and other chemicals may breakdown atrazine in soil and water, particularly in alkaline conditions. Sunlight and evaporation do not reduce its presence. It may bind to some soils, but generally tends to leach to ground water. Atrazine is not likely to be taken up in the tissues of plants or animals.

Land Use Conflicts

Urban sprawl is not the only land use concern on the rural-urban fringe. Certain agricultural land uses with residential land uses can create a variety of spillovers for rural residents on the rural-urban fringe. Depending on the agricultural enterprise, neighboring rural residents can experience various noxious odors, spray drift, noise at night, dust, loose animals, slow-moving farm implement traffic, and other unwanted agricultural spillovers.

On the other hand, locating rural subdivisions and residential property next to operating farms can create a variety of headaches for farmers. These might include trash; liability for trespassing children; complaints and potential nuisance suits for odor, noise, and spray drift; safety hazards from increased traffic and people, and crop or livestock losses due to trespassing neighbors and their pets.

The longer-term impacts of siting incompatible land uses next to one another can be more substantial for agriculture on the rural-urban interface than for agriculture in undeveloped areas. As the demand for urban development land rises on the fringe, some farmers become land speculators who sell out to the highest bidder. Their newly acquired fortunes can be used to retire early or to establish farming operations at a new, more distant location.

Right to Farm

Wisconsin's right-to-farm law is part of a national trend by states toward changing the common law prima facie case for filing nuisance claims against agricultural operations. The common law of nuisance forbids individuals from using their property in a way that causes harm to others. A private nuisance refers to an activity that interferes with an individual's reasonable use or enjoyment of his or her property. A public nuisance is an activity that threatens the public health, safety or welfare, or damages community resources, such as public roads, parks and water supplies.

The purpose of right-to-farm laws is to encourage agricultural production and discourage land use conflicts between expanding livestock operations and their

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neighbors. They all seek to legislatively lift the threat of nuisance lawsuits by neighbors if the agricultural operation produces odor, noise, water pollution, or other nuisance-type conditions (as can be true with large livestock operations such as hog, dairy, and poultry confinements). Right-to-farm laws are designed to accomplish one or both of the following objectives: (1) to strengthen the legal position of farmers when neighbors sue them for a private nuisance; and (2) to protect farmers from anti-nuisance ordinances and unreasonable controls on farming operations. Right-to-farm laws are intended to discourage neighbors from suing farmers. They help establish farmers who use good management practices prevail in private nuisance lawsuits. They document the importance of farming to the state or locality and put non-farm rural residents on notice that generally accepted agricultural practices are reasonable activities to expect in farming areas.

Agricultural Use Value Assessment

During the past several years the State of Wisconsin has moved to assessment of agricultural land, regardless of its zoning, based on its use as agricultural land, which has resulted in a tax shift to non agricultural landholders. The City of Fitchburg was one of the only incorporated municipalities to support the agricultural use assessment rule at the state legislature. Fitchburg's support was provided based on the potential ability to lower taxes on farm land, the value that is placed on rural agricultural land as a valued open space commodity in the City of Fitchburg. The City believed the tax shift was important to recognize the value of such a land use in the City, and the shift now causes urban users to pay a greater amount of taxes than would have been the case.

Agriculture and Rural Affairs Committee

According to the Fitchburg Municipal Code, the Agriculture and Rural Affairs Committee shall act as an advisory committee to the Plan Commission and shall:

- (A) Study the potential future of agriculture in Fitchburg.
- (B) Develop and recommend policies to promote sustainable and economically viable agriculture in Fitchburg.
- (C) Recommend areas to be preserved for agriculture, if any.
- (D) Study and recommend any potential compensation to landowners in areas designated for agricultural preservation.
- (E) Take action on any items referred to it by the Plan Commission or the Common Council.
- (F) Make recommendations on all rezoning requests in which any property zoned A-T or A-X outside the Urban Service Area is being considered.

Other Agricultural Government Agencies

Dane County Land Conservation Department (DCLCD)

DCLCD's goal is to provide conservation planning assistance and technical service in the area of soil and water conservation to landowners, land users, and decision makers of Dane County, Wisconsin.

US Department of Agriculture (USDA)

The Farm and Foreign Agricultural Services mission, comprised of the Farm Service Agency, the Foreign Agricultural Service, and the Risk Management Agency, helps keep America's farmers and ranchers in business as they face the uncertainties of weather and markets. They deliver commodity, credit, conservation, disaster, and emergency assistance programs that help improve the stability and strength of the agricultural economy.

Wisconsin Department of Agriculture, Trade and Consumer Protection

The mission of the Wisconsin Department of Agriculture, Trade and Consumer Protection is to serve the citizens of Wisconsin by assuring: the safety and quality of food, fair business practices for the buyer and seller, efficient use of agricultural resources in a quality environment, consumer protection, healthy animals and plants, and the vitality of Wisconsin agriculture and commerce.

University of Wisconsin - Extension

University of Wisconsin-Extension programs in Agriculture and Natural Resources help urban and rural people use research and knowledge to solve problems and take advantage of new opportunities. Agriculture and Natural Resources educators balance farm profitability and production of high quality food, horticulture crops, and fiber and plant material with protection of the natural environment.

Survey Results

Residents in Fitchburg appear to value the rural character of the community and would like to preserve its sense of place and identity. Seventy-nine % of residents are supportive of promoting the preservation of open space, while 68 percent are supportive of encouraging production agriculture. A majority (54 percent), are opposed to the development of rural open space and are in favor of a program that would compensate rural landowners for keeping land permanently undeveloped. Farmers, in contrast, are opposed to regulations that have the potential to limit their land use decisions. According to the survey, farmers are less supportive of preserving open space, more in favor of developing rural areas, not in favor of encouraging the continuation of production agriculture, and not in favor of either a temporary or a permanent agricultural protection area.

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