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## Town of Springdale Annex

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### 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 the 2010 Census, there are 1,904 people, 717 households, and 579 families residing in the Town of Springdale. The population density is 54 people per square mile. There are 756 housing units at an average density of 21.4 per square mile. The municipality population distributed by the Wisconsin Department of Administration indicates that the 2015 population for Town of Springdale was 1,948 people. Table 1 shows the population profile by age for the Town of Springdale according to the 2010 Census.

**Table 1 Population Profile of Town of Springdale**

Category	Number	Percent
Total population	1,904	100.0
Under 5 years	82	4.3
5 to 9 years	127	6.7
10 to 14 years	154	8.1
15 to 19 years	139	7.3
20 to 24 years	59	3.1
25 to 29 years	50	2.6
30 to 34 years	65	3.4
35 to 39 years	109	5.7
40 to 44 years	156	8.2
45 to 49 years	189	9.9
50 to 54 years	216	11.3
55 to 59 years	180	9.5
60 to 64 years	131	6.9
65 to 69 years	106	5.6
70 to 74 years	61	3.2
75 to 79 years	38	2.0
80 to 84 years	21	1.1
85 years and over	21	1.1

Data Source: 2010 U.S. Census

American Community Survey estimates for 2014 indicate that the median income for a household in the Town of Springdale is \$82,500 and the median income for a family is \$93,750. The per capita income for the Town of Springdale is \$37,637. 97.2% of the population has at least a high school degree, while 38.6% of the population holds at least a bachelor's level degree.

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## **Hazard Identification and Risk Assessment**

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 Springdale based on the Data Collection Guide. The Data Collection Guide listed all of the hazards that could impact anywhere in Dane County. The purpose of this worksheet was to identify and rank the hazards and vulnerabilities specific to the jurisdiction. The Town of Springdale’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.

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

**Table 2 Vulnerability Assessment Matrix for the Town of Springdale**

Hazard	Hazard Attributes (1-2-3)			Impact Attributes (0-1-2-3)						Total
				Primary Impact (Short Term – Life and Property)			Secondary Impact (Long Term- Community Impacts)			
	Area of Impact	Past History, Probability of Future Occurrence	Short Term Time Factors	Impact on General Structures	Impact on Critical Facilities	Impact on At-Risk Populations	Social Impact	Economic Impact	Severity of other associated secondary hazards	
Dam failure	0	0	0	0	0	0	0	0	0	<b>0</b>
Extreme Cold	1	1	0	0	0	1	1	0	0	<b>4</b>
Extreme Heat	1	1	0	0	0	1	1	1	0	<b>5</b>
Drought	1	1	0	0	0	1	1	1	0	<b>5</b>
Flood	2	2	2	0	2	0	0	2	0	<b>10</b>
Fog	0	0	0	0	0	0	0	0	0	<b>0</b>
Hail Storm	1	1	2	0	1	0	0	1	0	<b>6</b>
Landslide	0	0	0	0	0	0	0	0	0	<b>0</b>
Lightning	0	0	0	0	0	0	0	0	0	<b>0</b>
Tornado	3	2	3	3	3	3	3	3	3	<b>26</b>
Wildfire	0	0	0	0	0	0	0	0	0	<b>0</b>
Windstorm	3	2	3	3	3	3	3	3	3	<b>26</b>
Winter Storm	3	3	3	2	2	2	2	2	2	<b>21</b>

## Previous Hazard Events

Through the Data Collection Guide, the Town of Springdale was solicited to note specific historic hazard events to include in the community profile. No specific events were highlighted for the Town of Springdale.

## 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.

## 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	0	0
Population 18-64 with a Disability	62	4.9
Population Over 65 years old with a Disability	55	21.4
Total Population with Disability	117	5.9

Other Vulnerable Populations	Estimate	Percentage
Families Below Poverty Level	20	3.4
Individuals Below Poverty Level	102	5.1
Of those poverty: Individuals Under 18	28	5.9
Of those poverty: Individuals Over 65	15	5.8
Total Population Over 5 who Speak English less than "very well"	2	0.1
2014 ACS Total Population Estimate	2003	100%

Data Source: 2014 American Community Survey

## General Property

**Table 4. Property Exposure Summary**

Property Type	Total Parcel	Improved	Improved	Content (\$)	Total Value (\$)
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	Count	Parcel Count	Values (\$)		
<b>Totals</b>	<b>1,510</b>	<b>768</b>	<b>183,906,900</b>	<b>91,953,450</b>	<b>275,860,350</b>
Agriculture	612	235	50,225,100	25,112,550	75,337,650
Commercial	19	17	2,243,000	1,121,500	3,364,500
Utilities	3	1	152,200	76,100	228,300
Industrial	2	2	611,800	305,900	917,700
Institutional/ Governmental	3	1	319,200	159,600	478,800
Other	317	21	4,448,000	2,224,000	6,672,000
Residential	554	491	125,907,600	62,953,800	188,861,400

Data Source: Dane County Land Information Office

### **Critical Facilities**

The Town of Springdale has identified the following critical facilities important to protect from disaster impacts. These are collected in Table 5, which is based on GIS data inventories from Dane County.

**Table 5. Critical Facility Summary/Essential Infrastructures**

Facility	Type*	No. of Facilities	Replacement Value (\$)
Bridge	EI	2	2,000,000
Child Care	VF	3	470,100
Communications Tower	EI	4	467,500
Electric Substation	EI	1	0
FCC Tower	EI	2	152,200
Hazardous Chemicals	HM	2	0
Historic Site	VF	3	0
Municipal Hall	EI	1	0
<b>TOTAL</b>		19	3,089,800

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

Source: Dane County GIS

### **Vulnerability to Specific Hazards**

This section details vulnerability to specific hazards, where quantifiable, and where it differs from that of the overall County. The previous inventory tables quantify what is exposed to the various hazards within the Town of Springdale. Table 5 cross-references the hazards with the various tables where exposure or vulnerability specifics are found. The intent of Table 5 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**

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

**Flood**

**Structures 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 Springdale. 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	7	5	11.65	7	5	11.65

Source: Analysis based on Dane County Land Information Office Data

**Table 8. Properties with Primary Structures in the Floodplain**

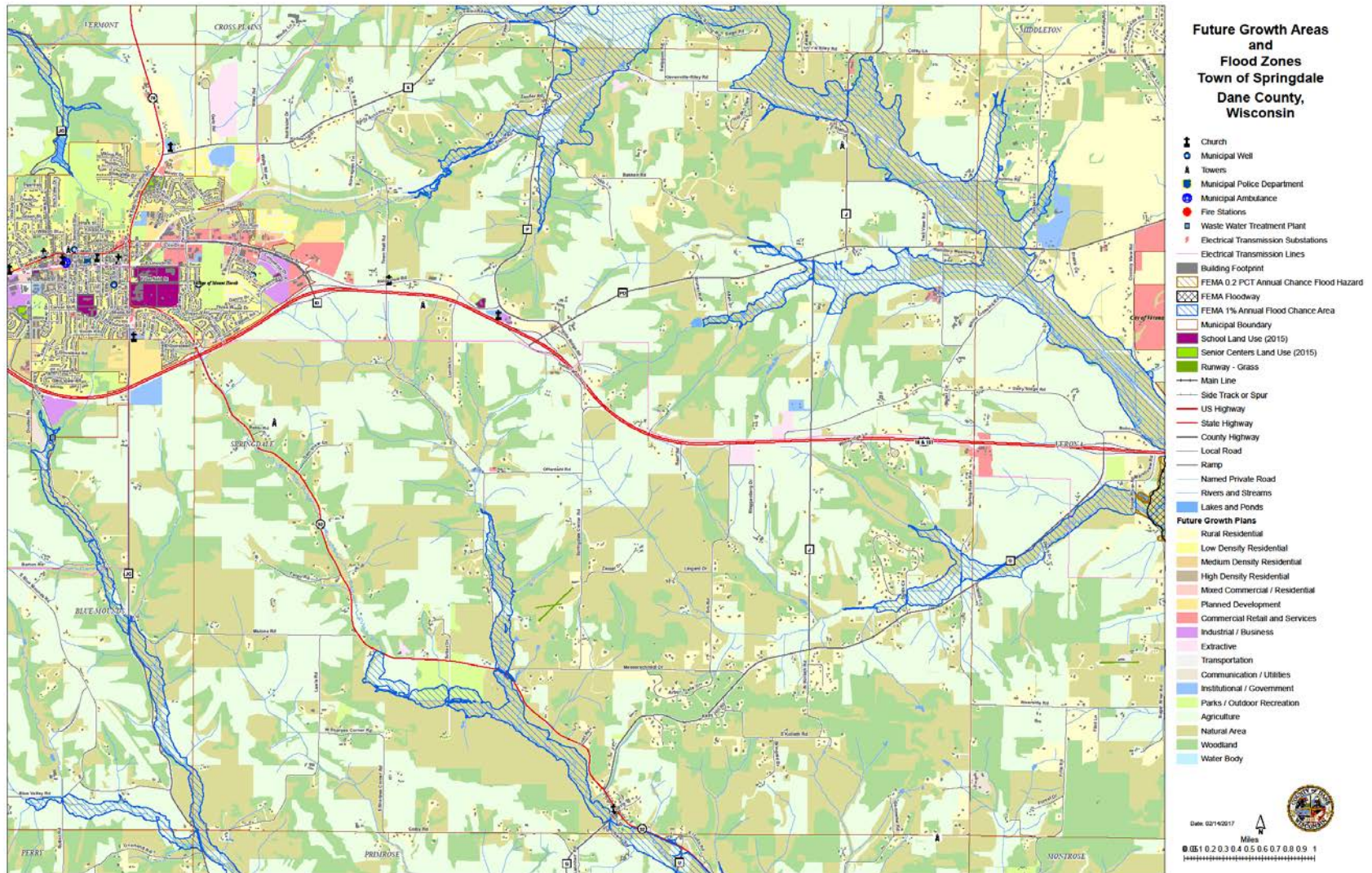
Total Floodway Properties	Floodway Improved Values	Floodway Residential Properties	Total Properties in 100 year Floodplain	Total Improved Value of Properties in 100 year Floodplain	Residential Properties in 100 year Floodplain	Total Properties in 500 year Floodplain	Total Improved Value of Properties in 500 year Floodplain	Residential Properties in 500 year Floodplain
0	\$0	0	7	\$883,000	5	7	\$883,000	5

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 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
2.39%	834	20	\$302,055,750	\$7,207,524	\$3,603,761.76	\$1,801,880.88	1.2%

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

## Growth and Development Trends

Planned land use is shown in Figure 1, in relation to the flood hazard. Table 11 illustrates how the Town of Springdale 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 12, drawn from the Demographics Services Center at the Wisconsin Department of Administration, shows population projections through 2035.

**Table 10 Town of Springdale Change in Population and Housing Units, 2010-2014/15**

2010 Population	2015 Population	Percent Change (%) 2010-2015	2010 # of Housing Units	2014 # of Housing Units	Percent Change (%) 2000-2014
1904	1948	2.31	756	764	1.1

Data Source: Dane County and Wisconsin Department of Administration

**Table 11 Town of Springdale Population Projections, 2015-2035**

Population Change	5 year Growth %	2015	2020	2025	2030	2035
Increase by same percentage each year	0.46%	1,948	1,993	2,038	2,085	2,133

Data Source: Dane County and Wisconsin Department of Administration

## 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

The Town of Springdale has not identified any regulatory tools as mitigation capabilities.

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

**Table 12 Responsible Personnel and Departments for the Town of Springdale**

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

Data Source: Town of Springdale Data Collection Guide

Table 13 identifies the financial resources available for mitigation and loss prevention activities.

**Table 13. Financial Resources for the Town of Springdale**

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

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## **Additional Capabilities**

The Town of Springdale identified several additional capabilities. The Town participates in Dane County's program of distributing reasonably priced weather radios. Additionally, the Town participates in the Southwest Dane Senior Outreach Program which has a disaster resistance voluntary registry. The Town Patrolman constantly monitors and repairs road safety issues such as damaged bridges or culverts and looks to improve drainage within the Town.

### ***National Flood Insurance Program Participation***

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

### **Public Involvement Activities**

The Town of Springdale 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**

### **Completed Mitigation Actions:**

The Town of Springdale has completed the following mitigation actions from the 2010 plan:

- Implement a program to identify and monitor Springdale residents, primarily the elderly, at most risk to the effects of extreme heat and cold. This was completed through participation in the Southwest Dane Senior Outreach program.
- Mitigation of hazardous road conditions during slippery foggy weather at sharp curve on northern section of Town Hall road in Section 5.

### **Continuing Mitigation Actions**

For this plan update, the Town of Springdale will be continuing the following mitigation actions:

Objective 1: Implement a program to improve road safety for all traffic on Town-wide roads. Determine the feasibility of reducing the flow of floodwaters over roads by evaluating road elevation, road shoulder, ditching, and culvert sizing standards for construction and upgrade for all roads in the Town of Springdale, but especially for roads in low-lying or flood prone areas.

#### Steps:

- Review existing inventory of all culverts in the Town of Springdale.
- Review existing inventory of flood prone roads with specific attention to road elevation, road shoulder, ditching and culvert sizing.

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- Develop criteria to evaluate and prioritize problems,
  - Compile existing road elevation, road shoulder, ditching, and culvert sizing design standards.
  - Evaluate the feasibility of designing roadway water conveyance systems for larger storm events.
  - Evaluate the impact of culvert sizing in private driveways and the impact on public roads.
  - Evaluate effectiveness of culvert aid program as a compliance tool for Town road upgrades.
  - Culvert sizing and maintenance on Town roads.
  - Culvert sizing and maintenance on private driveways.
  - Ditch protection and maintenance.
  - Use flood occurrences as an educational opportunity and an opportunity to implement upgrades.
  - Inventory and prioritize tree-trimming needs

Lead Implementing Agency: Dane County Highway

Supporting Agencies:

Local governments

Wisconsin DOT

Upper Sugar River Watershed Association

Possible Funding and Technical Assistance:

- Staff time
- FEMA-Hazard Mitigation Grant Program
- FEMA-Flood Mitigation Assistance
- FEMA-Pre-disaster Mitigation
- U.S. Army Corps of Engineers Small Flood Control Projects
- DNR-Municipal Flood Control Grant Program

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

Priority: High

Estimated Costs: Low

Update: This project is ongoing. The Town Patrolman constantly monitors drainage ways, culverts, and bridges and makes improvements as needed. Of particular importance is the need to inventory weak, damaged trees located on dead-end roads which could block efficient travel of emergency safety vehicles and citizens in and out of the area in case of an emergency

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Objective 2: Undertake public information activities to advise property owners, renters, businesses and vulnerable populations about hazards and recommended course of action to minimize damage and to protect people from harm.

Steps:

- Continue and expand the email notification program from the Town to citizens for notices of emergencies, road closures for road repair, etc. Emails are solicited in the annual town-wide newsletter and during voter registration and absentee ballot request processes.
- Disseminate to all Springdale property owners the handout: Dane County Natural Hazard Mitigation Plan Risk Assessment Questionnaire
- Disseminate to all Springdale property owners the handout: Dane County Natural Hazard Mitigation Plan Mitigation Strategy Questionnaire with special attention focused on the Personal and Household Preparedness and Mitigation Measures listed.

Lead Implementing Agency: Town of Springdale

Possible Funding and Technical Assistance:

- Staff time

Timeline: Begin immediately

Priority: Moderate

Estimated Costs: Low

Objective3: Implement a program to improve emergency response time for properties served by a shared private driveway.

Steps:

- Partner with the Mount Horeb Area Fire District to identify the individual properties served by a shared private driveway so that an individual rural fire number can be installed at the intersection of the single-use portion of the driveway with the shared portion of the driveway. Presently, the rural fire numbers for all the properties on a shared private driveway may only be located at the driveway intersection with the public road.
- Partner with the Mount Horeb Area Fire District to identify rural driveways longer than 1000 feet. A blue oval marker can be installed on the fire number pole at the road. The enables the fire department to know immediately the length of water supply hose needed to reach the property since first arriving fire engines only carry 1000 feet of water supply hose.

Lead Implementing Agency: Town of Springdale

Supporting Agency: Mount Horeb Area Fire District

Possible Funding and Technical Assistance:

- Staff time

Timeline: Begin immediately

Priority: Moderate

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Estimated Costs: Unknown

Objective 4: Continue to implement sound floodplain management practices through continued compliance with the National Flood Insurance Program at the County level, to include floodplain ordinance enforcement and periodic review, promoting the benefits of flood insurance, and continued staff training and development in floodplain management.

Steps:

- Evaluate through the existing staff, County planning staff, and additional DNR staff if necessary, the regulatory deficiencies and enforcement shortcomings in flood-related ordinances and programs. (See related County objective.)
- Periodically update ordinances as necessary.
- Ensure that stop work orders and other means of compliance are being used as authorized by each ordinance.
- Participate in Flood Insurance Rate Map updates by adopting new maps or amendments to maps.
- Work as a partner with Dane County Planning and Development staff with steps 1-4 above.
- Include the Dane County Planning and Development staff Natural Resource Protection Corridor information as part of the implementation and enforcement of the Town of Springdale Land Use Plan and Land Division/Subdivision, Driveway and Public Road ordinances.
- Work as a partner with the Upper Sugar River Watershed Association in its work to preserve and enhance watershed resources.
- Adopt amendments to the Town of Springdale Land Use Plan to improve the protection of Town natural resources.

Lead Implementing Agency: Dane County Planning and Development Department

Supporting Agency: Town of Springdale, DNR, Upper Sugar River Watershed Association

Possible Funding and Technical Assistance:

- Staff time

Timeline: Begin immediately

Priority: Moderate

Estimated Costs: Unknown