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Appendix 1: Solved Gaps & Deficiencies for Hazards

As noted in Chapter 3 Hazard Inventory for Yellow Medicine County, specific gaps and deficiencies were identified for all potential hazardous events. The problem areas identified in the original All-Hazard Mitigation Plan were presented to the Yellow Medicine Local Task Force and representatives from all cities within the county to state whether or not a gap or deficiency has been solved. In the event that efforts have been made to rectify a problem, but has not been fully completed, it remained under current gaps and deficiencies. Below is a list of all resolved gaps and deficiencies sorted according to hazard type.

Severe Storms:

- As many as 40 percent of the county's severe weather warning system sirens have not functioned properly at any given time. Also, a backup power source is not available for most of the county's sirens.
- The county's cities have emergency sirens to warn residents in the event of severe summer weather. Yellow Medicine County dispatch center has its own radar to track weather. The system is very old and does not function during a storm.
- While the county participates in the severe storm spotters network sponsored by the NWS, a procedure is not established for spotters when calling into local dispatch. Also, weather is extremely difficult to spot at night.
- Yellow Medicine County also has many "dead spots" around the county where emergency warnings from dispatch will not transmit. Three additional towers are needed to address this problem.
- Assessment of the risk of collapsed structure has not been assessed.
- The fairgrounds in Canby have not identified a safe place to go in the event of severe weather.
- The campgrounds in the city of Canby and at the Del Clarke campground have not identified a safe shelter to go to in the event of bad weather. If a potential farm museum is built at the Del Clarke site, a shelter should be part of the plans. It is not known if the campers at Del Clarke are able to hear the siren from Canby.

Floods:

- The Granite Falls wastewater treatment plant is not in the 100-year flood zone but the lift plant is. Until moved, Granite Falls' water supply remains at risk.
- At-risk uses and structures remain in identified 100-year floodplains, including nonconforming structures and uses currently "grandfathered in" in both the county and Granite Falls land use plans and ordinances.
- Local resources are not adequate for a severe and prolonged flood and there is a need for assistance from outside the community during an emergency.
- Flood risks need to be evaluated for the floodplains of the Canby and Lazarus Creeks and the confluence of Spring Creek and the Yellow Medicine River.

Wildfire:

- The county has not undertaken a systematic assessment of wildfire risks and associated prevention measures.

- Land use regulations can provide some protection for rural housing. The DNR informally recommends considering reasonable structure setbacks (perhaps 200 feet) from permanent conservation lands (i.e., publicly owned, private lands with a permanent conservation easement, or lands owned by private non-profit conservation organizations such as the Nature Conservancy). An additional benefit of such setbacks would be a reduction in the potential conflict between hunting and residential land uses. In addition, standards for access roads and driveways in fire hazard areas could be considered in order to ensure safe passage of fire equipment.
- There are many CRP, CREP and other natural areas that are not managed with prescribed burns. These areas should be encouraged to work with professional agencies to manage the land with prescribed burns to help reduce trash and debris that can create a large wildfire hazard.
- All firefighters in Yellow Medicine County are volunteer firefighters. The DNR wildfire training offered to local fire departments should be offered closer to local fire departments to be more effective and efficient.
- Currently the DNR calls the county before lighting a prescribed burn. This information should come to the local dispatch in order to be better prepared for fires that get away or relight at a later time.
- Much of the land in wildfire risk is state land and in rural areas. It needs to be defined as to who is responsible for fighting these fires and to establish a mutual aid agreement between DNR and local fire departments.
- Infrastructure is important. Dry hydrants have been demonstrated as an effective tool in assuring a steady and close by source of water for responding to major both wild land and structural fires in rural areas. Assessment should be made to determine where existing dry hydrants are, where fire risks are greatest, and where water bodies suitable to support a dry hydrant are located. Suitable placement of additional dry hydrants may be difficult as the area to fight wildfires is extremely large.

Infectious Diseases:

- The county has not adopted the Public Health Emergency Guide lines because it is not completed at this time.
- Guidelines for communication should be in place at the local level. Volunteer ambulance drivers or crew members helping with patients should be called immediately if an outbreak has occurred to keep them quarantined. Names and contact information should be collected at every emergency scene in order to keep any outbreak contained.

Structure Fire:

- Homes with chimneys pose a larger threat for fires. Specialized training classes, like chimney cleaning, safe cooking in the kitchen, and holiday hazards, could be offered to residents.
- Residents living in higher density areas should be more educated on fire prevention.
- Local Fire Departments do not have adequate equipment to fight fires; new trucks and PTE are needed in all Fire Departments.
- Local Fire Departments do not have adequate communication equipment to communicate with dispatch or other Fire Departments. Many of the Fire Departments are in need of new pagers to be alerted for fire calls.

Water Supply Contamination:

- The emergency response plan does not identify alternate sources of drinking water, including locates for acquiring adequate amounts of bottled water, in the event of contamination.
- County officials' efforts to educate citizens with private wells are not well coordinated with state and federal efforts. Also, citizens are given very little encouragement to remove old wells that are not compliant with the 1974 standards.
- The Burr Treatment plant should be more secure.
- Need installation of devices to stop contamination from individual homes into the water.

Appendix 2: Additional Hazard Research

Presidential Disaster Declarations: 1965 – 2003

Natural Hazards – A National Threat

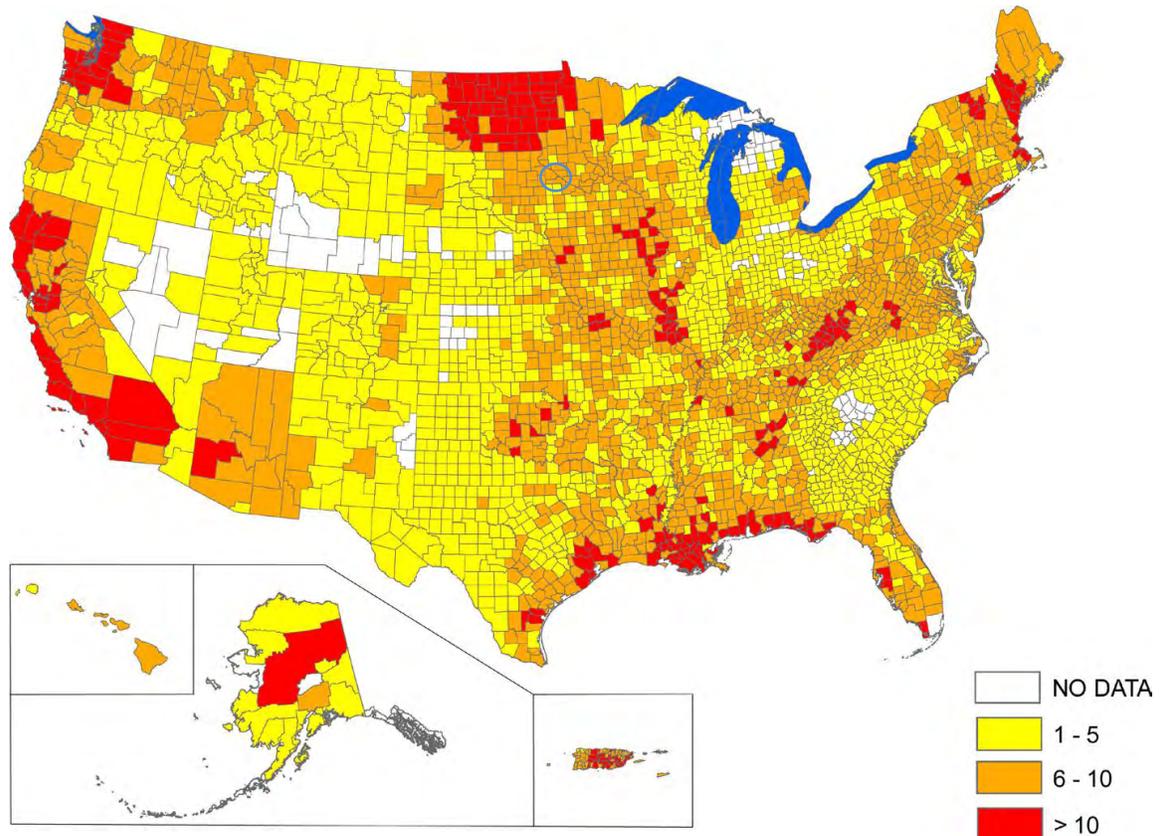
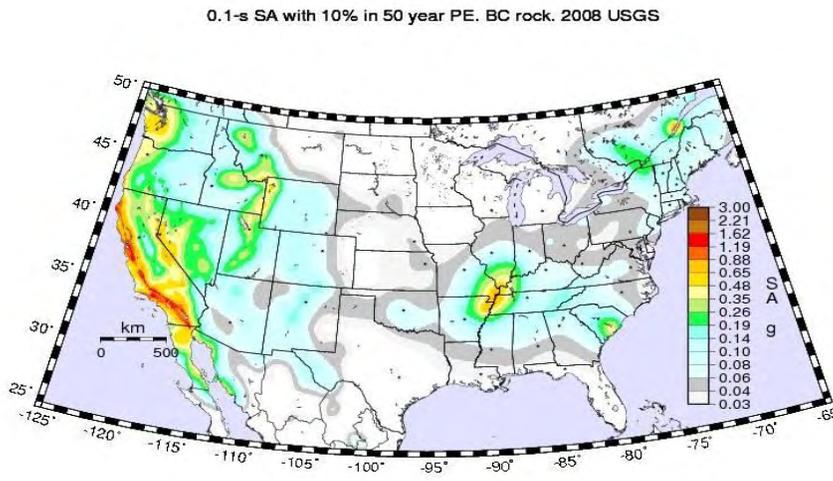


Image Source: <http://pubs.usgs.gov/fs/2007/3009/2007-3009.pdf>

From 1965 to 2003, Yellow Medicine County has witnessed 6-10 Presidential Declarations (see blue circle). From 2000 to 2009, Yellow Medicine County has experienced three Presidential Disaster Declarations: 2001 (Flood), 2006 (Winter Storm), and 2009 (Flood). It is anticipated that another declaration will occur in 2010 due to flooding.

Earthquakes



This map identifies the Probability of Exceedence for the United States at 10% in 50 years. The map measures probabilistic ground motion. Because all 5 counties in our region are below 3% g, these counties have a relatively low seismic risk and will not conduct an earthquake risk assessment.

Image Source:

<http://earthquake.usgs.gov/hazards/products/conterminous/2008/maps/us/10hzSA.10in50.usa.jpg>

Landslides

Very low susceptibility in Yellow Medicine County.

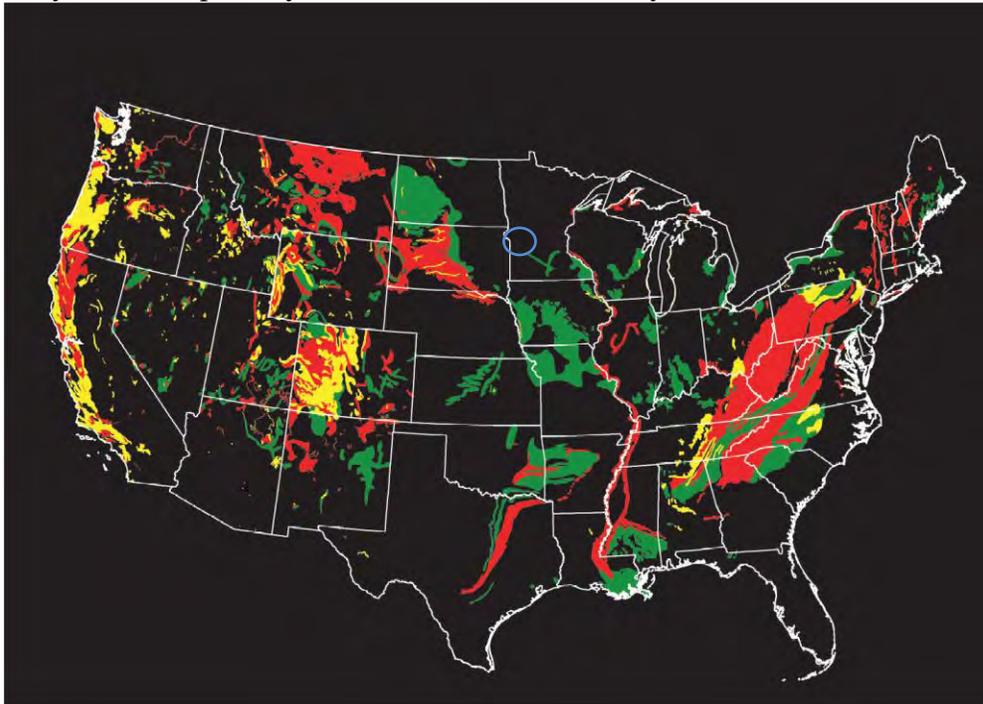
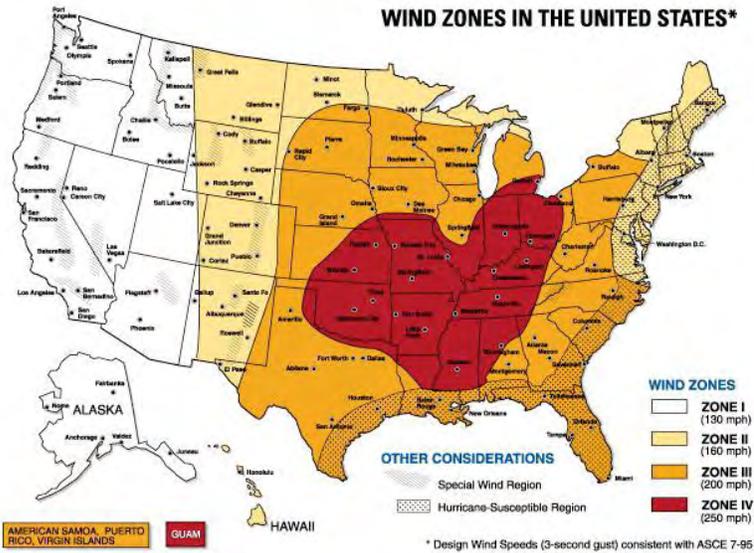
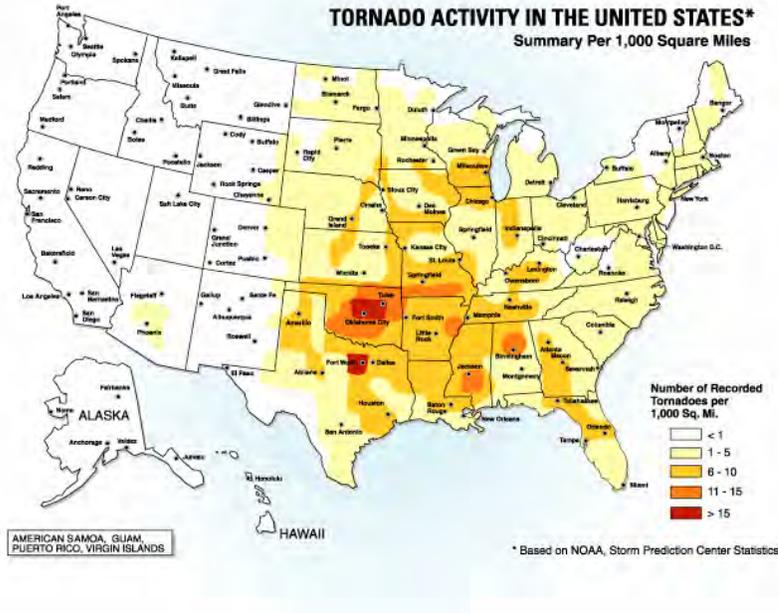


Image Source: <http://pubs.usgs.gov/fs/2005/3156/2005-3156.pdf>

Tornados



Source for above images: <http://www.fema.gov/pdf/library/ism2.pdf>

Tornados in Yellow Medicine County fall in the range of 1-5 tornados every 1,000 miles and are within Wind Zone Three (200mph). The combination of these effect put Yellow Medicine County at a “High Risk” for a tornado.

Appendix 3

Spring Flooding of 1997

Contributing Climatic Conditions

1. Heavy autumn precipitation

- much of Minnesota **six or more** inches in late October and November of 1996
- many areas **four or more** inches **above** normal
- most of Minnesota in **95th percentile** (one in 20 year event)

2. Extraordinary winter snowfall

- much of Red River and Upper Minnesota River Basins over six feet of snowfall
- some areas over eight feet of snowfall
- many areas two to three times average snowfall
- over 40 percent of Red River Basin (Minnesota portion) and uppermost reaches of Minnesota basin in 99th percentile (near or exceeding record snowfall)
- two thirds of Red River reach in 99th percentile
- historically no greater area of Red River Basin in record snowfall category in any past season
- 1996-97 snowfall exceeded 1896-97 (severe Red River flooding a century ago) snowfall by 25 to 50 percent in much of Red River Basin (Minnesota portion)
- less than 10 percent of basin covered by record snowfall in 1896-97
- discussions of earlier Red River flooding are available below

3. Less than ideal snowmelt scenario

- few mid and late winter melting days
- large temperature fluctuations in early April
- up to 10 degrees above normal in first week of month
- up to 20 degrees below normal in second week of month

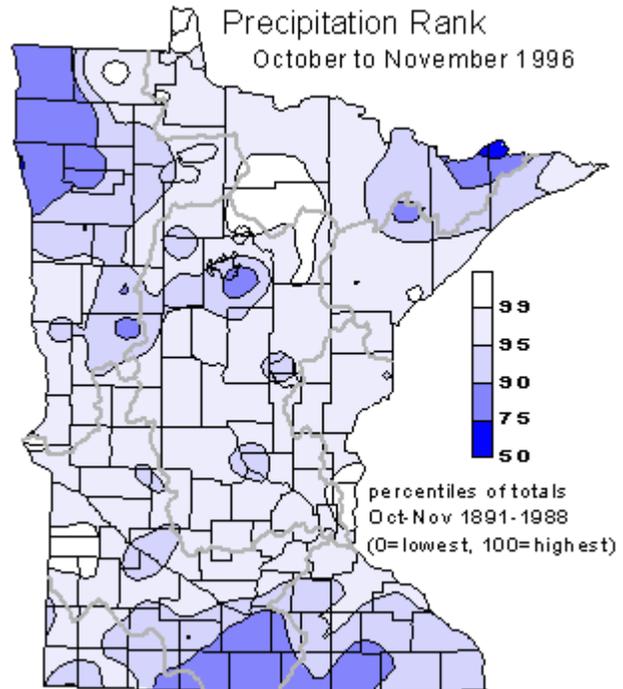
4. Heavy early spring precipitation

- two or more inches of precipitation (rain and snow) in western Minnesota April 5-6, 1997
- normal monthly April precipitation approximately two inches for region

FALL/WINTER OF 1996-97

1. Heavy autumn precipitation

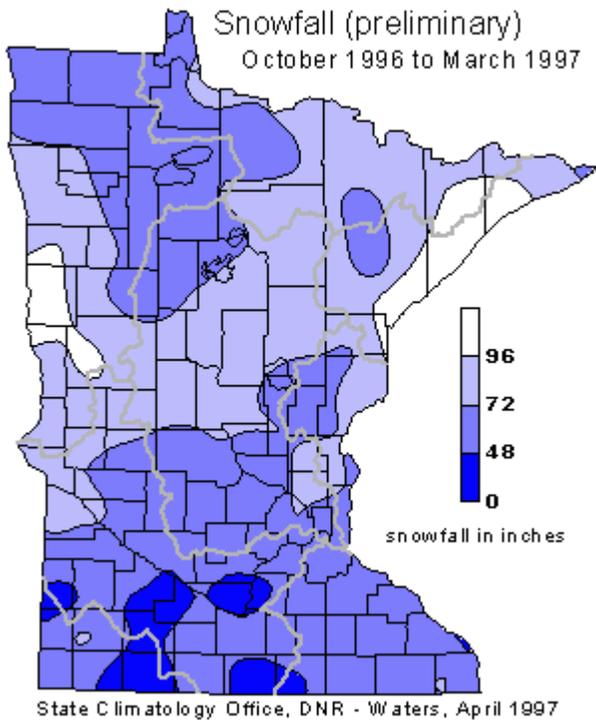
Much of Minnesota received **six or more** inches of precipitation in late October and November, 1996. For many areas such amounts were **four or more inches above** normal. Over most of Minnesota, such amounts ranked above the **95th percentile**, that is a one in 20 year event.



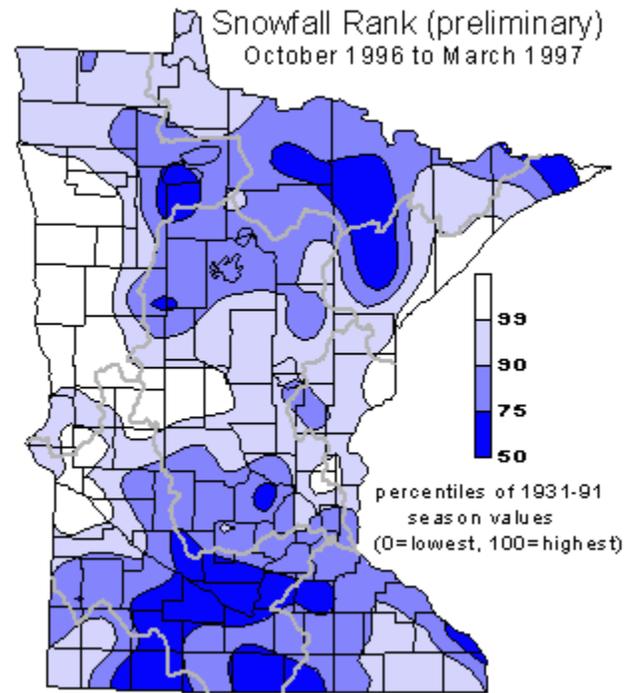
State Climatology Office, DNR - Waters, April 1997

2. Extra Ordinary winter snowfall

Over the course of the 1996-97 winter, much of Red River and Upper Minnesota River Basins, and the north shore of Lake Superior received over **six feet** of snowfall. Some areas ended up with over **eight feet**. Those amounts were as much as **two to three times average** snowfall. At Fargo, for instance, 117.0 inches fell in the 1996-97 season which may be compared with their long-term average snowfall of 38.9 inches and their old seasonal record of 89.1 inches.



State Climatology Office, DNR - Waters, April 1997

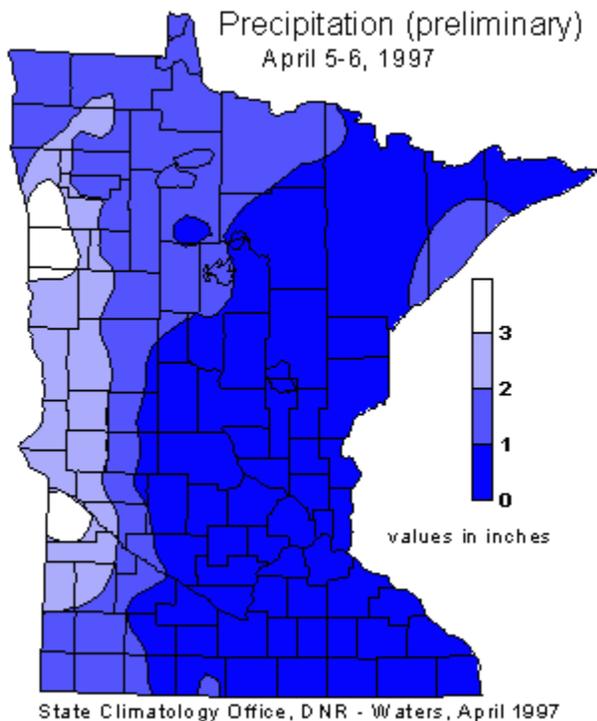


State Climatology Office, DNR - Waters, April 1997

The snowfall map shows that the heaviest snows extended eastward from the Fargo area to the north shore of Lake Superior. In much of the Red River Valley, the upper reaches of the Minnesota River, and along the north shore, those snowfalls were **very near or above the record** conditions in the 60 seasons from 1931 to 1991 (that is, the areas that ranked 99th percentile or greater).

3. Heavy early spring precipitation

At the beginning of the melt period, on April 5-6, 1997, **two or more** inches of precipitation (rain and snow) occurred in western Minnesota. At Crookston, 3.63 inches fell in two days. In a 100-year record there, the largest two-day total for March or April had been 2.35 inches. Normal *monthly* April precipitation is approximately two inches for the region.



4. Less than ideal snowmelt scenario

This season few mid and late winter melting days occurred. Large temperature fluctuations occurred in early April. Temperatures were up to **10 degrees above normal** in the first week of the month followed by up to **20 degrees below normal** in the second week of the month.

Appendix 4

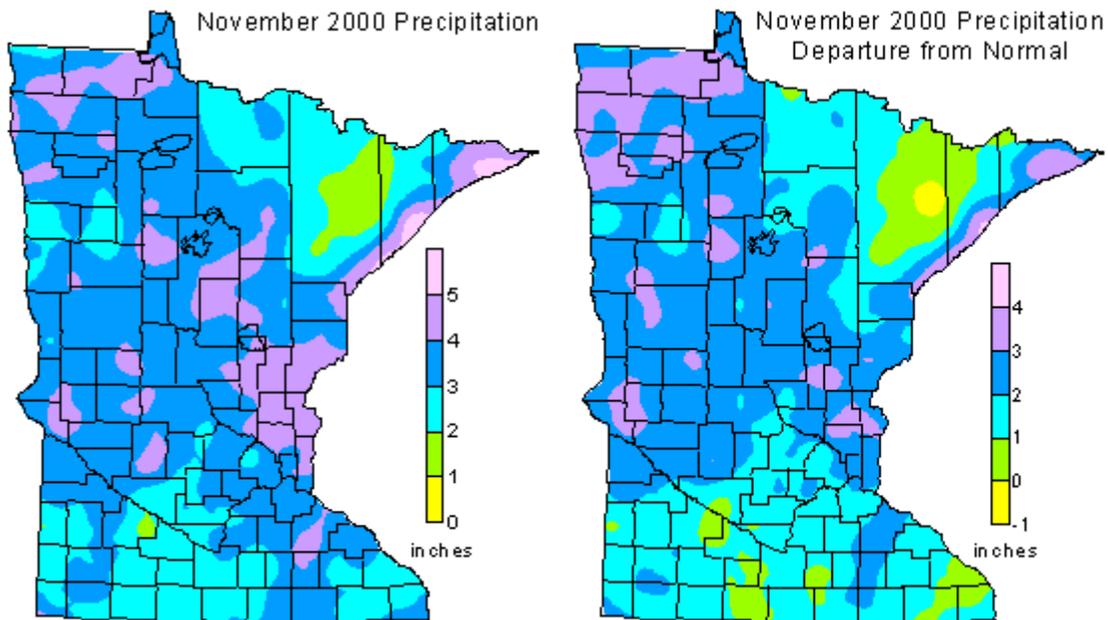
Climatic Conditions Leading to the Spring Flooding of 2001

Major flooding occurred along many of Minnesota's rivers during April 2001. The flooding was caused by four contributing climatic factors:

- **significant autumn precipitation**
- **heavy winter snowfall**
- **less than ideal snowmelt scenario**
- **record-breaking April precipitation**

1) Significant Autumn Precipitation

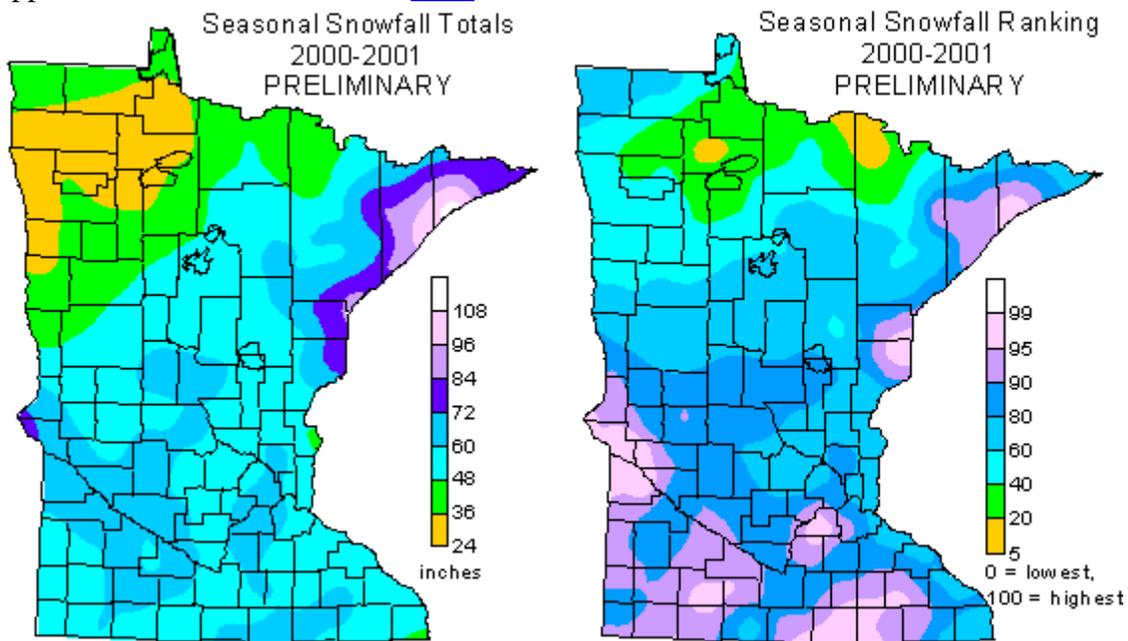
Many southwestern, central, and east central Minnesota locations entered November with water deficits due to below normal growing season rainfall. However, heavy early November rains filled the upper portions of the soil profile before soil freeze-up. The figures below show that November 2000 precipitation exceeded the historical average by more than two inches in many locations.



2) Heavy Winter Snowfall (2000-2001)

Mid- and late-November snows blanketed much of the state with a lasting snow cover that was to persist into the early spring. The figure below shows that seasonal snowfall totals exceeding 60 inches were common throughout western and southern Minnesota. Snowfall totals in excess of 72 inches were reported in northeastern Minnesota. As seen below, snowfall totals in 2000-2001 ranked above the 80th percentile across much of southern, western, and northeastern Minnesota. In some communities, seasonal snowfall

exceeded the 95th percentile. Normal annual snowfall in the southern one half of Minnesota ranges from 36 inches in the west to around 50 inches in the east. 2000-2001 snowfall topped the historical average by approximately two feet in western Minnesota, and by more than 18 inches in most southern Minnesota counties. Snow water equivalent in the snow pack at the end of the season was three to five inches in many areas. While 2000-2001 snowfall was heavy in many communities, the snowfall totals were far less than the 72 to 96 inch totals that covered most of the Red River basin and much of the Upper Minnesota River Basin in [1997](#).

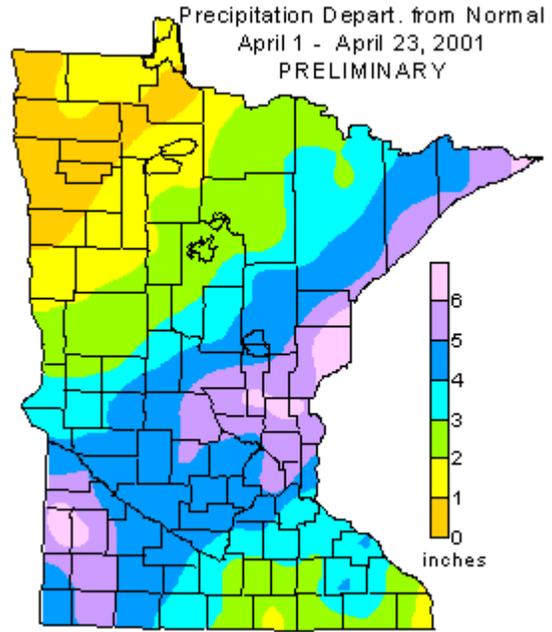
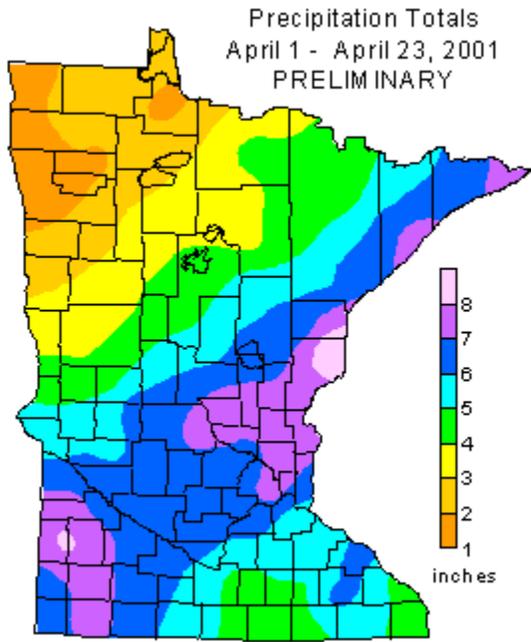


3) Less Than Ideal Snowmelt Scenario

The winter of 2000-2001 provided very few mid and late-winter melting days. While January was relatively mild, temperatures were still cold enough to retain most of the snow cover established during November and December. February was quite cold, finishing four to eight degrees below normal. March temperatures were three degrees below normal. The snow pack gradually diminished in depth throughout March, nevertheless snow water content did not change appreciably. Much of the melt water stayed on the landscape in the micro-relief.

4) Record-breaking April Precipitation

Extraordinarily heavy precipitation fell across much of Minnesota in April 2001. The figure below shows that a broad swath of southwestern, central, east central, and northeastern Minnesota received over six inches of precipitation from April 1 to April 23, 2001. Precipitation totals surpassed the historical average by more than four inches in these areas. For many communities, all-time April monthly precipitation records were set before the month came to a close.



[Return to the Climate Journal](#)

mcwg@soils.umn.edu

URL: http://climate.umn.edu/doc/flood_2001/flood_2001.htm

Last modified: April 24, 2001

Appendix 5: Complete Listing of Hazardous Spills in Yellow Medicine County (2002 – 2008)

Spill Date	Spill Name	City	Spilled Product	Quantity Released	Initially Reported Source Of Spill
7/30/2002	Minnesota West Comm. & Tech. College	Canby	Light Fuel Oil and Diesel	200 Gallons	UST Including Dispenser + Hose
11/4/2004	Kane Transport	Canby	Asphalt	6,000 Gallons	Truck/Vehicle Cargo
3/11/2006	Waltz Septic Service, Dumping complaint	Canby	Sewage Or Wastewater	3,000 Gallons	Truck/Vehicle Cargo
11/27/2007	Otter Tail Power Company, transformer oil release	Canby	Mineral Oil	10 Gallons	Transformers
1/2/1900	Garbage burning complaint	Canby	Other (Described In Remarks)	Unknown	Other
4/26/2005	Prairie Grain Partners	Clarkfield	Pesticide	15 Gallons	Truck/Vehicle Cargo
2/17/2006	Prairie Grain Partners	Clarkfield	Fertilizer Not Anhyd. Ammonia	5,000 Gallons	AST - Within Containment Area
10/6/2006	Kerkert Pumping - manure spill	Clarkfield	Manure	9,500 Gallons	Truck/Vehicle Cargo
4/6/2005	Richard Schultz Trucking, Inc	Echo	Light Fuel Oil and Diesel	75 Gallons	Truck/Vehicle Fuel
8/18/2005	Harvest Land Coop, Traffic Accident	Echo	Hydraulic Fluid	50 Gallons	Hose Or Pipe, Not Tank Related
9/4/2003	MN Valley Substation	Granite Falls	Mineral Oil	1 Gallon	Transformers
9/25/2003	Becker's Trucking Inc. at Wegdahl corner	Granite Falls	Food	6,000 Gallons	Truck/Vehicle Cargo
11/7/2003	Cargill-Gluek	Granite Falls	Light Fuel Oil and Diesel	50 Gallons	Truck/Vehicle Fuel
10/29/2003	Sub station	Granite Falls	Mineral Oil	50 Gallons	Transformers
1/28/2004	Minnesota Valley Generating Plant	Granite Falls	Sewage Or Wastewater	700 Gallons	Hose Or Pipe, Not Tank Related
10/27/2005	Scenic Overlook, Hwy 212 - 23	Granite Falls	Paint	5 Gallons	Barrels/Containers
12/10/2006	Yellow Freight terminal, diesel spill	Granite Falls	Light Fuel Oil and Diesel	Unknown	Truck/Vehicle Fuel
4/29/2007	Equity Elevator Trading Company	Granite Falls	Fertilizer Anhyd. Ammonia	Unknown	Truck/Vehicle Cargo
9/13/2007	Novco Inc. saddle tank	Granite Falls	Light Fuel Oil and Diesel	100 Gallons	Truck/Vehicle Fuel
2/7/2008	Specsys company	Granite Falls	Acid/Base Chemicals	1 Quart	Other
Unknown	Farmers Union Oil - auto line test	Granite Falls	Unknown	Unknown	UST Including Dispenser + Hose
4/2/2009	Specialty Systems-hydraulic fluid from hose	Granite Falls	Hydraulic Fluid	10 Gallons	Hose Or Pipe, Not Tank Related
6/1/2009	Residential complaint- transformer oil-Khali Residence	Granite Falls	Mineral Oil	Unknown	Transformers
7/8/2009	Particulate complaint from hotmix plant	Granite Falls	Other (Described In Remarks)	Unknown	Other
10/20/2005	MNDOT, Shoulder of roadway, Hwy 212	Montevideo	Other (Described In Remarks)	5 Gallons	Barrels/Containers
Unknown	Old UST Site, Reported by WCEC Morris	Morris	Light Fuel Oil and Diesel	Unknown	UST Including Dispenser + Hose
1/26/2008	Herman Kockelman	St. Leo	Light Fuel Oil and Diesel	30 Gallons	AST Including Lines
6/15/2004	Xcel Energy	Wood Lake	Mineral Oil	10 Gallons	Transformers
8/1/2005	Dwayne Erickson farm field	Wood Lake	Manure	Unknown	Truck/Vehicle Cargo

Source: Minnesota Emergency Response and Preparedness Section – Remediation Division, 2009

Appendix 6: NOAA Weather Radio Broadcasts

Minnesota Weather Radio Broadcast Coverage (2010)

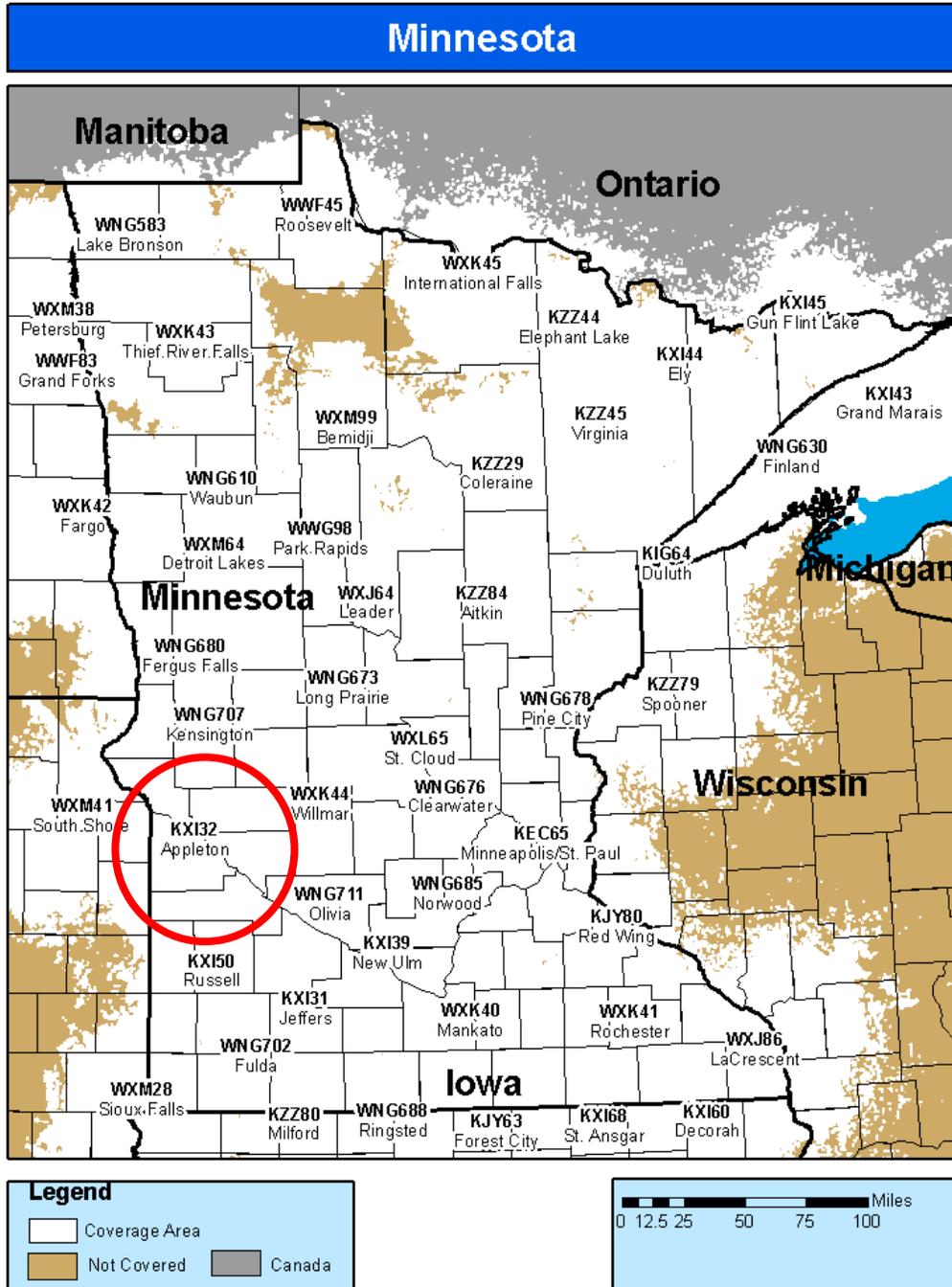
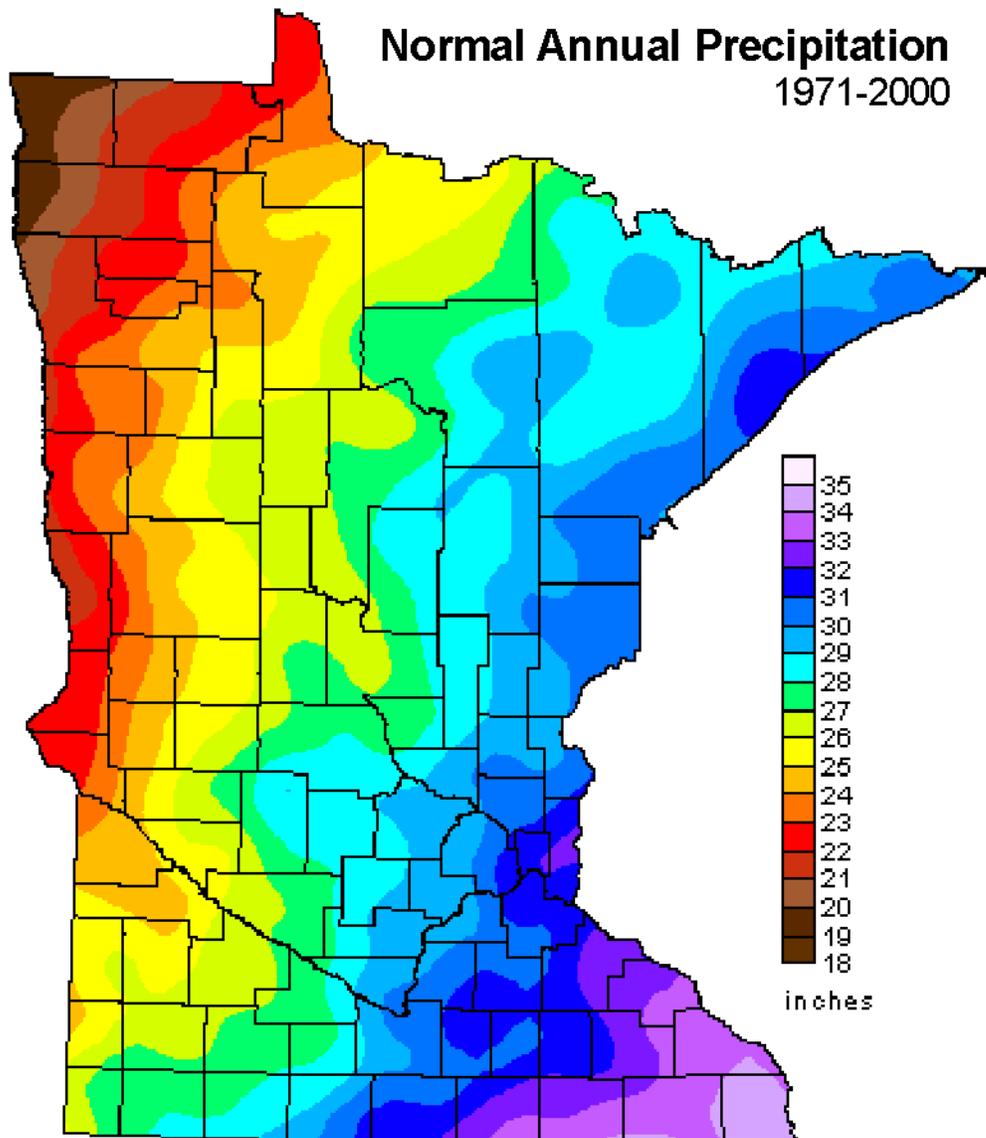


Image Source: <http://www.weather.gov/nwr/Maps/PHP/minnesota.php>

Yellow Medicine County is covered by Appleton KX132 (red circle – approximate area).

Appendix 7: Normal Annual Precipitation



Source: State Climatology Office-DNR Waters
December 2002

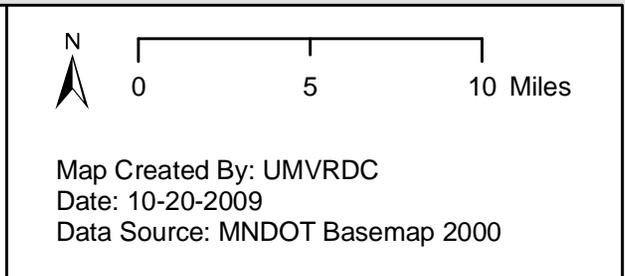
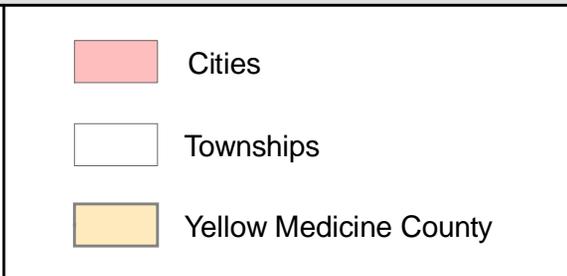
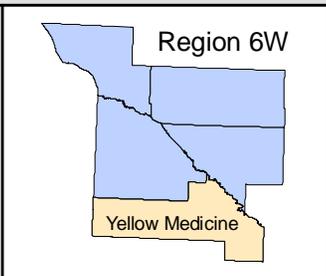
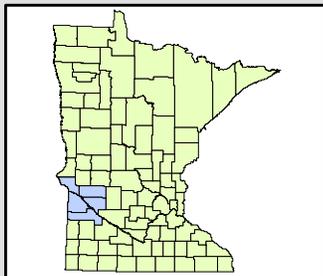
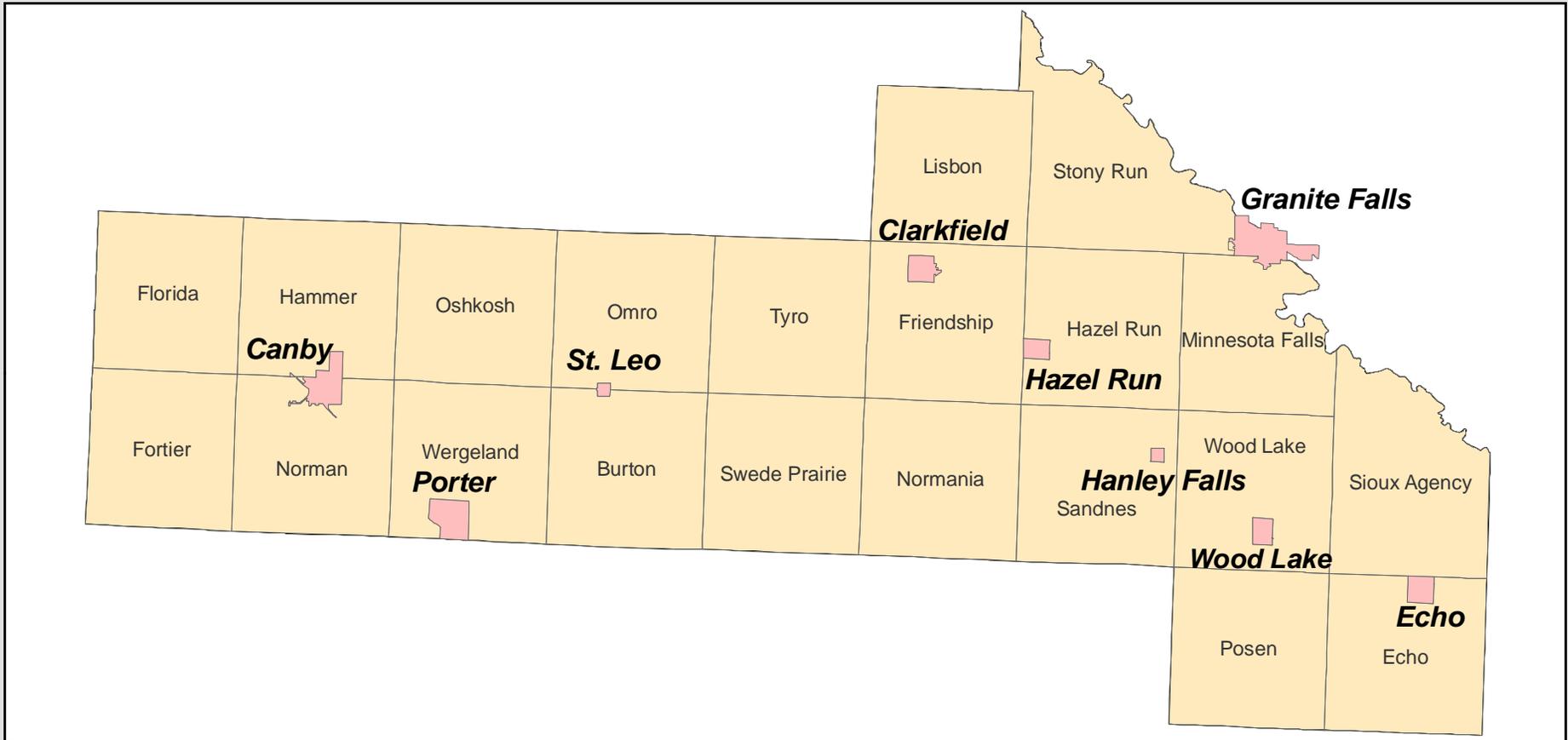
The central portion and northeastern portion of Yellow Medicine County has approximately 24-25 inches, while the far east and western portions are within 25-26 inches. A small area of Yellow Medicine County in the southwest corner receives on average between 26-27 inches annually.

Appendix 8: General Information Maps

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8-1: Civil Divisions

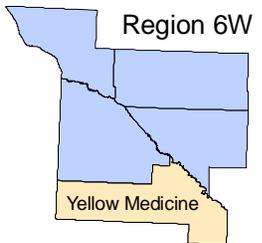
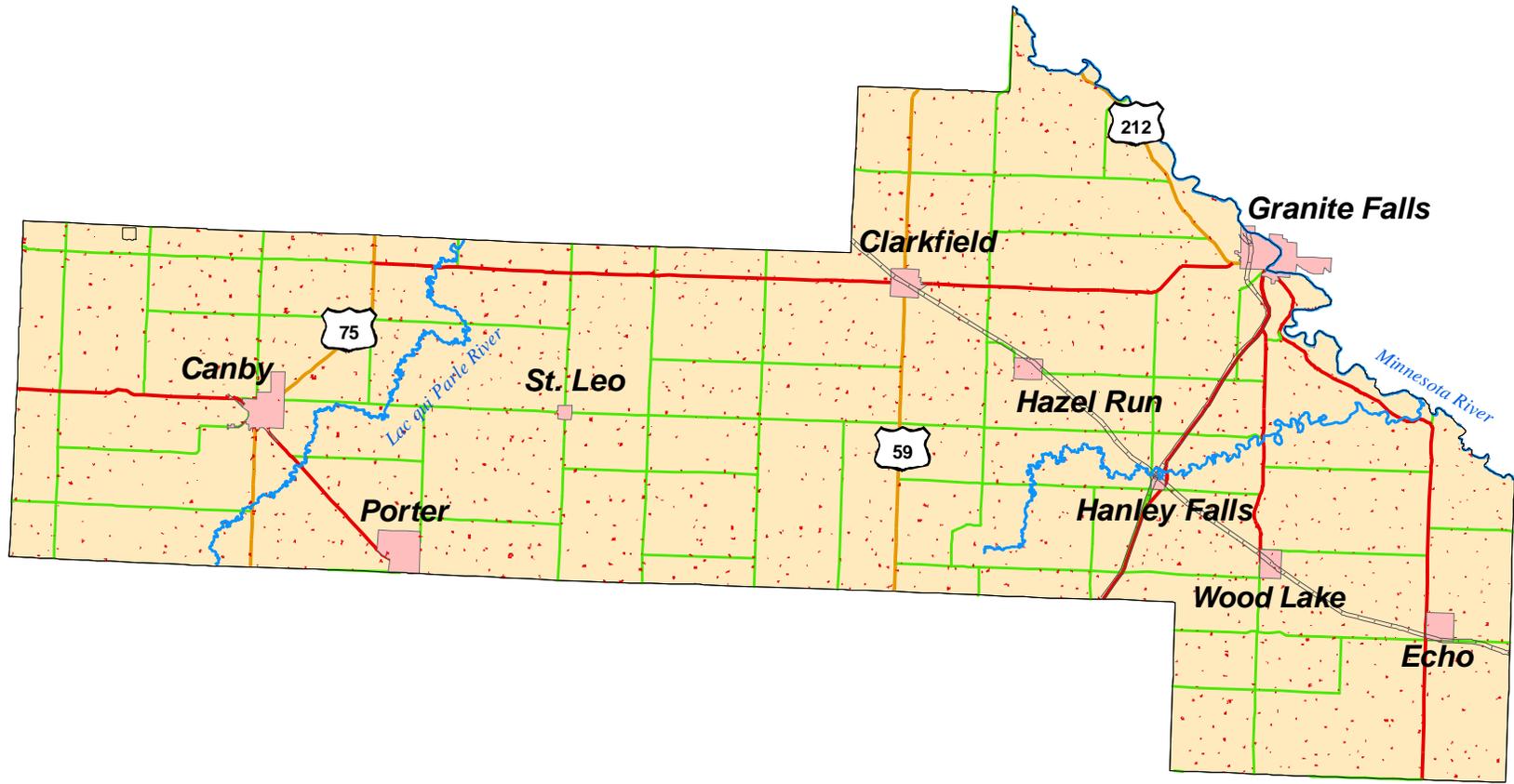
Yellow Medicine County
All-Hazard Mitigation Planning



8-2: Population Locations

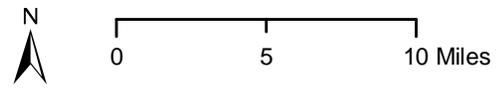
Yellow Medicine County

All-Hazard Mitigation Planning



- Cities
- Farmsteads
- Yellow Medicine County
- Rivers

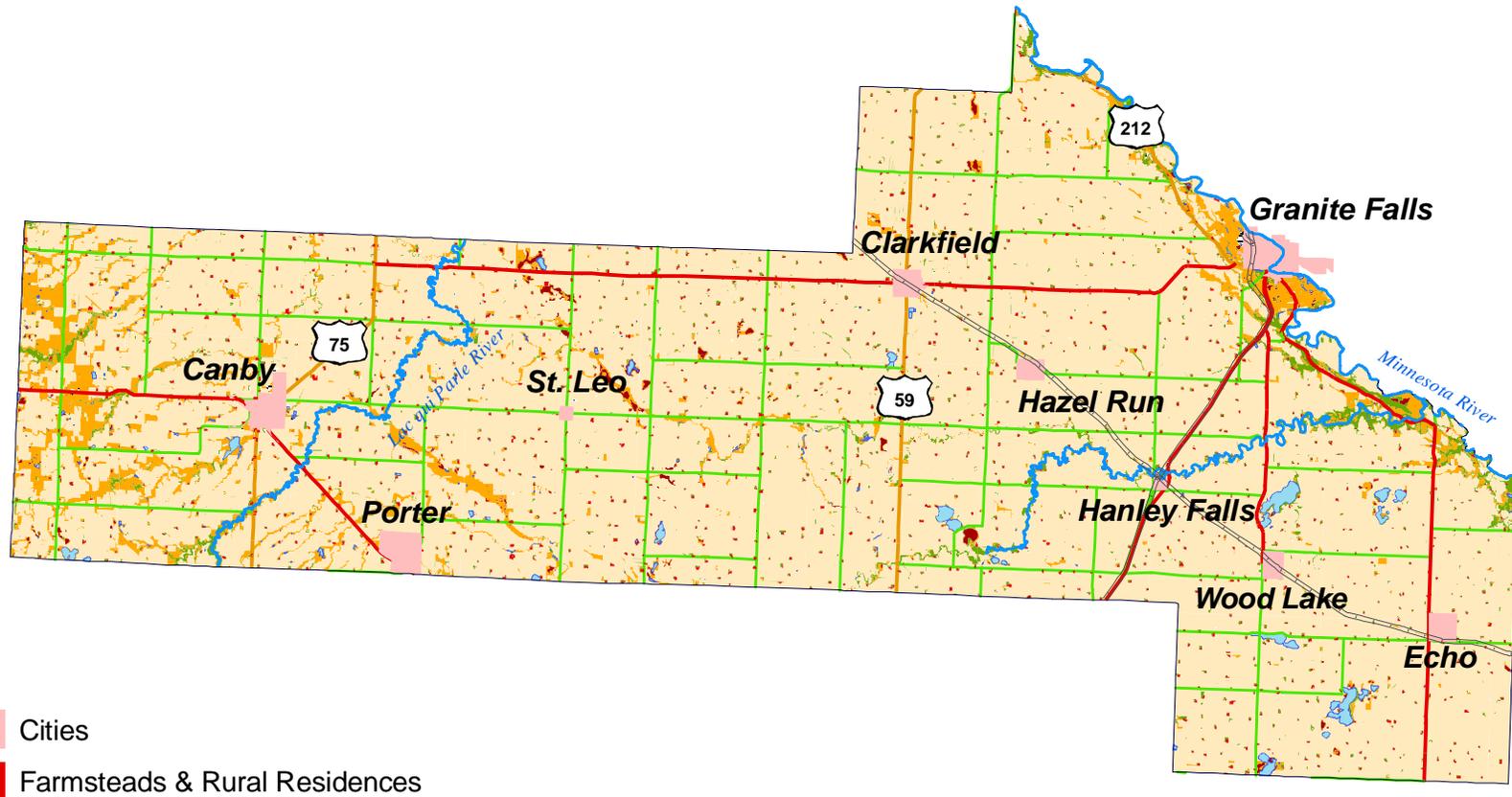
- ROADS**
- County State-Aid Highways
 - MN Trunk Highway
 - U.S. Highway
 - Railroads



Map Created By: UMRDC
Date: 10-20-2009
Data Source: MNDOT Basemap 2000

8-3: Land Use

Yellow Medicine County
All-Hazard Mitigation Planning



LAND USE

- Cultivated Land
- Pasture and Hayland
- Forest
- Grassland
- Gravel Pits and Open Mines
- Exposed Soil or Sandbars
- Wetlands
- Water Bodies

ROADS

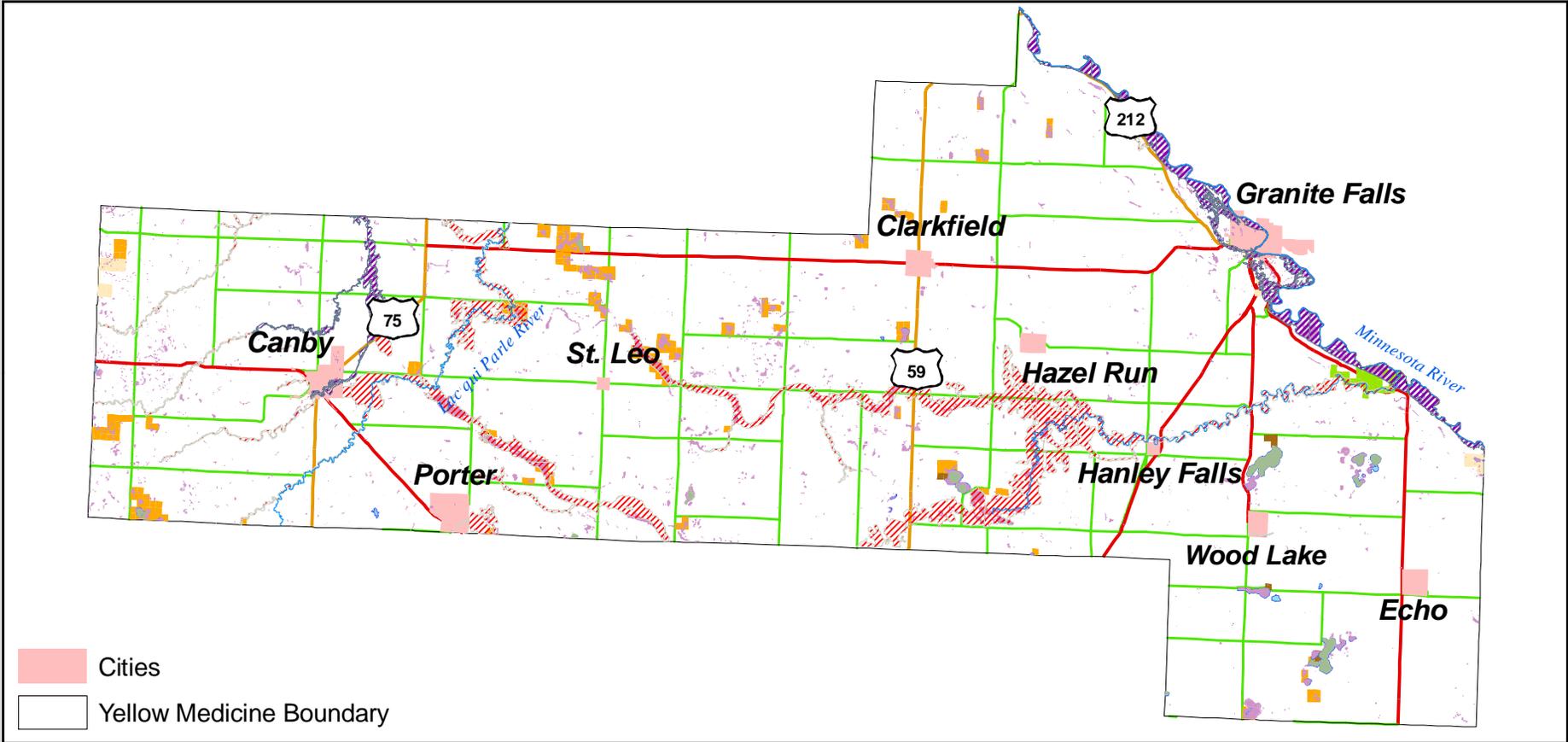
- County State-Aid Highways
- MN Trunk Highway
- U.S. Highway
- Railroads



Map Created By: UMRDC
Date: 10-20-2009
Data Source: MNDOT Basemap 2000

8-4: Natural Features

Yellow Medicine County
All-Hazard Mitigation Planning



FLOODPLAINS

- 100-Year
- 500-Year
- Water Bodies

WETLANDS

- Lacustrine
- Palustrine
- Riverine

PUBLIC LANDS

- Eco Services Division
- Forestry Division
- Wildlife Division
- Trails and Waterways
- Parks and Recreation Division

ROADS

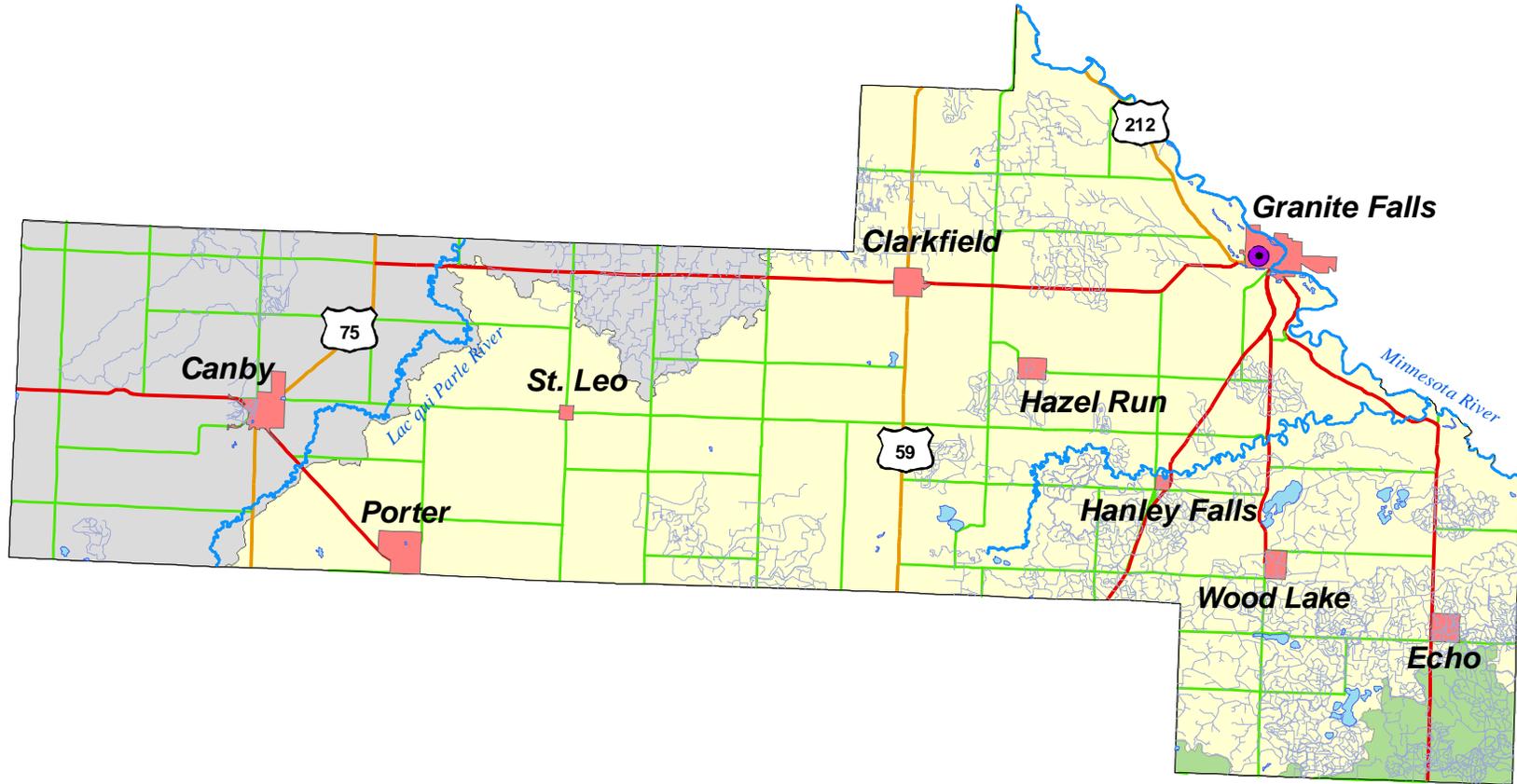
- County State-Aid Highways
- MN Trunk Highway
- U.S. Highway



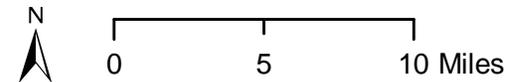
Map Created By: UMRDC
Date: 10-21-2009
Data Source: MNDOT Basemap 2000

8-5: Hydrology & Drainage

Yellow Medicine County
All-Hazard Mitigation Planning



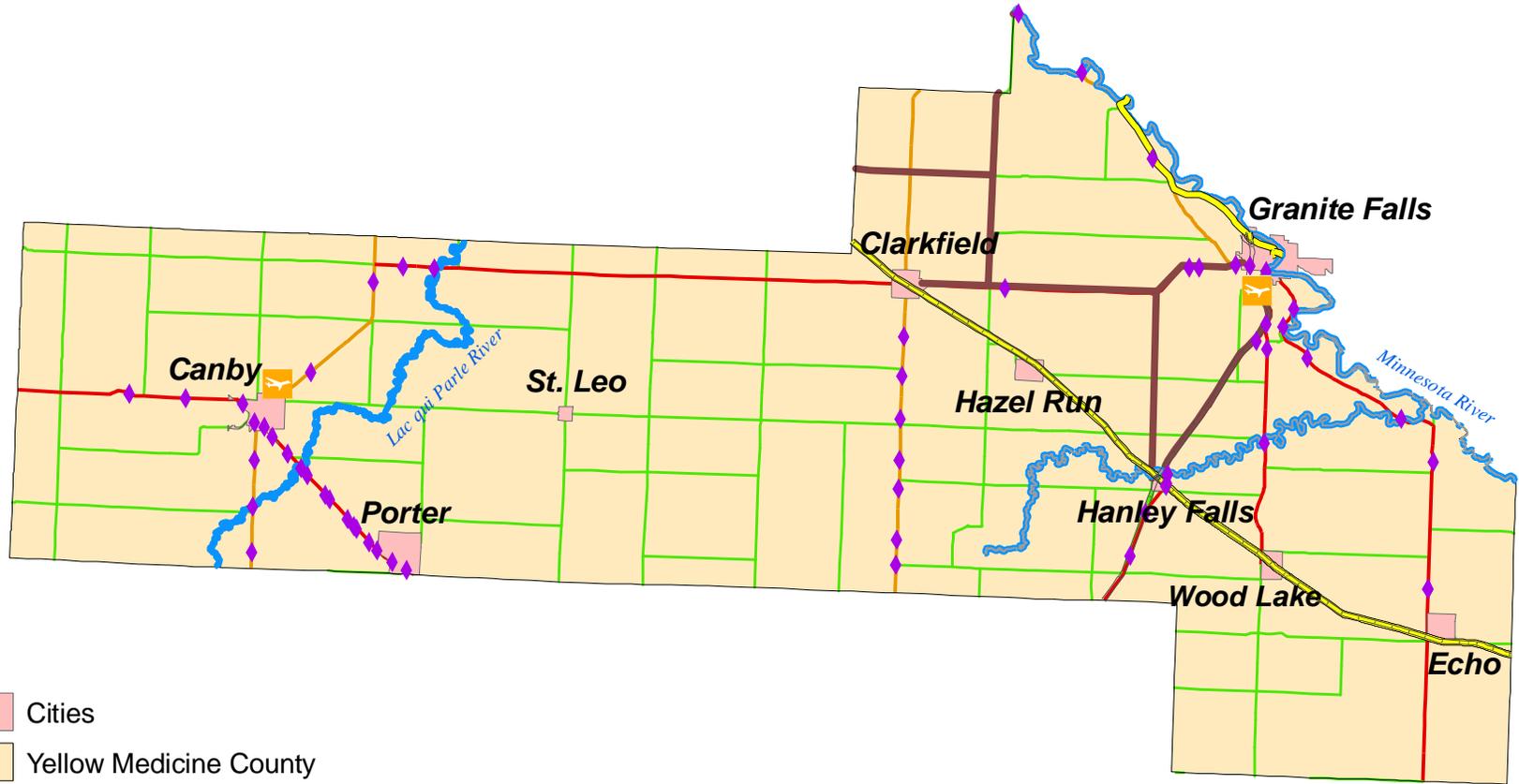
 Cities	MAJOR WATERSHEDS	ROADS
 Gaging Station	 Lac qui Parle River	 County State-Aid Highways
 Ditches	 Redwood River	 MN Trunk Highway
 Water Bodies	 Hawk Creek/ Yellow Medicine River	 U.S. Highway



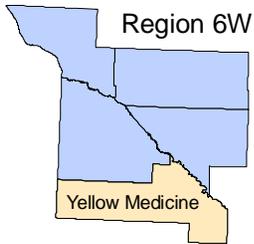
Map Created By: UMRDC
Date: 10-20-2009
Data Source: MNDOT Basemap 2000

8-6: Transportation System

Yellow Medicine County
All-Hazard Mitigation Planning

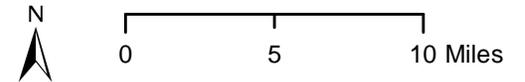


- Cities
- Yellow Medicine County



- Airports
- Bridges
- Potential Trail
- Canoe Routes
- Rivers
- Snowdrifters Snowmobile Trail

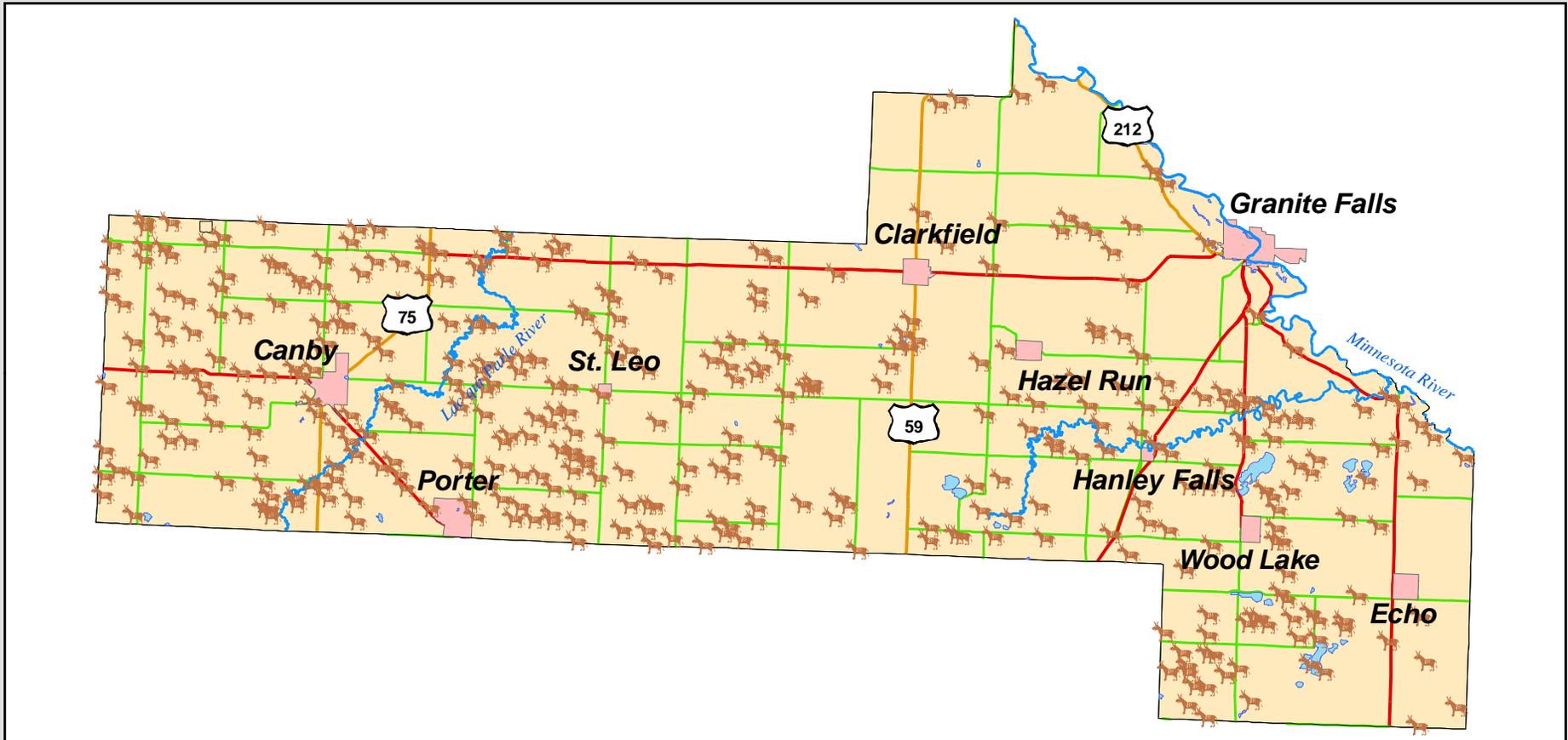
- ROADS**
- County State-Aid Highways
 - MN Trunk Highway
 - U.S. Highway
 - Railroads



Map Created By: UMRDC
Date: 10-22-2009
Data Source: MNDOT Basemap 2000

8-7: Feedlot Locations

Yellow Medicine County
All-Hazard Mitigation Planning



- Feedlot Locations
- Cities
- Water Bodies
- Yellow Medicine County

ROADS

- County State-Aid Highways
- MN Trunk Highway
- U.S. Highway

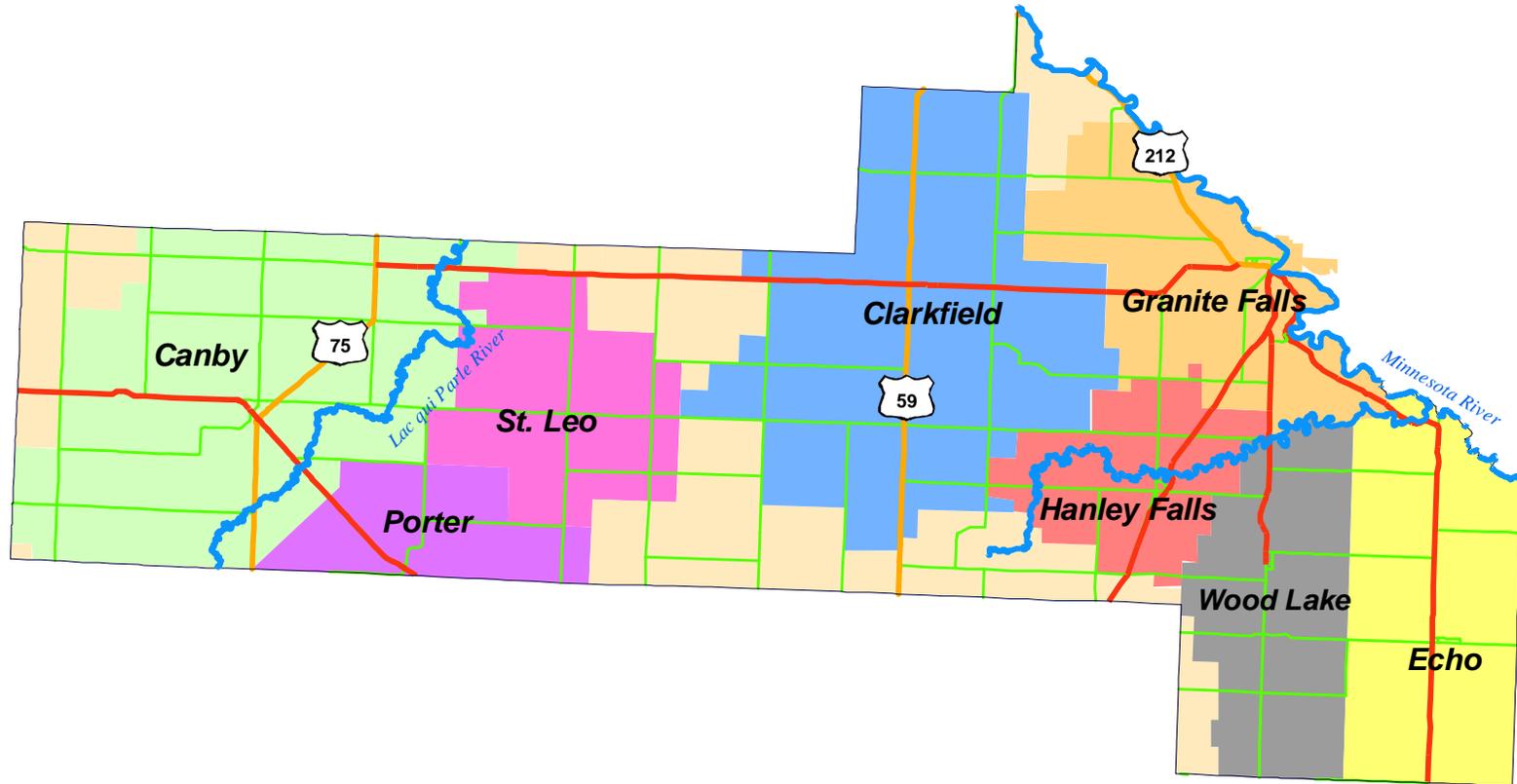


0 5 10 Miles

Map Created By: UMRDC
Date: 10-20-2009
Data Source: MNDOT Basemap 2000

8-8: Fire & Ambulance Districts

Yellow Medicine County
All-Hazard Mitigation Planning



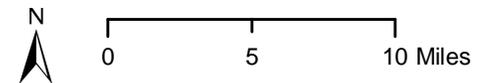
DISTRICTS

- | | |
|--|---|
|  Canby FD |  Hanley Falls FD |
|  Clarkfield FD |  Porter FD |
|  Echo FD |  St. Leo FD |
|  Granite Falls FD |  Wood Lake FD |
| |  Outside FD |

 Yellow Medicine County Rivers

ROADS

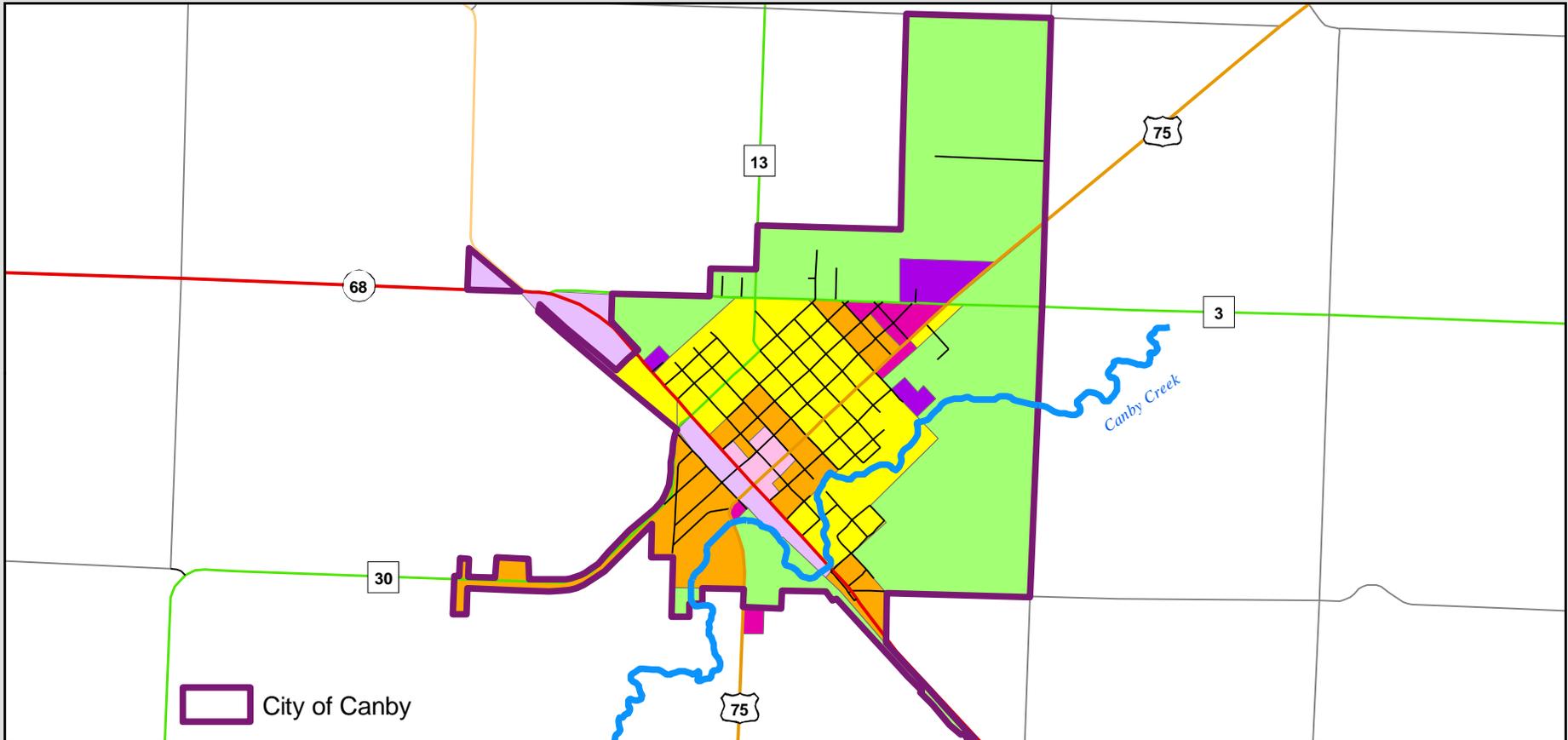
- | |
|---|
|  County State-Aid Highways |
|  MN Trunk Highway |
|  U.S. Highway |



Map Created By: UMRDC
Date: 10-20-2009
Data Source: MNDOT Basemap 2000

8-9: City of Canby Land Use

Yellow Medicine County
All-Hazard Mitigation Planning



ZONING

- | | |
|------------------|------------------|
| A - Agricultural | IA - Industrial |
| CA - Commercial | IB - Industrial |
| CB - Commercial | RA - Residential |
| Canby Creek | RB - Residential |

ROADS

- | |
|---------------------------|
| Township Roads |
| County Road |
| County State-Aid Highways |
| MN Trunk Highway |
| U.S. Highway |

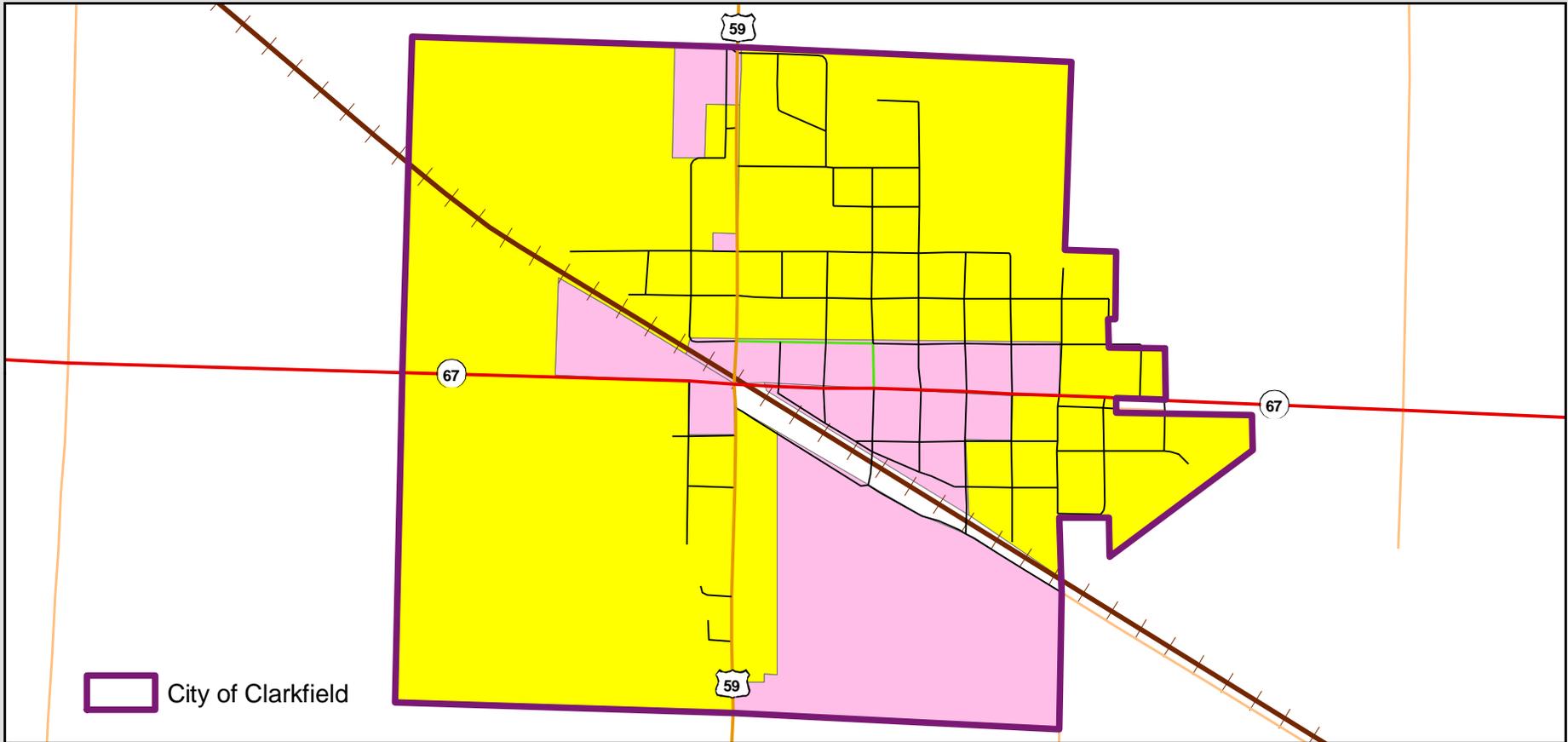


0 0.5 1 Miles

Map Created By: UMRDC
Date: 10-20-2009
Data Source: MNDOT Basemap 2000

8-10: City of Clarkfield Land Use

Yellow Medicine County
All-Hazard Mitigation Planning



 City of Clarkfield

Yellow Medicine County



ZONING

-  Commercial/Industrial
-  Residential

ROADS

-  Township Roads
-  County State-Aid Highways
-  MN Trunk Highway
-  U.S. Highway
-  Railroads

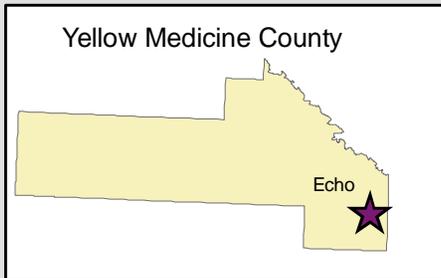
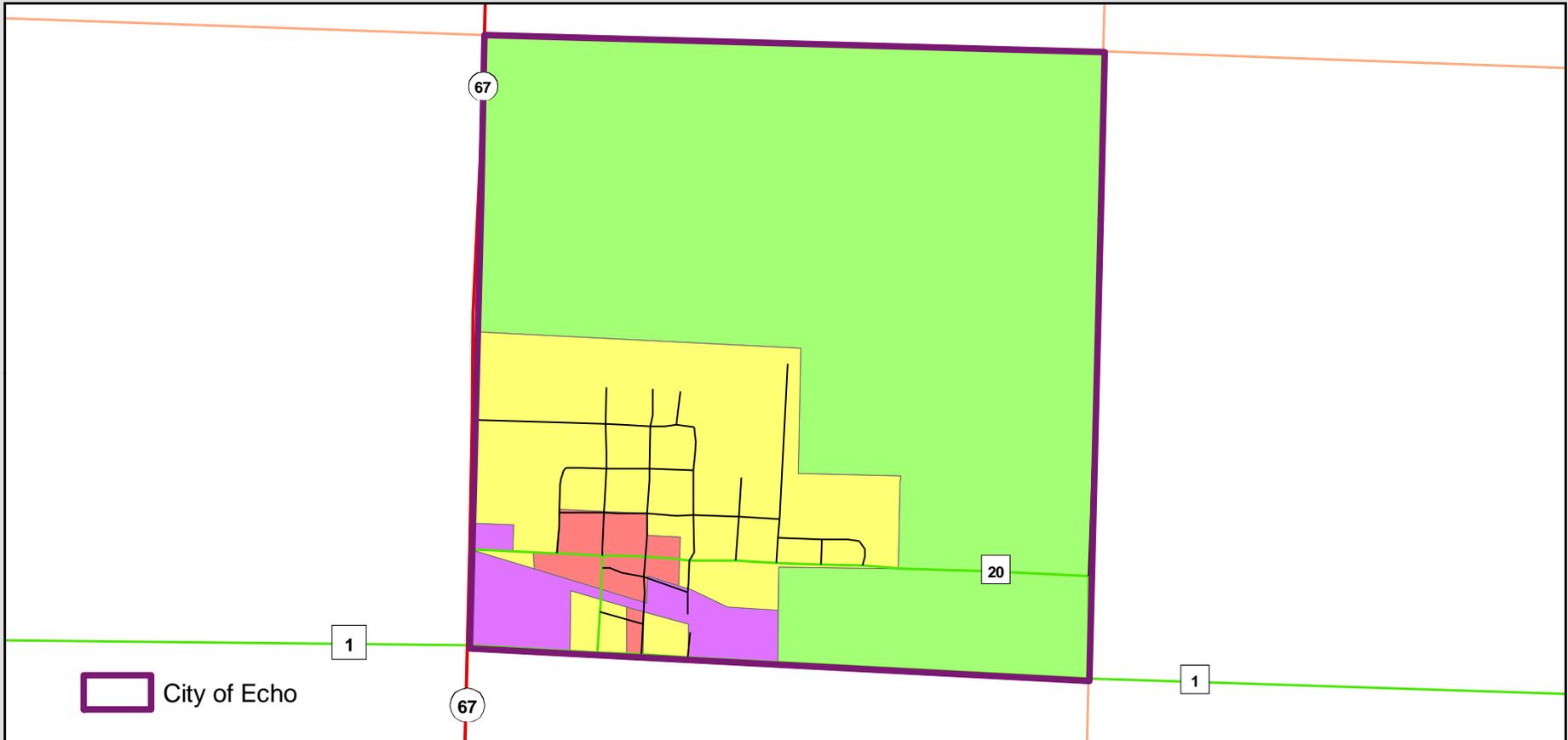


0 0.2 0.4 Miles

Map Created By: UMVRDC
Date: 10-20-2009
Data Source: MNDOT Basemap 2000

8-11: City of Echo Land Use

Yellow Medicine County
All-Hazard Mitigation Planning

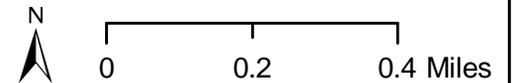


ZONING

- Agricultural
- Commercial
- Industrial
- Residential

ROADS

- Township Roads
- County State-Aid Highways
- MN Trunk Highway
- U.S. Highway
- Railroads

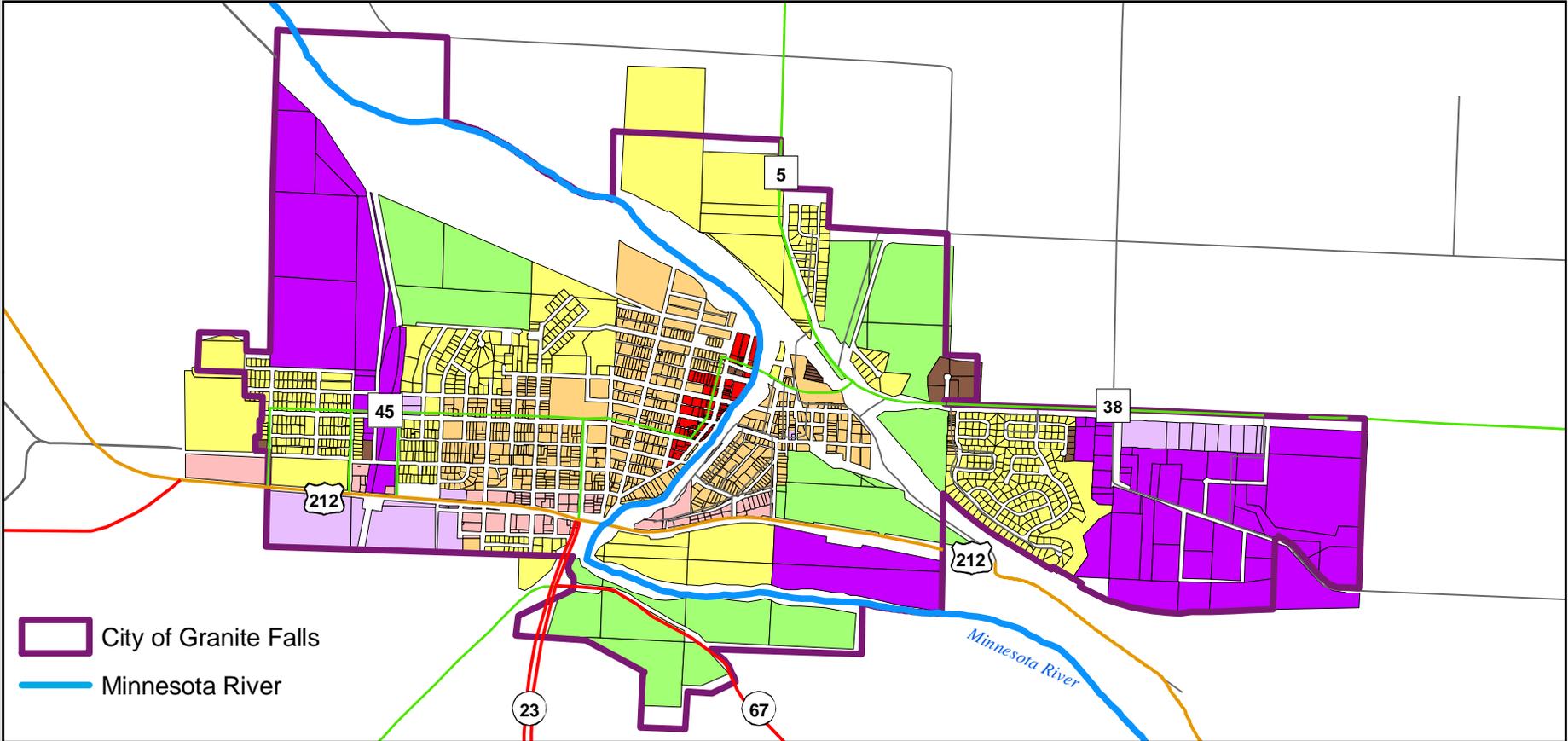


Map Created By: UMRDC
Date: 10-20-2009
Data Source: MNDOT Basemap 2000

8-12: City of Granite Falls Land Use

Yellow Medicine County

All-Hazard Mitigation Planning

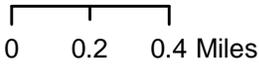


ZONING

- A Agriculture
- C 1 Highway/
Auto Commerce
- C 2 Downtown
Commerce
- I 1 Limited Industry
- I 2 General Industry
- R 1 Low Density Residence
- R 2 Medium Density Residence
- R M Multiple Dwelling Residence

ROADS

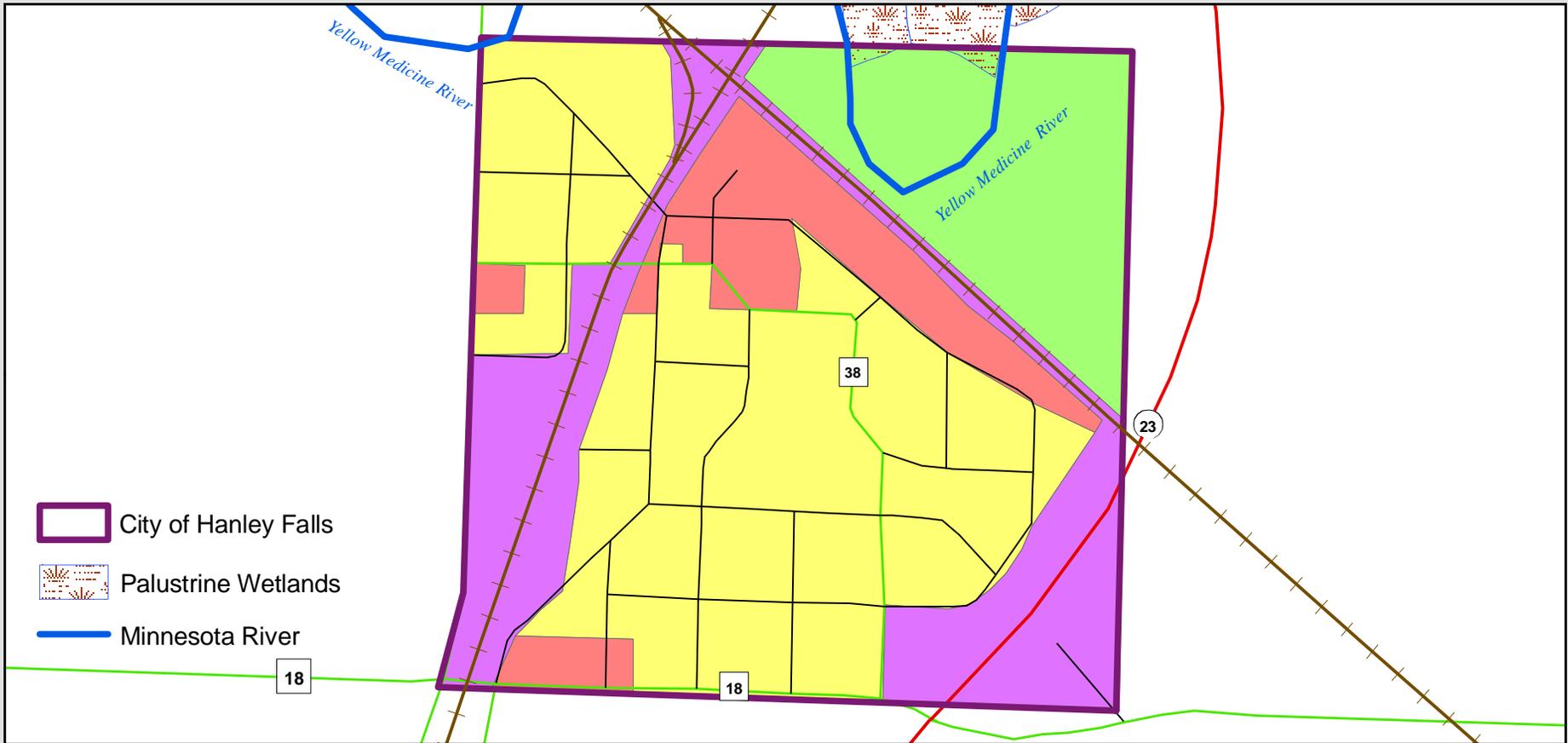
- Township Roads
- County State-Aid Highways
- MN Trunk Highway
- U.S. Highway



Map Created By: UMVRDC
 Date: 10-20-2009
 Data Source: MNDOT Basemap 2000

8-13: City of Hanley Falls Land Use

Yellow Medicine County
All-Hazard Mitigation Planning



-  City of Hanley Falls
-  Palustrine Wetlands
-  Minnesota River

Yellow Medicine County



ZONING

-  Agricultural
-  Commercial
-  Industrial
-  Residential

ROADS

-  Township Roads
-  County State-Aid Highways
-  MN Trunk Highway
-  U.S. Highway
-  Railroads



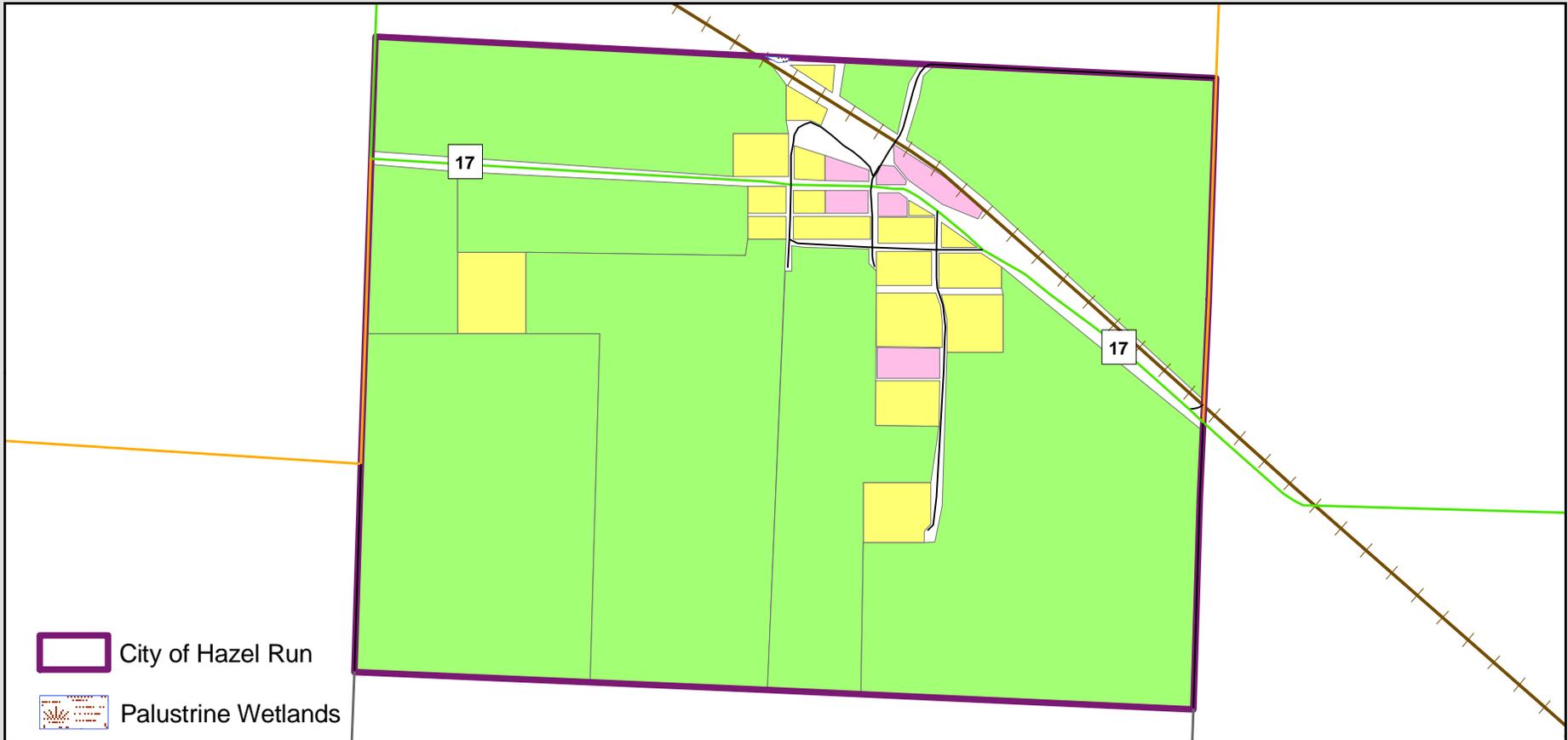
0 0.1 0.2 Miles

Map Created By: UMRDC
Date: 10-20-2009
Data Source: MNDOT Basemap 2000

8-14: City of Hazel Run Land Use

Yellow Medicine County

All-Hazard Mitigation Planning



Yellow Medicine County



ZONING

-  Agricultural
-  Commercial
-  Residential

ROADS

-  Municipal Roads
-  Township Roads
-  Country Roads
-  County State-Aid Highways
-  Railroads



0 0.15 0.3 Miles

Map Created By: UMRDC

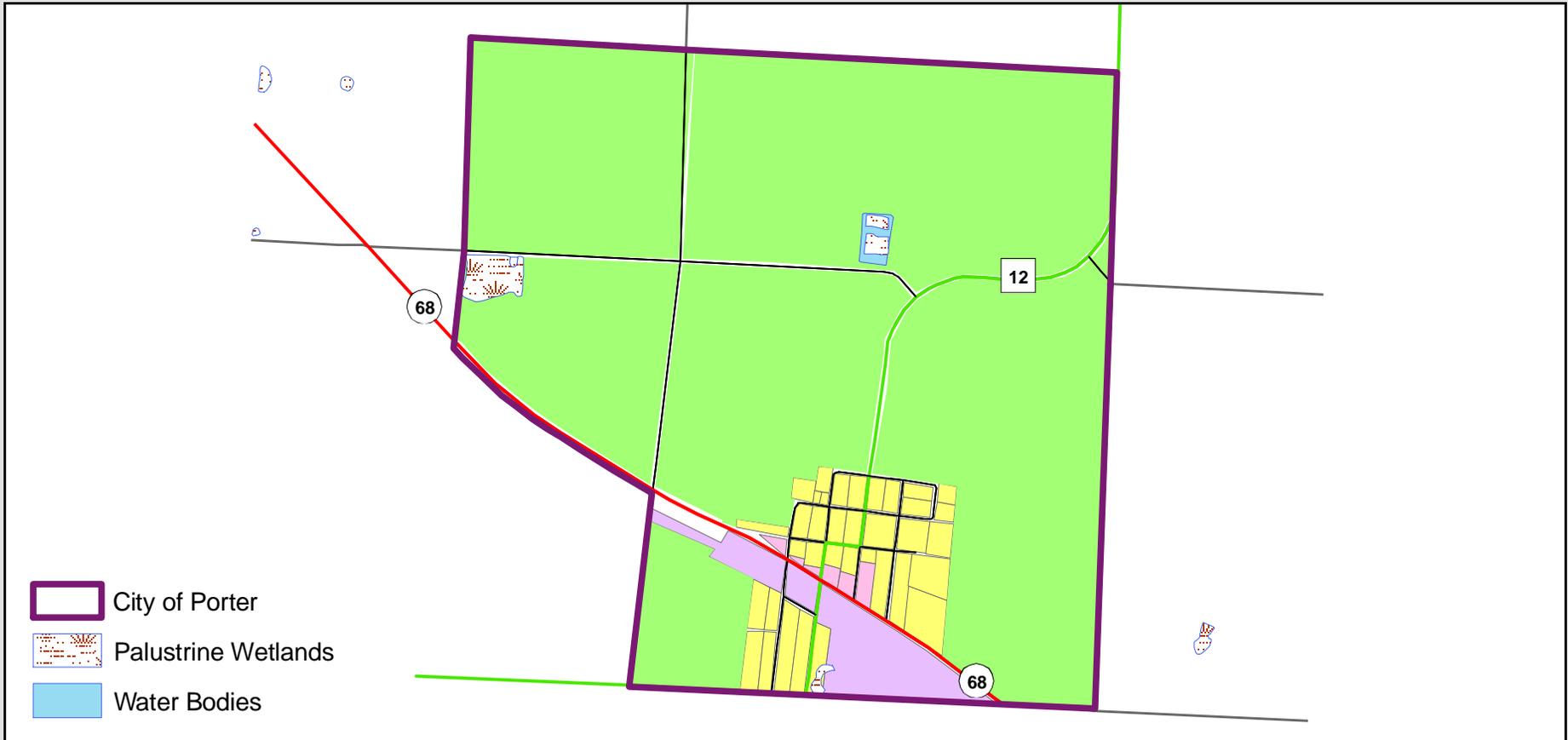
Date: 10-20-2009

Data Source: MNDOT Basemap 2000

8-15: City of Porter Land Use

Yellow Medicine County

All-Hazard Mitigation Planning



-  City of Porter
-  Palustrine Wetlands
-  Water Bodies

Yellow Medicine County



ZONING

-  Agricultural
-  Commercial
-  Industrial
-  Residential

ROADS

-  Municipal Roads
-  Township Roads
-  County State-Aid Highways
-  MN Trunk Highway



0 0.3 0.6 Miles

Map Created By: UMRVDC

Date: 10-20-2009

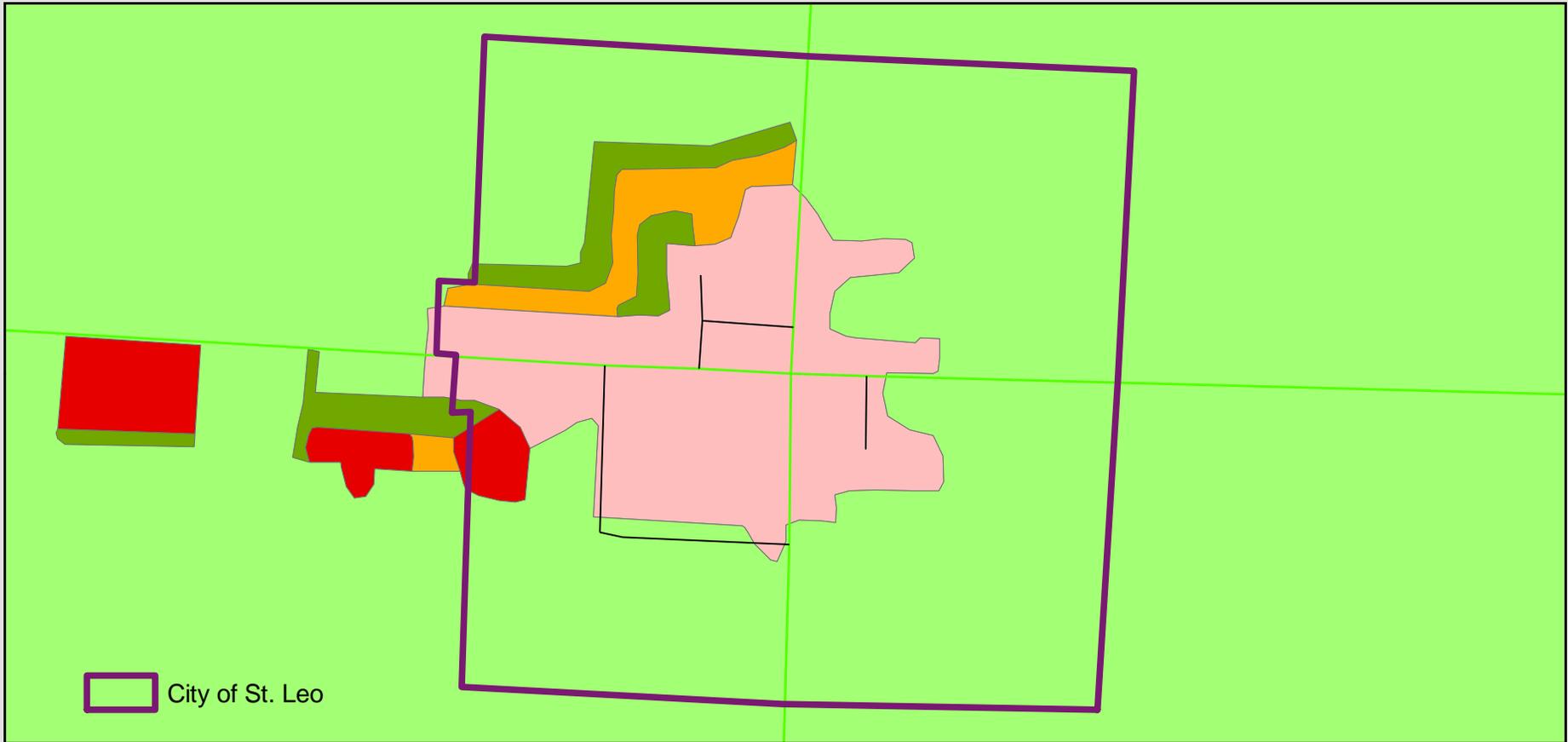
Data Source: MNDOT Basemap 2000

*Parcel Boundaries are approximate.

8-16: City of St. Leo Land Use

Yellow Medicine County

All-Hazard Mitigation Planning



City of St. Leo

Yellow Medicine County



LAND USE

- Urban/Industrial/Residential
- Farmsteads & Rural Residences
- Cultivated Land

Forest

Grassland

ROADS

- Municipal Roads
- County State-Aid Highways



0 0.1 0.2 Miles

Map Created By: UMVRDC

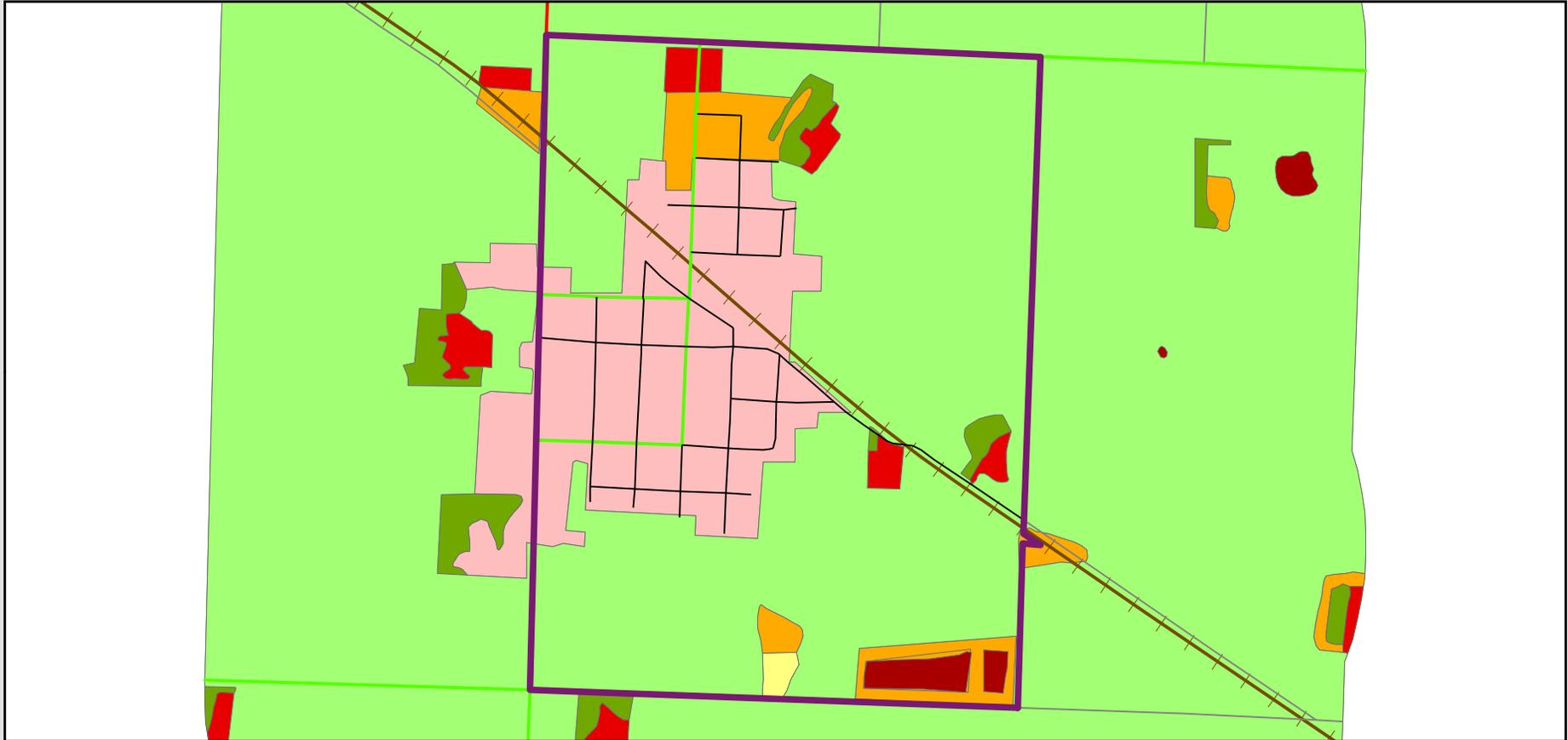
Date: 10-20-2009

Data Source: MNDOT Basemap 2000

8-17: City of Wood Lake Land Use

Yellow Medicine County

All-Hazard Mitigation Planning



City of Wood Lake

LAND USE

Urban/Industrial/
Residential

Farmsteads &
Rural Residences

Cultivated Land

Forest

Grassland

Wetlands

Gravel Pit

ROADS

Municipal Roads

Township Roads

County State-Aid Highways

MN Trunk Highway

Railroads



0 0.2 0.4 Miles

Map Created By: UMRDC

Date: 10-20-2009

Data Source: MNDOT Basemap 2000

Appendix 9: Public Participation

Mailing #1 – Educational Letter

July 21, 2009

TO: Cities and Townships within Yellow Medicine County
Interested Agencies, Groups or Persons

FROM: Michelle Gatz, Yellow Medicine County Emergency Manager
Katie Meyer, Community Development Planner

RE: Yellow Medicine County All-Hazard Mitigation Plan Update

As a result of the Disaster Mitigation Act of 2000, FEMA required that in order to be eligible for Hazard Mitigation Grant Program (HMGP) funds, a local unit of government (county, city, township) must first have in place a multi-hazard mitigation plan. All counties within the region completed the necessary All-Hazard Mitigation Plans between 2005 and 2006. In order to continue to be eligible for HMGP funds, Yellow Medicine County must update the plan within five years. Starting in June 2009, Yellow Medicine County, with the assistance of the Upper Minnesota Valley Regional Development Commission (UMVRDC), will update the All-Hazard Mitigation plan to meet the requirements of the Disaster Mitigation Act of 2000.

You have been identified by Michelle Gatz, Yellow Medicine Emergency Manager as a task force member to help update the Yellow Medicine County All-Hazard Mitigation Plan. It is the county's goal to involve a great variety of people to ensure that key interests and issues are not left out and increase the chance for lasting solutions. A task force will be assembled to represent all participating entities (county, city and townships) and to guide the planning. At least three task force meetings/public meetings will be held to solicit information, ideas and comments. Press releases will provide periodic updates.

The first local task force meeting to update the Yellow Medicine County All-Hazard Mitigation Plan is scheduled for July 29, 2009 at 7:00pm at the Fire Hall in Echo, MN. Attached you will find an agenda and handouts that will be used at this first meeting – *please bring the handouts to the meeting*. The main tasks of the first local taskforce meeting will be to discuss two sections of the initial plan, identify potential hazards, and prioritize those hazards on the level of risk each hazard poses to Yellow Medicine County.

If you are unable to attend this meeting or would not like to be involved, please contact Katie Meyer, UMVRDC, at 320-289-1981 or katie.meyer@umvrdc.org.

Enc.

Local Task Force Meeting 1 Information: pages 3-12

- Press Release
- Mailing
- Agenda
- Worksheets
- Meeting Summary

Press Release #1 (7/22/2009)



All-Hazard Mitigation Planning to Help Create Safe, Sustainable Communities

Floods, earthquakes, and tornadoes are all functions of the natural environment and become hazardous when they threaten our “built” environment with destruction. Each year billions of dollars are spent by federal, state and local governments, not to mention individuals, in response to and recovery from natural disasters. Lives are lost or devastated; property is demolished or devalued; the economic viability of communities is impacted for years to come.

Many techniques have proven effective in reducing or eliminating long-term effects of natural disaster. Such mitigation techniques, when undertaken before the next flood, earthquake or tornado, can lessen the likelihood that a natural hazard will become a disaster. It is important that community planning incorporates hazard mitigation to make a community a safer place to live and work and a more sustainable environment for generations to come.

As a result of the Disaster Mitigation Act of 2000, FEMA required that in order to be eligible for Hazard Mitigation Grant Program (HMGP) funds, a local unit of government (county, city, township) must first have in place a multi-hazard mitigation plan. All counties within the region completed the necessary All-Hazard Mitigation Plans between 2005 and 2006. In order to continue to be eligible for HMGP funds, all counties must update their completed plans within five years.

Starting in June 2009, Yellow Medicine, Swift, Big Stone and Chippewa counties with the assistance of the Upper Minnesota Valley Regional Development Commission (UMVRDC), will update the All-Hazard Mitigation plan to meet the requirements of the Disaster Mitigation Act of 2000. All cities and townships are eligible to participate in the county plan instead of completing one on their own. The process to update, write, review and submit should take approximately 18 months to complete.

It is a goal of each county to involve a great variety of people to ensure that key interests and issues are not left out and increase the chance for lasting solutions. A task force will be assembled to represent all participating entities (county, city and townships) and to guide the planning. At least three public meetings will be held to solicit information, ideas and comments. Press releases will provide periodic updates.

The first local task force meeting for the **Yellow Medicine County All-Hazard Mitigation Plan** will take place on July 29 at 7pm in the Fire Hall in Echo, MN. The main tasks will be to discuss two sections of the plan and identify/prioritize hazards. Input from the public is extremely important and encouraged. If you **have an interest in participating** in your county’s local taskforce, would like to be involved, or have any questions, please contact Katie Meyer, UMVRDC, at 320-289-1981.

Meeting #1 - Mailing

July 21, 2009

TO: Yellow Medicine County Task Force

FROM: Michelle Gatz, Yellow Medicine County Emergency Manager
Katie Meyer, Community Development Planner

RE: First Yellow Medicine County Task Force Meeting

The first Local Task Force meeting for the Yellow Medicine All-Hazard Mitigation Plan update will take place on July 29, 2009, at 7:00 P.M. at the Echo Fire Hall. Attached is an agenda at what will be covered at the meeting. Please bring this information to the meeting.

Please contact Katie Meyer at 320-289-1981 or katie.meyer@umvrdc.org with any questions.



klm

Meeting #1 - Agenda



**Yellow Medicine County All-Hazard Mitigation Plan
Task Force Meeting #1**

July 29, 2009
7:00pm – 8:00pm
Fire Hall, Echo MN

AGENDA

- 7:00 Task Force Introductions
- 7:05 Overview (handouts)
- Hazard Mitigation: Purpose and Plan
 - Timeline for Project
 - Public Participation/Planning Process
- 7:10 Hazard Identification Activity
- Past Hazard Worksheet – individual activity
 - List out New Hazards – group activity
 - Hazard Inventory – individual activity
 - Gaps/Deficiencies – group activity
- 7:55 Questions and Next Meeting

Questions/Comments:

Katie Meyer
Upper Minnesota Valley Regional Development Commission
323 West Schlieman Avenue
Appleton, MN 56208
Office: (320) 289-1981
Fax: (320) 289-1983
E-mail: katie.meyer@umvrdc.org

Meeting #1 – Handout #1

Gathering Data: Past Hazards (From 2005 to Today)

Hazard:

Hazard Description:

Date Hazard Occurred (estimate):

Type of Damage (injuries/buildings/road/blocked communications, etc.):

General Location:

Where to get more information (name/phone number for more info):

Could this hazard happen again now? If yes, how often?:

HOW BAD COULD THE HAZARD GET? (What are some of the worst things that could happen if this occurs... could it cause a different hazard?):

What is the main problem caused by this hazard? (Ex. Threaten homes, people, environmental, expensive, destroy crops/businesses)

Meeting #1 – Handout #2

Seasonal Events:

Gaps and Deficiencies:	Solved?
There are homes in the county that lack basements that would provide shelter in the event of a tornado or damaging winds from a severe thunderstorm. Some nursing homes do not have basement shelters or other suitable shelter for residents.	
There are schools and nursing homes in the county that do not have weather radios.	
The manufactured home park in Canby does not have a safety shelter on-site. The county is recommending that communities require shelters for mobile home park residents or provide information on evacuation routes to safe shelters elsewhere.	
It should be determined if additional towers are needed so that rural residents are not outside the range of the severe weather warning system sirens.	
While police radios currently work, it is uncertain what will happen after the state switches from UHF to VHF (800 mHz) in 2006 – 2007. The current radios will not work with 800 mHz towers and new radios are extremely expensive.	
As many as 40 percent of the county's severe weather warning system sirens have not functioned properly at any given time. Also, a backup power source is not available for most of the county's sirens.	
The county's cities have emergency sirens to warn residents in the event of severe summer weather. Yellow Medicine County dispatch center has its own radar to track weather. The system is very old and does not function during a storm.	
While the county participates in the severe storm spotters network sponsored by the NWS, a procedure is not established for spotters when calling into local dispatch.	
Yellow Medicine County also has many "dead spots" around the county where emergency warnings from dispatch will not transmit. Three additional towers are needed to address this problem.	
Most power lines in the county are above ground and subject to damage from ice storms, wind and falling tree limbs.	
Assessment of the risk of collapsed structure has not been assessed	
The fairgrounds in Canby have not identified a safe place to go in the event of severe weather.	
The campgrounds in the city of Canby and at the Del Clarke campground have not identified a safe shelter to go to in the event of bad weather	
In many communities, the local city hall is the emergency operations center. However, most are not able to access a backup power source.	
None of the schools in the district has an automated weather station providing current weather conditions. Emergency management personnel do not have an automated weather station. However, both do have computer programs that provide weather information.	

Dam Failure:

Gaps and Deficiencies:	Solved?
Emergency plans for dam safety have been created by the US Army Corps of Engineers or the NRSC, but have a tendency to become out of date when not used. Recently the emergency plans have been updated. The US Army Corps Engineers does not regularly work with local emergency managers to ensure that information is up-to-date and in the event of a disaster, plans can be implemented.	

Flood:

Gaps and Deficiencies:	Solved?
The Granite Falls wastewater treatment plant is not in the 100-year flood zone but the lift plant is.	
At-risk uses and structures remain in identified 100-year floodplains, including nonconforming structures and uses currently “grandfathered in” in both the county and Granite Falls.	
Local resources are not adequate for a severe and prolonged flood and there is a need for assistance from outside the community during an emergency.	
Flood risks need to be evaluated for the floodplains of the Canby and Lazarus Creeks and the confluence of Spring Creek and the Yellow Medicine River	
DNR forestry staff suggest that the costs and hazard associated with downed trees as debris flow might be mitigated through improved “sanitation cutting” in the floodplain. There are provisions within the Reinvest in Minnesota (RIM) set aside program that allows limited timber cutting on lands enrolled in the program.	

Droughts:

Gaps and Deficiencies:	Solved?
County has no estimates of annual recharge rates or the capacities of the various aquifers.	
Semiannual or annual water consumption by various major consumers, urban residential, industrial/commercial or agricultural, is not documented or known.	
Water conservation provisions and use restrictions in times of drought are not included in all county or city ordinances.	
The current county water plan recommends wellhead protection standards for adoption via ordinance by Yellow Medicine County, but has yet to be implemented.	

Infectious Diseases:

Gaps and Deficiencies:	Solved?
The county has not adopted the Public Health Emergency Guide lines because it is not completed at this time.	
Guidelines for communication should be in place at the local level. Volunteer ambulance drivers or crew members helping with patients should be called immediately if an outbreak has occurred to keep them quarantined. Names and contact information should be collected at every emergency scene in order to keep any outbreak contained.	

Civil Disturbances/Terrorism:

Gaps and Deficiencies:	Solved?
Design and operations of facilities in the county were not developed with terrorism prevention in mind.	
Recreation facilities developed around the Del Clark Dam provide easy, unmonitored access to the structure.	
Yellow Medicine County government buildings, including the county courthouse and all city halls, have unrestricted pedestrian access.	
All of the counties’ city halls and the Yellow Medicine County courthouse do not have fire suppression systems and are not blast resistant.	
School emergencies should be addressed and drills practiced.	

Wildfire:

Gaps and Deficiencies:	Solved?
Currently the county zoning lacks regulations regarding vegetation on property.	
The county has not undertaken a systematic assessment of wildfire risks and associated prevention measures.	
There are many CRP, CREP and other natural areas that are not managed with prescribed burns. These areas should be encouraged to work with professional agencies to manage the land with prescribed burns to help reduce trash and debris that can create a large wildfire hazard.	
All firefighters in Yellow Medicine County are volunteer firefighters. The DNR wildfire training offered to local fire departments should be offered closer to local fire departments to be more effective and efficient.	
It needs to be defined as to who is responsible for fighting wildfires and to establish a mutual aid agreement between DNR and local fire departments.	
A plan should be in place regarding proper radio channels between DNR, state patrol, local fire departments and local police. The smoke associated with wildfires can present a major hazard on roadways. Without direct contact with law enforcement, traffic control can be compromised.	
Updated gear and a plan to use it in cooperation with other departments is necessary. The DNR should have an up-to-date list of equipment available to them in the event of wildfires.	
Currently the DNR calls the county before lighting a prescribed burn. This information should come to the local dispatch in order to be better prepared for fires that get away or relight at a later time.	
Because of the rough terrain and location of wildfires, many of the fire departments do not have adequate equipment to fight wildfires. Fire vehicles are not able to access these areas. More grass rigs and off-road vehicles are needed to address the problem of wild land and grass fires and some – not all - communities have purchased the necessary equipment.	
Dry hydrants have been demonstrated as an effective tool in assuring a steady and close by source of water for responding to major both wild land and structural fires in rural areas. Assessment should be made to determine where existing dry hydrants are, where fire risks are greatest, and where water bodies suitable to support a dry hydrant are located.	

Structure Fire:

Gaps and Deficiencies:	Solved?
Homes with chimneys pose a larger threat for fires. Specialized training classes, like chimney cleaning, safe cooking in the kitchen, and holiday hazards, could be offered to residents.	
Currently, the only evacuation plans exist in the county emergency operations plan. Not all cities in the county have plans readily available for local residents in the event of large fires.	
Residents living in higher density areas should be more educated on fire prevention.	
Currently, some local roads and alleys are not adequate to handle fire trucks. Those roads should be identified and widened in the future to provide adequate protection to every property in the county.	
Local fire departments do not have adequate equipment to fight fires; new trucks and PTE are needed in all fire departments.	
Local fire departments do not have adequate communication equipment to communicate with dispatch or other fire departments. Many of the fire departments are in need of new pagers to be alerted for fire calls.	

Wastewater Treatment System Failure:

Gaps and Deficiencies:	Solved?
The effects severe flooding would have on wastewater plants have not been determined. In some communities, the information is known; however no steps have been taken to remedy the problem.	
Yellow Medicine County does not have an ordinance requiring periodic inspection of individual septic tank systems, rather inspects only at the time of sale, but this is not adequate. Inspections should go to all septic tank users to verify current compliance. May non-compliant septic tanks in the county will not be detected soon enough.	

Water Supply Contamination:

Gaps and Deficiencies:	Solved?
The emergency response plan does not identify alternate sources of drinking water, including locates for acquiring adequate amounts of bottled water, in the event of contamination.	
Some feedlots are not in compliance with MPCA rules, and operators have not been informed of some standards.	
Level II feedlots have not been put into a GIS database.	
County officials' efforts to educate citizens with private wells are not well coordinated with state and federal efforts. Also, citizens are given very little encouragement to remove old wells that are not compliant with the 1974 standards.	
Well houses are often not locked.	
Devices to stop contamination from individual homes back into the water supply should be installed.	
The Burr Treatment plant should be more secure.	

Hazardous Materials:

Gaps and Deficiencies:	Solved?
The Yellow Medicine County Water Plan only addresses ground water contamination based on fertilizer or pesticide use from residential and agricultural uses. Additional detail for other hazardous substances impacting the county's ground water would provide more detailed findings regarding the overall quality and potential risks if a hazardous materials event happens.	
Local radio and television stations do not provide a dependable service for tests of the Emergency Warning System in Yellow Medicine County. Tests are often ignored when played during the first of the month by the Yellow Medicine County Sheriff.	
A county-wide warning system for a disaster is not currently in place. Many residents would be left without warning in the event of a major catastrophe.	
The county and the incorporated cities do not require that commercial/industrial establishments report hazardous materials to the county emergency center and to the respective cities' fire departments.	
Plans, policies and/or procedures are not in place to deal with a meth lab incident in the county. Lack of information and awareness have left the county susceptible to an accident that could impact a large area. Some legal steps from the county attorney have been completed on state homes.	
Ordinances are not in place to require the landlord to be ultimately responsible for clean up in a meth lab incident. This should happen at the city and county level.	
Education by the public, business owners and landlords could prevent and deter meth labs. Posters should be distributed to local vendors to watch for patterns of meth lab purchases. Some training has occurred within local fire departments and police departments, however help has been requested from Countryside Public Health to increase educational opportunities.	
The county has not adopted the environmental health regulations or the County Safety Procedures and Policy Guide.	

Meeting #1 – Handout #3 (1 page-sample)

Table 44. Hazard: Drought (EXAMPLE)

Hazard:	Drought
Location	County
Historic events	1976, 1988, 2003
Likely to happen now?	Occasionally
How often?	1 time per 20-30 years
Where would it strike?	County
How bad could hazard get?	1930's dust bowl
When would hazard likely occur?	Summer
What other hazards could occur simultaneously?	Utility failure (water, wastewater), Wildfires
Economic impacts	Crops/Agriculture
Loss of life impacts	Unlikely
Risk Level VH: Very High H: High L: Limited M: Minimal	Citizens/People: Animals/Livestock: Housing: Critical Structures: Infrastructure:
Risk Assessment	
Frequency of Occurrence Unlikely 1 Occasional 2 Likely 3 Highly Likely 4	
Warning Time More than 12 hours 1 6 – 12 Hours 2 3 – 6 Hours 3 None – Minimal 4	
Potential Severity* Limited 1 Minor 2 Major 3 Substantial 4	
Risk Level** Minimal 1 Limited 2 High 3 Very High 4	
Overall Priority (total divide by 4) Very Low 1 Low 2 Moderate 3 High 4	
* Potential Severity asks the question, "How bad can it get?" ** See above Risk Level. Risk Level addresses risk to Citizens, Animals, Housing, Critical Structures and Infrastructure.	

Each of the hazards found in Chapter 4 (pages 3 – 13) was placed in a packet in the same form as the above table. The background information in the top half of the table summarized in the information discussed in Chapter 3 for each specific hazard. This information was provided to the Local Task Force members to fill out and perform a Hazard Inventory for Yellow Medicine County.

Meeting #1 – Meeting Summary Notes

Meeting Attendance: 19 People

Jurisdiction Attendance:

- Yellow Medicine County, Yellow Medicine County Township
- Canby, Clarkfield, Echo, Granite Falls, Hanley Falls, Porter, St. Leo, Wood Lake

*Hazel Run did not attend.

Completed Tasks:

- Discussed new hazards facing Yellow Medicine County
- Filled out the Past Hazards (Worksheet #1)
- Filled out noted Gaps and Deficiencies for each hazard (Worksheet #2)
- Filled out Hazard Inventory (Worksheet #3)
- Determined total number of current firefighters, fire equipment inventory, and number of police officers (part-time vs. full-time) for each city

City-Specific Meeting Information: pages 13 - 21

- Agenda
- Worksheets
- Meeting Summary

All cities were invited to attend this meeting via phone. In the event a city could not participate in this meeting, a separate meeting was scheduled with each city in order to ensure participation.

Three cities participated in this meeting: Canby, Clarkfield, and Hanley Falls. Both Canby and Hanley Falls required an additional meeting to finalize their risk assessment surveys and mitigation strategy surveys.

Below is a table that details when each city completed their risk assessment surveys and mitigation strategy surveys.

Jurisdiction	Risk Assessment Surveys	Mitigation Surveys
Yellow Medicine County	2/26/2010	2/26/2010
Canby	12/08/2009	12/08/2009
Clarkfield	8/25/2009	8/25/2009
Echo	8/31/2009	8/31/2009
Granite Falls	9/10/2009	9/10/2009
Hanley Falls	10/21/2009	10/21/2009
Hazel Run	9/01/2009	9/01/2009
Porter	12/10/2009	12/10/2009
St. Leo	9/11/2009	9/11/2009
Wood Lake	9/14/2009	9/14/2009

City Meeting - Agenda



Yellow Medicine County All-Hazard Mitigation Plan

City Meeting

August 25, 2009

3:00pm – 4:30pm

Clarkfield City Hall, MN

AGENDA

3:00 Task Force Introductions

3:05 Handouts

- City Surveys
 - Fill out / “Homework”
- Hazard Prioritization
 - Fill out / “Homework”
- Gaps & Deficiencies
 - Fill out

Questions/Comments:

Katie Meyer

Upper Minnesota Valley Regional Development Commission

323 West Schlieman Avenue

Appleton, MN 56208

Office: (320) 289-1981

Fax: (320) 289-1983

E-mail: katie.meyer@umvrdc.org

City Land Use Survey

List of Questions to Survey Cities: Risk Assessment Chapter	
1. Are there new hazards in your community? (Ex. Swine Flu (H1N1))	
2. Have any hazardous events occurred in your City since 2005? For each event list the following information: <ul style="list-style-type: none"> • Provide as much information as possible – date, affected areas, amount of loss, what happened, information on miles per hour, inches rained, flood depth, etc • Were there any buildings/structures/critical facilities/structures that house low-income/seniors/disabled (if any) affected during the event? 	
3. In proposed annexation areas, are there or will there be more structures in hazard areas?	
4. Have any new buildings for special high-risk population (low income, disabled, seniors) been constructed in your city? If so, how many?	
5. What (if any) actions have been taken to reduce the vulnerability of these special high-risk populations (low income, disabled, seniors)?	
6. What types of development are located in the 100 and 500 year floodplains? (generally)	
7. What are future development opportunities in the 100 and 500 year floodplains? (and their land uses)	

<p>8. Based on the City Comprehensive Plan (if applicable) what areas have been identified for future growth?</p> <ul style="list-style-type: none"> • What type of growth is expected in these areas? 	
<p>9. Are there any unique natural features, natural areas, and other environmental and aesthetic attributes present in the floodplains?</p>	
<p>10. Have land uses for the parcels in your City changed since 2005? If possible, which ones and to what?</p>	
<p>11. How much land has been annexed in the past 10 years? What are the new land uses of the newly annexed lands? (Ex. 3 acres of farmland to 3 acres of residential)</p>	
<p>12. How much land has been redeveloped? What are the previous and new land uses of the land?</p>	
<p>13. What are current breakouts of land uses in your City (in total acres and overall percentage)? (Ex. Residential =50%: 12 acres, Open Space = 10%, Commercial = 25%, Retail = 15%)</p>	
<p>14. Any new city facilities built in community since 2003? If so, what is the new address?</p>	
<p>15. Any new telecommunication and/or power facilities built in your city since 2003? These include: Internet/cellular/Cable/Electric/Gas/providers?</p>	
<p>16. Any new hospitals or clinics since 2003? If so, what is the new address?</p>	

City Risk Assessment Survey – Part A.

Hazard:

Type of Structure	Number of Structures/Parcels		Value of Structures/Parcels	
	# in Community	# in Hazard Area	\$ in community	\$ in Hazard Area
Residential				
Commercial				
Industrial				
Agricultural				
Religious/Non-profit				
Government				
Education				
Utilities				
Hazardous Facility				
Dam				
Critical Facilities				
Total				

Each city filled out a survey for three base natural hazards if they applied to the city, (Tornado, 100-Year Flood Event, and Dam Failure). If a city does not have one of these hazards, they were able to pick other hazards (natural or man-made) for a risk assessment.

City Risk Assessment Survey – Part B.

City of X, MN			Inventory of Community Assets		
Name or Description of Asset	Building Size (Sq.Ft)	Market Value (\$)	Name or Description of Asset	Building Size (Sq.Ft)	Market Value (\$)
Major Employers			Schools		
Multi-Family Housing			Institutional Buildings		
Historical Buildings/Structures					

Each city filled out a list of community assets. This list included a range of assets that were geared toward individual communities. The information gained from this survey was incorporated into the Risk Assessment Maps for communities found in Chapter 3 in the City Risk Assessment Section.

City Mitigation Survey – Part A.

City X, MN

List of Questions to Survey Cities: Mitigation Chapter	
<p>1. What mitigation strategies have your City completed since 2005?</p>	
<p>2. What mitigation objectives has your City participated in since 2005?</p>	
<p>3. Would you make any changes to previous Hazard Mitigation Plan: Goals/Objectives/Strategies? Or remove any? (See County Goals, Objectives, Strategies List)</p>	

Each city worked through the current All-Hazard Mitigation Plan strategies and commented on their participation level and on the strategies themselves.

City Mitigation Survey – Part B.

City X, MN (sample)

Hazard Type	Mitigation Actions:	Administering Department:	Project Timeframe:	Potential Funding Source:	Estimated Cost:	Rank Actions
Water Supply Contamination	Complete a Wellhead Protection Plan for the City	City	1.5 years	City	Staff Time	1
Floods	Complete a City-wide Stormwater Project with 6 additional lines and refurbishing an existing stormwater line	City	2 years	City-FEMA	\$100,000	2
Violent Storms & Extreme Temperatures	Backup power system for warning sirens	City	5-10 years	NOAA	\$5,000	3
Violent Storms & Extreme Temperatures	Purchase a shelter for Canby Fairgrounds	City	10-15 years	FEMA/County	\$30,000	4

Reason for Ranking:

- 1.
- 2.
- 3.
- 4.

Each city filled out a mitigation survey creating a “to-do” and at least one strategy had to be potentially funded by FEMA.

City Meeting – General Meeting Summary

All jurisdictions (not including townships) completed their land use survey, risk assessment surveys, and mitigation surveys in order to show participation.

Below is a table that details when each city completed their risk assessment surveys and mitigation strategy surveys.

Jurisdiction	Risk Assessment Surveys	Mitigation Surveys
Yellow Medicine County	2/26/2010	2/26/2010
Canby	12/08/2009	12/08/2009
Clarkfield	8/25/2009	8/25/2009
Echo	8/31/2009	8/31/2009
Granite Falls	9/10/2009	9/10/2009
Hanley Falls	10/21/2009	10/21/2009
Hazel Run	9/01/2009	9/01/2009
Porter	12/10/2009	12/10/2009
St. Leo	9/11/2009	9/11/2009
Wood Lake	9/14/2009	9/14/2009

Local Task Force Meeting 2 Information: pages 22-26

- Press Release
- Mailing
- Agenda
- Meeting Summary

Press Release #2 (1/04/2010)



All-Hazard Mitigation Planning to Help Create Safe, Sustainable Communities

Floods, earthquakes, and tornadoes are all functions of the natural environment and become hazardous when they threaten our “built” environment with destruction. Each year billions of dollars are spent by federal, state and local governments, not to mention individuals, in response to and recovery from natural disasters. Lives are lost or devastated; property is demolished or devalued; the economic viability of communities is impacted for years to come.

Many techniques have proven effective in reducing or eliminating long-term effects of natural disaster. Such mitigation techniques, when undertaken before the next flood, earthquake or tornado, can lessen the likelihood that a natural hazard will become a disaster. It is important that community planning incorporates hazard mitigation to make a community a safer place to live and work and a more sustainable environment for generations to come.

As a result of the Disaster Mitigation Act of 2000, FEMA required that in order to be eligible for Hazard Mitigation Grant Program (HMGP) funds, a local unit of government (county, city, township) must first have in place a multi-hazard mitigation plan. All counties within the region completed the necessary All-Hazard Mitigation Plans between 2005 and 2006. In order to continue to be eligible for HMGP funds, all counties must update their completed plans within five years.

Starting in June 2009, Yellow Medicine, Swift, Big Stone and Chippewa counties with the assistance of the Upper Minnesota Valley Regional Development Commission (UMVRDC), are updating the All-Hazard Mitigation plan to meet the requirements of the Disaster Mitigation Act of 2000. All cities and townships are eligible to participate in the county plan instead of completing one on their own. The process to update, write, review and submit should take approximately 18 months to complete.

It is a goal of each county to involve a great variety of people to ensure that key interests and issues are not left out and increase the chance for lasting solutions. A task force will be assembled to represent all participating entities (county, city and townships) and to guide the planning.

The second local task force meeting for the **Yellow Medicine County All-Hazard Mitigation Plan** will take place on January 13 at 7pm in the Fire Hall in Porter, MN. The main tasks will be to discuss mitigation ideas for the county and obtain a progress update on mitigation strategies identified in the previous plan. Input from the public is extremely important and encouraged. If you **have an interest in participating** in your county’s local taskforce, would like to be involved, or have any questions, please contact Katie Meyer, UMVRDC, at 320-289-1981 or katie.meyer@umvrdc.org.

Meeting #2 - Mailing



January 4, 2010

TO: Yellow Medicine County Task Force

FROM: Michelle Gatz, Yellow Medicine County Emergency Manager
Katie Meyer, Community Development Planner

RE: Second Yellow Medicine County Task Force Meeting

The second task force meeting for the Yellow Medicine All-Hazard Mitigation Plan update will take place on January 13, 2010, at 7:00 P.M. at the Porter Fire Hall. Attached is an agenda at what will be covered at the meeting. Please bring this information to the meeting.

Please contact Katie Meyer at 320-289-1981 or katie.meyer@umvrdc.org with any questions.

klm

Meeting #2 – Agenda



**Yellow Medicine County All-Hazard Mitigation Plan
Local Task Force Meeting #2**

January 13, 2010
7:00 - 8:00pm
Porter Fire Hall, MN

AGENDA

- 7:00 Overview of Agenda
- 7:05 Prioritization of Hazards (based on previous meeting)
- 7:10 Mitigation Worksheets/Discussion

Questions/Comments:

Katie Meyer
Upper Minnesota Valley Regional Development Commission
323 West Schlieman Avenue
Appleton, MN 56208
Office: (320) 289-1981
Fax: (320) 289-1983
E-mail: katie.meyer@umvrdc.org

Meeting #2 – Meeting Summary Notes

Meeting Attendance: 19 People

Jurisdiction Attendance:

- Yellow Medicine County, Yellow Medicine County Township
- Canby, Clarkfield, Echo, Granite Falls, Hanley Falls, Porter, St. Leo, Wood Lake

*Hazel Run did not attend.

Completed Tasks:

- Discussed prioritization of hazards in county (used information from previous meeting)
- Reviewed all mitigation strategies from current plan. Determined whether each strategy was: completed, considered a recurring strategy (no end of strategy), and not yet completed the strategy was still viable, or if a strategy was no longer relevant.

County Meeting: pages 27-29

- Agenda
- Meeting Summary

County Meeting – Agenda

Three Yellow Medicine County employees were invited (via email) to this meeting, the Emergency Manager, Engineer, and Zoning Administrator (County Sheriff attends all Local Task Force Meetings), to discuss the All-Hazard Mitigation Plan update.



Yellow Medicine County All-Hazard Mitigation Plan County Meeting

January 22, 2010

10:00 AM

Training Room at Yellow Medicine County Building - Granite Falls, MN

AGENDA

10:00 Overview of Agenda

10:05 County Risk Assessment

10:50 Mitigation Worksheets/Discussion

Questions/Comments:

Katie Meyer

Upper Minnesota Valley Regional Development Commission

323 West Schlieman Avenue

Appleton, MN 56208

Office: (320) 289-1981

Fax: (320) 289-1983

E-mail: katie.meyer@umvrdc.org

County Meeting – Meeting Summary

Meeting Attendance: 4 People

Completed Tasks:

- Discussed prioritization of hazards in county
- Completed a Risk Assessment for County
- Reviewed all mitigation strategies from current plan. Determined whether each strategy was: completed, considered a recurring strategy (no end of strategy), and not yet completed the strategy was still viable, or if a strategy was no longer relevant.
- Completed a Prioritization of Mitigation Strategies (draft version to be discussed at next Local Task Force meeting)

General Press Release for Release of Draft All-Hazard Mitigation Plan (1/29/2010)



**Yellow Medicine County's
All-Hazard Mitigation Plan**

As of June 2009, Yellow Medicine County with the assistance of the Upper Minnesota Valley Regional Development Commission (UMVRDC) has been in the process of updating their All-Hazard Mitigation Plan to meet the requirements of the Disaster Mitigation Act of 2000. As part of the requirements set forth by the Minnesota Department of Homeland Security and Emergency Management (HSEM) and the

Federal Emergency Management Agency (FEMA), the public must have available time to submit comments regarding the plan. To access a draft version of 6 of 8 chapters of the plan, please visit the UMVRDC website at: <http://www.umvrdc.org> and look for the "What's New" headline. Under this section, the draft plan is available electronically for public viewing.

In order to make comments or suggestions regarding the All-Hazard Mitigation Plan, please email Katie Meyer at katie.meyer@umvrdc.org or call the UMVRDC at 320-289-1981 or 1-800-752-1983. Comments received by the public will be reviewed and considered at Yellow Medicine County's Local Task Force meeting in St. Leo, MN at 6:30PM on February 24, 2010. The public is encouraged to attend this meeting.

Local Task Force Meeting 3 Information: pages 30-35

- Press Release
- Mailing
- Agenda
- Meeting Summary

Meeting #3 – Press Release (2/12/2010)



**Yellow Medicine County All-Hazard Mitigation
Public Meeting to be held February 24, 2010**

The third public meeting for the All-Hazard Mitigation Plan will take place on **February 24, 2010 at 6:30p.m. in St. Leo** at the Community Center. The main tasks will be to discuss how the All-Hazard Mitigation Plan for Yellow Medicine County will be implemented and maintained, in addition to discussing the prioritized mitigation actions determined at a the previous Local Task Force Meeting. Background information for Yellow Medicine County’s Hazard Inventory can be found at <http://www.umvrdc.org> under “What’s New”. Comments on the material posted can be made by emailing katie.meyer@umvrdc.org or by calling 1-800-752-1983 or 320-289-1981. Input from the public is extremely important and encouraged.

As a result of the Disaster Mitigation Act of 2000, FEMA now requires that in order to continue to be eligible for Hazard Mitigation Grant Program (HMGP) funds, Yellow Medicine County and cities must update their All-Hazard Mitigation Plan within five years. Yellow Medicine County, with the assistance of the Upper Minnesota Valley Regional Development Commission (UMVRDC), is in the process of updating their initial All-Hazard Mitigation Plan that meets FEMA requirements. FEMA has provided part of the funding necessary to complete this plan. The projects listed in this plan will be eligible for future HMGP funds.

If you cannot attend this meeting but would like to be involved, or if you have any questions please contact Katie Meyer at 320-289-1981 or katie.meyer@umvrdc.org.

Meeting #3 – Mailing



February 17, 2010

TO: Yellow Medicine County Task Force

FROM: Michelle Gatz, Yellow Medicine County Emergency Manager
Katie Meyer, Community Development Planner

RE: Third Yellow Medicine County Task Force Meeting

The third task force meeting for the Yellow Medicine All-Hazard Mitigation Plan update will take place on February 24, 2010, at 6:30 P.M. at the St. Leo Community Center/Fire Hall. Attached is an agenda at what will be covered at the meeting

Please contact Katie Meyer at 320-289-1981 or katie.meyer@umvrdc.org with any questions.

klm

Meeting #3 – Agenda



**Yellow Medicine County All-Hazard Mitigation Plan
Local Task Force Meeting #3**

February 24, 2010

6:30 – 7:30pm

St. Leo, MN Community Center/Fire Hall

AGENDA

- 6:30 Prioritization of Mitigation Strategies (based on previous meeting)
- 6:55 Plan Maintenance/Implementation Chapter Review
- 7:25 Fire District Map
- 7:30 Next Meeting Date

Questions/Comments:

Katie Meyer
Upper Minnesota Valley Regional Development Commission
323 West Schlieman Avenue
Appleton, MN 56208
Office: (320) 289-1981
Fax: (320) 289-1983
E-mail: katie.meyer@umvrdc.org

Meeting #3 – Meeting Summary Notes

Meeting Attendance: 21 People

Jurisdiction Attendance:

- Yellow Medicine County, Yellow Medicine County Township
- Canby, Clarkfield, Echo, Granite Falls, Hanley Falls, Porter, St. Leo, Wood Lake

*Hazel Run did not attend.

Completed Tasks:

- Discussed and determined prioritization of mitigation strategies for County
- Discussed and determined Plan Maintenance and Implementation of the updated All-Hazard Mitigation Plan
- Updated Fire Districts within the County

Yellow Medicine County Public Meeting Information: pages 36-39

- Press Release
- Mailing
- Meeting Summary

Yellow Medicine County Public Meeting – Press Release (12/26/2010)



**Yellow Medicine County All-Hazard Mitigation
Public Meeting to be held March 10, 2010**

Yellow Medicine County is hosting a public meeting regarding their All-Hazard Mitigation Plan on **March 10, 2010 from 4:00 – 6:00pm in Granite Falls** at the Law Enforcement Center. The main task will be to discuss and view all chapters of the mitigation plan. All public comments made will be discussed with the Yellow Medicine County Emergency Manager and incorporated into the plan. The draft plan is currently available online at <http://www.umvrdc.org> under “What’s New”. Comments on the material posted can be made by emailing katie.meyer@umvrdc.org or by calling 1-800-752-1983 or 320-289-1981.

If you cannot attend this meeting but would like to be involved, or if you have any questions please contact Michelle Gatz at 320-564-3134 or michelle.caveney@co.yellow-medicine.mn.us.

Yellow Medicine County Public Meeting – Mailing



March 2, 2010

TO: Yellow Medicine County, Cities, and Townships

FROM: Michelle Gatz, Yellow Medicine County Emergency Manager
Katie Meyer, Community Development Planner

RE: Yellow Medicine County All-Hazard Mitigation Plan Update Public Meeting

Yellow Medicine County is in the process of updating this All-Hazard Mitigation Plan in order to comply with FEMA regulations and is hosting a Public Meeting on **March 10, 2010 from 4:00 – 6:00pm in Granite Falls** at the Law Enforcement Center (Yellow Medicine County Building). The main task will be to discuss and view all chapters of the All-Hazard Mitigation Plan. All public comments made will be discussed with the Yellow Medicine County Emergency Manager and incorporated into the plan. The draft plan is currently available online at <http://www.umvrdc.org> under “What’s New”. Comments on the material posted can be made by emailing katie.meyer@umvrdc.org or by calling 1-800-752-1983 or 320-289-1981.

If you cannot attend this meeting but would like to be involved, or if you have any questions please contact Michelle Gatz at 320-564-3134 or michelle.caveney@co.yellow-medicine.mn.us.

klm

Yellow Medicine County Public Meeting – Meeting Summary Notes

Meeting Attendance: 6 Representatives

Jurisdiction Attendance:

- Yellow Medicine County
- Upper Sioux Community
- Hanley Falls, St. Leo

*Canby, Clarkfield, Echo, Granite Falls, Hazel Run, Porter, and Wood Lake did not attend.

Completed Tasks:

- Viewed and commented on countywide and city-specific maps
- Discussed mitigation strategies and the process used to update
- Discussed changes from current plan to updated plan in terms of new hazards and hazard prioritization
- Reviewed city-risk assessment section (summary, how numbers were attained)

Local Task Force Meeting 4 Information: pages 40-43

- Mailing
- Agenda
- Meeting Summary

April 14, 2010

TO: Yellow Medicine County Task Force

FROM: Michelle Gatz, Yellow Medicine County Emergency Manager
Katie Meyer, Community Development Planner

RE: Fourth Yellow Medicine County Task Force Meeting

The fourth Local Task Force meeting for the Yellow Medicine All-Hazard Mitigation Plan update will take place on April 21st, 2010, at 6:30 P.M. at the Clarkfield Fire Hall. Attached is an agenda at what will be covered at the meeting

Please contact Katie Meyer at 320-289-1981 or katie.meyer@umvrdc.org with any questions.



klm



**Yellow Medicine County All-Hazard Mitigation Plan
Local Task Force Meeting #4**

April 21, 2010
6:30 – 7:00pm
Clarkfield, MN - Fire Hall

AGENDA

- 6:30 Review of All-Hazard Mitigation Plan progress
- 6:45 Review of County and City Hazard Maps

Questions/Comments:

Katie Meyer
Upper Minnesota Valley Regional Development Commission
323 West Schlieman Avenue
Appleton, MN 56208
Office: (320) 289-1981
Fax: (320) 289-1983
E-mail: katie.meyer@umvrdc.org

Meeting #4 – Meeting Summary Notes

Meeting Attendance: 13 People

Jurisdiction Attendance:

- Yellow Medicine County, Yellow Medicine County Township
- Clarkfield, Echo, Granite Falls, Hanley Falls, Porter, St. Leo, Wood Lake

*Canby and Hazel Run did not attend.

Completed Tasks:

- Discussed HSEM comments regarding All-Hazard Mitigation Plan and updated Local Task Force on Plan Review Status
- Reviewed City and County Risk Assessment Maps