
Town of Middleton Annex

Community Profile

The Town of Middleton is located in the northwest quadrant of the County, north of the City of Verona, east of the Town of Cross Plains, and south of the Town of Springfield. The Cities of Madison and Middleton are directly adjacent the Town of Middleton's eastern boundary. The City of Verona is located approximately two miles to the south of the Town. The Town of Middleton is bounded to the north by the Town of Springfield, to the west by the Town of Cross Plains, and to the south by the Town of Verona. Land use is predominately residential, followed by agricultural and undeveloped spaces.

According to the United States Census Bureau, the town has a total area of 17.7 square miles, all of it land.

As of the 2000 Census, there are 4,594 people, 1,572 households, and 1,247 families residing in the Town of Middleton. The population density is 259.8 per square mile. There are 1,610 housing units at an average density of 91.0 per square mile. The municipality population distributed by Dane County indicates that the 2008 population for Middleton was 5,622 people.

There are 1,572 households out of which 44.7% have children under the age of 18 living with them, 11.6% of all households are made up of individuals and 3.2% have someone living alone who is 65 years of age or older. The average household size is 2.90 persons and the average family size is 3.17 persons. In the Town, the population is spread out with 29.9% under the age of 18, 4.8% from ages 18 to 24, 27.4% ages 25 to 44, 30.8% ages 45 to 64, and 7.1% who are 65 years of age or older. The median age is 39.5 years. 4.1% of the population speaks a language other than English at home and 7.6% of the population (above the age of 5) is disabled.

The median income for a household in the Town is \$93,008 and the median income for a family is \$103,940. The per capita income for the Town is \$46,214. 1.0% of the population and 0.3% of families are below the poverty line. Out of the total people living in poverty, 1.2% are under the age of 18 and 0.0% are 65 or older. 97.4% of the population has at least a high school degree, while 55.8% of the population holds at least a bachelor's level degree.

Hazard Identification and Risk Assessment

A hazard identification and vulnerability analysis was completed for the Town of Middleton using the same methodology in the base plan. The information to support the hazard identification and risk assessment for this Annex was collected through a Data Collection Guide, which was distributed to each participating municipality to complete.

The first step in a hazard analysis is to identify which hazards the community is vulnerable to. Table 1 outlines the hazard identification for the Town of Middleton based on the Data Collection Guide issued in 2008. The Data Collection Guide listed all of the hazards that could impact anywhere in Dane County. The purpose of this worksheet was to identify and

rank the hazards and vulnerabilities specific to the jurisdiction. The Town of Middleton's planning team members were asked to complete the matrix by ranking each category on a scale of 0 to 3 based on the experience and perspective of each planning team member. A ranking of 0 indicated "no concern" while a ranking of 3 indicated "highest concern". This matrix is captured in Table 1. This matrix reflects the significance of the hazards relative to one another. This matrix reflects that the Town of Middleton is most vulnerable to tornados. The Town has a medium vulnerability to winter storms and a lower vulnerability to extreme cold and lightning. The other hazards are not a concern to the Town.

Table 1 Vulnerability Assessment Matrix for the Town of Middleton

Hazard	Hazard Attributes (1-2-3)			Impact Attributes (0-1-2-3)						Total
				Primary Impact (Short Term – Life and Property)			Secondary Impact (Long Term- Community Impacts)			
	Area of Impact	Past History, Probability of Future Occurrence	Short Term Time Factors	Impact on General Structures	Impact on Critical Facilities	Impact on At-Risk Populations	Social Impact	Economic Impact	Severity of other associated secondary hazards	
Dam/Levee	0	0	0	0	0	0	0	0	0	0
Extreme Cold	1	1	1	0	0	1	1	0	1	6
Extreme Heat	0	0	0	0	0	0	0	0	0	0
Drought	0	0	0	0	0	0	0	0	0	0
Erosion	0	0	0	0	0	0	0	0	0	0
Flood	0	0	0	0	0	0	0	0	0	0
Fog	0	0	0	0	0	0	0	0	0	0
Hail Storm	0	0	0	0	0	0	0	0	0	0
Landslide	0	0	0	0	0	0	0	0	0	0
Lightning	1	0	0	1	1	1	0	0	1	5
Tornado	3	3	3	3	3	3	3	1	3	25
Wildfire	0	0	0	0	0	0	0	0	0	0
Windstorm	0	0	0	0	0	0	0	0	0	0
Winter Storm	2	2	1	1	1	1	1	0	2	11
Subsidence										
Other:										

Source: Town of Middleton

Previous Hazard Events

Through the Data Collection Guide, the Town of Middleton noted specific historic hazard events to include in the community profile. Per the 2009 Data collection guide for the Town of Middleton there were no previous hazard events reported.

Asset Inventory

Assets include the people, property, and critical facilities within the Town of Middleton that are exposed to hazards in general. Inventories of property, essential infrastructure, and natural, cultural or historic resources help provide a comprehensive picture of the community and provide a method of assessing exposure to hazards by establishing the improved and total values, capacities and populations for these assets. It also forms the basis for estimating potential losses, where possible.

Population

Table 2 Vulnerable Population Summary

Vulnerable Population Counts from the 2000 Census	Number	Percent
Total Population ages 5 or less	270	5.9%
Total population ages 5 to 19	1,203	26.2%
Total population over 65 years old	328	7.1%
Total Population with any Disability	337	7.6%
Families Below Poverty Level	4	0.3%
Individuals Below Poverty Level	33	0.7%
Total Population who Speak English less than "very well"	82	1.9%
Total Population	4,594	-

Data Source: 2000 US Census

General Property

Table 3 Property Exposure Summary

Property Type	Total Parcel Count	Improved Parcel Count	Improved Values (\$)	Content (\$)	Total Value (\$)
Residential	1,924	1,818	601,623,423	300,811,712	902,435,135
Agriculture	355	82	23,529,300	23,529,300	47,058,600
Other	446	119	42,606,100	21,303,050	63,909,150
Commercial Sales	19	15	7,835,600	7,835,600	15,671,200
Commercial Services	16	15	3,876,400	3,876,400	7,752,800
Transportation	7	-	-	-	-
Industrial	19	16	7,288,900	10,933,350	18,222,250
Institutional/Government	25	1	124,800	124,800	249,600
Total	2,811	2,066	686,884,523	368,414,212	1,055,298,735

Data Source: Dane County Land Information Office, December 2008

Critical Facilities

The Town of Middleton has identified the following critical facilities important to protect from disaster impacts. These are collected in Tables 4 and 5. Table 4 is based on GIS data inventories from Dane County. Table 5 is supplemental data that was provided by the community through the Data Collection Guide.

Table 4 Critical Facility Summary/Essential Infrastructures

Facility	Type*	No. of Facilities	Replacement Value (\$)
Communications Tower	EI	1	32,000
Electric Substation	EI	1	45,000,000
Nursing Home	VF	1	900,000
Public School	VF	2	28,000,000
Sheriff Precinct	EI	1	0
TOTAL		6	73,920,000

*EI: Essential Infrastructure; VF: Vulnerable Facilities; HM: Hazardous Materials Facilities

Data Source: Dane County GIS

Other Assets

Other assets help define a community beyond the current composition of the town. These assets may provide economic benefit to the community, in addition to preserving the heritage and diversity of the community and may include natural, cultural and historic assets or economic assets such as major employers. It may also include more specific detail on critical facilities. The Town of Middleton has identified these other assets in Table 5. Hazard specific vulnerabilities are noted, where known.

Table 5 Other Specific Assets for the Town of Middleton

Name of Asset	Type*	Replacement Value (\$)	Occupancy/ Capacity (#)	Hazard Specific Issues
Town Hall/Public Works	EI	3,000,000	150	Tornado, Lightning
Sunset Ridge School	VF	15,000,000	480	Tornado, Lightning
West Middleton School	VF	13,000,000	364	Tornado, Lightning
Fire Station	EI	1,500,000	-	Tornado, Lightning
Electrical Sub-station	EI	45,000,000	-	Tornado, Lightning
Rest Haven Health Care	VF	900,000.00	35	Tornado, Lightning

*EI: Essential Infrastructure; VF: Vulnerable Facilities; HM: Hazardous Materials Facilities; NA: Natural Assets

Data Source: Data Collection Guide

Vulnerability to Specific Hazards

This section details vulnerability to specific hazards, where quantifiable, and where it differs from that of the overall County. The previous inventory tables quantify what is exposed to the various hazards within Middleton. Table 6 cross-references the hazards with the various tables where exposure or vulnerability specifics are found. The intent of Table 6 is to

quantify, where possible, future impacts of each hazard on the jurisdiction. In many cases it is difficult to estimate potential losses, so the overall exposure of populations, structures, and critical facilities is referenced.

Table 6 Hazard Vulnerability Specifics

Hazard	Populations	Structures	Critical Facilities	Future Damage Potential
Dam Failure	None	None	None	Specifics unknown; See hazard profile in County Plan
Drought	Minimal	None	Minimal	Specifics unknown; See hazard profile in County Plan
Flooding	See section below	See section below	See section below	See section below
Fog	Minimal	None	None	Specifics unknown; See hazard profile in County Plan
Hailstorm	Minimal	See Property Exposure table 3	See Critical Facility Inventory Table(s)	Specifics unknown; See hazard profile in County Plan
Landslide/ Sinkholes/ Erosion	Minimal	Minimal	Minimal	Specifics unknown; See hazard profile in County Plan
Lightning	See Table 2 Population	See Table 3 Property Exposure	See Critical Facility Inventory Table(s)	Specifics unknown; See hazard profile in County Plan
Severe Cold	See Table 2 Population	See Table 3 Property Exposure	See Critical Facility Inventory Table(s)	Specifics unknown; See hazard profile in County Plan
Severe Heat	See Table 2 Population	None	Minimal	Specifics unknown; See hazard profile in County Plan
Severe Winter Storm	See Table 2 Population	See Table 3 Property Exposure	See Critical Facility Inventory Table(s)	Specifics unknown; See hazard profile in County Plan
Tornado	See Table 2 Population	See section below	See Critical Facility Inventory Table(s)	See section below
Wildfire	Minimal	Minimal	Minimal	Specifics unknown; See hazard profile in County Plan
Windstorm	See Table 2 Population	See Table 3 Property Exposure	See Critical Facility Inventory Table(s)	Specifics unknown; See hazard profile in County Plan

Flood

Structures in the Floodplain

Some assets are specifically vulnerable to floods, due to their location. These assets are collected in Table 7. Refer to the flood profile in the mitigation plan for a description of the methodology used to identify potentially flood-prone properties. The locations of properties within the floodplain are shown in Figure 1, in addition to flood hazard areas and planned land use.

Table 7 Potentially Flooded Property Summary and Loss Estimate (DFIRM 100 – year)

Property Type	Improved Parcel Count	Improved Values	Content	Total Values (Content & Imp.)	Estimated Loss
Agriculture	1	\$62,900	\$31,450	\$94,350	\$18,870
Other	1	\$172,300	\$86,150	\$258,450	\$51,690
Total	2	\$235,200	\$117,600	\$352,800	\$70,560

Data Source: Dane County GIS, 2008 DFIRM

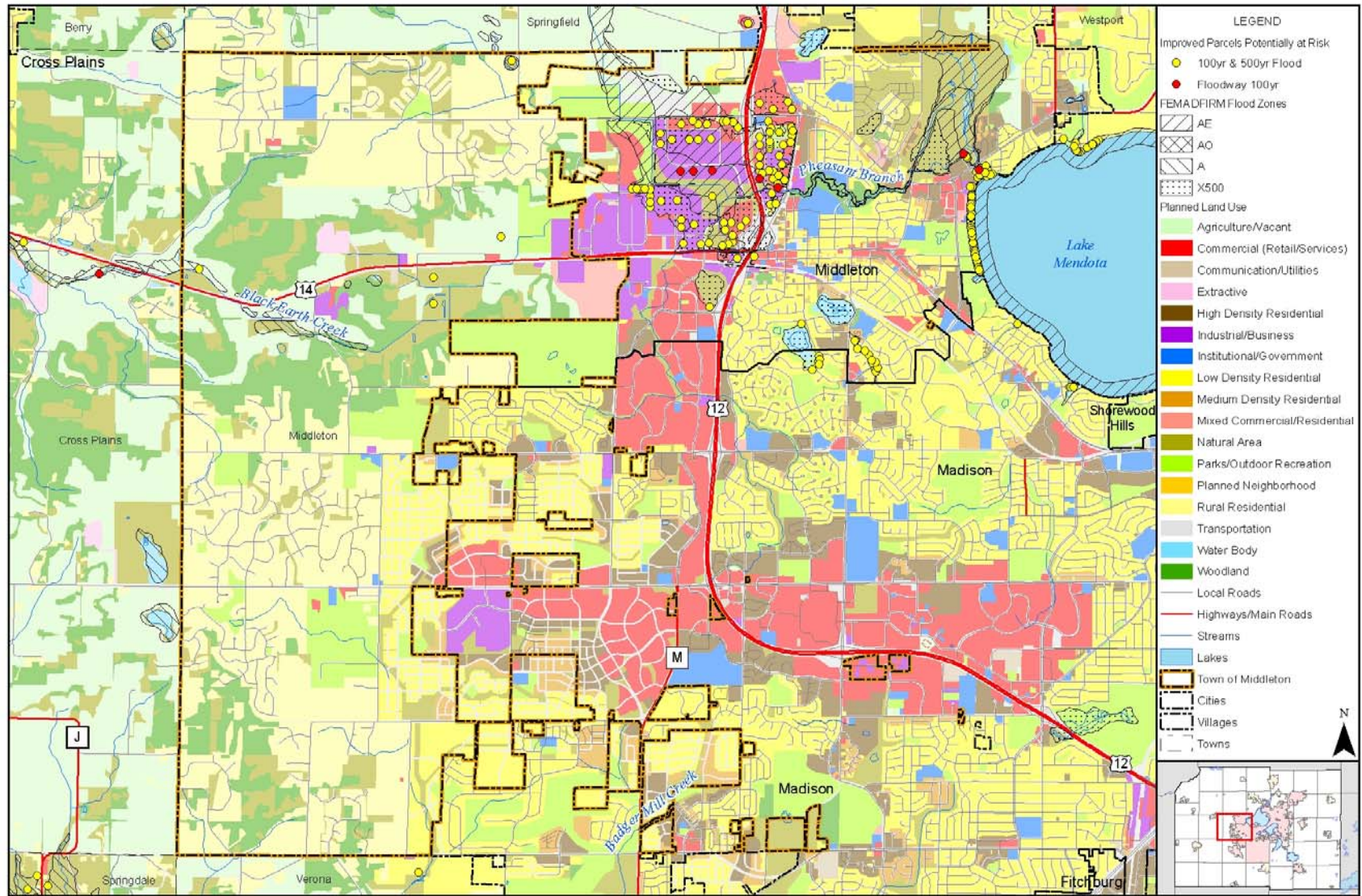
Repetitive Loss Properties and Flood Insurance Policies

A “repetitive loss” property is one that has received two or more flood insurance claim payments for at least \$1,000 each in any 10 year period since 1978. Flood insurance records indicate 1 repetitive loss property within the Town of Middleton. The general location of this property is shown in the map in the flood hazard profile in the base plan.

Critical Facilities

There are no critical facilities identified at risk to flooding.

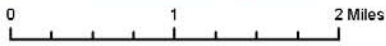
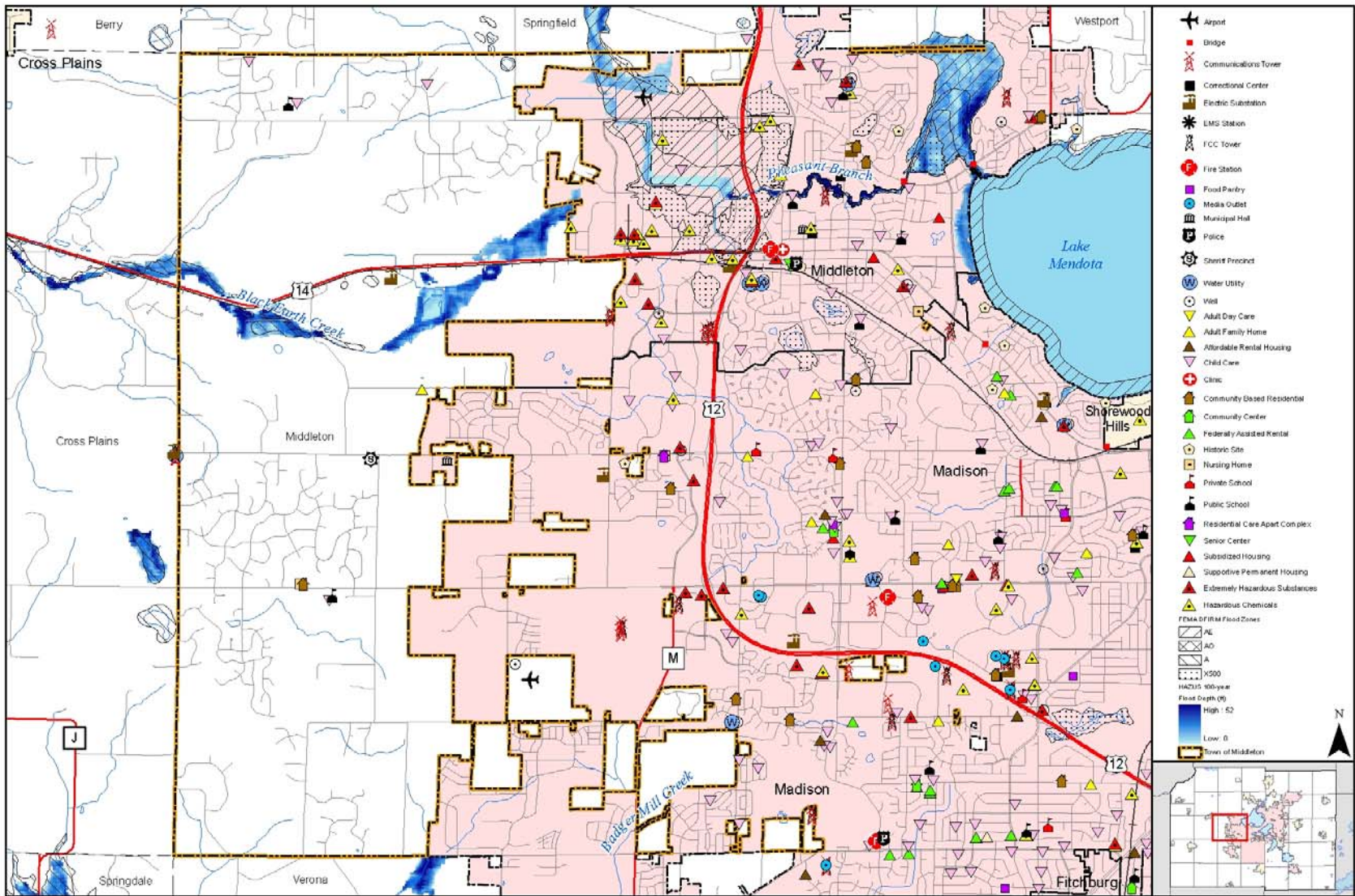
Figure 1 Flood Hazards and Future Land Use Map



0 1 2 Miles

Map compiled 6/2009; intended for planning purposes only.
Data Source: Dane County, Madison MPO, FEMA 2008 DFIRM

Figure 2 Flood Hazards and Critical Facilities Map



Map compiled 6/2009; intended for planning purposes only.
 Data Source: Dane County, FEMA 2008 DFIRM, HAZUS-MH MR3

Tornado

While it is difficult to estimate specific losses to a tornado due to the random nature of the event, a methodology was developed that was applied to each jurisdiction during the 2009 update. The table below estimates the percent area of the jurisdiction that could be impacted based on the average sized tornado (F2) in Dane County. High value exposure is based on 100% loss, medium 50% loss, and low is 25% loss to the property potentially impacted. The loss ratio, which is the ratio of the damaged building value to total exposed building value, is a measure of the impact to the jurisdiction as a whole. Communities with loss ratios 10% or more may have difficulty recovering from a disaster. Refer to the tornado hazard profile in the main mitigation plan for more details on this methodology.

Table 8 Tornado Loss Estimate

% area impact	Improved Parcel Count	Affected Structure Estimate	Total Exposed Value	Estimated Loss \$ (High Damage Range)	Estimated Loss \$ (Moderate Damage Range)	Estimated Loss \$ (Low Damage Range)	Loss Ratio for Moderate Damage Range
5.30%	2,066	110	1,055,298,735	55,974,540	27,987,270	6,996,817	2.7%

Data Source: Analysis Based on Dane County Land Information Office's data

Growth and Development Trends

Planned land use is shown in Figure 1, in relation to the flood hazard. Table 9 illustrates how the Town of Middleton has grown in terms of population and number of housing units between 2000 and 2008. Table 10 shows population projections through 2025.

Table 9 Town of Middleton Change in Population and Housing Units, 2000-2008

2000 Population	2008 Population	Percent Change (%) 2000-2008	2000 # of Housing Units	2008 # of Housing Units	Percent Change (%) 2000-2008
4,594	5,622	20.8 %	1,610	1,987	23%

Data Source: Dane County and the Town of Middleton Data Collection Guide

Table 10 Town of Middleton Population Projections, 2005-2025

Change in Population	2005	2010	2015	2020	2025
Increase by same percentage each year	5,192	5,608	6,057	6,526	7,027

Source: Demographics Services Center, Wisconsin Department of Administration, 2004

The Data Collection Guide issued in 2009 provided additional insight into growth and development for the Town of Middleton. Although subdivisions are not permitted, the Town of Middleton averages 5 new homes a year. This small increase in housing units indicates there is only a minor concern about increased exposure and vulnerability to hazards based on growth and development.

Problems or Additional Vulnerability issues

There is a possible residential development in the planning stages. It will not be located in a hazardous area or be vulnerable to other hazards except a possible tornado.

Capability Assessment

Capabilities are the programs and policies currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. This capabilities assessment summarizes regulatory mitigation capabilities, administrative and technical mitigation capabilities, and fiscal mitigation capabilities for the Town of Middleton.

Mitigation Capabilities Summary

Table 11 lists planning and land management tools typically used by local jurisdictions to implement hazard mitigation activities, or by themselves contribute to reducing hazard losses. The table also indicates which of these tools are currently utilized in the Town of Middleton.

Table 11 Town of Middleton Regulatory Mitigation Capabilities

Regulatory Tool (ordinances, codes, plans)	Yes/No	Comments
General or Comprehensive plan	Yes	Town of Middleton Website
Zoning ordinance	Yes	Dane County Zoning
Subdivision ordinance	Yes	Town Website
Growth management ordinance	No	
Floodplain ordinance	Yes	Town Office
Other special purpose ordinance (stormwater, steep slope, wildfire)	Yes	Website
Building code	Yes	WI Department of Commerce
Fire department ISO rating	No	
Erosion or sediment control program	Yes	Town Website
Storm water management program	Yes	Town Website
Site plan review requirements	Yes	Dane County Zoning
Capital improvements plan	No	
Economic development plan	No	
Local emergency operations plan	No	
Other special plans	No	
Flood insurance study or other engineering study for streams	No	
Elevation certificates (for floodplain development)	No	

Data Source: Town of Middleton Data Collection Guide

Table 12 identifies the personnel responsible for mitigation and loss prevention activities as well as related data and systems in the Town of Middleton.

Table 12 Responsible Personnel and Departments for the Town of Middleton

Personnel Resources	Yes/No	Department/Position	Comments
Planner/engineer with knowledge of land development/land management practices	Yes		Vierbicher.com
Engineer/professional trained in construction practices related to buildings and/or infrastructure	Yes		Vierbicher.com
Planner/engineer/scientist with an understanding of natural hazards	Yes		Vierbicher.com
Personnel skilled in GIS	Yes		Vierbicher.com
Full-time Building Official	Yes	Town Inspection Dept.	
GIS Data Resources – (land use, building footprints, etc.)	Yes		Vierbicher.com
Warning systems/services (Reverse 9-11, cable override, outdoor warning signals)	Yes	Outdoor warning siren located on Goth Road, Summit, Swoboda, Airport and Mound View	

Data Source: Town of Middleton Data Collection Guide

Table 13 identifies financial tools or resources that the Town of Middleton could potentially use to help fund mitigation activities.

Table 13 Financial Resources for the Town of Middleton

Financial Resources	Accessible/Eligible to Use (Yes/No)	Comments
Community Development Block Grants	Yes	
Capital improvements project funding	Yes	
Authority to levy taxes for specific purposes	Yes	
Fees for water, sewer, gas, or electric services	Yes	
Impact fees for new development	Yes	
Incur debt through general obligation bonds	Yes	
Incur debt through special tax bonds	Yes	
Incur debt through private activities	No	

Data Source: Town of Middleton Data Collection Guide

Additional Capabilities

National Flood Insurance Program Participation

The Town of Middleton does not participate in the National Flood Insurance Program as a stand-alone entity, but is covered by the County's ordinance.

Public Involvement Activities

During the 2009 update, the community assisted with the public involvement activities referenced in the base plan, including:

- Including the plan update as a Board Agenda Item
- Publishing a Newsletter Article
- Publishing information on Town Website

Mitigation Objectives (Actions)

Objective 1: Implement a program to assist residents and businesses to maintain power during tornadoes, high winds, hail, ice storms, and lightning strikes.

Steps:

- 1) Organize a meeting of Town patrolmen, fire and EMS personnel, utility company representatives, Town government officials, etc.
- 2) Develop criteria to assess risk level posed by tornadoes, high winds, hail and ice storms.
- 3) Inventory and critique the effectiveness of existing weather notification devices: tornado sirens, weather radios, etc.
- 4) Inventory and prioritize tree-trimming needs.
- 5) Evaluate the need and feasibility of a program to share Town-owned small propane generators on an as needed basis.

Lead Implementing Agency: Town of Middleton

Supporting Agencies:

- Dane County Emergency Management
- Red Cross

Possible Funding and Technical Assistance:

- Staff time
- FEMA Hazard Mitigation Grant Program
- FEMA Pre-disaster Mitigation

Timeline: Begin immediately, with grant applications and program implantation as funding becomes available.

Priority: Moderate - High

Estimated Costs: Staff time