

MITIGATION STRATEGY

1. CHAPTER OVERVIEW

This chapter is intended to identify common mitigation strategies for each of the hazards reviewed in this plan and potential funding sources for carrying out mitigation activities. The bulk of the chapter is devoted to listing goals, objectives, and policies along with projects or activities that apply broadly to the county and special projects or activities that apply to one or more of the municipalities.

2. TYPES OF POTENTIAL MITIGATION STRATEGIES

Mitigation strategies can be grouped into six broad categories:

- ◆ Prevention
- ◆ Property protection
- ◆ Public education and awareness
- ◆ Natural resource protection
- ◆ Emergency services
- ◆ Structural projects

Examples are listed below for each of the natural hazards addressed in this plan.

Dam Failure

- ◆ Remove dams that don't serve a useful purpose
- ◆ Require the preparation of emergency action plans
- ◆ Ensure that emergency action plans are current
- ◆ Ensure that dam inspections are conducted as required by state law
- ◆ Include a dam failure in emergency planning exercises
- ◆ Minimize the level of development in a dam's hydraulic shadow in an effort to minimize damage resulting from a dam failure

Flooding

- ◆ Continue to enforce floodplain regulation and strengthen requirements when appropriate
- ◆ Limit development in the floodplain through local floodplain regulations or zoning
- ◆ Provide dryland access through flood-prone areas
- ◆ Retrofit legal nonconforming buildings that do not meet floodplain regulations (e.g., elevating, floodproofing)
- ◆ Purchase repetitive loss properties and remove structures (i.e., demolition or relocation)
- ◆ Raise the surface of local roads above 50-year flood elevations and arterials above 100-year flood elevations
- ◆ Enlarge the cross-section of culverts and bridges when they do not adequately carry anticipated flood flows
- ◆ Prohibit basements in new subdivisions where flooding from stormwater could be problematic
- ◆ Clean drainageways to allow a free flow of water
- ◆ Minimize the amount of impervious surfaces in a watershed so that

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stormwater can soak into the ground rather than contributing to flood water

- ◆ Maintain appropriate water rescue equipment
- ◆ Develop and implement appropriate evacuation procedures in flood-prone area
- ◆ Install gaging stations to better understand surface water flow regimes
- ◆ Construct stormwater facilities (e.g., detention and retention basins) to help manage stormwater
- ◆ Take steps to upgrade the National Flood Insurance Program requirements
- ◆ Encourage farm operators to evaluate the economics of crop insurance programs.
- ◆ Encourage and incentivize land management practices that encourage infiltration such as no till farming, cover crops, rotational grazing, and native prairie establishment.
- ◆ Encourage enrollment into land retirement programs on the most environmentally sensitive cropland.
- ◆ Expand landowner/farmer outreach programs, which will increase the number of conservation practices that will retain water.
- ◆ Increase cost share funding for flood mitigation practices.
- ◆ Utilize modeling, including the Erosion Vulnerability Assessment for Agricultural Lands (EVAAL) tool, to identify priority areas for conservation and mitigation practices and projects.
- ◆ Conduct a cost-benefit analysis of best management projects, which could include smaller dam structures, berms, swales, terraces, prairie buffers and other practices to retain water on the landscape.
- ◆ Collaborate with county, city, and village government to expand cost-sharing program of rain gardens and other storm water retention practices.
- ◆ Utilize conservation easements to protect environmentally sensitive portions of parcels from development – they do not restrict all land use, rather they direct development to areas of land that are not environmentally sensitive.

Fog

- ◆ Identify those roadways where fog is localized and install appropriate signage
- ◆ Install automated visibility warning systems to detect reduced visibility conditions

Tornado / High Winds

- ◆ Construct storm shelters in campgrounds and mobile home parks
- ◆ Bury electrical and telephone lines and other utility cables
- ◆ Continue to enforce building codes and strengthen requirements when appropriate
- ◆ Include safety strategies for severe weather events in driver education classes
- ◆ Promote the construction of safe rooms when residential buildings are placed slab on grade

Severe Storms/Hail

- ◆ Encourage property owners to use building products (e.g., roofing, siding) resistant to hail damage

Snow Storms

- ◆ Bury electrical and telephone lines and other utility cables

Key Terms in This Chapter

Community Rating System (CRS) – A voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum National Flood Insurance Programs requirements. As a result, flood insurance premium rates are discounted to reflect the reduced flood risk resulting from qualified community actions.

Goal – A statement that describes a desired condition to be achieved sometime in the future. A goal is often broad in scope, not easily measurable, and long-term in nature.

Objective – A specific and usually measurable intermediate end that is achievable and make progress toward a goal.

National Flood Insurance Program – A Federal program created in 1968 under which flood-prone areas are identified and flood insurance is made available to the owners of the property in participating communities.

Policy – A predetermined course of action or specific rule that an organization adopts and uses in decision-making and which when applied will help to achieve one or more of its goals or objectives.

Repetitive loss community – A community with one or more repetitive loss properties.

Repetitive loss property (RLP) – For purposes of the Community Rating System, a property for which two or more National Flood Insurance Program losses of at least \$1,000 each have been paid within any 10-year rolling period since 1978.

Severe residential loss (SRL) property – A residential property (1) that has at least four NFIP claim payments over \$5,000 each, when at least two such claims have occurred within any ten-year period, and the cumulative amount of such claims payments exceeds \$20,000; or (2) or which at least two separate claims payments have been made with the cumulative amount of the building portion of such claims exceeding the value of the property, when two such claims have occurred within any 10-year period.

Safe room – An above ground room within a building (most often homes) that is specifically designed to withstand high winds and provides occupants a safe refuge from tornadoes, hurricanes, or other high-wind events.

Strategy – An action or a group of actions intended to achieve a goal or objective.

- ◆ Install temporary snow fences along road ways that have experienced blowing and drifting snow
- ◆ Continue to enforce building codes and strengthen requirements when appropriate
- ◆ State and local governments can produce and distribute information to motorists relating to severe winter weather hazards
- ◆ Include safety strategies for severe weather events in driver education classes

Temperature Extremes

- ◆ Establish heating and cooling centers for vulnerable populations including the elderly and homeless
- ◆ Encourage local residents to contact friends, neighbors, and other family members during periods of extreme heat or cold.

Drought

- ◆ Adopt local ordinances for prioritizing water usage during drought emergencies
- ◆ Develop public wells in deep aquifers
- ◆ Maintain enough water storage capacity in public water systems
- ◆ Protect wetlands from development
- ◆ Encourage the use of water-saving devices in homes and other places where water is used
- ◆ Encourage farmers to take out crop insurance
- ◆ Protect important aquifer recharge areas from inappropriate development
- ◆ Encourage farm operators to evaluate the economics of crop insurance programs.
- ◆ Encourage and incentivize the installation of agricultural conservation practices that promote soil health, preserve soil moisture, and help to minimize loss of crops and topsoil in the event of a drought. Such practices may include planting crop field windbreaks, planting cover crops, no-till farming, rotational grazing, and contour farming to help reduce evaporation and/or promote infiltration.
- ◆ Promote the use of drought-resistant landscaping practices using native plantings.
- ◆ Encourage and increase cost share assistance for the installation of farm drought management strategies including Irrigation Water Management Systems and expanded use of Wisconsin Irrigation Scheduling Program (WISP).
- ◆ Encourage multi-agency approaches to drought planning, water conservation, drought prediction, and stream and groundwater monitoring.

Contamination and Loss of Water Supply

- ◆ Encourage farm operators to evaluate the economics of crop insurance programs.
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Wildland Fire

- ◆ Maintain appropriate fire fighting equipment to effectively respond to wildland fires
- ◆ Ensure that new homes are well protected from wildland fires and have multiple routes of ingress and egress
- ◆ Provide homeowners with information on how to create a defensible space around structures
- ◆ Bury electrical and telephone lines and other utility cables
- ◆ Institute measures to reduce soil erosion following a wildland fire event
- ◆ Local governments in rural areas can require the issuance of burn permits
- ◆ Encourage property owners to conduct controlled burns as a means of controlling fuel buildup

3. EXISTING MITIGATION STRATEGIES

FLOOD PROTECTION MEASURES

Under authority granted by Public Law 566, the U.S. Department of Agriculture, Soil Conservation Services constructed three flood-control dams and a multipurpose reservoir in the headwaters of Honey Creek, northwest of Plain, to control flooding. A reach of Honey Creek near Plain was channelized as part of the same project.

Other dams in Sauk County have minimal flood control potential. Seeley Lake decreases downstream discharges somewhat, due to the increase in evaluation needed to pass large flood discharges over the dam. No additional flood-protection structures are planned.

NATIONAL FLOOD INSURANCE PROGRAM

In 1968, the United States Congress created the National Flood Insurance Program (NFIP)¹ to identify and map flood-prone communities and provide flood insurance to those property owners within a community that has adopted floodplain management regulations that meet minimum requirements. The Federal Insurance and Mitigation Administration, a division of the Federal Emergency Management Agency (FEMA), administers this federal program. Over 21,000 communities across the United States and its territories now participate in the NFIP.

Sauk County participates in the NFIP along with the cities and villages listed in Table 7-1. The villages of Cazenovia and Loganville do not participate. In 2002, the Federal Emergency Management Agency, in collaboration with the Wisconsin Department of Natural Resources, initiated a multi-year effort to create and adopt digital flood insurance rate maps (FIRMs) for the entire county. The new floodplain maps for Sauk County went into effect December 18, 2009.

¹ The National Flood Insurance Program was created with the passage of the National Flood Insurance Act of 1968.

Table 7-1. Participating Jurisdictions in the National Flood Insurance Program: November 2018

Municipality	Initial FIRM Adopted	Current FIRM Adopted
City		
Baraboo	08/01/79	11/20/13
Reedsburg	03/04/85	10/02/15
Wisconsin Dells [1]	12/18/84	05/16/16
Village		
Cazenovia [1]	12/18/09	12/08/16
Ironton	03/07/01	11/20/13
Lake Delton	09/04/85	11/20/13
La Valle	09/19/84	11/20/13
Lime Ridge	09/01/87	11/20/13
Loganville	02/15/85	11/20/13
Merrimac	03/07/01	11/20/13
North Freedom	09/19/84	11/20/13
Plain	09/30/88	11/20/13
Prairie du Sac	03/07/01	10/02/15
Rock Springs	09/18/85	11/20/13
Sauk City	03/07/01	10/02/15
Spring Green	02/01/86	10/02/15
West Baraboo	09/19/84	11/20/13
Sauk County	09/17/80	10/02/15

Source: Federal Emergency Management Agency <https://www.fema.gov/cis/AWI.pdf> Accessed on February 2, 2019

Notes:

1. Municipality located in Sauk County and another county

Participation in the NFIP is based on an agreement between local communities and the federal government. If a community adopts and enforces a floodplain management ordinance to reduce future flood risks to new construction in Special Flood Hazard Areas, the federal government will make flood insurance available within the community as a financial protection against flood losses.

The Sauk County floodplain ordinance is based on a model established by the Wisconsin Department of Natural Resources (DNR). In 2008, the DNR drafted a new model ordinance. All existing floodplain ordinances need to meet the requirements of the new model.

Because Sauk County and each of the cities and villages participate in the NFIP, property owners are able to purchase flood insurance, including those not located within a mapped floodplain area. Flood insurance pays even when no state or federal disaster is declared. Historically, federal disaster declarations have been issued in less than 50 percent of the flooding incidents.

There are two types of flood insurance. The first is a policy that insures the physical structure and the second is a policy that covers the content of the building. The standard flood insurance policy provides coverage for one building per policy. The only exception is 10 percent coverage for a detached garage. However, the total payment for flood damage to the detached garage and the

house together cannot exceed the building policy limit. For coverage to apply, the garage can only be used for parking and storage. All other buildings on the premises need separate coverage. The maximum allowable limits are \$250,000 for residential properties and \$500,000 for commercial properties.

Contents are not automatically included. If contents coverage is desired, a specific amount must be named and a separate premium charged. Contents coverage limits are \$100,000 for residential policies and \$500,000 for commercial policies.

Building property coverage includes:

- ◆ The insured building and its foundation
- ◆ The electrical and plumbing systems
- ◆ Central air conditioning equipment, furnaces, and water heaters
- ◆ Refrigerators, cooking stoves, and built-in appliances such as dishwashers
- ◆ Permanently installed carpeting over an unfinished floor
- ◆ Permanently installed paneling, wallboard, bookcases, and cabinets.
- ◆ Window blinds
- ◆ Detached garages (up to 10 percent of building property coverage)
- ◆ Debris removal

Personal property coverage includes:

- ◆ Personal belongings such as clothing, furniture, and electronic equipment
- ◆ Curtains
- ◆ Portable and window air conditioners
- ◆ Portable microwave ovens and portable dishwashers
- ◆ Carpets not included in building coverage (see above)
- ◆ Clothes washers and dryers
- ◆ Food freezers and the food in them
- ◆ Certain valuable items such as original artwork and furs (up to \$2,500)

The cost of an annual regular flood insurance policy varies depending on the site location, age of the building, design of the building, and elevation of the building if located in a flood hazard area.

Sanitary sewer backups are not covered. However, many homeowner's policies do have riders to cover sewer back-ups. Sewer back-up riders can cost as little as \$30 per year.

While flood insurance coverage can significantly reduce the potential economic loss to a landowner in case of a flood disaster, flood insurance also helps reduce the cost of disaster aid to the general public. It has been shown that every \$3 paid in flood insurance claims saves \$1 in disaster assistance payments.

At the beginning of 2009, there were more than 200 insurance policies in effect in Sauk County (Table 7-2). Roughly, one quarter of all of the policies were for property in the city of Reedsburg. Countywide, coverage totaled more than \$44.8 million and premiums totaled \$135,626 for those policies.

Federal disaster declarations are issued in less than 50 percent of the flood events.

Table 7-2. Flood Insurance Policies: September 2018

Municipality	Policies	Total Coverage	Total Premiums
City			
Baraboo	14	\$3,950,000	\$13,076
Reedsburg	47	\$10774,500	\$36,919
Wisconsin Dells [1]	0	0	0
Village			
Lake Delton	1	\$185,000	\$292
La Valle	11	\$2,956,200	\$12,819
Loganville	1	\$280,000	\$388
Merrimac	0	0	0
North Freedom	3	\$628,000	\$2409
Plain	0	0	0
Prairie du Sac	1	\$210,000	\$351
Rock Springs	11	\$2,627,300	\$11,270
Sauk City	2	\$310,000	\$945
Spring Green	0	0	0
West Baraboo	1	\$280,000	\$480
Unincorporated Sauk County	80	\$16,103,700	\$60,065
Total	172	\$38,304,700	\$139,014

Source: Federal Emergency Management Agency <https://bsa.nfipstat.fema.gov/reports/1011.htm#WIT>
 Accessed on February 2, 2019

Notes:

1. Municipality located in Sauk County and another county; data is for the entire municipality
2. This municipality is not listed as participating or as not participating in the National Flood Insurance program

COMMUNITY RATING SYSTEM

The Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum requirements of the National Flood Insurance Program (NFIP). Because flood risk has been reduced, policyholders in participating communities enjoy lower flood insurance premiums than those located in a community that is not part of CRS. Flood insurance premium rates are discounted as shown in Table 7-3 based on a community's rating. A Class 1 community receives a 45 percent premium discount, while a Class 9 community receives a 5 percent discount. A Class 10 community is not participating in CRS and receives no discount. The CRS classes for local communities are based on 18 activities, organized under four categories: (1) public information, (2) mapping and regulations, (3) flood damage reduction, and (4) flood preparedness. Nationwide, 1,049 communities are part of CRS, or roughly 5 percent of those who are eligible.

Sauk County and all of the cities and villages have a CRS rating of 10 (Table 7-4). Given the potential cost savings, the county and municipalities should investigate the feasibility of and support for lowering their CRS class rating.

Table 7-3. Insurance Premium Reductions for Communities in the Community Rating System

CRS Rating	Special Flood Hazard Area	Non-Special Flood Hazard Area
	1	45%
2	40%	10%
3	35%	10%
4	30%	10%
5	25%	10%
6	20%	10%
7	15%	5%
8	10%	5%
9	5%	5%
10	0	0

Table 7-4. Community Rating System Rating of Jurisdictions; Sauk County: 2018

Municipality	CRS Rating
City	
Baraboo	10
Reedsburg	10
Wisconsin Dells [1]	10
Village	
Cazenovia [1]	10
Ironton	10
Lake Delton	10
La Valle	10
Lime Ridge	10
Loganville	10
Merrimac	10
North Freedom	10
Plain	10
Prairie du Sac	10
Rock Springs	10
Sauk City	10
Spring Green	10
West Baraboo	10
Sauk County	10

Source: National Flood Insurance Program
Notes:

1. Municipality located in Sauk County and another county; rating is for the entire municipality

PROPERTY ACQUISITION AND STRUCTURE REMOVAL

In some situations, certain properties are eligible for voluntary acquisition. Once acquired the structures are demolished or otherwise removed. Following the flooding in 2008, four municipalities received funding for property acquisition involving both residential and commercial properties. Table 7-5 lists the properties acquired to date and what funding was used in the purchase.

Table 7-5. Acquired Flood-Prone Properties: 1996 through 2018

Year	Municipality	Properties	Funding Source
2010	Town of Spring Green	28 residential properties	HMGP, FEMA-DR-1768
2010	City of Reedsburg	2 commercial and 18 residential properties	FEMA-DR-1768
2010	Village of Rock Springs	1 commercial and 19 residential properties	FEMA-DR-1768
2010	Town of Excelsior	1 residential property	FEMA-DR-1768

Source: Sauk County Emergency Management
Key: PDM – Pre-Disaster Mitigation Program
HMGP – Hazard Mitigation Grant Program
FMA- Flood Mitigation Assistance Program
WDNR – Wisconsin Department of Natural Resources
CDBG – Community Development Block Grant

STORMREADY

StormReady is a national voluntary program, administered through local National Weather Service offices, that encourages communities to take a proactive approach in developing plans to improve local hazardous weather operations and public awareness for all types of local severe weather threats². It is intended to give communities the skills and education needed to cope with and manage potential weather-related disasters, before and during the event. By participating in StormReady, local agencies can earn recognition for their jurisdiction by meeting criteria established by the National Weather Service in partnership with federal, state, and local emergency management professionals.

The program does not replace any of the various federally or state-funded hazard mitigation programs, rather, it compliments them. The entire community - from the mayor, emergency managers, to business leaders and civic groups - can take the lead on becoming StormReady. Education and communication are a key part of the StormReady program. The Wisconsin StormReady Advisory Board, comprised of National Weather Service personnel and state, regional, and county emergency managers, reviews applications and visits the jurisdictions to verify the steps made in the process to become StormReady. The designation is only valid for two years.

The county or none of the municipalities in the county are certified StormReady (Table 7-6).

NOAA WEATHER RADIO

NOAA Weather Radio (NWR) is a nationwide network of radio stations broadcasting continuous weather information direct from a nearby National Weather Service office. NWR broadcasts National Weather Service warnings, watches, forecasts, and other hazard information 24 hours a day. It is also used to broadcast warning and post-event information for all types of hazards - both natural events (e.g., severe weather, flooding) and man-made events (e.g., Amber Alerts, toxic, chemical, and biological releases, terrorist attacks). The radios can be programmed to receive information specific to a certain geographic area and sound an alarm to alert users of approaching dangerous weather. NWR is the primary actuator of the Federal Communications Commission’s Emergency Alert System (EAS).

As of October 2006, the NWR network included 961 stations covering an estimated 97 percent of the U.S. population. The Milwaukee/Sullivan Weather Service Forecast office is located in the Town of Sullivan and serves 20 counties in south-central and southeast Wisconsin. NOAA Weather Radios are available through retail stores that sell electronic appliances, marine supply stores, truck stops, cable shopping networks, mail order catalogs, and the Internet.

The Sauk County Emergency Management Office has promoting use of National Atmospheric and Oceanic Administration (NOAA) weather radios as a cost-effective solution. These radios are a primary means of alerting the public to the imminent danger of hazardous weather. The office would like to see use of this reasonably priced product increase, especially among facilities in which large numbers of people congregate and/or which have populations with special needs (e.g., schools, hospitals, industry).

Table 7-6. StormReady Jurisdictions; Wisconsin: 2018 (November)

Jurisdiction
Counties
Lincoln
Oneida
Racine
Communities
Belleville
Cedarburg
Dousman
Hillsboro
Lake Mills
Viroqua
Waupaca
Whitewater

Source: www.stormready.noaa.gov/communities.htm

The NOAA Weather Radio network provides authoritative weather and emergency information to the public.

² More information about StormReady is available from the Milwaukee/Sullivan Weather Service Forecast office. www.crh.noaa.gov/mkx/?n=stormready-mkx

During the goal-setting exercise, the ad hoc working group indicated a preference of promoting the use of weather radios rather than deploying additional sirens.

EMERGENCY MANAGEMENT OFFICE WEBSITE

The Sauk County Emergency Management Office has been working to create a comprehensive website where citizens can access personal preparedness information, threat bulletins, and other emergency management information keyed to their community. This ongoing project is led by the County Emergency Management Office and is funded through the regular departmental budget. The Office would like to expand the current website to include bulletins from the American Red Cross, Wisconsin Emergency Management and the Federal Emergency Management Agency. County Emergency Management also plans to utilize various media outlets monitored by the public to publicize this resource to the community.

STORMWATER MANAGEMENT ORDINANCE

New urban development brings with it increases in impervious surfaces such as rooftops, driveways, and streets. As areas develop into urban land uses, there is an increase in both volume and rate of runoff. To control the rate of runoff and potential downstream increases in peak flood elevations, some communities require detention of stormwater.

Sauk County has adopted a stormwater management ordinance and each of the cities and villages have an ordinance as well.

EROSION AND SEDIMENT CONTROL ORDINANCES

Sediment from construction sites can deposit in local streams causing blockages that can result in potentially higher flood elevations during storm events. To control construction site erosion from construction sites, the Wisconsin Department of Commerce has adopted construction site erosion control regulations through the state Uniform Building Code. State erosion control regulations are enforced through the local building inspectors.

Sauk County does not have a stormwater and erosion control ordinance but is evaluating whether to do so.

Under Sauk County Chapter 26 Agricultural Performance Standards and Manure Management ordinance, all pastures and land where crops or feed are grown shall be managed to meet the tolerable soil loss. Chapter 26 applies to all land located within unincorporated areas of Sauk County. Best management practices must be implemented to control sheet, rill, and wind erosion. Chapter 26 is enforced through Sauk County Conservation, Planning, and Zoning the department; however, landowner compliance is dependent on a requirement to offer at least 70% cost share assistance. Availability of cost share funding is limited.

SHORELAND ZONING

Under Wisconsin Administrative Code NR 115, counties are required to adopt a shoreland zoning ordinance that controls development within the shoreland³ of lakes and streams. The shoreland-zoning ordinance establishes minimum lot sizes—10,000 square feet on public sanitary sewer and 20,000 square feet on private sanitary systems. Buildings must be setback 75 feet from the ordinary high-water mark and comply with local floodplain zoning ordinances. The ordinance regulates the cutting of trees and shrubbery within 35 feet of the ordinary high-water mark and prohibits more than 30 feet of every 100 feet to be removed. These development standards follow land when it is annexed into a city or village, unless the municipality has adopted an ordinance as strict as the county ordinance. Sauk County has adopted an ordinance consistent with state requirements.

SHORELAND WETLAND ZONING

Under Wisconsin Administrative Code NR 115, counties are required to adopt a shoreland wetland zoning ordinance that creates a shoreland wetland zoning district to control the development of wetlands that are two acres or more in size within the shoreland area. Permitted uses in the shoreland wetland district are limited to:

- ◆ recreation (hiking, fishing, hunting, swimming, and boating)
- ◆ agriculture
- ◆ public roadways and railroad lines
- ◆ public utilities
- ◆ non-residential building used for aquaculture

These development standards follow land when it is annexed into a city or village, unless the municipality has adopted an ordinance as strict as the county ordinance. Sauk County has adopted an ordinance consistent with state requirements.

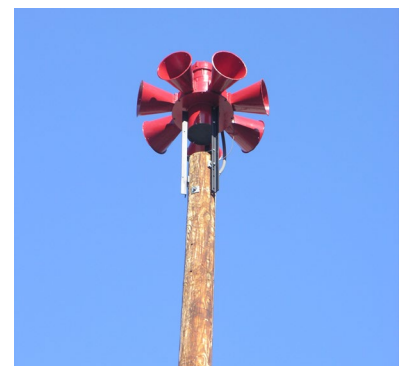
COMPREHENSIVE PLANS

In 1999, the Governor signed legislation that created a new framework for comprehensive planning in Wisconsin. By January 1, 2010, any community wanting to regulate land use must have an adopted comprehensive plan that meets minimum state requirements. Although state requirements do not require that natural hazard planning be a part of a comprehensive plan, communities do have an opportunity to consider natural hazards when devising land use plans and goals, objectives, and policies relating to land use and environmental management.

TORNADO SIRENS

Warning sirens are located throughout Sauk County but are primarily located in more urban areas. For example, there are five sirens in the city of Baraboo. Given the cost related to the installation and on-going maintenance costs, the County is promoting the use of NOAA weather radios as a more cost-effective solution.

Tornado Siren



³ A shoreland is defined as land within the following distances from the ordinary high-water mark of navigable waters: 1000 feet from a lake, pond, or flowage; and 300 feet from a river or stream or the landward side of the floodplain, whichever is greater. (NR 115.03 (8))

ROADWAY CLOSURES DURING FLOOD EVENTS

In some of the larger flood events, roadways in the county are blocked with water. This can create a potentially dangerous scenario for drivers, limit access to areas within the county, or cause travel delays. To deal with roadway closings, there are two categories of alternatives. The first are alternatives to modify the roadway (e.g. bridge replacement and elevate roadway) to prevent flooding. The second category includes maintenance of a system to actively close roadways when flooding occurs and identify alternate routes for emergency traffic.

Bridge Replacement. In some cases, an alternative to road inundation may be to increase the hydraulic opening of the bridges to minimize the backwater on the upstream side of the bridge. When bridges are scheduled for replacement due to age or roadway expansion, the bridge designers should look at the effect of the bridge design on the roadway overtopping. If feasible, the new bridge should be replaced with a structure that would meet the criteria outlined in Table 7-7.

The Wisconsin Department of Transportation (WDOT) provides design criteria for structure crossings a stream in the Facilities Development Manual, Procedure 13-10-1. Major structures, such as bridges and box culverts, are designed using a process of selecting a design frequency, which best produces a balance between structure costs and the cost of potential flood-related damages or risks. Structures in new locations are generally designed to accommodate the 100-year event without increasing the upstream flood stages over existing conditions. Replacement structures are generally designed not to increase the headwater elevation from existing conditions.

In some situations, structure sizes may be increased to reduce the upstream flood elevations. In those cases, if the existing structure is causing upstream flood storage, the flows will need to be re-evaluated to determine if the new structure will increase downstream flows and stages. Under Wisconsin Administrative Code NR 116, if a new bridge results in upstream or downstream increases in the flood elevation greater than 0.01 feet, easements from the affected landowners are required. Where feasible, roadway surfaces should be designed to provide emergency access during flood events. The recommended criterion for flood protection, based on roadway classification, is outlined in Table 7-7.

Elevation of Roadways An alternative to roadway inundation is to raise the pavement surface to above the regional flood elevation. Placing additional fill along the roadway corridor would raise the road surface. While this alternative would help maintain public access, the raising of the road surface may increase flood elevations upstream of the fill. The fill would need to be structurally designed to withstand the hydraulic pressures of the floodwaters. As with bridge replacement, wide-scale elevation of roadway surfaces is not recommended at this time. As roadway maintenance is scheduled, the designers should consider the alternative of roadway elevation. Roadways should only be raised where the project is cost effective.

Road Closures During Flooding Drowning is the number one cause of flood deaths. More people drown in their cars than anywhere else. During flood events, the depth of the water over road surfaces is difficult to predict. Many drivers enter water they think is a few inches deep, only to find themselves in

Table 7-7. Recommended Roadway Flood Protection Level

Roadway Classification	Recommended Protection Level
Interstate and railroads	100-year flood
State & county highway	50-year flood
Local arterial	50-year flood
Minor and collector street	10-year flood

the center of a flowing stream. For years, Sauk County and the local municipalities have closed and barricaded roadways that are flooded. A coordinated system between Sauk County Emergency Management, the Sauk County Sheriff's Department, and local municipalities is in place to close flooded roads and reroute traffic.

PUBLIC INFORMATION

Information is one of the most important tools in helping people mitigate the potential impacts of hazards, particularly natural disasters. To be effective, information needs to be available from several sources and be offered on an on-going basis.

By way of example, Exhibit 7-1 outlines the roles of the various organizations involved in public education with regards to floodplain issues. In an effort to keep state residents informed about natural hazards, Wisconsin Emergency Management sponsors a number of public awareness campaigns, including:

- ◆ Tornado & Severe Weather Week
- ◆ Rip Current Awareness Week
- ◆ Heat Awareness Day
- ◆ Lightning Safety Week proclamations

Exhibit 7-1. Organizations and Their Roles in Distributing Public Information Regarding Floodplain Management

Organization / Activities

Federal Emergency Management Agency (FEMA)

- ◆ Provides information on National Flood Insurance Program (NFIP)
- ◆ Provides training to insurance industry on implementation of NFIP
- ◆ Provides technical information on flood mitigation activities
- ◆ Maintains a national library of floodplain maps

Wisconsin Emergency Management

- ◆ Provides information and training in emergency management including preparedness, response, recovery, and mitigation activities.

Wisconsin Department of Natural Resources

- ◆ Provides information on National Flood Insurance Program (NFIP)
- ◆ Provides technical information on flood mitigation activities
- ◆ Maintains a state library of floodplain maps and flood profile models
- ◆ Provides training to local zoning administrators on implementation of floodplain zoning ordinances

Sauk County Zoning Department

- ◆ Maintains local library of floodplain maps
- ◆ Provides information on National Flood Insurance Program (NFIP)
- ◆ Provides information on county floodplain regulations

Local Insurance Agents

- ◆ Provides information on National Flood Insurance Program (NFIP)

Local Lending Agencies

- ◆ Provides information on National Flood Insurance Program (NFIP). Flood insurance is required on federally backed mortgages for properties located in a floodplain.

Real Estate Agents

- ◆ Provides information on National Flood Insurance Program (NFIP)
- ◆ Required by state law to notify buyers whether or not a structure is located in a regulatory floodplain

4. FUNDING SOURCES

AVAILABLE FEDERAL FUNDING SOURCES

The Federal Emergency Management Agency administers a number of programs that fund mitigation activities at the local and state level.

Hazard Mitigation Grant Program The Hazard Mitigation Grant Program (HMGP) provides grants to States and local governments to implement long-term hazard mitigation measures after a major disaster declaration. The purpose of the HMGP is to reduce the loss of life and property due to natural disasters and to enable mitigation measures to be implemented during the immediate recovery from a disaster. The HMGP is authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act.

Flood Mitigation Assistance Program The Flood Mitigation Assistance (FMA) program was created as part of the National Flood Insurance Reform Act (NFIRA) of 1994 with the goal of reducing or eliminating claims under the National Flood Insurance Program (NFIP). FEMA provides FMA funds to assist States and communities implement measures that reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes, and other structures insurable under the National Flood Insurance Program.

Pre-Disaster Mitigation Program The Pre-Disaster Mitigation (PDM) program provides funds to states, territories, Indian tribal governments, communities, and universities for hazard mitigation planning and the implementation of mitigation projects prior to a disaster event. Funding these plans and projects reduces overall risks to the population and structures, while also reducing reliance on funding from actual disaster declarations. PDM grants are to be awarded on a competitive basis and without reference to state allocations, quotas, or other formula-based allocation of funds.

Repetitive Flood Claims Program The Repetitive Flood Claims (RFC) grant program was authorized by the Bunning-Bereuter-Blumenauer Flood Insurance Reform Act of 2004, which amended the National Flood Insurance Act of 1968. Up to \$10 million is available annually for FEMA to provide RFC funds to assist States and communities reduce flood damages to insured properties that have had one or more claims to the National Flood Insurance Program. Eligible activities include acquisition of properties, and either demolition or relocation of flood-prone structures, where the property is deed restricted for open space uses in perpetuity.

Severe Repetitive Loss Program The Severe Repetitive Loss (SRL) grant program was authorized by the Bunning-Bereuter-Blumenauer Flood Insurance Reform Act of 2004, which amended the National Flood Insurance Act of 1968 to provide funding to reduce or eliminate the long-term risk of flood damage to severe repetitive loss (SRL) structures insured under the National Flood Insurance Program (NFIP). The act authorized up to \$40 million for each fiscal year 2005 through 2009.

Eligible flood mitigation project activities include floodproofing (historical properties only), relocation, elevation, acquisition, mitigation reconstruction (demolition rebuild), and minor physical localized flood control projects.

FUNDING RECEIVED

Since 1965, Sauk County and municipalities have received more than \$10 million in federal funding for mitigation activities (Table 7-8). The village of Rock Springs, city of Baraboo, and Sauk County recently received funding for land acquisition related to the Presidential disaster in 2008.

Table 7-8. Federal and State Funding for Mitigation Activities: 1965 through 2018

Year	Jurisdiction	Amount	Funding Source	Funded Activities
2004	Sauk County	Not known	Pre-Disaster Mitigation (PDM) Program	Prepare countywide hazard mitigation plan
2004	City of Baraboo	\$12,000	Pre-Disaster Mitigation (PDM) Program	Prepare countywide hazard mitigation plan
2009	Sauk County	\$19,245.71	Hazard Mitigation Grant Program through Presidentially declared disaster (FEMA-DR-1768-WI)	Update countywide hazard mitigation plan
2009	Sauk County	\$5,499,424	Hazard Mitigation Grant Program through Presidentially declared disaster (FEMA-DR-1768-WI)	Property acquisition in towns of Excelsior and Spring Green
2009	City of Reedsburg	\$2,602,770	Hazard Mitigation Grant Program through Presidentially declared disaster (FEMA-DR-1768-WI)	Property acquisition
2009	Village of Rock Springs	\$2,512,786	Hazard Mitigation Grant Program through Presidentially declared disaster (FEMA-DR-1768-WI)	Property acquisition
2018	Sauk County	\$23,552	Hazard Mitigation Grant Program through Presidentially declared disaster (FEMA-DR-4276-WI)	Update countywide hazard mitigation plan

Source: Sauk County Emergency Management and Wisconsin Emergency Management

5. REVIEW OF CAPABILITIES

This multi-jurisdictional plan covers the unincorporated area of Sauk County and 17 municipalities. They all have different levels of resources and personnel that could be made available in the implementation of this plan (Table 7-9).

Table 7-9. Summary of Staff Capabilities: 2018

	Administrator	Emergency Management Staff	Community Planner
City			
Baraboo	Yes	No	No
Reedsburg	Yes	No	Yes (1 FTE)
Wisconsin Dells [1]	Yes	No	No
Village			
Cazenovia [1]	Yes	No	No
Ironton	Yes	No	No
Lake Delton	Yes	No	No
La Valle	Yes	No	No
Lime Ridge	Yes	No	No
Loganville	Yes	No	No
Merrimac	Yes	No	No
North Freedom	Yes	No	No
Plain	Yes	No	No
Prairie du Sac	Yes	No	No
Rock Springs	Yes	No	No
Sauk City	Yes	No	No
Spring Green	Yes	No	No
West Baraboo	Yes	No	No
Sauk County	Yes	Yes (2.0 FTE)	Yes (3.0 FTE)

6. AUTHORITY TO CONTROL LAND USE AND DEVELOPMENT

As set forth in state statutes, municipalities in the state are given the authority to adopt and enforce various regulations controlling land development and use. All municipalities in Sauk County have elected to do so (Table 7-10). All of the municipalities in the county also enforce building codes.

Table 7-10. Summary of Authority to Control Development: 2018

	Floodplain Zoning	General Zoning	Land Division Regulations
City			
Baraboo	Yes	Yes	Yes
Reedsburg	Yes	Yes	Yes
Wisconsin Dells [1]	Yes	Yes	Yes
Village			
Cazenovia [1]	Yes	Yes	Yes
Ironton	Yes	Yes	Yes
Lake Delton	Yes	Yes	Yes
La Valle	Yes	Yes	Yes
Lime Ridge	Yes	Yes	Yes
Loganville	Yes	Yes	Yes
Merrimac	Yes	Yes	Yes
North Freedom	Yes	Yes	Yes
Plain	Yes	Yes	Yes
Prairie du Sac	Yes	Yes	Yes
Rock Springs	Yes	Yes	Yes
Sauk City	Yes	Yes	Yes
Spring Green	Yes	Yes	Yes
West Baraboo	Yes	Yes	Yes
Sauk County	Yes	Yes	Yes

7. GOALS, OBJECTIVES, POLICIES, AND ACTIVITIES

This section builds off of the previous parts of the plan and presents a unified plan of action to mitigate the effects of natural hazards on property, people, and assets. It lists goals, objectives, and policies that will guide decision-makers and other officials. Goals are intended to describe an end state, usually in general terms. In contrast, objectives describe an end state in measurable and specific terms. Policies give clear direction on what will be done to help achieve a goal and the objectives.

Following the listing of goals, objectives, and policies, a chart lists specific action items along with an estimated implementation cost and potential funding sources. Responsible entities are listed for each so that implementation is well defined.

The activity charts are a work in progress. As items are completed, they will be deleted and as new opportunities or issues arise, items will be added. Further, depending on available resources, including funding and staff time, priorities may change.

Activities are prioritized as low, medium, or high based on the STAPLE+E approach. Exhibit 7-2 lists each of the criteria used to identify the priority. The mitigation actions with the highest priority were deemed to be the most cost effective and most compatible with the community’s social and cultural values.

Cost estimates are provided to help formulate funding priorities. When a project is to be undertaken, a more detailed budget should be prepared to assess a project’s cost. At that time, a benefit cost analysis should be completed to show how the benefits of the project compare to anticipated costs. Federal funding for mitigation activities can only be obtained when benefits clearly outweigh the costs.

Exhibit 7-2. STAPLE+E

Criteria	Description
S – Social	Mitigation actions are acceptable to the community if they do not adversely affect a particular segment of the population, do not cause relocation of lower income people, and if they are compatible with the community’s social and cultural values.
T – Technical	Mitigation actions are technically most effective if they provide long- term reduction of losses and have minimal secondary adverse impacts.
A – Administrative	Mitigation actions are easier to implement if the jurisdiction has the necessary staffing and funding.
P – Political	Mitigation actions can truly be successful if all stakeholders have been offered an opportunity to participate in the planning process and if there is public support for the action.
L – Legal	It is critical that the jurisdiction or implementing agency have the legal authority to implement and enforce a mitigation action.
E – Economic	Budget constraints can significantly deter the implementation of mitigation actions. Hence, it is important to evaluate whether an action is cost-effective, as determined by a cost benefit review, and possible to fund.
E – Environmental	Sustainable mitigation actions that do not have an adverse effect on the environment, that comply with Federal, State, and local environmental regulations, and that are consistent with the community’s environmental goals, have mitigation benefits while being environmentally sound.

As part of the 2010 update, significant changes were made to this section of the plan. Those goals, objectives, policies, and activities that were added as part of the 2010 plan update are so noted, along with those that have been revised. Those that ensure continued compliance with the National Flood Insurance are also so designated. Minor revisions were made in the most recent update.

The following exhibit presents a summary of changes in objectives, policies, and implementation activities between the last plan update and this one. Cost estimates were updated as appropriate.

Exhibit 7-3. Summary of Changes to Objectives, Policies, and Activities in 2019 Plan

Goal	Objectives	Policies	Activities
Goal 1. Public Education and Communication	No change	No change	No change
Goal 2. Information and Technology Systems	No change	No change	No change
Goal 3. Early Warning System	No change	No change	No change
Goal 4. Flooding and Dam Failure	New objective	New policies	4 activities completed
Goal 5. Storm Events	No change	No change	1 activity completed
Goal 6. Temperature Extremes	No change	No change	1 activity completed
Goal 7. Drought	New objective	New policies	No change
Goal 8. Wildland Fire	No change	No change	No change
Goal 9. Hazardous Materials Incidents	No change	No change	1 activity removed (to develop Level B Response Team)

After a thorough review, the following municipalities, with assistance from the Sauk County Emergency Management staff, determined they do not have any specific mitigation projects or activities.

- Village of Cazenovia (pop. 4, also located in adjoining county)
- Village of Ironton (pop. 491)
- Village of Loganville (pop. 258)
- Village of Merrimac (pop. 552)
- Village of Plain (pop. 778)

RELATIONSHIP TO OTHER LOCAL PLANNING EFFORTS

It is strongly recommended that these goals and actions be adopted as part of local comprehensive planning efforts where appropriate, especially in areas where existing problems can be corrected and to prevent problems from occurring in newly developed areas.

PRIORITIZATION OF GOALS AND ACTIONS

Goals and actions have been prioritized based on (1) the potential risk associated with each particular hazard, (2) the ability of the proposed action to have a positive impact upon minimizing or eliminating the risk from the hazard, (3) overall cost of associated with the proposed action, and (4) the availability of resources to fund and implement the action in a timely manner.

COST BENEFIT ANALYSIS FOR GOALS AND ACTIONS

Specific cost benefit reviews will occur for each action in each participating jurisdiction during annual budget scenarios. Most identified actions are programmatic and not capital expenditures. The impact and cost of each program will be determined on an as needed basis prior to implementation. The information provided with each action is intended to assist in the cost benefit evaluation of each action. Costs estimates, funding sources, schedules, and

responsible parties are preliminary and subject to change based on fiscal conditions.

MAJOR ACCOMPLISHMENTS

A number of major accomplishments have been achieved in the last eight years (Table 7-10).

Table 7-10. Major Accomplishments: 2010-2018

-
1. Developed dam break analysis and Emergency Action Plans for County dams.
 2. Completed annual certifications for emergency action plans for major power dams impacting Sauk County.
 3. Completed a database of bridges/culverts on a county or state road.
 4. City of Baraboo constructed a floodwall to protect the city shop from flooding.
 5. Completed a debris management plan, including short- and long-term disposal.
 6. Revised Sauk County's emergency operations plan to address temperature extremes (i.e., cold and heat).
 7. EAP and IOM Plans have been completed for three dams owned by Sauk County.
 8. EAP and IOM Plans are currently being completed for three dams owned by Sauk County (Plain Honey Creek Dams 2, 3, and 4)
 9. Mitigation work has been done on Clark Creek based on the Clark Creek study (2008)
-

Goal 1. Public Education and Communication

Provide the public with the information they need to adequately prepare for and respond to natural hazards including dam failure, flooding, ice shoves, dense fog, tornadoes, hailstorms, thunderstorms, winter storms, temperature extremes, drought, and wildland fire.

Objectives

1. Strengthen emergency service preparedness and response by enhancing public education throughout the county.
2. Increase the number of households that have prepared a family emergency plan.
3. Increase the number of multi-language public outreach materials.
4. Increase the number of municipalities and critical facilities with emergency plans.

Policies

1. Work with non-governmental organizations, such as youth, service, professional, and religious organizations, to promote mitigation education and awareness.
2. Look for multiple and varied opportunities to disseminate educational information to county residents and business owners.
3. Improve communication between the county and local units of government when disasters occur or are likely to occur.

Implementation Actions / Strategies	Cost Estimate (2018)	Potential Funding Source	Priority	Schedule		Responsible Entity
				2019 - 2023	2024 - 2029	
1. Develop and implement education programs aimed at mitigating natural hazards and reducing the risk to citizens, public agencies, private property owners, businesses, and schools. (2018 status – ongoing effort)	\$10,000	Departmental budget	Medium	X	X	Sauk County Emergency Management; cities of Baraboo, Reedsburg, and Wisconsin Dells; and villages of Ironton, Lake Delton, La Valle, Lime Ridge, Loganville, Merrimac, North Freedom, Plain, Prairie du Sac, Rock Springs, Sauk City, Spring Green, and West Baraboo
2. Create displays for use at public events such as the county fair and wellness fairs. (2018 status – ongoing effort)	Staff time and cost of supplies	Departmental budget	Medium	X		Sauk County Emergency Management; cities of Baraboo, Reedsburg, and Wisconsin Dells; and villages of Ironton, Lake Delton, La Valle, Lime Ridge, Loganville, Merrimac, North Freedom, Plain, Prairie du Sac, Rock Springs, Sauk City, Spring Green, and West Baraboo
3. Work with the public and private schools within the county to promote hazard mitigation awareness and to create plans. (2018 status – ongoing effort)	Staff time	Departmental budget	Medium	X	X	Sauk County Emergency Management; cities of Baraboo, Reedsburg, and Wisconsin Dells; and villages of Ironton, Lake Delton, La Valle, Lime Ridge, Loganville, Merrimac, North Freedom, Plain, Prairie du Sac, Rock Springs, Sauk City, Spring Green, and West Baraboo
4. Continue to promote informational campaigns about severe weather, such as Winter Awareness Week in November, Tornado and Severe Weather Awareness Week in April, Heat Awareness Day in June, Flood Awareness in March, and Preparedness Week in September. (2018 status – ongoing effort)	Staff time	Departmental budget	Medium	X	X	Sauk County Emergency Management; cities of Baraboo, Reedsburg, and Wisconsin Dells; and villages of Ironton, Lake Delton, La Valle, Lime Ridge, Loganville, Merrimac, North Freedom, Plain, Prairie du Sac, Rock Springs, Sauk City, Spring Green, and West Baraboo

5.	Continue offering information regarding insurance to farm operators for potential crop losses due to weather-related damage. (2018 status – ongoing effort)	Staff time	Departmental budget	Medium	X	X	Sauk UW-Extension
6.	Provide more hazard-related information in multiple languages (2018 status – ongoing effort)	Staff time	Departmental budget	Medium	X		Sauk County Emergency Management; Sauk County Health Department
7.	Add information to the village's website about natural disasters and mitigation efforts and flooding (New 2018)	Staff time	Departmental budget	Medium	X		Village of North Freedom

Goal 2. Information and Technology Systems

Utilize the full range of information systems and digital technology in mitigation planning.

Objectives

1. Increase the amount of information that is available on the county’s website relating to natural and manmade hazards

Policies

1. Post information on the county’s website that may be of interest to county residents and local officials.
2. Develop on-line tools as may be needed to provide cost-effective services.

Implementation Actions / Strategies	Cost Estimate (2018)	Potential Funding Source	Priority	Schedule		Responsible Entity
				2019 - 2023	2024 - 2029	
1. Continue to add/update links on the existing department web sites (e.g., ARC, FEMA, WEM), especially focusing on preparedness bulletins, including a link to the stream gauge web site maintained by the National Weather Service. (2018 status – ongoing effort)	Staff time	Departmental budget	Medium	X		Sauk County Emergency Management
2. Develop and maintain a geographic database of natural hazard events that have occurred in the county, including location, event conditions, and resulting damage. (2018 status – ongoing effort)	Staff time	Departmental budget	High	X		Sauk County Emergency Management; Sauk County Land Information Department
3. Develop and maintain a webpage relating to mitigation planning and activities, to include the posting of the countywide natural hazards mitigation plan. (2018 status – ongoing effort)	Staff time	Departmental budget	High	X		Sauk County Emergency Management
4. Add links on websites maintained by local jurisdictions to the Sauk County Emergency Management website. (2018 status – ongoing effort)	Staff time	Departmental budget	High	X		Cities of Baraboo, Reedsburg, and Wisconsin Dells; and the villages of Ironton, Lake Delton, La Valle, Lime Ridge, Loganville, Merrimac, North Freedom, Plain, Prairie du Sac, Rock Springs, Sauk City, Spring Green, and West Baraboo
5. Update and maintain the database of critical facilities that was provided to the county as part of the 2010 plan update project. (2018 status – completed for recent plan update)	Staff time	Departmental budget	Medium	X	X	Sauk County Emergency Management

Goal 3. Early Warning System

Develop and utilize an early warning system to provide the affected public with as much advance warning as possible.

Objectives

1. Maintain the geographic coverage of emergency sirens in the county.
2. Increase the number of homes, large businesses, schools, health care facilities, and other facilities that utilize National Oceanic and Atmospheric Administration (NOAA) weather radios.
3. Identify options for mass notification/warning notification utilizing current technologies (e.g., cellular, text messaging, e-mail).

Policies

1. Evaluate the need for establishing additional sirens in those areas of the county that do not have coverage.
2. Promote the increased use of National Oceanic and Atmospheric Administration (NOAA) weather radios, especially among facilities of special concern especially in those areas of the county not currently covered by warning sirens.
3. Continue to support the efforts of severe weather spotters.

Implementation Actions / Strategies	Cost Estimate (2018)	Potential Funding Source	Priority	Schedule		Responsible Entity
				2019 - 2023	2024 - 2029	
1. Explore alternatives to increase public warning options (e.g., sirens, mass notification system). (2018 status – ongoing effort)	Staff time	Departmental budget	Medium	X		Sauk County Emergency Management
2. Analyze the current coverage of outdoor sirens and prepare a schedule for placing additional sirens in the county. (2018 status – ongoing effort)	Staff time	Departmental budget	High	X		Sauk County Emergency Management; cities of Baraboo, Reedsburg, and Wisconsin Dells; and the villages of Ironton, Lake Delton, La Valle, Lime Ridge, Loganville, Merrimac, North Freedom, Plain, Prairie du Sac, Rock Springs, Sauk City, Spring Green, and West Baraboo
3. Continue to update and/or monitor the countywide public early warning system and network. (2018 status – ongoing effort)	Staff time	Departmental budget	Medium	X	X	Sauk County Emergency Management
4. Continue to apply for federal funding to purchase NOAA weather radios for county residents. (2018 status – ongoing effort)	Staff time	Departmental budget	Medium	X	X	Sauk County Emergency Management; cities of Baraboo, Reedsburg, and Wisconsin Dells; and the villages of Ironton, Lake Delton, La Valle, Lime Ridge, Loganville, Merrimac, North Freedom, Plain, Prairie du Sac, Rock Springs, Sauk City, Spring Green, and West Baraboo
5. Continue to host classes for severe weather spotters and maintain a network of spotters in the county. (2018 status – ongoing effort)	Staff time	Departmental budget	Medium	X	X	Sauk County Emergency Management
6. Develop an early warning system to monitor river levels and related flooding for the Baraboo River (using RTU) (New 2018)	Unknown	Capital budget and other sources	Medium	X		Sauk County Emergency Management
7. Install a new siren in the community. (New 2018)	\$10,000	Capital budget, grants, and other sources	Medium	X		Village of Lime Ridge

Goal 4. Flooding and Dam Failure

Lessen the impact that floods have on people, property, and the environment.

Objectives

1. Minimize the impact of flooding on potentially affected structures.
2. Decrease the number of structures currently located in the 100-year floodplain that are not properly flood-proofed.
3. Minimize the amount of impervious surface in new development projects to allow more infiltration of stormwater into the ground.
4. Increase public awareness of flooding.
5. Maintain compliance with the National Flood Insurance Program.
6. Encourage and incentivize land management practices that encourage infiltration such as no till farming, cover crops, rotational grazing, and native prairie establishment.

Policies

1. Continue to enforce floodplain regulations to ensure that future development in the 100-year floodplain meets established standards.
2. Support the identification and conservation of land with high flood mitigation value (e.g., wetlands, upland storage, and infiltration areas).
3. Support land acquisition and other management strategies to preserve open space for flood mitigation purposes.
4. Ensure that governmental officials and employees, county residents, and real estate agents are aware of floodplain regulations.
5. Ensure that people owning property in the 100-year floodplain and other flood-prone areas, and their agents; notify buyers when selling their property.
6. Adopt standards to control the proportion of a site that can be covered with impervious surfaces.
7. Locate public infrastructure outside of the 100-year floodplain. When infrastructure needs to be located in the 100-year floodplain, it should be flood proofed or otherwise protected from floodwater.
8. Design and properly size new stream crossings so that floodwaters do not overtop the road and a significant backwater effect is not created.
9. Continue to enforce stormwater management regulations.
10. Update flood insurance rate maps (FIRMs) when it can be shown that they are substantially inaccurate.
11. Ensure that all large dams in the county have emergency action plans and that they are up to date.
12. Undertake such activities as may be required to remain compliant with the requirements of the National Flood Insurance Program.
13. Discourage and/or limit development within the 100-year floodplain and other flood-prone areas through comprehensive plans that may be prepared or amended.
14. The County Board supports the preparation of grant applications for the preparation of emergency action plans.
15. Encourage farm operators to evaluate the economics of crop insurance programs.
16. Encourage and incentivize land management practices that encourage infiltration such as no till farming, cover crops, rotational grazing, and native prairie establishment.
17. Encourage enrollment into land retirement programs on the most environmentally sensitive cropland.
18. Expand landowner/farmer outreach programs, which will increase the number of conservation practices that will retain water.
19. Increase cost share funding for flood mitigation practices.
20. Utilize modeling, including the Erosion Vulnerability Assessment for Agricultural Lands (EVAAL) tool, to identify priority areas for conservation and mitigation practices and projects.
21. Conduct a cost-benefit analysis of best management projects, which could include smaller dam structures, berms, swales, terraces, prairie buffers and other practices to retain water on the landscape.
22. Collaborate with county, city, and village government to expand cost-sharing program of rain gardens and other storm water retention practices.
23. Utilize conservation easements to protect environmentally sensitive portions of parcels from development – they do not restrict all land use, rather they direct development to areas of land that are not environmentally sensitive.

Implementation Actions / Strategies	Cost Estimate (2018)	Potential Funding Source	Priority	Schedule		Responsible Entity
				2019 - 2023	2024 - 2029	
1. Prepare a map depicting those areas of the county that have experienced problems resulting from flash flooding. (2018 status - work with the ACOE has begun)	Staff time	FEMA and departmental budgets	High	X		Sauk County Planning and Zoning; Mapping Department; and Emergency Management
2. Initiate a program to work with owners of property in the 100-year floodplain and other flood-prone areas relating to mapped flood storage areas and identification of pumping stations. (2018 status – ongoing effort)	Staff time	Departmental budget	High	X	X	Sauk County Planning & Zoning Department, Sauk County Land Conservation Department, Mapping Department

Implementation Actions / Strategies	Cost Estimate (2018)	Potential Funding Source	Priority	Schedule		Responsible Entity
				2019 - 2023	2024 - 2029	
3. Continue to survey floodplain property owners for a voluntary buyout or relocation project. (2018 status – ongoing effort)	Varies	Departmental budget	High	X	X	Sauk County Planning & Zoning Department, Sauk County Emergency Management, individual local jurisdictions
4. Municipalities facing significant growth should develop, update or maintain a stormwater management plan to address stormwater control issues within their borders and meet new EPA/DNR regulations. (2018 status – ongoing effort)	Staff time	Departmental budget; state and federal grants	High	X	X	Sauk County Planning & Zoning and Emergency Management; cities of Baraboo, Reedsburg, and Wisconsin Dells; and the villages of Ironton, Lake Delton, La Valle, Lime Ridge, Loganville, Merrimac, North Freedom, Plain, Prairie du Sac, Rock Springs, Sauk City, Spring Green, and West Baraboo
5. Identify and analyze feasible mitigation options for those properties, which are designated as a repetitive loss property. (2018 status – ongoing effort)	Staff time	Departmental budget	High	X	X	Sauk County Emergency Management
6. Apply for funding through the federal Hazard Mitigation Grant program, Flood Mitigation Assistance Program, and the Pre-Disaster Mitigation Program as well as any other resources that may be available to help flood proof repetitive loss sites or other flood-prone properties or remove them through voluntary acquisition with demolition or relocation. (2018 status – ongoing effort)	Staff time	Departmental budget	High	X	X	Sauk County Emergency Management; cities of Baraboo, Reedsburg, and Wisconsin Dells; and the villages of Ironton, Lake Delton, La Valle, Lime Ridge, Loganville, Merrimac, North Freedom, Plain, Prairie du Sac, Rock Springs, Sauk City, Spring Green, and West Baraboo
7. Design and construct stormwater management facilities consistent with adopted stormwater management plans than have been or will be prepared / amended. (2018 status – ongoing effort)	Staff time	Departmental budget	Medium	X		Cities of Baraboo, Reedsburg, and Wisconsin Dells; and the villages of Ironton, Lake Delton, La Valle, Lime Ridge, Loganville, Merrimac, North Freedom, Plain, Prairie du Sac, Rock Springs, Sauk City, Spring Green, and West Baraboo
8. Identify and upgrade those culverts and bridges that are undersized or are otherwise unable to handle expected flood flows. (2018 status – ongoing effort)	Staff time	Departmental budget	High	X		Sauk County Highway and Public Works Department; cities of Baraboo, Reedsburg, and Wisconsin Dells; and the villages of Ironton, Lake Delton, La Valle, Lime Ridge, Loganville, Merrimac, North Freedom, Plain, Prairie du Sac, Rock Springs, Sauk City, Spring Green, and West Baraboo

Implementation Actions / Strategies	Cost Estimate (2018)	Potential Funding Source	Priority	Schedule		Responsible Entity
				2019 - 2023	2024 - 2029	
9. Prepare a strategy to prioritize road improvements for public roadways that are susceptible to flooding. (2018 status – ongoing effort)	Staff time	Departmental budget	High	X		Sauk County Highway and Public Works Department; cities of Baraboo, Reedsburg, and Wisconsin Dells; and the villages of Ironton, Lake Delton, La Valle, Lime Ridge, Loganville, Merrimac, North Freedom, Plain, Prairie du Sac, Rock Springs, Sauk City, Spring Green, and West Baraboo
10. Re-evaluate and update the county ordinances as may be required and adopt a countywide stormwater management and erosion control ordinance. (2018 status – ongoing effort)	Staff time	Departmental budget	Medium	X		Sauk County Conservation, Planning, and Zoning Department
11. Distribute National Flood Insurance Program (NFIP) information to the public. (2018 status – ongoing effort)	Staff time	Departmental budget	Medium	X	X	Sauk County Emergency Management; Sauk County Conservation, Planning, and Zoning Department; cities of Baraboo, Reedsburg, and Wisconsin Dells; and the villages of Ironton, Lake Delton, La Valle, Lime Ridge, Loganville, Merrimac, North Freedom, Plain, Prairie du Sac, Rock Springs, Sauk City, Spring Green, and West Baraboo.
12. Evaluate the support for and the feasibility of becoming part of the Community Rating System (CRS) to lower flood insurance premiums for property owners. (2018 status – ongoing effort)	Staff time	Departmental budget	High	X		Sauk County Emergency Management; Sauk County Conservation, Planning, and Zoning Department; Cities of Baraboo, Reedsburg, and Wisconsin Dells; and the villages of Ironton, Lake Delton, La Valle, Lime Ridge, Loganville, Merrimac, North Freedom, Plain, Prairie du Sac, Rock Springs, Sauk City, Spring Green, and West Baraboo.
13. Work with property owners with land that has been delineated as flood storage areas on the flood insurance rate maps to protect them from inappropriate development. (2018 status – ongoing effort)	Staff time	Departmental budget	High	X		Sauk County Emergency Management; Sauk County Conservation, Planning, and Zoning Department; Cities of Baraboo, Reedsburg, and Wisconsin Dells; and the villages of Ironton, Lake Delton, La Valle, Lime Ridge, Loganville, Merrimac, North Freedom, Plain, Prairie du Sac, Rock Springs, Sauk City, Spring Green, and West Baraboo

Implementation Actions / Strategies	Cost Estimate (2018)	Potential Funding Source	Priority	Schedule		Responsible Entity
				2019 - 2023	2024 - 2029	
14. Work with the Wisconsin Department of Natural Resources to ensure that an emergency action plan is prepared for large dams and that they are periodically updated. (2018 status – ongoing effort)	Staff time	Departmental budget	Medium	X		Sauk County Emergency Management
15. Ensure that privately owned large dams are inspected consistent with state law. (2018 status – ongoing effort)	Staff time	Departmental budget	Medium	X		Sauk County Emergency Management
16. Ensure that publicly owned large dams are inspected consistent with state law. (2018 status – ongoing effort)	Staff time	Departmental budget	Medium	X		Cities of Baraboo, Reedsburg, and Wisconsin Dells; and the villages of Ironton, Lake Delton, La Valle, Lime Ridge, Loganville, Merrimac, North Freedom, Plain, Prairie du Sac, Rock Springs, Sauk City, Spring Green, and West Baraboo; Wisconsin Department of Natural Resources
17. Conduct a study to determine feasible and cost-effective solutions to minimize flooding along streams and rivers experiencing flooding in the last five years. (2018 status – ongoing effort)	Unknown	Departmental budget	High	X		Sauk County Emergency Management; Sauk County Conservation, Planning, and Zoning Department; cities of Baraboo, Reedsburg, and Wisconsin Dells; and the villages of Ironton, Lake Delton, La Valle, Lime Ridge, Loganville, Merrimac, North Freedom, Plain, Prairie du Sac, Rock Springs, Sauk City, Spring Green, and West Baraboo
18. Relocate Reedsburg’s city shop out of the floodplain (2018 status – ongoing effort)	Unknown	Capital budget and other sources	Medium	X		City of Reedsburg
19. Re-evaluate the area along Highway 60 and Old Bluff Trail to verify extent of floodplain (2018 status – ongoing effort)	Unknown	Capital budget and other sources	Medium	X		Town of Prairie du Sac
20. Elevate Barbara Ann Drive and replace adjacent boardwalk as a sidewalk (New 2018)	Unknown	Capital budget and other sources	Medium	X		City of Reedsburg
21. Relocate and elevate electric substation on Railroad Street (New 2018)	Unknown	Capital budget and other sources	Medium	X		City of Reedsburg
22. New ambulance generator (New 2018)	Unknown	Capital budget and other sources	Medium	X		City of Reedsburg
23. New flood protection levee in Downtown Reedsburg (New 2018)	Unknown	Capital budget and other sources	Medium	X		City of Reedsburg
24. Elevate W Main St (State HWY 33) (New 2018)	Unknown	Capital budget and other sources	Medium	X		City of Reedsburg

Implementation Actions / Strategies	Cost Estimate (2018)	Potential Funding Source	Priority	Schedule		Responsible Entity
				2019 - 2023	2024 - 2029	
25. Relocate and elevate sewer lift station on County V (New 2018)	Unknown	Capital budget and other sources	Medium	X		City of Reedsburg
26. Relocate existing Village hall, library, and fire station out of the floodplain (New 2018)	Unknown	Capital budget and other sources	High	X	X	Village of La Valle
27. Relocate municipal public utility infrastructure that is vulnerable to flooding out of the floodplain (New 2018)	Unknown	Capital budget and other sources	High	X	X	Sauk County Emergency Management; cities of Baraboo, Reedsburg, and Wisconsin Dells; and the villages of Ironton, Lake Delton, La Valle, Lime Ridge, Loganville, Merrimac, North Freedom, Plain, Prairie du Sac, Rock Springs, Sauk City, Spring Green, and West Baraboo
28. Develop a plan to relocate downtown Rock Springs to a location outside of the floodplain (New 2018)	Unknown	Capital budget and other sources	High	X	X	Village of Rock Springs
29. Apply for funding through the federal Hazard Mitigation Grant program, Flood Mitigation Assistance Program, and the Pre-Disaster Mitigation Program as well as any other resources that may be available to remove flood-prone properties through voluntary acquisition with demolition or relocation. (2018 status – new for West Baraboo)	Unknown	Capital budget and other sources	High	X	X	Village of West Baraboo
30. Evaluate the potential expansion and development of additional stormwater retention ponds. (New 2018)	Unknown	Departmental budgets and other sources	High	X	X	City of Wisconsin Dells
31. Evaluate the potential expansion and development of additional stormwater retention ponds. (New 2018)	Unknown	Departmental budgets and other sources	High	X		Village of Prairie du Sac
32. Conduct a study to determine feasible and cost-effective solutions to minimize flooding (New 2018)	Unknown	Departmental budgets and other sources	High	X		Village of Spring Green
33. Conduct a study to determine feasible and cost-effective solutions to minimize flooding (New 2018)	Unknown	Departmental budgets and other sources	High	X		Village of Sauk City

Goal 5. Storm Events (Tornadoes, Wind Events, Storms, Hail, and Dense Fog)

Lessen the effects of a storm event to the extent feasible and speed recovery following an event.

Objectives

1. Increase public education and awareness of the potential severity of storm events.
2. Minimize the amount of time that businesses and government facilities, such as schools, damaged by a storm event are not operational.
3. Minimize the amount of time it takes to rebuild or restore dwellings damaged by a storm event.
4. Prevent injuries and death from storm events.
5. Minimize response time needed to respond to storm events.

Policies

1. Bury overhead power and utility lines where feasible as a way to reduce power outages during all types of storm events.
2. Ensure that adequate tornado shelters are available to county residents especially those living in mobile/manufactured home parks.
3. Include redevelopment objectives in smart growth comprehensive plans to support post-disaster development activities.
4. Encourage homebuilders and others to incorporate wind-resistant features into new home construction.
5. Work with utility companies to assess and to improve, when necessary, electric service reliability.
6. Work with public and private utility companies to ensure that trees are properly trimmed near utility lines.
7. Promote home safety measures such as the construction of safe rooms.
8. Continue to ensure that new development meets applicable development standards, such as zoning, stormwater management, shoreland zoning, and shoreland/wetland zoning.
9. Encourage the use of tie-downs on mobile homes and manufactured homes.
10. Encourage the use of snow fences where needed.
11. Promote winter hazards awareness, including home and travel safety measures, such as avoiding travel during winter storms.

Implementation Actions / Strategies	Cost Estimate (2018)	Potential Funding Source	Priority	Schedule		Responsible Entity
				2019 - 2023	2024 - 2029	
1. Promote lightning awareness (2018 status – ongoing effort)	Low	Departmental budget	Low	X	X	Sauk County Emergency Management
2. The County and local units of government should identify buildings that will provide protection to the public in the event of a tornado. (2018 status – ongoing effort)	Low	Departmental budget	High	X		Sauk County Emergency Management
3. Upon identifying existing building that could provide protection, the County and local units of government should identify areas that are deficit in tornado shelters. (2018 status – ongoing effort)	Low	Departmental budget	High	X	X	Sauk County Emergency Management
4. Identify and pursue funding opportunities to develop and implement local and county mitigation activities. (2018 status – ongoing effort)	Staff time	Departmental budget	Medium	X	X	Sauk County Emergency Management; cities of Baraboo, Reedsburg, and Wisconsin Dells; and the villages of Ironton, Lake Delton, La Valle, Lime Ridge, Loganville, Merrimac, North Freedom, Plain, Prairie du Sac, Rock Springs, Sauk City, Spring Green, and West Baraboo
5. Periodically assess whether there are enough storm shelters to house displaced persons. (2018 status – ongoing effort)	Staff time	Departmental budget	Medium	X	X	Sauk County Emergency Management; American Red Cross

Implementation Actions / Strategies	Cost Estimate (2018)	Potential Funding Source	Priority	Schedule		Responsible Entity
				2019 - 2023	2024 - 2029	
6. Study the feasibility of and support for adopting a local regulation, which would require new mobile home/manufacture home parks and future expansions of existing parks to provide for a tornado shelter for residents. (2018 status – ongoing effort)	Staff time	Departmental budget	Medium	X		Sauk County Emergency Management; Cities of Baraboo, Reedsburg, and Wisconsin Dells; and the villages of Ironton, Lake Delton, La Valle, Lime Ridge, Loganville, Merrimac, North Freedom, Plain, Prairie du Sac, Rock Springs, Sauk City, Spring Green, and West Baraboo
7. Install storm shelters near or in existing mobile home parks and high occupancy campgrounds. (2018 status – ongoing effort)	Project dependant	Private funds and grants	Medium	X		Mobile home park operators and campground operations; Sauk County Emergency Management
8. Work with the local chapter of the American Red Cross to update its shelter evaluation assessment. (2018 status – ongoing effort)	Staff time	Departmental budget	Medium	X		Sauk County Emergency Management; American Red Cross
9. Investigate the need for standby generators at government buildings, especially public safety facilities. (2018 status – ongoing effort)	Staff time	Departmental budget	Medium	X		Sauk County Emergency Management; cities of Baraboo, Reedsburg, and Wisconsin Dells; and the villages of Ironton, Lake Delton, La Valle, Lime Ridge, Loganville, Merrimac, North Freedom, Plain, Prairie du Sac, Rock Springs, Sauk City, Spring Green, and West Baraboo
10. Evaluate the cost/benefit of establishing a storm shelter(s) for Blackhawk Mobile home park (New 2018)	Staff time	Departmental budget	High	X		City of Baraboo
11. Evaluate the cost/benefit of establishing a storm shelter(s) for campground/mobile home park (New 2018)	Staff time	Departmental budget	High	X		Village of Lake Delton

Goal 6. Temperature Extremes

Protect county residents from the effects of temperature extremes.

Objectives

1. Prevent deaths and injuries due to temperature extremes.
2. Increase public education and awareness.

Policies

1. Encourage volunteers to look after vulnerable individuals, especially the elderly, during times of extreme heat and cold.
2. Open county and other public facilities with air conditioning, as appropriate, for public access during periods of extreme heat.
3. Ensure that county residents are aware that there are different forms of assistance to help qualified individuals to help pay their winter heating costs.

Implementation Actions / Strategies	Cost Estimate (2018)	Potential Funding Source	Priority	Schedule		Responsible Entity
				2019 - 2023	2024 - 2029	
1. Develop a directory of public buildings that would be open to the public during extended heat waves. (2018 status – ongoing effort)	Staff time	Departmental budget	Medium	X	X	Sauk County Emergency Management; Sauk County Health Department
2. Call a meeting of public and non-profit organizations that may be able to mobilize a volunteer corps of individuals willing to assist vulnerable people during periods of extreme heat or cold. (2018 status – ongoing effort)	Staff time	Departmental budget	High	X		Sauk County Emergency Management; Sauk County Health Department
3. Investigate the possibility of establishing a database of individuals who are vulnerable to temperature extremes and who have voluntarily placed their name on a call list. (2018 status – ongoing effort)	Staff time	Departmental budget	High	X		Sauk County Emergency Management; Sauk County Health Department; American Red Cross
4. Publicise available programs that help low-income residents pay for their utility expenses. (2018 status – ongoing effort)	Staff time	Departmental budget	Medium	X		Sauk County Emergency Management; Sauk County Health Department; cities of Baraboo, Reedsburg, and Wisconsin Dells; and the villages of Ironton, Lake Delton, La Valle, Lime Ridge, Loganville, Merrimac, North Freedom, Plain, Prairie du Sac, Rock Springs, Sauk City, Spring Green, and West Baraboo

Goal 7. Drought

Protect the public health, safety, and welfare of county residents during periods of drought.

Objectives

1. Decrease water use during periods of drought.
2. Minimize the economic impacts of drought on the local economy.

Policies

1. Encourage water conservation during periods of drought.
2. Impose water use restrictions during periods of extreme drought.
3. Work with appropriate agencies to conserve water, provide drought prediction, and provide stream and groundwater monitoring.
4. Work with local, state, and federal agencies that can assist with and promote soil health, preserve soil moisture and help to minimize the loss of the crops and topsoil in the event of a drought.
5. Monitor groundwater levels to identify the status of groundwater resources and trends.
6. Work with state and federal agencies to develop appropriate regional strategies to address drought conditions.
7. Provide information to farmers in times of drought.
8. Inform farmers about purchasing crop insurance.
9. Encourage farm operators to evaluate the economics of crop insurance programs.
10. Encourage and incentivize the installation of agricultural conservation practices that promote soil health, preserve soil moisture, and help to minimize loss of crops and topsoil in the event of a drought. Such practices may include planting crop field windbreaks, planting cover crops, no-till farming, rotational grazing, and contour farming to help reduce evaporation and/or promote infiltration.
11. Promote the use of drought-resistant landscaping practices using native plantings.
12. Encourage and increase cost share assistance for the installation of farm drought management strategies including Irrigation Water Management Systems and expanded use of Wisconsin Irrigation Scheduling Program (WISP).
13. Encourage multi-agency approaches to drought planning, water conservation, drought prediction, and stream and groundwater monitoring.

Implementation Actions / Strategies	Cost Estimate (2018)	Potential Funding Source	Priority	Schedule		Responsible Entity
				2019 - 2023	2024 - 2029	
1. The County should encourage farmers that irrigate to use the Wisconsin Irrigation Scheduling Program (WISP). (2018 status, ongoing strategy)	Low	Departmental budget	Low	X	X	Sauk County Land Conservation Department
2. Develop a program to communicate with farmers during times of drought. (2018 status – ongoing effort)	Low	Departmental budgets	Low	X		Sauk County Land Conservation Department and Sauk County UW Extension
3. Provide a crop insurance educational program. (2018 status – ongoing effort)	Low	Departmental budgets	Low	X	X	Sauk County Land Conservation Department and Sauk County UW Extension
4. Adopt local regulations to control the use of water during drought conditions. (2018 status – ongoing effort)	Staff time	Departmental budget	Medium	X	X	Municipalities with public water systems
5. Develop procedures for water distribution during drought to those in need. (2018 status – ongoing effort)	Staff time	Departmental budget	Medium	X		Sauk County Emergency Management

Goal 8. Wildland Fire

Protect structures and people in Sauk County from uncontrolled wildfires.

Objectives

1. Decrease the number of wildland fires occurring in the county.
2. Decrease the number of acres burned from wildland fires.
3. Increase public education.

Policies

1. Support the use of controlled burns as a way of reducing the threat of dangerous wildland fires.
2. Enhance emergency services to increase the efficiency of wildfire response and recovery activities.
3. Encourage local fire departments to work with the Wisconsin Department of Natural Resource to provide training to their personnel on fighting large wildland fires.
4. Continue to provide outreach efforts to homeowners on protecting homes and structures from wildfires including information about fire-resistant construction.
5. Continue cooperation through mutual aid agreements.

Implementation Actions / Strategies	Cost Estimate (2018)	Potential Funding Source	Priority	Schedule		Responsible Entity
				2019 - 2023	2024 - 2029	
1. The County and DNR should continue to make outreach efforts to homeowners on protecting their homes and structures from wildfires. (2018 status – no action due to low priority)	Low	Departmental budget	Low	X	X	Sauk County Planning & Zoning Department and Sauk County Emergency Management
2. Work with local jurisdictions to encourage adequate access for emergency vehicles, including 30 ft. minimum distance between structures and safe design/locations for driveways. (2018 status– ongoing strategy)	Low	Departmental budget	Low	X	X	Sauk County Planning & Zoning Department and the Sauk County Emergency Management
3. Apply for federal and state grants to enhance the capability of local fire departments. (2018 status – ongoing effort)	Staff time	Departmental budget	Medium	X	X	Local fire departments
4. Provide education to county and municipal personnel about federal cost-share and grant programs, fire protection agreements, and other related federal programs so the full array of assistance available to local agencies is understood. (2018 status – ongoing effort)	Staff time	Departmental budget	Low	X		Sauk County Emergency Management; cities of Baraboo, Reedsburg, and Wisconsin Dells; and the villages of Ironton, Lake Delton, La Valle, Lime Ridge, Loganville, Merrimac, North Freedom, Plain, Prairie du Sac, Rock Springs, Sauk City, Spring Green, and West Baraboo
5. Develop a digital database to keep track of wildfire events in the county. (2018 status – ongoing effort)	Staff time	Departmental budget	Medium	X		Sauk County Emergency Management; local fire departments

Goal 9. Hazardous Materials Incidents

Protect people and natural resources from the adverse affects of hazardous materials incidents.

Objectives

1. Decrease the number of incidents involving hazardous materials.
2. Increase the effectiveness of local emergency response crews.
3. Increase awareness and information related to safe handling procedures.
4. Increase awareness and education efforts concerning proper certification and identification for transporting hazardous materials.
5. Minimize the negative effects of hazardous material spills. **(2005 plan)**

Policies

1. Encourage local enforcement of state compliance standards for safe handling and storage of hazardous materials.
2. Include local emergency response entities when appropriate in the development and maintenance of local emergency plans, off-site facility plans, SARA plans, and Tier 3 plans.
3. Continue coordination relating to the implementation of the Brown Route alternative route.
4. Ensure that facilities storing or using hazardous materials are not located near residential areas and/or residential care facilities such as nursing homes and the like.
5. Ensure that emergency response crews have proper training (e.g., recognize USDOT labels for hazardous materials).

Implementation Actions / Strategies	Cost Estimate (2018)	Potential Funding Source	Priority	Schedule		Responsible Entity
				2019 - 2023	2024 - 2029	
1. The County should prevent or reduce hazardous material exposure by separation and buffering between industrial areas and other land uses (2018 status - ongoing effort)	Moderate	Departmental budget	High	X	X	Sauk County Planning and Zoning Department
2. Continue to identify and record locations of all properties where hazardous materials are used or stored. (2018 status - ongoing)	Staff time	Departmental budget	Medium	X	X	Sauk County Emergency Management
3. Establish a formal procedure to promptly notify those people affected by an uncontrolled release of hazardous materials. (2018 status - ongoing)	Staff time	Departmental budget	Medium	X	X	Sauk County Emergency Management
4. Develop a coordinated training procedure involving police departments and fire departments to respond to uncontrolled releases of hazardous materials. (2018 status - ongoing)	Staff time	Departmental budget	Medium	X	X	Sauk County Emergency Management
5. Identify truck routes where transporting of hazardous materials is permitted and incorporate that information into comprehensive plans and other planning projects. (2018 status - ongoing)	Staff time	Departmental budget	Medium	X	X	Sauk County Emergency Management
6. Conduct periodic emergency response training exercises. (2018 status - ongoing)	\$5,000 per training exercise	Departmental budget	Medium	X	X	Sauk County Emergency Management