Dane County Natural Hazard Mitigation Plan

Town of Cottage Grove Annex

Summer 2022

Town of Cottage Grove Annex

This annex is a part of the Dane County Natural Hazard Mitigation Plan (DCNHMP). The DCNHMP contains additional information to support the Federal Emergency Management Agency's (FEMA) recognition of the plan (including this annex) as the formal natural hazard mitigation plan for the county and participating local governments. This annex will be valid for as long as FEMA approves the DCNHMP. The strategies adopted in this annex are designed to guide community efforts to reduce risks from natural hazards. These strategies work in conjunction with neighboring communities and Dane County government to reduce risks from natural hazards.

COMMUNITY PROFILE

The Town of Cottage Grove is located in eastern Dane County, Wisconsin, about 1½ miles east of Madison and 65 miles west of Milwaukee. Its land area includes about 33.7 square miles. It is bisected by County Highways BB and N, bordered on the north by I-94 and US Highway 12/l8 runs through the southern part. The Town is bordered on the north by the town of Sun Prairie and the town of Pleasant Springs to the south. The town of Deerfield is located to the east and the Town of Blooming Grove and the city of Madison to the west. The Village of Cottage Grove is located in the northern part of the Town, along County Trunks N and BB and includes 1,480 acres. Pursuant to state statutes, the Village extends and exercises its extraterritorial authority into the Town 1½ miles in all directions, and the City of Madison extends and exercises its extraterritorial authority into the Town 3 miles. Where the extraterritorial jurisdictions of the City of Madison and the Village of Cottage Grove meet, a compromise between the two has been reached. This extraterritorial area encompasses some 17,225 acres. Collectively, the area of the Village and the extraterritorial area accounts for about 81 percent of the original town. Land use in the Town includes agriculture, wetlands and woodlands, rural subdivisions, and dispersed one and two-family homes.

As of 2020, the Town of Cottage Grove has 2,408 households, with an average of 2.9 people per household. The municipal population data provided by the American Community Survey, a product of the US Census Bureau, indicates that the 2019 population estimates for Town of Cottage Grove is comprised of 3,958 people. Table 1 shows the population profile by age for Town of Cottage Grove.

Table 1 Population Profile of Town of Cottage Grove, Dane County

Category	Number	Percent
Total population	**3,958**	**100%**
Under 5 years	289	7.3%
5 to 9 years	240	6.1%
10 to 14 years	225	5.7%
15 to 19 years	134	3.4%
20 to 24 years	254	6.4%
25 to 29 years	111	2.8%
30 to 34 years	172	4.3%
35 to 39 years	176	4.4%
40 to 44 years	207	5.2%
45 to 49 years	288	7.3%
50 to 54 years	329	8.3%
55 to 59 years	519	13.1%
60 to 64 years	339	8.6%
65 to 69 years	280	7.1%
70 to 74 years	238	6.0%
75 to 79 years	54	1.4%
80 to 84 years	84	2.1%
85 years and over	19	0.5%

Data Source: 2019 ACS Estimates - U.S. Census

Growth & Development Trends

Table 2-3 illustrates how the entire Town of Cottage Grove has grown in terms of population and number of households between 2010 and 2020. Housing data is to 2020 due to data availability. This data may differ from the 2019 Census Population Estimates, due to sampling differences and margin of error. Table 2-3 is drawn from the Wisconsin Department of Administration.

Table 2 Town of Cottage Grove Change in Population and Households, 2010-2020

2010 Population	2020 Population	Percent Change (%) 2010-2020	2010 # of Households	2020 # of Households	Percent Change (%) 2010-2020
3,875	3,918	1.11%	1,463	2,408	64.5%

Data Source: Demographic Services Center, Wisconsin Department of Administration, 2021

Table 3 Town of Cottage Grove Population Projections, 2020-2040 11.79

Population Projection	2020	2025	2030	2035	2040
Increase by half of percent of change (1.11%/2) every 5 years	1,688	1,697	1,706	1,715	1,724

Data Source: Demographic Services Center, Wisconsin Department of Administration, 2021

Note: Population estimates offered by the U.S. Census Bureau's American Community Survey may differ from the WDOA data, due to sourcing, margin of error, and data availability.

Population Summary

Tables 4-7 illustrates key population demographics within the Town of Cottage Grove. Key demographics include: (1) Disability Characteristics, (2) Federal Income Poverty Levels, (3) Educational Attainment, and (4) Household Language with English Speaking Capabilities. Due to data availability, all key demographic information has been provided by the American Community Survey (ACS) 2019 estimates. The ACS is a self-reported survey and may include total sample size differences and statistical margin of error.

Table 4 Town of Cottage Grove, Dane County – Disability Characteristics by Detailed Age

Category	Number	Percent
Total of Residents with Self-Identified Disabilities	**693**	**100%**
With a hearing difficulty	**234**	**33.8%**
Population under 18 years	22	-
Population 18 to 64 years	90	-
Population 65 years and over	122	-
With a vision difficulty	**39**	**5.6%**
Population under 18 years	0	-
Population 18 to 64 years	9	-
Population 65 years and over	30	-
With a cognitive difficulty	**243**	**35.1%**
Population under 18 years	27	-
Population 18 to 64 years	143	-
Population 65 years and over	73	-
With an ambulatory difficulty	**71**	**10.2%**
Population under 18 years	11	-
Population 18 to 64 years	34	-
Population 65 years and over	26	-
With a self-care difficulty	**8**	**1.2%**
Population under 18 years	0	-
Population 18 to 64 years	8	-
Population 65 years and over	0	-
With an independent living difficulty	**98**	**14.1%**
Population 18 to 64 years	42	-
Population 18 to 34 years	9	-
Population 65 years and over	56	-

Data Source: 2019 ACS Estimates - U.S. Census

Table 5.1: Town of Cottage Grove, Dane County – Federal Income Poverty Levels (FIPL) by Families Summary

Category	Number of Families
50 percent of poverty level	0
125 percent of poverty level	14
150 percent of poverty level	31
185 percent of poverty level	47
200 percent of poverty level	81
300 percent of poverty level	133
400 percent of poverty level	346
500 percent of poverty level	538

Data Source: 2019 ACS Estimates - U.S. Census

Note: Use table 5.2 to interpret table 5.1:

5.1 identifies the *total number of families* (regardless of size) by percentage.

5.2 identifies *family size* in relation to annual family income and the percentage category of the FIPL.

Table 5.2: Town of Cottage Grove, Dane County – Annual Federal Income Poverty Level Guide

Family Size	50%	100%	125%	150%	185%	200%	300%	400%	500%
1	$6,440	$12,880	$16,100	$19,320	$23,828	$25,760	$38,640	$51,520	$64,400
2	$8,710	$17,420	$21,775	$26,130	$32,227	$34,840	$52,260	$69,680	$87,100
3	$10,980	$21,960	$27,450	$32,940	$40,626	$43,920	$65,880	$87,840	$109,800
4	$13,250	$26,500	$33,125	$39,750	$49,025	$53,000	$79,500	$106,000	$132,500
5	$15,520	$31,040	$38,800	$46,560	$57,424	$62,080	$93,120	$124,160	$155,200
6	$17,790	$35,580	$44,475	$53,370	$65,823	$71,160	$106,740	$142,320	$177,900

Data Source: dhs.wisconsin.gov

Table 6: Town of Cottage Grove, Dane County – Educational Attainment by Householders

Category	Number	Percent
Total of Householders	**1,160**	**100%**
Less than high school graduate	16	1.4%
High school graduate (includes equivalency)	339	29.2%
Some college, associate's degree	440	37.9%
Bachelor's degree or higher	365	31.5%

Data Source: 2019 ACS Estimates - U.S. Census

Table 7: Household Language & English Speaking Capabilities

Category	Number	Percent
Total of Households	**1,465**	**100%**
English only	**1,336**	**91.2%**
Spanish:	**68**	**4.6%**
Limited English speaking household	0	-
Not a limited English speaking household	68	-
Other Indo-European languages:	**29**	**2.0%**
Limited English speaking household	0	-
Not a limited English speaking household	29	-
Asian and Pacific Island languages:	**32**	**2.2%**
Limited English speaking household	0	-
Not a limited English speaking household	32	-
Other languages:	**0**	**0.0%**
Limited English speaking household	0	-
Not a limited English speaking household	0	-

Data Source: 2019 American Community Survey

Note: Population estimates offered by the U.S. Census Bureau's American Community Survey may differ from the WDOA data, due to sourcing, margin of error, and data availability.

Asset Inventory

Assets include the people, property, and critical facilities within the Town of Cottage Grove 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.

General Property

Table 8 Property Exposure Summary

Property Type	Parcel Count	Improved Land Count	Improved Land Value ($)	Content Value ($)	Total Value ($)
Total	**4,276**	**4,233**	**8,179,690,700**	**4,089,845,350**	**12,269,536,050**
Agriculture	736	736	91,837,000	45,918,500	137,755,500
Industrial	37	37	29,704,900	14,852,450	44,557,350
Residential	2,365	2,365	393,517,500	196,758,750	590,276,250
Transportation	10	10	464,500	232,250	696,750
Utility	3	3	8,600	4,300	12,900
Commercial	37	37	9,520,000	4,760,000	14,280,000
Other	20	20	9,460,200	4,730,100	14,190,300
Institutional/ Governmental	22	22	679,700	339,850	1,019,550

Data Source: Dane County Land Information Office, December 2021

Critical Facilities

The Town of Cottage Grove has identified the critical facilities important to protect from disaster impacts. These are collected in Table 9. Table 9 is based on GIS data inventories from Dane County and information gathered from the Town. No further supplemental data was provided by the community through the Data Collection Guide.

Table 9 Critical Facility Summary/Essential Infrastructure

Facility	Type*	No. of Facilities	Replacement Value ($)
11 Bridges	EI	11	(Total)
Baxter Rd Bridge	EI	1	$150,000
Ridge Rd Bridge	EI	1	$500,000
Uphoff Rd Bridge	EI	1	$550,000
W. Ridge Rd Bridge	EI	1	$500,000
Femrite Rd Bridge	EI	1	$500,000
Hope Rd Bridge	EI	1	$500,000
Siggelkow Rd Bridge	EI	1	$500,000
Natvig Rd Bridge	EI	1	$400,000
Vilas Rd Bridges (3)	EI	3	$1,100,000
Flynn Hall at 116 W. Reynolds St	VF	1	$750,000
Town Garage at 4062 County N	EI	1	$800,000
Salt Shed at 4062 County N	EI	1	$75,000
Pole Shed at 4062 County N	EI	1	$35,000
Electric Substation	EI	1	Not Town Owned
Emergency Services Building	EI	1	$5,000,000
Town Hall at 4058 County N	EI	1	$900,000
Police Station at 2560 Nora Rd	EI	1	$2,000,000
Salt bunker with overhead storage	EI	1	50,000
*EI: Essential Infrastructure; VF: Vulnerable Facilities; HM: Hazardous Materials Facilities			

Data Source: 2021 Town of Cottage Grove Data Collection Guide

Other Assets

Other assets help define a community beyond the current composition of the Town of Cottage Grove. 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 Cottage Grove has not identified any other assets.

VULNERABILITY ASSESSMENT

A hazard identification and vulnerability analysis was completed for the Town of Cottage Grove using the same methodology in the County's 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 10 outlines the hazard identification for the Town of Cottage Grove based on the Data Collection Guide issued in 2021. The Data Collection Guide listed all of the hazards that could impact Dane County. The purpose of this worksheet was to identify and rank the hazards and vulnerabilities specific to the jurisdiction. Brooklyn's planning team members were asked to complete the matrix by ranking each category on a scale of 0 to 5 based on the experience and perspective of each planning team member. A ranking of 0 indicated "no concern" while a ranking of 5 indicated "highest concern." This matrix appears as Table 10. This matrix reflects the significance of the hazards relative to one another as perceived by the Example's planning team.

This matrix reflects that the Town of Cottage Grove is most vulnerable to tornadoes, wind storms, and floods. The vulnerability established here is a qualitative assumption based on the impacts, geographic extent, probability of future occurrence, and magnitude/severity.

Table 10: Vulnerability Assessment Matrix for the Town of Cottage Grove

Name of Jurisdiction: Town of Cottage Grove										
Hazard	**Hazard Attributes**			**Impact Attributes**						
				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	**Total of Row Values**
	(1-5)	*(1-5)*	*(1-5)*	*(0-5)*	*(0-5)*	*(0-5)*	*(0-5)*	*(0-5)*	*(0-5)*	
Dam/Levee failure	1	1	1	0	0	0	0	0	0	3
Extreme Cold	5	3	3	4	4	3	1	1	0	24
Extreme Heat	5	3	3	2	1	4	1	1	0	20
Drought	5	2	2	1	1	1	1	4	3	20
Expansive soils	0	0	0	0	0	0	0	0	0	0
Flood	3	4	4	3	4	1	1	4	2	26
Fog	3	3	3	0	0	0	0	0	0	9
Hail Storm	3	3	3	1	0	0	0	3	0	13
Landslide	0	0	0	0	0	0	0	0	0	0
Lightning	1	1	3	3	3	3	1	2	3	20
Tornado	5	3	5	5	5	5	5	5	5	43
Wildfire	1	1	5	2	0	1	1	1	0	12
Windstorm	5	5	5	5	3	2	1	4	3	33
Winter Storm	5	3	3	4	3	3	1	1	2	25

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 Town of Cottage Grove. Table 11 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 11 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	Minimal	Minimal	Specifics unknown; See hazard profile in County Plan
Flooding	See Tables 13-14 below	See Tables 13-14 below	See Tables 13-14 below	See Tables 13-14 below
Fog	None	None	None	Specifics unknown; See hazard profile in County Plan
Hailstorm	None	Minimal	Minimal	Specifics unknown; See hazard profile in County Plan
Landslide/ Sinkholes/ Erosion	None	None	None	Specifics unknown; See hazard profile in County Plan
Lightning	See Tables 4-7 Population	See Property Exposure table 8	See Critical Facility Inventory Table(s)	Specifics unknown; See hazard profile in County Plan
Severe Cold	See Tables 4-7 Population	See Property Exposure table 8	See Critical Facility Inventory Table(s)	Specifics unknown; See hazard profile in County Plan
Severe Heat	See Tables 4-7 Population	Moderate	See Critical Facility Inventory Table(s	Specifics unknown; See hazard profile in County Plan
Winter Storm	See Tables 4-7 Population	See Property Exposure table 8	See Critical Facility Inventory Table(s)	Specifics unknown; See hazard profile in County Plan
Tornado	See Table 15 below	See Table 15 below	See Table 15 below	See Table 15 below
Wildfire	Minimal	Moderate	None	Specifics unknown; See hazard profile in County Plan
Windstorm	Moderate	See Property Exposure table 8	See Critical Facility Inventory Table(s)	Specifics unknown; See hazard profile in County Plan

Data Source: 2021 Town of Cottage Grove Data Collection Guide – Prepared by DCEM

Previous Hazard Events

Through the Data Collection Guide, the Town of Cottage Grove noted specific historic hazard events to include in the community profile. These events have been incorporated into the appropriate hazard chapters in the main mitigation 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. The events noted by this jurisdiction in the Data Collection Guide include:

Town of Cottage Grove Historic Natural Hazards

Table 12 Town of Cottage Grove Historic Natural Hazards

Natural Hazard	Date	Impacted Structures	Comprehensive Harm to Jurisdiction	Other reported Losses (Fiscal reports, programs, etc)	Comments
Winter Storm	02/1-2/2011	N/A	Overtime work to clear roads.	N/A	$ 11,183.40 [High likelihood of reoccurring]
Wind Storm	07/06/2021	Multiple Impacted Structures	Lots of trees down throughout the subdivision. Highway crew picked up tree debris placed by the road in that subdivision over the course of more than a week..	N/A	Mostly occurred in Ravenwood subdivision [High likelihood of reoccurring]

Data Source: 2021 Town of Cottage Grove Data Collection Guide

Flood Hazard

Structures and Properties in the Floodplain

Refer to the flood profile in the mitigation plan for a description of the methodology used to identify potentially flood-prone properties. Figure 1 shows mapped floodplains, future growth areas, and critical or vulnerable facilities. Tables 13 and 14 outline the primary structures on them within the Town of Cottage Grove, Dane County. Potential number of individuals at risk figures are based on primary residential structures and the average household size within Dane County (2.37 people as of 2021). Estimated loss potentials for all structures on the floodway can be found within section 4.6 in chapter 4 of the county plan.

Table 13 Primary Structures in the 100 Year Floodplain

Residential Structures in 100 yr. Floodway	Non-Residential Structures in 100 yr. Floodplain	Total Structures in 100 yr. Floodplain	Potential # of People at Risk in 100 yr. Floodplain	Total Assessed Values ($) of Structures in 100 yr. Floodplain
5	0	5	12	$1,259,037

Source: Analysis based on Dane County Land Information Office Data

Table 14 Primary Structures in the 500 Year Floodplain

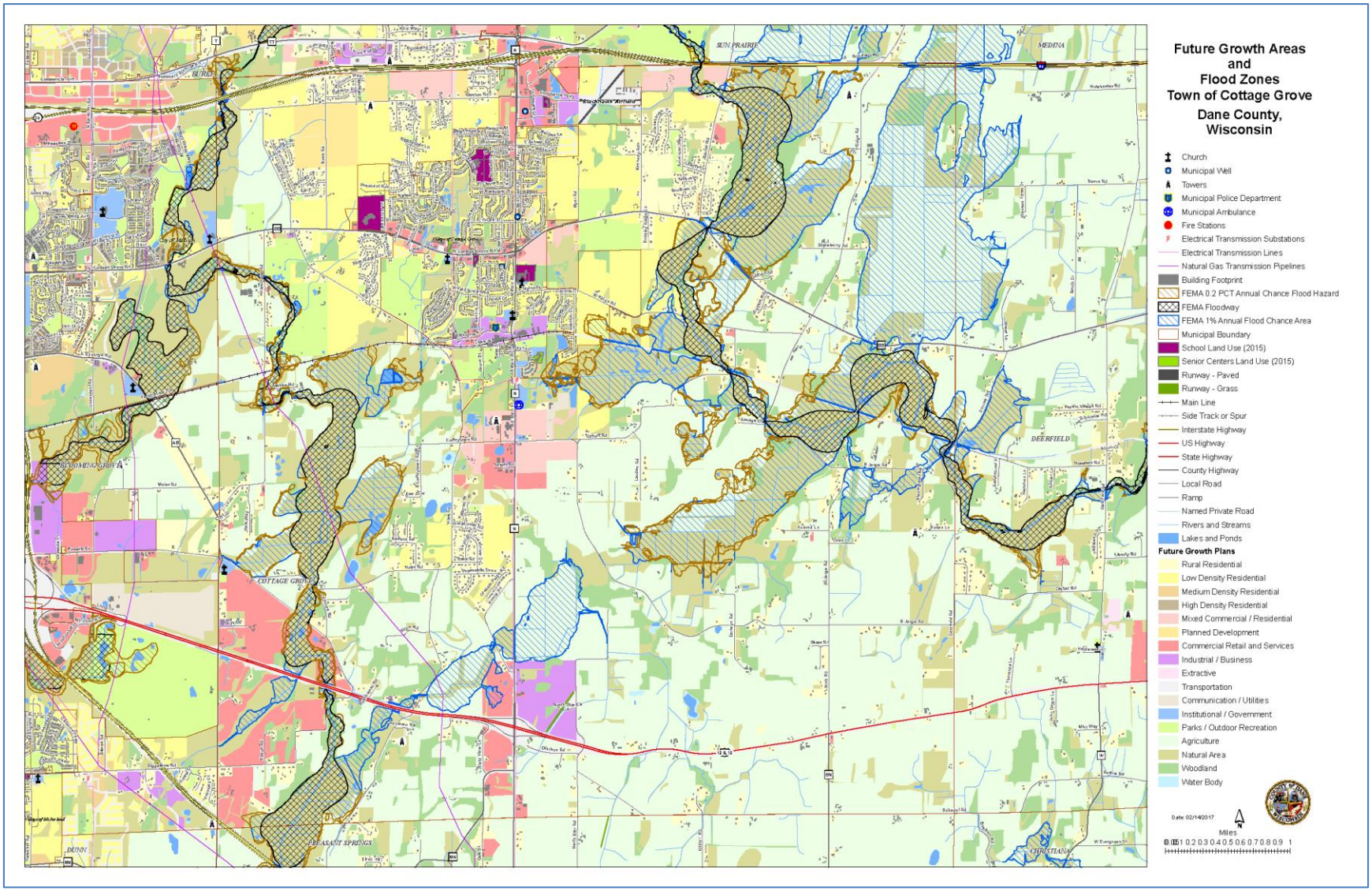
Residential Structures in 500 yr. Floodway	Non-Residential Structures in 500 yr. Floodplain	Total Structures in 500 yr. Floodplain	Potential # of People at Risk in 500 yr. Floodplain	Total Improved Values ($) of Structures in 500 yr. Floodplain
5	1	6	12	$465,066

Source: Analysis based on Dane County Land Information Office Data

Repetitive Loss Properties and Flood Insurance Polices

- One repetitive loss property has been reported in the Town of Cottage Grove, Dane County.
- The Town of Cottage Grove has 0 flood insurance policies in force within Dane County.

Figure 1 Flood Hazards and Future Land Use 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 2023 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 15 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
2.62%	3,230	85	802,788,600	21,006,285	10,503,142	5,251,571	1%

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

Problems or Additional Vulnerability Issues

The Town of Cottage Grove's Data Collection Guide issued in 2021 listed:

- **Average Depth of 100-Year Floodplain**
  - 866.1 feet
- **Hazard Concern (i.e. vulnerable populations)**:
  - We do not have any elderly, disabled, or low income projects/properties in the Town, so there would be no large concentrations of these, however 47% of our population is over 50 years of age and 693 residents listed disabilities (as per the 2019 ACS), so efforts should be made to ensure they would all be able to utilize any assistance offered in the event of a disaster.
- **Growth Trends:**
  - Recent residential growth in the Town has mainly been in two new subdivision additions. Other than resulting in more people in concentrated areas, these should not create any additional vulnerability.
  - A new commercial area is developing on North Star Road. Provisions for emergency access are part of the approval process for new businesses, and the Town should be aware of any hazardous materials stored or used there.
  - Growth in Sun Prairie has directed a large amount of water into the Koshkonong Creek, causing flooding along its banks. However, Most of the flooding is in farmland.

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 Cottage Grove.

Mitigation Capabilities Summary

Table 16 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 Cottage Grove.

Table 16 Town of Cottage Grove Regulatory Mitigation Capabilities

Regulatory Tools (ordinances, codes, plans)	Yes/No	Comments
Existing Natural Hazard Mitigation Plan	Yes	Annex to Dane County Plan
General or Comprehensive plan	Yes	Comprehensive Plan
Zoning ordinance	No	Town is under Dane County zoning
Subdivision ordinance	Yes	TCG Ordinance Chapter 15
Growth management ordinance	No	N/A
Shoreland / wetland zoning ordinance	No	Under Dane County's ordinance
Floodplain zoning ordinance	No	Under Dane County's ordinance
FEMA / NFIP Community Rating System	No	N/A
Other special purpose ordinance (stormwater, steep slope, wildfire)	Yes	Stormwater – Chapter 14 Illicit Discharge Control
Building code	Yes	TCG Ordinance Chapter 12
Fire department ISO rating	5/10	5 within 5 miles of station, 10 elsewhere
Climate change Impact program	No	N/A
Erosion or sediment control program	No	County regulates erosion control
Stormwater management program	Yes	MS4 Permit
Site plan review requirements	Yes	TCG Ordinance Section 12.08
Capital improvements plan	No	N/A
Economic development plan	No	N/A
Local emergency operations plan	Yes	N/A
Other special plans	No	N/A
Flood insurance study or other engineering study for streams	No	N/A
Elevation certificates (for floodplain development)	Yes	With property records

Regulatory Tools (ordinances, codes, plans)	Yes/No	Comments
Climate Action Plan	No	We have an adopted climate resolution that has a task list.

Data Source: Town of Cottage Grove Data Collection Guide, 2021

Table 17 identifies the personnel responsible for mitigation and loss prevention activities as well as related data and systems in the Town of Cottage Grove.

Table 17 Responsible Personnel and Departments for the Town of Cottage Grove

Personnel Resources	Yes/No	Department/Position	Comments
Planner/engineer with knowledge of land development/land management practices	Yes	MD Roffers, Inc Contracted Planning Consultant	N/A
Engineer/professional trained in construction practices related to buildings and/or infrastructure	Yes	Nick Bubolz General Engineering Company Contracted Engineer	N/A
Planner/engineer/scientist with an understanding of natural hazards	No	N/A	N/A
Personnel skilled in GIS	No	N/A	N/A
Full time building official	No	Jim Trebian General Engineering Company Contracted Building Inspector	Part time
Personnel skilled in Climate resilience	No		N/A
Floodplain manager	No		N/A
Emergency manager	Yes	Mike Fonger Town Board Supervisor Director of Emergency Government	N/A
Real estate acquisition personnel	No	N/A	N/A
Grant writer	No	N/A	N/A
Other personnel	No	N/A	N/A
GIS Data Resources (Hazard areas, critical facilities, land use, building footprints, etc.)	Yes	Access Dane, and just implementing ESRI with our own layers	N/A
Warning Systems/Services (Reverse 9-11, cable override, outdoor warning signals)	Yes	County Reverse 911, outdoor signals in Village can be heard in parts of the Town	N/A

Data Source: Town of Cottage Grove Data Collection Guide 2021

Table 18 identifies financial tools or resources that the Town of Cottage Grove could potentially use to help fund mitigation activities.

Table 18 Financial Resources for the Town of Cottage Grove

Financial Resources	Accessible/Eligible to Use (Yes/No)
Community Development Block Grants	Yes
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	Yes
Dedicated funding for land, easement or conservation easement acquisition	No
Fees for water, stormwater, sewer, gas, or electric services	No
Impact fees for new development	Yes
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	No
Incur debt through private activities	No
Withhold spending in hazard prone areas	No

Data Source: Town of Cottage Grove Data Collection Guide

Additional Capabilities

The Town of Cottage Grove identified the following as past or ongoing public education or information programs:

- Fire protection events offered by the Fire department, including visits to local schools or daycares.
- Fire, EMS and Emergency Government departments all have articles in the Town of Cottage Grove annual report and newsletter that is sent to all residents.
- Stormwater management presentations at the Annual Meeting several times.
- Stormwater Consultant, Charles Nahn of Nahn & Associates, works with the Monona Grove High School toward holding educational sessions on stormwater control.

National Flood Insurance Program Participation

The Town of Cottage Grove is not currently participating in the National Flood Insurance Program.

Public Involvement Activities

The Town of Cottage Grove provided a publically noticed listening session with the Town of Cottage Local Steering Committee on November 1, 2021. It was noticed on the Town website, Town Facebook Page, and Town Hall Bulletin Board. An agenda discussing the draft mitigation strategies was provided. No changes were made to the initial draft mitigation strategies.

Mitigation Actions

Mitigation Strategies

Below are the identified mitigation strategies developed by the Town of Cottage Grove's NHMP steering committee. Mitigation is defined as a sustained action to reduce or eliminate risk to people and property from hazards and their effects. A *mitigation strategy* is a long-term vision for risk reduction in local jurisdictional or regional planning. A mitigation strategy can be achieved by a list of overall improvements to achieve (goals) that provide direction for community efforts to reduce potential losses identified in the risk assessment.

Strategy #1	**Severe Heat and/or Cold**
Prevention	Natural Resource Protection
Property Protection	Critical Facilities Protection
Public Education & Awareness	Structural Project

Purpose and desired outcomes are to make sure cooling or warming shelters are available to residents.

Defined steps to achieving this mitigation strategy

1. Use Town Annual newsletter, email, web site, local and social media to educate town residents where centers would be/are located. First priority would be the Town Hall with a capacity of 150. Flynn Hall could take another 180 people. Town Garage could serve as an overflow heating center. Duration is expected to be short term. Water is available; need a supply of disposable drinking cups. Food may be needed if time becomes extended.
   a. *Responsible Party* – Emergency Government/Town Board/Town Staff
   b. *Funding source* – Town Budget
   c. *Completion date* – ongoing

Strategy #1	Severe Heat and/or Cold

2. Consider upgrading/adding generators to handle HVAC.
   a. *Responsible Party* – Town Board
   b. *Funding source* – Look for grant or use of ARPA funds
   c. *Completion date* – End of 2022

Strategy #2	Flooding
Prevention	**Natural Resource Protection**
Property Protection	Critical Facilities Protection
Public Education & Awareness	Structural Project

Assess critical waterways in the Township for flood mitigation. Provide sand bags and sand for use by property owners.

Defined steps to achieving this mitigation strategy

1. Improvements to Koshkonong Creek are needed to allow water coming from Sun Prairie to flow through the Town without flooding. The Town has agreed to share the cost of a 3-year study by the University Alliance to determine what steps are needed to mitigate the flooding from the creek.
   a. *Responsible Party* – Town Board/Friends of the Koshkonong Creek/UW Alliance
   b. *Funding source* – Town Budget
   c. *Completion date* – August 2024

2. Perform improvements as recommended by UW Alliance Study.
   d. *Responsible Party* – Town Board/Contractors
   e. *Funding source* – Town Budget, look for grant funding
   f. *Completion date* – Unknown until scope is determined by UW Alliance Study
   g.

3. Improve Ridge Road in the area that frequently floods.
   h. *Responsible Party* – Town Board
   i. *Funding source* – Town Budget, look for grant funding
   j. *Completion date* – End of 2022

Strategy #2	Flooding

4. Door Creek should be looked at to see if improvements could increase flow/reduce flooding in the western side of the Town.
   a. *Responsible Party* – Contractor
   b. *Funding source* – Town Budget, look for grant funding
   c. *Completion date* – End of 2023

5. Verify enough sand bags and sand are on hand or readily accessible.
   a. *Responsible Party* – Emergency Government
   b. *Funding source* – Town Budget or get from County
   c. *Completion date* – By Spring of 2022

Strategy #3	Tornado/Windstorm
Prevention	Natural Resource Protection
Property Protection	Critical Facilities Protection
Public Education & Awareness	Structural Project

Overall purpose is to keep roads open so people can get the services they need and to provide shelter to those whose homes are uninhabitable.

Defined steps to achieving this mitigation strategy

3. Assess/maintain trees over roadways that could cause damage or injury if they fall in a wind storm and communicate with utilities about any trees over utility lines.
   a. *Responsible Party* – Town Highway Department
   b. *Funding source* – Town Budget
   c. *Completion date* – Ongoing

4. Open a shelter for those whose homes are damaged. Use Town Annual newsletter, email, web site, local and social media to educate town residents where shelters would be/are located. First priority would be the Town Hall with a capacity of 150. Flynn Hall could take another 180 people. Town Garage could serve as an overflow for winter storms, but does not have adequate A/C to be a summer shelter. Duration is expected to be short term. Water is available: need a supply of disposable drinking cups. Food may be needed if time becomes extended.
   k. *Responsible Party* – Emergency Government, Town Staff
   l. *Funding source* – Town Budget, possible FEMA reimbursement
   m. *Completion date* – Immediately after storm occurrence
   n.

5. Emergency Government would be activated for response and recovery.
   d. *Responsible Party* – Emergency Government
   e. *Funding source* – Town Budget/Possible FEMA reimbursement
   f. *Completion date* – Immediately after storm occurrence

Strategy #3	Tornado/Windstorm

6. Debris removal to clear roads. Arrange for disposal options for debris from private properties, including maintaining relationships with contractors for debris disposal.
   d. *Responsible Party* – Town Highway Department/Emergency Government/Contractors
   e. *Funding source* – Town Budget/Possible FEMA Reimbursement
   f. *Completion date* – Immediately after storm occurrence

Strategy #4	Winter Storm
Prevention	Natural Resource Protection
Property Protection	Critical Facilities Protection
Public Education & Awareness	Structural Project

Overall purpose is to keep roads open so people can get the services they need. Offer shelter to those displaced from their homes.

Defined steps to achieving this mitigation strategy

7. Install snow fence to minimize drifting, mow ditches so snow doesn't collect and maintain tress so they don't weight down and create hazards.
   a. *Responsible Party* – Town Highway Department
   b. *Funding source* – Town Budget
   c. *Completion date* – Every fall

8. Open a shelter for those whose homes are uninhabitable. Use Town Annual newsletter, email, web site, local and social media to educate town residents where shelters would be/are located. First priority would be the Town Hall capacity with a of 150. Flynn Hall could take another 180 people. Town Garage could serve as an overflow. Duration is expected to be short term. Water is available: need a supply of disposable drinking cups. Food may be needed if time becomes extended.
   o. *Responsible Party* – Emergency Government, Town Staff
   p. *Funding source* – Town Budget, possible FEMA reimbursement
   q. *Completion date* – Immediately after storm occurrence
   r.

9. Maintain list contractors to assist with snow removal.
   g. *Responsible Party* – Highway Superintendent
   h. *Funding source* – Town Budget/Possible FEMA reimbursement
   i. *Completion date* – Ongoing

Dane County Natural Hazard Mitigation Plan

Town of Dunn Annex

Summer 2022

Town of Dunn Annex

This annex is a part of the Dane County Natural Hazard Mitigation Plan (DCNHMP). The DCNHMP contains additional information to support the Federal Emergency Management Agency's (FEMA) recognition of the plan (including this annex) as the formal natural hazard mitigation plan for the county and participating local governments. This annex will be valid for as long as FEMA approves the DCNHMP. The strategies adopted in this annex are designed to guide community efforts to reduce risks from natural hazards. These strategies work in conjunction with neighboring communities and Dane County government to reduce risks from natural hazards.

COMMUNITY PROFILE

Dunn is a rural community of approximately 4,931 residents located directly south of the City of Madison and is surrounded by the cities of Fitchburg and Stoughton, the Village of McFarland, and the Town of Oregon, and the Towns of Blooming Grove, Pleasant Springs and Rutland. In 2014, the Town contained 16,364 acres, the vast majority of it still agriculture and undeveloped land. Residential uses are also prominent. There are a limited number of institutional, industrial and commercial parcels. According to the United States Census Bureau, the Town has a total area of 34.3 square miles, 27.99 square miles of it is land and 6.31 square miles is water. The total area is 18.4% water.

As of 2020, the Town of Dunn has 2,268 households, with an average of 2.35 people per household. The municipal population data provided by the American Community Survey, a product of the US Census Bureau, indicates that the 2019 population estimates for Town of Dunn is approximately 13,004 people. Table 1 shows the population profile by age for Town of Dunn.

Table 1 Population Profile of Town of Dunn, Dane County

Category	Number	Percent
Total population	**5,237**	**100%**
Under 5 years	272	5.2%
5 to 9 years	120	2.3%
10 to 14 years	407	7.8%
15 to 19 years	155	3.0%
20 to 24 years	306	5.8%
25 to 29 years	170	3.2%
30 to 34 years	198	3.8%
35 to 39 years	239	4.6%
40 to 44 years	368	7.0%
45 to 49 years	298	5.7%
50 to 54 years	410	7.8%
55 to 59 years	546	10.4%
60 to 64 years	453	8.6%
65 to 69 years	569	10.9%
70 to 74 years	351	6.7%

75 to 79 years	246	4.7%
80 to 84 years	95	1.8%
85 years and over	34	0.6%

Data Source: 2019 ACS Estimates - U.S. Census

Growth & Development Trends

Table 2-3 illustrates how the entire Town of Dunn has grown in terms of population and number of households between 2010 and 2020. Housing data is to 2020 due to data availability. Table 2-3 is drawn from the Wisconsin Department of Administration.

Table 2 Town of Dunn Change in Population and Households, 2010-2020

2010 Population	2020 Population	Percent Change (%) 2010-2020	2010 # of Households	2020 # of Households	Percent Change (%) 2010-2020
4,931	4,896	0.70%	2,062	2,268	9.9%

Data Source: Demographic Services Center, Wisconsin Department of Administration, 2021

Table 3 Town of Dunn Population Projections, 2020-2040 11.79

Population Projection	2020	2025	2030	2035	2040
Increase by half of percent of change (0.70%/2) every 5 years	4,896	4,913	4,930	4,947	4,964

Data Source: Demographic Services Center, Wisconsin Department of Administration, 2021

Note: Population estimates offered by the U.S. Census Bureau's American Community Survey may differ from the WDOA data, due to sourcing, margin of error, and data availability.

Population Summary

Tables 4-7 illustrates key population demographics within the Town of Dunn. Key demographics include: (1) Disability Characteristics, (2) Federal Income Poverty Levels, (3) Educational Attainment, and (4) Household Language with English Speaking Capabilities. Due to data availability, all key demographic information has been provided by the American Community Survey (ACS) 2019 estimates. The ACS is a self-reported survey and may include total sample size differences and statistical margin of error.

Table 4 Town of Dunn, Dane County – Disability Characteristics by Detailed Age

Category	Number	Percent
Total of Residents Self-Identified as Disabled	**675**	**100%**
With a hearing difficulty	**140**	**20.7%**
Population under 18 years	13	-
Population 18 to 64 years	46	-
Population 65 years and over	81	-
With a vision difficulty	**47**	**7.0%**
Population under 18 years	13	-
Population 18 to 64 years	17	-
Population 65 years and over	17	-
With a cognitive difficulty	**102**	**15.1%**
Population under 18 years	16	-
Population 18 to 64 years	50	-
Population 65 years and over	36	-
With an ambulatory difficulty	**234**	**34.7%**
Population under 18 years	0	-
Population 18 to 64 years	94	-
Population 65 years and over	140	-
With a self-care difficulty	**32**	**4.7%**
Population under 18 years	0	-
Population 18 to 64 years	15	-
Population 65 years and over	17	-
With an independent living difficulty	**120**	**17.8%**
Population 18 to 64 years	75	-
Population 18 to 34 years	51	-
Population 65 years and over	45	-

Data Source: 2019 ACS Estimates - U.S. Census

Table 5.1: Town of Dunn, Dane County – Federal Income Poverty Levels (FIPL) by Families Summary

Category	Number of Families
50 percent of poverty level	15
125 percent of poverty level	51
150 percent of poverty level	142
185 percent of poverty level	287
200 percent of poverty level	361
300 percent of poverty level	490
400 percent of poverty level	677
500 percent of poverty level	846

Data Source: 2019 ACS Estimates - U.S. Census

Note: Use table 5.2 to interpret table 5.1:

5.1 identifies the *total number of families* (regardless of size) by percentage.

5.2 identifies *family size* in relation to annual family income and the percentage category of the FIPL.

Table 5.2: Town of Dunn, Dane County – Annual Federal Income Poverty Level Guide

Family Size	50%	100%	125%	150%	185%	200%	300%	400%	500%
1	$6,440	$12,880	$16,100	$19,320	$23,828	$25,760	$38,640	$51,520	$64,400
2	$8,710	$17,420	$21,775	$26,130	$32,227	$34,840	$52,260	$69,680	$87,100
3	$10,980	$21,960	$27,450	$32,940	$40,626	$43,920	$65,880	$87,840	$109,800
4	$13,250	$26,500	$33,125	$39,750	$49,025	$53,000	$79,500	$106,000	$132,500
5	$15,520	$31,040	$38,800	$46,560	$57,424	$62,080	$93,120	$124,160	$155,200
6	$17,790	$35,580	$44,475	$53,370	$65,823	$71,160	$106,740	$142,320	$177,900

Data Source: dhs.wisconsin.gov

Table 6: Town of Dunn, Dane County – Educational Attainment by Householders

Category	Number	Percent
Total of Householders	**1,687**	**100%**
Less than high school graduate	95	5.6%
High school graduate (includes equivalency)	508	30.1%
Some college, associate's degree	476	28.2%
Bachelor's degree or higher	608	36.0%

Data Source: 2019 ACS Estimates - U.S. Census

Table 7: Household Language & English Speaking Capabilities

Category	Number	Percent
Total of Households	**2,212**	**100%**
English only	**1,985**	**89.7**
Spanish:	**126**	**2.6%**
Limited English speaking household	57	-
Not a limited English speaking household	69	-
Other Indo-European languages:	**48**	**2.2%**
Limited English speaking household	0	-
Not a limited English speaking household	48	-
Asian and Pacific Island languages:	**53**	**2.4%**
Limited English speaking household	20	-
Not a limited English speaking household	33	-
Other languages:	**0**	**0.0%**
Limited English speaking household	0	-
Not a limited English speaking household	0	-

Data Source: 2019 American Community Survey

Note: Population estimates offered by the U.S. Census Bureau's American Community Survey may differ from the WDOA data, due to sourcing, margin of error, and data availability.

Asset Inventory

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

General Property

Table 8 Property Exposure Summary

Property Type	Parcel Count	Improved Land Count	Improved Land Value ($)	Content Value ($)	Total Value ($)
Total	**4,454**	**4,417**	**1,334,967,700**	**667,483,850**	**2,002,451,550**
Agriculture	741	741	118,884,100	59,442,050	178,326,150
Residential	3,607	3607	1,205,821,600	602,910,800	1,808,732,400
Transportation	4	0	0	0	0
Utility	10	10	200,800	100,400	301,200
Commercial	37	37	8,641,100	4,320,550	12,961,650
Other	22	22	1,420,100	710,050	2,130,150
Institutional/ Governmental	33	0	0	0	0

Data Source: Dane County Land Information Office, December 2021

Critical Facilities

The Town of Dunn has identified the critical facilities important to protect from disaster impacts. These are collected in Table 9. Table 9 is based on GIS data inventories from Dane County and information gathered from the Town. No further supplemental data was provided by the community through the Data Collection Guide.

Table 9 Critical Facility Summary/Essential Infrastructure

Facility	Type*	No. of Facilities	Replacement Value ($)
Airport	EI	N/A	N/A
Communications Tower	EI	N/A	N/A
Electric Substation	EI	N/A	N/A
FCC Tower	EI	N/A	N/A
Hazardous Chemicals	HM	N/A	N/A
Historic Site	VF	N/A	N/A
Manufactured Home	VF	N/A	N/A
Municipal Hall	EI	N/A	N/A
Well	EI	N/A	N/A
Roads	EI	N/A	N/A
Bridges	EI	N/A	N/A
Sanitary Districts	EI	N/A	N/A
Cell Towers	EI	N/A	N/A
Power Station	EI	N/A	N/A
Bay View Heights Mobile Home Park	VF	N/A	N/A
Barber's Bay Mobile Home Park	VF	N/A	N/A
Storm Shelter	EI	N/A	N/A
Quick Stop Gas Station	HM	N/A	N/A
Town Transfer Site	HM	N/A	N/A
Town Highway Garage	HM	N/A	N/A
Third Street Wetlands	N/A	N/A	N/A
Miller Detention Pond	N/A	N/A	N/A
Colladay Point Detention Pond	N/A	N/A	N/A
Hook Lake Wildlife and Natural Area	N/A	N/A	N/A
Grass Lake Wildlife and Natural Area	N/A	N/A	N/A
Lower Waubesa Wetland	N/A	N/A	N/A
Lower Mud Lake	N/A	N/A	N/A
American Indian Mounds	N/A	N/A	N/A
Shorelines:	N/A	N/A	N/A
Lake Kegonsa	N/A	N/A	N/A
Lake Waubesa	N/A	N/A	N/A

Yahara River	N/A	N/A	N/A
Woodlots	N/A	N/A	N/A
*EI: Essential Infrastructure; VF: Vulnerable Facilities; HM: Hazardous Materials Facilities			

Data Source: 2021 Town of Dunn Data Collection Guide

Other Assets

Other assets help define a community beyond the current composition of the Town of Dunn. 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 Dunn has not identified any other assets.

VULNERABILITY ASSESSMENT

A hazard identification and vulnerability analysis was completed for the Town of Dunn using the same methodology in the County's 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 10 outlines the hazard identification for the Town of Dunn based on the Data Collection Guide issued in 2021. The Data Collection Guide listed all of the hazards that could impact Dane County. The purpose of this worksheet was to identify and rank the hazards and vulnerabilities specific to the jurisdiction. Brooklyn's planning team members were asked to complete the matrix by ranking each category on a scale of 0 to 5 based on the experience and perspective of each planning team member. A ranking of 0 indicated "no concern" while a ranking of 5 indicated "highest concern." This matrix appears as Table 10. This matrix reflects the significance of the hazards relative to one another as perceived by the Example's planning team.

This matrix reflects that the Town of Dunn is most vulnerable to floods, tornadoes, and winter storms. The vulnerability established here is a qualitative assumption based on the impacts, geographic extent, probability of future occurrence, and magnitude/severity.

Table 10: Vulnerability Assessment Matrix for the Town of Dunn

Name of Jurisdiction: Town of Dunn										
Hazard	**Hazard Attributes**			**Impact Attributes**						
				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	**Total of Row Values**
	(1-5)	*(1-5)*	*(1-5)*	*(0-5)*	*(0-5)*	*(0-5)*	*(0-5)*	*(0-5)*	*(0-5)*	
Dam/Levee failure	4	1	2	5	5	0	4	4	5	30
Extreme Cold	5	3	1	4	5	5	2	2	3	30
Extreme Heat	5	3	1	1	1	5	2	2	3	23
Drought	5	4	1	2	2	5	2	3	3	27
Expansive soils	3	1	1	5	5	5	2	4	3	29
Flood	5	5	3	5	5	3	4	5	5	40
Fog	2	2	2	0	0	0	0	0	0	6
Hail Storm	2	2	2	3	3	4	1	4	3	24
Landslide	3	1	1	5	5	5	2	4	3	29
Lightning	1	1	2	1	1	1	0	2	1	10
Tornado	5	5	3	5	5	5	5	5	5	43
Wildfire	2	1	1	2	2	2	2	2	2	16
Windstorm	4	3	3	3	3	4	1	3	2	26
Winter Storm	5	5	3	3	3	5	4	4	3	35

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 Town of Dunn. Table 11 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 11 Hazard Vulnerability Specifics

Hazard	Populations	Structures	Critical Facilities	Future Damage Potential
Dam Failure	None	See Property Exposure table 8	See Tables 13-14 below	Specifics unknown; See hazard profile in County Plan
Drought	See Tables 4-7 Population	Moderate	Moderate	Specifics unknown; See hazard profile in County Plan
Flooding	See Tables 13-14 below	See Tables 13-14 below	See Tables 13-14 below	See Tables 13-14 below
Fog	None	None	None	Specifics unknown; See hazard profile in County Plan
Hailstorm	See Tables 4-7 Population	See Property Exposure table 8	See Critical Facility Inventory Table(s)	Specifics unknown; See hazard profile in County Plan
Landslide/ Sinkholes/ Erosion	See Tables 4-7 Population	See Property Exposure table 8	See Critical Facility Inventory Table(s)	Specifics unknown; See hazard profile in County Plan
Lightning	Minimal	Minimal	Minimal	Specifics unknown; See hazard profile in County Plan
Severe Cold	See Tables 4-7 Population	See Property Exposure table 8	See Critical Facility Inventory Table(s)	Specifics unknown; See hazard profile in County Plan
Severe Heat	See Tables 4-7 Population	Minimal	Minimal	Specifics unknown; See hazard profile in County Plan
Winter Storm	See Tables 4-7 Population	See Property Exposure table 8	See Critical Facility Inventory Table(s)	Specifics unknown; See hazard profile in County Plan
Tornado	See Table 15 below	See Table 15 below	See Table 15 below	See Table 15 below
Wildfire	Moderate	Moderate	Moderate	Specifics unknown; See hazard profile in County Plan
Windstorm	See Tables 4-7 Population	See Property Exposure table 8	See Critical Facility Inventory Table(s)	Specifics unknown; See hazard profile in County Plan

Data Source: 2021 Town of Dunn Data Collection Guide – Prepared by DCEM

Previous Hazard Events

Through the Data Collection Guide, the Town of Dunn noted specific historic hazard events to include in the community profile. These events have been incorporated into the appropriate hazard chapters in the main mitigation 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. The events noted by this jurisdiction in the Data Collection Guide include:

Town of Dunn Historic Natural Hazards

Table 12 Town of Dunn Historic Natural Hazards

Natural Hazard	Date	Impacted Structures	Comprehensive Harm to Jurisdiction	Other reported Losses (Fiscal reports, programs, etc)	Comments
Flooding	08-09/2018	Multiple Impacted Structures	Heavy rainfall and high lake levels created flooding. The State of Wisconsin declared a State of Emergency. Road closures, bridge damage, and residential flooding ensued.	$154 million in damages	There was additional overtime and expenses for the Town. [High likelihood of reoccurring]
Tornado	06/29/2014	Multiple Impacted Structures	The tornado caused tree damage (including one tree that fell on a car), ripped the roof off a horse stable, and tore electric panels off multiple homes. Property damage was estimated at $50,000.	N/A	EF-1 Tornado
Tornado/ Flood	06/6-8/2018	Multiple Impacted Structures	The events incurred over $186,000 in property damage. Though no properties were destroyed, one received major levels of damaged, 16 sustained minor	Several hundred dollars of overtime labor was incurred by town employees, as well as approximately $2000 in other expenses.	N/A

			damage, and an additional seven were affected.		
Flood	08/2007	Multiple Impacted Structures	The event caused major damage to the foundation of one home (an estimated $30,000 in damages) and affected six additional properties. Only one property had flood insurance. Over $68,000 in damages were reported.	The town incurred an additional $2,000 between protective measures and road systems expenses.	The town incurred a $1,580 in equipment expenses and $1,600 in overtime labor costs. [High likelihood of reoccurring]
Tornado	08/18/2005	Multiple Impacted Structures	Overall, 69 homes in the Town were destroyed and 86 additional homes sustained major damage. 23 reported injuries, and 1 reported death.	$248,107 in costs for recovery.	E3 Tornado

Data Source: 2021 Town of Dunn Data Collection Guide

Flood Hazard

Structures and Properties in the Floodplain

Refer to the flood profile in the mitigation plan for a description of the methodology used to identify potentially flood-prone properties. Figure 1 shows mapped floodplains, future growth areas, and critical or vulnerable facilities. Tables 13 and 14 outline the primary structures on them within the Town of Dunn, Dane County. Potential number of individuals at risk figures are based on primary residential structures and the average household size within Dane County (2.37 people as of 2021). Estimated loss potentials for all structures on the floodway can be found within section 4.6 in chapter 4 of the county plan.

Table 13 Primary Structures in the 100 Year Floodplain

Residential Structures in 100 yr. Floodway	Non-Residential Structures in 100 yr. Floodplain	Total Structures in 100 yr. Floodplain	Potential # of People at Risk in 100 yr. Floodplain	Total Assessed Values ($) of Structures in 100 yr. Floodplain
94	4	98	222	$14,857,057

Source: Analysis based on Dane County Land Information Office Data

Table 14 Primary Structures in the 500 Year Floodplain

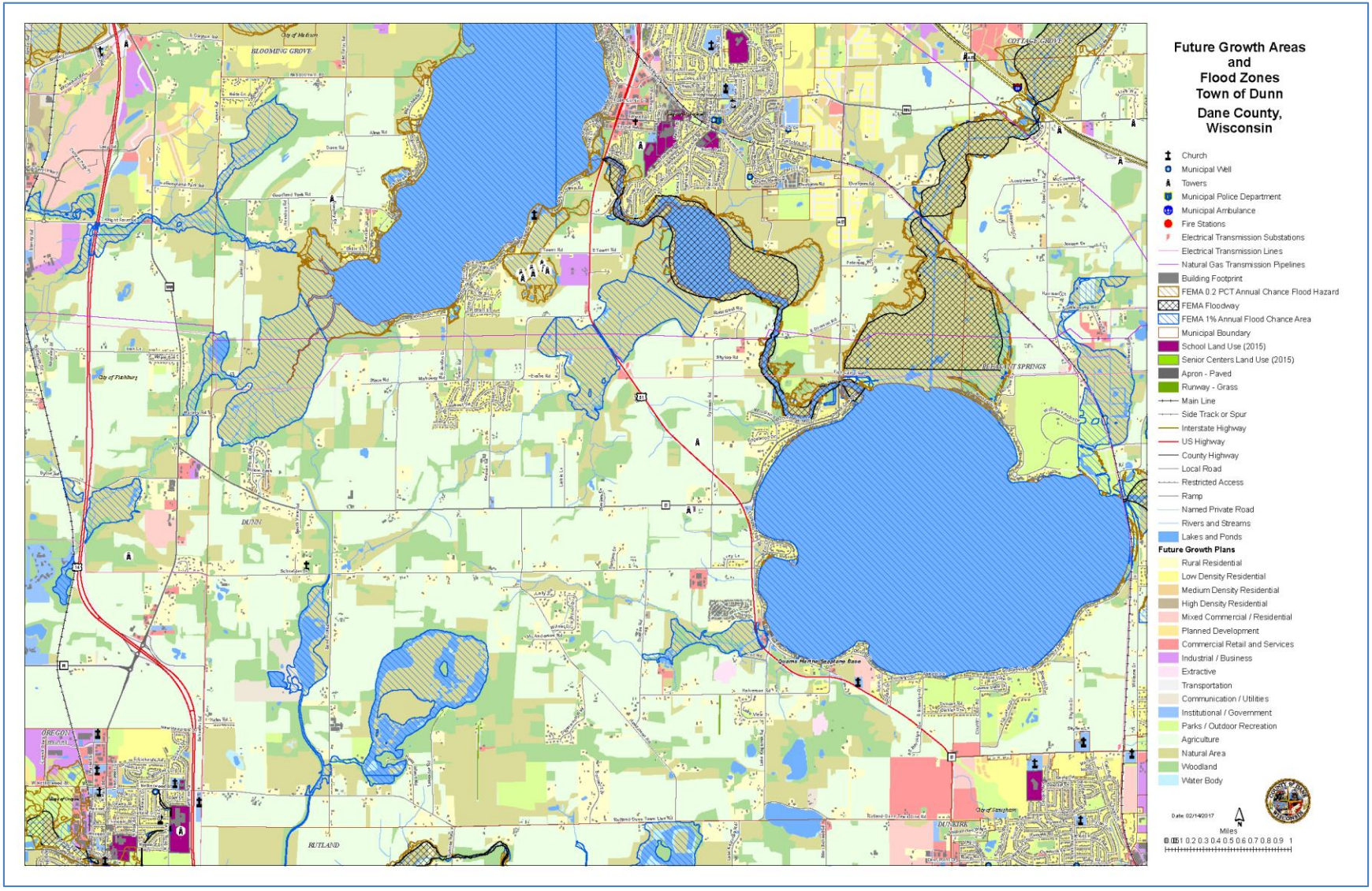
Residential Structures in 500 yr. Floodway	Non-Residential Structures in 500 yr. Floodplain	Total Structures in 500 yr. Floodplain	Potential # of People at Risk in 500 yr. Floodplain	Total Improved Values ($) of Structures in 500 yr. Floodplain
157	4	161	372	$14,530,810

Source: Analysis based on Dane County Land Information Office Data

Repetitive Loss Properties and Flood Insurance Polices

- No repetitive loss properties have been reported in the Town of Dunn, Dane County.
- The Town of Dunn has 0 flood insurance policies in force within Dane County.

Figure 1 Flood Hazards and Future Land Use 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 2023 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 15 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
2.98%	4417	132	2,002,451,550	59,648,215	29,824,107	14,912,053	1%

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

Problems or Additional Vulnerability Issues

The Town of Dunn's Data Collection Guide issued in 2021 listed:

- **Average Depth of 100-Year Floodplain**
  - Lake Waubesa = 847 ft.
  - Lake Kegonsa = 845.2 ft.
- **Hazard Concern (i.e. vulnerable populations)**:
  - Lower-income residents are probably the most vulnerable citizens as many of these residents live in a mobile home park. The Town, with funding from FEMA, constructed a storm shelter in the mobile home park in 2009, which has helped alleviate the risk of death or injuries from storms. However, there are some mobile home residents who may still choose to not use the building during a storm.
- **Growth Trends:**
  - Due to the Town's land use policy, large urban growth is not anticipated in the future.

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 Dunn.

Mitigation Capabilities Summary

Table 16 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 Dunn.

Table 16 Town of Dunn Regulatory Mitigation Capabilities

Regulatory Tools (ordinances, codes, plans)	Yes/No	Comments
Existing Natural Hazard Mitigation Plan	Yes	The last update occurred in 2018.
General or Comprehensive plan	Yes	Here and on town website: townofdunnwi.gov
Zoning ordinance	Yes	The Town follows the Dane County Zoning ordinance. https://www.countyofdane.com/documents/pdf/ordinances/ch010-01-31-20.pdf
Subdivision ordinance	Yes	The Town has a subdivision ordinance and a mobile home ordinance which dictates the standards mobile home placement must adhere to.
Growth management ordinance	No	The Town's Comprehensive Plan serves as a growth management functions, as does the Town's Purchase of Development Rights program. On town website
Shoreland/ wetland zoning ordinance	Yes	The Town follows the Dane County Zoning ordinance which also oversees shoreland, wetland, and floodplain zoning.
Floodplain zoning ordinance	Yes	The Town has adopted the floodplain maps, however, Dane County Zoning regulates development in floodplains.
FEMA / NFIP Community Rating System	No	N/A
Other special purpose ordinance (stormwater, steep slope, wildfire)	Yes	The Town has an Illicit Discharge / Stormwater Management ordinance. On town website: townofdunnwi.gov
Building code	Yes	The Town has adopted the State of Wisconsin Department of Safety and Professional Services which also include the Uniform Dwelling Code.
Fire department ISO rating	No	The Town contracts with McFarland, Oregon, and Stoughton fire departments to oversee Town districts.
Climate change	No	

Regulatory Tools (ordinances, codes, plans)	Yes/No	Comments
Impact program		
Erosion or sediment control program	No	Dane County Land and Water Resources administers erosion control.
Stormwater management program	Yes	The Town has an Illicit Discharge / Stormwater Management ordinance. On town website: townofdunnwi.gov Direct link: https://687ea092-604e-4ee5-8492-507feae8fb73.filesusr.com/ugd/7ab7a6_c1aafb695fb0426dae1de4dc2638196c.pdf
Site plan review requirements	Yes	The Town oversees the siting of structures on parcels that are over 2.3 acres. The review requirements are also incorporated in the Town's Comprehensive Plan. On town website: townofdunnwi.gov
Capital improvements plan	Yes	Incorporated into the Town's 3-5 year budget projection.
Economic development plan	No	N/A
Local emergency operations plan	Yes	N/A
Other special plans	Yes	Urban Forestry, Election Day Contingency Plan, Storm Shelter Operation Manual
Flood insurance study or other engineering study for streams	No	N/A
Elevation certificates (for floodplain development)	No	N/A
Climate Action Plan	No	N/A

Data Source: Town of Dunn Data Collection Guide, 2021

Table 17 identifies the personnel responsible for mitigation and loss prevention activities as well as related data and systems in the Town of Dunn.

Table 17 Responsible Personnel and Departments for the Town of Dunn

Personnel Resources	Yes/No	Department/Position	Comments
Planner/engineer with knowledge of land development/land management practices	Yes	Land Use Director	N/A
Engineer/professional trained in construction practices related to buildings and/or infrastructure	Yes	Public Works Superintendent (non-engineer) and Building Inspectors	N/A
Planner/engineer/scientist with an understanding of natural hazards	No	N/A	The Town contracts when I cannot accommodate its needs in-house.
Personnel skilled in GIS	Yes	Land Use Director & Administrative Coordinator	
Full time building official	No	N/A	The Town contracts when I cannot accommodate its needs in-house.
Personnel skilled in Climate resilience	No	N/A	The Town contracts when I cannot accommodate its needs in-house.
Floodplain manager	No	N/A	The Town contracts when I cannot accommodate its needs in-house.
Emergency manager	No	N/A	N/A
Real estate acquisition personnel	No	N/A	N/A
Grant writer	Yes	Each Town position write grants relevant to their projects.	N/A
Other personnel	No		N/A
GIS Data Resources (Hazard areas, critical facilities, land use, building footprints, etc.)	Yes	The Town retrieves GIS data from Dane County Land Information Office.	N/A
Warning Systems/Services (Reverse 9-11, cable override, outdoor warning signals)	No	N/A	N/A

Data Source: Town of Dunn Data Collection Guide 2021

Table 18 identifies financial tools or resources that the Town of Dunn could potentially use to help fund mitigation activities.

Table 18 Financial Resources for the Town of Dunn

Financial Resources	Accessible/Eligible to Use (Yes/No)
Community Development Block Grants	Yes
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	Yes
Dedicated funding for land, easement or conservation easement acquisition	Yes
Fees for water, stormwater, sewer, gas, or electric services	No
Impact fees for new development	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activities	No
Withhold spending in hazard prone areas	No

Data Source: Town of Dunn Data Collection Guide

Additional Capabilities

The Town of Dunn identified the following as past or ongoing public education or information programs:

- The bi-annual Town newsletter, website, and Town meetings include information about stormwater run-off and environmental protection. The Town contributes to 3 fire districts (Stoughton, McFarland, and Oregon) that provide fire safety and education. In 2018, Madison Metropolitan Sewerage District partnered with the Town to implement a study on reducing chloride in our freshwater by incentivizing inefficient water softener replacements. Fire, EMS and Emergency Government departments all have articles in the Town of Dunn annual report and newsletter that is sent to all residents.

- A storm shelter was constructed in 2009 to provide a safe shelter for 228 homes and hundreds of people within a mobile home park. The building has been used regularly to provide a safe place during extreme heat, winter storms, high winds, and tornado events.

National Flood Insurance Program Participation

The Town of Dunn is not currently participating in the National Flood Insurance Program.

Public Involvement Activities

The Town of Dunn provided a publically noticed listening session with the Town of Dunn Town Board on October 18, 2021. It was noticed on the Town website. An agenda discussing the draft mitigation strategies was provided. No changes were made to the initial draft mitigation strategies.

Mitigation Actions

Mitigation Strategies

Below are the identified mitigation strategies developed by the Town of Dunn's NHMP steering committee. Mitigation is defined as a sustained action to reduce or eliminate risk to people and property from hazards and their effects. A *mitigation strategy* is a long-term vision for risk reduction in local jurisdictional or regional planning. A mitigation strategy can be achieved by a list of overall improvements to achieve (goals) that provide direction for community efforts to reduce potential losses identified in the risk assessment.

Strategy #1	**Reducing Loss of Human Life - Tornadoes**
Prevention	Natural Resource Protection
Property Protection	Critical Facilities Protection
Public Education & Awareness	Structural Project

The Town hopes to educate people about why they should take severe weather and tornado warnings seriously. The Town will include information regarding severe weather events in the Town's biannual newsletter. With today's social media trends, it seems more prevalent than in the past to record a severe weather event rather than take proper cover. The desired outcome of increased public education and awareness is for more people to take cover during severe weather events. .

Defined steps to achieving this mitigation strategy

1. Research effective strategies to educate people on severe weather warning systems.
   a. *Responsible Party* – Town of Dunn Staff
   b. *Funding source* – Town of Dunn Staff
   c. *Completion date* – Spring 2022

2. Write newsletter article and social media post to publish in the spring of 2022.
   a. *Responsible Party* – Town of Dunn Staff
   b. *Funding source* – Town of Dunn Staff
   c. *Completion date* – Spring 2022

Strategy #2	Mitigating Road Closures Due to Flood Waters
Prevention	Natural Resource Protection
Property Protection	Critical Facilities Protection
Public Education & Awareness	**Structural Project**

During previous flooding events, Tower Rd and Lake Kegonsa Rd, were unpassable due to flood waters. This posed a potential hazard to residents in nearby neighborhoods because in the event of an emergency, response times would have drastically been longer due to having to find an alternative route. Raising the elevation and improving stormwater management on these roads will mitigate the potential for longer emergency response times in the event the roads are impassable due to flooding again and it will also mitigate the potential of road damage. The desired outcome would be for the flood waters to avoid the roads, preserving the fastest emergency response times possible and proper road condition.

Defined steps to achieving this mitigation strategy

1. Write application and apply for grant funding to cover all or a portion of the cost to implement mitigation strategies for Tower and Lake Kegonsa Road.
   a. *Responsible Party* – Town of Dunn Staff
   b. *Funding source* – Town of Dunn
   c. *Completion date* – By summer of 2023

2. Hire a structural engineer to design for stormwater management and improved road specifications.
   a. *Responsible Party* – Town of Dunn and contracted engineer firm
   b. *Funding source* – Town of Dunn, FEMA Hazard or Flood Mitigation Grant, DNR Municipal Flood Control Grant Program
   c. *Completion date* – Following when/if grant funding is received

Strategy #2	Mitigating Road Closures Due to Flood Waters

3. After engineer plans have been completed, bid out the construction project and award contractor with project.
   a. *Responsible Party* – Town of Dunn
   b. *Funding source* – Town of Dunn, FEMA Hazard or Flood Mitigation Grant, Municipal Flood Control Grant Program
   c. *Completion date* – Dependent on funds but desired by spring of 2024

4. Begin road construction and implement engineered plans and raise the elevations and repave each road to engineered-plan specifications.
   a. *Responsible Party* – Hired contractor and Town of Dunn
   b. *Funding source* – Grant funds and Town of Dunn
   c. *Completion date* – Dependent on funds but desired by end of summer 2025

Strategy #3	Public Education of Flood Proofing Strategies
Prevention	Natural Resource Protection
Property Protection	Critical Facilities Protection
Public Education & Awareness	Structural Project

Previous flooding events in the Town primarily caused damage to private structures. To alleviate the potential for future damages to structures from flooding, the Town strives to educate the public about flood proofing techniques. By implementing public education and awareness initiatives, the desired goal is to have property owners be more prepared in the event of flooding, thus hopefully protecting structures from flooding damage.

Defined steps to achieving this mitigation strategy

1. Research effective strategies to educate people on flood preparation and mitigation strategies to protect their properties.
   a. *Responsible Party* – Town of Dunn Staff
   b. *Funding source* – Town of Dunn Staff
   c. *Completion date* – Spring 2022

2. Write newsletter article and social media and website literature to publish in the spring of 2022.
   a. *Responsible Party* – Town of Dunn Staff
   b. *Funding source* – Town of Dunn Staff
   c. *Completion date* – Spring 2022

Strategy #4	Reducing Loss of Human Life – Lack of Basements
Prevention	Natural Resource Protection
Property Protection	Critical Facilities Protection
Public Education & Awareness	Structural Project

Many residences throughout the Town do not have basements. This is primarily common on lakeshore properties where no basement was constructed due to lot restrictions and high ground water. This poses a risk to many residents since they do not have the standard suggested safe place to retreat to during severe weather events. The Town hopes to educate people about various local locations they can go to take cover from severe weather events. The Town will include information regarding safe places in the Town's biannual newsletter. The desired outcome of increased public education and awareness is for more people to take cover during severe weather events. This hazard mitigation strategy was added to the plan at the request of comments from the Town's public hearing on October 18th, 2021 regarding the hazard mitigation plan update.

Defined steps to achieving this mitigation strategy

1. Communicate and collaborate with local public officials to determine potential available safe places for residents during severe weather.
    a. *Responsible Party* – Town of Dunn Staff
    b. *Funding source* – Town of Dunn Staff
    c. *Completion date* – Spring 2022

2. Write newsletter article and social media post to publish in the spring of 2022 indicating where safe places would be available for residents to go during any severe weather events.
    a. *Responsible Party* – Town of Dunn Staff
    b. *Funding source* – Town of Dunn Staff
    c. *Completion date* – Spring 2022

Dane County Natural Hazard Mitigation Plan

Town of Oregon Annex

Summer 2022

Town of Oregon Annex

This annex is a part of the Dane County Natural Hazard Mitigation Plan (DCNHMP). The DCNHMP contains additional information to support the Federal Emergency Management Agency's (FEMA) recognition of the plan (including this annex) as the formal natural hazard mitigation plan for the county and participating local governments. This annex will be valid for as long as FEMA approves the DCNHMP. The strategies adopted in this annex are designed to guide community efforts to reduce risks from natural hazards. These strategies work in conjunction with neighboring communities and Dane County government to reduce risks from natural hazards.

COMMUNITY PROFILE

The Town of Oregon is located in south central Dane County. The town is bounded on the north by the City of Fitchburg, on the east by the Village of Oregon and the Town of Rutland, on the south by the Village and Town of Brooklyn, and the west by the town of Montrose. Land use is dominated by agriculture and residential uses. According to the United States Census Bureau, the town has a total area of 32.3 square miles of which, 32.2 square miles of it is land and 0.1 square miles of it is water.

As of 2020, the Town of Oregon has 1,267 households, with an average of 2.62 people per household. The municipal population data provided by the American Community Survey, a product of the US Census Bureau, indicates that the 2019 population estimates for the Town of Oregon is 3,321 people. Table 1 shows the population profile by age for Town of Oregon.

Table 1 Population Profile of Town of Oregon, Dane County

Category	Number	Percent
Total population	**3,321**	**100%**
Under 5 years	134	4.0%
5 to 9 years	250	7.5%
10 to 14 years	174	5.2%
15 to 19 years	190	5.7%
20 to 24 years	122	3.7%
25 to 29 years	124	3.7%
30 to 34 years	156	4.7%
35 to 39 years	153	4.6%
40 to 44 years	234	7.0%
45 to 49 years	199	6.0%
50 to 54 years	252	7.6%
55 to 59 years	291	8.8%
60 to 64 years	368	11.1%
65 to 69 years	288	8.7%
70 to 74 years	176	5.3%
75 to 79 years	139	4.2%
80 to 84 years	42	1.3%
85 years and over	29	0.9%

Data Source: 2019 ACS Estimates - U.S. Census

Growth & Development Trends

Table 2-3 illustrates how the entire Town of Oregon has grown in terms of population and number of households between 2010 and 2020. Housing data is up to year 2020 due to data availability. Table 2-3 is drawn from the Wisconsin Department of Administration.

Table 2 Town of Oregon Change in Population and Households, 2010-2020

2010 Population	2020 Population	Percent Change (%) 2010-2020	2010 # of Households	2020 # of Households	Percent Change (%) 2010-2020
3,184	3,261	2.41%	1,160	1,267	5.02%

Data Source: Demographic Services Center, Wisconsin Department of Administration, 2021

Table 3 Town of Oregon Population Projections, 2020-2040 11.79 4.07

Population Projection	2020	2025	2030	2035	2040
Increase by half of percent of change (2.41%/2) every 5 years	3,261	3,300	3,339	3,379	3,419

Data Source: Demographic Services Center, Wisconsin Department of Administration, 2021

Note: Population estimates offered by the U.S. Census Bureau's American Community Survey may differ from the WDOA data, due to sourcing, margin of error, and data availability.

Population Summary

Tables 4-7 illustrates key population demographics within the Town of Oregon. Key demographics include: (1) Disability Characteristics, (2) Federal Income Poverty Levels, (3) Educational Attainment, and (4) Household Language with English Speaking Capabilities. Due to data availability, all key demographic information has been provided by the American Community Survey (ACS) 2019 estimates. The ACS is a self-reported survey and may include total sample size differences and statistical margin of error.

Table 4 Town of Oregon, Dane County – Disability Characteristics by Detailed Age

Category	Number	Percent
Total of Residents with Self-Identified Disabilities	**450**	**100%**
With a hearing difficulty	**103**	**22.9%**
Population under 18 years	12	-
Population 18 to 64 years	44	-
Population 65 years and over	47	-
With a vision difficulty	**25**	**5.6%**
Population under 18 years	0	-
Population 18 to 64 years	25	-
Population 65 years and over	0	-
With a cognitive difficulty	**135**	**30.0%**
Population under 18 years	38	-
Population 18 to 64 years	72	-
Population 65 years and over	25	-
With an ambulatory difficulty	**99**	**22.0%**
Population under 18 years	0	-
Population 18 to 64 years	56	-
Population 65 years and over	43	-
With a self-care difficulty	**19**	**4.2%**
Population under 18 years	7	-
Population 18 to 64 years	7	-
Population 65 years and over	5	-
With an independent living difficulty	**69**	**15.3%**
Population 18 to 64 years	40	-
Population 18 to 34 years	0	-
Population 65 years and over	29	-

Data Source: 2019 ACS Estimates - U.S. Census

Table 5.1: Town of Oregon, Dane County – Federal Income Poverty Levels (FIPL) by Families Summary

Category	Number of Families
50 percent of poverty level	0
125 percent of poverty level	27
150 percent of poverty level	34
185 percent of poverty level	52
200 percent of poverty level	70
300 percent of poverty level	146
400 percent of poverty level	237
500 percent of poverty level	410

Data Source: 2019 ACS Estimates - U.S. Census

Note: Use table 5.2 to interpret table 5.1:

5.1 identifies the *total number of families* (regardless of size) by percentage.

5.2 identifies *family size* in relation to annual family income and the percentage category of the FIPL.

Table 5.2: Town of Oregon, Dane County – Annual Federal Income Poverty Level Guide

Family Size	50%	100%	125%	150%	185%	200%	300%	400%	500%
1	$6,440	$12,880	$16,100	$19,320	$23,828	$25,760	$38,640	$51,520	$64,400
2	$8,710	$17,420	$21,775	$26,130	$32,227	$34,840	$52,260	$69,680	$87,100
3	$10,980	$21,960	$27,450	$32,940	$40,626	$43,920	$65,880	$87,840	$109,800
4	$13,250	$26,500	$33,125	$39,750	$49,025	$53,000	$79,500	$106,000	$132,500
5	$15,520	$31,040	$38,800	$46,560	$57,424	$62,080	$93,120	$124,160	$155,200
6	$17,790	$35,580	$44,475	$53,370	$65,823	$71,160	$106,740	$142,320	$177,900

Data Source: dhs.wisconsin.gov

Table 6: Town of Oregon, Dane County – Educational Attainment by Householders

Category	Number	Percent
Total of Householders	**1,074**	**100%**
Less than high school graduate	7	0.7%
High school graduate (includes equivalency)	175	16.3%
Some college, associate's degree	287	26.7%
Bachelor's degree or higher	605	56.3%

Data Source: 2019 ACS Estimates - U.S. Census

Table 7: Household Language & English Speaking Capabilities

Category	Number	Percent
Total of Households	**1,295**	**100%**
English only	**1,210**	**93.4%**
Spanish:	**52**	**4.0%**
Limited English speaking household	0	-
Not a limited English speaking household	52	-
Other Indo-European languages:	**33**	**2.5%**
Limited English speaking household	0	-
Not a limited English speaking household	33	-
Asian and Pacific Island languages:	**0**	**0.0%**
Limited English speaking household	0	-
Not a limited English speaking household	0	-
Other languages:	**0**	**0.0%**
Limited English speaking household	0	-
Not a limited English speaking household	0	-

Data Source: 2019 American Community Survey

Note: Population estimates offered by the U.S. Census Bureau's American Community Survey may differ from the WDOA data, due to sourcing, margin of error, and data availability.

Asset Inventory

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

General Property

Table 8 Property Exposure Summary

Property Type	Parcel Count	Improved Land Count	Improved Land Value ($)	Content Value ($)	Total Value ($)
Total	**2,617**	**2,614**	**551,136,900**	**275,568,450**	**826,705,350**
Agriculture	700	700	120,846,200	60,423,100	181,269,300
Industrial	3	3	339,500	169,750	509,250
Residential	1,859	1,859	413,841,800	206,920,900	620,762,700
Transportation	21	21	3,180,600	1,590,300	4,770,900
Utility	2	0	0	0	0
Commercial	17	17	10,408,800	5,204,400	15,613,200
Other	14	14	2,520,000	1,260,000	3,780,000
Institutional/ Governmental	1	0	0	0	0

Data Source: Dane County Land Information Office, December 2021

Critical Facilities

The Town of Oregon has identified the critical facilities important to protect from disaster impacts. These are collected in Table 9. Table 9 is based on GIS data inventories from Dane County and information gathered from the Town. No further supplemental data was provided by the community through the Data Collection Guide.

Table 9 Critical Facility Summary/Essential Infrastructure

Facility	Type*	No. of Facilities	Replacement Value ($)
Town Hall	EI	1	N/A
Town Garage	EI	1	N/A
Town Roads	EI	1+	N/A
Town Bridges	EI	1+	N/A
Town Recycling Center (TORC)	EI	1	N/A
Cell Tower – Cty D	EI	1	N/A
Town Park — Bicentennial Park, 8445 Highway MM	NA	1	N/A
Town Park — Hillcrest Park, 873 and 876 Della Road	NA	1	N/A
Town Park — Kennedy Park, 4779 Kennedy Park Road	NA	1	N/A
Town Park — Ravenoaks Park, 6238 Ahwahnee Court	NA	1	N/A
Town Park — Town Park, 901 Glenway Road	NA	1	N/A
*EI: Essential Infrastructure; VF: Vulnerable Facilities; HM: Hazardous Materials Facilities			

Data Source: 2021 Town of Oregon Data Collection Guide

Other Assets

Other assets help define a community beyond the current composition of the Town of Oregon. 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 Oregon has not identified any other assets.

VULNERABILITY ASSESSMENT

A hazard identification and vulnerability analysis was completed for the Town of Oregon using the same methodology in the County's 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 10 outlines the hazard identification for the Town of Oregon based on the Data Collection Guide issued in 2021. The Data Collection Guide listed all of the hazards that could impact Dane County. The purpose of this worksheet was to identify and rank the hazards and vulnerabilities specific to the jurisdiction. Brooklyn's planning team members were asked to complete the matrix by ranking each category on a scale of 0 to 5 based on the experience and perspective of each planning team member. A ranking of 0 indicated "no concern" while a ranking of 5 indicated "highest concern." This matrix appears as Table 10. This matrix reflects the significance of the hazards relative to one another as perceived by the Example's planning team.

This matrix reflects that the Town of Oregon is most vulnerable to winter storms, tornadoes, wind storms, and floods. The vulnerability established here is a qualitative assumption based on the impacts, geographic extent, probability of future occurrence, and magnitude/severity.

Table 10: Vulnerability Assessment Matrix for the Town of Oregon

Name of Jurisdiction: Town of Oregon										
Hazard	**Hazard Attributes**			**Impact Attributes**						
				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	**Total of Row Values**
	(1-5)	*(1-5)*	*(1-5)*	*(0-5)*	*(0-5)*	*(0-5)*	*(0-5)*	*(0-5)*	*(0-5)*	
Dam/Levee failure	0	0	0	0	0	0	0	0	0	0
Extreme Cold	1	1	1	1	1	1	1	1	0	8
Extreme Heat	3	3	1	1	1	1	1	1	0	12
Drought	3	3	1	1	1	1	3	3	3	19
Expansive soils	1	1	3	1	0	0	0	0	1	7
Flood	3	3	3	3	3	3	3	3	3	27
Fog	1	1	3	1	1	1	1	1	1	11
Hail Storm	2	2	2	2	2	1	1	2	1	15
Landslide	1	1	1	0	0	0	1	1	1	6
Lightning	2	1	1	2	2	2	0	0	1	11
Tornado	3	3	4	4	3	3	3	3	3	29
Wildfire	2	1	1	2	2	2	2	2	2	16
Windstorm	3	3	3	3	3	3	3	3	3	27
Winter Storm	4	4	4	4	4	4	4	4	4	36

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 Town of Oregon. Table 11 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 11 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	Minimal	Minimal	Specifics unknown; See hazard profile in County Plan
Flooding	See Tables 13-14 below	See Tables 13-14 below	See Tables 13-14 below	See Tables 13-14 below
Fog	Minimal	Minimal	Minimal	Specifics unknown; See hazard profile in County Plan
Hailstorm	Minimal	Moderate	Moderate	Specifics unknown; See hazard profile in County Plan
Landslide/ Sinkholes/ Erosion	None	None	None	Specifics unknown; See hazard profile in County Plan
Lightning	Moderate	Moderate	Moderate	Specifics unknown; See hazard profile in County Plan
Severe Cold	Minimal	Minimal	Minimal	Specifics unknown; See hazard profile in County Plan
Severe Heat	Minimal	Minimal	Minimal	Specifics unknown; See hazard profile in County Plan
Winter Storm	See Tables 4-7 Population	See Property Exposure table 8	See Critical Facility Inventory Table(s)	Specifics unknown; See hazard profile in County Plan
Tornado	See Table 15 below	See Table 15 below	See Table 15 below	See Table 15 below
Wildfire	Moderate	Moderate	Moderate	Specifics unknown; See hazard profile in County Plan
Windstorm	See Tables 4-7 Population	See Property Exposure table 8	See Critical Facility Inventory Table(s)	Specifics unknown; See hazard profile in County Plan

Data Source: 2021 Town of Oregon Data Collection Guide – Prepared by DCEM

Previous Hazard Events

Through the Data Collection Guide, the Town of Oregon noted specific historic hazard events to include in the community profile. These events have been incorporated into the appropriate hazard chapters in the main mitigation 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. The events noted by this jurisdiction in the Data Collection Guide include:

Town of Oregon Historic Natural Hazards

Table 12 Town of Oregon Historic Natural Hazards

Natural Hazard	Date	Impacted Structures	Comprehensive Harm to Jurisdiction	Other reported Losses (Fiscal reports, programs, etc.)	Comments
Winter Storm	02/2011	N/A	Blizzard conditions with heavy snow and strong winds in early and late February. Business closures and impassible roads ensued.	N/A	N/A
Tornado	06/2014	Multiple Impacted Structures	Minor to severe structure damage in Verona. Extensive tree damage in Oregon.	N/A	N/A
Flood	2018-2019	Multiple Impacted Structures	Closed roadways; residential flooding; flooding in farm fields; expansion of lake surface area	N/A	N/A
Wind Storm	06/2018	Multiple Impacted Structures	Major damage to property, infrastructure, and crops.	N/A	N/A

Data Source: 2021 Town of Oregon Data Collection Guide

Flood Hazard

Structures and Properties in the Floodplain

Refer to the flood profile in the mitigation plan for a description of the methodology used to identify potentially flood-prone properties. Figure 1 shows mapped floodplains, future growth areas, and critical or vulnerable facilities. Tables 13 and 14 outline the primary structures on them within the Town of Oregon, Dane County. Potential number of individuals at risk figures are based on primary residential structures and the average household size within Dane County (2.37 people as of 2021). Estimated loss potentials for all structures on the floodway can be found within section 4.6 in chapter 4 of the county plan.

Table 13 Primary Structures in the 100 Year Floodplain

Residential Structures in 100 yr. Floodway	Non-Residential Structures in 100 yr. Floodplain	Total Structures in 100 yr. Floodplain	Potential # of People at Risk in 100 yr. Floodplain	Total Assessed Values ($) of Structures in 100 yr. Floodplain
0	0	0	0	$0

Source: Analysis based on Dane County Land Information Office Data

Table 14 Primary Structures in the 500 Year Floodplain

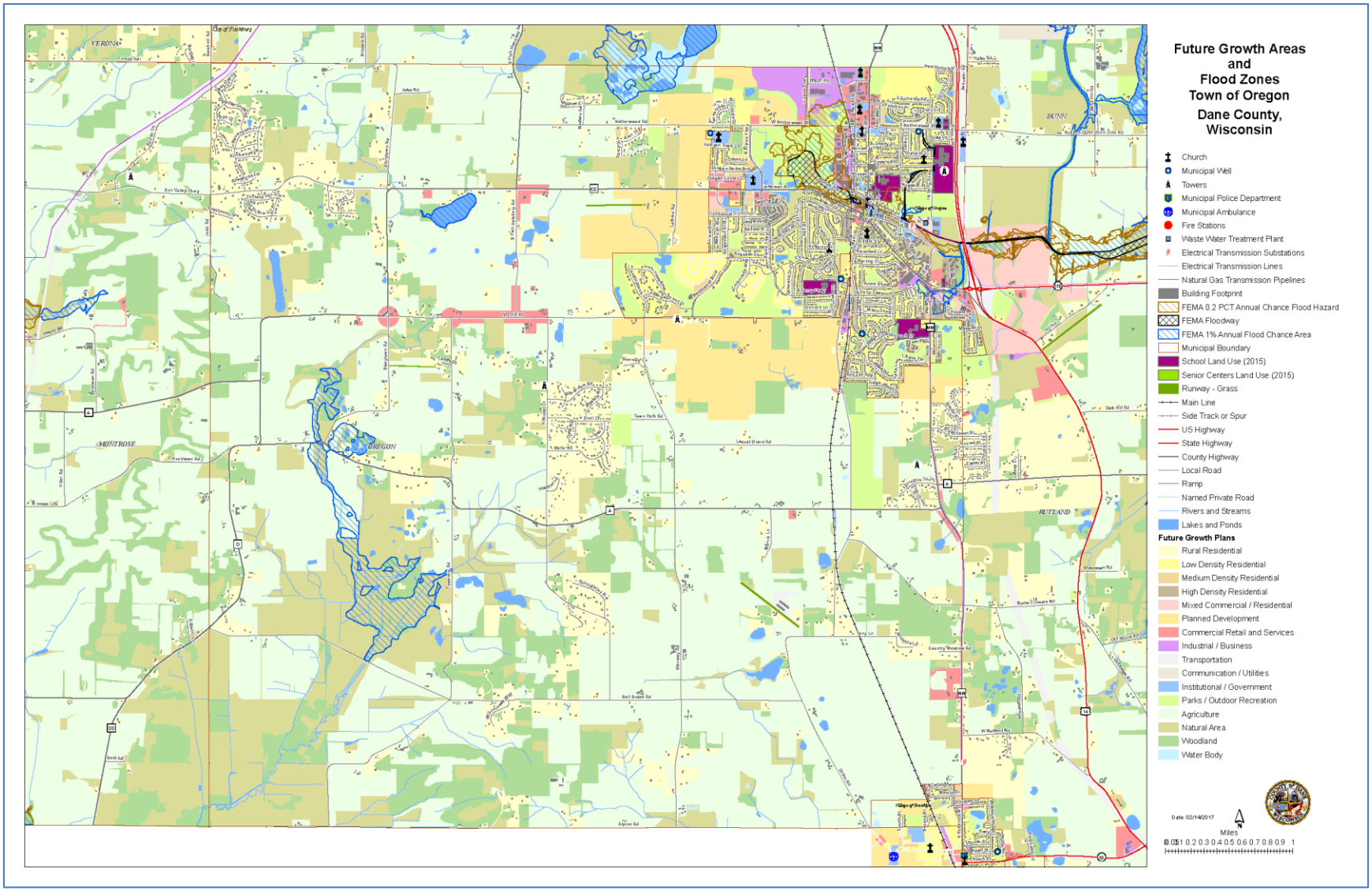
Residential Structures in 500 yr. Floodway	Non-Residential Structures in 500 yr. Floodplain	Total Structures in 500 yr. Floodplain	Potential # of People at Risk in 500 yr. Floodplain	Total Improved Values ($) of Structures in 500 yr. Floodplain
0	0	0	0	$0

Source: Analysis based on Dane County Land Information Office Data

Repetitive Loss Properties and Flood Insurance Polices

- Repetitive loss properties have not been reported in the Town of Oregon, Dane County.
- The Town of Oregon has 0 flood insurance policies in force within Dane County.

Figure 1 Flood Hazards and Future Land Use 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 2023 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 15 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
2.72%	2,614	71	826,705,350	22,448,694	11,224,347	5,612,173	1%

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

Problems or Additional Vulnerability Issues

The Town of Oregon's Data Collection Guide issued in 2021 did not identify additional vulnerabilities.

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 Oregon.

Mitigation Capabilities Summary

Table 16 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 Oregon.

Table 16 Town of Oregon Regulatory Mitigation Capabilities

Regulatory Tools (ordinances, codes, plans)	Yes/No	Comments
Existing Natural Hazard Mitigation Plan	Yes	Dane County
General or Comprehensive plan	Yes	www.town.springfield.wi.us
Zoning ordinance	Yes	www.town.springfield.wi.us/land-use
Subdivision ordinance	Yes	www.town.springfield.wi.us/ordinances/
Growth management ordinance	Yes	aka Transfer of Development Rights Program www.town.springfield.wi.us/land-use/program-trannsfer-development/
Shoreland / wetland zoning ordinance	No	Dane County
Floodplain zoning ordinance	No	Dane County
FEMA / NFIP Community Rating System	No	N/A
Other special purpose ordinance (stormwater, steep slope, wildfire)	N/A	Stormwater – Dane County; Development prohibited on slopes >20% per Land Development Ordinance
Building code	Yes	www.town.springfield.wi.us/ordinances/
Fire department ISO rating	No	N/A
Climate change Impact program	No	N/A
Erosion or sediment control program	No	Dane County
Stormwater management program	No	Dane County
Site plan review requirements	Yes	www.town.springfield.wi.us – Zoning and Design Review Ordinances
Capital improvements plan	No	N/A
Economic development plan	No	N/A
Local emergency operations plan	No	N/A
Other special plans	No	N/A
Flood insurance study or other engineering	No	N/A

Regulatory Tools (ordinances, codes, plans)	Yes/No	Comments
study for streams		
Existing Natural Hazard Mitigation Plan	Yes	Dane County
General or Comprehensive plan	Yes	www.town.springfield.wi.us

Data Source: Town of Oregon Data Collection Guide, 2021

Table 17 identifies the personnel responsible for mitigation and loss prevention activities as well as related data and systems in the Town of Oregon.

Table 17 Responsible Personnel and Departments for the Town of Oregon

Personnel Resources	Yes/No	Department/Position	Comments
Planner/engineer with knowledge of land development/land management practices	Yes	Dane County Zoning	N/A
Engineer/professional trained in construction practices related to buildings and/or infrastructure	Yes	Dane County Zoning	N/A
Planner/engineer/scientist with an understanding of natural hazards	Yes	Dane County Zoning	N/A
Personnel skilled in GIS	Yes	Dane County	N/A
Full time building official	No	Part-time Building Inspector	N/A
Personnel skilled in Climate resilience	No	N/A	N/A
Floodplain manager	No	N/A	N/A
Emergency manager	No	N/A	N/A
Real estate acquisition personnel	No	N/A	N/A
Grant writer	No	N/A	N/A
Other personnel	Yes	2 Full time Public Works 2 Full time Clerk Staff	N/A
GIS Data Resources (Hazard areas, critical facilities, land use, building footprints, etc.)	Yes	Dane County	N/A
Warning Systems/Services (Reverse 9-11, cable override, outdoor warning signals)	Yes	DaneCom	N/A
Other	Yes	Planning Commission Emergency Management Committee Town Board Supervisors	N/A

Data Source: Town of Oregon Data Collection Guide 2021

Table 18 identifies financial tools or resources that the Town of Oregon could potentially use to help fund mitigation activities.

Table 18 Financial Resources for the Town of Oregon

Financial Resources	Accessible/Eligible to Use (Yes/No)
Community Development Block Grants	Yes
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	Yes
Dedicated funding for land, easement or conservation easement acquisition	No
Fees for water, stormwater, sewer, gas, or electric services	No
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
Withhold spending in hazard prone areas	No

Data Source: Town of Oregon Data Collection Guide

Additional Capabilities

The Town of Oregon identified the following as past or ongoing public education or information programs:

- Oregon Area Fire & EMS Department, Belleville Fire & EMS, Brooklyn Fire & EMS
- Outreach from Fire & EMS above

National Flood Insurance Program Participation

The Town of Oregon is not currently participating in the National Flood Insurance Program.

Public Involvement Activities

The Town of Oregon provided a publically noticed listening session with the Town of Oregon Emergency Management Committee hearing on November 16, 2021. It was noticed on the Town website. An agenda discussing the draft mitigation strategies was provided. No changes were made to the initial draft mitigation strategies.

MITIGATION STRATEGIES

Below are the identified mitigation strategies developed by the Town of Oregon's NHMP steering committee. Mitigation is defined as a sustained action to reduce or eliminate risk to people and property from hazards and their effects. A *mitigation strategy* is a long-term vision for risk reduction in local jurisdictional or regional planning. A mitigation strategy can be achieved by a list of overall improvements to achieve (goals) that provide direction for community efforts to reduce potential losses identified in the risk assessment.

Strategy #1	**Drainage Districts**
Prevention	Natural Resource Protection
Property Protection	Critical Facilities Protection
Public Education & Awareness	Structural Project

The Town of Oregon plans to develop tactics to make residents aware of the risk of winter storms and to provide education about those risks and how to minimize them. Extreme cold, heavy snowfall, blizzard conditions, and treacherous roads pose widespread threats to property and life throughout the Town. Those threats can be decreased. By researching best practices and developing effective communication campaigns, the Town can help save lives, reduce injury, and reduce property damage.

Defined steps to achieving this mitigation strategy

1. Research best-practice tactics for developing awareness, education, and preparation campaigns related to winter storms.
   a. *Responsible Party* – Town of Oregon Board and Plan Commission
   b. *Funding source* – Town of Oregon
   c. *Completion date* – End of Q2 2022

2. Develop winter storm awareness, education, and preparation campaigns as identified through the research conducted.
   a. *Responsible Party* – Town of Oregon Board
   b. *Funding source* – Town of Oregon
   c. *Completion date* – End of Q4 2022

Strategy #1	Drainage Districts

3. Implement winter storm awareness, education, and preparation campaigns as developed.
   a. *Responsible Party* – Town of Oregon Board
   b. *Funding source* – Town of Oregon
   c. *Completion date* – Q1 2023 and ongoing

Dane County Natural Hazard Mitigation Plan

Town of Springdale Annex

Summer 2022

Town of Springdale Annex

This annex is a part of the Dane County Natural Hazard Mitigation Plan (DCNHMP). The DCNHMP contains additional information to support the Federal Emergency Management Agency's (FEMA) recognition of the plan (including this annex) as the formal natural hazard mitigation plan for the county and participating local governments. This annex will be valid for as long as FEMA approves the DCNHMP. The strategies adopted in this annex are designed to guide community efforts to reduce risks from natural hazards. These strategies work in conjunction with neighboring communities and Dane County government to reduce risks from natural hazards.

COMMUNITY PROFILE

The Town of Springdale is located in southwestern Dane County, Wisconsin, southwest of the City of Madison, between the City of Verona and the Village of Mount Horeb. Neighboring Towns in Dane County include Blue Mounds, Cross Plains, Middleton, Montrose, Perry, Primrose, Vermont, and Verona. Residing on the eastern edge of southwestern Wisconsin's driftless (unglaciated) area, Springdale's topography is consequently varied with rolling hills and valleys hosting natural springs that feed trout streams. Springdale lies within the Upper Sugar River Watershed. According to the United States Census Bureau, the Town of Springdale has a total area of 35.28 square miles, all of it land.

As of 2020, the Town of Springdale has 717 households, with an average of 2.68 people per household. The municipal population data provided by the American Community Survey, a product of the US Census Bureau, indicates that the 2019 population estimates for Town of Springdale is comprised of 2,044 people. Table 1 shows the population profile by age for Town of Springdale.

Table 1 Population Profile of Town of Springdale, Dane County

Category	Number	Percent
Total population	**2,044**	**100%**
Under 5 years	108	5.3%
5 to 9 years	125	6.1%
10 to 14 years	132	6.5%
15 to 19 years	108	5.3%
20 to 24 years	88	4.3%
25 to 29 years	45	2.2%
30 to 34 years	77	3.8%
35 to 39 years	124	6.1%
40 to 44 years	143	7.0%
45 to 49 years	160	7.8%
50 to 54 years	175	8.6%
55 to 59 years	209	10.2%
60 to 64 years	176	8.6%
65 to 69 years	127	6.2%
70 to 74 years	143	7.0%
75 to 79 years	52	2.5%
80 to 84 years	23	1.1%
85 years and over	29	1.4%

Data Source: 2019 ACS Estimates - U.S. Census

Growth & Development Trends

Table 2-3 illustrates how the entire Town of Springdale has grown in terms of population and number of households between 2010 and 2020. Housing data is to 2020 due to data availability. This data may differ from the 2019 Census Population Estimates, due to sampling differences and margin of error. Table 2-3 is drawn from the Wisconsin Department of Administration.

Table 2 Town of Springdale Change in Population and Households, 2010-2020

2010 Population	2020 Population	Percent Change (%) 2010-2020	2010 # of Households	2020 # of Households	Percent Change (%) 2010-2020
1,904	2,037	6.98%	717	809	12.83%

Data Source: Demographic Services Center, Wisconsin Department of Administration, 2021

Table 3 Town of Springdale Population Projections, 2020-2040

Population Projection	2020	2025	2030	2035	2040
Increase by half of percent of change (6.98%/2) every 5 years	2,037	2,108	2,181	2,257	2,335

Data Source: Demographic Services Center, Wisconsin Department of Administration, 2021

Note: Population estimates offered by the U.S. Census Bureau's American Community Survey may differ from the WDOA data, due to sourcing, margin of error, and data availability.

Population Summary

Tables 4-7 illustrates key population demographics within the Town of Springdale. Key demographics include: (1) Disability Characteristics, (2) Federal Income Poverty Levels, (3) Educational Attainment, and (4) Household Language with English Speaking Capabilities. Due to data availability, all key demographic information has been provided by the American Community Survey (ACS) 2019 estimates. The ACS is a self-reported survey and may include total sample size differences and statistical margin of error.

Table 4 Town of Springdale, Dane County – Disability Characteristics by Detailed Age

Category	Number	Percent
Total of Residents with Self-Identified Disabilities	**265**	**100%**
With a hearing difficulty	**47**	**17.7%**
Population under 18 years	0	-
Population 18 to 64 years	5	-
Population 65 years and over	42	-
With a vision difficulty	**16**	**6.0%**
Population under 18 years	3	-
Population 18 to 64 years	10	-
Population 65 years and over	3	-
With a cognitive difficulty	**31**	**11.7%**
Population under 18 years	2	-
Population 18 to 64 years	20	-
Population 65 years and over	9	-
With an ambulatory difficulty	**82**	**30.9%**
Population under 18 years	2	-
Population 18 to 64 years	23	-
Population 65 years and over	57	-
With a self-care difficulty	**36**	**13.6%**
Population under 18 years	2	-
Population 18 to 64 years	3	-
Population 65 years and over	31	-
With an independent living difficulty	**53**	**20.0%**
Population 18 to 64 years	16	-
Population 18 to 34 years	6	-
Population 65 years and over	37	-

Data Source: 2019 ACS Estimates - U.S. Census

Table 5.1: Town of Springdale, Dane County – Federal Income Poverty Levels (FIPL) by Families Summary

Category	Number of Families
50 percent of poverty level	3
125 percent of poverty level	10
150 percent of poverty level	23
185 percent of poverty level	41
200 percent of poverty level	41
300 percent of poverty level	95
400 percent of poverty level	170
500 percent of poverty level	263

Data Source: 2019 ACS Estimates - U.S. Census

Note: Use table 5.2 to interpret table 5.1:

5.1 identifies the *total number of families* (regardless of size) by percentage.

5.2 identifies *family size* in relation to annual family income and the percentage category of the FIPL.

Table 5.2: Town of Springdale, Dane County – Annual Federal Income Poverty Level Guide

Family Size	50%	100%	125%	150%	185%	200%	300%	400%	500%
1	$6,440	$12,880	$16,100	$19,320	$23,828	$25,760	$38,640	$51,520	$64,400
2	$8,710	$17,420	$21,775	$26,130	$32,227	$34,840	$52,260	$69,680	$87,100
3	$10,980	$21,960	$27,450	$32,940	$40,626	$43,920	$65,880	$87,840	$109,800
4	$13,250	$26,500	$33,125	$39,750	$49,025	$53,000	$79,500	$106,000	$132,500
5	$15,520	$31,040	$38,800	$46,560	$57,424	$62,080	$93,120	$124,160	$155,200
6	$17,790	$35,580	$44,475	$53,370	$65,823	$71,160	$106,740	$142,320	$177,900

Data Source: dhs.wisconsin.gov

Table 6: Town of Springdale, Dane County – Educational Attainment by Householders

Category	Number	Percent
Total of Householders	**614**	**100%**
Less than high school graduate	13	2.1%
High school graduate (includes equivalency)	106	17.3%
Some college, associate's degree	191	31.1%
Bachelor's degree or higher	304	49.5%

Data Source: 2019 ACS Estimates - U.S. Census

Table 7: Household Language & English Speaking Capabilities

Category	Number	Percent
Total of Households	**785**	**100%**
English only	**743**	**94.6%**
Spanish:	**20**	**2.5%**
Limited English speaking household	0	-
Not a limited English speaking household	20	-
Other Indo-European languages:	**15**	**1.9%**
Limited English speaking household	0	-
Not a limited English speaking household	15	-
Asian and Pacific Island languages:	**7**	**0.9%**
Limited English speaking household	0	-
Not a limited English speaking household	7	-
Other languages:	**0**	**0.0%**
Limited English speaking household	0	-
Not a limited English speaking household	0	-

Data Source: 2019 American Community Survey

Note: Population estimates offered by the U.S. Census Bureau's American Community Survey may differ from the WDOA data, due to sourcing, margin of error, and data availability.

Asset Inventory

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

General Property

Table 8 Property Exposure Summary

Property Type	Parcel Count	Improved Land Count	Improved Land Value ($)	Content Value ($)	Total Value ($)
Total	**2,118**	**2,114**	**462,059,400**	**231,029,700**	**693,089,100**
Agriculture	680	680	123,423,000	61,711,500	185,134,500
Industrial	7	7	293,900	146,950	440,850
Residential	1,364	1,364	332,794,800	166,397,400	499,192,200
Utility	5	5	467,500	233,750	701,250
Commercial	33	33	3,224,300	1,612,150	4,836,450
Other	17	17	948,300	474,150	1,422,450
Institutional/ Governmental	12	8	907,600	453,800	1,361,400

Data Source: Dane County Land Information Office, December 2021

Critical Facilities

The Town of Springdale has identified the critical facilities important to protect from disaster impacts. These are collected in Table 9. Table 9 is based on GIS data inventories from Dane County and information gathered from the Town. No further supplemental data was provided by the community through the Data Collection Guide.

Table 9 Critical Facility Summary/Essential Infrastructure

Facility	Type*	No. of Facilities	Replacement Value ($)
Town Hall	E1	1	500,000
Springdale Lutheran Church	VF	1	N/A
Mt Vernon Zwingli United Church of Christ	VF	1	N/A
Bridge Town of Springdale	E1	1	1,000,000
Bridge Town of Springdale	E1	1	1,000,000
Old Historic Town Hall	VF	1	N/A
Hearts and Hands Children's Center	VF	1	N/A
Donald Park	NA	1	N/A
Riley Marsh	NA	1	N/A
Springdale Wetlands	NA	1	N/A
Cell Towers (4)	E1	4	N/A
TDS Substation	E1	1	N/A
*EI: Essential Infrastructure; VF: Vulnerable Facilities; HM: Hazardous Materials Facilities			

Data Source: 2021 Town of Springdale Data Collection Guide

Other Assets

Other assets help define a community beyond the current composition of the Town of Springdale. 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 Springdale has not identified any other assets.

VULNERABILITY ASSESSMENT

A hazard identification and vulnerability analysis was completed for the Town of Springdale using the same methodology in the County's 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 10 outlines the hazard identification for the Town of Springdale based on the Data Collection Guide issued in 2021. The Data Collection Guide listed all of the hazards that could impact Dane County. The purpose of this worksheet was to identify and rank the hazards and vulnerabilities specific to the jurisdiction. Brooklyn's planning team members were asked to complete the matrix by ranking each category on a scale of 0 to 5 based on the experience and perspective of each planning team member. A ranking of 0 indicated "no concern" while a ranking of 5 indicated "highest concern." This matrix appears as Table 10. This matrix reflects the significance of the hazards relative to one another as perceived by the Example's planning team.

This matrix reflects that the Town of Springdale is most vulnerable to tornadoes, winter storms, and floods. The vulnerability established here is a qualitative assumption based on the impacts, geographic extent, probability of future occurrence, and magnitude/severity.

Table 10: Vulnerability Assessment Matrix for the Town of Springdale

Name of Jurisdiction: Town of Springdale										
Hazard	**Hazard Attributes**			**Impact Attributes**						
				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	**Total of Row Values**
	(1-5)	*(1-5)*	*(1-5)*	*(0-5)*	*(0-5)*	*(0-5)*	*(0-5)*	*(0-5)*	*(0-5)*	
Dam/Levee failure	1	1	1	0	0	0	0	0	0	3
Extreme Cold	3	3	1	2	2	3	3	2	1	20
Extreme Heat	3	3	1	3	3	3	3	3	2	24
Drought	3	3	1	1	1	2	3	3	2	19
Expansive soils	1	1	1	0	0	0	0	0	0	3
Flood	5	5	4	5	4	5	4	5	1	38
Fog	1	1	1	0	0	0	0	0	0	3
Hail Storm	3	3	4	1	3	1	1	3	1	20
Landslide	1	1	1	1	1	1	1	1	1	9
Lightning	1	1	1	1	1	1	1	1	1	9
Tornado	5	4	5	5	5	5	5	5	4	43
Wildfire	1	1	1	1	1	1	1	1	1	9
Windstorm	5	4	5	5	5	5	5	5	4	43
Winter Storm	5	5	5	4	4	4	4	4	4	39

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 Town of Springdale. Table 11 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 11 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	Moderate	Minimal	Minimal	Specifics unknown; See hazard profile in County Plan
Flooding	See Tables 13-14 below	See Tables 13-14 below	See Tables 13-14 below	See Tables 13-14 below
Fog	None	None	None	Specifics unknown; See hazard profile in County Plan
Hailstorm	Minimal	Moderate	Minimal	Specifics unknown; See hazard profile in County Plan
Landslide/ Sinkholes/ Erosion	Minimal	Minimal	Minimal	Specifics unknown; See hazard profile in County Plan
Lightning	Minimal	Minimal	Minimal	Specifics unknown; See hazard profile in County Plan
Severe Cold	See Tables 4-7 Population	Moderate	Moderate	Specifics unknown; See hazard profile in County Plan
Severe Heat	See Tables 4-7 Population	See Property Exposure table 8	See Critical Facility Inventory Table(s)	Specifics unknown; See hazard profile in County Plan
Winter Storm	See Tables 4-7 Population	See Property Exposure table 8	See Critical Facility Inventory Table(s)	Specifics unknown; See hazard profile in County Plan
Tornado	See Table 15 below	See Table 15 below	See Table 15 below	See Table 15 below
Wildfire	Minimal	Minimal	Minimal	Specifics unknown; See hazard profile in County Plan
Windstorm	See Tables 4-7 Population	See Property Exposure table 8	See Critical Facility Inventory Table(s)	Specifics unknown; See hazard profile in County Plan

Data Source: 2021 Town of Springdale Data Collection Guide – Prepared by DCEM

Previous Hazard Events

Through the Data Collection Guide, the Town of Springdale noted specific historic hazard events to include in the community profile. These events have been incorporated into the appropriate hazard chapters in the main mitigation 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. The events noted by this jurisdiction in the Data Collection Guide include:

Town of Springdale Historic Natural Hazards

Table 12 Town of Springdale Historic Natural Hazards

Natural Hazard	Date	Impacted Structures	Comprehensive Harm to Jurisdiction	Other reported Losses (Fiscal reports, programs, etc.)	Comments
Flood	08-/17/2018– 09/03/2018	Multiple Impacted Structures	Fallen trees, flooded basements of homes, damage to personal belongings in homes.	N/A	$50,000 from FEMA

Data Source: 2021 Town of Springdale Data Collection Guide

Flood Hazard

Structures and Properties in the Floodplain

Refer to the flood profile in the mitigation plan for a description of the methodology used to identify potentially flood-prone properties. Figure 1 shows mapped floodplains, future growth areas, and critical or vulnerable facilities. Tables 13 and 14 outline the primary structures on them within the Town of Springdale, Dane County. Potential number of individuals at risk figures are based on primary residential structures and the average household size within Dane County (2.37 people as of 2021). Estimated loss potentials for all structures on the floodway can be found within section 4.6 in chapter 4 of the county plan.

Table 13 Primary Structures in the 100 Year Floodplain

Residential Structures in 100 yr. Floodway	Non-Residential Structures in 100 yr. Floodplain	Total Structures in 100 yr. Floodplain	Potential # of People at Risk in 100 yr. Floodplain	Total Assessed Values ($) of Structures in 100 yr. Floodplain
8	2	10	19	$2,032,979

Source: Analysis based on Dane County Land Information Office Data

Table 14 Primary Structures in the 500 Year Floodplain

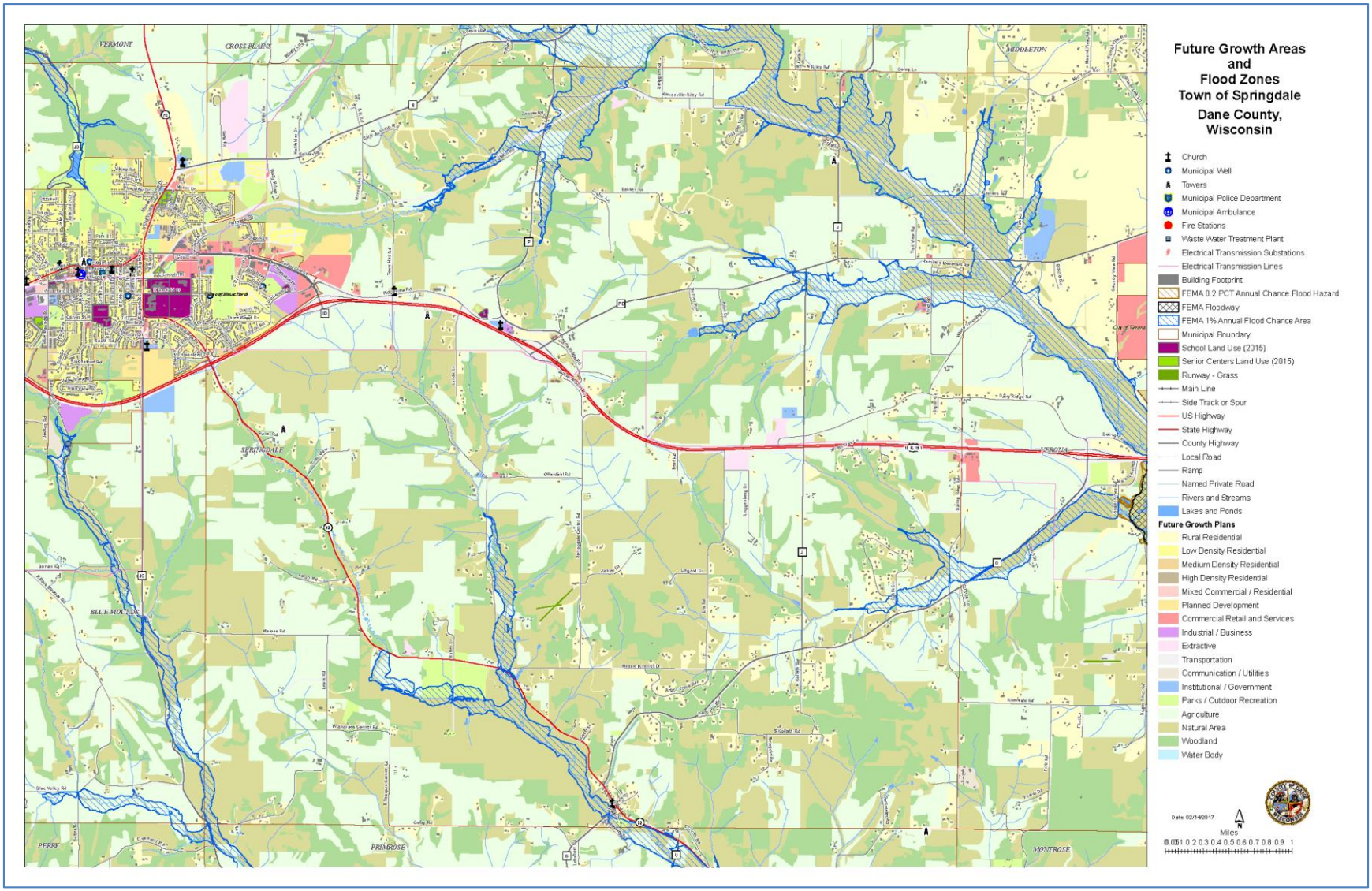
Residential Structures in 500 yr. Floodway	Non-Residential Structures in 500 yr. Floodplain	Total Structures in 500 yr. Floodplain	Potential # of People at Risk in 500 yr. Floodplain	Total Improved Values ($) of Structures in 500 yr. Floodplain
6	2	8	14	$976,119

Source: Analysis based on Dane County Land Information Office Data

Repetitive Loss Properties and Flood Insurance Polices

- No repetitive loss properties have been reported in the Town of Springdale, Dane County.
- The Town of Springdale has 0 flood insurance policies in force within Dane County.

Figure 1 Flood Hazards and Future Land Use 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 2023 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 15 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
2.39%	2,114	50	693,089,100	16,538,192	8,269,096	4,134,548	1%

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

Problems or Additional Vulnerability Issues

The Town of Springdale's Data Collection Guide issued in 2021 listed:

- **Hazard Concern (i.e. vulnerable populations)**:
  - Springdale has no specific facilities for special needs populations, such as the elderly, disabled or low-income
- **Growth Trends:**
  - Dane County wetland maps prevent building in wetlands and vulnerable areas. We have no concerns about future growth and development being in hazard areas.
- **How vulnerability has changed since last DCNHMP update:**
  - Culvert replacement over the years has decreased erosion. Shoulder work is a preventative measure we have taken to decrease future road damage.

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 Springdale.

Mitigation Capabilities Summary

Table 16 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 Springdale.

Table 16 Town of Springdale Regulatory Mitigation Capabilities

Regulatory Tools (ordinances, codes, plans)	Yes/No	Comments
Existing Natural Hazard Mitigation Plan	Yes	https://em.countyofdane.com/documents/PDFs/mitigation%20plan/municipality/Town-of-Springdale.pdf
General or Comprehensive plan	Yes	https://townofspringdale.org/uploads/editor/files/10172016%20Plan%20updated%2006222020.pdf
Zoning ordinance	Yes	Dane County
Subdivision ordinance	Yes	https://townofspringdale.org/uploads/editor/files/06222020%20Land%20Division%20and%20Subdivision%20Code%20Amended%20final.pdf
Growth management ordinance	Yes	https://townofspringdale.org/uploads/editor/files/10172016%20Plan%20updated%2006222020.pdf
Shoreland / wetland zoning ordinance	Yes	Dane County ordinance
Floodplain zoning ordinance	Yes	Dane County ordinance
FEMA / NFIP Community Rating System	Yes	Covered under Dane County
Other special purpose ordinance (stormwater, steep slope, wildfire)	Yes	https://townofspringdale.org/uploads/editor/files/Private%20Driveway%20Ordinance%20Amended%2012_15_2020(1).pdf (Driveway/Steep slope)
Building code	Yes	https://townofspringdale.org/uploads/editor/files/Building_Mechanical%20Code%20Ordin%20Title9%20Chpt1%20Adopt%2012_17_2019_20200115_1.pdf
Fire department ISO rating	N/A	Mount Horeb
Climate change Impact program	No	N/A
Erosion or sediment control program	Yes	Dane County
Stormwater management program	No	N/A
Site plan review requirements	Yes	N/A
Capital improvements plan	Yes	N/A
Economic development plan	No	N/A
Local emergency operations plan	Yes	Dane County

Regulatory Tools (ordinances, codes, plans)	Yes/No	Comments
Other special plans	No	N/A
Flood insurance study or other engineering study for streams	Yes	Dane County/DNR
Elevation certificates (for floodplain development)	Yes	Dane County
Climate Action Plan	Yes	Dane County

Data Source: Town of Springdale Data Collection Guide, 2021

Table 17 identifies the personnel responsible for mitigation and loss prevention activities as well as related data and systems in the Town of Springdale.

Table 17 Responsible Personnel and Departments for the Town of Springdale

Personnel Resources	Yes/No	Department/Position	Comments
Planner/engineer with knowledge of land development/land management practices	Yes	Town and Country Engineers	N/A
Engineer/professional trained in construction practices related to buildings and/or infrastructure	Yes	Town and Country Engineers	N/A
Planner/engineer/scientist with an understanding of natural hazards	Yes	N/A	Dane County
Personnel skilled in GIS	Yes	N/A	Dane County
Full time building official	Yes	Johnson Inspectors LLC as needed	
Personnel skilled in Climate resilience	Yes	N/A	Dane County
Floodplain manager	Yes	N/A	Dane County
Emergency manager	Yes	N/A	Dane County
Real estate acquisition personnel	No	N/A	N/A
Grant writer	Yes	Clerk/Deputy Clerk/Treasurer	N/A
Other personnel	No	N/A	N/A
GIS Data Resources (Hazard areas, critical facilities, land use, building footprints, etc.)	Yes	N/A	Dane County
Warning Systems/Services (Reverse 9-11, cable override, outdoor warning signals)	Yes	N/A	Dane County

Data Source: Town of Springdale Data Collection Guide 2021

Table 18 identifies financial tools or resources that the Town of Springdale could potentially use to help fund mitigation activities.

Table 18 Financial Resources for the Town of Springdale

Financial Resources	Accessible/Eligible to Use (Yes/No)
Community Development Block Grants	Yes
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	Yes
Dedicated funding for land, easement or conservation easement acquisition	No
Fees for water, stormwater, sewer, gas, or electric services	Yes
Impact fees for new development	No
Incur debt through general obligation bonds	N/A
Incur debt through special tax bonds	N/A
Incur debt through private activities	N/A
Withhold spending in hazard prone areas	Yes

Data Source: Town of Springdale Data Collection Guide

Additional Capabilities

The Town of Springdale identified the following as past or ongoing public education or information programs:

- We implemented a Town of Springdale email blast to inform residents on town happenings, construction, road closures, town meetings, etc.

National Flood Insurance Program Participation

The Town of Springdale is not currently participating in the National Flood Insurance Program.

Public Involvement Activities

The Town of Springdale provided two publically noticed listening sessions with the Town of Springdale Town Board on November 2, 2021. It was noticed on the Town website. An agenda discussing the draft mitigation strategies was provided. No changes were made to the initial draft mitigation strategies.

MITIGATION STRATEGIES

Below are the identified mitigation strategies developed by the Town of Springdale's NHMP steering committee. Mitigation is defined as a sustained action to reduce or eliminate risk to people and property from hazards and their effects. A *mitigation strategy* is a long-term vision for risk reduction in local jurisdictional or regional planning. A mitigation strategy can be achieved by a list of overall improvements to achieve (goals) that provide direction for community efforts to reduce potential losses identified in the risk assessment.

Strategy #1	**Springdale Town Hall and Town Garage flood Prevention**
Prevention	Natural Resource Protection
Property Protection	**Critical Facilities Protection**
Public Education & Awareness	Structural Project

Reducing the flood risk for Springdale Town Hall, parking lot, and garage will: lessen disruption to the essential work of Town employees, ensure access to equipment necessary for storm cleanup, maintain the town's only polling location, reduce financial loss for the Town, and protect vital records from water damage. The community will benefit by ensuring that the Town Hall remains open and accessible to employees and the public and that town employees are able to continue on with essential town business, including assisting in cleaning up storm damage and necessary repairs. .

Defined steps to achieving this mitigation strategy

1. Update and install gutters on Springdale Town Hall
   a. *Responsible Party* – Town of Springdale
   b. *Funding source* – Town of Springdale, possible county funding or FEMA
   c. *Completion date* – 9/2022

2. Drainage improvement and landscaping on the west side of Town Hall building
   a. *Responsible Party* – Town of Springdale
   b. *Funding source* – Town of Springdale, possible county funding or FEMA
   c. *Completion date* – 9/2022

Strategy #1	Springdale Town Hall and Town Garage flood Prevention

3. Install swale, wash stone, and drain tile at Town Hall
   a. *Responsible Party* – Town of Springdale
   b. *Funding source* – Town of Springdale, possible county funding or FEMA
   c. *Completion date* – 9/2022

Strategy #2	Shoulder improvements on steep slopes in the Town of Springdale
Prevention	**Natural Resource Protection**
Property Protection	Critical Facilities Protection
Public Education & Awareness	Structural Project

Shoulders on roads with steep slopes in the Town of Springdale will be improved and drainage from roads will be improved. Improving shoulders and drainage from roads will reduce shoulder washouts and road damage during heavy rains. These improvements will reduce road closures, improve convenience and safety for residents, ensure access to critical infrastructure, expedite and reduce repairs needed to Town roads, and reduce financial loss for the Town.

Defined steps to achieving this mitigation strategy

1. Install rip-rap on Malone Rd and other roads with steep slopes in town
   a. *Responsible Party* – Town
   b. *Funding source* – Tax dollars, possible government/FEMA grant assistance
   c. *Completion date* – Ongoing

2. Use recycled asphalt on steep slopes on stretches of town roads
   d. *Responsible Party* – Town of Springdale
   e. *Funding source* – Tax dollars, possible government/FEMA grant assistance
   f. *Completion date* – Ongoing

Strategy #3	Natural Disaster public awareness campaign for Town of Springdale residents

Prevention	Natural Resource Protection
Property Protection	Critical Facilities Protection
Public Education & Awareness	Structural Project

Implementing a Natural Disaster Public Awareness Campaign will benefit Town of Springdale residents by informing them of the possibility of natural disasters like snow/ice before they occur and suggesting steps they can take to keep safe. The Town of Springdale residents will also be informed in real-time of hazards like road closures, icy conditions, and downed trees and power lines on town roads. The desired outcomes for implementing this strategy are: to keep our residents safe and informed during natural disasters, prevent people from non-essential travel in unsafe conditions, and allow town employees to expedite storm cleanup.

Defined steps to achieving this mitigation strategy

1. Inform Springdale residents about Dane County alert system and Springdale email list and encourage them to sign up. Residents can be informed about the Dane County alerts through the Springdale email list and annual newsletter, and residents can be informed about the Springdale email list through the annual newsletter.
   a. *Responsible Party* – Town of Springdale staff-Jackie Arthur/Maggie Milcarek
   b. *Funding source* – none
   c. *Completion date* – 2021

2. Send residents email alerts and update website about potential predictable natural disasters and recommendations for how to stay safe. For example, staying off roads and avoiding non-essential travel.
   g. *Responsible Party* – Town of Springdale staff-Devin Dahlk, Jackie Arthur, Maggie Milcarek
   h. *Funding source* – none
   i. *Completion date* – Ongoing

Strategy #3	Natural Disaster public awareness campaign for Town of Springdale residents

3. Send residents email alerts and update website about hazards due to natural disasters such as road closures, downed trees, downed power lines, and hazardous conditions.
   d. *Responsible Party* – Town of Springdale staff-Devin Dahlk, Jackie Arthur, Maggie Milcarek
   e. *Funding source* – none
   f. *Completion date* – Ongoing

Strategy #4	Tree-trimming to mitigate damage from wind events
Prevention	Natural Resource Protection
Property Protection	Critical Facilities Protection
Public Education & Awareness	Structural Project

Trimming trees in the Town of Springdale could mitigate some damage caused by wind events such as derechos or tornados. Tree-trimming could reduce the number of trees and branches that are knocked down which could prevent blocked roads, downed power lines, and widespread power outages. Reducing the risk for damage from wind events would reduce harm and financial loss to residents, improve the safety of town roads, and reduce the costs incurred by the town for cleanup efforts.

Defined steps to achieving this mitigation strategy

1. Hire a contractor to trim trees on town roads including Malone and Town Hall Road
   a. *Responsible Party* – Town of Springdale
   b. *Funding source* – Town of Springdale, tax dollars, possibly FEMA funds
   c. *Completion date* – 2022 and Ongoing

Dane County Natural Hazard Mitigation Plan

Town of Springfield Annex

Summer 2022

Town of Springfield Annex

This annex is a part of the Dane County Natural Hazard Mitigation Plan (DCNHMP). The DCNHMP contains additional information to support the Federal Emergency Management Agency's (FEMA) recognition of the plan (including this annex) as the formal natural hazard mitigation plan for the county and participating local governments. This annex will be valid for as long as FEMA approves the DCNHMP. The strategies adopted in this annex are designed to guide community efforts to reduce risks from natural hazards. These strategies work in conjunction with neighboring communities and Dane County government to reduce risks from natural hazards.

COMMUNITY PROFILE

The Town of Springfield, located in the northwestern section of the County, Wisconsin is predominately a farming community. The Town is about six miles square bordering both sides of U.S. Hwy. 12. The predominant land use is agriculture. The Town also has considerable woodlands and other open spaces. Single-family and two-family homes constitute the remainder of uses with a number of industrial activity.

As of 2020, the Town of Springfield has 1,116 households, with an average of 2.68 people per household. The municipal population data provided by the American Community Survey, a product of the US Census Bureau, indicates that the 2019 population estimates for Town of Springfield is comprised of 2,920 people. Table 1 shows the population profile by age for Town of Springfield.

Table 1 Population Profile of Town of Springfield, Dane County

Category	Number	Percent
Total population	**2,920**	**100%**
Under 5 years	118	4.0%
5 to 9 years	128	4.4%
10 to 14 years	215	7.4%
15 to 19 years	213	7.3%
20 to 24 years	136	4.7%
25 to 29 years	109	3.7%
30 to 34 years	164	5.6%
35 to 39 years	143	4.9%
40 to 44 years	126	4.3%
45 to 49 years	259	8.9%
50 to 54 years	164	5.6%
55 to 59 years	324	11.1%
60 to 64 years	268	9.2%
65 to 69 years	172	5.9%
70 to 74 years	175	6.0%
75 to 79 years	67	2.3%
80 to 84 years	82	2.8%
85 years and over	57	2.0%

Data Source: 2019 ACS Estimates - U.S. Census

Growth & Development Trends

Table 2-3 illustrates how the entire Town of Springfield has grown in terms of population and number of households between 2010 and 2020. Housing data is to 2020 due to data availability. This data may differ from the 2019 Census Population Estimates, due to sampling differences and margin of error. Table 2-3 is drawn from the Wisconsin Department of Administration.

Table 2 Town of Springfield Change in Population and Households, 2010-2020

2010 Population	2020 Population	Percent Change (%) 2010-2020	2010 # of Households	2020 # of Households	Percent Change (%) 2010-2020
2,734	2,957	8.15%	1,014	1,065	5.02%

Data Source: Demographic Services Center, Wisconsin Department of Administration, 2021

Table 3 Town of Springfield Population Projections, 2020-2040 11.79 4.07

Population Projection	2020	2025	2030	2035	2040
Increase by half of percent of change (8.15%/2) every 5 years	2,957	3,077	3,202	3,332	3,467

Data Source: Demographic Services Center, Wisconsin Department of Administration, 2021

Note: Population estimates offered by the U.S. Census Bureau's American Community Survey may differ from the WDOA data, due to sourcing, margin of error, and data availability.

Population Summary

Tables 4-7 illustrates key population demographics within the Town of Springfield. Key demographics include: (1) Disability Characteristics, (2) Federal Income Poverty Levels, (3) Educational Attainment, and (4) Household Language with English Speaking Capabilities. Due to data availability, all key demographic information has been provided by the American Community Survey (ACS) 2019 estimates. The ACS is a self-reported survey and may include total sample size differences and statistical margin of error.

Table 4 Town of Springfield, Dane County – Disability Characteristics by Detailed Age

Category	Number	Percent
Total of Residents with Self-Identified Disabilities	**375**	**100%**
With a hearing difficulty	**77**	**20.5%**
Population under 18 years	5	-
Population 18 to 64 years	18	-
Population 65 years and over	54	-
With a vision difficulty	**18**	**4.8%**
Population under 18 years	7	-
Population 18 to 64 years	7	-
Population 65 years and over	4	-
With a cognitive difficulty	**71**	**18.9%**
Population under 18 years	11	-
Population 18 to 64 years	40	-
Population 65 years and over	20	-
With an ambulatory difficulty	**96**	**25.6%**
Population under 18 years	7	-
Population 18 to 64 years	22	-
Population 65 years and over	67	-
With a self-care difficulty	**46**	**12.3%**
Population under 18 years	7	-
Population 18 to 64 years	22	-
Population 65 years and over	17	-
With an independent living difficulty	**67**	**17.9%**
Population 18 to 64 years	23	-
Population 18 to 34 years	9	-
Population 65 years and over	44	-

Data Source: 2019 ACS Estimates - U.S. Census

Table 5.1: Town of Springfield, Dane County – Federal Income Poverty Levels (FIPL) by Families Summary

Category	Number of Families
50 percent of poverty level	20
125 percent of poverty level	35
150 percent of poverty level	52
185 percent of poverty level	60
200 percent of poverty level	64
300 percent of poverty level	159
400 percent of poverty level	243
500 percent of poverty level	320

Data Source: 2019 ACS Estimates - U.S. Census

Note: Use table 5.2 to interpret table 5.1:

5.1 identifies the *total number of families* (regardless of size) by percentage.

5.2 identifies *family size* in relation to annual family income and the percentage category of the FIPL.

Table 5.2: Town of Springfield, Dane County – Annual Federal Income Poverty Level Guide

Family Size	50%	100%	125%	150%	185%	200%	300%	400%	500%
1	$6,440	$12,880	$16,100	$19,320	$23,828	$25,760	$38,640	$51,520	$64,400
2	$8,710	$17,420	$21,775	$26,130	$32,227	$34,840	$52,260	$69,680	$87,100
3	$10,980	$21,960	$27,450	$32,940	$40,626	$43,920	$65,880	$87,840	$109,800
4	$13,250	$26,500	$33,125	$39,750	$49,025	$53,000	$79,500	$106,000	$132,500
5	$15,520	$31,040	$38,800	$46,560	$57,424	$62,080	$93,120	$124,160	$155,200
6	$17,790	$35,580	$44,475	$53,370	$65,823	$71,160	$106,740	$142,320	$177,900

Data Source: dhs.wisconsin.gov

Table 6: Town of Springfield, Dane County – Educational Attainment by Householders

Category	Number	Percent
Total of Householders	**845**	**100%**
Less than high school graduate	28	3.3
High school graduate (includes equivalency)	270	32.0
Some college, associate's degree	161	19.1
Bachelor's degree or higher	386	45.7

Data Source: 2019 ACS Estimates - U.S. Census

Table 7: Household Language & English Speaking Capabilities

Category	Number	Percent
Total of Households	**1,075**	**100%**
English only	**999**	**92.9%**
Spanish:	**56**	**5.2%**
Limited English speaking household	13	-
Not a limited English speaking household	43	-
Other Indo-European languages:	**10**	**0.9%**
Limited English speaking household	0	-
Not a limited English speaking household	10	-
Asian and Pacific Island languages:	**3**	**0.3%**
Limited English speaking household	0	-
Not a limited English speaking household	3	-
Other languages:	**7**	**0.7%**
Limited English speaking household	0	-
Not a limited English speaking household	7	-

Data Source: 2019 American Community Survey

Note: Population estimates offered by the U.S. Census Bureau's American Community Survey may differ from the WDOA data, due to sourcing, margin of error, and data availability.

Asset Inventory

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

General Property

Table 8 Property Exposure Summary

Property Type	Parcel Count	Improved Land Count	Improved Land Value ($)	Content Value ($)	Total Value ($)
Total	**2,644**	**2,627**	**665,211,400**	**332,605,700**	**997,817,100**
Agriculture	1,011	1,011	250,456,800	125,228,400	375,685,200
Industrial	14	14	2,559,800	1,279,900	3,839,700
Residential	1,521	1,521	372,521,000	186,260,500	558,781,500
Utility	8	8	61,200	30,600	91,800
Commercial	73	73	39,612,600	19,806,300	59,418,900
Other	2	o	o	0	0
Institutional/ Governmental	15	o	0	0	0

Data Source: Dane County Land Information Office, December 2021

Critical Facilities

The Town of Springfield has identified the critical facilities important to protect from disaster impacts. These are collected in Table 9. Table 9 is based on GIS data inventories from Dane County and information gathered from the Town. No further supplemental data was provided by the community through the Data Collection Guide.

Table 9 Critical Facility Summary/Essential Infrastructure

Facility	Type*	No. of Facilities	Replacement Value ($)
Town Garage, Hall & Salt Shed	E1	1	2 million
Town Roads – 62 miles	E1	N/A	62 million
Cell Towers – 2	E1	2	2 million
Wind Turbines – 6	E1	6	20 million
RNG Facility	E1 & HM	1	100 million
RNG Solar	E1	1	3 million
St. Martins Church	VF	1	1.3 million
St. Peters Church	VF	1	1.1 million
St. Peters School	VF	3	1 million
St. Andrews School	VF	1	5 million
Don's Mobile Manor-manufactured home comm.	VF	1	3 million
Pheasant Branch Watershed	NA	1	N/A
Farmland	NA	1	N/A
Waunakee Marsh	NA	1	N/A
*EI: Essential Infrastructure; VF: Vulnerable Facilities; HM: Hazardous Materials Facilities			

Data Source: 2021 Town of Springfield Data Collection Guide

Other Assets

Other assets help define a community beyond the current composition of the Town of Springfield. 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 Springfield has not identified any other assets.

VULNERABILITY ASSESSMENT

A hazard identification and vulnerability analysis was completed for the Town of Springfield using the same methodology in the County's 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 10 outlines the hazard identification for the Town of Springfield based on the Data Collection Guide issued in 2021. The Data Collection Guide listed all of the hazards that could impact Dane County. The purpose of this worksheet was to identify and rank the hazards and vulnerabilities specific to the jurisdiction. Brooklyn's planning team members were asked to complete the matrix by ranking each category on a scale of 0 to 5 based on the experience and perspective of each planning team member. A ranking of 0 indicated "no concern" while a ranking of 5 indicated "highest concern." This matrix appears as Table 10. This matrix reflects the significance of the hazards relative to one another as perceived by the Example's planning team.

This matrix reflects that the Town of Springfield is most vulnerable to tornadoes, wind storms and floods. The vulnerability established here is a qualitative assumption based on the impacts, geographic extent, probability of future occurrence, and magnitude/severity.

Table 10: Vulnerability Assessment Matrix for the Town of Springfield

Name of Jurisdiction: Town of Springfield										
Hazard	**Hazard Attributes**			**Impact Attributes**						
				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	**Total of Row Values**
	(1-5)	*(1-5)*	*(1-5)*	*(0-5)*	*(0-5)*	*(0-5)*	*(0-5)*	*(0-5)*	*(0-5)*	
Dam/Levee failure	1	1	3	4	4	4	4	3	4	28
Extreme Cold	5	5	5	2	1	4	3	2	4	31
Extreme Heat	5	4	5	1	0	4	3	2	3	27
Drought	4	4	4	1	0	2	3	2	2	22
Expansive soils	2	4	4	2	1	2	2	1	2	20
Flood	3	4	4	2	3	4	4	3	4	31
Fog	1	3	3	1	0	1	2	1	2	14
Hail Storm	3	4	4	2	1	2	2	1	1	20
Landslide	1	1	3	1	1	3	3	2	1	16
Lightning	1	3	4	2	3	3	2	2	5	25
Tornado	2	2	4	4	4	4	4	3	5	32
Wildfire	2	2	4	3	4	3	4	3	4	29
Windstorm	5	3	4	3	3	3	3	2	4	30
Winter Storm	5	5	5	2	1	3	3	3	5	32

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 Town of Springfield. Table 11 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 11 Hazard Vulnerability Specifics

Hazard	Populations	Structures	Critical Facilities	Future Damage Potential
Dam Failure	See Tables 4-7 Population	See Property Exposure table 8	See Critical Facility Inventory Table(s)	Specifics unknown; See hazard profile in County Plan
Drought	Moderate	Minimal	None	Specifics unknown; See hazard profile in County Plan
Flooding	See Tables 13-14 below	See Tables 13-14 below	See Tables 13-14 below	See Tables 13-14 below
Fog	Minimal	Minimal	None	Specifics unknown; See hazard profile in County Plan
Hailstorm	Moderate	Moderate	Minimal	Specifics unknown; See hazard profile in County Plan
Landslide/ Sinkholes/ Erosion	See Tables 4-7 Population	Minimal	Minimal	Specifics unknown; See hazard profile in County Plan
Lightning	See Tables 4-7 Population	Moderate	See Critical Facility Inventory Table(s)	Specifics unknown; See hazard profile in County Plan
Severe Cold	See Tables 4-7 Population	Moderate	Minimal	Specifics unknown; See hazard profile in County Plan
Severe Heat	See Tables 4-7 Population	Minimal	None	Specifics unknown; See hazard profile in County Plan
Winter Storm	See Tables 4-7 Population	Moderate	Minimal	Specifics unknown; See hazard profile in County Plan
Tornado	See Table 15 below	See Table 15 below	See Table 15 below	See Table 15 below
Wildfire	See Tables 4-7 Population	See Property Exposure table 8	See Critical Facility Inventory Table(s)	Specifics unknown; See hazard profile in County Plan
Windstorm	See Tables 4-7 Population	See Property Exposure table 8	See Critical Facility Inventory Table(s)	Specifics unknown; See hazard profile in County Plan

Data Source: 2021 Town of Springfield Data Collection Guide – Prepared by DCEM

Previous Hazard Events

Through the Data Collection Guide, the Town of Springfield noted specific historic hazard events to include in the community profile. These events have been incorporated into the appropriate hazard chapters in the main mitigation 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. The events noted by this jurisdiction in the Data Collection Guide include:

Town of Springfield Historic Natural Hazards

Table 12 Town of Springfield Historic Natural Hazards

Natural Hazard	Date	Impacted Structures	Comprehensive Harm to Jurisdiction	Other reported Losses (Fiscal reports, programs, etc)	Comments
Flood	08/2018	Multiple Impacted Structures	Basements flooding, field and crop damage.	N/A	FEMA & State assistance = $45,538
Winter Storm	02/2011	Multiple Impacted Structures	Travel and activity impeded for multiple days during snow clean up and removal, with numerous businesses closing during storm and clean up. Schools were also closed.	N/A	13-14" in 36 hours
Flood	06/2018	Multiple Impacted Structures	Significant rainfall over a number of days in the central and southwestern areas of the state caused dam failure and river flooding and rising water tables. Significant Crop damage, road washout, ditch erosion and culvert failure.	N/A	N/A
Flood	2001	N/A	9+" of rain fall in a day.	N/A	N/A

Data Source: 2021 Town of Springfield Data Collection Guide

Flood Hazard

Structures and Properties in the Floodplain

Refer to the flood profile in the mitigation plan for a description of the methodology used to identify potentially flood-prone properties. Figure 1 shows mapped floodplains, future growth areas, and critical or vulnerable facilities. Tables 13 and 14 outline the primary structures on them within the Town of Springfield, Dane County. Potential number of individuals at risk figures are based on primary residential structures and the average household size within Dane County (2.37 people as of 2021). Estimated loss potentials for all structures on the floodway can be found within section 4.6 in chapter 4 of the county plan.

Table 13 Primary Structures in the 100 Year Floodplain

Residential Structures in 100 yr. Floodway	Non-Residential Structures in 100 yr. Floodplain	Total Structures in 100 yr. Floodplain	Potential # of People at Risk in 100 yr. Floodplain	Total Assessed Values ($) of Structures in 100 yr. Floodplain
0	0	0	0	$0

Source: Analysis based on Dane County Land Information Office Data

Table 14 Primary Structures in the 500 Year Floodplain

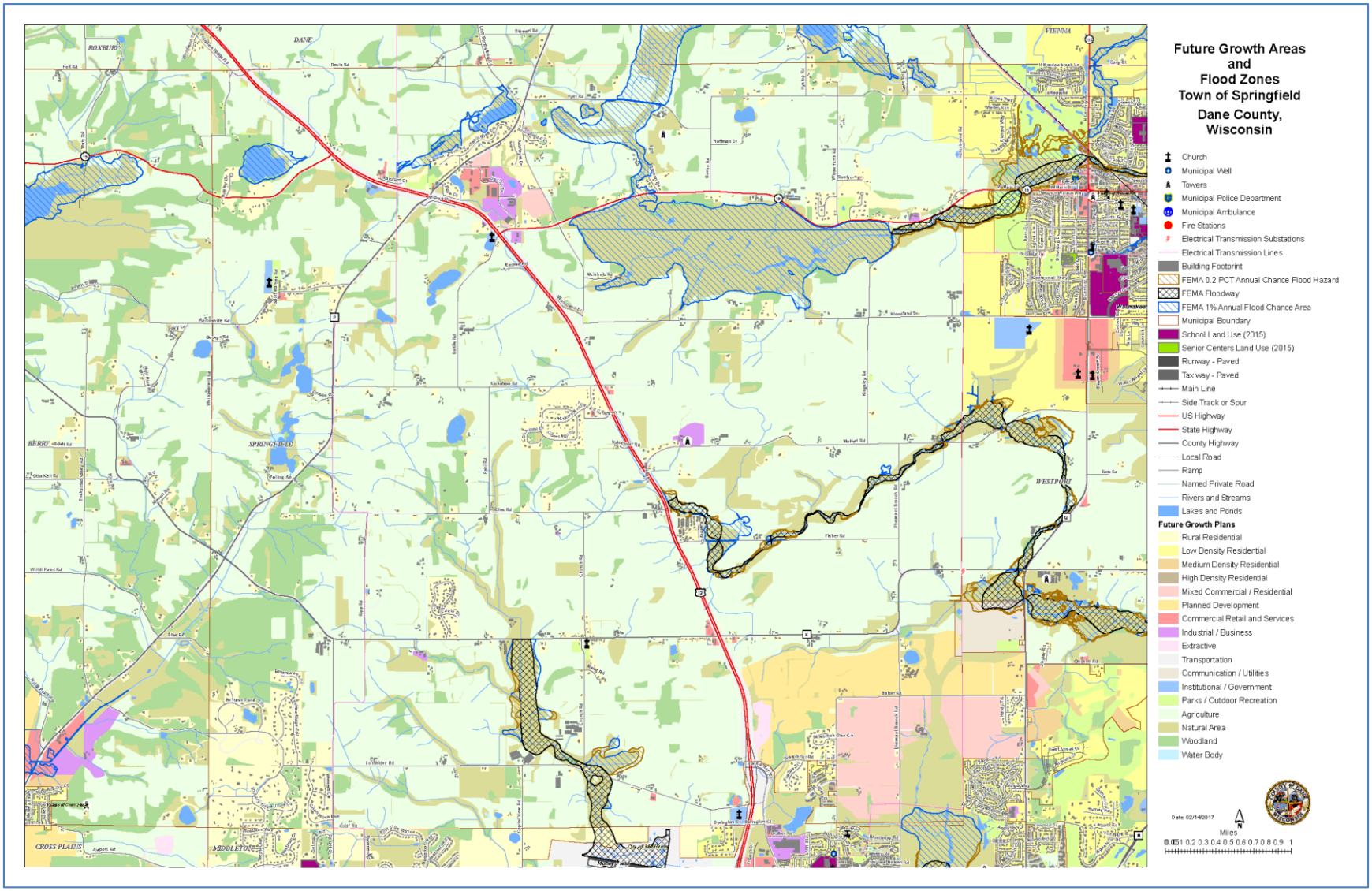
Residential Structures in 500 yr. Floodway	Non-Residential Structures in 500 yr. Floodplain	Total Structures in 500 yr. Floodplain	Potential # of People at Risk in 500 yr. Floodplain	Total Improved Values ($) of Structures in 500 yr. Floodplain
4	1	5	9	N/A

Source: Analysis based on Dane County Land Information Office Data

Repetitive Loss Properties and Flood Insurance Polices

- Repetitive loss properties have not been reported in the Town of Springfield, Dane County.
- The Town of Springfield has 0 flood insurance policies in force within Dane County.

Figure 1 Flood Hazards and Future Land Use 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 2023 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 15 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
2.33%	2,627	61	997,817,100	23,292,384	11,646,192	5,823,096	1%

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

Problems or Additional Vulnerability Issues

The Town of Springfield's Data Collection Guide issued in 2021 listed:

- **Hazard Concern (i.e. vulnerable populations)**:
  - The manufactured home community, many of which are low income &/or senior citizens, is especially vulnerable to tornados, wind storms, and freezing cold.
- **Growth Trends:**
  - Growth was stagnant from 2000 to 2010 and experienced an 8% from 2010 to 2020. Due to Springfield's location at the edge of growing urban communities, population is expected to grow, but be held in check by a residential density program developed and adopted to maintain the agricultural and rural character of the town. Planned growth will be directed to already developed areas of town as much as possible, and away from low lying areas susceptible to flooding.

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 Springfield.

Mitigation Capabilities Summary

Table 16 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 Springfield.

Table 16 Town of Springfield Regulatory Mitigation Capabilities

Regulatory Tools (ordinances, codes, plans)	Yes/No	Comments
Existing Natural Hazard Mitigation Plan	**Y**	Dane County
General or Comprehensive plan	**Y**	www.town.springfield.wi.us
Zoning ordinance	**Y**	www.town.springfield.wi.us/land-use
Subdivision ordinance	**Y**	www.town.springfield.wi.us/ordinances/
Growth management ordinance	**Y**	aka Transfer of Development Rights Program www.town.springfield.wi.us/land-use/program-trannsfer-development/
Shoreland / wetland zoning ordinance	**N**	Dane County
Floodplain zoning ordinance	**N**	Dane County
FEMA / NFIP Community Rating System	**N**	N/A
Other special purpose ordinance (stormwater, steep slope, wildfire)		Stormwater – Dane County; Development prohibited on slopes >20% per Land Development Ordinance
Building code	**Y**	www.town.springfield.wi.us/ordinances/
Fire department ISO rating	**N**	N/A
Climate change Impact program	**N**	N/A
Erosion or sediment control program	**N**	Dane County
Stormwater management program	**N**	Dane County
Site plan review requirements	**Y**	www.town.springfield.wi.us – Zoning and Design Review Ordinances
Capital improvements plan	**N**	N/A
Economic development plan	**N**	N/A
Local emergency operations plan	**N**	N/A
Other special plans	**N**	N/A
Flood insurance study or other engineering	**N**	N/A

Regulatory Tools (ordinances, codes, plans)	Yes/No	Comments
study for streams		
Elevation certificates (for floodplain development)	**N**	N/A
Climate Action Plan	**N**	N/A

Data Source: Town of Springfield Data Collection Guide, 2021

Table 17 identifies the personnel responsible for mitigation and loss prevention activities as well as related data and systems in the Town of Springfield.

Table 17 Responsible Personnel and Departments for the Town of Springfield

Personnel Resources	Yes/No	Department/Position	Comments
Planner/engineer with knowledge of land development/land management practices	Y	Town Planner	Per diem
Engineer/professional trained in construction practices related to buildings and/or infrastructure	Y	Per diem engineer & building inspector	Per diem & outside contractor
Planner/engineer/scientist with an understanding of natural hazards	N	N/A	N/A
Personnel skilled in GIS	Y	Engineer	Per diem
Full time building official	Y	Outside vendor, not town staff.	
Personnel skilled in Climate resilience	N	N/A	Through Dane County
Floodplain manager	N	N/A	Through Dane County
Emergency manager	N	N/A	Through Dane County
Real estate acquisition personnel	N	N/A	N/A
Grant writer	N	N/A	N/A
Other personnel	Y	Road Patrolman	N/A
GIS Data Resources (Hazard areas, critical facilities, land use, building footprints, etc.)	N	N/A	Through Dane County
Warning Systems/Services (Reverse 9-11, cable override, outdoor warning signals)	N	N/A	Tornado siren through Dane County Emergency Management

Data Source: Town of Springfield Data Collection Guide 2021

Table 18 identifies financial tools or resources that the Town of Springfield could potentially use to help fund mitigation activities.

Table 18 Financial Resources for the Town of Springfield

Financial Resources	Accessible/Eligible to Use (Yes/No)
Community Development Block Grants	Y
Capital improvements project funding	Y
Authority to levy taxes for specific purposes	Y
Dedicated funding for land, easement or conservation easement acquisition	N
Fees for water, stormwater, sewer, gas, or electric services	N
Impact fees for new development	N
Incur debt through general obligation bonds	Y
Incur debt through special tax bonds	Y
Incur debt through private activities	Y
Withhold spending in hazard prone areas	Y

Data Source: Town of Springfield Data Collection Guide

National Flood Insurance Program Participation

The Town of Springfield is not currently participating in the National Flood Insurance Program.

MITIGATION STRATEGIES

Below are the identified mitigation strategies developed by the Town of Springfield's NHMP steering committee. Mitigation is defined as a sustained action to reduce or eliminate risk to people and property from hazards and their effects. A *mitigation strategy* is a long-term vision for risk reduction in local jurisdictional or regional planning. A mitigation strategy can be achieved by a list of overall improvements to achieve (goals) that provide direction for community efforts to reduce potential losses identified in the risk assessment.

Strategy #1	**Drainage Districts**
Prevention	Natural Resource Protection
Property Protection	Critical Facilities Protection
Public Education & Awareness	Structural Project
The development of drainage districts will provide a coordinated drainage plan for an area to route water away from structures and vulnerable assets. The drainage route would utilize tools to slow the flow of water to curb erosion, while facilitating the flow off and away from homes, businesses, ag land and natural resources.	
Defined steps to achieving this mitigation strategy	
1. Develop drainage routes for flood prone areas, identifying holding areas and locations to implement velocity restraints on flowage. a. *Responsible Party* – Town Board, Town Planner and Hydrology specialist/engineers b. *Funding source* – Grants, loans and municipal budget c. *Completion date* – Complete within the first month of project initiation after funding.	
2. Acquire any property outside of the ROW necessary to direct and hold water. a. *Responsible Party* – Town Board b. *Funding source* – Municipal budget, grants, loans c. *Completion date* – Within two years of drainage route demarcation, as funding allows.	

Strategy #1	Drainage Districts

3. Engage reputable contractors to work with Town engineers to implement the improvements.
   a. *Responsible Party* – Town Board and town engineer
   b. *Funding source* – Municipal budget, grants, loans
   c. *Completion date* – Within one year of land acquisition.

Strategy #2	Extreme Weather Shelter
Prevention	Natural Resource Protection
Property Protection	**Critical Facilities Protection**
Public Education & Awareness	**Structural Project**

The Town of Springfield's mobile home residents and elderly population are exceptionally vulnerable to extreme weather, such as significant snow accumulation, wind storms or tornados, extreme temperatures, and flooding.

The Town would like to construct a multi-use town facility that can serve as a storm shelter and offer accommodations to at least 10% of the town's residents. It would provide physical safety, as well as be equipped with emergency generator power and emergency supplies. The structure will house the Town administrative offices, host town meetings and elections, and be used for community events or rented by town residents for private use.

Defined steps to achieving this mitigation strategy

1. Identify the community's facility needs.
   a. *Responsible Party* – Town Board and town planner
   b. *Funding source* – Municipal budget.
   c. *Completion date* – Within three months of project initiation.

2. Commission engineering plans.
   d. *Responsible Party* – Town Board and Town Engineer
   e. *Funding source* – Municipal budget
   f. *Completion date* – Within 30 days of needs identification, or as budget allows.

3. Contract with suitable bidder for building construction.
   a. *Responsible Party* – Town Board and Town Engineer
   b. *Funding source* – Municipal budget, grants, loans.
   c. *Completion date* – Within one year of contract award.

Strategy #2	Extreme Weather Shelter

4. Equip with backup power and heating, emergency supplies and respite equipment.
   a. *Responsible Party* – Town Board, town staff
   b. *Funding source* – Municipal budget, grants, loans.
   c. *Completion date* – Upon construction completion.

Strategy #3	**Flood Mitigation**
Prevention	**Natural Resource Protection**
Property Protection	Critical Facilities Protection
Public Education & Awareness	**Structural Project**
Provide Flood protection through mitigation activities.	
Defined steps to achieving this mitigation strategy	

1. Identify other stakeholders: Local, state and federal governments, farms, businesses, non-profits, etc.
   a. *Responsible Party* – Plan Commission
   b. *Funding source* – N/A
   c. *Completion date* – Ongoing.

2. Study, develop and design a stormwater storage and conveyance system to hold and slow the flow of water through the town of Springfield into adjoining municipalities to limit flooding.
   g. *Responsible Party* – Professional hydrologists and engineers whose recruitment and oversite will be dependent on participant stakeholders formed into appropriate work group or government committee.
   h. *Funding source* – Multi-jurisdictional.
      Local and state governments, grants, capital budgets, loans, etc.
   i. *Completion date* – Within two years of initiation.

Strategy #3	Flood Mitigation
3. Review and schedule of implementation of recommendations. Recommendations may include procuring land for detention, installing vegetation and breaker rock, terracing, diversions, etc. d. *Responsible Party* – Work group/committee. e. *Funding source* – Multi-jurisdictional. f. *Completion date* – Within six months of project proposal.	
4. Implementation of recommendations. d. *Responsible Party* – Work group/committee. e. *Funding source* – Multi-jurisdictional. f. *Completion date* – As funding allows.	

Strategy #4	Flood Prevention & Structural Project
Prevention	Natural Resource Protection
Property Protection	Critical Facilities Protection
Public Education & Awareness	**Structural Project**

Town roads would no longer be subject to flooding and large-scale washouts which hinder transportation, commerce, and accessibility.

Defined steps to achieving this mitigation strategy

1. Identify the roads subject to regular flooding and erosion in large rain and/or snow melt events.
   a. *Responsible Party* – Road patrolman.
   b. *Funding source* – Staff funding.
   c. *Completion date* – Within one year.

2. Develop solutions that may include a combination of ditching, culverts, raising of the road bed, diversion and retention.
   j. *Responsible Party* – Town engineers, road patrolman, town board
   k. *Funding source* – Municipal budget.
   l. *Completion date* – Within 6 months of identifying flood prone areas,.

3. Implement recommendations as able.
   g. *Responsible Party* – Town Board.
   h. *Funding source* – Municipal budget, capital budget, grants, loans.
   i. *Completion date* – Ongoing, as budgetary constraints allow.

Dane County Natural Hazard Mitigation Plan

Town of Vermont Annex

Summer 2022

Town of Vermont Annex

This annex is a part of the Dane County Natural Hazard Mitigation Plan (DCNHMP). The DCNHMP contains additional information to support the Federal Emergency Management Agency's (FEMA) recognition of the plan (including this annex) as the formal natural hazard mitigation plan for the county and participating local governments. This annex will be valid for as long as FEMA approves the DCNHMP. The strategies adopted in this annex are designed to guide community efforts to reduce risks from natural hazards. These strategies work in conjunction with neighboring communities and Dane County government to reduce risks from natural hazards.

COMMUNITY PROFILE

The Town of Vermont, located in the northwestern section of the County, Wisconsin is predominately a farming community. The Town is about six miles square bordering both sides of U.S. Hwy. 12. The predominant land use is agriculture. The Town also has considerable woodlands and other open spaces. Single-family and two-family homes constitute the remainder of uses with a number of industrial activity.

As of 2020, the Town of Vermont has 1,116 households, with an average of 2.68 people per household. The municipal population data provided by the American Community Survey, a product of the US Census Bureau, indicates that the 2019 population estimates for the Town of Vermont is 836 people. Table 1 shows the population profile by age for the town.

Table 1 Population Profile of Town of Vermont, Dane County

Category	Number	Percent
Total population	**836**	**100%**
Under 5 years	34	4.1%
5 to 9 years	40	4.8%
10 to 14 years	45	5.4%
15 to 19 years	33	3.9%
20 to 24 years	40	4.8%
25 to 29 years	29	3.5%
30 to 34 years	34	4.1%
35 to 39 years	42	5.0%
40 to 44 years	30	3.6%
45 to 49 years	55	6.6%
50 to 54 years	75	9.0%
55 to 59 years	107	12.8%
60 to 64 years	123	14.7%
65 to 69 years	73	8.7%
70 to 74 years	38	4.5%
75 to 79 years	22	2.6%
80 to 84 years	13	1.6%
85 years and over	3	0.4%

Data Source: 2019 ACS Estimates - U.S. Census

Growth & Development Trends

Table 2-3 illustrates how the entire Town of Vermont has grown in terms of population and number of households between 2010 and 2020. Housing data is up to year 2020 due to data availability. Table 2-3 is drawn from the Wisconsin Department of Administration.

Table 2 Town of Vermont Change in Population and Households, 2010-2020

2010 Population	2020 Population	Percent Change (%) 2010-2020	2010 # of Households	2020 # of Households	Percent Change (%) 2010-2020
819	844	3.05%	325	337	3.69%

Data Source: Demographic Services Center, Wisconsin Department of Administration, 2021

Table 3 Town of Vermont Population Projections, 2020-2040 11.79 4.07 1.5

Population Projection	2020	2025	2030	2035	2040
Increase by half of percent of change (3.05%/2) every 5 years	844	856	868	881	894

Data Source: Demographic Services Center, Wisconsin Department of Administration, 2021

Note: Population estimates offered by the U.S. Census Bureau's American Community Survey may differ from the WDOA data, due to sourcing, margin of error, and data availability.

Population Summary

Tables 4-7 illustrates key population demographics within the Town of Vermont. Key demographics include: (1) Disability Characteristics, (2) Federal Income Poverty Levels, (3) Educational Attainment, and (4) Household Language with English Speaking Capabilities. Due to data availability, all key demographic information has been provided by the American Community Survey (ACS) 2019 estimates. The ACS is a self-reported survey and may include total sample size differences and statistical margin of error.

Table 4 Town of Vermont, Dane County – Disability Characteristics by Detailed Age

Category	Number	Percent
Total of Residents with Self-Identified Disabilities	**91**	**100%**
With a hearing difficulty	**15**	**16.%**
Population under 18 years	0	-
Population 18 to 64 years	8	-
Population 65 years and over	7	-
With a vision difficulty	**6**	**6.6%**
Population under 18 years	0	-
Population 18 to 64 years	6	-
Population 65 years and over	0	-
With a cognitive difficulty	**23**	**25.3%**
Population under 18 years	0	-
Population 18 to 64 years	17	-
Population 65 years and over	6	-
With an ambulatory difficulty	**16**	**17.6%**
Population under 18 years	0	-
Population 18 to 64 years	9	-
Population 65 years and over	7	-
With a self-care difficulty	**10**	**11.0%**
Population under 18 years	0	-
Population 18 to 64 years	8	-
Population 65 years and over	2	-
With an independent living difficulty	**21**	**23.1%**
Population 18 to 64 years	15	-
Population 18 to 34 years	2	-
Population 65 years and over	6	-

Data Source: 2019 ACS Estimates - U.S. Census

Table 5.1: Town of Vermont, Dane County – Federal Income Poverty Levels (FIPL) by Families Summary

Category	Number of Families
50 percent of poverty level	5
125 percent of poverty level	7
150 percent of poverty level	7
185 percent of poverty level	9
200 percent of poverty level	15
300 percent of poverty level	50
400 percent of poverty level	84
500 percent of poverty level	111

Data Source: 2019 ACS Estimates - U.S. Census

Note: Use table 5.2 to interpret table 5.1:

5.1 identifies the *total number of families* (regardless of size) by percentage.

5.2 identifies *family size* in relation to annual family income and the percentage category of the FIPL.

Table 5.2: Town of Vermont, Dane County – Annual Federal Income Poverty Level Guide

Family Size	50%	100%	125%	150%	185%	200%	300%	400%	500%
1	$6,440	$12,880	$16,100	$19,320	$23,828	$25,760	$38,640	$51,520	$64,400
2	$8,710	$17,420	$21,775	$26,130	$32,227	$34,840	$52,260	$69,680	$87,100
3	$10,980	$21,960	$27,450	$32,940	$40,626	$43,920	$65,880	$87,840	$109,800
4	$13,250	$26,500	$33,125	$39,750	$49,025	$53,000	$79,500	$106,000	$132,500
5	$15,520	$31,040	$38,800	$46,560	$57,424	$62,080	$93,120	$124,160	$155,200
6	$17,790	$35,580	$44,475	$53,370	$65,823	$71,160	$106,740	$142,320	$177,900

Data Source: dhs.wisconsin.gov

Table 6: Town of Vermont, Dane County – Educational Attainment by Householders

Category	Number	Percent
Total of Householders	**275**	**100%**
Less than high school graduate	4	1.5%
High school graduate (includes equivalency)	35	12.7%
Some college, associate's degree	72	26.2%
Bachelor's degree or higher	164	59.6%

Data Source: 2019 ACS Estimates - U.S. Census

Table 7: Town of Vermont, Dane County – Household Language & English Speaking Capabilities

Category	Number	Percent
Total of Households	**352**	**100%**
English only	**342**	**97.2%**
Spanish:	**0**	**0.0%**
Limited English speaking household	0	-
Not a limited English speaking household	0	-
Other Indo-European languages:	**6**	**1.7%**
Limited English speaking household	0	-
Not a limited English speaking household	6	-
Asian and Pacific Island languages:	**4**	**1.1%**
Limited English speaking household	0	-
Not a limited English speaking household	4	-
Other languages:	**0**	**0.0%**
Limited English speaking household	0	-
Not a limited English speaking household	0	-

Data Source: 2019 American Community Survey

Note: Population estimates offered by the U.S. Census Bureau's American Community Survey may differ from the WDOA data, due to sourcing, margin of error, and data availability.

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.

General Property

Table 8 Property Exposure Summary

Property Type	Parcel Count	Improved Land Count	Improved Land Value ($)	Content Value ($)	Total Value ($)
Total	**1,235**	**1,231**	**261,181,700**	**130,590,850**	**391,772,550**
Agriculture	552	552	94,006,900	47,003,450	141,010,350
Industrial	10	10	3,455,000	1727,500	5,182,500
Residential	651	651	156,934,000	78,467,000	235,401,000
Transportation	1	1	11,100	5,550	16,650
Utility	2	2	400,200	200,100	600,300
Commercial	4	3	1,662,300	831,150	2,493,450
Other	9	9	4,115,700	2,057,850	6,173,550
Institutional/ Governmental	6	3	596,500	298,250	894,750

Data Source: Dane County Land Information Office, December 2021

Critical Facilities

The Town of Vermont has identified the critical facilities important to protect from disaster impacts. These are collected in Table 9. Table 9 is based on GIS data inventories from Dane County and information gathered from the Town. No further supplemental data was provided by the community through the Data Collection Guide.

Table 9 Critical Facility Summary/Essential Infrastructure

Facility	Type*	No. of Facilities	Replacement Value ($)
Town Hall	EI	1	$201,000
Town Garage	EI	1	$313,700
Salt Shed	EI	1	$100,800
*EI: Essential Infrastructure; VF: Vulnerable Facilities; HM: Hazardous Materials Facilities			

Data Source: 2021 Town of Vermont Data Collection Guide

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 not identified any other assets.

VULNERABILITY ASSESSMENT

A hazard identification and vulnerability analysis was completed for the Town of Vermont using the same methodology in the County's 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 10 outlines the hazard identification for the Town of Vermont based on the Data Collection Guide issued in 2021. The Data Collection Guide listed all of the hazards that could impact Dane County. The purpose of this worksheet was to identify and rank the hazards and vulnerabilities specific to the jurisdiction. Brooklyn's planning team members were asked to complete the matrix by ranking each category on a scale of 0 to 5 based on the experience and perspective of each planning team member. A ranking of 0 indicated "no concern" while a ranking of 5 indicated "highest concern." This matrix appears as Table 10. This matrix reflects the significance of the hazards relative to one another as perceived by the Example's planning team.

This matrix reflects that the Town of Vermont is most vulnerable to winter storms, tornados, and wind storms. The vulnerability established here is a qualitative assumption based on the impacts, geographic extent, probability of future occurrence, and magnitude/severity.

Table 10: Vulnerability Assessment Matrix for the Vermont

Name of Jurisdiction: Town of Vermont										
Hazard	**Hazard Attributes**			**Impact Attributes**						
				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	**Total of Row Values**
	(1-5)	*(1-5)*	*(1-5)*	*(0-5)*	*(0-5)*	*(0-5)*	*(0-5)*	*(0-5)*	*(0-5)*	
Dam/Levee 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
Expansive soils	0	0	0	0	0	0	0	0	0	0
Flood	2	3	2	1	1	1	1	2	2	15
Fog	2	3	3	0	0	0	1	1	1	11
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	2	2	2	1	2	2	1	16
Windstorm	2	2	3	2	2	1	2	2	2	18
Winter Storm	3	3	2	2	2	1	2	2	2	19

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 Vermont. Table 11 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 11 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	None	None	None	Specifics unknown; See hazard profile in County Plan
Flooding	See Tables 13-14 below	See Tables 13-14 below	See Tables 13-14 below	See Tables 13-14 below
Fog	None	None	None	Specifics unknown; See hazard profile in County Plan
Hailstorm	Minimal	Moderate	Minimal	Specifics unknown; See hazard profile in County Plan
Landslide/ Sinkholes/ Erosion	None	None	None	Specifics unknown; See hazard profile in County Plan
Lightning	Minimal	Minimal	See Critical Facility Inventory Table(s)	Specifics unknown; See hazard profile in County Plan
Severe Cold	Minimal	Minimal	Minimal	Specifics unknown; See hazard profile in County Plan
Severe Heat	Minimal	Minimal	Minimal	Specifics unknown; See hazard profile in County Plan
Winter Storm	Minimal	Moderate	Moderate	Specifics unknown; See hazard profile in County Plan
Tornado	See Table 15 below	See Table 15 below	See Table 15 below	See Table 15 below
Wildfire	Minimal	Moderate	Moderate	Specifics unknown; See hazard profile in County Plan
Windstorm	Minimal	Moderate	Moderate	Specifics unknown; See hazard profile in County Plan

Data Source: 2021 Town of Vermont Data Collection Guide – Prepared by DCEM

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 main mitigation 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. The events noted by this jurisdiction in the Data Collection Guide include:

Town of Vermont Historic Natural Hazards

Table 12 Town of Vermont Historic Natural Hazards

Natural Hazard	Date	Impacted Structures	Comprehensive Harm to Jurisdiction	Other reported Losses (Fiscal reports, programs, etc)	Comments
Winter Storm	02/2008	N/A	Business at Tyrol Basin Ski & Snowboard area was impacted due to inability for cars to get to the facility but they were able to eventually open	N/A	N/A
Flood	06/2008	Multiple Impacted Structures	Wide-spread flooding with minimal damage	N/A	N/A
Flood	05/2000	Multiple Impacted Structures	Wide-spread flooding with moderate damage	N/A	N/A
Flood	08/2018	Multiple Impacted Structures	9+" of rain fall in a day. Wide-spread flooding with moderate impact	N/A	N/A

Data Source: 2021 Town of Vermont Data Collection Guide

Flood Hazard

Structures and Properties in the Floodplain

Refer to the flood profile in the mitigation plan for a description of the methodology used to identify potentially flood-prone properties. Figure 1 shows mapped floodplains, future growth areas, and critical or vulnerable facilities. Tables 13 and 14 outline the primary structures on them within Town of Vermont, Dane County. Potential number of individuals at risk figures are based on primary residential structures and the average household size within Dane County (2.37 people as of 2021). Estimated loss potentials for all structures on the floodway can be found within section 4.6 in chapter 4 of the county plan.

Table 13 Primary Structures in the 100 Year Floodplain

Residential Structures in 100 yr. Floodway	Non-Residential Structures in 100 yr. Floodplain	Total Structures in 100 yr. Floodplain	Potential # of People at Risk in 100 yr. Floodplain	Total Assessed Values ($) of Structures in 100 yr. Floodplain
20	1	21	47	$2,758,633

Source: Analysis based on Dane County Land Information Office Data

Table 14 Primary Structures in the 500 Year Floodplain

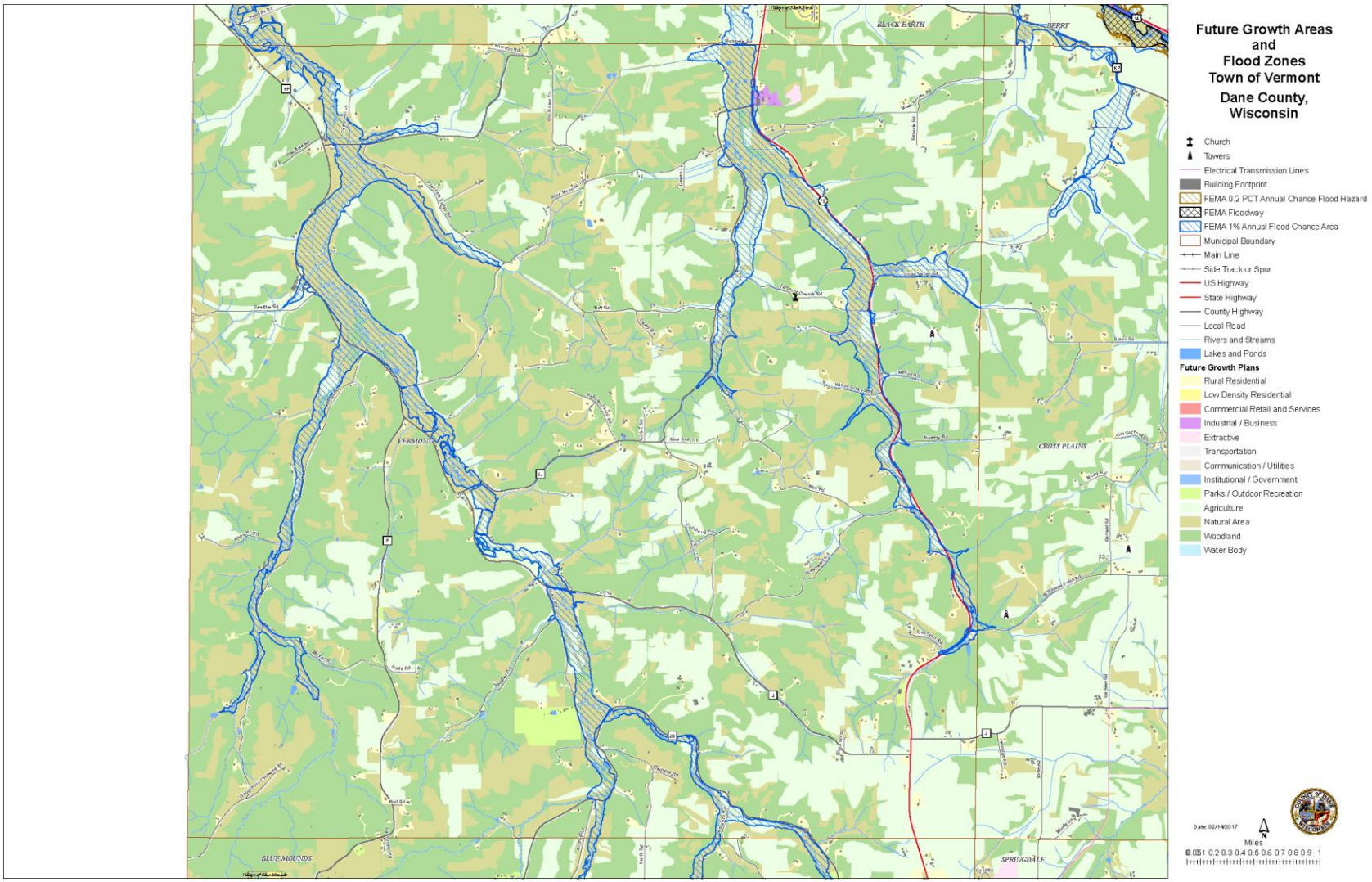
Residential Structures in 500 yr. Floodway	Non-Residential Structures in 500 yr. Floodplain	Total Structures in 500 yr. Floodplain	Potential # of People at Risk in 500 yr. Floodplain	Total Improved Values ($) of Structures in 500 yr. Floodplain
19	1	20	45	$2,046,424

Source: Analysis based on Dane County Land Information Office Data

Repetitive Loss Properties and Flood Insurance Polices

- Repetitive loss properties have not been reported in the Town of Vermont, Dane County.
- The Town of Vermont has 0 flood insurance policies in force within Dane County.

Figure 1 Flood Hazards and Future Land Use 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 2023 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 15 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%	1231	29	391,772,550	9,222,219	4,611,109	2,305,554	1%

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

Problems or Additional Vulnerability Issues

The Town of Vermont's Data Collection Guide issued in 2021 listed:

- **Growth Trends:**
  - There is a potential for Town of Vermont to have an increase in high-elevation building which could reduce the impact to homes from flood conditions but possibly increasing the risk of driveway/road washouts due to flooding. Homes at higher elevations may also increase the impact on residents from snowstorms. To minimize the impact on driveways/roads from flooding, Town of Vermont has planning regulations regarding increases in percentage.

- **Changes since 2018 DC NHMP Update:**
  - Since the DaneCom implementation has been completed, the Town of Vermont has added interoperable communication equipment to Town Hall as well as town vehicles.

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 16 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 16 Regulatory Mitigation Capabilities

Regulatory Tools (ordinances, codes, plans)	Yes/No	Comments
Existing Natural Hazard Mitigation Plan	Yes	Not currently on our website
General or Comprehensive plan	Yes	http://www.vermonttownship.com/land-use/comprehensive-plan
Zoning ordinance	Yes	http://www.vermonttownship.com/ordinances/land-division
Subdivision ordinance	Yes	http://www.vermonttownship.com/ordinances/land-division
Growth management ordinance	Yes	http://www.vermonttownship.com/ordinances/land-division
Shoreland / wetland zoning ordinance	No	Managed by Dane County Land and Water Resources
Floodplain zoning ordinance	No	Managed by Dane County Land and Water Resources
FEMA / NFIP Community Rating System	N/A	N/A
Other special purpose ordinance (stormwater, steep slope, wildfire)	Yes	http://www.vermonttownship.com/ordinances/roads-driveways
Building code	Yes	http://www.vermonttownship.com/ordinances/buildings
Fire department ISO rating	Yes	N/A
Climate change Impact program	No	N/A
Erosion or sediment control program	No	Managed by Dane County Land and Water Resources
Stormwater management program	No	Managed by Dane County Land and Water Resources
Site plan review requirements	Yes	Managed by the Town as well as Dane County Zoning
Capital improvements plan	No	N/A
Economic development plan	No	N/A
Local emergency operations plan	Yes	N/A
Other special plans	No	N/A
Flood insurance study or other engineering study for streams	No	N/A
Elevation certificates (for floodplain	No	N/A

Regulatory Tools (ordinances, codes, plans)	Yes/No	Comments
development)		
Climate Action Plan	No	N/A

Data Source: Town of Vermont Data Collection Guide, 2021

Table 17 identifies the personnel responsible for mitigation and loss prevention activities as well as related data and systems in the Town of Vermont.

Table 17 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	Town Planner	Per diem
Engineer/professional trained in construction practices related to buildings and/or infrastructure	Yes	Per diem engineer & building inspector	Per diem & outside contractor
Planner/engineer/scientist with an understanding of natural hazards	No	N/A	N/A
Personnel skilled in GIS	Yes	Engineer	Per diem
Full time building official	Yes	Outside vendor, not town staff.	
Personnel skilled in Climate resilience	No	N/A	Through Dane County
Floodplain manager	No	N/A	Through Dane County
Emergency manager	No	N/A	Through Dane County
Real estate acquisition personnel	No	N/A	N/A
Grant writer	No	N/A	N/A
Other personnel	Yes	Road Patrolman	N/A
GIS Data Resources (Hazard areas, critical facilities, land use, building footprints, etc.)	No	N/A	Through Dane County
Warning Systems/Services (Reverse 9-11, cable override, outdoor warning signals)	No	N/A	Tornado siren through Dane County Emergency Management

Data Source: Town of Vermont Data Collection Guide 2021

Table 18 identifies financial tools or resources that the Town of Vermont could potentially use to help fund mitigation activities.

Table 18 Financial Resources for the Town of Vermont

Financial Resources	Accessible/Eligible to Use (Yes/No)
Community Development Block Grants	Yes
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	Yes
Dedicated funding for land, easement or conservation easement acquisition	No
Fees for water, stormwater, sewer, gas, or electric services	No
Impact fees for new development	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activities	Yes
Withhold spending in hazard prone areas	Yes

Data Source: Town of Vermont Data Collection Guide

National Flood Insurance Program Participation

The Town of Vermont is not currently participating in the National Flood Insurance Program.

Public Involvement Activities

The Town of Vermont provided a publically noticed listening session with the Town of Vermont Board Committee on November 8, 2021. It was noticed on the Town website. An agenda discussing the draft mitigation strategies was provided. No changes were made to the initial draft mitigation strategies.

MITIGATION STRATEGIES

Below are the identified mitigation strategies developed by the Town of Vermont's NHMP steering committee. Mitigation is defined as a sustained action to reduce or eliminate risk to people and property from hazards and their effects. A *mitigation strategy* is a long-term vision for risk reduction in local jurisdictional or regional planning. A mitigation strategy can be achieved by a list of overall improvements to achieve (goals) that provide direction for community efforts to reduce potential losses identified in the risk assessment.

Strategy #1	**Upgrade Bridges**
Prevention	Natural Resource Protection
Property Protection	Critical Facilities Protection
Public Education & Awareness	**Structural Project**

The Town of Vermont has a duty to provide essential support for residents in the event of a natural hazard. Upgrading bridges so that they are able to withstand an extreme flooding event would benefit all residents of the township.

Defined steps to achieving this mitigation strategy

1. Identify bridge ratings and possible gaps in the storm "load" of each township bridge
   a. *Responsible Party* – Town of Vermont Board in collaboration with Town Patrolman
   b. *Funding source* – N/A
   c. *Completion date* – March 1, 2022

2. Determine possible options for improving town bridges
   a. *Responsible Party* – Town of Vermont board, Town Patrolman, WI DOT, CARPC Green Infrastructure project representative
   b. *Funding source* – Municipal budget
   c. *Completion date* – July 1, 2022

Strategy #1	Upgrade Bridges
3. Develop cost/benefit analysis of bridge upgrade options a. *Responsible Party* – Town of Vermont Board in collaboration with Town Patrolman b. *Funding source* – N/A c. *Completion date* – September 1, 2022	
4. Consider cost for inclusion in Town of Vermont Budget a. *Responsible Party* – Town of Vermont Board b. *Funding source* – N/A c. *Completion date* – December 1, 2022	

Strategy #2	Plan and Post Evacuation Routes & Post Emergency Shelter Information

Prevention	Natural Resource Protection
Property Protection	Critical Facilities Protection
Public Education & Awareness	Structural Project

The Town of Vermont has a designated emergency shelter. The designated shelter has not been widely promoted and the public would benefit from additional communication.

Additionally, in the event of an extreme weather event, it would benefit residents to be aware of recommended routes to get out of the township or to get to the designated emergency shelter. Developing recommended routes for various hazards and communicating them well has the potential to increase public safety when an emergent event arises.

Defined steps to achieving this mitigation strategy

1. Develop recommended routes
   a. *Responsible Party* – Town of Vermont Board in collaboration with the Town of Vermont Patrolman, at least one citizen representatives and a representative from Vermont Lutheran Church which serves as the emergency shelter
   b. *Funding source* – N/A
   c. *Completion date* – June 1, 2022

2. Communicate Emergency Shelter and Route Information
   d. *Responsible Party* – Town of Vermont board, Municipal Clerk and the volunteers who produce the Vermont's Voice community newsletter
   e. *Funding source* – Municipal budget
   f. *Completion date* – December 1, 2022

Strategy #3	Generator for Emergency Shelter
Prevention	Natural Resource Protection
Property Protection	Critical Facilities Protection
Public Education & Awareness	**Structural Project**

The Town of Vermont has a designated emergency shelter. The designated shelter should have a generator in the event of an emergency event that results in a loss of utility service.

Providing the public with access to critical utilities in the event of a natural hazard enhances public safety.

Defined steps to achieving this mitigation strategy

5. Discuss the purchase of a generator
   a. *Responsible Party* – Town of Vermont Board in collaboration with a representative from Vermont Lutheran Church which serves as the emergency shelter
   b. *Funding source* – N/A
   c. *Completion date* – March 1, 2022

6. Make decision regarding generator purchase and include in Town of Vermont Budget
   g. *Responsible Party* – Town of Vermont board
   h. *Funding source* – Municipal budget
   i. *Completion date* – December 1, 2022

Strategy #4	**Flood Prevention & Structural Project**
Prevention	Natural Resource Protection
Property Protection	Critical Facilities Protection
Public Education & Awareness	**Structural Project**

The Town of Vermont has a duty to provide essential support for residents in the event of a natural hazard. Having road access throughout the township even in a flood emergency is important.

Defined steps to achieving this mitigation strategy

1. Identify critical low lying areas on town road
   a. *Responsible Party* – Town of Vermont Board in collaboration with Town Patrolman
   b. *Funding source* – N/A
   c. *Completion date* – March 1, 2022

2. Determine possible options for improving road bed or water flow
   j. *Responsible Party* – Town of Vermont board, Town Patrolman, WI DOT, CARPC Green Infrastructure project representative
   k. *Funding source* – Municipal budget
   l. *Completion date* – July 1, 2022

3. Develop cost/benefit analysis of road bed improvement options
   a. *Responsible Party* – Town of Vermont Board in collaboration with Town Patrolman
   b. *Funding source* – N/A
   c. *Completion date* – September 1, 2022

Strategy #4	Flood Prevention & Structural Project

4. Consider cost for inclusion in Town of Vermont Budget
   a. *Responsible Party* – Town of Vermont Board
   b. *Funding source* – N/A
   c. *Completion date* – December 1, 2022

Dane County Natural Hazard Mitigation Plan

Town of Verona Annex

Summer 2022

Town of Verona Annex

This annex is a part of the Dane County Natural Hazard Mitigation Plan (DCNHMP). The DCNHMP contains additional information to support the Federal Emergency Management Agency's (FEMA) recognition of the plan (including this annex) as the formal natural hazard mitigation plan for the county and participating local governments. This annex will be valid for as long as FEMA approves the DCNHMP. The strategies adopted in this annex are designed to guide community efforts to reduce risks from natural hazards. These strategies work in conjunction with neighboring communities and Dane County government to reduce risks from natural hazards.

COMMUNITY PROFILE

The Town of Verona is located in the Southwest quadrant of the County, north of the Town of Montrose, east of the Town of Springdale, west of the City of Fitchburg, and south of the City of Madison. The land use is dominated by agriculture and woodlands, and dispersed one, two, and multifamily homes. According to the United States Census Bureau, the Town of Verona has a total area of 29.35 square miles, 29.31 square miles of it is land and .04 square miles is water.

As of 2020, the Town of Verona has 797 households, with an average of 2.69 people per household. The municipal population data provided by the American Community Survey, a product of the US Census Bureau, indicates that the 2019 population estimates for the Town of Verona is 1,816 people. Table 1 shows the population profile by age for Town of Verona.

Table 1 Population Profile of Town of Verona, Dane County

Category	Number	Percent
Total population	**1,816**	**100%**
Under 5 years	117	6.4%
5 to 9 years	113	6.2%
10 to 14 years	157	8.6%
15 to 19 years	67	3.7%
20 to 24 years	59	3.2%
25 to 29 years	41	2.3%
30 to 34 years	97	5.3%
35 to 39 years	113	6.2%
40 to 44 years	106	5.8%
45 to 49 years	124	6.8%
50 to 54 years	141	7.8%
55 to 59 years	176	9.7%
60 to 64 years	137	7.5%
65 to 69 years	127	7.0%
70 to 74 years	78	4.3%
75 to 79 years	60	3.3%
80 to 84 years	60	3.3%
85 years and over	43	2.4%

Data Source: 2019 ACS Estimates - U.S. Census

Growth & Development Trends

Table 2-3 illustrates how the entire Town of Verona has grown in terms of population and number of households between 2010 and 2020. Housing data is up to year 2020 due to data availability. Table 2-3 is drawn from the Wisconsin Department of Administration.

Table 2 Town of Verona Change in Population and Households, 2010-2020

2010 Population	2020 Population	Percent Change (%) 2010-2020	2010 # of Households	2020 # of Households	Percent Change (%) 2010-2020
1,948	2,025	3.9%	746	797	6.83%

Data Source: Demographic Services Center, Wisconsin Department of Administration

Table 3 Town of Verona Population Projections, 2020-2040 1.95

Population Projection	2020	2025	2030	2035	2040
Increase by half of percent of change (3.9%/2) every 5 years	2,025	2,064	2,104	2,145	2,186

Data Source: Demographic Services Center, Wisconsin Department of Administration, 2021

Note: Population estimates offered by the U.S. Census Bureau's American Community Survey may differ from the WDOA data, due to sourcing, margin of error, and data availability.

Population Summary

Tables 4-7 illustrates key population demographics within the Town of Verona. Key demographics include: (1) Disability Characteristics, (2) Federal Income Poverty Levels, (3) Educational Attainment, and (4) Household Language with English Speaking Capabilities. Due to data availability, all key demographic information has been provided by the American Community Survey (ACS) 2019 estimates. The ACS is a self-reported survey and may include total sample size differences and statistical margin of error.

Table 4 Town of Verona, Dane County – Disability Characteristics by Detailed Age

Category	Number	Percent
Total of Residents with Self-Identified Disabilities	**318**	**100%**
With a hearing difficulty	46	14.5%
Population under 18 years	0	-
Population 18 to 64 years	21	-
Population 65 years and over	25	-
With a vision difficulty	**37**	**11.6%**
Population under 18 years	0	-
Population 18 to 64 years	22	-
Population 65 years and over	15	-
With a cognitive difficulty	**43**	**13.5%**
Population under 18 years	4	-
Population 18 to 64 years	30	-
Population 65 years and over	9	-
With an ambulatory difficulty	**82**	**25.8%**
Population under 18 years	0	-
Population 18 to 64 years	31	-
Population 65 years and over	51	-
With a self-care difficulty	**51**	**16.0%**
Population under 18 years	0	-
Population 18 to 64 years	24	-
Population 65 years and over	27	-
With an independent living difficulty	**59**	**18.5**
Population 18 to 64 years	31	-
Population 18 to 34 years	12	-
Population 65 years and over	28	-

Data Source: 2019 ACS Estimates - U.S. Census

Table 5.1: Town of Verona, Dane County – Federal Income Poverty Levels (FIPL) by Families Summary

Category	Number of Families
50 percent of poverty level	0
125 percent of poverty level	0
150 percent of poverty level	4
185 percent of poverty level	18
200 percent of poverty level	25
300 percent of poverty level	79
400 percent of poverty level	143
500 percent of poverty level	201

Data Source: 2019 ACS Estimates - U.S. Census

Note: Use table 5.2 to interpret table 5.1:

5.1 identifies the *total number of families* (regardless of size) by percentage.

5.2 identifies *family size* in relation to annual family income and the percentage category of the FIPL.

Table 5.2: Town of Verona, Dane County – Annual Federal Income Poverty Level Guide

Family Size	50%	100%	125%	150%	185%	200%	300%	400%	500%
1	$6,440	$12,880	$16,100	$19,320	$23,828	$25,760	$38,640	$51,520	$64,400
2	$8,710	$17,420	$21,775	$26,130	$32,227	$34,840	$52,260	$69,680	$87,100
3	$10,980	$21,960	$27,450	$32,940	$40,626	$43,920	$65,880	$87,840	$109,800
4	$13,250	$26,500	$33,125	$39,750	$49,025	$53,000	$79,500	$106,000	$132,500
5	$15,520	$31,040	$38,800	$46,560	$57,424	$62,080	$93,120	$124,160	$155,200
6	$17,790	$35,580	$44,475	$53,370	$65,823	$71,160	$106,740	$142,320	$177,900

Data Source: dhs.wisconsin.gov

Table 6: Town of Verona, Dane County – Educational Attainment by Householders

Category	Number	Percent
Total of Householders	**527**	**100%**
Less than high school graduate	0	0.0%
High school graduate (includes equivalency)	98	18.6%
Some college, associate's degree	107	20.3%
Bachelor's degree or higher	322	61.1%

Data Source: 2019 ACS Estimates - U.S. Census

Table 7: Household Language & English Speaking Capabilities

Category	Number	Percent
Total of Households	**685**	**100%**
English only	**632**	**92.3%**
Spanish:	**23**	**-**
Limited English speaking household	4	-
Not a limited English speaking household	19	-
Other Indo-European languages:	**17**	**2.5%**
Limited English speaking household	0	-
Not a limited English speaking household	17	-
Asian and Pacific Island languages:	**9**	**1.3%**
Limited English speaking household	0	-
Not a limited English speaking household	9	-
Other languages:	**4**	**0.6%**
Limited English speaking household	0	-
Not a limited English speaking household	4	-

Data Source: 2019 American Community Survey

Note: Population estimates offered by the U.S. Census Bureau's American Community Survey may differ from the WDOA data, due to sourcing, margin of error, and data availability.

Asset Inventory

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

General Property

Table 8 Property Exposure Summary

Property Type	Parcel Count	Improved Land Count	Improved Land Value ($)	Content Value ($)	Total Value ($)
Total	**1,701**	**1,678**	**385,760,000**	**192,880,000**	**578,640,000**
Agriculture	393	393	74,278,000	37,139,000	111,417,000
Industrial	47	47	10,898,200	5,449,100	16,347,300
Residential	1,178	1,178	289,498,600	144,749,300	434,247,900
Transportation	2	2	100,000	50,000	150,000
Utility	8	0	0	0	0
Commercial	37	31	10,324,700	5,162,350	15,487,050
Other	23	18	201,500	100,750	302,250
Institutional/ Governmental	13	9	459,000	229,500	688,500

Data Source: Dane County Land Information Office, December 2021

Critical Facilities

The Town of Verona has identified the critical facilities important to protect from disaster impacts. These are collected in Table 9. Table 9 is based on GIS data inventories from Dane County and information gathered from the Town. No further supplemental data was provided by the community through the Data Collection Guide.

Table 9 Critical Facility Summary/Essential Infrastructure

Facility	Type*	No. of Facilities	Replacement Value ($)
Badger Prairie Health Care Center	EI	1	N/A
Badger Prairie Needs Network	EI	1	N/A
Madison Metro Sewerage District Pump Station #12	EI	1	N/A
Bridge B-13-335	EI	1	1,000,000
Bridge B-13-617	EI	1	1,000,000
Bridge B-13-785	EI	1	1,000,000
Bridge B-13-363	EI	1	1,000,000
Bridge B-13-434	EI	1	1,000,000
Bridge B-13-487	EI	1	1,000,000
Bridge B-13-053	EI	1	1,000,000
Bridge B-13-383	EI	1	1,000,000
Bridge B-13-486	EI	1	1,000,000
Bridge P-13-183	EI	1	1,000,000
Town of Verona Hall and Office	VF	1	$3,000,000
Town of Verona Public Works Garage building and Equipment	EI	1	$1, 500,000
Wisconsin Power and Light Substation	EI	1	N/A
Mt. Vernon Tele. (TDS) Cellular Tower	EI	1	N/A
Dane County Cellular Tower	EI	1	N/A
Dane County Microwave Tower	EI	1	N/A
U.S. Cellular Tower	EI	1	N/A
Entercom Tower	EI	1	N/A
Town of Verona Public Works Tower	EI	1	$5,000
Verona Airport	VF	1	N/A
Sugar Ridge Airport	VF	1	N/A
345 KV ATC transmission Line	EI	1	N/A
69/138 KV ATC Transmission Line	EI	1	N/A
*EI: Essential Infrastructure; VF: Vulnerable Facilities; HM: Hazardous Materials Facilities			

Data Source: 2021 Town of Verona Data Collection Guide

Other Assets

Other assets help define a community beyond the current composition of the Town of Verona. 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 Verona has not identified any other assets.

VULNERABILITY ASSESSMENT

A hazard identification and vulnerability analysis was completed for the Town of Verona using the same methodology in the County's 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 10 outlines the hazard identification for the Town of Verona based on the Data Collection Guide issued in 2021. The Data Collection Guide listed all of the hazards that could impact Dane County. The purpose of this worksheet was to identify and rank the hazards and vulnerabilities specific to the jurisdiction. Brooklyn's planning team members were asked to complete the matrix by ranking each category on a scale of 0 to 5 based on the experience and perspective of each planning team member. A ranking of 0 indicated "no concern" while a ranking of 5 indicated "highest concern." This matrix appears as Table 10. This matrix reflects the significance of the hazards relative to one another as perceived by the Example's planning team.

This matrix reflects that the Town of Verona is most vulnerable to winter storms, expansive soils, tornadoes, and floods. The vulnerability established here is a qualitative assumption based on the impacts, geographic extent, probability of future occurrence, and magnitude/severity.

Table 10: Vulnerability Assessment Matrix for the Town of Verona

Name of Jurisdiction: Town of Verona										
Hazard	**Hazard Attributes**			**Impact Attributes**						
				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	**Total of Row Values**
	(1-5)	*(1-5)*	*(1-5)*	*(0-5)*	*(0-5)*	*(0-5)*	*(0-5)*	*(0-5)*	*(0-5)*	
Dam/Levee failure	1	1	1	0	0	0	0	0	0	3
Extreme Cold	5	3	4	2	2	4	2	2	2	26
Extreme Heat	5	4	4	2	2	4	2	2	2	27
Drought	5	2	3	1	1	2	2	4	3	23
Expansive soils	5	2	1	3	3	1	1	2	2	20
Flood	5	5	3	3	4	4	3	4	4	35
Fog	2	1	5	1	1	2	2	2	1	17
Hail Storm	2	2	4	1	3	2	1	4	1	20
Landslide	1	1	1	1	1	1	1	1	1	9
Lightning	5	5	5	1	4	2	2	3	2	29
Tornado	4	4	5	2	2	4	3	5	2	31
Wildfire	1	1	3	1	1	1	1	1	1	11
Windstorm	4	4	5	2	2	4	3	5	2	31
Winter Storm	5	5	5	3	3	5	4	3	2	35

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 Town of Verona. Table 11 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 11 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	Moderate	Minimal	Minimal	Specifics unknown; See hazard profile in County Plan
Flooding	See Tables 13-14 below	See Tables 13-14 below	See Tables 13-14 below	See Tables 13-14 below
Fog	Moderate	Minimal	Minimal	Specifics unknown; See hazard profile in County Plan
Hailstorm	Moderate	Minimal	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	Moderate	Minimal	See Critical Facility Inventory Table(s)	Specifics unknown; See hazard profile in County Plan
Severe Cold	See Tables 4-7 Population	Moderate	Moderate	Specifics unknown; See hazard profile in County Plan
Severe Heat	See Tables 4-7 Population	Moderate	Moderate	Specifics unknown; See hazard profile in County Plan
Winter Storm	See Tables 4-7 Population	See Property Exposure table 8	See Critical Facility Inventory Table(s)	Specifics unknown; See hazard profile in County Plan
Tornado	See Table 15 below	See Table 15 below	See Table 15 below	See Table 15 below
Wildfire	Minimal	Minimal	Minimal	Specifics unknown; See hazard profile in County Plan
Windstorm	See Tables 4-7 Population	Moderate	Moderate	Specifics unknown; See hazard profile in County Plan

Data Source: 2021 Town of Verona Data Collection Guide – Prepared by DCEM

Previous Hazard Events

Through the Data Collection Guide, the Town of Verona noted specific historic hazard events to include in the community profile. These events have been incorporated into the appropriate hazard chapters in the main mitigation 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. The events noted by this jurisdiction in the Data Collection Guide include:

Town of Verona Historic Natural Hazards

Table 12 Town of Verona Historic Natural Hazards

Natural Hazard	Date	Impacted Structures	Comprehensive Harm to Jurisdiction	Other reported Losses (Fiscal reports, programs, etc.)	Comments
Flood	08/27-29/2018	Multiple Impacted Structures	Approx. 11 inches of rainfall over a 12-hour period resulting in severe flooding and damage. Flooding of Sugar River resulted in 3 days of road closures.	N/A	N/A
Flood	03/12-15/2019	Multiple Impacted Structures	6-inch rainfall on melting snow and caused localized Flooding.	Culvert replacement on Country view road, erosion of pavement shoulder at bridge crossings Replacement cost $8,500.	N/A
Wind Storm	07/29/2021	N/A	15 downed trees and limbs in the right of way.	N/A	N/A

Data Source: 2021 Town of Verona Data Collection Guide

Flood Hazard

Structures and Properties in the Floodplain

Refer to the flood profile in the mitigation plan for a description of the methodology used to identify potentially flood-prone properties. Figure 1 shows mapped floodplains, future growth areas, and critical or vulnerable facilities. Tables 13 and 14 outline the primary structures on them within the Town of Verona, Dane County. Potential number of individuals at risk figures are based on primary residential structures and the average household size within Dane County (2.37 people as of 2021). Estimated loss potentials for all structures on the floodway can be found within section 4.6 in chapter 4 of the county plan.

Table 13 Primary Structures in the 100 Year Floodplain

Residential Structures in 100 yr. Floodway	Non-Residential Structures in 100 yr. Floodplain	Total Structures in 100 yr. Floodplain	Potential # of People at Risk in 100 yr. Floodplain	Total Assessed Values ($) of Structures in 100 yr. Floodplain
7	1	8	17	$1,046,104

Source: Analysis based on Dane County Land Information Office Data

Table 14 Primary Structures in the 500 Year Floodplain

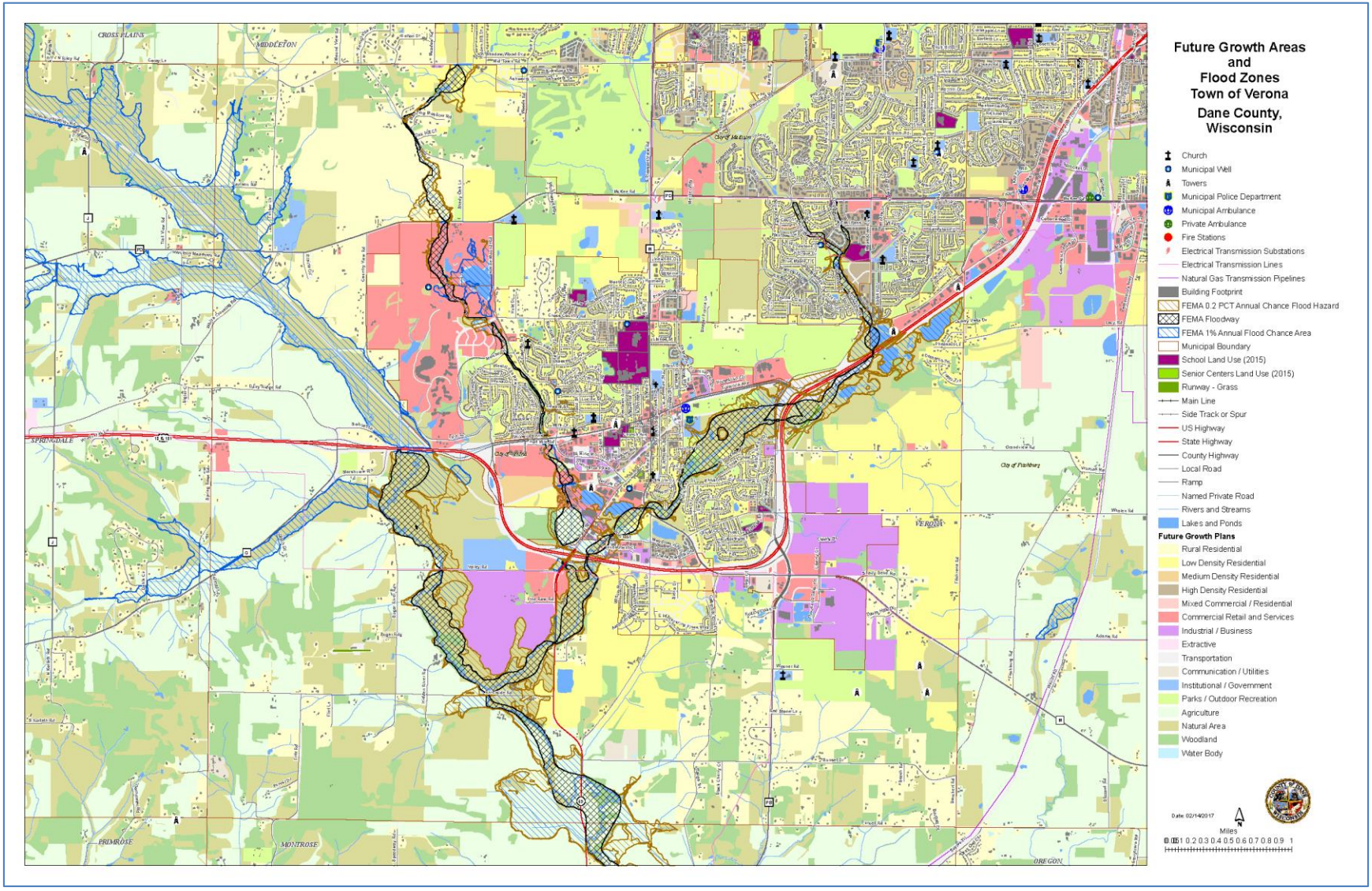
Residential Structures in 500 yr. Floodway	Non-Residential Structures in 500 yr. Floodplain	Total Structures in 500 yr. Floodplain	Potential # of People at Risk in 500 yr. Floodplain	Total Improved Values ($) of Structures in 500 yr. Floodplain
8	3	11	19	$609,107

Source: Analysis based on Dane County Land Information Office Data

Repetitive Loss Properties and Flood Insurance Polices

- Repetitive loss properties have not been reported in the Town of Verona, Dane County.
- The Town of Verona has 0 flood insurance policies in force within Dane County.

Figure 1 Flood Hazards and Future Land Use 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 2023 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 15 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
3.51%	1,678	58	578,640,000	20,339,141	10,169,570	5,084,785	2%

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

Problems or Additional Vulnerability Issues

The Town of Verona's Data Collection Guide issued in 2021 listed:

- **Average Depth of 100-Year Floodplain:**
  - 1 Foot.
- **Growth Trends:**
  - The Town of Verona continues to grow at a modest rate with approximately 15 new homes per year. Zoning is predominately agricultural and rural residential. No viable commercial or Industrial development areas exist in the Town. Residential areas are located above and out of the regulatory floodplain areas and contain internal storm water controls designed to minimize localized flooding. And provide flood routing away from building and developed areas.

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 Verona.

Mitigation Capabilities Summary

Table 16 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 Verona.

Table 16 Town of Verona Regulatory Mitigation Capabilities

Regulatory Tools (ordinances, codes, plans)	Yes/No	Comments
Existing Natural Hazard Mitigation Plan	Yes	N/A
General or Comprehensive plan	Yes	N/A
Zoning ordinance	No	Dane County – Ch. 10 https://www.countyofdane.com/documents/pdf/ordinances/ch010-01-31-20.pdf
Subdivision ordinance	Yes	N/A
Growth management ordinance	No	N/A
Shoreland/wetland zoning ordinance	No	Dane County – Ch. 11 https://www.countyofdane.com/documents/pdf/ordinances/ord011.pdf
Floodplain zoning ordinance	No	Dane County – Ch. 17 https://www.countyofdane.com/documents/pdf/ordinances/ch017--rev.-103120-.pdf
FEMA / NFIP Community Rating System	No	N/A
Other special purpose ordinance (stormwater, steep slope, wildfire)	No	N/A
Building code	Yes	N/A
Fire department ISO rating	Yes	N/A
Climate change Impact program	No	N/A
Erosion or sediment control program	No	Dane County – Ch. 14 https://www.countyofdane.com/documents/pdf/ordinances/ord014.pdf
Stormwater management program	No	Dane County – Ch. 14 https://www.countyofdane.com/documents/pdf/ordinances/ord014.pdf
Site plan review requirements	Yes	N/A

Regulatory Tools (ordinances, codes, plans)	Yes/No	Comments
Capital improvements plan	Yes	N/A
Economic development plan	No	N/A
Local emergency operations plan	Yes	N/A
Other special plans	No	N/A
Flood insurance study or other engineering study for streams	No	N/A
Elevation certificates (for floodplain development)	No	Dane County – Ch. 17 https://www.countyofdane.com/documents/pdf/ordinances/ch017--rev.-103120-.pdf
Climate Action Plan	**No**	N/A

Data Source: Town of Verona Data Collection Guide, 2021

Table 17 identifies the personnel responsible for mitigation and loss prevention activities as well as related data and systems in the Town of Verona.

Table 17 Responsible Personnel and Departments for the Town of Verona

Personnel Resources	Yes/No	Department/Position	Comments
Planner/engineer with knowledge of land development/land management practices	Yes	Town Planner/Administrator	N/A
Engineer/professional trained in construction practices related to buildings and/or infrastructure	Yes	Director of Public Works	N/A
Planner/engineer/scientist with an understanding of natural hazards	Yes	Director of Public Works	N/A
Personnel skilled in GIS	No	N/A	MSA Engineers
Full time building official	No	N/A	Part Time
Personnel skilled in Climate resilience	Yes	Town Planner/Administrator	
Floodplain manager	No	N/A	Dane County
Emergency manager	No	N/A	Dan e County
Real estate acquisition personnel		N/A	N/A
Grant writer	Yes	Town Planner/Administrator	N/A
Other personnel		N/A	N/A
GIS Data Resources (Hazard areas, critical facilities, land use, building footprints, etc.)	Yes	Director of Public Works	N/A

Warning Systems/Services (Reverse 9-11, cable override, outdoor warning signals)	No	N/A	Dane County, City of Verona, City of Fitchburg
Other	Yes	Planning Commission Emergency Management Committee Town Board Supervisors	N/A

Data Source: Town of Verona Data Collection Guide 2021

Table 18 identifies financial tools or resources that the Town of Verona could potentially use to help fund mitigation activities.

Table 18 Financial Resources for the Town of Verona

Financial Resources	Accessible/Eligible to Use (Yes/No)
Community Development Block Grants	No
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	Yes
Dedicated funding for land, easement or conservation easement acquisition	No
Fees for water, stormwater, sewer, gas, or electric services	Yes
Impact fees for new development	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activities	No
Withhold spending in hazard prone areas	No

Data Source: Town of Verona Data Collection Guide

Additional Capabilities

The Town of Verona identified the following as past or ongoing public education or information programs:

- Valley Road Bridge Replacement (2023) to reduce flooding impact/damage.
- Fitchrona Road/Goose Lake Storm Drainage Study to mitigate flooding to Fitchrona Road and regulate water levels in Goose Lake.

The Town of Verona compiled the following as a list of on-going duties/projects focused on mitigation activities.

Overall Financial Planning

The Town of Verona has reserve funds in addition to its operating budget. While most of these funds are earmarked for specific purposes, the Town Board would have the option of using the funds in a dire emergency. Moreover, the Town of Verona has no debt, allowing great financial flexibility in dealing with a potential crisis.

Equipment

The Town of Verona has a policy to replace snowplow equipment on a rotational basis. Main rolling stock, (snow plow trucks) are replaced based upon age and condition. Four snowplow vehicles are currently available. The town owns a John Deere front end loader and a Case tractor both with snow removal capabilities.

Sanitary Sewer

The sanitary sewer system of the town consists of approximately 115 customers and is cleaned and televised on a 3-year rotating basis. Emergency response is available through agreement with McCann's sewer service, Oregon, WI, as well as local excavating contractors. Repairs are completed for a section following the televising so that they can be accurately budgeted. Special Charges are added to property tax bills for those within this Utility District with public sewerage service to cover operating costs and to maintain a capital reserve (current reserves for repair/replacement are approximately $100,000). This routine of televising and repair minimizes the risk of infiltration/inflow, overflow, and backup events that could compromise the efficiency of the system and/or put public health at risk.

Roads and Private Driveways

The Town of Verona Public Works Department staff reviews town road paving, ditching, shoulders, signage, culverts, and bridges on an annual basis. The ratings, in turn, determine future maintenance/reconstruction/replacement and budgeting. In addition to funding improvements through property taxes, Department of Transportation aids based on mileage, shared revenue payments from the Wisconsin Department of Revenue, and Local Road Improvement Program grants and Town Road Improvement Discretionary grants are sought and used. The Town reviews its right-of-way on a regular basis and contracts for tree trimming/removal that present a potential safety issue to the public.

In 2017, the Town of Verona Driveway Ordinance was amended to accommodate modern firefighting apparatus including hammerhead turnarounds near rural residences, updating minimum standards for

driveway construction, trimming of trees adjacent to drives, and detailed standards for sightlines and flares where driveways intersect Town roads.

Stormwater
The Town of Verona and City of Fitchburg worked collaboratively in 2020 to study and analyze road flooding along Fitchrona road near US 18/1515 and proposed mitigation strategies to minimize flooding of the road and the adjacent Goose Lake. Flooding is caused by increasing runoff from developed area in the watershed and increased rainfall intensities. Solutions include improving the outlet of Goode Lake and providing constructed channel connection to Badger Mill Creek.

Fire and EMS
In 2014, the Town of Verona and City of Verona dissolved a shared fire district. The Town now contracts for services through the City of Verona and has a 30-year commitment to the capital fund to maintain and replace emergency equipment. In 2015, the City of Verona built a new fire station to house the Fire Department staff and equipment as well as to provide a satellite location for the regional emergency management service, Fitch-Rona EMS. Likewise, the Town of Verona's contract with the Fitch-Rona EMS includes a commitment to capital costs to maintain and replace equipment.

Town Office and Public Works Facilities
In 2017 the town completed construction The design of the new facilities allows all public works equipment to be stored inside to prolong the life of equipment and reduce the time for it to be available in the event of an emergency. Furthermore, area is available at the facility for storage of downed trees and limbs. Ice and snow control materials, salt and sand, are stored in an enclosed salt building and are not subject to weather conditions.

Communications
In 2013, public works mobile, portable, and base radio equipment was modernized to be compliant with new FCC narrow band standards. Likewise, the Town paid its proportionate share to the City of Verona Fire Department and Fitch-Rona EMS for the modernization of their communications equipment including interoperability standards defined by DaneCom. The Town continues to pay its proportionate share for County emergency communications managed by DaneCom.

In 2020 the Town of Verona upgraded its website, web hosting service, and website software. Edits to the website can now be made in real time by office staff. The Town continues to add to listserv recipients who receive regular updates on meetings, local, county, and state developments.

Accommodations and Programs for
The Town of Verona continues to support the local Meals on Wheels program for at-risk seniors; the Town provided start up support to the Badger Prairie Needs Network that is the local food pantry for at-risk families. In addition, the Town has contracted with the Verona Senior Center to provide services to elderly residents and citizen. These provide equitable services to the Town's most vulnerable populations.

Intergovernmental Cooperation
The Town of Verona is in continual conversations with the neighboring jurisdictions of the City of Madison, the City of Verona, the City of Fitchburg, and Dane County. A variety of agreements for road planning and maintenance add to the Town's ability to provide safe transportation in emergency

situations. In addition, the Town and City of Verona has worked cooperatively during past emergencies such as the 2014 tornado to address disaster clean-up.

National Flood Insurance Program Participation

The Town of Verona is not currently participating in the National Flood Insurance Program.

Public Involvement Activities

The Town of Verona provided a publically noticed listening session with the Town of Verona Board on December 7, 2021. The listening session was noticed on the Town website. An agenda discussing the draft mitigation strategies was provided. No changes were made to the initial draft mitigation strategies.

MITIGATION STRATEGIES

Below are the identified mitigation strategies developed by the Town of Verona's NHMP steering committee. Mitigation is defined as a sustained action to reduce or eliminate risk to people and property from hazards and their effects. A *mitigation strategy* is a long-term vision for risk reduction in local jurisdictional or regional planning. A mitigation strategy can be achieved by a list of overall improvements to achieve (goals) that provide direction for community efforts to reduce potential losses identified in the risk assessment.

Strategy #1	**Flooding - Prevention**
Prevention	Natural Resource Protection
Property Protection	Critical Facilities Protection
Public Education & Awareness	Structural Project
The Town of Verona has a duty to protect residents from unpredictable hazards, and flooding dangers and risks can be reduced by purchasing vulnerable properties located in the identified flood way and floodplain areas. buying sensitive lands The desired outcome would be an elimination of property damage due to flooding and improved safety to residents by reducing flooding frequencies to roads and bridges.	
Defined steps to achieving this mitigation strategy	
1. Identify properties subject to historical flooding damage a. *Responsible Party* – Town Staff b. *Funding source* – Municipal Budget *Completion date* –1-2023	
2. Determine if voluntary purchase of properties is desired by the property owner a. *Responsible Party* – Town Board b. *Funding source* – Municipal Budget *Completion date* –6-2023	

Strategy #1	Flooding - Prevention

3. Grant writing to FEMA – Pre-Disaster Mitigation Grant Program in order to fund property purchase
   c. *Responsible Party* – Town Staff
   d. *Funding source* – Municipal Budget
   e. *Completion date* – Complete within first twelve months of project initiation.

4. Implementation process/construction after awarded grant is received.
   a. *Responsible Party* – Private Party Appraisal/Acquisition Contractor
   b. *Funding source* – FEMA, Municipal Budget
   c. *Completion date* – 2-3 years after project initiation.

Strategy #2	Flooding – Critical Facilities Protection

Prevention	Natural Resource Protection
Property Protection	**Critical Facilities Protection**
Public Education & Awareness	Structural Project

The Town of Verona has a duty to protect residents from unpredictable hazards, and flooding dangers and risks can be reduced by purchasing an emergency engine driven centrifugal trash pump.

The desired outcome would be the ability to quickly and effectively pump water from culverts and storm sewers that are at or over design capacities during and after a storm event. This strategy would and improved safety to residents by reducing flooding frequencies to roads and bridges.

Defined steps to achieving this mitigation strategy

1. Identify areas subject to flooding which could be relieved by pumping
   a. *Responsible Party* – Town Staff
   b. *Funding source* – Municipal Budget

      Completion date –1-2023

2. Determine if available pump systems would be effective for specific rainfall events
   f. *Responsible Party* – Town Board
   g. *Funding source* – Municipal Budget

      Completion date –6-2023

3. Grant writing to FEMA – Pre-Disaster Mitigation Grant Program in order to fund property purchase
   h. *Responsible Party* – Town Staff
   i. *Funding source* – Municipal Budget
   j. *Completion date* – Complete within first twelve months of project initiation.

Strategy #2	Flooding – Critical Facilities Protection

4. Implementation process/construction after awarded grant is received.
   d. *Responsible Party* – Town Staff/ Pump Vendor
   e. *Funding source* – FEMA, Municipal Budget
   f. *Completion date* – 1 year after project initiation.

Strategy #3	Winter Storm - Prevention

Prevention	Natural Resource Protection
Property Protection	Critical Facilities Protection
Public Education & Awareness	Structural Project

The Town of Verona has a duty to protect residents from unpredictable winter storm hazards, and additional snow equipment to apply brine (water and salt mixture) distribution to road would be an effective means of addressing snow and ice conditions. Additionally, areas subject to drifting could be protected by installation snow fencing.

The desired outcome would be a preventive method of mitigating snow drifting and applying material to minimize snow and ice buildup and improve winter road safety for vehicles and other road users while decreasing the amount of pure salt applied to the road network.

Defined steps to achieving this mitigation strategy

5. Identify hazardous and problematic road areas which could benefit from brine application and/ or snow fencing.
   a. *Responsible Party* – Town Staff
   b. *Funding source* – Municipal Budget
      Completion date – 1-2023

6. Seek public input on brine application in lieu of/in addition to, salt and sand distribution. Installation of snow fencing in the public right of way or on private property.
   k. *Responsible Party* – Town Board
   l. *Funding source* – Municipal Budget
      Completion date –6-2023

7. Grant writing to FEMA – Pre-Disaster Mitigation Grant Program
   m. *Responsible Party* – Town Staff
   n. *Funding source* – Municipal Budget
   o. *Completion date* – Complete within first six months of project initiation.

Strategy #3	Winter Storm - Prevention

8. Implementation process/construction after awarded grant is received.
   g. *Responsible Party* – Town Staff/ Equipment Vendor/Installation Contractor
   h. *Funding source* – FEMA, Town Budget
   i. *Completion date* – 2 years after project initiation.

Strategy #4	Wind Storm – Structural Project
Prevention	Natural Resource Protection
Property Protection	Critical Facilities Protection
Public Education & Awareness	**Structural Project**

The Town of Verona has a duty to protect residents from unpredictable wind storm events and hazards, and a program to remove dead and hazardous trees from the public right of way would provide improved security and safety for residents and other road users by reducing the number of road closures and accidents related to downed trees and utilities.

The desired outcome would be a public road network free of recognizable tree hazards and vulnerable utility lines as well as improving emergency response times by minimizing unforeseen road closures.

Defined steps to achieving this mitigation strategy

1. Survey locations of hazardous trees and private overhead utilities in the public right of way
   a. *Responsible Party* – Town Staff/Private Utility Companies
   b. *Funding source* – Municipal Budget
      Completion date – 1-2023
2. Seek public input for removal of trees in the public right of way with respect to esthetics and public safety.
   p. *Responsible Party* – Town Board
   q. *Funding source* – Municipal Budget
      Completion date –12-2023
3. Grant writing to FEMA – Pre-Disaster Mitigation Grant Program
   r. *Responsible Party* – Town Staff
   s. *Funding source* – Municipal Budget
   t. *Completion date* – Complete within first twelve months of project initiation.

Strategy #4	Wind Storm – Structural Project

4. Implementation process/construction after awarded grant is received.
   j. *Responsible Party* – Third Party/Private Contractor/ Utility Companies
   k. *Funding source* – FEMA
   l. *Completion date* – 2-4 years after project initiation.

Dane County Natural Hazard Mitigation Plan

Town of Westport Annex

Summer 2022

Town of Westport Annex

This annex is a part of the Dane County Natural Hazard Mitigation Plan (DCNHMP). The DCNHMP contains additional information to support the Federal Emergency Management Agency's (FEMA) recognition of the plan (including this annex) as the formal natural hazard mitigation plan for the county and participating local governments. This annex will be valid for as long as FEMA approves the DCNHMP. The strategies adopted in this annex are designed to guide community efforts to reduce risks from natural hazards. These strategies work in conjunction with neighboring communities and Dane County government to reduce risks from natural hazards.

COMMUNITY PROFILE

The Yahara River flows prominently through the Town of Westport. The river enters the northeast part of the Town on Section 12, and flows southwesterly into Lake Mendota, and also by Six Mile Creek which enters the Town on the northwestern part, on Section 6, flows southeasterly through Waunakee and empties into Lake Mendota on Section 28. The northeastern part of Westport is prairie land, the central and southeasterly portions marsh, and the remaining parts oak openings and prairie. Lake Mendota covers a part of five sections in the south. According to the United States Census Bureau, the Town of Westport has a total area of 27.24 square miles, 22.23 square miles of it is land and 5.01 square miles is water. The total area is 18.4% water.

As of 2020, the Town of Westport has 1,961 households, with an average of 2.32 people per household. The municipal population data provided by the American Community Survey, a product of the US Census Bureau, indicates that the 2019 population estimates for the Town of Westport is 4,184 people. Table 1 shows the population profile by age for Town of Westport.

Table 1 Population Profile of Town of Westport, Dane County

Category	Number	Percent
Total population	**4,184**	**100%**
Under 5 years	126	3.0%
5 to 9 years	186	4.4%
10 to 14 years	293	7.0%
15 to 19 years	248	5.9%
20 to 24 years	95	2.3%
25 to 29 years	151	3.6%
30 to 34 years	74	1.8%
35 to 39 years	183	4.4%
40 to 44 years	305	7.3%
45 to 49 years	347	8.3%
50 to 54 years	249	6.0%
55 to 59 years	262	6.3%
60 to 64 years	481	11.5%
65 to 69 years	369	8.8%
70 to 74 years	300	7.2%
75 to 79 years	237	5.7%
80 to 84 years	190	4.5%
85 years and over	88	2.1%

Data Source: 2019 ACS Estimates - U.S. Census

Growth & Development Trends

Table 2-3 illustrates how the entire Town of Westport has grown in terms of population and number of households between 2010 and 2020. Housing data is up to year 2020 due to data availability. Table 2-3 is drawn from the Wisconsin Department of Administration.

Table 2 Town of Westport Change in Population and Households, 2010-2020

2010 Population	2020 Population	Percent Change (%) 2010-2020	2010 # of Households	2020 # of Households	Percent Change (%) 2010-2020
3,950	4,102	3.8%	1,782	1,961	10.04%

Data Source: Demographic Services Center, Wisconsin Department of Administration

Table 3 Town of Westport Population Projections, 2020-2040 1.9

Population Projection	2020	2025	2030	2035	2040
Increase by half of percent of change (3.8%/2) every 5 years	4,102	4,179	4,258	4,338	4,420

Data Source: Demographic Services Center, Wisconsin Department of Administration, 2021

Note: Population estimates offered by the U.S. Census Bureau's American Community Survey may differ from the WDOA data, due to sourcing, margin of error, and data availability.

Population Summary

Tables 4-7 illustrates key population demographics within the Town of Westport. Key demographics include: (1) Disability Characteristics, (2) Federal Income Poverty Levels, (3) Educational Attainment, and (4) Household Language with English Speaking Capabilities. Due to data availability, all key demographic information has been provided by the American Community Survey (ACS) 2019 estimates. The ACS is a self-reported survey and may include total sample size differences and statistical margin of error.

Table 4 Town of Westport, Dane County – Disability Characteristics by Detailed Age

Category	Number	Percent
Total of Residents with Self-Identified Disabilities	**751**	**100%**
With a hearing difficulty	**101**	**13.4%**
Population under 18 years	0	-
Population 18 to 64 years	49	-
Population 65 years and over	52	-
With a vision difficulty	**74**	**9.8%**
Population under 18 years	0	-
Population 18 to 64 years	35	-
Population 65 years and over	39	-
With a cognitive difficulty	**102**	**13.6%**
Population under 18 years	17	-
Population 18 to 64 years	66	-
Population 65 years and over	19	-
With an ambulatory difficulty	**235**	**31.3%**
Population under 18 years	0	-
Population 18 to 64 years	118	-
Population 65 years and over	117	-
With a self-care difficulty	**92**	**12.2%**
Population under 18 years	0	-
Population 18 to 64 years	51	-
Population 65 years and over	41	-
With an independent living difficulty	**147**	**19.6%**
Population 18 to 64 years	85	-
Population 18 to 34 years	17	-
Population 65 years and over	62	-

Data Source: 2019 ACS Estimates - U.S. Census

Table 5.1: Town of Westport, Dane County – Federal Income Poverty Levels (FIPL) by Families Summary

Category	Number of Families
50 percent of poverty level	4
125 percent of poverty level	38
150 percent of poverty level	50
185 percent of poverty level	55
200 percent of poverty level	55
300 percent of poverty level	145
400 percent of poverty level	352
500 percent of poverty level	469

Data Source: 2019 ACS Estimates - U.S. Census

Note: Use table 5.2 to interpret table 5.1:

5.1 identifies the *total number of families* (regardless of size) by percentage.

5.2 identifies *family size* in relation to annual family income and the percentage category of the FIPL.

Table 5.2: Town of Westport, Dane County – Annual Federal Income Poverty Level Guide

Family Size	50%	100%	125%	150%	185%	200%	300%	400%	500%
1	$6,440	$12,880	$16,100	$19,320	$23,828	$25,760	$38,640	$51,520	$64,400
2	$8,710	$17,420	$21,775	$26,130	$32,227	$34,840	$52,260	$69,680	$87,100
3	$10,980	$21,960	$27,450	$32,940	$40,626	$43,920	$65,880	$87,840	$109,800
4	$13,250	$26,500	$33,125	$39,750	$49,025	$53,000	$79,500	$106,000	$132,500
5	$15,520	$31,040	$38,800	$46,560	$57,424	$62,080	$93,120	$124,160	$155,200
6	$17,790	$35,580	$44,475	$53,370	$65,823	$71,160	$106,740	$142,320	$177,900

Data Source: dhs.wisconsin.gov

Table 6: Town of Westport, Dane County – Educational Attainment by Householders

Category	Number	Percent
Total of Householders	**1,204**	**100%**
Less than high school graduate	12	1.0%
High school graduate (includes equivalency)	71	5.9%
Some college, associate's degree	293	24.3%
Bachelor's degree or higher	828	68.8%

Data Source: 2019 ACS Estimates - U.S. Census

Table 7: Town of Westport, Dane County – Household Language & English Speaking Capabilities

Category	Number	Percent
Total of Households	**1,989**	**100%**
English only	**1,850**	**93.0**
Spanish:	**26**	**1.3%**
Limited English speaking household	17	-
Not a limited English speaking household	9	-
Other Indo-European languages:	**49**	**2.5%**
Limited English speaking household	0	-
Not a limited English speaking household	49	-
Asian and Pacific Island languages:	**64**	**3.2%**
Limited English speaking household	0	-
Not a limited English speaking household	64	-
Other languages:	**0**	**0.0%**
Limited English speaking household	0	-
Not a limited English speaking household	0	-

Data Source: 2019 American Community Survey

Note: Population estimates offered by the U.S. Census Bureau's American Community Survey may differ from the WDOA data, due to sourcing, margin of error, and data availability.

Asset Inventory

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

General Property

Table 8 Property Exposure Summary

Property Type	Parcel Count	Improved Land Count	Improved Land Value ($)	Content Value ($)	Total Value ($)
Total	**2,419**	**2,402**	**829,084,900**	**414,542,450**	**12,43,627,350**
Agriculture	331	331	79,601,600	39,800,800	119,402,400
Industrial	51	51	26,034,300	13,017,150	39,051,450
Residential	1,874	1,874	668,707,400	334,353,,700	10,03,061,100
Transportation	3	3	8,600	4,300	12,900
Utility	16	16	378,300	189,150	567,450
Commercial	85	85	40,948,000	20,474,000	61,422,000
Other	38	38	13,234,300	6,617,150	19,851,450
Institutional/ Governmental	21	4	172,400	86,200	258,600

Data Source: Dane County Land Information Office, December 2021

Critical Facilities

The Town of Westport has identified the critical facilities important to protect from disaster impacts. These are collected in Table 9. Table 9 is based on GIS data inventories from Dane County and information gathered from the Town. No further supplemental data was provided by the community through the Data Collection Guide.

Table 9 Critical Facility Summary/Essential Infrastructure

Facility	Type*	No. of Facilities	Replacement Value ($)
Bridge	EI	1	4,000,000.00
Communication Tower	EI	1	601,200
FCC Tower	EI	1	601,200
Electric Substation	EI	1	0
Municipal Hall	EI	1	0
Water Utility	EI	1	0
Well	EI	1	800,000
Extreme HazSubs	HM	1	316,000
Agriculture	NA	1	N/A
Commercial	VF	1	N/A
Utilities	EI	1	N/A
Industrial	VF	1	N/A
Institution/Gov't	VF	1	N/A
Other	VF	1	N/A
Residential	VF	1	N/A
Hazard Chemicals	HM	1	304,000
Childcare	VF	1	466,600
Community Base Res	VF	1	0
Historic Site	VF	1	0
Sanitary Sewer Lift	EI	1	500,000
*EI: Essential Infrastructure; VF: Vulnerable Facilities; HM: Hazardous Materials Facilities			

Data Source: 2021 Town of Westport Data Collection Guide

Other Assets

Other assets help define a community beyond the current composition of the Town of Westport. 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 Westport has not identified any other assets.

VULNERABILITY ASSESSMENT

A hazard identification and vulnerability analysis was completed for the Town of Westport using the same methodology in the County's 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 10 outlines the hazard identification for the Town of Westport based on the Data Collection Guide issued in 2021. The Data Collection Guide listed all of the hazards that could impact Dane County. The purpose of this worksheet was to identify and rank the hazards and vulnerabilities specific to the jurisdiction. Brooklyn's planning team members were asked to complete the matrix by ranking each category on a scale of 0 to 5 based on the experience and perspective of each planning team member. A ranking of 0 indicated "no concern" while a ranking of 5 indicated "highest concern." This matrix appears as Table 10. This matrix reflects the significance of the hazards relative to one another as perceived by the Example's planning team.

This matrix reflects that the Town of Westport is most vulnerable to tornadoes, wind storms, and floods. The vulnerability established here is a qualitative assumption based on the impacts, geographic extent, probability of future occurrence, and magnitude/severity.

Table 10: Vulnerability Assessment Matrix for the Town of Westport

Name of Jurisdiction: Town of Westport										
Hazard	**Hazard Attributes**			**Impact Attributes**						
				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	**Total of Row Values**
	(1-5)	*(1-5)*	*(1-5)*	*(0-5)*	*(0-5)*	*(0-5)*	*(0-5)*	*(0-5)*	*(0-5)*	
Dam/Levee failure	0	0	0	0	0	0	0	0	0	0
Extreme Cold	4	3	1	2	2	3	1	1	1	18
Extreme Heat	4	3	1	2	2	3	1	1	1	18
Drought	5	2	1	1	1	1	1	4	1	17
Expansive soils	0	0	0	0	0	0	0	0	0	0
Flood	5	5	4	4	5	1	4	5	5	38
Fog	1	1	1	1	1	1	1	1	1	9
Hail Storm	2	3	3	3	2	1	3	4	1	22
Landslide	1	1	1	1	1	1	1	1	1	9
Lightning	2	2	3	2	2	1	1	1	1	15
Tornado	5	5	5	5	5	5	5	5	5	45
Wildfire	1	1	1	1	1	1	1	1	1	9
Windstorm	5	4	4	5	5	5	5	5	5	43
Winter Storm	4	4	2	2	4	4	4	4	4	32

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 Town of Westport. Table 11 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 11 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	Minimal	Minimal	Specifics unknown; See hazard profile in County Plan
Flooding	See Tables 13-14 below	See Tables 13-14 below	See Tables 13-14 below	See Tables 13-14 below
Fog	Minimal	Minimal	Minimal	Specifics unknown; See hazard profile in County Plan
Hailstorm	Minimal	See Property Exposure table 8	Minimal	Specifics unknown; See hazard profile in County Plan
Landslide/ Sinkholes/ Erosion	Minimal	Minimal	Minimal	Specifics unknown; See hazard profile in County Plan
Lightning	Minimal	Moderate	Moderate	Specifics unknown; See hazard profile in County Plan
Severe Cold	See Tables 4-7 Population	Moderate	Moderate	Specifics unknown; See hazard profile in County Plan
Severe Heat	See Tables 4-7 Population	Moderate	Moderate	Specifics unknown; See hazard profile in County Plan
Winter Storm	See Tables 4-7 Population	Moderate	See Critical Facility Inventory Table(s)	Specifics unknown; See hazard profile in County Plan
Tornado	See Table 15 below	See Table 15 below	See Table 15 below	See Table 15 below
Wildfire	Minimal	Minimal	Minimal	Specifics unknown; See hazard profile in County Plan
Windstorm	See Tables 4-7 Population	See Property Exposure table 8	See Critical Facility Inventory Table(s)	Specifics unknown; See hazard profile in County Plan

Data Source: 2021 Town of Westport Data Collection Guide – Prepared by DCEM

Previous Hazard Events

Through the Data Collection Guide, the Town of Westport noted specific historic hazard events to include in the community profile. These events have been incorporated into the appropriate hazard chapters in the main mitigation 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. The events noted by this jurisdiction in the Data Collection Guide include:

Town of Westport Historic Natural Hazards

Table 12 Town of Westport Historic Natural Hazards

Natural Hazard	Date	Impacted Structures	Comprehensive Harm to Jurisdiction	Other reported Losses (Fiscal reports, programs, etc.)	Comments
Flood	2018	N/A	Washouts of shoulder, primarily on Reynolds Ave., East St., River Rd., and Woodland Dr.	1 Replacement of WIPP	N/A

Data Source: 2021 Town of Westport Data Collection Guide

Flood Hazard

Structures and Properties in the Floodplain

Refer to the flood profile in the mitigation plan for a description of the methodology used to identify potentially flood-prone properties. Figure 1 shows mapped floodplains, future growth areas, and critical or vulnerable facilities. Tables 13 and 14 outline the primary structures on them within the Town of Westport, Dane County. Potential number of individuals at risk figures are based on primary residential structures and the average household size within Dane County (2.37 people as of 2021). Estimated loss potentials for all structures on the floodway can be found within section 4.6 in chapter 4 of the county plan.

Table 13 Primary Structures in the 100 Year Floodplain

Residential Structures in 100 yr. Floodway	Non-Residential Structures in 100 yr. Floodplain	Total Structures in 100 yr. Floodplain	Potential # of People at Risk in 100 yr. Floodplain	Total Assessed Values ($) of Structures in 100 yr. Floodplain
77	5	82	182	$20,643,279

Source: Analysis based on Dane County Land Information Office Data

Table 14 Primary Structures in the 500 Year Floodplain

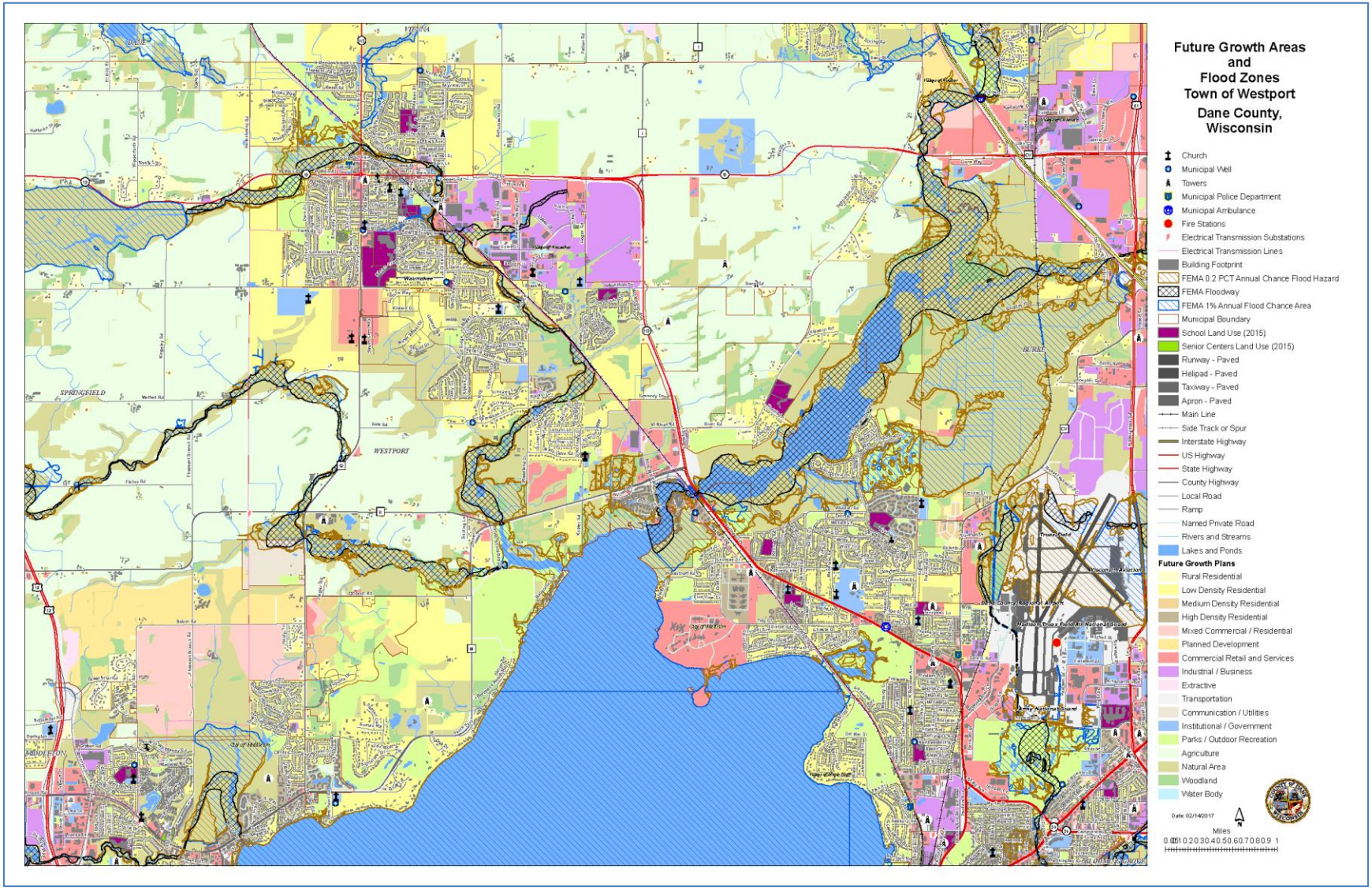
Residential Structures in 500 yr. Floodway	Non-Residential Structures in 500 yr. Floodplain	Total Structures in 500 yr. Floodplain	Potential # of People at Risk in 500 yr. Floodplain	Total Improved Values ($) of Structures in 500 yr. Floodplain
93	3	96	43	$10,782,421

Source: Analysis based on Dane County Land Information Office Data

Repetitive Loss Properties and Flood Insurance Polices

- Repetitive loss properties have not been reported in the Town of Westport, Dane County.
- The Town of Westport has 0 flood insurance policies in force within Dane County.

Figure 1 Flood Hazards and Future Land Use 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 2023 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 15 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
4.05%	2,402	97	1,243,627,350	50,401,878	25,200,939	12,600,469	2%

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

Problems or Additional Vulnerability Issues

The Town of Westport's did not list any additional vulnerability issues in the 2021 Data Collection Guide.

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 Westport.

Mitigation Capabilities Summary

Table 16 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 Westport.

Table 16 Town of Westport Regulatory Mitigation Capabilities

Regulatory Tools (ordinances, codes, plans)	**Yes/No**	**Comments**
Existing Natural Hazard Mitigation Plan	**Yes**	**Dane County Natural Hazard Mitigation Plan, Westport Annex**
General or Comprehensive plan	**Yes**	
Zoning ordinance	**Yes**	**Town only or ETZ Middleton or Waunakee**
Subdivision ordinance	**Yes**	
Growth management ordinance	**No**	
Shoreland / wetland zoning ordinance	**Yes**	**Dane County's Ordinance**
Floodplain zoning ordinance	**No**	
FEMA / NFIP Community Rating System		
Other special purpose ordinance (stormwater, steep slope, wildfire)	**Yes**	**Stormwater, Rural Character Preserve**
Building code	**Yes**	
Fire department ISO rating	**Yes**	**Varies by Department (Served by Middleton and Waunakee)**
Climate change Impact program	**No**	
Erosion or sediment control program	**Yes**	
Stormwater management program	**Yes**	
Site plan review requirements	**Yes**	**Commercial & Multifamily**
Capital improvements plan	Yes	N/A
Economic development plan	No	N/A
Local emergency operations plan	Yes	N/A
Other special plans	No	N/A
Flood insurance study or other engineering study for streams	No	N/A

Regulatory Tools (ordinances, codes, plans)	Yes/No	Comments
Elevation certificates (for floodplain development)	No	Dane County – Ch. 17
Climate Action Plan	**No**	N/A

Data Source: Town of Westport Data Collection Guide, 2021

Table 17 identifies the personnel responsible for mitigation and loss prevention activities as well as related data and systems in the Town of Westport.

Table 17 Responsible Personnel and Departments for the Town of Westport

Personnel Resources	Yes/No	Department/Position	Comments
Planner/engineer with knowledge of land development/land management practices	Yes	Contract	N/A
Engineer/professional trained in construction practices related to buildings and/or infrastructure	Yes	Contract	N/A
Planner/engineer/scientist with an understanding of natural hazards	Yes	Contract	N/A
Personnel skilled in GIS	Yes	Town Administrator	User of GIS Data Maps
Full time building official	No	N/A	All inspectors are part-time
Personnel skilled in Climate resilience	No	N/A	N/A
Floodplain manager	No	N/A	N/A
Emergency manager	No	N/A	N/A
Real estate acquisition personnel	No	DCEM	N/A
Grant writer		Town Staff	N/A
Other personnel			N/A
GIS Data Resources (Hazard areas, critical facilities, land use, building footprints, etc.)	Yes	Dane County and General Engineering	N/A
Warning Systems/Services (Reverse 9-11, cable override, outdoor warning signals)	Yes	Dane County Sheriff's Department & Tornado Warning Sirens	N/A

Data Source: Town of Westport Data Collection Guide 2021

Table 18 identifies financial tools or resources that the Town of Westport could potentially use to help fund mitigation activities.

Table 18 Financial Resources for the Town of Westport

Financial Resources	Accessible/Eligible to Use (Yes/No)
Community Development Block Grants	Yes
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	Yes
Dedicated funding for land, easement or conservation easement acquisition	N/A
Fees for water, stormwater, 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	Yes
Withhold spending in hazard prone areas	N/A

Data Source: Town of Westport Data Collection Guide

Additional Capabilities

The Town of Westport did not identify additional capabilities in the 2021 Data Collection Guide.

National Flood Insurance Program Participation

The Town of Westport is not currently participating in the National Flood Insurance Program.

Public Involvement Activities

The Town of Westport provided a publically noticed listening session with the Town of Westport Board on November 15, 2021. The listening session was noticed on the Town website. An agenda discussing the draft mitigation strategies was provided. No changes were made to the initial draft mitigation strategies.

MITIGATION STRATEGIES

Below are the identified mitigation strategies developed by the Town of Westport's NHMP steering committee. Mitigation is defined as a sustained action to reduce or eliminate risk to people and property from hazards and their effects. A *mitigation strategy* is a long-term vision for risk reduction in local jurisdictional or regional planning. A mitigation strategy can be achieved by a list of overall improvements to achieve (goals) that provide direction for community efforts to reduce potential losses identified in the risk assessment.

Strategy #1	**Floodplain Management**
Prevention	**Natural Resource Protection**
Property Protection	Critical Facilities Protection
Public Education & Awareness	Structural Project

Work to assist in implementing sound floodplain management practices through continued compliance with the National Flood Insurance Program, to include floodplain ordinance enforcement and periodic review, promoting the benefits of flood insurance, and continued staff training and development in floodplain management.

- Evaluate through existing staff, Waunakee and Middleton zoning staff, and additional DNR staff, if necessary, the regulatory deficiencies and enforcement shortcomings in flood-related ordinances and programs.
- Periodically work with others to update ordinances as necessary.
- Ensure that stop work orders and other means of compliance are being used as authorized by each ordinance.
- Educate the public what the rules/regulations of Shoreland Zoning that is required by the County and when they are required.
- Encourage floodplain management staff to become Certified Floodplain Managers (CFM) or maintain their CFM status.
- Revise participation in Flood Insurance Rate Map and adopt new maps or amendments to maps.
- Improve risk assessment and tracking of floodplain permits.
- Promote and disperse information on the benefits of flood insurance, with assistance from partners such as the County, WDNR, or ASFPM.
- Evaluate the potential costs and benefits of becoming a participant in the Community Rating System.
- Research options to decrease shoulder washouts when flooding happens.
- Undertake staff training to meet all steps of this objective.

Defined steps to achieving this mitigation strategy

Strategy #1	Floodplain Management

1. Continue to study, develop, and implement a plan to prevent flood damage to residents on the North Shore of Lake Mendota along Reynolds Avenue and Kupfer Road, including protection of the Reynolds Avenue sanitary sewer lift station owned and operated by the Town of Westport Sewer Utility District. This plan should consider berming, pumps, dikes, and new technologies, which could prevent further flood damage in the area and save disaster relief expenses and energies.
   a. *Responsible Party* – Town Administration, Joint Zoning Authority, County
   b. *Funding source* – Municipal Budget, Grants
   c. *Completion date* – Complete within the first twelve months of project initiation

2. Study, develop, and implement a plan to provide for shore stabilization on the North Shore of Lake Mendota from the Kupfer Road neighborhood to the Yahara River. This will prevent further loss of wildlife habitat and prevent the damage to Kupfer Road. See Objective 1 for details.
   a. *Responsible Party* – Town Administration
   b. *Funding source* – Municipal Budget
   c. *Completion date* – Complete within the first twelve months of project initiation

3. Study, develop, and implement a plan to provide for stormwater detention at the Mary Lake Pond located east of Woodland Drive as it crosses Six Mile Creek, whether by refurbishing the pond or by recreating or creating increased wetlands, in order to increase water quality and decrease water quantity into Lake Mendota from Six Mile Creek.
   d. *Responsible Party* – Town Administration, County
   e. *Funding source* – Grant
   f. *Completion date* – Set to be completed in 2022

Strategy #1	Floodplain Management

4. Study, develop, design, and implement improvements for the Woodland Drive bridge over Six Mile Creek, and for the roadway near the bridge, that will enhance the water quality of the Creek, assist in holding area wide stormwater from the Creek and Lake Mendota, and to aid in protecting the roadway and bridge from being damaged by floodwaters that often overflow the bridge and road.
   a. *Responsible Party* – Town Administration
   b. *Funding source* –
   c. *Completion date* – This task was addressed partially in the 2010 Woodland Drive construction. Bridge construction at some point will finalize this, but perhaps not for 20-30 years.

5. Study, develop, design, and implement improvements to ditches/shoulders on Town roads that will help with erosion and washouts in times of flooding.
   a. *Responsible Party* – Town Administration
   b. *Funding source* – Municipal Budget, Grant funding if available
   c. *Completion date* – within twelve months of initiation of projects.

Strategy #2	Flooding – Critical Facilities Protection
Prevention	Natural Resource Protection
Property Protection	**Critical Facilities Protection**
Public Education & Awareness	Structural Project

The Town of Westport has a duty to protect residents from unpredictable hazards, and flooding dangers and risks can be reduced by purchasing an emergency engine driven centrifugal trash pump.

The desired outcome would be the ability to quickly and effectively pump water from culverts and storm sewers that are at or over design capacities during and after a storm event. This strategy would and improved safety to residents by reducing flooding frequencies to roads and bridges.

Defined steps to achieving this mitigation strategy

1. Identify areas subject to flooding which could be relieved by pumping
   a. *Responsible Party* – Town Staff
   b. *Funding source* – Municipal Budget

      Completion date –1-2023

2. Determine if available pump systems would be effective for specific rainfall events
   d. *Responsible Party* – Town Board
   e. *Funding source* – Municipal Budget

      Completion date –6-2023

3. Grant writing to FEMA – Pre-Disaster Mitigation Grant Program in order to fund property purchase
   f. *Responsible Party* – Town Staff
   g. *Funding source* – Municipal Budget
   h. *Completion date* – Complete within first twelve months of project initiation.

Strategy #2	Flooding – Critical Facilities Protection

4. Implementation process/construction after awarded grant is received.
   g. *Responsible Party* – Town Staff/ Pump Vendor
   h. *Funding source* – FEMA, Municipal Budget
   i. *Completion date* – 1 year after project initiation.

Strategy #3	Winter Storm - Prevention

Prevention	Natural Resource Protection
Property Protection	Critical Facilities Protection
Public Education & Awareness	Structural Project

The Town of Westport has a duty to protect residents from unpredictable winter storm hazards, and additional snow equipment to apply brine (water and salt mixture) distribution to road would be an effective means of addressing snow and ice conditions. Additionally, areas subject to drifting could be protected by installation snow fencing.

The desired outcome would be a preventive method of mitigating snow drifting and applying material to minimize snow and ice buildup and improve winter road safety for vehicles and other road users while decreasing the amount of pure salt applied to the road network.

Defined steps to achieving this mitigation strategy

6. Identify hazardous and problematic road areas which could benefit from brine application and/ or snow fencing.
   a. *Responsible Party* – Town Staff
   b. *Funding source* – Municipal Budget
      Completion date – 1-2023

7. Seek public input on brine application in lieu of/in addition to, salt and sand distribution. Installation of snow fencing in the public right of way or on private property.
   i. *Responsible Party* – Town Board
   j. *Funding source* – Municipal Budget
      Completion date –6-2023

8. Grant writing to FEMA – Pre-Disaster Mitigation Grant Program
   k. *Responsible Party* – Town Staff
   l. *Funding source* – Municipal Budget
   m. *Completion date* – Complete within first six months of project initiation.

Strategy #3	Winter Storm - Prevention

9. Implementation process/construction after awarded grant is received.
   j. *Responsible Party* – Town Staff/ Equipment Vendor/Installation Contractor
   k. *Funding source* – FEMA, Town Budget
   l. *Completion date* – 2 years after project initiation.

Strategy #4	**Wind Storm – Structural Project**
Prevention	Natural Resource Protection
Property Protection	Critical Facilities Protection
Public Education & Awareness	**Structural Project**

The Town of Westport has a duty to protect residents from unpredictable wind storm events and hazards, and a program to remove dead and hazardous trees from the public right of way would provide improved security and safety for residents and other road users by reducing the number of road closures and accidents related to downed trees and utilities.

The desired outcome would be a public road network free of recognizable tree hazards and vulnerable utility lines as well as improving emergency response times by minimizing unforeseen road closures.

Defined steps to achieving this mitigation strategy

1. Survey locations of hazardous trees and private overhead utilities in the public right of way
   a. *Responsible Party* – Town Staff/Private Utility Companies
   b. *Funding source* – Municipal Budget
      Completion date – 1-2023

2. Seek public input for removal of trees in the public right of way with respect to esthetics and public safety.
   n. *Responsible Party* – Town Board
   o. *Funding source* – Municipal Budget
      Completion date –12-2023

3. Grant writing to FEMA – Pre-Disaster Mitigation Grant Program
   p. *Responsible Party* – Town Staff
   q. *Funding source* – Municipal Budget
   r. *Completion date* – Complete within first twelve months of project initiation.

Strategy #4	Wind Storm – Structural Project

4. Implementation process/construction after awarded grant is received.
   m. *Responsible Party* – Third Party/Private Contractor/ Utility Companies
   n. *Funding source* – FEMA
   o. *Completion date* – 2-4 years after project initiation.