
Town of Christiana Annex

Community Profile

The Town of Christiana is located in the Southeast quadrant of the County, south of the Town of Deerfield, east of the Town of Pleasant Springs and completely encompassing the Villages of Cambridge and Rockdale. Land use is dominated by agriculture and woodlands, and dispersed one- and two-family homes. According to the United States Census Bureau, the Town of Christiana has a total area of 35.81 square miles. As of the 2010 Census, there are 1,235 people, 478 households, and 338 families residing in the Town of Christiana. The population density is 54.5 per square mile. There are 497 housing units at an average density of 14.4 per square mile. Table 1 shows the population profile by age for the Town of Christiana according to the 2010 Census.

Table 1 Population Profile of Town of Christiana

Category	Number	Percent
Total population	1,235	100.0
Under 5 years	70	5.7
5 to 9 years	81	6.6
10 to 14 years	86	7.0
15 to 19 years	83	6.7
20 to 24 years	46	3.7
25 to 29 years	67	5.4
30 to 34 years	58	4.7
35 to 39 years	64	5.2
40 to 44 years	72	5.8
45 to 49 years	122	9.9
50 to 54 years	134	10.9
55 to 59 years	104	8.4
60 to 64 years	74	6.0
65 to 69 years	64	5.2
70 to 74 years	50	4.0
75 to 79 years	35	2.8
80 to 84 years	14	1.1
85 years and over	11	0.9

Data Source: 2010 U.S. Census

American Community Survey estimates for 2014 indicate that the median income for a household in the Town of Christiana is \$58,807 and the median income for a family is \$81,389. The per capita income for the Town of Christiana is \$31,952. 95.6% of the population has at least a high school degree, while 25.9% of the population holds at least a bachelor's level degree.

Hazard Identification and Risk Assessment

A hazard identification and vulnerability analysis was completed for the Town of Christiana 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 2 outlines the hazard identification for the Town of Christiana based on the Data Collection Guide issued in 2015. 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. The Town of Christiana’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 2. This matrix reflects the significance of the hazards relative to one another as perceived by the Town of Christiana’s planning team.

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

DRAFT

Table 2 Vulnerability Assessment Matrix for the Town of Christiana

Hazard	Hazard Attributes (1-5)			Impact Attributes (0-5)						Total
				Primary Impact (Short Term – Life and Property)			Secondary Impact (Long Term- Community Impacts)			
	Area of Impact	Past History, Probability of Future Occurrence	Short Term Time Factors	Impact on General Structures	Impact on Critical Facilities	Impact on At-Risk Populations	Social Impact	Economic Impact	Severity of other associated secondary hazards	
Dam/Levee	0	0	0	0	0	0	0	0	0	0
Extreme Cold	3	3	1	1	0	3	2	1	1	15
Extreme Heat	3	3	1	1	0	3	2	1	1	15
Drought	3	2	1	1	0	1	1	3	1	13
Flood	0	0	0	0	0	0	0	0	0	0
Fog	1	1	1	1	1	1	1	1	1	9
Hail Storm	1	1	1	1	1	1	1	1	1	9
Landslide	0	0	0	0	0	0	0	0	0	0
Lightning	1	1	1	1	1	1	1	1	1	9
Tornado	5	4	5	5	5	5	5	5	5	44
Wildfire	1	1	1	1	1	1	1	1	1	9
Windstorm	5	5	5	5	5	5	5	5	5	45
Winter Storm	5	5	3	3	3	5	5	4	5	38

Previous Hazard Events

For the purposes of this plan, the Town of Christiana chose to only list those hazard events noted in the broader County plan.

Asset Inventory

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

Population

Table 3 Vulnerable Population Summary

Disability Status from the 2014 American Community Survey	Number	Percent of Group with Disability
Population Under 5 years old with a Disability	0	0%
Population 5-17 years old with a Disability	11	4.2%
Population 18-64 with a Disability	131	10.2%
Population Over 65 years old with a Disability	56	22.6%
Total Population with Disability	198	10.5%

Data Source: 2014 American Community Survey

Other Vulnerable Populations	Estimate	Percentage
Families Below Poverty Level	26	4.8%
Individuals Below Poverty Level	166	8.9%
Of those poverty: Individuals Under 18	63	18.3%
Of those poverty: Individuals Over 65	3	1.2%
Total Population Over 5 who Speak English less than "very well"	18	1.0%
2014 ACS Total Population Estimate	1885	100%

Data Source: 2014 American Community Survey

General Property

Table 4 Property Exposure Summary

Property Type	Total Parcel Count	Improved Parcel Count	Improved Values (\$)	Content (\$)	Total Value (\$)
Totals	1,170	507	76,797,900	38,398,950	115,196,850
Agriculture	744	248	36,352,900	18,176,450	54,529,350
Commercial	7	5	714,400	357,200	1,071,600
Utilities	5	2	304,600	152,300	456,900
Industrial	3	2	264,000	132,000	396,000
Institutional/ Governmental	7	1	98,500	49,250	147,750
Other	147	9	670,200	335,100	1,005,300
Residential	257	240	38,393,300	19,196,650	57,589,950

Data Source: Dane County Land Information Office, 2015

Critical Facilities

The Town of Christiana has identified the critical facilities important to protect from disaster impacts. These are collected in Table 5. Table 5 is based on GIS data inventories from Dane County. No further supplemental data was provided by the community through the Data Collection Guide.

Table 5. Critical Facility Summary/Essential Infrastructures

Facility	Type*	No. of Facilities	Replacement Value (\$)
Town Hall	VF	1	Unknown
Town Garage	VF		Unknown
*EI: Essential Infrastructure; VF: Vulnerable Facilities; HM: Hazardous Materials Facilities			

Data Source: 2015 Town of Christiana Data Collection Guide

Other Assets

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

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 Christiana. Table 6 cross-references the hazards with the various tables where exposure or vulnerability specifics are found. The intent of Table 6 is to quantify, where possible, future impacts

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

Table 6. Hazard Vulnerability Specifics

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

Flood 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 7 and 8 outline the primary structures and properties with primary

structures on them within the Town of Christiana. Potential number of individuals at risk figures are based on primary residential structures and the average household size within Dane County.

Table 7 Primary Structures in the Floodplain

Total Floodway Structures	Floodway Residential Structures	Total Structures in 100 year Floodplain	Residential Structures in 100 year Floodplain	Potential Number of Individuals at Risk in 100 year Flood	Total Structures in 500 year Floodplain	Residential Structures in 500 year Floodplain	Potential Number of Individuals at Risk in 500 year Flood
0	0	2	2	4.66	2	2	4.66

Source: Analysis based on Dane County Land Information Office Data

Table 8 Properties with Primary Structures in the Floodplain

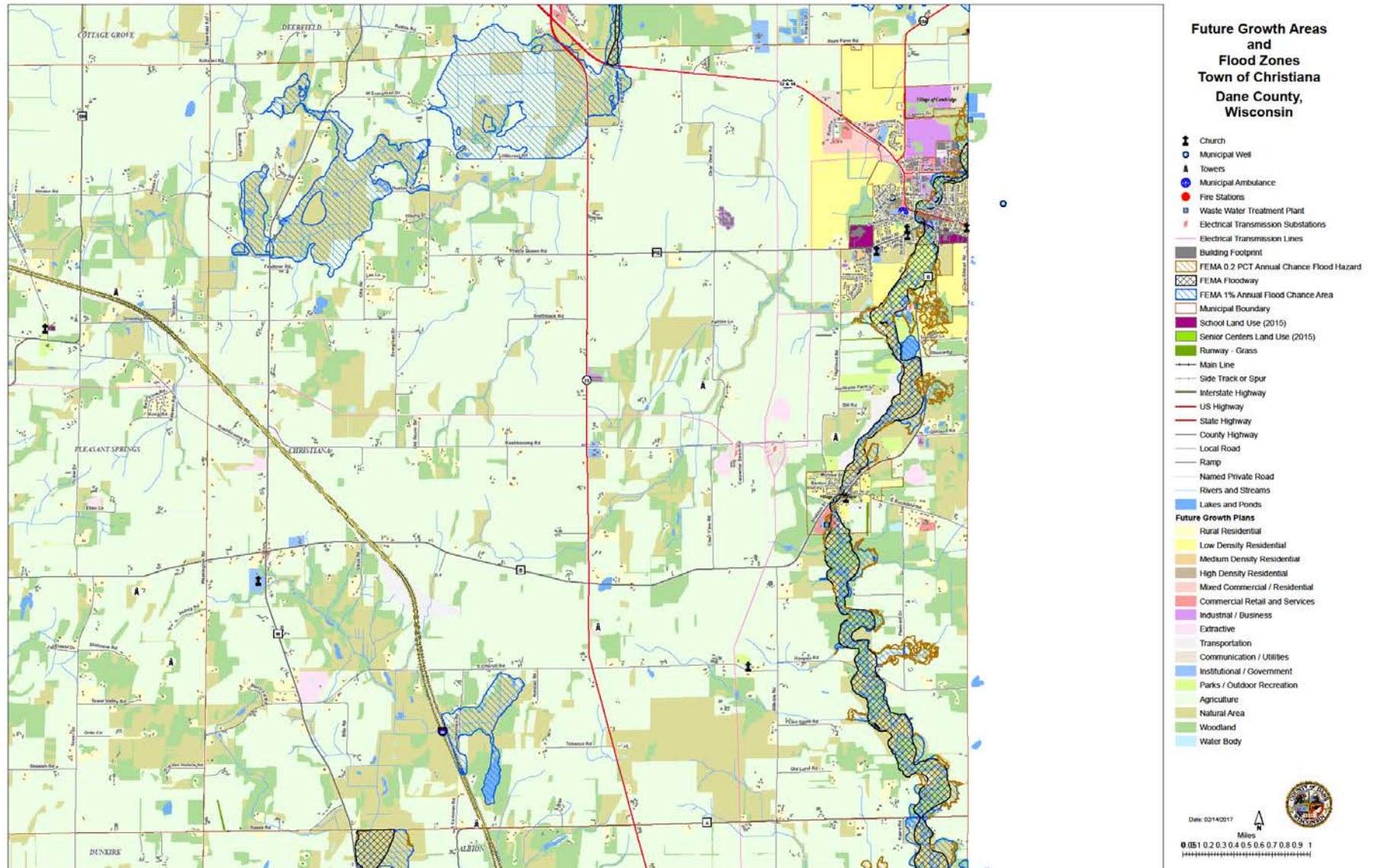
Total Floodway Properties	Floodway Improved Values	Floodway Residential Properties	Total Properties in 100 year Floodplain	Total Improved Value of Properties in 100 year Floodplain	Residential Properties in 100 year Floodplain	Total Properties in 500 year Floodplain	Total Improved Value of Properties in 500 year Floodplain	Residential Properties in 500 year Floodplain
0	\$0	0	2	\$424,000	2	2	\$424,000	2

Source: Analysis based on Dane County Land Information Office Data

Repetitive Loss Properties and Flood Insurance Policies

No repetitive losses have been reported. Flood insurance policies and loss statistics are included as part of the County plan.

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

Table 9 Tornado Loss Estimate

% Area of 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
2.42%	566	14	\$137,653,650	\$3,333,027	\$1,666,513.55	\$833,256.77	1.2%

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

Growth and Development Trends

Planned land use is shown in Figure 1, in relation to the flood hazard. Table 10 illustrates how the Town of Christiana has grown in terms of population and number of housing units between 2010 and 2014-15. Housing data is to 2014 due to data availability. Table 11, drawn from the Demographics Services Center at the Wisconsin Department of Administration, shows population projections through 2035.

Table 10 Town of Christiana Change in Population and Housing Units, 2000-2014/15

2010 Population	2015 Population	Percent Change (%) 2010-2015	2010 # of Housing Units	2014 # of Housing Units	Percent Change (%) 2010-2014
1235	1253	1.46%	497	527	6.0%

Source: Dane County and Wisconsin Department of Administration, 2016

Table 11 Town of Christiana Population Projections, 2005-2035

Population Projection	2015	2020	2025	2030	2035
Increase by same percentage each year (.14%)	1,253	1,271	1,290	1,308	1,327

Data Source: Demographic Services Center, Wisconsin Department of Administration, 2015

Problems or Additional Vulnerability issues

The Data Collection Guide issued in 2015 listed the large population of elderly people within the Town of Christiana as a possible vulnerability concern. It also listed its mobile home park as an additional vulnerability.

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 Christiana.

Mitigation Capabilities Summary

Table 12 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 Christiana.

Table 12 Town of Christiana Regulatory Mitigation Capabilities

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

Data Source: Town of Christiana Data Collection Guide

Table 13 identifies the personnel responsible for mitigation and loss prevention activities as well as related data and systems in the Town of Christiana.

Table 13 Responsible Personnel and Departments for the Town of Christiana

Personnel Resources	Yes/No	Department/Position	Comments
Planner/engineer with knowledge of land development/land management practices	No		County
Engineer/professional trained in construction practices related to buildings and/or infrastructure	Yes	Building Inspector	
Planner/engineer/scientist with an understanding of natural hazards	No		County
Personnel skilled in GIS	No		
Full-time Building Official	No	Building Engineer	On-Call
Floodplain Manager	No		
Emergency Manager	No		
Grant Writer	No		
GIS Data Resources – (land use, building footprints, etc.)	No		Dane County
Warning systems/services (Reverse 9-11, cable override, outdoor warning signals)	No		County Emergency Management

Data Source: Town of Christiana Data Collection Guide, 2015

Table 14 identifies financial tools or resources that the Town of Christiana could potentially use to help fund mitigation activities.

Table 14 Financial Resources for the Town of Christiana

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
Fees for water, 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

Additional Capabilities

National Flood Insurance Program Participation

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

Public Involvement Activities

The Town of Christiana community participated in the County public outreach process. This was a series of public workshops held around the County in which an overview of natural hazard mitigation was given and the County plan was discussed. Residents were then given the opportunity to give their input on mitigation actions that could be taken, and filled out informational surveys that assessed the level of risk the perceived within their own community. More information on these meetings can be found in the County base plan.

Mitigation Actions

Objective 1: Support Dane County efforts to mitigate natural hazards at the local level through continued collaboration with County projects in the Town of Christiana area. The Town will continue to lower its vulnerability to natural hazards by distributing County hazard mitigation information and evaluating grant opportunities for potential use on hazard mitigation projects within the Town.

Steps:

- 1) Consider Dane County hazard mitigation information and its relevance to Town hazard mitigation efforts and resident safety.
- 2) Take necessary steps to apply for hazard mitigation grant money when available.

Lead Implementing Agency: Town of Christiana

Supporting Agencies: Dane County Emergency Management

Possible Funding and Technical Assistance:

Timeline: Continuous

Priority: Moderate

Estimated Costs: Unknown