
Town of Roxbury Annex

Community Profile

The Town of Roxbury is located in the northwest quadrant of Dane County, north of the Town of Roxbury, north east of the town of Mazomanie, and west of the Town of Dane. Land use is dominated by agriculture and woodlands, and dispersed one- and two-family homes. According to the United States Census Bureau, the Town of Roxbury has a total area of 34.3 square miles.

As of the 2010 Census, there are 1,794 people, 663 households, and 519 families residing in the Town of Roxbury. The population density is 52.2 per square mile. There are 806 housing units at an average density of 23.5 per square mile. The municipality population distributed by Wisconsin Department of Administration indicates that the 2015 population for Town of Roxbury was 1,841 people. A population age profile for the Town is in Table 1.

Table 1 Population Age Profile

Category	Number	Percent
Total population	1,794	100.0
Under 5 years	76	4.2
5 to 9 years	126	7.0
10 to 14 years	157	8.8
15 to 19 years	135	7.5
20 to 24 years	65	3.6
25 to 29 years	53	3.0
30 to 34 years	76	4.2
35 to 39 years	87	4.8
40 to 44 years	166	9.3
45 to 49 years	196	10.9
50 to 54 years	168	9.4
55 to 59 years	157	8.8
60 to 64 years	100	5.6
65 to 69 years	94	5.2
70 to 74 years	59	3.3
75 to 79 years	37	2.1
80 to 84 years	20	1.1
85 years and over	22	1.2

Data Source: 2010 Census

According to the 2014 American Community Survey, the median income for a household in the Town of Roxbury is \$75,893 and the median income for a family is \$90,000. The per capita income for the Town of Roxbury is \$40,242. 96.4% of the population has at least a high school degree, while 29.1% of the population holds at least a bachelor's level degree.

Hazard Identification and Risk Assessment

A hazard identification and vulnerability analysis was completed for the Town of Roxbury using the same methodology in the base plan. The information to support the hazard identification and risk assessment for this Annex was collected through a Data Collection Guide, which was distributed to each participating municipality to complete.

The first step in a hazard analysis is to identify which hazards the community is vulnerable to. Table 2 outlines the hazard identification for the Town of Roxbury 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 Roxbury’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 Roxbury has a medium vulnerability to floods. The Town of Roxbury has a lower vulnerability to dam failure, extreme heat and cold, drought, erosion, fog, hail storm, landslide, lightning, tornado, wildfire, wind storm, winter storm, and subsidence. The vulnerability established here is a qualitative assumption based on the impacts, geographic extent, probability of future occurrence, and magnitude/severity.

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Table 2 Vulnerability Assessment Matrix for the Town Of Roxbury

Hazard	Hazard Attributes (1-5)			Impact Attributes (0-5)						Total
				Primary Impact (Short Term – Life and Property)			Secondary Impact (Long Term- Community Impacts)			
	Area of Impact	Past History, Probability of Future Occurrence	Short Term Time Factors	Impact on General Structures	Impact on Critical Facilities	Impact on At-Risk Populations	Social Impact	Economic Impact	Severity of other associated secondary hazards	
Dam failure	1	1	1	0	0	0	0	0	0	3
Extreme Cold	1	1	1	0	0	0	0	0	0	3
Extreme Heat	1	1	1	0	0	0	0	0	0	3
Drought	2	2	2	0	0	0	2	4	1	13
Expansive Soil	1	1	1	0	0	0	0	0	0	3
Flood	5	5	5	5	3	3	3	3	1	33
Fog	1	1	1	0	0	1	0	0	0	6
Hail Storm	3	3	3	3	3	3	1	3	1	23
Landslide	1	1	1	1	1	1	1	3	3	13
Lightning	2	2	2	5	5	5	5	5	5	36
Tornado	5	5	5	5	5	5	5	5	5	45
Wildfire	1	1	1	2	2	2	2	2	2	15
Windstorm	3	3	3	3	3	3	3	3	3	27
Winter Storm	4	4	4	2	2	3	3	3	3	28

Data Source: Town of Roxbury Data Collection Guide, 2015

Previous Hazard Events

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

Flood: June 2002

Flood waters in the Town of Roxbury caused flooded homes and basements. The event occurred in various areas of the town. There were no deaths or injuries reported, but there was reported damage to property. Exact numbers were not available. The Town of Roxbury did not receive FEMA funds to help recover from the hazard. The Town of Roxbury planning members felt such an event had a moderate potential to occur again.

Flood: May – August 2002 and 2008

Flood waters in the Town of Roxbury flooded homes and roads. The event occurred in various areas of the town. There were no deaths or injuries reported, but there was reported damage to property. Exact numbers were not available. The Town of Roxbury received FEMA funds to help recover from the hazard, which helped pay for high capacity pump and three miles of pipe line installation by the Lake District to reduce water elevation. The Town of Roxbury planning members feel such an event has a high potential to occur again.

Asset Inventory

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

Other Vulnerable Populations	Estimate	Percentage
Families Below Poverty Level	10	1.9
Individuals Below Poverty Level	48	2.7
Of those poverty: Individuals Under 18	0	0
Of those poverty: Individuals Over 65	7	2.8
Total Population Over 5 who Speak English less than “very well”	6	0.3
2014 ACS Total Population Estimate	1806	100%

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Data Source: 2014 American Community Survey

General Property

Table 4 Property Exposure Summary

Property Type	Total Parcel Count	Improved Parcel Count	Improved Values (\$)	Content (\$)	Total Value (\$)
Totals	1,415	699	126,573,700	63,286,850	189,860,550
Agriculture	647	205	36,884,000	18,442,000	55,326,000
Commercial	13	11	2,105,200	1,052,600	3,157,800
Utilities	1	0	0	0	0
Industrial	7	4	2,550,600	1,275,300	3,825,900
Institutional/ Governmental	2	0	0	0	0
Other	235	26	5,597,800	2,798,900	8,396,700
Residential	510	453	79,436,100	39,718,050	119,154,150

Data Source: Dane County Land Information Office

Critical Facilities

The Town of Roxbury has identified the following critical facilities important to protect from disaster impacts. This data is collected in Table 5. Table 5 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	1	\$1,000,000
Child Care	VF	3	\$450,600
Communications Tower	EI	1	\$0
Community Based Residential	VF	1	\$0
FCC Tower	EI	2	\$0
Hazardous Chemicals	HM	3	\$455,100
Historic Site	VF	2	\$0
Manufactured Home	VF	134	\$0
Municipal Hall	EI	1	\$0
Wastewater Treatment	EI	1	\$200,000,000
TOTAL		149	\$201,905,700

Data Source: Dane County GIS, *EI: Essential Infrastructure; VF: Vulnerable Facilities; HM: Hazardous Materials Facilities;

Other Assets

Other assets help define a community beyond the current composition of the Town of Roxbury. These assets may provide economic benefit to the community, in addition to preserving the heritage and diversity of the community and may include natural, cultural and historic assets or economic assets such as major employers. It may also include more specific detail on critical facilities. The Town of Roxbury has not identified any additional assets.

Vulnerability to Specific Hazards

This section details vulnerability to specific hazards, where quantifiable, and where it differs from that of the overall County. The previous inventory tables quantify what is exposed to the various hazards within Town of Roxbury. 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

Hazard	Populations	Structures	Critical Facilities	Future Damage Potential
Dam Failure	None	Minimal	Minimal	Specifics unknown; See hazard profile in County Plan
Drought	Minimal	None	Minimal	Specifics unknown; See hazard profile in County Plan
Flooding	See section below	See section below	See section below	See section below
Fog	Minimal	None	None	Specifics unknown; See hazard profile in County Plan

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

Flood

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 Roxbury. 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
3	3	25	24	55.92	19	18	41.94

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
2	\$117,800	2	18	\$1,039,700	17	19	\$1,074,700	18

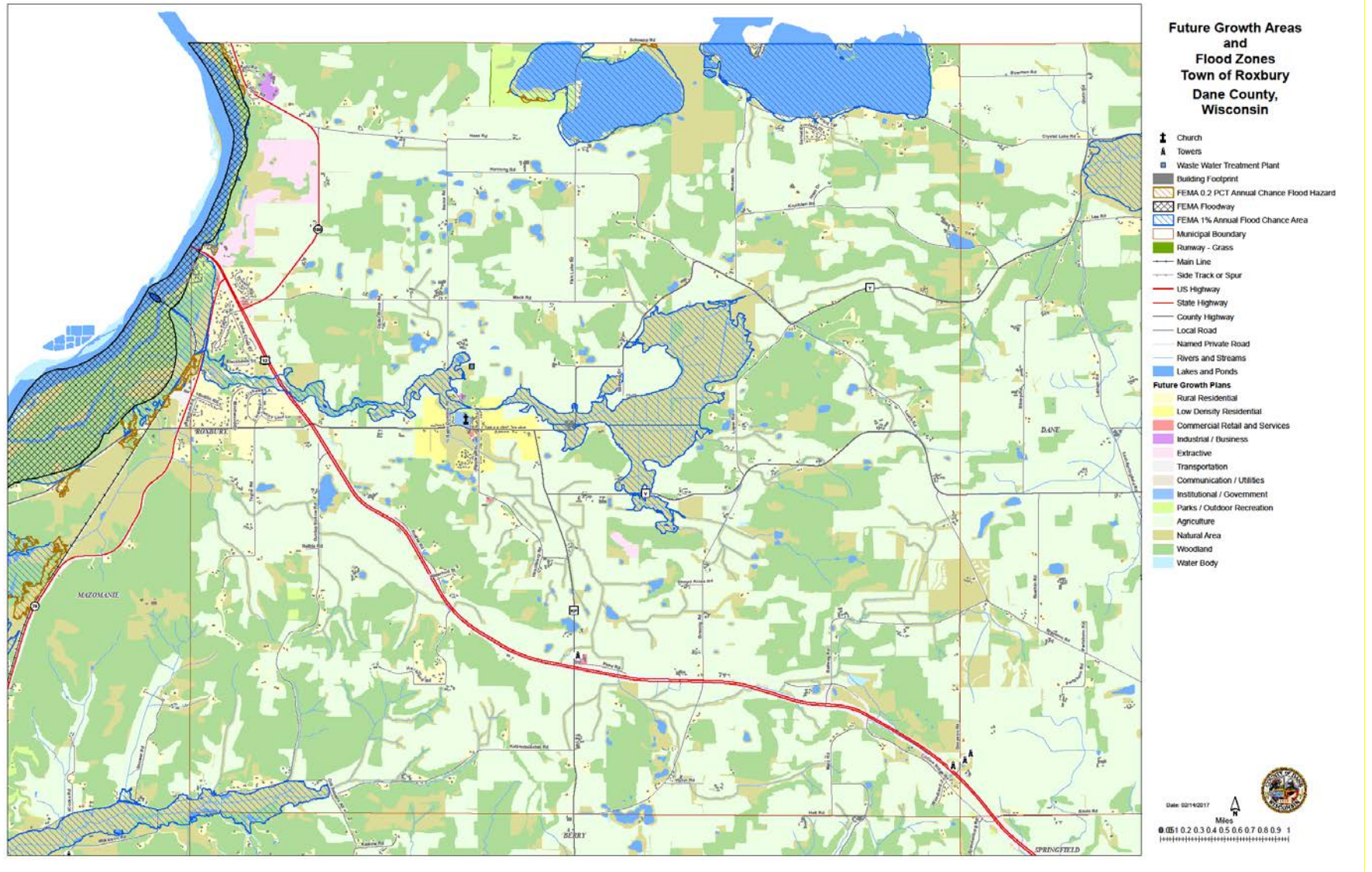
Source: Analysis based on Dane County Land Information Office Data

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.

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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 2015 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
2.35%	733	17	\$200,109,900	\$4,706,078	\$2,353,038.82	\$1,176,519.41	1.2%

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

Growth and Development Trends

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

Table 10 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 (%) 2010-2014
1794	1841	2.62	806	788	-2.2

Data Source: Wisconsin Department of Administration and Dane County Planning and Development

Table 11 Population Projections, 2015-2035

Population Change	5 year Growth %	2015	2020	2025	2030	2035
Increase by same percentage each year	0.52%	1,841	1,889	1,938	1,988	2,039

Data Source: Wisconsin Department of Administration and Dane County Planning and Development

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 Roxbury.

Mitigation Capabilities Summary

Table 12 lists planning and land management tools typically used by local jurisdictions to implement hazard mitigation activities, or by themselves contribute to reducing hazard losses. The table also indicates which of these tools are currently utilized in the Town of Roxbury.

Table 12 Town Of Roxbury Regulatory Mitigation Capabilities

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

Data Source: Town of Roxbury Data Collection Guide, 2015

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

Table 13 Responsible Personnel and Departments for the Town Of Roxbury

Personnel Resources	Yes/No	Department/Position	Comments
Planner/engineer with knowledge of land development/land management practices	No		
Engineer/professional trained in construction practices related to buildings and/or infrastructure	Yes	Contract w/MEI	
Planner/engineer/scientist with an understanding of natural hazards	No		
Personnel skilled in GIS	No		
Full-time Building Official	No		
Floodplain Manager	No		
Emergency Manager	No		
Grant Writer	No		
Other Personnel	Yes	Town Patrol Person	
GIS Data Resources – (land use, building footprints, etc.)	No		
GIS Data – Links to assessor’s data			
Warning systems/services (Reverse 9-11, cable override, outdoor warning signals)	No		
Other:			

Data Source: Town of Roxbury Data Collection Guide, 2015

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

Table 14 Financial Resources for the Town Of Roxbury

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	Lake District Taxes
Fees for water, sewer, gas, or electric services	No	
Impact fees for new development	No	
Incur debt through general obligation bonds	Yes	
Incur debt through special tax bonds	No	
Incur debt through private activities	No	
Other:		

Data Source: Town of Roxbury Data Collection Guide, 2015

Additional Capabilities

National Flood Insurance Program Participation

The Town of Roxbury does not participate in the National Flood Insurance Program as a stand-alone entity, but is covered under the County's participation so residents can get flood insurance.

Public Involvement Activities

The Town of Roxbury 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 Objectives (Actions)

Hazard mitigation is a process of continuous improvement. The Town of Roxbury has made progress on its mitigation goal from 2009, and will be continuing it for this planning cycle.

Objective 1: Flood mitigation to private property and town road infrastructure.

Steps:

- Obtain permit for five year pumping from Fish Lake to Wisconsin River
- Increase existing Fish Lake pump capacity to reduce time frame to decrease water/Lake elevation
- Explore other mitigation techniques as necessary

Lead Implementing Agency:

Fish and Crystal Lake District.

Supporting Agencies:

- Town of Roxbury
- Dane County
- Town of West Point
- Columbia County

Possible Funding and Technical Assistance:

Timeline: Within next 12 months for pump capacity and five year pumping permit.

Priority: High.

Estimated Costs: Approximately \$500,000 over the next five years.