
Town of Vermont Annex

Community Profile

The Town of Vermont is located in the Northwest quadrant of the County, West of the village of Cross Plains, South of the Village of Black Earth and North of the town of Blue mounds. Land use is dominated by agriculture and woodlands, and dispersed one- and two-family homes.

According to the United States Census Bureau, the Town of Vermont has a total area of 35.77 square miles, all of it land.

As of the 2000 Census, there are 839 people, 298 households, and 81.2 families residing in the Town of Vermont. The population density is 23.5 per square mile. There are 312 housing units at an average density of 8.7 per square mile. The municipality population distributed by Dane County indicates that the 2008 population for Town of Vermont was 886 people.

There are 298 households out of which 81.2% have children under the age of 18 living with them, 18.8% of all households are made up of individuals and 5.0% have someone living alone who is 65 years of age or older. The average household size is 2.82 and the average family size is 3.05. In the Town of Vermont , the population is spread out with 26.9% under the age of 18, 5.0% from ages 18 to 24, 29.2% ages 25 to 44, 28.7% ages 45 to 64, and 10.1% who are 65 years of age or older. The median age is 40.4 years. 2.8% of the population speaks a language other than English at home and 8.5% of the population (above the age of 5) is disabled.

The median income for a household in the Town of Vermont is \$65,208 and the median income for a family is \$70,750. The per capita income for the Town of Vermont is \$26,549. 2.8% of the population and 0.8% of families are below the poverty line. Out of the total people living in poverty, 0.0% is under the age of 18 and 8.3% are 65 or older. 93.5 of the population has at least a high school degree, while 41.9 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 Vermont 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 Vermont 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 Vermont'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 appears as Table 1. This matrix reflects the significance of the hazards relative to one another.

This matrix reflects that the Town of Vermont is most vulnerable to extreme heat and cold, drought, and winter storms. The Town of Vermont has a medium vulnerability to flood, fog, hail storm, wildfire, and windstorm, and a lower vulnerability to dam/levee failures, erosion, landslides, lightning, and tornado. The vulnerability established here is a qualitative assumption based on the impacts, geographic extent, probability of future occurrence, and magnitude/severity. On the county level, these vulnerabilities were calculated with quantitative data as well.

Table 1 Vulnerability Assessment Matrix for the Town of Vermont

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 failure	1	1	1	0	0	0	0	0	0	3
Extreme Cold	3	2	2	1	1	1	2	2	2	16
Extreme Heat	3	1	2	1	1	1	2	1	2	14
Drought	3	3	1	0	0	0	2	2	2	13
Erosion	1	1	1	0	0	0	0	0	0	3
Flood	2	3	3	1	2	1	1	2	2	17
Fog	2	3	3	0	1	0	1	1	1	12
Hail Storm	2	3	3	2	1	1	1	1	1	15
Landslide	1	1	1	0	0	0	0	0	0	3
Lightning	1	3	3	1	3	1	1	1	1	15
Tornado	1	3	3	2	3	1	2	2	2	19
Wildfire	2	2	3	2	2	1	2	2	2	18
Windstorm	2	2	3	2	3	1	2	2	2	19
Winter Storm	3	3	2	1	2	1	2	2	2	18
Subsidence										
Other:										

Source: Town of Vermont

Previous Hazard Events

Through the Data Collection Guide, the Town of Vermont noted specific historic hazard events to include in the community profile. These events have been incorporated into the appropriate hazard chapters in the base plan. These events had a particular impact on the community beyond the impacts and events recorded in the Dane County Hazard Mitigation Plan. This is not a comprehensive summary of past incidents, as the hazard profiles collected in the main Mitigation Plan include other events that may have historically impacted the jurisdiction. Recent events noted by this jurisdiction in the Data Collection Guide include:

Flooding: June 2008

Along with many other jurisdictions in Dane County, the Town of Vermont experienced wide-spread flooding during June of 2008. Roads and school closures were minimal, no injuries and deaths were reported, but damages were documented and federal assistance was provided. The event is considered likely to occur again.

Flooding: May 2000

Town-wide flooding of roads and right of way properties, crop damage and personal property damage impacted the Town. No injuries or deaths were reported, and losses were reported but are not currently available. The data collection guide indicates the event is likely to occur again.

Snow Storm: February 2008

Town-wide snow resulted in federal aid provisions to accommodate recovery costs from a region-wide snowstorm in early February of 2008. No injuries or deaths were reported, and no documented damages to property were forwarded, but roads, schools and businesses were closed and/or delayed. The event is considered extremely likely to occur again.

Asset Inventory

Assets include the people, property, and critical facilities within the Town of Vermont 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

Disability Status from the 2000 Census	Number	Percent
Total Population ages 5 or less	44	5.2%
Total population ages 5 to 19	200	23.8%
Total population over 65 years old	85	10.1%
Total Population with any Disability	64	8.5%
Families Below Poverty Level	2	.8
Individuals Below Poverty Level	23	2.0
Total Population who Speak English less than "very well"	2	.03%
Total Population	839	100%

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	714	217	39,053,900	19,526,950	58,580,850
Agriculture	338	99	18,580,000	18,580,000	37,160,000
Other	79	68	13,157,300	6,578,650	19,735,950
Transportation	2				
Industrial	2	1	21,600	32,400	54,000
Institutional & Government	3				
Total	1,138	385	70,812,800	44,718,000	115,530,800

Data Source: Dane County Land Information Office, December 2008

Critical Facilities

The Town of Vermont has identified the following critical facilities important to protect from disaster impacts. These are collected in Table 4, which is based on GIS data inventories from Dane County.

Table 4 Critical Facility Summary/Essential Infrastructures

Facility	Type*	No. of Facilities	Replacement Value (\$)
Bridge	EI	7	7,000,000
Town Garage	EI	1	106,000
Municipal Hall, Salt Shed	EI	2	360,000
TOTAL		10	7,466,00

*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 of Vermont. 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 Vermont has identified these other assets in Table 5. Hazard specific vulnerabilities are noted, where known.

Table 5 Other Specific Assets for the Town of Vermont

Name of Asset	Type*	Replacement Value (\$)	Occupancy/ Capacity (#)	Hazard Specific Issues
Tyrol Basin Ski Area	EI	Unknown	Unknown	None
*EI: Essential Infrastructure; VF: Vulnerable Facilities; HM: Hazardous Materials Facilities; NA: natural assets				

Data Source: Dane County GIS

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 the Town of Vermont. 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

Hazard	Populations	Structures	Critical Facilities	Future Damage Potential
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 location of properties within the floodplain is 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
Recreation	6	\$1,281,700	\$640,850	\$1,922,550	\$384,510
Residential	2	\$254,900	\$127,450	\$382,350	\$76,470
Other	18	\$2,418,600	\$1,209,300	\$3,627,900	\$725,580
Total	26	\$3,955,200	\$1,977,600	\$5,932,800	\$1,186,560

Data Source: Dane County GIS, 2008 DFIRM

Based on the average household size in Dane County and the count of residential parcels in the floodplain, approximately 5 people are potentially at risk to the 100 year flood and 0 additional to the 500 year flood within the jurisdiction.

Repetitive Loss Properties and Flood Insurance Policies

There are no repetitive loss properties in the Town of Vermont. Specific NFIP policy information is available only for Cities and Villages in Dane County and is not available by Town.

Critical Facilities

Table 8 displays a result of an analysis of critical facilities located within either the FEMA DFIRM 100-year, 500-year, or HAZUS 100-year floodplains. Additional detail on the facilities is shown in Table 9. The location of these facilities is shown in Figure 2.

Table 8 Potentially Flooded Critical Facility Summary

Facility Type	No. of Facilities	DFIRM 100-yr	DFIRM 500-yr	HAZUS Only
Bridge	3	1		2
Total	3	1	0	2

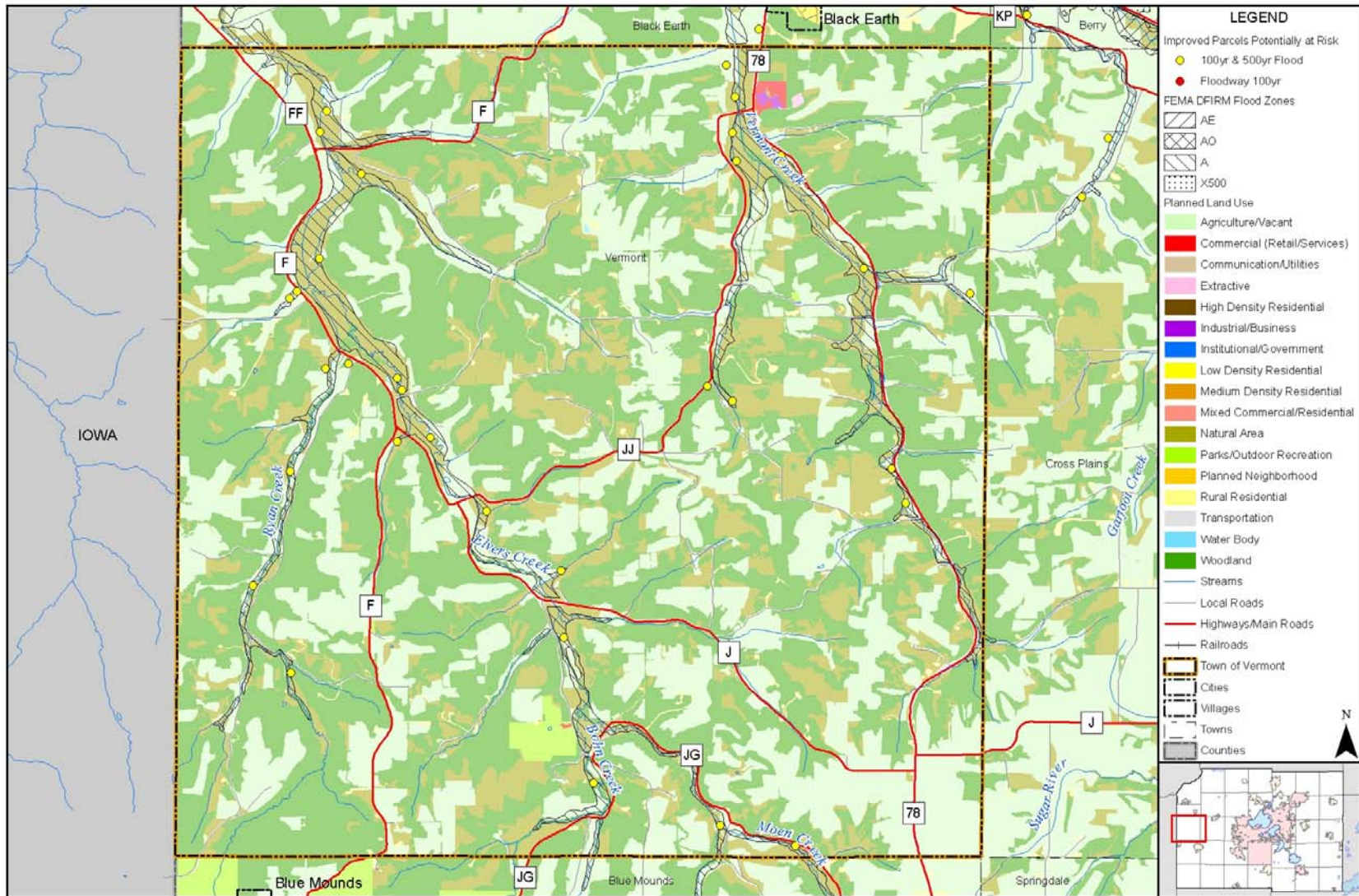
Data Source: Dane County GIS, 2008 DFIRM

Table 9 Potentially Flooded Critical Facility Detail

Facility Type	Facility Name	DFIRM Flood Zone	HAZUS Flood Zone	HAZUS & DFIRM	HAZUS Flood Depth
Bridge		X	Y		
Bridge		A			4.83
Bridge		X	Y		8.77

Data Source: Dane County GIS, 2008 DFIRM

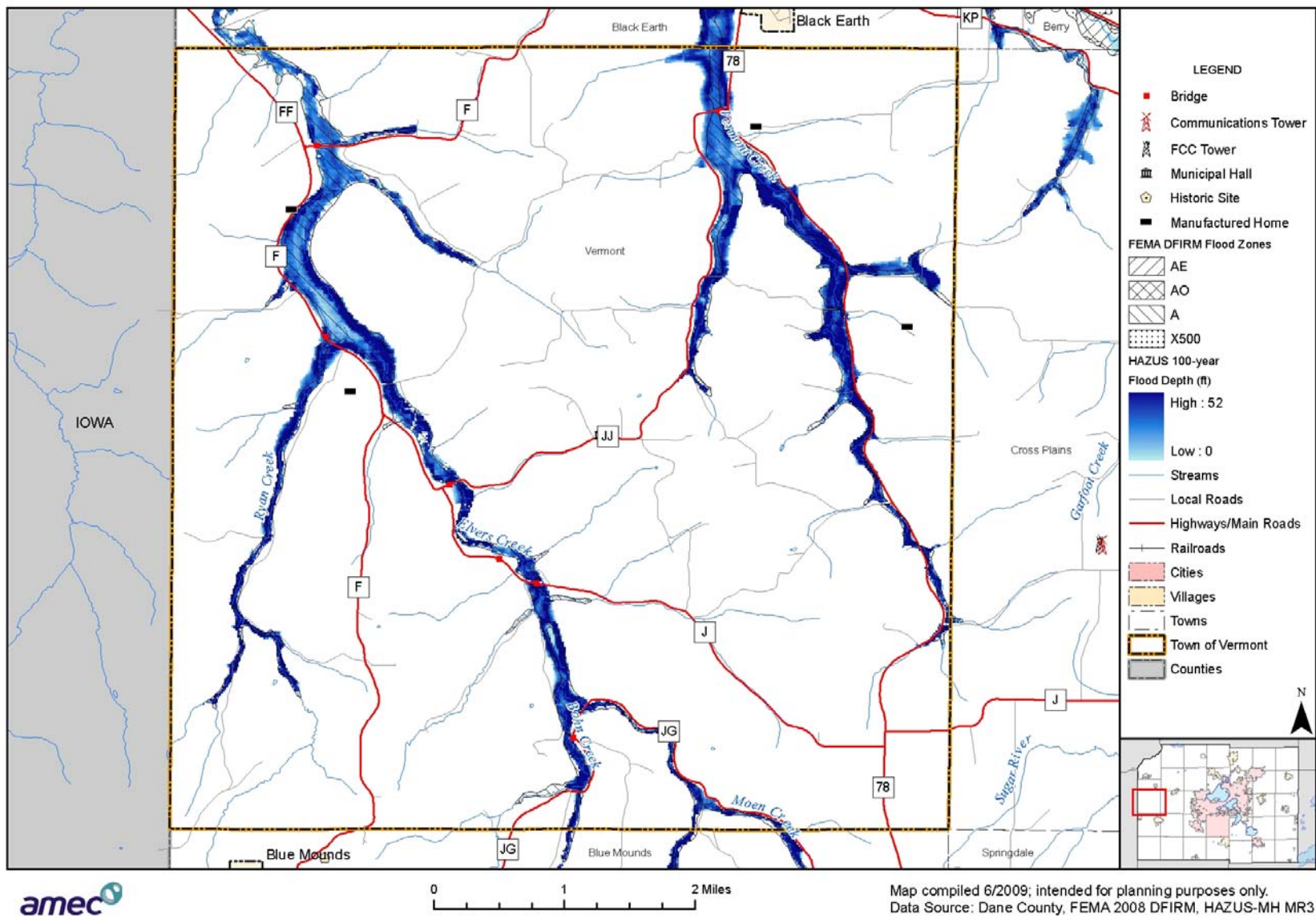
Figure 1 Flood Hazards and Future Land Use Map



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



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 10 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
2.35%	385	9	115,530,800	2,719,717	1,359,859	339,965	1.2%

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 11 illustrates how the Town of Vermont has grown in terms of population and number of housing units between 2000 and 2008. Table 12 shows population projections through 2025.

Table 11 Town of Vermont 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
839	886	5.6	312	n/a	n/a

Data Source: Dane County

Table 12 Town of Vermont Population Projections, 2005-2025

Population Projection	2005	2010	2015	2020	2025
Increase by same percentage each year	884	920	953	989	1,031

Data Source: Demographic Services Center, Wisconsin Department of Administration, 2004

Problems or Additional Vulnerability issues

The Data Collection Guide provided the following additional vulnerability or problem issues for the Town of Vermont:

- As noted elsewhere, standing water is usually only our issue for some cropland. Structures are seldom affected; roads impacted by flowing water.

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 Vermont.

Mitigation Capabilities Summary

Table 13 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 Vermont.

Table 13 Town of Vermont Regulatory Mitigation Capabilities

Regulatory Tool (ordinances, codes, plans)	Yes/No	Comments
General or Comprehensive plan	Yes	Comp Plan Pending
Zoning ordinance	Yes	Dane County
Subdivision ordinance	NA	None Permitted
Growth management ordinance	Yes	1 per 35 acres
Floodplain ordinance	Yes	County/State
Other special purpose ordinance (stormwater, steep slope, wildfire)	Yes	Storm water, county, steep slope, town
Building code	Yes	
Erosion or sediment control program	Yes	Dane County
Storm water management program	Yes	Dane County
Site plan review requirements	Yes	Town Plan Commission
Capital improvements plan	Yes	Road Primarily
Economic development plan	No	
Local emergency operations plan	Yes	Currently only elections
Other special plans	No	
Flood insurance study or other engineering study for streams	No	

Data Source: Data Collection Guide for the Town of Vermont

Table 14 identifies the personnel responsible for mitigation and loss prevention activities as well as related data and systems in the Town of Vermont.

Table 14 Responsible Personnel and Departments for the Town of Vermont

Personnel Resources	Yes/No	Department/Position	Comments
Planner/engineer with knowledge of land development/land management practices	Yes	Plan commission questions referred to Dane County or consulting engineer	
Engineer/professional trained in construction practices related to buildings and/or infrastructure	Yes	Building Inspector(private contractor)	
Planner/engineer/scientist with an understanding of natural hazards	Yes	Plan commission questions referred to Dane County or consulting engineer	
Personnel skilled in GIS	No	Rely on Dane County	
Full-time Building Official	No	Part time building inspector(independent contractor)	
Floodplain Manager	No	Rely on Dane County	
Emergency Manager	No	None other than town chairman	
Grant Writer	No		
Other Personnel	No		
GIS Data Resources – (land use, building footprints, etc.)	No	Rely on Dane County	
Warning systems/services (Reverse 9-11, cable override, outdoor warning signals)	No	Rely on Dane County	

Data Source: Data Collection Guide for the Town of Vermont

Table 15 identifies financial tools or resources that the Town of Vermont could potentially use to help fund mitigation activities.

Table 15 Financial Resources for the Town of Vermont

Financial Resources	Accessible/Eligible to Use (Yes/No)	Comments
Community Development Block Grants		
Capital improvements project funding		
Authority to levy taxes for specific purposes		
Fees for water, sewer, gas, or electric services		
Impact fees for new development		
Incur debt through general obligation bonds		
Incur debt through special tax bonds		
Incur debt through private activities		
Other:		The Town has the same authority to levy taxes or borrow money as other towns.

Data Source: Data Collection Guide for the Town of Vermont

Additional Capabilities

The Data Collection Guide identified the following additional capabilities for the Town of Vermont:

- Only fire safety materials as supplied by the DNR.
- Storm damaged roads and right of way are often repaired to a higher standard in order to prevent future damage.

National Flood Insurance Program Participation

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

Public Involvement Activities

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

Mitigation Actions

Objective #1: Addition to salt shed to allow for prolonged winter weather without salt/sand resupply.

Steps:

- 1) A preliminary design has been completed for a salt shed addition and inquiries are underway concerning necessary permits.

Lead Implementing Agency: The Town of Vermont will act as the general contractor.

Supporting Agencies:

- The only other agencies involved will be those having responsibility for oversight of construction standards, and Dane County Planning and Development (Zoning).

Possible Funding and Technical assistance:

- We expect this to be self-funded, with technical assistance coming from the Department of Natural Resources, the Town's Contract Building Inspector and those contractors hired to construct the project.

Timeline: The current expectation is that this project will be completed in the fall of 2009.

Priority: This project currently has our highest priority.

Estimated Costs: We expect this project to cost approximately \$23,500.

Objective #2: Provision for the integration of emergency generator power into the Town garage and town hall electrical power supply.

Steps:

1) One construction estimate has been received.

Lead Implementing Agency: The Town of Vermont will act as the general contractor.

Supporting Agencies: None

Possible Funding and Technical assistance:

- We expect this to be self-funded, with technical assistance coming from the Town's Contract Building Inspector and the contractor hired to construct the project.

Timeline: The timeline is unknown.

Priority: This project is currently a medium priority.

Estimated Costs: We expect this project to cost approximately \$4,000.

Objective #3: Determine whether flow capacity of Bergum Road box culvert is adequate, replace to required flow and traffic design standard.

Steps:

1) Seek technical assistance with hydrologic analysis, design assistance as required, funding and construction assistance as required

Lead Implementing Agency: Town of Vermont

Supporting Agencies:

- WI Department of Natural Resources
- Dane County Highway and Transportation for technical assistance and as necessary for permitting
- Dane County Land and Water Resources Department for technical assistance and as necessary for permitting
- Dane County Emergency Management

Possible Funding and Technical assistance:

- Staff time
- FEMA – Hazard Mitigation Grant Program
- FEMA – Pre-disaster Mitigation
- Bridge Aid
- Other grant funding as available.

Timeline: The timeline is unknown.

Priority: This project is currently a medium priority.

Estimated Costs: Unknown

Objective #4: Determine whether flow capacity of Vermont Church Road box culvert is adequate, replace to required flow and traffic design standard.

Steps:

- 1) Seek technical assistance with hydrologic analysis, design assistance as required, funding and construction assistance as required

Lead Implementing Agency: Town of Vermont

Supporting Agencies:

- WI Department of Natural Resources
- Dane County Highway and Transportation for technical assistance and as necessary for permitting
- Dane County Land and Water Resources Department for technical assistance and as necessary for permitting
- Dane County Emergency Management.

Possible Funding and Technical assistance:

- Staff time
- FEMA – Hazard Mitigation Grant Program
- FEMA – Pre-disaster Mitigation
- Bridge Aid
- Other grant funding as available.

Timeline: The timeline is unknown.

Priority: This project is currently a medium priority.

Estimated Costs: Unknown

Objective #5: Reduce vulnerability of water control facilities to flood damage. Determine adequacy of presently installed culverts and replace as necessary. Reshape and add reinforcement to various road shoulders and ditches to increase resistance to erosion and increase flow capacity.

Steps:

- 1) Review existing inventory of culverts
- 2) Prioritize known problem areas
- 3) Seek funding assistance

Lead Implementing Agency: Town of Vermont

Supporting Agencies:

-
- Dane County Highway and Transportation for technical assistance and as necessary for permitting
 - Dane County Land and Water Resources Department for technical assistance and as necessary for permitting
 - Dane County Emergency Management.

Possible Funding and Technical assistance:

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

Timeline: To be implemented as funds permit

Priority: This project is currently a medium priority

Estimated Costs: Unknown

Objective #6: Set up emergency management coordination center in town hall, add interoperable communications equipment to town hall and town vehicles.

Steps:

- 1) Research options appropriate to the size of our municipality and the hazards present
- 2) Seek technical and financial assistance for implementation

Lead Implementing Agency: Town of Vermont

Supporting Agencies: Dane County Emergency Management

Possible Funding and Technical assistance:

- Staff time
- FEMA – Hazard Mitigation Grant Program
- FEMA – Pre-disaster Mitigation
- Other grant funding as available.

Timeline: The timeline is unknown.

Priority: This project is currently a low priority.

Estimated Costs: Unknown