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Hazard Mitigation Plan 2007 to 2012

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Wadena County Pre-Disaster Mitigation Plan

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1.0 PURPOSE AND INTRODUCTION

1.1 Purpose

This plan is intended to reduce the threat of natural, human induced and technological hazards through the assessment of these hazards and through the development of an action plan specifying goals, objectives, and strategies. Through this advanced planning, Wadena County will continue to be leader in ensuring the safety and public protection of the entire countywide community. The purpose for the creation of this plan is to:

1. Foster communication between cities, townships, businesses, community organizations, public and private facilities, organizations, and similar entities throughout the county
2. Promote sound public policy designed to protect life and property from natural, human caused and technological hazards
3. Develop and implement educational programs to increase public awareness of the risks associated with all hazards
4. Provide for a safer and more enjoyable countywide community

1.2 Background

The Wadena County All Hazard Mitigation Plan was funded through the Pre-Disaster Mitigation (PDM) Program established by the Disaster Mitigation Act of 2000 and through county in-kind contributions. Intended to break the cycle of disaster and rebuild, the Federal Emergency Management Agency (FEMA) program offers financial assistance to local governments to prepare and implement their local all hazard mitigation plans. More information on the PDM program can be found through the Federal Emergency Management Agency, Minnesota Homeland Security and Emergency Management, or the Minnesota Local Planning Assistance Center.

1.3 Definition of Mitigation

Hazard Mitigation is defined as any action taken to eliminate or lessen the risk of natural and human caused or technological hazards to life and property. Mitigation measures might include public education, development of regulations or public policy, structural hazard control or protection projects, altering or

retrofitting facilities, acquisition or relocation of structures, or the development of improved or increased warning systems.

1.4 The Planning Process

To assist in the development of the Wadena County Hazard Mitigation Plan, the County secured the assistance of the Region Five Development Commission. While working with two other counties within the Commission's service area, the Region Five Development Commission assisted with all phases of the planning process as outlined within this section. The following timeline provides a narrative overview of each of these phases:

1.4.1 Data Collection

April 2003 through October 2003

The data collection process focused on the examination of existing plans, programs, and policies currently maintained by Wadena County. These plans, programs, and policies are further broken down as follows:

Planning Documents Reviewed:

- Wadena County Comprehensive Plan
- Wadena County Comprehensive Water Plan
- USGS Water Resources Investigations Report #02-4023
- Wadena County Emergency Operations Plan
- Soil Survey of Wadena County
- Wadena County Nitrate-Nitrogen Probability Map
- Floodplain Management Handbook for Local Officials
- State of Minnesota Hazard Mitigation Plan

Programs Reviewed:

- Wadena County Emergency Management Programs
- Wadena County National Flood Insurance Program (NFIP) Participation
- Wadena County Public Health Programs
- Wadena County Sheriff Department Programs
- Environmental Programs EPA and MPCA
- Minnesota Department of Homeland Security & Emergency Management Programs

Policy Documents Reviewed:

- Wadena County Ordinance

1.4.2 Public and Local Government Participation Component October 2003 through February 2004

Wadena County recognizes the importance of public participation in developing a strong all-hazard mitigation plan. To this extent, Wadena County invited members of the public to participate in seven separate occasions during the planning process. These meetings were as follows:

Wadena County PDM Planning Open House

Held: December 4, 2003, 1:00 to 4:00 p.m.

Location: Wadena County Courthouse Auditorium

Topics: Introduction of the PDM Planning process with a project description and overview was presented by Region Five Development Commission staff. Participants had the opportunity to ask questions during a question and answer session. Several attendees volunteered to participate on the Planning Team.

Approximate Attendance: 26 Persons

Wadena County PDM Full Planning Team Meeting 1

Held: February 12, 2004, 1:00 – 3:00 p.m.

Location: Wadena County Courthouse Auditorium

Topics: Team members were given an overview of the hazard mitigation planning process and began identifying and classifying hazards to be addressed within the hazard mitigation plan. These hazards were classified either as Natural Hazards or Human-caused/Technological Hazards (HCT). Once a list of hazards was established participants volunteered to participate on either the Natural Hazards Subcommittee or the Human-caused/Technological Hazards Subcommittee.

Approximate Attendance: 22 Persons

Wadena County PDM Planning Natural Hazards Team Meeting 1

Held: February 23, 2004, 1:00 – 4:00 p.m.

Location: Wadena County Courthouse Auditorium

Topics: All subcommittee meetings were open to the public. Through these subcommittee meetings groups assessed the risk associated with hazards specific to Natural Hazards. These risk assessments and identification matrices are presented throughout this plan.

Approximate Attendance: 7 Persons



Wadena County PDM Planning HCT Team Meeting 1

Held: February 25, 2004, 1:00 – 4:00 p.m.

Location: Wadena County Courthouse Auditorium

Topics: All subcommittee meetings were open to the public. Through these subcommittee meetings groups assessed the risk associated with hazards specific to Human-caused/Technological Hazards. These risk assessments and identification matrices are presented throughout this plan.

Approximate Attendance: 5 Persons

Members:

PLANNING TEAM MEMBERS		
Deana Skov Orton Township Resident	Ivan Reinke Wadena County Soil & Water	Vince Wegsheid Wadena Township Resident
Pat Johnson Todd/Wadena Electric Cooperative	Wayne Terry Emergency Management	Dennis Carlson Blueberry Township Resident
Dave Rousslang City of Wadena Resident	Maxine Erickson Leaf River Township Resident	Bob Blessing City of Staples Emergency Management
Brad Kern Resident/Contractor	Robert Jenson Thomastown Township Resident	Patricia Johnson Todd/Wadena Electric Cooperative
Dale Dobson City of Wadena Resident	Tom Breckenridge Wadena Business Owner	Sharon McLeod Wadena Food Shelf & Chamber of Commerce

Local Government Participation

The first step in the local government participation process was to request each local government wishing to participate in the planning process to express this desire through the adoption of a resolution. Since townships are the unincorporated areas of Wadena County, the adoption of a resolution to participate in the planning process and a resolution to approve the County's hazard mitigation plan was not necessary. Such resolutions however, were approved by most townships. Cities which will participate in the implementation plan were required to submit a resolution approving this plan. All resolutions

adopted by local governments within Wadena County are located within Appendix H of this plan.

The following is a list of jurisdictions (cities) participating in the Wadena County Hazard Mitigation Planning Process. All townships Wadena County are unincorporated and therefore remain under the jurisdiction of Wadena County. To qualify as a participating jurisdiction a city must: (1) identify at least one task within Section 4.0 of this plan the jurisdiction will complete, or participate in completing; and (2) formally adopt the Wadena County Hazard Mitigation Plan by Resolution. Any city within Wadena County may be added to this list by contacting the Wadena County Emergency Management Director and completing the two objectives mentioned above.

	CITIES		TOWNSHIPS
*	Aldrich ²	Aldrich ²	Orton ²
*	Menahga ²	Blueberry ²	Red Eye ²
*	Nimrod ²	Bullard	Rockwood ²
*	Sebeka ²	Huntersville ²	Shell River ²
X	Staples ¹	Leaf River ²	Thomastown ²
*	Verndale ²	Lyons ²	Wadena
X	Wadena ¹	Meadow ²	Wing River ²
		North Germany ²	
¹ Denotes fully participating jurisdictions. ² Denotes jurisdictions which have completed one of the two objectives listed above.			

Local governments not participating in the 2003 to 2005 Wadena County Hazard Mitigation Planning process will be contacted by the County's Emergency Management Director upon the beginning of any plan revision process to extend an invitation to participate in the revision process by resolution. All resolutions signed at that time will be included within the plan revision and forwarded along with the revised plan to the Minnesota Homeland Security and Emergency Management and FEMA.

Prior to the start of the Wadena County All-Hazard Mitigation planning process, local officials from all townships and cities within the County received a copy of the local government official survey. This survey was used to gather local officials' opinions on comprehensive plan related issues within the County as well as hazard mitigation related questions including identification of potential hazards within the county and also risk assessment related questions.

Local officials then participated in a series of meetings held throughout 2003 and 2004. In these meetings local officials provided opinions and comments related to hazards of concern within their communities as well as the likelihood of the occurrence of those hazards. All information received through the inclusion of local government officials was used to establish the goals and objectives presented within the *Wadena County All Hazard Mitigation Plan*.

Other Participants

In an effort to provide a broad perspective, the invitation to participate in the planning process was expanded beyond those representing local government. Invitation to participate was sent to all area service organizations, hospitals, schools, colleges and neighboring counties. Several representatives of these organizations attended the initial open house but chose not to participate beyond. For a complete list of those who were invited and those who attended, see appendix J.

Sectoring of Wadena County for Hazard Mitigation Planning

In developing a plan that addresses hazards on a county-wide basis as well as locally, it is important to divide the planning area into smaller, more manageable sections. For the purposes of developing this plan, the county was divided into two sectors. One sector is the Trunk Highway 10/Burlington Northern Santa Fe Railroad Corridor (TH 10/BNSF). The TH 10/BNSF Corridor consists of approximately 56% of the population, 29% of the total market value, the largest city and two of the three largest townships. This sector also includes US Highway 10, which through Wadena County has an Annual Average Daily Traffic (AADT) of approximately 8000 vehicles. The Heavy Commercial Average Daily Traffic (HCADT) volumes consist of approximately 750 larger vehicles having six or more tires. The Burlington Northern Santa Fe Railroad carries freight of all kinds as well as hazardous materials as many as 40 times per day through Wadena County. For these reasons, it was determined that the lower portion of the county be analyzed differently. The remainder of the county makes up the second sector. The local governments included within each sector are listed as follows generally beginning with local governments in the northwest portion of the sector to southeast (see Appendix C for visual reference):

TH 10/BNSF Corridor:	Wadena, Aldrich, and Thomastown Townships; Cities of Wadena, Verndale, Aldrich, and Staples
Balance of County:	Blueberry, Shell River, Huntersville, Red Eye, Meadow, Orton, Rockwood, North Germany, Lyons, Leaf River, Wing River, and Bullard Townships; Cities of Menahga, Sebeka, and Nimrod

1.4.3 Development of Goals, Objectives and Strategies March 2004 through May 2004

Wadena County PDM Planning Natural Hazards Team Meeting 2

Held: March 29, 2004, 1:00 – 4:00 p.m.

Location: Wadena County Courthouse Board Room

Topics: At this meeting, which was open to the public, the team identified the goals, strategies, implementation policies, responsibilities, and costs associated with Natural hazards. Results are listed within section five of this plan.

Approximate Attendance: 8 Persons

Wadena County PDM Planning HCT Hazards Team Meeting 2

Held: April 15, 2004, 1:00 – 4:00 p.m.

Location: Wadena County Courthouse Auditorium

Topics: At this meeting, which was open to the public, the team identified the goals, strategies, implementation policies, responsibilities, and costs associated with Human-causes/Technological hazards. Results are listed within section five of this plan.

Approximate Attendance: 6 Persons

Wadena County PDM Full Planning Team Meeting 1

Held: April 22, 2004, 10:00 – Noon

Location: Wadena County Courthouse Auditorium

Topics: Members of both subcommittees met on this day to share, review and critique the goals, strategies, implementation policies, responsibilities, and costs that each subcommittee had developed.

Approximate Attendance: 10 Persons

Wadena County Technical Advisory Team Meeting

Held: May 18, 2004, 10:00 – Noon

Location: Wadena County Courthouse Auditorium

Topic: The Technical Advisory Team, which its member list is cited in the acknowledgement page, met to review the goals, strategies, implementation policies, responsibilities, and costs presented by the Planning Teams

Approximate Attendance: 7

1.4.4 Drafting and Development
May 2004 through August 2004

In the drafting and development phase, Region Five Development Commission staff prepared the Wadena County Hazard Mitigation Plan public review document with the cooperation of the Wadena County Emergency Management Director, the Wadena County Environmental Services Department (ESD), the Wadena County Planning & Zoning Department, and the Wadena County Soil & Water Conservation District. The plan was then forwarded onto process participants, local officials, Minnesota Homeland Security and Emergency Management, and the general public for review and comment

1.4.5 Public Review, County Adoption, State and FEMA Review and Adoption
October 2004 through March 2005

Copies of the Wadena County Hazard Mitigation Plan document were sent to all local units of government within the County and made available on the Region Five Development Commission Website. A published notice notifying interested persons of this was published in the official newspaper of the County. Despite

this effort to solicit public review, few comments were received. What comments were received resulted in some minor editorial and changes to the community profile section Wadena County Hazard Mitigation Plan document.

1.5 Plan Implementation and Maintenance

Paramount to the success of the Wadena County All Hazard Mitigation plan is the commitment of County officials, staff, and the entire countywide community to the implementation of the goals, objectives, and strategies set forth in section 4.0 of this plan. Changes resulting from internal and external forces, coupled with the completion of individual goals, objectives and policies may be cause for revision of this plan. In order to respond to these changes the Wadena County Emergency Management Director will review this plan at least annually to ensure goals, objectives and policies are being met in accordance to the implementation schedule of the plan.

Every three to five years Wadena County shall update and revise this plan to ensure the plan remains consistent with the overall goal of the plan which is briefly summarized as the mitigation of potential hazards within Wadena County. The Emergency Management Director will bring the Citizens Planning Team and Technical Advisory Team together as part of this review and revision process. FEMA requires the updated plan be submitted to the State and FEMA every five years for review.

See appendix M for recommended revisions for the plan update.

Implementation of Plans, Programs, and Policies

The implementation schedule of the Wadena County Hazard Mitigation Plan calls for the updating and revision of several Wadena County plans, programs, and policies. As this plan is implemented, the Wadena County Emergency Management Director will coordinate these revisions with the persons identified as "Task Leaders" within the implementation schedule of the plan. Plans, programs, and policies to be updated include:

Plans to be revised as necessary:

- Wadena County Comprehensive Plan
- Wadena County Comprehensive Water Plan
- Wadena County Emergency Operations Plan

Programs to be revised as necessary:

- Wadena County Emergency Management Programs
- Wadena County National Flood Insurance Program (NFIP) Participation
- Wadena County Public Health Programs
- Wadena County Sheriff Department Programs

Policies to be revised as necessary:

- Wadena County Ordinance
Ongoing Public Participation

In order to ensure public involvement in future revisions to this plan, Wadena County shall follow a similar procedure, including the memberships of public members on any future Hazard Mitigation Planning Teams and Subcommittees and the regular publishing and updating of information related to the hazard mitigation plan revision process. Mechanisms that are to be used to ensure ongoing public participation include the following:

- General public membership on future hazard mitigation planning teams and subcommittees
- Posting of the Wadena County Hazard Mitigation Plan on the Wadena County Website
- Published notices of all public hazard mitigation related meetings
- Maintain copies of the Wadena County Hazard Mitigation Plan at all libraries and similar public information outlets within Wadena County

Plan Responsibilities

The Wadena County Emergency Management Director is responsible for all monitoring, maintenance, coordination, implementation and retention of the Wadena County Hazard Mitigation Plan with the ongoing support of the Wadena County Board of Commissioners and Wadena County Departments. Please direct all inquiries related to this plan or Wadena County Emergency Management to:

Scott McKellep
Emergency Management Director
Wadena County Courthouse
415 South Jefferson Street
Wadena, MN 56482

Via Telephone:
(218) 631-7617

Via e-mail:
scott.mckellep@co.wadena.mn.us

The Wadena County Hazard Mitigation Plan, on file with the Emergency Management Director, is available as a reference for others researching the same information for future updates of their plans. A copy of the plan is also the office of each of the following Wadena County Departments:

- Planning & Zoning
- Highway
- Public Health
- MIS
- Sheriff



2.0 COMMUNITY PROFILE

2.1 General Overview

Wadena County, established on February 21, 1873, is in the central part of Minnesota. It has a total land area of about 563 square miles, or 343,550 acres. Wadena County has an estimated 2001 population of 13,646 people and is bordered by five different counties: Hubbard to the north, Wadena to the northeast, Todd to the south, Ottertail to the southwest, and Becker to the Northwest. The city of Wadena is the County Seat and is in the extreme southwest corner of the county.



Wadena County has been home to numerous industries and companies since 1873. In years past, a brewery, a horseshoe company, an elevator manufacturer, and even a bucket-making outfit once claimed Wadena County as its home. Today, farming remains the number one industry. The agricultural enterprises in the county are mainly dairy farming, livestock and hog operations, and production of grain for feed.

Wadena County is still home to a major patio and outdoor furniture industry, as well as several banks, realtors, motels and restaurants.

Several lakes, the Crow Wing River, saddle and snowmobile trails, golf courses are among several recreational opportunities in Wadena County.

Table 2.1 is a summary of land uses in Wadena County.

Table 2.1

Wadena County Land Use Summary		
Definition	Acreage	% of County
Commercial/Industrial	1017.1	0.29%
Farmstead	3715.8	1.07%
Residential Land	4933.8	1.42%
Community Service	1197.7	0.34%
Recreation Land	1159.8	0.33%
Transportation Services	9670.6	2.78%
Abandoned Farmstead	156.8	0.05%
Cropland	73162.7	21.05%
Hay Land	15991.7	4.60%
Pasture Land	19718.4	5.67%
Irrigated Land	17659.8	5.08%
Barnlots	1727.5	0.50%
Native Pastures	12356.1	3.56%
Wildlife Land	3674.9	1.06%
RIM (Reinvest in MN)	349.9	0.10%
CRP	5943.0	1.71%
Deciduous Forest	17340.4	4.99%
Coniferous Forest	56051.5	16.13%
Mixed-Woodlot Forest	26169.7	7.53%
Water	5558.8	1.60%
Altered Water	570.7	0.16%
Gravel Pits	165.2	0.05%
Natural Areas - Mixed	23980.8	6.90%
Natural Areas - Grass	18549.5	5.34%
Natural Areas - Coniferous	4627.5	1.33%
Natural Areas - Deciduous	22070.4	6.35%
	347,520.05	100.00%

Source: Wadena County Water Plan. Wadena SWCD Digitized Land Use Coverage. 1991-92 Aerial Flights.

2.2 Local Community Overview

The local communities of Wadena County include fifteen townships and seven cities. Wadena, the county seat, is the largest city with an estimated 4,242 people in 2002. The cities of Wadena County are: **Aldrich, Menahga, Nimrod, Sebeka, Staples, Verndale and Wadena.**

Wadena Township is the largest of the fifteen townships in the county with a population estimate in 2002 of 994 people. The fifteen Wadena County Townships include: **Aldrich, Blueberry, Bullard, Huntersville, Leaf River, Lyons, Meadow, North Germany, Orton, Red Eye, Rockwood, Shell River, Thomastown, Wing River and Wadena.** For a summary of demographic information, see appendix B.

The Townships of Bullard, Huntersville, and Lyons did not participate in the planning process.

Below is a brief summary of each city within Wadena County.

2.2.1 Aldrich **Contact:** Christine Staneck, PO Box 152, Aldrich, MN 56434, Phone 218-445-5287

The only city to see a decline in population, Aldrich is the smallest city in the county with 49 residents in 2002. Of the 31 housing units in Aldrich, 23 are owner occupied and 18 were built before 1939. No houses have been built since 1989. Aldrich is located on US Trunk Highway 10.

For an additional summary of demographic information, see Appendix A1.

Aldrich was settled somewhat earlier than the other towns of the county. In the year 1872 the railroad arrived, giving a terrific boost to the town's population. W.A. Bryant and Bro.'s opened the first regular store in 1876. In 1881, Delos Helmer built a beautiful hotel which he called the "Aldrich House." In 1882, L.D. French, W.F. Marcus and J.M. Russ built the first sawmill. The population in 1883 had reached the all time high of 100 people. In 1883 the town witnessed their first industrial strike, when five mill hands left their work on general grievances. The strike wasn't too drastic, however, as new mill hands were hired and the mill resumed operation two days later. By 1922 the population had grown such that a new residential section was built adding new homes, and improving greatly, the already popular town of Aldrich.

2.2.2 Menahga **Contact:** Teri Osterman, PO Box C, Menahga, MN 56464,
Phone 218-564-4557

Located in the Northwestern corner of the county, Menahga is the second largest and second fastest growing city in the county increasing by about 46% since 1970 to a population of 1217 people. Menahga also has the largest population over the age of 65 with 404 people, or about 33% of its population. For an additional summary of demographic information, see Appendix A2.

D.E. Jones was responsible for the Menahga town site in January of 1891. Late summer 1891, the railroad came through for the first time. When the railroad was established, Chet Eddy, Charles Barney Kelly and Joseph Askew immediately set up a sawmill. W.R. Baumbaugh is reported to have opened the first store. The town was given the name "The Gateway To The Pines" by the Governor of Louisiana on his visit, when the Jefferson highway opened. Joseph A. Quinn was one of the outstanding bankers in the village. Menahga too had a terrible fire, which nearly destroyed the village in 1903. Midsummer Day has long been established as an annual celebration.

2.2.3 Nimrod **Contact:** Margaret Rathcke, PO Box 50, Nimrod, MN 56478,
Phone 218-472-3277

In East Central Wadena County is the small city of Nimrod. Nimrod has a population of 75, which is up from 64 in 1970. Of the 43 homes in Nimrod, 11 of them were built between 1970 and 1979. The average income is \$37,478.

For an additional summary of demographic information, see Appendix A3.

Located on the banks of the Crow Wing River, in the township of Orton, Nimrod was established in 1879 by a man named Savoy. In the early years of lumbering, it was first only a tie camp, but still a very important village. Jake Graba was recorded to have kept the first stopping place for lumbermen, offering them room and board for a very nominal fee. Nimrod was also recorded as a very important village between wheat prairies and Verndale, since its location was such that the early settlers could get supplies there.

2.2.4 Sebeka **Contact:** Julie Rehm, PO Box 305, Sebeka, MN 56477
Phone 218-837-5773

Located on US Trunk Highway 71, Sebeka has the Red Eye River that runs through it and State Trunk Highway 227 as its main East/West corridor.

Sebeka's population has been up and down over the past 30 years as it has been as low as 662 in 1990 and as high as 774 in 1980. In 2002 the population was 696.

28% of the 377 homes in Sebeka were built before 1939. Recently a small housing increase has been seen in the city with 47 houses built since 1995. The average income in Sebeka is \$32,179.

For an additional summary of demographic information, see Appendix A4.

Sebeka was built close to the banks of the Red Eye River and came into existence a little ahead of the railroad. In 1890, the first merchandise was brought into the town by team, probably being delivered to John Anderson, who was the town's first businessman. The town site was originally the farm of E. Alfred Olson. The first doctor recorded in Sebeka history was Dr. John Knight. Isaac Foster established one of the first flour and sawmills holding many of his logging drives in the Red Eye River. In the year 1894 Sebeka was threatened with total destruction when a fire broke out in the downtown area. The Sebeka creamery has been one of the outstanding businesses since 1908.

2.2.5 Staples **Contact:** Phil Lindaman, 611 Iowa Ave NE, Staples, MN 56479, Phone 218-894-2550

The Wadena County portion of the City of Staples is the fastest growing city in Wadena County. In 1970 the population was 98, in 2002 it was 651. In 2000 there were 200 houses in the Wadena County portion of Staples; only 7 of them were built before 1950. The average income is \$40,318.

For an additional summary of demographic information, see Appendix A5.

In 1878 King Staples and Howard C. Mealy came to the area searching for timber. A year later they established a sawmill where the Northern Pacific shops were eventually located. Known early on as Staples Mills, the order was made establishing it as a town in 1882. In 1889 the towns' railroad identity came to light when the Northern Pacific Railroad built a roundhouse and Staples became a Railroad Division Point. Also in 1889, Staples Mills became the Village of Presto, until 1895 when on a 126 to 1 vote, again became the Village of Staples.

Though much of the City of Staples is in Todd County, today 651 of Staples' residents live in Wadena County.

2.2.6 Verndale **Contact:** Dawn Nelson, PO Box 156, Verndale, MN 56481
Phone 218-445-5400

Of the seven cities in Wadena County, four of them are located along the Trunk Highway 10/BNSF Corridor. Verndale is one of those four. The population of Verndale has remained virtually the same since 1970 as it currently sits at 575 while it was 570 in 1970.

For an additional summary of demographic information, see Appendix A6.

Verndale was settled in 1876 when John E. Butler and Charles C. Killey arrived from Iowa. Judge L.W. Smith laid out the first town site in October 1877. The first school house was built in 1878 and cost about \$1200. There were 25 pupils the first term. One of the first newspapers was started in 1877, and went under the name of the Wadena County Tribune. Dr. Harding opened the first drug store in Verndale about 1878. Verndale boasts the organization of the first lodge in the county when in January of 1880, the Fidelity Lodge (Masonic) was organized with H. Brintell as master. In 1883 the population had grown to 700 people. Verndale, feeling that with the increased population, they should hold the county seat, began a court battle for it in 1886. After battling all the way to the Supreme Court, Verndale finally decide to give up the idea. Verndale boasts the oldest bank in the county. In 1908 a fire nearly destroyed the town and entailed losses of \$50,000, completely destroying Smith's Store and many other buildings.

2.2.7 Wadena **Contact:** Bradley Swenson, City Hall Box 30, Wadena, MN 56482, Phone 218-631-7707

The County Seat, Wadena is located in the Southwestern corner of the county at the junctions of two US Trunk Highways, 10 and 71, and Minnesota Trunk Highway 29. Also through the city runs a major rail line that carries approximately 40 trains per day that is owned by the Burlington Northern Sante Fe Railroad company.

The population of Wadena experienced an increase of 3.29% from 1990 to 2000 after seeing a decline in the previous ten years. 1,033 or about 24% of Wadena's population was over the age of 65 in 2000. About 5% or 207 was over the age of 85.

In Wadena about 60% of the residents live in owner occupied homes. There are 1920 homes in the city, 536 of which were built before 1939. About 78% of Wadena's residents have at least a High School diploma. 8% of the total have a Bachelor's degree.

The largest industry in Wadena is in the area of education, health and social services where over 27% of the population works. Manufacturing and retail trade each make up of about 16% of the workforce. The average income is \$34,384.

For an additional summary of demographic information, see Appendix A7. Established in the early part of 1878, Wadena had a population of 96 residents. The Merchants Hotel, Baumbachs and Meyer Store, S.S. Garner's land office were some of the early businesses, and Charley Peake held the honor of opening the first store. In 1891, a terrible grippe epidemic hit Wadena causing illness to the majority of the residents. In 1903, Thomas Miller brought the first horseless carriage into Wadena and Henry Ebner purchased a Rambler at the same time. Carl and Roller built the first brewery in 1881. Harry Hutton, a

telegraph operator had the first high wheel bicycle in town in 1883. On October 15, 1901 Burch's new opera house opened with the "Quo Vadis" presented by the Sanford Dodge Co. In 1913, Standard Oil Co. built the first oil station. The Pioneer Journal, Wadena County's largest newspaper was established in 1877 and is one of the oldest business firms.

2.3 General County History

Indians used Wadena County as hunting grounds. French and British fur traders were the first white men to venture into the area. Trading posts were established along the Leaf River in Wing River Township, where the Leaf River enters the Crow Wing River, and at the confluence of the Partridge and Crow Wing Rivers. In 1844 a land route was constructed through Wadena County. This route followed the Leaf River and was called the Red River Ox Cart Trail.

Wadena County was included in the Indian land concession of 1855. In June 1858, the state legislature established Wadena County and named the town of Wadena as temporary county seat. At that time Wadena was located along the western side of the Crow Wing River, between the Leaf and Partridge Rivers. When the railroad was constructed a few miles to the south of this site, Wadena was moved to its present location. In February 1873, Wadena County was organized and Wadena officially became the county seat.

After the construction of the railroad in 1873, the county became attractive to homesteaders. The northern part of the county was settled dominantly by the Finnish, the east-central part by Germans, and the southern part by the Danish, Norwegian, Swedish, and English. Agriculture and forestry were the major industries. Most towns were built along the railroad line. In 1930, about two-thirds of the people lived in rural areas, but by 1960 the number declined to about 40 percent. The population of the county was 10,699 in 1920 and 14,174 in 1980.

Wadena County consists of 15 townships. The southern six townships were organized in the early 1880's. As the population of the county increased, other areas were organized into townships, and by 1898 the entire county was organized. The incorporated cities in the county are Aldrich, Menahga, Nimrod, Sebeka Staples, Verndale, and Wadena. The unincorporated areas are Bluegrass, Huntersville, and Oylen.



2.4 Physical Characteristics

2.4.1 Climate and Precipitation

Table 2-2 summarizes temperature data and table 2-3 is a summary of precipitation for Wadena County as recorded in the period 1971 to 2000. Tables 2-4 and 2-5 summarize growing season information. Table 2-5 shows probable dates of the first freeze in fall and the last freeze in spring. Table 2-6 provides data on length of the growing season.

In winter, the average temperature is 10 degrees F and the average daily minimum temperature is -2 degrees. The lowest temperature on record, which occurred in 1996, is -43 degrees. In summer, the average temperature is 67 degrees and the average daily maximum temperature is 79 degrees. The highest recorded temperature since 1971, which occurred at Wadena on August 19, 1976, is 102 degrees. 112 degrees is the highest recorded temperature on record, it occurred on August 10, 1936. On average, Wadena County will see 4.3 days a year with a maximum temperature greater than 90 degrees. An average of 190 days each year will have a minimum temperature less than 32 degrees and 54 days less than 0 degrees.

The total annual precipitation is 26.44 inches. Of this, 19 inches, or about 72 percent, usually falls in April through September. The growing season for most crops falls within these periods. In 2 years out of 10, the total precipitation is less than 22 inches. The heaviest 1-day rainfall during the period of record was 5.97 inches at Wadena on August 7, 1995. An average year in Wadena County will have 97 days with precipitation totals greater than 0.01 inches, 55 days greater than 0.1 inches, 16 days greater than .5 inches and 5 days with more than 1 inch.

The average seasonal snowfall is 48.3 inches. Since 1971, the greatest one day snow fall amount occurred on January 5, 1997, an amount of 18.5 inches. On average, 111 days of the year have at least 1 inch of snow on the ground. The number of such days varies greatly for year to year. Table 2-7 is a summary of the monthly average snowfall amounts.

The average relative humidity in mid-afternoon is about 60 percent. Humidity is higher at night, and the average at dawn is about 80 percent. The sun shines 65 percent of the time possible in summer and 50 percent in winter. The prevailing wind is from the north. Average wind speed is highest, 14 miles per hour, in spring.



Table 2-2

Temperature Summary													
1971-2000 NCDC Normals													
Element	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
Max °F	15.8	23	34.9	52.8	67.2	74.2	78.6	77.2	67.3	54.9	35.4	21.2	50.2
Min °F	-5.3	1.3	14.6	29.2	42.3	52.3	56.4	54.1	43.9	32.2	17.8	2.5	28.4
Mean °F	5.3	12.2	24.8	41	54.8	63.3	67.5	65.7	55.6	43.6	26.6	11.9	39.4
HDD base 65	1853	1481	1248	721	343	120	52	77	293	666	1153	1649	9656
CDD base 65	0	0	0	0	27	67	130	97	11	0	0	0	332

Source: <http://mcc.sws.uiuc.edu>

Table 2-3

Precipitation Summary													
1971-2000 Averages													
Element	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
Precip (in)	0.95	0.61	1.6	1.98	3.01	4.24	3.64	3.15	2.6	2.58	1.48	0.6	26.44

Source: <http://mcc.sws.uiuc.edu>

Table 2-4

Growing Season Summary											
Derived from 1971-2000 Averages											
Base Temp °F	Date of Last Spring Occurrence					Date of First Fall Occurrence					
	Median	Early	90%	10%	Late	Median	Early	90%	10%	Late	
	32	5/8	4/22	4/26	5/24	5/26	9/24	9/12	9/16	10/6	10/10
30	5/7	4/17	4/23	5/17	5/26	9/27	9/12	9/17	10/13	10/16	
28	5/3	4/11	4/22	5/13	5/16	10/4	9/20	9/23	10/24	11/3	
24	4/19	3/25	3/31	5/6	5/10	10/17	9/22	10/5	10/31	11/3	
20	4/10	3/19	3/25	4/18	4/30	10/30	9/30	10/9	11/8	11/15	
16	4/5	3/13	3/18	4/13	4/21	11/7	10/7	10/23	11/16	11/27	

Source: <http://mcc.sws.uiuc.edu>

Table 2-5

Length of Growing Season (Days)						
Derived from 1971-2000 Averages						
Base Temp °F	Median	Shortest	10%	90%	Longest	
32	139	115	122	157	162	
30	145	115	128	161	164	
28	158	129	139	172	200	
24	182	139	157	206	223	
20	204	173	185	221	225	
16	219	185	195	240	260	

Source: <http://mcc.sws.uiuc.edu>

Table 2-6

Snowfall Summary													
1971-2000 Averages													
Element	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
Snow (in)	12.1	7.4	9.8	3	0.1	0	0	0	0	1	8.1	6.9	48.4

Source: <http://mcc.sws.uiuc.edu>

2.4.2 General Soils

The soils in Wadena County are formed in glacial till, in material sorted out of glacial meltwater, and inorganic matter. About 60 percent of the soils were formed in sandy and gravelly outwash, 25 percent in glacial till, and 15 percent in organic matter.

The Wadena drumlin field of the Wisconsin Glaciations is the most recent evidence of glacial action in the County. At one time this drumlin field extended across the entire County in a northeast to southwest alignment. The meltwater from most recent glacial events has significantly altered the appearance of the drumlin field. The most evident drumlins are in the west-central part of the County, near Sebeka and Blue Grass. The landscape is gently sloping. Blowers, Paddock, Rockwood, and Runeberg soils formed in the glacial till on the Drumlins.

Two distinct glacial outwash areas are in the County. One area of outwash is generally north and east of the drumlin field and the Redeye and Leaf Rivers, and it extends in to Hubbard and Wadena Counties. It is dominantly sand, some of which is fine or coarse, and small amounts of gavel. The landscape is nearly level to sloping, except along the rivers. Soils formed in this outwash material include Huntersville, Menahga, Friendship and Meehan.

Another district area of outwash is south of the Leaf River, and it extends into Todd County and the southeastern part of Otter Tail County. The outwash in this area consists of calcareous sand and gravel of which is dominantly sand and coarse sand and a moderate amount of gravel. Carbonates are leached to a depth of about 4 feet. The landscape is nearly level to sloping. Sand-covered drumlins also are in this area. Dorset, Nymore, Verndale, Oylen, and Forada soils formed in this outwash material.

The organic material in the County consists of herbaceous plant material. Soils that formed in this material have a high water table. Plants such as cattails, sedge, reeds, grasses and some shrubs thrive on these soils. Because the high water table affects the rate of decomposition, material from these plants accumulate faster than they decompose. The organic material is 8 inches to more than 7 feet thick, and is moderately decomposed to highly decomposed. The organic soils are in depression, potholes, and broad drainage ways throughout the County. Seelyeville, Rifle, Markey, and Cathro are examples.

A summary of soils in Wadena County is included in Table 2-7.

Table 2-7

Summary of Soils in Wadena County		
Soil Types	Acres	% of the County
Areas not suited to Development or Agriculture	938.9	0.3
Bodies of Water	4,569.0	1.3
Flood Plain Soils	4,950.7	1.4
High Water Table Sands	39,698.8	11.4
Loamy Sands found in Glacial outwash areas	65,420.3	18.8
Loamy sands with a till substratum	9,446.9	2.7
Loamy Sands with somewhat Poorly Drained Inclusions	58,377.3	16.8
Organic Peats and Mucks	83,258.6	24
Paddock Complex, very stony soils	14,499.8	4.2
Sandy Loams formed in Glacial Outwash Areas	34,967.0	10.1
Sandy Loams found in Glacial Drumlin Areas	31,347.3	9

Source: Wadena County Comprehensive Local Water Plan

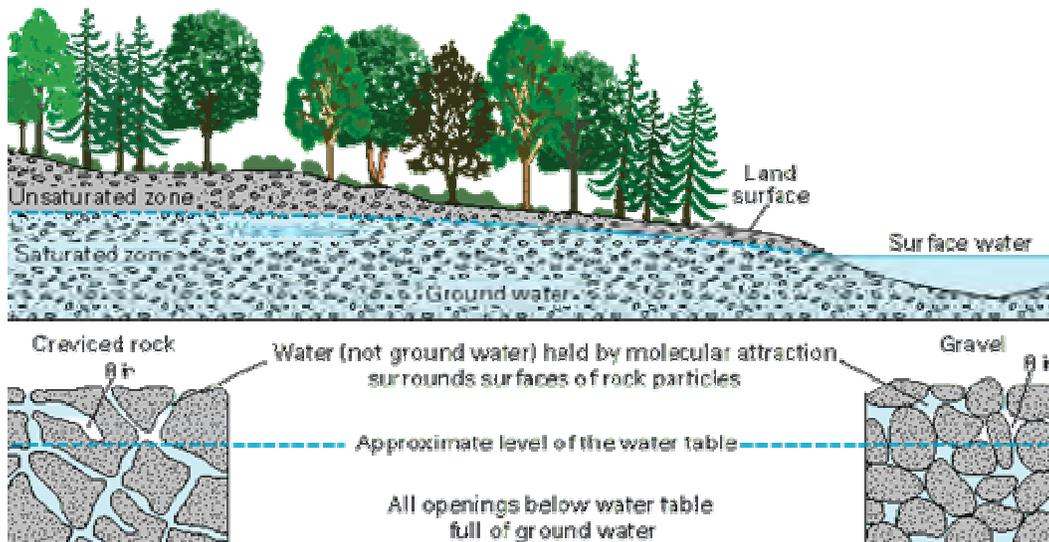
2.4.3 Erosion Prone Soils

The Soil and Water Conservation District (SWCD) classification of erosion prone soils includes those soils that have a land capability rating indication erosion potential and are classified as any land use that increases the opportunity for erosion. Presently the County has about 18,566 acres of water erosion prone soils. Wind erosion is also a high priority in Wadena county. There are approximately 645,308.7 acres of wind erosion prone areas in Wadena County. These areas are defined as areas where the land capability rating indicates wind erosion potential and the land use bares soil to be blown away. The irrigated acres are of special concern, regarding wind erosion since many of the soils with the highest potential for wind erosion are irrigated farmlands.

2.4.4 Hydrology

2.4.4.a Aquifer Systems

Most ground water in the County is in pores or openings between particles of sand and gravel in glacial outwash or glacial till. The thickness of the saturated area is as much as 70 feet, but it averages about 36 feet. Some areas do not have a saturated zone. The ground water is shallow in the outwash areas because the thick layers of glacial till restrict the downward movement of water. In areas that have glacial till above and below outwash sand and gravel, well water is available in lenses of sand and gravel within the glacial till. In Wadena County well yields of up to 1000 gallons a minute in the thicker saturated aquifers are common. Most water throughout the County is of the calcium bicarbonate type and is normally suitable for most purposes, although certain uses may require water treatment. Recharge of the water aquifers is done primarily by precipitation. Most discharge occurs as evapotranspiration, base flow to the Crow Wing River on the eastern side of the county, and base flows to other smaller streams and lakes.



2.4.4.b Watersheds

Wadena County has three major watersheds as defined by the state. See appendix C-5 for a Wadena County Watershed map.

1. The Crow Wing River Watershed includes 58 minor watersheds from Wadena County that drain into the Crow Wing River. It contains some major farming areas, a good portion of the forestlands of Wadena County and one community without sewer and water. Presently, the state has it classified as a canoeing river.

2. The Redeye River Watershed is a tributary of the Crow Wing and has 26 minor watersheds and contains some major farming areas and one community without sewer and water.

3. The Long Prairie has only one minor watershed located within Wadena County.

A complete listing of all minor watersheds is maintained by the Wadena County Soil and Water Conservation District.

Table 2-8

Crow Wing River Watershed Land Uses		
Definition	Acres	% of Watershed
Commercial/Industrial	390.76	0.2%
Farmstead	1556.90	0.9%
Residential land	2902.53	1.6%
Community service	590.35	0.3%
Recreation land	683.83	0.4%
Transportation service	4285.77	2.4%
Abandoned farmstead	135.56	0.1%
Cropland	27053.35	14.9%
Hayland	9171.86	5.0%
Pasture land	7519.05	4.1%
Irrigated land	5569.19	3.1%
Barnlots	545.69	0.3%
Native pastures	4266.16	2.3%
Wildlife land	1940.38	1.1%
RIM	149.99	0.1%
CRP	1942.72	1.1%
Deciduous forest	6768.01	3.7%
Coniferous forest	45174.69	24.8%
Mixed-Woodlot forest	17375.73	9.5%
Water	4542.31	2.5%
Altered Water	155.57	0.1%
Gravel pits	28.54	0.0%
Natural areas-mixed	14123.28	7.8%
Natural areas-grass	12116.35	6.7%
Natural areas-coniferous	3141.79	1.7%
Natural areas-deciduous	9962.50	5.5%

Source: Wadena County Comprehensive Local Water Plan

2.4.4.c Protected Waters, Ditches and Control Structures

Protected waters inventory is divided by State regulation into two categories: waters and wetlands. There are 31 lakes, 32 wetlands, and 24 natural and altered natural watercourses protected by the Minnesota Department of natural Resources (DNR), final inventory dated 5 July 1984, for Wadena County. The DNR is responsible for issuing protected waters permits. The biggest protected water is Blueberry Lake with 555 acres and the smallest is 10 acres and is unnamed. Wadena County shares four lakes that are inventoried in two other counties, two in Wadena and two in Hubbard. A map of lakes and rivers can be found in appendix C-4.

A complete list of protected waters in Wadena County is maintained by the Wadena County Soil and Water Conservation District.

2.4.5 Land Cover

The original vegetation of Wadena County reflected its position within the transition zone from the “great prairie” and the “big woods”. According to the original survey, done during the time period of 1847-1907, the most dominated vegetation was the Conifer forest with a mixture of Jack pine, Red pine, Oak and Hazel. Nearly fifty percent of the county ranging from the north, middle and eastern parts of the County were covered with it. The western edge of the County was covered with a boreal Hardwood-Conifer Forest mixture containing Aspen, Birch, Balsam Fir, White Spruce, and White Cedar. The Southeastern corner of the County was covered with a mixture of Prairie Grasses and Wetland Grasses. Appendix C-6 will provide a visual description of Wadena County’s land cover.

2.4.6 Topography

Wadena County is divided into two distinct areas, the Wadena drumlin field and the outwash plains. The drumlin field is dominantly in the west-central part of the County. A few small areas are in the eastern and southern parts. The drumlins are nearly level to sloping. Slopes are smooth and are short to moderately long. The drumlin fields make up about 30 percent of the County.

The Sandy outwash areas are dominantly level to gently sloping, except where they are adjacent to rivers and lakes. Slopes are smooth and are short to moderately long. Closed depressions are common in the outwash. The outwash plains make up about 70 percent of the County.

In the northwest part of Wadena County the drumlin field has an elevation of about 1,510 feet, which is the highest area in the County. The lowest area, which is about 1,225 feet is along the southeast corner of the County. The mean elevation for the county is at about 1,350 feet.

All runoff in the county flows into the Crow Wing River and its tributaries. The major tributaries are the Cat, Leaf, Partridge, Red Eye, Shell and Wing Rivers. Watersheds in the County contain many small creeks and in many places the creeks flow through a series of depressions rather than through a caved valley.

Source: Wadena County Comprehensive Local Water Plan

2.5 Community Facilities

Assisted Living

2-9

Name	Address	City
Comfort Care Cottage	1232 Jefferson St. S	Wadena
Fair Oaks Atrium Apartments	201 Shady Lane Dr	Wadena
Lakewood Pines	1702 Airport Rd	Staples
Humphrey Manor	222 2nd St SE	Wadena
Little Bit of Country	813 Harmony Lane	Wadena
Heritage House of Sebek		Sebek

Clinics

2-10

Name	Address	City
Lakewood Clinic	403 Prairie Ave NE	Staples
Sebek Medical Clinic	102 Minnesota Ave E	Sebek
Boline Chiropractic PA	14 Bryant Ave SW	Wadena
Godfrey Chiropractic Clinic	309 Jefferson ST S	Wadena
Grunst Chiropractic Clinic	10 Byrant Ave SE	Wadena
Wadena Medical Center LTD	4 Deerwood Ave NW	Wadena

City Halls

2-11

Name	Address	City
Verndale City Hall		Verndale
Wadena City Hall	222 2nd St SE	Wadena
Menahga City Hall		Menahga
Sebek City Hall		Sebek

Churches

2-12

Name	Address	City
Apostolic Lutheran Church Services		Oylen
Assumption of Our Lady Catholic Church		Menahga
Bethany Free Lutheran Church		Blue Grass
Bethany Lutheran Church		Menahga
Bethany Free Lutheran Church		Sebek
Balsamlund Lutheran Church		Aldrich
Blowers Chapel	County Rd 91	Bluffton
Central United Methodist Church		Verndale
Christ Lutheran Church		Wolf Lake
Evangelic Lutheran Church		Nimrod
Evangelical Church	419 Second St. NE	Wadena
First English Lutheran Church		Menahga
First Missionary Baptist Church	222 Third St. NE	Wadena
Grace Lutheran Church		Sebek
Holy Cross Catholic Church		Butler

Churches Continued

Hope Chapel Alliance Church	RT 3 Box 53	Verndale
Immanuel Lutheran Church	Dayton and 2nd	Wadena
Immanuel Lutheran Church		Verndale
Menahga Apostolic Lutheran Church		Menahga
Menahga Assembly of God		Menahga
Messiah Lutheran Church	301 South Jefferson	Wadena
Our Savior Lutheran Church		Sebeka
Oylen Christian Missionary and Alliance Church		Oylen
Redeemer Lutheran Church		Verndale
Redeemer Lutheran Church		Menahga
Runeberg Apostolic Lutheran Church		Menahga
Sebeka Apostolic Lutheran Church		Sebeka
Sebeka United Methodist Church		Sebeka
Southbrook Baptist Church	1842 Southwest Second St.	Wadena
Spruce Grove Apostolic Lutheran Church		Wolf Lake
St. Ann's Catholic Church	514 1 st St SE	Wadena
St. Fredericks Catholic Church		Verndale
St. Huberts Catholic Church		Blue Grass
St. John's Lutheran Church	710 Franklin Ave SW	Wadena
The old Country Church		Leaf River
Thomastown Covenant Church		Staples
United Methodist church		Verndale
Verndale Assembly of God		Verndale
Verndale Christian and Missionary Church		Verndale
Wadena Alliance Church	1428 South Jefferson	Wadena
Wadena Assembly of God	419 Northwest First Street	Wadena
Wadena Kingdom Hall	625 NW 3rd St.	Wadena
Wadena Seventh Day Adventist	14711 125 th Ave	Wadena
Wadena United Methodist Church	23 SE Dayton Ave.	Wadena
Westside Laestadian Lutheran Church		Sebeka
Wolf Lake Laestadian Lutheran Church		Wolf Lake
Zion Free Lutheran Church	602 Jefferson	Wadena
Church of Christ	110 Colfax Ave SW	Wadena
First Congregational Church		Wadena
St. Helen's Episcopal Church		Wadena

County Complexes

2-13

Name	Address	City
Wadena County	124 1st St SE	Wadena
Wadena County Public Health	22 Dayton Ave SE	Wadena
Wadena County Hwy Dept	221 Harry & Rich Drive	Wadena
County Hwy Maintenance Shop	County Rd 104	Verndale
County Hwy Maintenance Shop	Acorn St	Nimrod
County Hwy Maintenance Shop	216 SE 1 st St	Menahga
County Hwy Maintenance Shop	County Rd 11	Sebeka

Group Homes

2-14

Name	Address	City
Oakridge Home of Wadena Inc		Wadena
Share-A-Home		Wadena
Storge Residential Homes		Wadena

Historical Societies

2-15

Name	Address	City
Wadena Historical Society	603 Jefferson St. N	Wadena
England Prairie Pioneer Club		Verndale

Hospitals

2-16

Name	Address	City
Greater Staples Hospital	401 Prairie Ave NE	Staples
Tri-County Hospital	415 N Jefferson St	Wadena

Nursing Homes

2-17

Name	Address	City
Fair Oaks Lodge	201 Shady Lane Dr	Wadena
Lakewood Health Systems	401 Prairie Ave	Staples
Green Pine Acres		Menahga

Schools

2-18

Name	Address	City
St. Ann's	519 2nd St. SE	Wadena
Freshwater Education District	624 Jefferson St. N	Wadena
Wadena Deer Creek Public Schools	520 SW Colfax	Wadena
Wadena Deer Creek High School	600 SW Colfax	Wadena
Wadena Elementary	215 SW Colfax	Wadena
Wadena Schools	519 2nd St SE	Wadena
Northwest Community and Technical College	405 SW Colfax	Wadena
Central Lakes College	1820 Airport Road	Staples
St. John's Preschool	710 Franklin Ave SW	Wadena
Menahga Public Schools		Menahga
Verndale Public Schools		
Sebeka Public Schools		

State Facilities

2-19

Name	Address	City
DNR Ranger Station		Nimrod
National Guard Station	517 Jefferson N	Wadena

Arenas 2-20

Name	Address	City
Wadena Community Center	700 Community Ctr Dr.	
Sebeka Public Pool		

Bus Stations 2-21

Name	Address	City
Greyhound	20 Ash Ave NW	Wadena

Libraries 2-22

Name	Address	City
Wadena Library	304 1st St. SW	Wadena

Parks and Campgrounds 2-23

Name	Address	City
Shell City Campground		Sebeka
Huntersville Township Campsite		Sebeka
Huntersville Forest Campsite		Sebeka
Big Bend Campsite		Sebeka
Tree Farm Landing Park		
Anderson's Crossing Park		
Stigman's Mound Park		
Frames Landing Park		
Little White Dog Park		
Knob Hill Park		
Bullard's Park		
Old Wadena Park		Staples
McGivern Park		Staples
Huntersville State Forest		

Theaters 2-24

Name	Address	City
Cozy Theater	223 S Jefferson	Wadena

2.5.1 Emergency Facilities

Emergency facilities listed within this plan include law enforcement, ambulance, fire, emergency shelter and gathering places. This information can be found in the above and below tables.

	AGENCY	ADDRESS	CITY	PHONE
Sheriff/Police				
	Wadena County Sheriff's Dept.	415 S Jefferson St	Wadena	218-631-7600
	Menahga Police	PO Box C	Menahga	218-564-4516
	Sebeka Police	PO Box 30	Sebeka	218-837-5911
	Staples Police	611 Iowa Ave NE	Staples	320-732-2157
	Verndale Police	PO Box 156	Verndale	218-445-5400
	Wadena Police	121 Colfax Ave SE	Wadena	218-631-7700
Fire				
	Menahga Fire	PO Box C	Menahga	
	Sebeka Fire	PO Box 305	Sebeka	
	Staples Fire	611 Iowa Ave NE	Staples	
	Verndale Fire	PO Box 156	Verndale	
	Wadena Fire	121 Colfax Ave SE	Wadena	
Ambulance				
	Tri-County Hospital Ambulance	415 Jefferson St N	Wadena	218-631-4433
	Staples Hospital Ambulance	401 Prairie Ave E	Staples	218-894-3030

2.5.2 Hazardous Materials Facilities

Hazardous wastes include a wide range of household, commercial, industrial products and substances. Some of the more common products that individuals and businesses use include paints, fertilizers, cleaning solvents, acids, lead, heavy metals and other substances. Due to their toxic nature, these products and their containers require special use and disposal.

Businesses that generate, use or store defined amounts of these chemicals or substances are required to register with the MPCA. Table 2-D in Appendix D shows hazardous waste generators within the County.

2.6 Infrastructure

2.6.1 Pipelines

The following are pipeline operators within Wadena County. Due to the sensitive nature of pipelines, all location and description information is maintained by the Wadena County Emergency Management Director. For more information related

to pipelines including locations, incident information, and similar information contact the Wadena County Emergency Management Director. The following companies all maintain pipelines within Wadena County.

Table 2-25

Pipeline Operator
Minnesota Pipeline Company
Northern Natural Gas Company
Viking Gas Transmission Company

2.6.2 Solid Waste

2.6.2.a Landfills

Wadena County currently has no active landfills. Two closed landfills have been identified, see table 2-26

Table 2-26

Name	Location	Ownership	Class	Size			Operating Period
				Filled	Permitted	Waste	
Anderson Sebeka Sanitary Landfill	3.5 miles NW of Sebeka off of Co Rd 142	Private	B	5.1 acres	27 acres	53,500 cubic yards	April 12, 1973 to Dec. 1987
History: Site accepted waste primarily from the City of Sebeka and the northern half of the county. The site was neither properly designed nor adequately monitored. Operational problems were frequently documented by the MPCA and a Notice of Violation was issued in Feb. 1983. Access control and illegal dumping continue to be a problem on the site.							
Name	Location	Ownership	Class	Size			Operating Period
				Filled	Permitted	Waste	
Wadena Sanitary Landfill	1 mile N of US Hwy 10 on Co Rd 142, NW of Wadena	Public	D	17.8 acres	158.5 acres	525,000 cubic yards	May 11, 1970 to NA
History: Originally owned and operated by the City of Wadena, the site accepted mixed municipal and industrial waste primarily from the City of Wadena and the southern half of the county. The site was located in a gravel pit and was filled such that the northern side of the fill area encroached the Leaf River flood plain. The site had inadequate monitoring until a system was designed and installed by the MPCA. The site was not properly closed and covered with approved cover soils. Barreled paint waste, thinners and cleaners were reportedly deposited at the site sometime in the late 1970's. A portion of the site continues to be used as a diseased tree burning area and compost area. In addition, part of the permitted area was sold to Wadena County for use as a demolition waste disposal site; and a second area is presently being used as a transfer and recycling staging area.							

<http://www.pca.state.mn.us/cleanup/landfills-brainerd.html>

2.6.2.b Sanitation Providers

Table 2-27

Provider	Address	City
Killian Sanitation	48527 Co Rd 7	Staples
City Dray	16407 Hwy 71	Wadena
Waste Management		

2.6.3 Transportation

2.6.3.a Airports

Wadena County has one Municipal Airport. That Airport is located two miles northwest of Staples. The elevation is 1287 feet has a beacon, lighted runway and wind indicator. The city of Wadena's Municipal airport is located in Otter Tail County.

2.6.3.b Railroads

The Burlington Northern Sante Fe Railroad operates a main line segment through the southern most portion of Wadena County. The rail line is adjacent to US Highway 10 and it carries approximately 40 trains per day that average approximately 60 mph. See appendix C-3.

2.6.3.c Roads

The two main roadways within Wadena County are US Highway 10 and US Highway 71. Accommodating traffic in an east/west direction, US 10 passes through Wadena County connecting Staples to the east and Wadena to the west. US 71 runs in the north/south direction connecting Menahga to the north and the city of Wadena to the south of the county.

State Highway 29 is a short segment with the County (.87 miles) which connect the community of Deer Creek in Otter Tail County with the city of Wadena. State Highway 227 also runs east/west for approximately 11 miles between the cities of Nimrod and Sebeka. A short section of State Highway 87, approximately 3 miles, lies within Wadena County. This connects Menahga with Frazee in Becker County.

See appendix C-2 for mapping information.

2.6.3.d Transit

Wadena County Transit service is provided by Friendly Rider Transit. Friendly Rider Transit provides services to the general population, elderly and disabled. It operates throughout the county and in adjacent townships west and south of Wadena. Three, sixteen-passenger buses with lift capacity operate Monday through Friday, plus Sunday morning transportation is available in the city of Wadena. Friendly Rider is located at 124 First Street SE in Wadena.



2.6.4 Utilities

2.6.4.a Electric

Table 2-28

Provider	Address
Todd-Wadena Electric Cooperative	550 Ash Ave NE, Wadena
Minnesota Power	30 W. Superior St, Duluth, MN

2.6.4.b Natural Gas

Table 2-29

Provider
Aquila



2.6.5 Waterworks

2.6.5.a Drinking Water

Table 2-30

Community Water Systems:

Water Systems that serve the same people year-round (e.g. in homes or businesses).

Water System Name	Population Served	Primary Water Source Type	Storage Capacity	Pumping Capacity	Average Demand	Peak Demand	Water System ID
BELL HILL RECOVERY CENTER (Wadena)	100	Ground water	NA	NA	NA	NA	MN1800005
MENAHGA	1220	Ground water	205,000 gal	300 gal/min	84,500 gal/day	180,000 gal/day	MN1800001
SEBEKA	710	Ground water	50,000 gal	250 gal/min	124,000 gal/day	262,500 gal/day	MN1800002
VERNDALE	575	Ground water	55,000 gal	250 gal/min	50,334 gal/day	83,000 gal/day	MN1800003
STAPLES	3104 651 In Wadena Co.	Ground water	NA	NA	NA	NA	MN1770011
WADENA	4294	Ground water	500,000 gal	1,830 gal/min	665,740 gal/day	1,627,200 gal/day	MN1800004

Source: <http://www.epa.gov/safewater/dwinfo/mn.htm> & Wadena County Comprehensive Plan

*For a complete list of Non-Transient and Transient Non-Community Water Systems see appendix E.



2.6.5.b Storm and Waste Water

Table 2-31

Community	Storm Supply	Sanitary Sewer/discharge	Sewer/discharge	Treatment Type	Capacity	Average	Peak
Aldrich	None	None	None	None	NA	NA	NA
Menahga	Yes	Yes, Spirit Lake & Blueberry River	Yes, Yaeger Lake	Pond System	111,000 gal/day	85,000 gal/day	120,000 gal/day
Nimrod	None	None	None	None	NA	NA	NA
Sebeka ¹	Yes	Yes, Red Eye River	Yes	Pond System	432,000 gal/day	100,000 gal/day	200,000 gal/day
Verndale ²	Yes	Yes, Wing River	Yes	Pond System	83,500 gal/day	82,795 gal/day	170,000 gal/day
Staples	Yes	Yes, Hayden Creek	Yes	Mechanical System	NA	NA	NA
Wadena	Yes	Yes, Union Creek	Yes	Mechanical System	1,000,000 gal/day	500,000 gal/day	750,000 gal/day

Source: Wadena County Comprehensive Local Water Plan & Wadena County Comprehensive Plan

¹ The Sebeka stabilization ponds were reconstructed in 1991 due to erosion of the cells. A geothermal textile liner was installed with rip rap to control any possible erosion or weeds. The ponds should serve the city for many years with no additional construction. The ponds consist of aeration cells and other cells with a chlorination cell. The facility has a controlled discharge to the Red Eye River and is designed to treat an average influent flow of up to 200,000 gallons per day with a five-day biochemical oxygen demand strength of 444 milligrams per liter. The two primary cells have total combined surface area of 17.6 acres and the two secondary cells have a total combined surface area of 5.8 acres.

² The sewage treatment plant was built in 1987 to replace the old ponds system. The sewage treatment plant consists of two ponds, three rapid infiltration basins, and piping to connect the ponds to the basins. The sewage treatment plant is of sufficient size to handle any city expansion up to twice its current size. The lift station was also rebuilt in 1987. The capacity of the sewage treatment plant is .083 MGD (million gallons/day). The city currently pumps about .050 MGD. In 1997 the city replaced over 1400 feet of sewer main to eliminate most of the I/I problems. The wastewater is gravity fed from the pond to the RIB's activated once per week. The ponds have a holding capacity of 180 days because the ponds can't be operated from mid-December thru mid-April.

2.6.5.c Wells

Table 2-32 shows public water supply intakes and wells in Wadena County by community, permit, location, number and source. There are no communities in Wadena County that use surface water as a source for public waters.

Intakes & Wells					2-32
Community	Permit	Location	Number	Source	
Wadena	753230	134 35 5	2	Well	
Wadena	753230	134 35 6	3	Well	
Wadena	753230	134 35 5	4	Well	
Wadena	753230	134 35 6	5	Well	
Wadena	753230	134 35 5	6	Well	
Wadena	753230	134 35 7	7	Well	
Wadena	753230	134 35 7	8	Well	
Wadena	753230	134 35 6	9	Well	
Menahga	803105	134 35 6	1	Well	
Verndale	813075	134 35 6	1	Well	
Verndale	813075	134 35 6	2	Well	
Sebeka	843251	134 35 6	1	Well	
Sebeka	843251	134 35 6	5	Well	
Sebeka	843251	134 35 6	6	Well	

Source: Wadena County Comprehensive Local Water Plan

2.7 Population and Housing Characteristics

Table 2-33

County of Wadena

Population

	Number	Percent %
1970	12,412	
1980	14,192	
1990	13,154	
2000	13,713	
2002	13,674	
Percent % of Change 1990-2000	559	4.25
Percent % of Change 1970-2000		-3.65
65 and Over of 2000 Population	2,727	19.89
85 and Over of 2000 Population	436	3.18

Population By Race

	Number	Percent %
White	13,424	97.90
Black or African American	66	0.50
American Indian or Alaska Native	76	0.60
Asian	25	0.20
Native Hawaiian and Other Pacific Islanders	4	0.00
Other Single Race	37	0.30
Two or More Races	81	0.60
Total	13,713	100.00
Hispanic or Latino Total	128	0.93

Population Projections

	Number	Percent %
2005	14,120	
2010	14,520	
2015	14,860	
2020	15,210	
2025	15,570	
2030	15,900	
Percent % change 2005-2030		12.6

Education Attainment

	Number	Percent %
No Schooling completed	27	0.30
Nursery to 4th grade	40	0.44
5th to 6th grade	74	0.82
7th to 8th grade	805	8.90
9th grade	247	2.73
10th grade	230	2.54
11th grade	220	2.43
12th grade, no diploma	209	2.31
High school graduate (include equivalency)	3,340	36.92
Some college, less than 1 year	700	7.74
Some college, 1 or more years, no degree	1,324	14.63
Associate degree	619	6.84
Bachelor's degree	771	8.52
Master's degree	296	3.27
Professional school degree	67	1.26
Doctorate degree	31	0.34
Total	9,047	100.00

School Enrollment

	Number	Percent %
Enrolled in nursery school, preschool	177	5.00
Enrolled in kindergarten	230	6.50
Enrolled in grade 1 to grade 4	781	22.08
Enrolled in grade 5 to grade 8	876	24.76
Enrolled in grade 9 to grade 12	905	25.58
Enrolled in college, undergraduate years	540	15.63
Enrolled in graduate or professional school	49	1.39
Total	3,538	100.00

Housing

	Number	Percent %
Number of Households	5,426	
Persons per Household	2.45	
Number of Housing Units	6,334	
Vacant Units Non Seasonal	381	6.02
Vacant Units Seasonal	527	8.32
Owner Occupied Units	4,212	66.50
Renter Occupied Units	1,214	19.17

Age of Housing

	Number	Percent %
Built 1999 to March 2000	155	2.45
Built 1995 to 1998	293	4.63
Built 1990 to 1994	277	4.37
Built 1980 to 1989	682	10.77
Built 1970 to 1979	1,271	20.07
Built 1960 to 1969	866	13.67
Built 1950 to 1959	653	10.31
Built 1940 to 1949	596	9.41
Built 1939 and Earlier	1,541	24.33
Total	6,334	100.00

Heating Method

	Number	Percent %
Utility Gas	1,896	34.94
Bottled, tank, or LP gas	820	15.11
Electricity	1,115	20.55
Fuel Oil, kerosene, etc.	965	17.78
Coal or coke	0	0.00
Wood	600	11.07
Solar energy	0	0.00
Other fuel	17	0.31
No fuel used	13	0.24
Total	5,426	100.00

Group Quarter

	Number	Percent %
Correctional institutions	22	4.94
Nursing Homes	326	73.26
Other institutions	0	0
College dormitories	0	0
Military quarters	0	0
Other non institutional group quarters	97	21.8
Total	445	100

Market Values

Estimated Market Value	554,453,500
------------------------	-------------

Economic Development

	Number
Average Income	37,555
Median Income	30,651
Per Capita Income	15,146
Total Population	13,713
Total Income	207,695,600

Per Capita Income History

	Number
1970	2,105
1980	4,890
1990	8,640
2000	15,146

Median Income Distribution

	Number	Percent %
Less than \$10,000	870	16.10
\$10,000 to \$14,999	464	8.59
\$15,000 to \$19,999	515	9.53
\$20,000 to \$24,999	457	8.46
\$25,000 to \$29,999	333	6.16
\$30,000 to \$34,999	416	7.70
\$35,000 to \$39,999	355	6.57
\$40,000 to \$44,999	349	6.46
\$45,000 to \$49,999	307	5.68
\$50,000 to \$59,999	455	8.42
\$60,000 to \$74,999	385	7.12
\$75,000 to \$99,999	317	5.87
\$100,000 to \$124,999	71	1.31
\$125,000 to \$149,000	29	0.54
\$150,000 to \$199,999	25	0.46
\$200,000 or more	56	1.04
Total	5,404	100.00

Poverty

	Number
Income below poverty level	808
Income at or above poverty level	4,596

Industry

	Number	Percent %
Agriculture, forestry, Fishing and hunting and mining	454	7.63
Agriculture, forestry, fishing and hunting	448	7.53
Mining	6	0.10
Construction	443	7.45
Manufacturing	937	15.75
Wholesale trade	299	5.02
Retail trade	737	12.39
Transportation and warehousing, and utilities	275	4.62
Transportation and warehousing	248	4.17
Utilities	27	0.45
Information	70	1.17
Finance, insurance, real estate and rental and leasing	206	3.46
Finance and insurance	160	2.69
Real estate and rental and leasing	46	0.77
Professional , scientific, management, administrative, and waste management services	233	3.92
Professional ,scientific, and technical services	123	2.07
Management of companies and enterprises	0	0.00
Administrative and support and waste management services	110	1.85
Educational, health and social services	1,477	24.83
Educational services	634	10.66
Health care and social assistance	843	14.17
Arts, entertainment, recreation, accommodation and food services	360	6.05
Arts, entertainment, and recreation	31	0.52
Accommodation and food services	329	5.53
Other services	275	4.62
Public Administration	183	3.08
Total	5,949	100.00

Transportation

	Number	Percent %
Car, Truck or van	5,009	85.9
Drive alone	4,310	73.92
Carpooled	699	11.99
Public Transportation	57	0.98
Bus or trolley bus	57	0.98
Streetcar or trolley car	0	0
Subway or elevated	0	0
Railroad	0	0
Ferry boat	0	0
Taxicab	0	0
Motorcycle	0	0
Bicycle	14	0.24
Walked	243	4.17
Other means	34	0.58
Worked at home	474	8.13
Total	5,831	100

Mean Travel Time to Work	19.3
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Estimated Market Values

By Township		By City	
Township	Estimated Market Value	Township	Estimated Market Value
Aldrich	\$28,150,700	Aldrich	1,507,300
Blueberry	\$42,938,000	Menahga	37,063,800
Bullard	\$12,220,100	Nimrod	2,001,000
Huntersville	\$9,720,900	Sebeka	17,201,900
Leaf River	\$23,256,200	Staples	17,131,600
Lyons	\$15,321,400	Verndale	12,234,300
Meadow	\$15,331,600	Wadena	118,609,200
North Germany	\$19,308,100	Total	\$205,749,100
Orton	\$15,329,700		
Red Eye	\$21,352,600		
Rockwood	\$20,518,000		
Shell River	\$17,782,400		
Thomastown	\$43,794,200		
Wadena	\$39,612,900		
Wing River	\$24,067,600		
Total	\$348,704,400		
		Grand Total	\$554,453,500

3.0 HAZARD ASSESSMENT

3.1 Hazard Overview

Wadena County faces the challenge of several potential natural, human caused and technological hazards. The following is an assessment of the frequency of occurrence, historical impacts, and rankings of real and potential hazards facing Wadena County. This assessment is based on the best available information, including information obtained by local, state, and federal sources as well as through local official and citizen participation.

To quantify risk assessment information gathered for each identified hazard, color coding is used according to the following:

Frequency		
Future timeframe event most likely to occur		
	Highly Likely	Near 100% probability in next year
	Likely	At least 1 chance in next 10 years
	Occasional	At least 1 chance in next 100 years
	Unlikely	Less than 1% Probability in next 100 years

Warning		
Amount of warning time prior to hazard event occurring		
	None to Minimal	None to three hours of warning time
	3 to 6 Hours	Three to six hours of warning time
	6 to 12 Hours	Six to twelve hours of warning time
	More than 12 Hrs	More than twelve hours of warning time

Impact		
Measures the perceived level of impact on the entire County		
	Substantial	Widespread injury, loss of life and property damage
	Major	Significant property damage, great injury and loss of life
	Minor	Limited property damage, minimal injury and loss of life
	Limited	Cosmetic property damage, no loss of life, minimal injury

Area		
Total area of Sector effected including all cities and townships		
	Catastrophic	Majority or all of the sector effected
	Critical	Twenty-five to fifty percent of sector effected
	Limited	Ten to twenty-five percent of sector effected
	Negligible	Localized area of sector effected

Duration		
Length of duration of hazard event limited to the event itself or length of time the event can cause injury to persons, loss of life, and/or potential property damage		
	More than 24 Hrs	Over 24 hours
	12 to 24 Hours	Twelve to twenty-four hours
	1 to 12 Hours	One to twelve hours
	Less than 1 Hour	Less than one hour

Risk to Life/Injury and Risk to Property		
Measures the perceived risk to bodily harm or injury and/or property damage in the immediate proximity where the specific hazard occurs.		
	Very High	Total loss of life and destruction of property
	High	High loss of life, injury or property damage
	Limited	Small loss of life, injury, and property damage
	Minimal	No loss of life, cosmetic property damage if any

Through survey and meetings of the Citizen Planning Team, 31 hazards were identified. The Citizen Planning Team then reviewed and discussed each identified potential hazard and its relationship to other identified potential hazards as well as its relevance to Wadena County by using an assessment process that used the thirteen criteria listed in table 3-1.

Table 3-1 Hazard Assessments

Frequency	Warning Time	Impact	Area
Duration	Risk to Citizens & People	Risk to Animals & Livestock	Risk to Housing & Living Quarters
	Risk to Special Facilities & Community Resources	Risk to Infrastructure & Lifelines	Risk to HazMat Facilities & Public Health Concerns
Risk to Commercial & Industrial Facilities			

Through this process the Planning Team determined that many can be combined and that two were not relevant and significant to the county to warrant further discussion at this time. The remaining nineteen were then separated into two groups. The two groups include Natural hazards and Human Caused/ Technological (HCT). These hazards were then discussed, ranked and evaluated using a series of worksheets that are documented in Appendix F. The following hazards were identified for detailed analysis:

Table 3-2

Natural	Technological/Human Caused
Tornado	Groundwater Depletion
Flooding	Groundwater Contamination
Winter Storms	Hazardous Material (Transport and Train)
Drought	Hazardous Material (Fixed facilities)
Severe Summer Storms	Power Grid Failure
Flooding	Dam Failure
Wind Storm (sustained)	Computer Viruses
Extreme Heat	Terrorism
Wildfire	Railroad Interference with Emergency Response
Infectious Disease	

This chapter identifies all hazards affecting Wadena County. It provides information on the history and extent of hazards, evaluates the possible effects, identifies vulnerable populations and assets (buildings, critical facilities, and essential infrastructure), and estimates potential losses that may occur. This process identifies the most critical problems and issues that require mitigation action.

3.1.1 Estimating Losses

Limited data currently exists to fully estimate the potential loss of each hazard presented throughout this plan. As this data becomes available, Wadena County will provide more thorough loss estimations in future updates of this plan. The current process of obtaining this data is very timely and expensive. As the development of information management continues, the ability to estimate these potential dollar losses will be available.

The next plan update should include:

- A description of vulnerability by types and numbers of existing structures and infrastructure by hazard.
- A description of vulnerability by types and numbers of future structures and infrastructure by hazard.
- An estimation of potential dollar losses to vulnerable structures.
- An estimate for each identified hazard.
- Estimates for structure, contents, and function losses to present a full picture of the total loss for each building, infrastructure, and critical facility.

3.2 NATURAL HAZARDS

Natural Hazard refers to all atmospheric, hydrologic, geologic (especially seismic and volcanic), and wildfire phenomena that, because of their location, severity, and frequency, have the potential to affect humans, their structures, or their activities adversely.

3.2.1 Tornado

A tornado is a violent windstorm characterized by a twisting, funnel-shaped cloud. It is spawned by a thunderstorm and produced when cool air overrides a layer of warm air, forcing the warm air to rise rapidly. Tornado season is generally March through August, although tornadoes can occur at any time of year. In Minnesota the earliest verified tornado occurred on March 18, 1968 and the latest occurred on November 16, 1931. Nearly 75% of tornadoes in Minnesota occur in the months of May, June, and July. They tend to occur in the afternoons and evenings: over 80 percent of all tornadoes strike between noon and midnight. The magnitude of tornadoes is measured according to the Fujita Scale, commonly known as the “F” Scale. This scale (Table 3-2) displays the magnitude of a particular tornado based on several criteria including amount of destruction, wind speeds, and other data collected after the affected area has been assessed. Because of the random nature of tornadoes, there is little ability to predict specifically where they will occur within a region.



The Fujita Scale

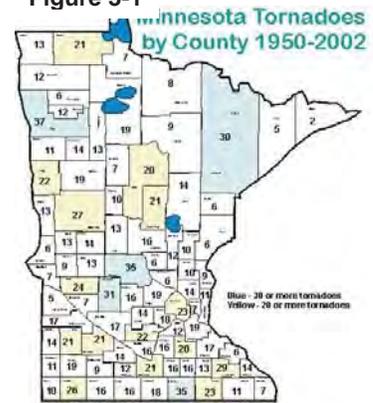
Table 3-3

F-Scale	Intensity Phrase	Wind Speed	Type of Damage Done
F0	Gale Tornado	40-72 mph	Some damage to chimneys; breaks branches off trees; pushes over shallow-rooted trees; damages sign boards.
F1	Moderate Tornado	73-112 mph	The lower limit is the beginning of hurricane wind speed; peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off the roads; attached garages may be destroyed.
F2	Significant Tornado	113-157 mph	Considerable damage. Roofs torn off frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light object missiles generated.
F3	Severe Tornado	158-206 mph	Roof and some walls torn off well constructed houses; trains overturned; most trees in forest uprooted
F4	Devastating Tornado	207-260 mph	Well-constructed houses leveled; structures with weak foundations blown off some distance; cars thrown and large missiles generated.
F5	Incredible Tornado	261-318 mph	Strong frame houses lifted off foundations and carried considerable distances to disintegrate; automobile sized missiles fly through the air in excess of 100 meters; trees debarked; steel re-inforced concrete structures badly damaged.
F6	Inconceivable Tornado	319-379 mph	These winds are very unlikely. The small area of damage they might produce would probably not be recognizable along with the mess produced by F4 and F5 wind that would surround the F6 winds. Missiles, such as cars and refrigerators would do serious secondary damage that could not be directly identified as F6 damage. If this level is ever achieved, evidence for it might only be found in some manner of ground swirl pattern, for it may never be identifiable through engineering studies

History

Tornadoes occur in every county in Minnesota. Since 1950, Wadena County has experienced ten. Of the ten tornadoes, data is available for nine of them. All of the tornado events in Wadena County occurred either in the late afternoon or evening. Zero deaths and five injuries were reported. The total property damage recorded was \$2.03 million. The earliest damage-causing event on record in the Storm Events Database occurred in 1964; the most recent in 2000. Tornado magnitudes are measured on the Fujita Scale, shown in Table 3-2.

Figure 3-1



Source: National Climatic Data Center

Table 3-4 Tornadoes in Wadena County

DATE	TIME	Dth	Inj	Mag	PrD \$
June 8, 1964	10:10 PM	0	0	F1	3K
September 9, 1964	7:40 PM	0	0	F1	25K
July 4, 1966	8:00 PM	0	0	F1	250K
July 10, 1966	4:15 PM	0	0	F2	250K
July 14, 1968	8:30 PM	0	0	F0	3K
August 26, 1977	6:45 PM	0	2	F2	250K
July 12, 1978	6:30 PM	0	0	F0	0
October 26, 1996	4:30 PM	0	0	F2	750K
July 8, 2000	8:20 PM	0	3	F2	500K
		0	5		2.03M

Dth: Deaths
 Inj: Injuries
 Mag: Magnitude
 PrD\$: Property Damage

Source: <http://www4.ncdc.noaa.gov>

Tornado Myths:

MYTH: Areas near rivers, lakes, and mountains are safe from tornadoes.

FACT: No place is safe from tornadoes. In the late 1980's, a tornado swept through Yellowstone National Park leaving a path of destruction up and down a 10,000 ft. mountain.

MYTH: The low pressure with a tornado causes buildings to "explode" as the tornado passes overhead.

FACT: Violent winds and debris slamming into buildings cause most structural damage.

MYTH: Windows should be opened before a tornado approaches to equalize pressure and minimize damage.

FACT: Opening windows allows damaging winds to enter the structure. Leave the windows alone; instead, immediately go to a safe place.

Risks & Vulnerabilities

Table 3-5 Tornado

Sector	Frequency	Warning Time	Impact	Area	Duration	Life/Injury	Property
TH 10/BNSF Corridor	Highly Likely	Minimal	Minor	Negligible	Less than 1 hour	High	High
Balance of County	Highly Likely	Minimal	Limited	Negligible	Less than 1 hour	High	High

Damage from tornados can interrupt infrastructure, scattering debris over roads and bridges, and tearing out power lines. Table 3-4 shows an equal risk as well as an equal vulnerability to a tornado in Wadena County. Though this may be the case, a closer evaluation will indicate a higher risk in the TH 10/BNSF Corridor due to the population density and more critical facilities.

Plans, Programs & Policies

- National Weather Service Storm Monitoring Activities
- NOAA Weather Radio
- Severe Weather Shelters
- Severe Weather Alert System
- Local Television and Radio Stations
- EAS System
- Local Warning Sirens

3.2.2 Flooding

Flooding is defined as the accumulation of water within a water body and the overflow of excess water onto adjacent floodplain lands. The floodplain is the land adjoining the channel, river, stream, lake, or other water body that is susceptible to flooding. The majority of areas of flooding have been identified by FEMA and mapped for floodplain management.

The 100 year floodplain is a misleading term. It identifies areas that have a 1% chance of occurring annually. These areas may be flooded more than once every hundred years. These Special Flood Hazard Areas (SFHA) are mapped by FEMA and the Minnesota Department of Resources through the National Flood Insurance Program (NFIP). The Flood Insurance Rate Maps (FIRM) are used to determine what areas need flood insurance and are on file with the Wadena County Emergency Management Director.

River flooding occurs when the water overtops the stream banks and encroaches into the floodplain. Flooding in rivers and streams generally result from a

combination of deep, late-winter snowpack, frozen soil that prevents infiltration, rapid snowmelt, and heavy widespread precipitation.

“Flash flood” is a term widely used by flood experts and the general population. However, there is no single definition or method to distinguish flash flooding for river and other floods. For the purpose of this plan, we will define flash flooding as flooding that occurs due to localized drainage and is outside the boundaries of the FIRM floodplain. Flash floods result from powerful, concentrated, slow-moving thunderstorms. The effect of a flash flood is often greater in areas with inadequate storm sewers and storm drainage systems.

A type of flood that is less frequent in Wadena County but has the potential to cause significant localized damage, is slow rising lake levels. Above average precipitation over a long term period will increase the risk of potential lake flooding, especially in land locked basins with poor lake outlet.

History

The list of Federally declared disasters, input from the Planning Committee, and the Storm Events Database were utilized to profile the history of flood events in Wadena County. Table 3-5 lists the documented and known flood events in the county. Flooding and heavy rain have both been known to cause road damage. Floodwaters that cover the surface of the road often cause the base of the road to wash away and the surface asphalt to crack and fail. This failure to roads can lead to utility damage. Major flooding in Minnesota took place in 1950, 1965, 1968, 1972, 1987, 1993, and 1997. These floods are considered among the most severe in Minnesota's history in terms of stream flow magnitude, extent of lands inundated, loss of life, and property damage.

Though Wadena County has several rivers, the history of flooding in the County is minimal. Due to river characteristics, soil type, land use, etc. overland flooding in Wadena County has little damage effect on property. The following is a synopsis of potential impacts on the communities of Wadena County.

Aldrich – The Partridge runs through the city. Due to the high banks only one business, a restaurant/bar, in the city face the risks potential of flooding. This business has flooded in the past.

Menahga – The Blueberry River flows through the North part of the city. Table 3-5 identifies a 1905 Menahga flood. In 1997 the river was over its banks but did no damage.

Nimrod – The Crow Wing River flows through the center of the city. A potential exists in spring if ice backs up. No history can be found of this occurring.

Sebeka – The Red Eye River that flows through the city caused concern in 1997 when it spilled over its banks and into the city park.

Staples – No part of the Wadena County portion of Staples is near a river. No history can be found of any flooding in this area of the city.

Verndale – The Wing River flows about three miles northwest of the city. Verndale sits on high ground and has little flood threat.

Wadena – The Leaf River that flows on the North edge of the city has gone over its banks and over Trunk Highway 71 in the past. There is a remote chance of flooding on the city’s fringes.

Other Areas – The area known as Wahoo Valley in Bullard Township has had a history of flooding. A restaurant/bar located on the low banks of the Crow Wing River has flooded in the past due to ice backing up behind the bridge downstream. Thomastown Township has numerous isolated homes that are right along the river. These homes have been threatened in the past.

Table 3-6 Floods in Wadena County

DATE	LOCATION	TYPE	Dth	Inj	PrD	INFO SOURCE
May 9, 1905	Menahga	NA	NA	NA	NA	Citizen Committee
March 22, 1966	NA	NA	NA	NA	NA	FEMA
April 18, 1969	NA	NA	NA	NA	NA	FEMA
August 18, 1995	NA	NA	NA	NA	NA	FEMA
April 8, 1997	NA	NA	NA	NA	NA	FEMA
August 9, 2000	Aldrich	Flash	0	0	0	NCDC
April 7, 2001	NA	Flash	0	0	0	NCDC
June 13, 2001	NA	Flash	0	0	0	NCDC
July 2, 2003	NA	Flash	0	0	0	NCDC

Source: National Climatic Data Center, FEMA, Citizen Committee

Risks & Vulnerabilities

During the assessment of “flooding” it was determined that to more accurately identify the risks and vulnerabilities in Wadena County that this plan separate “flash floods” from general overland or river flooding.

Table 3-7 Flash Flood

Sector	Frequency	Warning Time	Impact	Area	Duration	Life/Injury	Property
TH 10/BNSF Corridor	Occasional	Minimal	Major	Negligible	1 to 12 Hrs	High	High
Balance of the County	Occasional	Minimal	Limited	Negligible	1 to 12 Hrs	Limited	High

Table 3-8 General Overland or River Flood

Sector	Frequency	Warning Time	Impact	Area	Duration	Life/Injury	Property
TH 10/BNSF Corridor	Occasional	12+ Hrs	Minor	Negligible	More than 24 Hrs	Minimal	Minimal
Balance of the County	Likely	12+ Hrs	Minor	Negligible	More than 24 Hrs	Limited	Limited

An analysis of Tables 3-6 and 3-7 makes known that Flash Flooding has a greater impact in the TH 10/BNSF Corridor mainly due to more impervious surface and more dense population. In the balance of the county there is a greater possibility due to the increased amount of FIRM areas.

Plans, Programs & Policies

- 100-year Floodplain Mapping
- Participation in NFIP
- Flood emergency response plan include within Emergency Operations Plan (EOP)

3.2.3 Winter Storms and Events

Minnesota is a place of extreme weather. Winter storms are an expected event by many people. The more extreme storms occur less frequently.



BLIZZARD

A blizzard includes strong winds averaging or frequently gusting to, or above, 35 miles an hour and very low visibility due to blowing or falling snow. These are the most dangerous winter storms and can be especially severe when combined with temperatures below 10 degrees.

ICE STORMS

Ice storm conditions are most common when a rain event occurs and air temperature exceeds 32 degrees Fahrenheit, but the surface temperature remains at or below freezing. When the precipitation meets the surface and structures, ice accumulations occur. The National Weather Service defines an ice storm as accumulations of ice greater than ¼ inches.



SLEET

Sleet forms when precipitation originating as rain travels through freezing temperatures causing the precipitation to freeze before reaching the ground. Generally, sleet storm events are shorter in duration than ice storms, and generally have lower impacts.

EXTREME COLD

While there is no clear definition of “extreme cold”, the term can be generally defined as temperatures well below zero degrees Fahrenheit. Exposure to extremely cold temperatures can cause frostbite, hypothermia, and can be life threatening. In addition, extremely cold conditions can cause damage to infrastructure, automobiles, etc., if proper measures are not taken for cold weather preparation. Extreme cold is also associated with wind chill. Wind Chill is the term used to describe the rate of heat loss on the human body resulting from the combined effect of low temperature and wind. As winds increase, heat is carried away from the body at a faster rate, driving down both the skin temperature and eventually the internal body temperature. While wind chill will take heat away from an object faster, it cannot cool that object below the actual temperature.

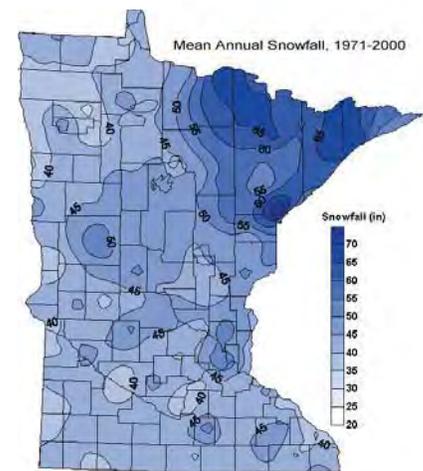
HEAVY SNOW OR SNOW STORM

Heavy snow is typically defined as a snow event with four or more inches of accumulation in a 12-hour time period, six or more inches of snow in a 18-hour time period, and 12 or more inches of snow in a 24-hour time period.



When visibility falls below one-half mile a snow event is considered heavy regardless of wind speed. Table 3-8 provides a list of winter storm related activity as reported by the NOAA.

Figure 3-3



<http://www.climate.umn.edu>

History

Typically at least one or more of the winter storm events listed above occur within Wadena County at least annually. These storms can occur at any time of day and generally occur during between the months of October and April. Each occurrence is often times are a combination of the above events.

Table 3-9 Winter Storm Events

DATE	TIME	TYPE	Dth	Inj	PrD
November 4, 1993	8:00 AM	Heavy Snow	0	0	0
November 12, 1993	4:00 PM	Ice Storm & Snow	0	0	0
November 24, 1993	8:00 AM	Heavy Snow	0	0	0
March 23, 1994	6:00 AM	Heavy Snow & Ice	0	0	0
April 28, 1994	4:00 AM	Heavy Snow & Ice	0	0	0
November 27, 1994	5:00 AM	Heavy Snow & Ice	0	0	0
February 14, 1995	2:00 PM	Heavy Snow	0	0	0
March 4, 1995	12:00 PM	Heavy Snow	0	0	0
March 27, 1995	1:00 AM	Heavy & Blowing Snow	0	0	0
January 4, 1997	12:00 AM	Heavy Snow	0	0	0
March 13, 1997	4:00 AM	Heavy Snow	0	0	0
February 15, 2000	7:00 AM	Heavy Snow	0	0	0
March 14, 2000	6:00 PM	Heavy Snow	0	0	0
April 10, 2000	11:00 AM	Heavy Snow	0	0	0
December 27, 2000	10:00 PM	Winter Storm	0	0	0
January 29, 2001	10:00 PM	Winter Storm	0	0	0
February 23, 2001	7:15 PM	Winter Storm	0	0	0
November 26, 2001	3:35 PM	Winter Storm	0	0	0
March 8, 2002	3:35 PM	Winter Storm	0	0	0
November 23, 2003	6:00 AM	Winter Storm	0	0	0
January 24, 2004	3:25 PM	Winter Storm	0	0	0

Source: <http://www4.ncdc.noaa.gov>

Risks & Vulnerabilities

Table 3-10 Winter Storm Events

Sector	Frequency	Warning Time	Impact	Area	Duration	Life/Injury	Property
TH 10/BNSF Corridor	Highly Likely	6 to 12 Hrs	Limited	Catastrophic	12 to 24 Hrs	Limited	Limited
Balance of the County	Highly Likely	6 to 12 Hrs	Limited	Catastrophic	12 to 24 Hrs	Limited	Limited

Plans, Programs & Policies

- Infrastructure improvements
- Snow fencing and windbreaks including natural vegetation
- Cold weather awareness and public education
- Snow removal, (salt, sand, etc.)

3.2.4 Drought

Although the definition of a drought varies from location to location, a simple definition of the hazard is a prolonged period of dry weather due to a deficiency in precipitation. Drought is further defined as meteorological, agricultural, hydrological, and socioeconomic. Meteorological drought refers to a period of dry weather associated with lack of precipitation, agricultural drought refers to crop damage as a result of drought, hydrological drought refers to a drop in surface and groundwater levels as a result of drought, and socioeconomic drought refers to impacts on humans individually or collectively.

Table 3-11

PRECIPITATION LOWS IN WADENA COUNTY			
Period of Record: 1885-2001			
MONTH	LOW (in)	YEAR	NORMAL
JAN	0.03	1942	0.95
FEB	0.02	1958	0.91
MAR	0.10	1959	1.60
APR	0.05	1980	1.98
MAY	0.06	1928	3.01
JUN	0.96	1987	4.24
JUL	0.53	1947	3.64
AUG	0.24	1970	3.15
SEP	0.24	1974	2.60
OCT	0.10	1944	2.58
NOV	0.02	1941	1.48
DEC	0.02	1930	0.60

History

Drought has a history of occurring every one to two decades since the early 1900s. In more recent decades, drought is occurring more frequently, once per decade since the 1970s. During the summer drought of 1988 surface water permits were suspended for the Crow Wing Watershed in late July and August. This affected about 15 irrigators in Wadena County causing hardship because of reduced crop yields.

Table 3-12

Historical Occurrence of Drought in Minnesota Involving Wadena County		
Year	Location	Remarks
1987-1989	Statewide	Established new "average low precipitation" and "average high temperature" records. Farmers lost most, if not all, of the year's crop. Drought also affected power production, the forest products industry, public water supplies and fish and wildlife dependent on adequate surface water. Mississippi River flow levels threatened to drop below the Minneapolis Water Works intake pipes.
1976-1977	Statewide	Began in 1974 in parts of south-central and western MN. Most severely affected areas were the Otter Tail and Lac Qui Parle River basins. Dry conditions caused lower water levels in wells and caused record low stream flows throughout the state. Late summer forest fires broke out and conflicts arose between domestic well owners and neighboring high capacity well owners.
1931-1942	Statewide	Intensity and duration differed locally
1911-1914	Statewide	Intensity and duration differed locally

Source: Minnesota State All-Hazard Mitigation Plan

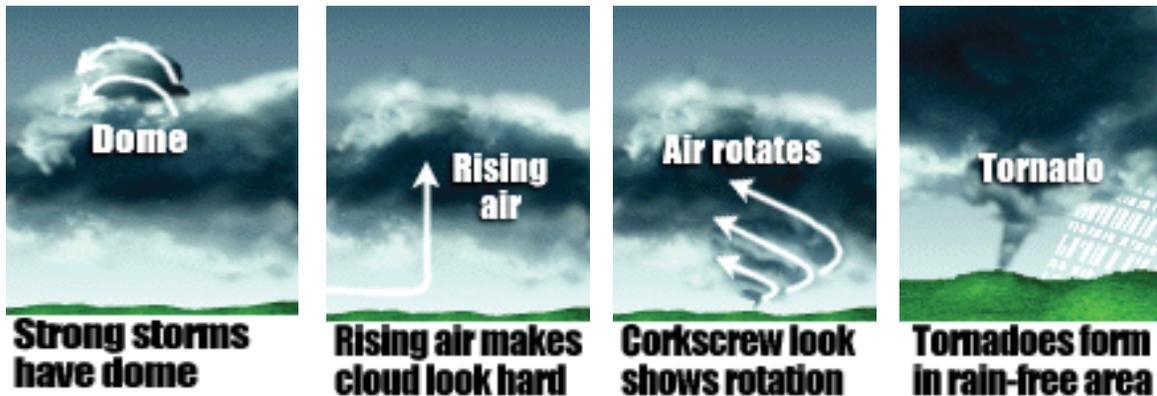
Risks & Vulnerabilities

Table 3-13 Drought

Sector	Frequency	Warning Time	Impact	Area	Duration	Life/Injury	Property
TH 10/BNSF Corridor	Likely	12+ Hrs	Major	Catastrophic	More than 24 Hrs	Minimal	Minimal
Balance of the County	Likely	12+ Hrs	Major	Catastrophic	More than 24 Hrs	Minimal	Minimal

Plans, Programs & Policies

- Water usage monitoring
- Local water usage limits, bans, and regulations
- US Department of Agriculture
- Local medical centers



Source: National Weather Service "Advanced Spotters Field Guide"

3.2.5 Severe Summer Storms

THUNDERSTORM

Thunderstorms can occur anywhere in the world and at any time of the day, however in Wadena County they are most likely to occur between the months of May and August. All thunderstorms produce lightning and thunder. Some have the potential to produce damaging straight-line winds, large hail, heavy rain, flooding, and tornadoes. A thunderstorm is classified as “severe” when it contains either singly, or a combination of hail 3/4" or greater, winds gusting in excess of 50 knots (57.5 mph), and/or tornado.

Table 3-14

DATE	LOCATION	TIME	MAG	Dth	Inj	PrD	CrD
July 10, 1966	N/A	5:00 PM	58 kts.	0	0	0	0
April 8, 1969	N/A	9:00 AM	65 kts.	0	0	0	0
July 2, 1984	N/A	8:30 PM	52 kts.	0	0	0	0
August 15, 1987	N/A	6:50 PM	59 kts.	0	0	0	0
May 22, 1989	N/A	4:30 PM	56 kts.	0	0	0	0
July 13, 1995	Portions of W Cent Mn	2:05 AM	N/A	0	6	15.0M	16.0M
October 26, 1996	Nimrod	5:10 PM	N/A	0	0	250K	0
June 26, 1998	Verndale	9:00 PM	N/A	0	0	1K	0
September 25, 1998	Verndale	11:10 PM	N/A	0	3	560K	0
	Wadena	11:10 PM	N/A	0	0	250K	0
July 15, 1999	Menahga	7:45 PM	52 kts.	0	0	0	0
	Verndale	7:50 PM	N/A	0	0	20K	0
April 5, 2000	N/A	11:00 AM	64 kts.	0	0	0	0
June 11, 2001	Menahga	12:15 PM	N/A	0	0	15K	0
June 13, 2001	Verndale	6:24 PM	N/A	0	0	1K	0
July 21, 2001	Wadena	5:15 AM	52 kts.	0	0	0	0
July 30, 2001	Sebeka	11:12 AM	N/A	0	0	2K	0
	Nimrod	11:30 AM	N/A	0	0	1K	0
February 2, 2002	N/A	12:00 PM	56 kts.	0	0	0	0
July 7, 2002	Aldrich	6:10 PM	N/A	0	0	0	0
	Verndale	6:10 PM	N/A	0	0	1K	0
	Menahga	8:04 AM	N/A	0	0	5K	0
July 21, 2002	Verndale	6:28 AM	52 kts.	0	0	0	0
	Wadena	7:15 AM	N/A	0	0	5K	0
July 2, 2003	Sebeka	7:10 PM	61 kts.	0	0	0	0
	Staples	8:00 PM	52 kts.				
	Verndale	8:38 PM	65 kts.				
	Wadena	8:38 PM	65 kts.				

Source: <http://www4.ncdc.noaa.gov>

LIGHTNING

Lightning occurs when there is a build up and discharge between positive and negative charges within a cloud, two clouds, cloud to air, or between a cloud and the ground. When this difference becomes great enough a lightning bolt strikes. Lightning presents a danger as it is present in all thunderstorms, however approximately 80% of all lightning activity occurs within a cloud, from cloud to air, and cloud to cloud. Table 3-14 shows recorded damages caused by lightning.

Table 3-15

DATE	Location	TIME	Dth	Inj	PrD	CrD
August 12, 2000	Menahga	9:00 AM	0	0	20K	0

Source: <http://www4.ncdc.noaa.gov>

HAIL STORM

Also the product of a thunderstorm, hail is formed when water droplets are carried through thunderstorm updrafts to the freezing regions of the cloud. The droplets are then pushed through the updrafts and downdrafts of the cloud mixing with other water droplets until a pellet of ice is formed that can no longer be supported by the updrafts. When this occurs the ice pellets or hailstones fall to the ground. Most hail in Minnesota ranges in size from pea size to golf ball size however larger hailstones have been reported on a more infrequent basis. Table 3-15 displays recorded Wadena County hail events.

Table 3-16

DATE	LOCATION	TIME	MAG	Dth	Inj	PrD	CrD
September 6, 1959	N/A	1:45 PM	3.00 in.	0	0	0	0
July 16, 1967	N/A	1:00 PM	1.75 in.	0	0	0	0
July 30, 1967	N/A	5:00 PM	1.75 in.	0	0	0	0
June 20, 1968	N/A	5:30 PM	1.75 in.	0	0	0	0
	N/A	6:00 PM	1.50 in.				
April 20, 1974	N/A	2:15 AM	0.75 in.	0	0	0	0
August 25, 1974	N/A	2:40 AM	0.75 in.	0	0	0	0
September 8, 1977	N/A	6:20 PM	1.75 in.	0	0	0	0
July 4, 1978	N/A	9:35 PM	1.75 in.	0	0	0	0
August 21, 1978	N/A	2:00 AM	1.75 in.	0	0	0	0
August 10, 1980	N/A	3:20 PM	1.75 in.	0	0	0	0
May 27, 1983	N/A	1:55 AM	1.75 in.	0	0	0	0
July 2, 1984	N/A	8:15 PM	0.75 in.	0	0	0	0
April 21, 1985	N/A	7:17 PM	1.75 in.	0	0	0	0
June 21, 1985	N/A	3:15 PM	1.00 in.	0	0	0	0
July 20, 1987	N/A	5:30 AM	0.75 in.	0	0	0	0
September 15, 1991	N/A	1:25 AM	1.75 in.	0	0	0	0
June 5, 1996	Menahga	6:46 PM	1.00 in.	0	0	10K	10k
July 11, 1996	Oylen	6:30 PM	1.75 in.	0	0	5K	0
		6:42 PM	2.50 in.	0	0	5K	0

Table 3-15 Continued							
DATE	LOCATION	TIME	MAG	Dth	Inj	PrD	CrD
July 21, 1996	Wadena	6:16 PM	1.00 in.	0	0	0	0
		6:32 PM	1.25 in.				
September 3, 1996	Wadena Aldrich	2:05 AM	0.75 in.	0	0	0	0
		2:42 AM	0.75 in.				
October 26, 1996	Wadena	4:41 PM	0.75 in.	0	0	0	0
June 28, 1997	Wadena	11:30 AM	0.75 in.	0	0	0	0
		12:00 PM	0.75 in.				
August 3, 1997	Aldrich	8:30 PM	0.75 in.	0	0	0	0
June 1, 1998	Menahga	5:00 PM	0.75 in.	0	0	0	0
July 20, 1998	Menahga Sebeka	4:57 PM	1.00 in.	0	0	0	0
		5:10 PM	0.75 in.				
September 25, 1998	Sebeka Wadena	11:10 PM	0.75 in.	0	0	0	0
		11:10 PM	1.00 in.				
July 4, 1999	Wadena	11:29 AM	0.75 in.	0	0	0	0
August 9, 1999	Sebeka	2:15 AM	0.75 in.	0	0	0	0
September 2, 1999	Nimrod	8:05 AM	0.75 in.	0	0	0	0
July 8, 2000	Wadena	7:50 PM	0.75 in.	0	0	0	0
August 14, 2000	Sebeka Wadena	11:10 AM	1.75 in.	0	0	0	0
		11:10 AM	1.75 in.				
May 15, 2001	Huntersville	3:57 PM	1.75 in.	0	0	0	0
June 11, 2001	Sebeka	12:27 PM	0.88 in.	0	0	0	0
June 13, 2001	Verndale	6:20 PM	1.00 in.	0	0	0	0
July 17, 2001	Huntersville Oylen	5:58 PM	2.50 in.	0	0	0	0
		6:44 PM	1.75 in.				
August 17, 2001	Menahga	4:35 PM	0.75 in.	0	0	0	0
August 29, 2001	Menahga Sebeka	5:30 PM	0.75 in.	0	0	0	0
		5:55 PM	1.00 in.				
July 31, 2002	Menahga	11:45 PM	0.75 in.	0	0	0	0
August 9, 2002	Sebeka	6:30 PM	0.75 in.	0	0	0	0
August 28, 2002	Nimrod	8:25 PM	0.75 in.	0	0	0	0
September 2, 2002	Verndale Aldrich	7:40 AM	1.75 in.	0	0	0	0
		7:45 AM	1.75 in.				
May 22, 2003	Sebeka	5:00 PM	0.75 in.	0	0	0	0
		5:16 PM	1.75 in.				
		5:32 PM	1.00 in.				
July 2, 2003	Nimrod Sebeka	6:50 PM	1.00 in.	0	0	0	0
		7:10 PM	0.88 in.				
		7:20 PM	0.75 in.				
July 6, 2003	Sebeka	6:43 PM	0.75 in.	0	0	0	0
July 19, 2003	Oylen	1:59 PM	0.75 in.	0	0	0	0

Source: <http://www4.ncdc.noaa.gov>

WINDSTORMS (STRAIGHT-LINED WINDS)

Windstorms can occur at any time throughout the year, however most commonly are experienced with severe thunderstorms in warm weather months. Windstorms most commonly include downbursts, tornadoes, and straight lined winds and are defined as events with wind speeds greater than 60 miles per hour.

History

Limited information is available related to windstorms however Table 3-13 displays high winds during a thunderstorm event.

Plans, Programs and Policies

- Windbreaks: Natural Vegetative Cover

Risks & Vulnerabilities

Table 3-17 Wind Storm (Straight Line Winds)

Sector	Frequency	Warning Time	Impact	Area	Duration	Life/Injury	Property
TH 10/BNSF Corridor	Highly Likely	3 to 6 Hrs	Limited	Catastrophic	1 to 12 Hrs	Minimal	Minimal
Balance of the County	Highly Likely	3 to 6 Hrs	Limited	Catastrophic	1 to 12 Hrs	Minimal	Minimal

Plans, Programs & Policies

- National Weather Service storm monitoring activities
- NOAA Weather Radio
- Severe Weather Shelters
- Severe Weather Alert System
- Infrastructure Improvements

3.2.6 Sustained Wind Storm

The National Weather Service defines a *Wind Advisory* as sustained winds of 30 to 39 mph lasting for at least one hour. A *High Wind Warning* is defined as sustained winds of at least 40 mph for one hour or more, or gusts to 58 mph or more.

History

Though limited to no information detailing the history of damage caused by sustained winds, it is a real threat. The specific threat is the damage caused by soil erosion on lake shores and tilled fields.

Risks & Vulnerabilities

Table 3-18 Sustained Wind Storm

Sector	Frequency	Warning Time	Impact	Area	Duration	Life/Injury	Property
TH 10/BNSF Corridor	Highly Likely	3 to 6 Hrs	Limited	Critical	More Than 24 Hrs	Minimal	Limited
Balance of the County	Highly Likely	3 to 6 Hrs	Limited	Critical	More Than 24 Hrs	Minimal	Limited

Plans, Programs & Policies

- Windbreaks: Natural Vegetative Cover

3.2.7 Extreme Heat

Extreme heat refers to the impacts on the human and physical environment due to heat. The impacts of heat are typically measured using the heat index, which measures the temperature felt by the human body by combining actual temperature with humidity. As both heat and humidity increase the effects on the human body become of greater concern.

History

Little data is available on the history of extreme heat in Wadena County. It is a fact that a high heat index and extremely high temperatures can be very dangerous. From FEMA and their website www.fema.gov, the effects of heat:

- In a normal year, approximately 175 Americans die from extreme heat. Young children, elderly people, and those who are sick or overweight are more likely to become victims.
- Between 1936 and 1975, nearly 20,000 people succumbed to the effects of heat and solar radiation.
- Because men sweat more than women, men are more susceptible to heat illness because they become more quickly dehydrated.
- Sunburn can significantly slow the skin's ability to release excess heat.

Risks & Vulnerabilities

Table 3-19 Extreme Heat

Sector	Frequency	Warning Time	Impact	Area	Duration	Life/Injury	Property
TH 10/BNSF Corridor	Highly Likely	6 to 12 Hrs	Limited	Catastrophic	More Than 24 Hrs	Minimal	Minimal
Balance of the County	Highly Likely	6 to 12 Hrs	Limited	Catastrophic	More Than 24 Hrs	Minimal	Minimal

Plans, Programs & Policies

- National Weather Service
- Local radio and television
- Red Cross
- Helping Your Neighbor Program
- Center for Disease Control

3.2.8 Wildfire

A wildfire is essentially an uncontrolled fire spreading through vegetative fuels over a large area. Wildfires can be caused by natural causes such as lightning, but are often times caused by human. There are essentially four types of wildfire or stages of wildfire including ground, surface, crown, and spotting. Ground fire is the starting of a wildfire and usually due to the small size of the fire, it may be difficult to detect until it has reached the surface stage. The surface fire generally burns approximately four feet in height and the difficulty of extinguishing the fire is associated with potential nearby fuels. Once a fire begins burning the tops of trees it is known as a crown fire. This fire can be extremely difficult to control due to winds which may cause spotting. Spotting is caused by the throwing or blowing of large embers of crown fire or surface fire ahead of a wildfire. Spotting makes the controlling of a fire extremely difficult depending on wind speeds, etc.

History

Though limited information regarding the history of wildfire is available for Wadena County, there is potential for such an event as witnessed by neighboring Todd and Hubbard County residents in 1980 and 1976. Table 3-19 shows four largest fires recorded in Minnesota.

Table 3-20 Minnesota Wildfires

Year	Event
2000	CarlosEdge fire burned 8,000 acres, destroyed over 4 structures, and endangered the towns of Linnwood, Stacy and Wyoming.
1980	Motley fire burned 6,800 acres, destroyed over 20 structures, and endangered the towns of Motley and Phillbrook.
1977	Wildland fires destroyed hundreds of thousands of acres of forestland and millions of dollars in homes and improved property. Suppression costs that year totaled around \$25 million.
1976	Badoura fire burned 23,000 acres and a dozen buildings in just six hours.

Risks & Vulnerabilities

Table 3-21 Wildfire

Sector	Frequency	Warning Time	Impact	Area	Duration	Life/Injury	Property
TH 10/BNSF Corridor	Unlikely	Minimal	Minor	Negligible	12 to 24 Hrs	Minimal	Minimal
Balance of the County	Occasional	Minimal	Major	Negligible	12 to 24 Hrs	Minimal	High

Plans, Programs & Policies

- Local Fire Departments and Associations
- Minnesota Department of Natural Resources
- Rural Fire Assistance Program (Department of Interior)
- US Forest Service
- National Interagency Fire Center

3.2.9 Infectious Disease (Environmental Outbreak)

Emerging infectious diseases are infections that have newly appeared in a population or have existed but are rapidly increasing in incidence or geographic range. In the mid-twentieth century, antibiotics cured many of the diseases that were life-threatening. Eradicating the specter of debilitating and fatal diseases, people were optimistic about a world without infectious diseases. Since then new diseases emerged that temper that optimism, such as AIDS and new strains of influenza. In recent years, the increasing mobility of people throughout the world brought the recurrence of diseases that were thought to be eradicated such as monkey pox.

(Minnesota State Hazard Mitigation Plan; Centers for Disease Control Monkeypox web site, <www.cdc.gov/ncidod/monkeypox/index.htm.)

History

Bacteria existed long before humans evolved, and bacterial diseases probably co-evolved with each species. Many bacterial diseases that we see today have been around for as long as we have, others may have developed later.

Between the middle of 1918 and the middle of 1919, the worldwide Spanish Influenza epidemic killed at least 21 million human beings – well over twice the number of combat deaths in World War I. The “Spanish” flu had first appeared in America in spring 1918.

All over the world, Spanish Influenza ravaged civilian populations. One-quarter of all Americans suffered bouts of influenza. More than 600,000 Americans died, 10,000 of them were Minnesotans. The city of St. Paul saw more than 1,000 deaths; Minneapolis, more than 1,300.

In recent years, the State of Minnesota has not had an infectious disease outbreak that reached epidemic proportion.

Table 3-22

Time Course of Common Infections (all in days)			
Disease	Incubation period	Latency period	Infectious period
Measles	8-13	6-9	6-7
Mumps	12-26	12-18	4-8
Pertussis	6-10	21-23	7-10
Rubella	14-21	7-14	10-12
Diphtheria	2-5	14-21	2-5
Varicella	13-17	8-12	10-11
Hepatitis B	50-110	13-17	19-22
Poliomyelitis	7-12	1-3	14-20
Influenza	1-3	1-3	2-3

Source: <http://uhavax.hartford.edu/bugl/histepi.htm>

The tables on the next two pages list several common source and host-to-host epidemics, the causative agent (followed by V for virus, B for bacteria, and P for protozoa), sources of infection, and the reservoirs of the infection. Current knowledge tells us that humans are the only reservoirs for sexually transmitted diseases.

Table 3-23

Common Source Epidemic Diseases			
Disease	Causative Agent	Infection Sources	Reservoirs
Anthrax	<i>Bacillus anthracis</i> (B)	Milk or meat from infected animals	Cattle, swine, goats, sheep, horses
Bacillary Dysentery	<i>Shigella dysenteriae</i> (B)	Fecal contamination of food and water	Humans
Botulism	<i>Clostridium botulinum</i> (B)	Soil-contaminated food	Soil
Brucellosis	<i>Brucella melitensis</i> (B)	Milk or meat from infected animals	Cattle, swine, goats, sheep, horses
Cholera	<i>Vibrio cholerae</i> (B)	Fecal contamination of food and water	Humans
Giardiasis	<i>Giardia</i> spp. (P)	Fecal contamination of water	Wild mammals
Hepatitis	Hepatitis A,B,C,D,E (V)	Infected humans	Humans
Paratyphoid	<i>Salmonella paratyphi</i> (B)	Fecal contamination of food and water	Humans
Typhoid Fever	<i>Salmonella typhi</i> (B)	Fecal contamination of food and water	Humans
Host-to-host Epidemics			
Disease	Causative Agent	Infection Sources	Reservoirs
Respiratory Diseases			
Diphtheria	<i>Corynebacterium diphtheriae</i> (B)	Human cases and carriers; infected food and fomites	Humans
Hantavirus pulmonary syndrome	Hantavirus (V)	Inhalation of contaminated fecal material	Rodents
Meningococcal meningitis	<i>Neisseria meningitidis</i> (B)	Human cases and carriers	Humans
Pneumonococcal pneumonia	<i>Streptococcus pneumonia</i> (B)	Human carriers	Humans
Tuberculosis	<i>Mycobacterium tuberculosis</i> (B)	Sputum from human cases; contaminated milk	Humans, cattle
Whooping cough	<i>Bordetella pertussis</i> (B)	Human cases	Humans
German measles	Rubella virus (V)	Human cases	Humans
Influenza	Influenza virus (V)	Human cases	Humans, animals
Measles	Measles virus (V)	Human cases	Humans

Table 3-22 Continued			
Disease	Causative Agent	Infection Sources	Reservoirs
Sexually Transmitted Diseases			
HIV-Disease	HIV (V)	Infected body fluids, blood, semen, etc.	Humans
Chlamydia	<i>Chlamydia trachomatis</i> (B)	Urethral, vaginal, and anal secretions	Humans
Gonorrhea	<i>Neisseria gonorrhoeae</i> (B)	Urethral and vaginal secretions	Humans
Syphilis	<i>Treponema pallidum</i> (B)	Infected exudate or blood	Humans
Trichomoniasis	<i>Trichomonas vaginalis</i> (P)	Urethral, vaginal, prostate secretions	Humans
Vector-borne diseases			
Epidemic typhus	<i>Rickettsia prowazekii</i> (B)	Bite by infected louse	Humans, lice
Lyme disease	<i>Borrelia burgdorferi</i> (B)	Bite from infected tick	Rodents, deer, ticks
Malaria	<i>Plasmodium</i> spp. (P)	Bite from infected Anopheles mosquito	Humans, mosquitoes
Plague	<i>Yersinia pestis</i> (B)	Bite by infected flea	Wild rodents
Rocky Mountain spotted Fever	<i>Rickettsia rickettsii</i> (B)	Bite by infected tick	Ticks, rabbits, mice
Direct-contact diseases			
Psittacosis	<i>Chlamydia psittaci</i> (B)	Contact with birds or bird excrement	Wild and domestic birds
Rabies	Rabies virus (V)	Bite by carnivore	Wild and domestic carnivores
Tularemia	<i>Franciscella tularensis</i> (B)	Contact with rabbits	Rabbits

Source: <http://uhavax.hartford.edu/bugl/histepi.htm>

Risks & Vulnerabilities

Table 3-24 Infectious Disease

Sector	Frequency	Warning Time	Impact	Area	Duration	Life/Injury	Property
TH 10/BNSF Corridor	Likely	12+ Hrs	Major	Catastrophic	More Than 24 Hrs	Limited	Minimal
Balance of the County	Likely	12+ Hrs	Major	Catastrophic	More Than 24 Hrs	Limited	Minimal

Plans, Programs & Policies

- Center for Disease Control
- Center for Infectious Disease Research & Policy
- Minnesota Department of Health

3.3 HUMAN CAUSED AND TECHNOLOGICAL HAZARDS

3.3.1 Groundwater Depletion

Groundwater depletion is the withdrawal of water from a ground water source at a rate greater than its rate of recharge.

History

Much of Wadena County is covered by a surficial Sandplain Outwash Aquifer that is readily recharged. However, due to the sandy soils of the area, irrigation has been necessary to grow many of the crops raised in the area. This has placed an increased pressure on our groundwater resources. Because of the lack of reliable surface water supplies most irrigations supplies come from the uppermost confined aquifer. Concerns have been raised that there may be too much irrigation using that aquifer as its source of water. Wadena County currently has 17,659.8 acres of irrigation with 201 active permits throughout the County. 11,654 acres of irrigated land in the county is located in the southern three townships, which are located primarily in the Sandplain Outwash Aquifer.

In 1996 a four-year study was initiated to determine the areal extent, thickness and hydraulic properties of the uppermost confined aquifer in southern Wadena County. It was also to investigate the vertical hydraulic connection between the uppermost confined aquifer and the surficial aquifer and estimate the effects of continued development on water levels.

An observation well network was established with as many as 80 domestic and irrigation wells in the uppermost confined aquifer. Another network was established with 34 observation wells in the surficial aquifer and all the wells are measured monthly for water level changes. Test drilling was conducted at 16 sites throughout the study are to install observation wells. At one site a test hole was drilled to 157 feet without penetrating a confined aquifer. A network of stream-stage measurement sites on the Crow Wing, Leaf, Wing and Partridge Rivers were installed to monitor the stream and aquifer hydraulic head.

A potentiometric surface map was constructed in August of 1997 for the uppermost confined aquifer. The direction of flow was determined to be east and southeast towards the Crow Wing River. The map also exhibited areas of depressed water levels caused by ground-water withdrawals for irrigation.

A water-level change map was also constructed for the uppermost confined aquifer. Water levels declined in 21 wells in areas where irrigation was prevalent ranging from .2 to 3.66 feet with a mean decline of 1.2 feet. Water levels outside irrigated areas declined less than 0.1 foot or had rises in water levels over the same periods. The uppermost elevation of the aquifer was determined to be

1350 feet and the lowest portion was at 1200 feet, located near the Crow Wing River.

Following three years of data collection, the fourth year of the study was used to develop the model. Model results indicate that the anticipated increases in withdrawals during a drought may lower water levels 2 to 4 feet regionally in much of both the surficial and uppermost confined aquifers. Water-level declines in the surficial aquifer of about 6 feet may occur in Wadena and in the central part of the aquifer south of the Leaf River. Simulated declines in all aquifers as a result of the anticipated increased withdrawals and hypothetical drought are not great enough to cause most wells to go dry.

Source: Wadena County Comprehensive Local Water Plan

Risks & Vulnerabilities

Table 3-25 Groundwater Depletion

Sector	Frequency	Warning Time	Impact	Area	Duration	Life/Injury	Property
TH 10/BNSF Corridor	Occasional	12+ Hrs	Major	Critical	More Than 24 Hrs	High	Limited
Balance of the County	Occasional	12+ Hrs	Major	Critical	More Than 24 Hrs	Limited	Limited

Plans, Programs & Policies

- Water usage monitoring
- Groundwater Observation Wells
- USGS
- Minnesota Department of Natural Resources
- Wadena County SWCD

3.3.2 Groundwater Contamination

Groundwater contamination includes the introduction of both point and non-point source pollutants into groundwater. Point source means any discernible, confined and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. Non-point source is a land management activity or land use activity that contributes or may contribute to ground and surface water pollution as a result of runoff, seepage, or percolation and that is not defined as a point source. This contamination also can be extended to include surface waters. For most of the county, individual wells draw from groundwater, however the cities of Menahga, Sebeka, Verndale, Staples, and Wadena maintain municipal drinking water systems monitored by each municipal operator.

History

Groundwater contamination in Wadena County has been limited to minor events or releases, some of which are identified in Table 3-24. The only event listed by the Environmental Protection Agency's Safe Drinking Water Information System to occur in Wadena County was recorded in Verndale. The health based violation occurred between October 1, 2002 and December 31, 2002. The contaminant level of coliform was not indicated.

Risks & Vulnerabilities

Table 3-26 Groundwater Contamination

Sector	Frequency	Warning Time	Impact	Area	Duration	Life/Injury	Property
TH 10/BNSF Corridor	Likely	12+ Hrs	Minor	Limited	More Than 24 Hrs	High	Limited
Balance of the County	Occasional	12+ Hrs	Minor	Limited	More Than 24 Hrs	Limited	Limited

Plans, Programs & Policies

- Wellhead Protection Program
- Minnesota Department of Health
- Public Education Opportunities
- Environmental Protection Agency
- Minnesota Pollution Control Agency

3.3.3 Hazardous Materials Accident (Transportation)

Hazardous materials are transported throughout the county through a variety of transportation modes. These modes include road, rail, aircraft and pipeline. Each of these modes presents different and unique risks of potential release or spill while in transit as well as differing levels of impact once the release or spill has occurred. For the most part, the transport of hazardous materials within the county includes the movement of materials from producers to users, producers to distributors, between storage and use facilities, and hazardous waste materials moving from use to disposal facilities.

ROADWAYS

The roadway network through Wadena County includes one medium priority Interregional Corridor, US Hwy 10 and one Regional Corridor, US Hwy 71. As well, there are links to the many communities throughout the county. The degree of impact from a hazardous material related release or spill is dependent on the proximity of the vehicle to population densities, concentrated development and environmentally sensitive areas when the event occurs. Map C-3 of appendix C shows population centers along Highways within Wadena County.

RAIL

Running along the Southern boundaries of the county from the East and West is one of busiest rail lines in the state. The impacts of rail related hazardous material releases or spills carry the potential of being great due to the amount of rail traffic within the county as well as the close proximity of rail lines to population centers. Types of potential hazardous material releases along the county's rail corridors includes, but is not limited to valve leakage, safety valve releases, which carries the potential of releasing hazardous material in the form of liquid or gases in addition to release or spill due to derailment, collision, or similar accident. Such accidents carry the potential of releasing hundreds to thousands of gallons of material within areas along rail corridors.

AIR

Within Wadena County there is one airport facility, which is located in North Staples. As with all airport facilities and air travel in general, hazardous materials transported by air travel or stored at airport facilities carry the potential of posing risk to life, property, and the environment.

PIPELINES

Within Wadena County is a series of pipelines carrying flammable liquids and gases. Many of these pipelines are located close to and within in cities of Wadena County. Due to the sensitivity of pipeline data the pipelines map is removed from all public copies of this plan, however the Minnesota Office of Pipeline Safety is one of nine state offices to be a state repository for the National Pipeline Mapping System. All inquiries as to the viewing of this map can also be directed to Wadena County Emergency Management.

History

Hazardous materials accidents can and have occurred anywhere. Communities like those in the TH10/BNSF Corridor of Wadena County are particularly at risk. However, hazardous materials are transported on all roadways daily, so any area is considered vulnerable to an accident. Table 3-28 identifies incidents in Wadena County.

Table 3-27

Hazardous Materials Incidents by Transportation Mode (1983 - 1990)			
Mode of Transportation	Number of Accidents	Associated Deaths	Associated Injuries
Air	1,220	0	153
Highway	41,781	79	1,569
Railway	7,886	1	423
Water	83	1	35
Other	29	0	2
Total	50,999	81	2,182

Source: FEMA

Table 3-26 shows transportation incidents on a national level.

Risks & Vulnerabilities

Table 3.28 Hazardous Materials Accident (Transportation)

Sector	Frequency	Warning Time	Impact	Area	Duration	Life/Injury	Property
TH 10/BNSF Corridor	Likely	Minimal	Major	Limited	12 to 24 Hours	High	Limited
Balance of the County	Occasional	Minimal	Major	Limited	12 to 24 Hours	Limited	Minimal

Plans, Programs & Policies

- MPCA
- MN Emergency Response Commission
- Local fire, police, emergency medical
- Individual site plans

3.3.4 Hazardous Materials Accident (Fixed facilities)

Various facilities throughout Wadena County hold hazardous materials. Some of these materials include flammable liquids, fuels, acids, corrosive materials, and other materials. Each facility exceeding minimum thresholds for material amounts can be found in appendix D of this plan. Each of these facilities must file a Risk Management Plan with the County Emergency Management Office, the State Emergency Response Commission, and the Environmental Protection Agency. Each of these plans provide information on the hazardous materials maintained onsite, the risk associated with those materials, potential area affected, and other information as required by the Emergency Response Commission. Table 3-28 lists a table of release events within Wadena County within the past ten years.

History

Wadena County has had a history of hazardous material spills, accidents, and similar events in the past. This is due largely to the major roadway and railway transportation corridors, pipelines, and fixed facilities within the County. Through the excellent work of local and state emergency response professionals, these events have amounted in a relatively small impact to the overall County population. The following is an inventory of hazardous material related events as reported by the National Response Center:

Table 3-29

Incident Date	Street	City	Type Of Incident	Medium Affected	Material Name
3/27/91	RT 1 AND COUNTY RD 101	WADENA	MOBILE	WATER	UNTREATED HUMAN WASTE
12/20/92	MILE 158.2	VERNDALE	RAILROAD	RAIL REPORT (N/A)	(null)
1/7/94	DOT NO.062749 L	STAPLES	RAILROAD NON-RELEASE	RAIL REPORT (N/A)	(null)
1/8/94	WADENA SALES	WADENA	PIPELINE	UNKNOWN	(null)
8/18/95	DOT CROSSING # 0627790	WADENA	RAILROAD NON-RELEASE	RAIL REPORT (N/A)	(null)
3/11/96	MILEPOST 163.3MINNESOTA DIVISION	WADENA	RAILROAD	RAIL REPORT (N/A)	(null)
1/9/97	OFF HIGHWAY 10	VERNDALE	FIXED	LAND	POLYCHLORINATED BIPHENYLS
4/1/98	600 SE 5TH STREET	WADENA	FIXED	UNKNOWN	CHROMIC ACID (5-20 PERCENT)
4/1/98	600 SE 5TH STREET	WADENA	FIXED	UNKNOWN	CHROMIUM SALT (5-20 PERCENT)
9/3/98	MILEPOST:163.4CROSS ST:OINK JOINT RDDOT NO:062469X	WADENA	RAILROAD NON-RELEASE	RAIL REPORT (N/A)	(null)
5/19/00	JEFFERSON ST CROSSING	WADENA	RAILROAD NON-RELEASE	(null)	(null)
6/15/00	1 MILE EAST OF WADENAON US HIGHWAY 10	WADENA	STORAGE TANK	AIR	AMMONIA, ANHYDROUS

Source: <http://www.nrc.uscg.mil/foia.html>



Risks & Vulnerabilities

Table 3-30 Hazardous Materials Accident (Fixed facilities)

Sector	Frequency	Warning Time	Impact	Area	Duration	Life/Injury	Property
TH 10/BNSF Corridor	Likely	Minimal	Major	Limited	12 to 24 Hours	High	Limited
Balance of the County	Occasional	Minimal	Major	Limited	12 to 24 Hours	Limited	Minimal

Plans, Programs & Policies

- MPCA
- MN Emergency Response Commission
- Local fire, police, emergency medical
- Individual site plans

3.3.5 Power Grid Failure

Power Grid failure in the context of this plan would include any electrical power outage for a period of greater than 24 hours.



History

Though limited specific information is available about power failures in Wadena County, they have occurred and are likely to occur in the future. The general cause is the likely result of a severe weather event such as thunderstorms that have associated high winds and lightning, ice storms, and winter storms with heavy snow.

Todd-Wadena Electric Cooperative has identified only two instances in its 64-year history when a widespread outage lasted more than 24 hours. And they were within 6 weeks of each other in 1998, both caused by severe storms.

The first was on September 26, 1998, when 100 mph winds went through the area just past midnight, knocking trees onto lines and breaking about 70 utility poles. For a few hours, about 1000 customers were without power; gradually, and with the help of other utilities, all services were connected. Final repairs were made about 36 hours after the storm went through. Damages totaled nearly \$100,000.

The second was a winter storm on November 10, 1998 when heavy snow and winds in excess of 60 mph affected about 2/3 of the Todd-Wadena system – so nearly 3000 customers were affected by outages of varying duration. The first outages were reported at 7:30 a.m.; about 22 hours later, all customers were back on line. The estimated damages totaled about \$75,000.

Table 3-30 shows eight of the largest power failures in U.S. History. Though they may not have directly affected residents of Wadena County, the impact was

noticed. Another relevance to the table is the cause of each outage, each a potential cause anywhere in the U.S. as well as Wadena County.

Table 3-31

Date	Description
11/9/1965	More than 80,000 square miles in seven states and two Canadian provinces go dark and an estimated 30 million people are affected. Six days later, investigators find a single fault relay switch in Ontario caused the outage.
7/13/1977	In New York City, 9 million people are without power for 25 hours after lightning strikes upstate power lines. Police arrest 3,700 in widespread looting and lawlessness.
5/19/1986	A switching problem in an electrical substation at Grand Central Terminal in New York city caused a 12-hour blackout in a four-block area of midtown Manhattan.
8/10/1996	Power goes out for up to 10 hours in a region stretching from Oregon to San Diego and as far east as Texas
10/23/1997	In downtown San Francisco, about 230,000 people in a five-mile long area are affected by a blackout that is later determined by the FBI to have been caused intentionally.
12/8/1998	A construction crew's mistake caused a blackout across a 49-square mile area of the San Francisco peninsula. The outage lasts seven hours and affects more than 940,000 people.
7/6/1999	After three days of scorching heat, power lines give way and cause a 19-hour blackout in sections of New York City.
8/14/2003	The largest power outage in U.S. History sweeps across a vast swath of the northern United States, spreading as far west as Ohio and Michigan, and parts of neighboring Canada. More than 50 Million people are affected.

Source: <http://abcnews.go.com>

Risks & Vulnerabilities

Table 3-32 Power Grid Failure

Sector	Frequency	Warning Time	Impact	Area	Duration	Life/Injury	Property
TH 10/BNSF Corridor	Likely	Minimal	Minor	Catastrophic	More than 24 Hrs	Limited	Limited
Balance of the County	Likely	Minimal	Minor	Catastrophic	More than 24 Hrs	Limited	Limited

Plans, Programs & Policies

- Todd-Wadena Electric Service Cooperative
- The North American Electric Reliability Council
- Electric Power Research Institute
- Other Electrical Service Providers

3.3.6 Dam Failure

Dam failure involves an unintended release or surge of impounded water due to collapse, damage, overtopping, and similar structural failure of a dam structure. Causes of dam failure include, but are not limited to gradual breakdown from normal aging, insufficient design or construction, lack of repair or maintenance, vandalism, blockage by debris, flooding, and similar causes. Failure of a dam can result in damage to or loss of life and property. A list of dams within Wadena County is provided below.

There are 3 dams in Wadena County. The locations of the dams and control structures are shown on Table 3-32

Table 3-33 Dam Inventory

Dam No.	Name	Nearest City	Owner	Hazard
815	Yaeger Lake	Nimrod	Wadena County	Low
828	Huntersville No. 3	Nimrod	Wadena County	Low
829	Huntersville No. 4	Nimrod	Wadena County	Low
	Aldrich	Aldrich		

Source: MN DNR

History

In the past any flooding event within Wadena County or downstream from the County has been caused by flooding overflow and not by structure failure of dams.

Risks & Vulnerabilities

Table 3-34 Dam Failure

Sector	Frequency	Warning Time	Impact	Area	Duration	Life/Injury	Property
TH 10/BNSF Corridor	NA	NA	NA	NA	NA	NA	NA
Balance of the County	Unlikely	Minimal	Minor	Limited	More than 24 Hrs	Minimal	Limited

Plans, Programs and Policies

- Army Corps of Engineers
- NATDAM database
- Minnesota Department of Natural Resources

3.3.7 Computer Viruses

A program or piece of code that is loaded onto your computer without your knowledge and runs against your wishes. Viruses can also replicate themselves. All computer viruses are manmade. A simple virus that can make a copy of itself over and over again is relatively easy to produce. Even such a simple virus is dangerous because it will quickly use all available memory and bring the system to a halt. An even more dangerous type of virus is one capable of transmitting itself across networks and bypassing security systems.

Some people distinguish between general viruses and *worms*. A worm is a special type of virus that can replicate itself and use memory, but cannot attach itself to other programs. <http://www.actlab.utexas.edu/~aviva/compsec/virus/whatis.html>

History

With the advent of the Apple and IBM Personal Computers in the early eighties came the first modern day computer viruses. As these computers became more and more popular the unpreparedness of the computer society to such a phenomenon known as a computer virus, became evident in 1986. In 1986 The first IBM PC virus "Brain" pandemic began. Each year since the "Brain" has seen a significant virus attack as well an increase of attacks.

In 1989, the first anti-virus software became available. Today it is a must for all computers.

In January of 2003, the relatively benign "Slammer" (Sapphire) worm becomes the fastest spreading worm to date, infecting 75,000 computers in approximately ten minutes, doubling its numbers every 8.5 seconds in its first minute of infection. The Sobig worm becomes the one of the first to join the spam community. Infected computer systems have the potential to become spam relay points and spamming techniques are used to mass-mail copies of the worm to potential victims.

Fortunately, to date, the critical facilities of Wadena County have been able to avoid any major attack on their system.

Risks & Vulnerabilities

Table 3-35 Computer Viruses

Sector	Frequency	Warning Time	Impact	Area	Duration	Life/Injury	Property
TH 10/BNSF Corridor	Highly Likely	Minimal	Limited	Negligible	More than 24 Hrs	Minimal	Limited
Balance of the County	Highly Likely	Minimal	Limited	Negligible	More than 24 Hrs	Minimal	Limited

Plans, Programs & Policies

- Wadena County MIS Department
- Back-up Strategies

3.3.8 Terrorism

Human caused hazards, including terrorism, are intentional, malicious, and often times criminal uses of force and violence to perpetrate disasters against persons and/or property. Terrorism, including domestic terrorism, are actions intended to intimidate or coerce a government or civilian population to further political or social objectives. These actions can be either domestic or international depending on the origin, base and objectives of the terrorist organizations or individuals perpetrated for personal reasons.

Terrorism hazards include, but are not limited to the use of weapons of mass destruction, including biological, chemical, and nuclear or radiological weaponry; arson, use of incendiary or explosive devices and armed attacks; industrial sabotage and intentional release of hazardous materials; and attacks on technology including computers through viruses or by other means commonly known as “cyberterrorism.”

History

Due to the broad scope of the term “terrorism”, the historical information is limited. Though that attacks of September 11, 2001, occurred many miles away in New York City, Washington D.C. and Pennsylvania, the impacts of such events reach Wadena County.

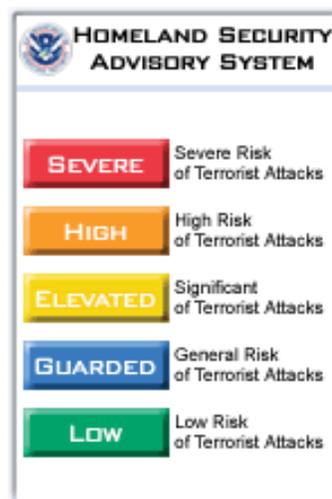
Risks & Vulnerabilities

Table 3-36 Terrorism

Sector	Frequency	Warning Time	Impact	Area	Duration	Life/Injury	Property
TH 10/BNSF Corridor	Likely	Minimal	Limited	Catastrophic	More than 24 Hrs	Limited	Limited
Balance of the County	Likely	Minimal	Limited	Catastrophic	More than 24 Hrs	Minimal	Minimal

Plans, Programs & Policies

- Department of Homeland Security
- Minnesota Homeland Security and Emergency Management (HSEM)
- Local police, fire, emergency medical
- Individual public and private facilities
- Public education and awareness



3.3.9 Railroad Interference With Emergency Vehicles

In Wadena County and specifically the City of Wadena, a major rail line bisects the community dividing it into a north half and south half. With approximately 40 trains per day passing through the area, there is concern that emergency vehicles can be delayed for a period of time long enough to increase the potential severity and impact of a hazard incident.

History

To date, no documented history of loss of life or property due to emergency vehicles being restricted access to an emergency scene from a train moving through the area.

Risks & Vulnerabilities

Table 3-37 Railroad Interference With Emergency Vehicles

Sector	Frequency	Warning Time	Impact	Area	Duration	Life/Injury	Property
TH 10/BNSF Corridor	Highly Likely	Minimal	Limited	Negligible	Less than 1 Hr	Minimal	Minimal
Balance of the County	NA	NA	NA	NA	NA	NA	NA

Plans, Programs & Policies

- Mn/DOT
- BNSF
- County Highway Department
- Transportation Planning

4.0 ACTION PLAN [GOALS, OBJECTIVES, STRATEGIES AND FUNDING]

Eliminating or reducing the risks on persons, property, and the environment is the focus of the Wadena County Hazard Mitigation Plan. The goals and objectives presented within this section are intended to address natural, human-caused and technological hazards within the County before they occur through the use of local, state, and federal resources. To clarify the following action the following terms are defined:

GOAL: The overall desired effect including both long term or ongoing and terminal effects. For the purpose of this Section, goals are identified with a number.

COSTS: The estimated cost to achieve the corresponding objective. The costs are identified by using the following table:

DESCRIPTION	APPROXIMATE LOW	APPROXIMATE HIGH
LOW	\$0.00	\$5,000.00
MODERATE	\$5,001.00	\$50,000.00
HIGH	\$50,001.00	\$250,000.00
VERY HIGH	\$250,001.00	And up

OBJECTIVE: Actions or steps that will be taken to achieve the goal or desired effect. For the purpose of this plan, objectives are identified with a letter.

TASK LEADER: Either individual or collective responsible agency, department, organization, group, or person that will carry out the corresponding objective. Contact information for all Task Leaders is as follows:

Emergency Management
Director: Scott McKellep
Wadena County Courthouse
415 South Jefferson Street
Wadena, MN 56482
218-631-7617

Planning & Zoning
Administrator: Deana Skov
Wadena County Courthouse
415 South Jefferson Street
Wadena, MN 56482
218-631-7604

Highway Department
Engineer: Joel Uling
221 Harry & Rich Dr South
Wadena, MN 56482
218-631-7636

Public Health
Director: Karen Nelson
22 Dayton Ave SE
Wadena, MN 56482
218-631-7629

Sheriff Department
Sheriff: Michael D. Carr
 Wadena County Courthouse
 415 South Jefferson Street
 Wadena, MN 56482
 218-631-7600

Soil and Water Conservation District (SWCD)
Manager: Malinda Dexter
 4 Alfred Street
 Wadena, MN 56482
 218-631-3194

Management of Information Systems (MIS)
Director: Kevin Stensrude
 Wadena County Courthouse
 415 South Jefferson Street
 Wadena, MN 56482
 218-631-7626

City Information is listed in section 2.2 on pages 11 – 14.

TIMELINE: Date or timeframe the objective will be achieved in. If an objective is ongoing or no specific date can be set to carry out the objective then it is labeled as “ongoing.”

Prioritization of Action Items

Assigned Value

This section outlines the prioritization of the action items presented within this plan. Each action item or objective contained within this plan is assigned a prioritization value based on the following table. These values are ranked 1 to 6 with 1 being a “highest priority” value and 6 being the “least priority” value.

Priority	Category
1.	Policy Improvements: Includes making changes to any policy(ies) maintained by Wadena County.
2.	Process Improvements: Includes making changes to any programs or processes conducted by Wadena County.
3.	Physical Improvements: Includes any projects related to improvement of structures or physical terrain to minimize or eliminate hazards.
4.	Information Gathering: Includes any action related to the inventorying or gathering of information.
5.	Outreach Projects: Includes the dissemination of information to the public.
6.	Communication Efforts: Includes ongoing cooperation and communication with organizations/agencies external to Wadena County.

Prioritization by Time Schedule

Each action item presented within this section is scheduled for completion according to a specified timeline. All items of the same assigned value will be implemented according to the time schedule provided depending on the prioritization by costs.

Prioritization by Costs

Each action item is assigned an estimated cost. This estimate is purely a figure used to assess potential costs associated with the action item to be carried out and is not intended to represent any exact value or project cost. Cost benefit estimates were made on all action items during the development of this action plan. All action items of the same assigned value will be implemented contingent upon Wadena County securing any necessary funding. This means that if an action item is a #1 priority, is scheduled to be completed in 2007, but funding cannot be secured until 2009, the item must be held until 2009 to be completed.

A thorough cost benefit analysis to determine the cost benefit ratio will be conducted by the implementing agency prior to the implementation of each project derived from this plan.

4.1 NATURAL HAZARD GOALS, OBJECTIVES AND STRATEGIES

Natural hazard mitigation measures presented throughout this planning process have been divided into the following groups:

- Tornado
- Sustained Wind Storm
- Flooding and Flash Flooding
- Extreme Heat
- Winter Storms
- Wildfire
- Drought
- Infectious Disease
- Severe Summer Storms

4.1.1 TORNADO MITIGATION PLAN

Resources:

USDA Storm Resources & Info http://disaster.usda.gov/storm_jump.htm

Goal 1: Minimize the impacts of tornadoes on life and property

Objectives	P	Timeframe							Cost
		2007	2008	2009	2010	2011	2012	Ongoing	
1a: Continue to provide Posters, brochures, media materials Task Leader: Emergency Management Director	5							X	LOW
1b: Distribute educational materials with County mailings Task Leader: Emergency Management Director	5							X	LOW
1c: Provide information on making structures safer, materials, building storm shelters, etc. Task Leader: County Planning & Zoning Administrator, Planning & Zoning Administrator or Commission for the Cities of Aldrich, Menahga, Nimrod, Sebeka, Staples, Wadena, and Verndale	5							X	LOW
1d: Require storm shelters for all mobile home parks, multiple family dwellings Task Leader: County Planning & Zoning Administrator, Planning & Zoning Administrator or Commission for the Cities of Aldrich, Menahga, Nimrod, Sebeka, Staples, Wadena, and Verndale	1							X	MODERATE
1e: Encourage NWS weather radio use Task Leaders: Emergency Management Director	5							X	LOW
1f: Continue to upgrade and improve Emergency Warning Systems Task Leaders: Emergency Management Director	3							X	HIGH
1g: Require all warning systems to be radio activated by dispatch and have battery back-up Task Leaders: Emergency Management Director	3					X			HIGH
1h: Establish neighborhood calling trees Task Leaders: Emergency Management Director	2			X					LOW

4.1.2 FLOODING AND FLASH FLOODING

Resources:
Minnesota Department of Natural Resources

Goal 1: Minimize the impacts of flooding on life and property

Objectives	P	Timeframe							Cost
		2007	2008	2009	2010	2011	2012	Ongoing	
1a: Restrict building in floodplain areas that consistently flood – Includes cities Task Leader: Planning & Zoning Administrator, Planning & Zoning Administrator or Commission for the Cities of Aldrich, Menahga, Nimrod, Sebeka, Staples, Wadena, and Verndale	1							X	LOW
1b: Encourage development of parks and open space areas along floodplain areas that consistently flood Task Leader: Planning & Zoning Administrator, Planning & Zoning Administrator or Commission for the Cities of Aldrich, Menahga, Nimrod, Sebeka, Staples, Wadena, and Verndale	5							X	MODERATE
1c: Continue to update Emergency Operation Plan yearly Task Leader: Emergency Management Director	1							X	LOW
1d: Encourage early participation of individual landowners in the FEMA National Flood Insurance Program by persons within floodplain areas Task Leader: Planning & Zoning Administrator, Emergency Management Director	1							X	LOW

Goal 2: Minimize impacts of flash floods on life and property

Objectives	P	Timeframe							Cost
		2007	2008	2009	2010	2011	2012	Ongoing	
2a: Provide public education on dangers of flash flooding Task Leader: Emergency Management Director	5							X	LOW
2b: Encourage municipalities to require the development of new storm sewer infrastructure capable of handling a ten to twenty year rain event in new subdivisions Task Leader: Planning & Zoning Administrator, Emergency Management Director	1			X					HIGH
2c: Keep culverts and drainage ditches free of debris Task Leader: County Highway Engineer, Town Boards, City of Wadena Public Works	2							X	MODERATE
2d: Educate property owners on landscaping methods Task Leader: Planning & Zoning Administrator, Wadena County SWCD	5	X							LOW

4.1.3 WINTER STORMS

Resources: NOAA

Goal 1: Minimize the impacts of winter storm activity and cold weather events on citizens

Objectives	P	Timeframe							Cost
		2007	2008	2009	2010	2011	2012	Ongoing	
1a: Encourage through education, event preparedness; i.e. Furnace inspection Task Leader: Public Health Director, Emergency Management Director	5							X	LOW
1b: Encourage the review of winter driving techniques Task Leader: Emergency Management Director, Public Health Director, Sheriff, MN Department of Public Safety	5							X	LOW
1c: Continue to promote the need for emergency supplies and blankets in traveling vehicles Task Leader: Emergency Management Director, Public Health Director, Sheriff, MN Department of Public Safety	5							X	LOW
1d: Encourage the elderly and those that care for the elderly, to keep an ample supply of medication Task Leader: Emergency Management Director, Public Health Director	5							X	LOW

Goal 2: Minimize the impacts of winter storm activity and cold weather events on property

Objectives	P	Timeframe							Cost
		2007	2008	2009	2010	2011	2012	Ongoing	
2a: Provide information on building materials and practices that increase structural safety, and increase energy conservation in cold weather conditions Task Leader: Planning & Zoning Administrator	5							X	LOW
2b: Encourage the planting of trees and natural vegetation in new development to minimize large snow accumulation Task Leader: Planning & Zoning Administrator, Wadena County SWCD	5							X	MODERATE
2c: Promote inspection and trimming of trees that potentially could fall onto power lines Task Leader: Emergency Management Director, Electric Service Providers	2							X	MODERATE
2d: Promote the use of snow fencing Task Leader: Emergency Management Director	5							X	LOW

Goal 3: Prevent or minimize the impacts of winter storm activity and cold weather events on infrastructure including individual septic treatment systems

Objectives	P	Timeframe							Cost
		2007	2008	2009	2010	2011	2012	Ongoing	
3a: Draw upon local and hazard mitigation funding to ensure power infrastructure can withstand ice storm conditions Task Leader: Planning & Zoning Administrator	6		X						HIGH
3b: Provide information to landowners with Individual Septic Treatment Systems on ways to protect their systems from extreme cold Task Leader: Planning & Zoning Administrator	5							X	LOW

Goal 4: Minimize the impacts of winter storm activity and cold weather events on roadways

Objectives	P	Timeframe							Cost
		2007	2008	2009	2010	2011	2012	Ongoing	
4a: Encourage the planting of natural vegetation or the placement of snow fences or similar devices along roadways to minimize snow accumulation Task Leader: Highway Engineer	5							X	LOW
4b: Continue providing exceptional snow removal, salting, and sanding to minimize the impacts of snow accumulations on motorists Task Leader: Highway Engineer	3							X	MODERATE
4c: Promote the use of snow fencing, including "living snow fencing" Task Leader: Highway Engineer	5							X	MODERATE

4.1.4 DROUGHT

Resources:

NOAA Drought Info Center	http://www.drought.noaa.gov/
National Drought Mitigation Center	http://www.drought.unl.edu/index.htm
U.S. Drought Monitor	http://www.drought.unl.edu/dm/monitor.html
USDA Drought Resources & Info	http://disaster.usda.gov/drought_jump.htm

Goal 1: Minimize the impacts of drought on agriculture

Objectives	P	Timeframe							Cost
		2007	2008	2009	2010	2011	2012	Ongoing	
1a: Encourage the wise utilization of water resources regardless of time of year Task Leader: Wadena County SWCD	5							X	LOW
1b: Encourage crop rotation and planting crops according to water needs Task Leader: Wadena County SWCD	5							X	LOW
1c: Promote mulch gardens Task Leader: Wadena County SWCD	5							X	LOW

Goal 2: Minimize the stress the drought causes to farmers

Objectives	P	Timeframe							Cost
		2007	2008	2009	2010	2011	2012	Ongoing	
2a: Promote area support groups Task Leader: Public Health Director	5							X	LOW

Goal 3: Minimize the impacts of drought on livestock

Objectives	P	Timeframe							Cost
		2007	2008	2009	2010	2011	2012	Ongoing	
3a: Promote shelter belts Task Leader: Wadena County SWCD	5							X	LOW
3b: Recommend sprinklers to cool animals Task Leader: Wadena County SWCD	5							X	MODERATE

4.1.5 SEVERE SUMMER STORMS Thunderstorm/Lightning/Hail/High Wind

Resources:

USDA Storm Resources & Info http://disaster.usda.gov/storm_jump.htm

Goal 1: Minimize the impacts of severe summer storms on life and property

Objectives	P	Timeframe							Cost
		2007	2008	2009	2010	2011	2012	Ongoing	
1a: Continue to provide Posters, brochures, media materials Task Leader: Emergency Management	5							X	LOW
1b: Provide information on making structures safer: materials, building storm shelters, etc. Task Leader: Planning & Zoning Administrator, Planning & Zoning Administrator or Commission for the Cities of Aldrich, Menahga, Nimrod, Sebeka, Staples, Wadena, and Verndale.	5							X	LOW
1c: Require storm shelters for all mobile home parks, multiple family dwellings Task Leader: County Planning & Zoning Administrator, Planning & Zoning Administrator or Commission for the Cities of Aldrich, Menahga, Nimrod, Sebeka, Staples, Wadena, and Verndale.	1							X	MODERATE
1d: Encourage NWS weather radio use Task Leader: Emergency Management Director	5							X	LOW
1e: Continue to upgrade and improve Emergency Warning Systems Task Leaders: Emergency Management Director	3							X	HIGH
1f: Encourage cities to participate in state programs Task Leaders: Emergency Management Director	6							X	LOW
1g: Provide education on what causes storm damage Task Leader: Emergency Management Director	5							X	LOW
1h: Recommend a list of building materials capable of handling high winds in areas without natural windbreaks Task Leader: Planning & Zoning Administrator, Planning & Zoning Administrator or Commission for the Cities of Aldrich, Menahga, Nimrod, Sebeka, Staples, Wadena, and Verndale.	5							X	LOW
1i: Recommend the use of windbreaks in all new development where natural or man-made windbreaks do not exist Task Leader: Wadena County SWCD	5							X	MODERATE
1j: Provide public education on the dangers of wind, especially winds associated with thunderstorm activity Task Leader: Emergency Management Director	5							X	LOW
1k: Provide information on reinforcement measures that can be taken by landowners to prevent damage caused by wind Task Leader: Planning & Zoning Administrator, Planning & Zoning Administrator or Commission for the Cities of Aldrich, Menahga, Nimrod, Sebeka, Staples, Wadena, and Verndale, Emergency Management Director	5							X	LOW

Goal 2: Minimize the impacts of severe summer storms on roadways

Objectives	P	Timeframe							Cost
		2007	2008	2009	2010	2011	2012	Ongoing	
2a: Identify and improve potential and historical areas of road washout Task Leader: Highway Engineer, Town Boards	4							X	MODERATE

4.1.6 WIND STORM (SUSTAINED)

Goal 1: Minimize the impacts of sustained wind storms on property

Objectives	P	Timeframe							Cost
		2007	2008	2009	2010	2011	2012	Ongoing	
1a: Recommend a list of building materials capable of handling high winds in areas without natural windbreaks Task Leader: Planning & Zoning Administrator, Planning & Zoning Administrator or Commission for the Cities of Aldrich, Menahga, Nimrod, Sebeka, Staples, Wadena, and Verndale	5							X	LOW
1b: Encourage property owners to trim trees that are near buildings Task Leader: Planning & Zoning Administrator, Planning & Zoning Administrator or Commission for the Cities of Aldrich, Menahga, Nimrod, Sebeka, Staples, Wadena, and Verndale	5							X	LOW
1c: Encourage property owners to removed dead and diseased trees Task Leader: Planning & Zoning Administrator, Planning & Zoning Administrator or Commission for the Cities of Aldrich, Menahga, Nimrod, Sebeka, Staples, Wadena, and Verndale	5							X	LOW

Goal 2: Minimize the impacts of sustained wind storms on lakeshore

Objectives	P	Timeframe							Cost
		2007	2008	2009	2010	2011	2012	Ongoing	
2a: Encourage landowners to keep lakeshore in natural state Task Leader: Wadena County SWCD, MN DNR	5							X	LOW
2b: Promote the use of rip rap when practical Task Leader: Wadena County SWCD, MN DNR	5							X	MODERATE

4.1.7 EXTREME HEAT

Resources:

Federal Emergency Management Agency

<http://www.fema.gov/hazards/extremeheat/heat.shtm>

Goal 1: Lesson the impact of extremely high temperature on the people of Wadena County

Objectives	P	Timeframe							Cost
		2007	2008	2009	2010	2011	2012	Ongoing	
1a: Publish a special section with emergency information on extreme heat; include the phone numbers of emergency services offices and hospitals. Task Leader: Emergency Management Director, Public Health Director	5							X	LOW
1b: Sponsor a "Helping Your Neighbors" program through your local school system to encourage children to think of those persons who require special assistance such as elderly people, infants or people with disabilities during severe weather conditions Task Leader: Public Health Director	6		X						LOW

4.1.8 WILDFIRE

Resources:

National Interagency Fire Center <http://www.nifc.gov/>
 FEMA Wildfire Information <http://www.fema.org/hazards/fires/wildfires.shtm>
 Minnesota DNR Wildfire <http://www.dnr.state.mn.us/forestry/fire/index.html>
 USDA Fire Resources & Info http://disaster.usda.gov/fire_jump.htm

Goal 1: Continue strong wildfire prevention measures

Objectives	P	Timeframe							Cost
		2007	2008	2009	2010	2011	2012	Ongoing	
1a: Continue to provide public education materials related to the prevention of forest fires and wildfire Task Leader: MN DNR	5							X	LOW
1b: Continue to conduct controlled burns as necessary to prevent the spread of wildfires Task Leader: MN DNR	3							X	MODERATE
1c: Ensure the strong coordination between local fire departments and associations as well as those from outside areas to provide fire protection, which will reduce the impact of wildfires Task Leader: MN DNR, Emergency Management Director	6							X	LOW

Goal 2: Work to promote preventative measures to reduce risk of wildfire

Objectives	P	Timeframe							Cost
		2007	2008	2009	2010	2011	2012	Ongoing	
2a: Promote positive forestry management techniques including the removal of dead, dry vegetation and trees which may ignite as a result of lightning or human related causes Task Leader: MN DNR, Emergency Management Director	5							X	LOW
2b: Encourage the use of landscape design that will minimize the risk of wildfire Task Leader: MN DNR, Planning & Zoning	5							X	LOW
2c: Continue to monitor the removal of trees and vegetation around electrical lines and if possible bury electrical lines Task Leader: Emergency Management Director, Electric Service Providers	6							X	MODERATE

4.1.9 INFECTIOUS DISEASE

Resources:

Minnesota Department of Health <http://www.health.state.mn.us/divs/idepc/>
 Infectious Disease Epidemiology, Prevention and Control Division

Centers for Disease Control <http://www.bt.cdc.gov/index.asp>
 Emergency Preparedness and Response

Goal 1: Foster and support health related programs related to the mitigation or planning for infectious disease

Objectives	P	Timeframe							Cost
		2007	2008	2009	2010	2011	2012	Ongoing	
<p>1a: Encourage the continued cooperation between Wadena County Public Health Department and the Minnesota Department of Health Task Leader: Public Health Director</p>	6							X	LOW

4.2 HUMAN CAUSED/TECHNOLOGICAL HAZARD GOALS, OBJECTIVES AND STRATEGIES

Human caused and technological hazard mitigation measures presented throughout this planning process have been divided into the following groups:

- Groundwater Depletion
- Groundwater Contamination
- Hazardous Material (Transport and Train)
- Hazardous Material (Fixed facilities)
- Power Grid Failure
- Dam Failure
- Computer Viruses
- Terrorism
- Railroad Interference with Emergency Response

4.2.1 Groundwater Depletion

Resources:

Wadena County Comprehensive Local Water Plan
USGS Water-Resources Investigations Report 02-4023

Goal 1: Avoid depletion of Wadena County's groundwater aquifers

Objectives	P	Timeframe							Cost
		2007	2008	2009	2010	2011	2012	Ongoing	
1a: Support Goals and Objectives of the Wadena County Comprehensive Local Water Plan Task Leader: Wadena County SWCD, Planning & Zoning Administrator	6							X	LOW
1b: Continue to Monitor levels on Lakes and Rivers in the County Task Leader: Wadena County SWCD, MN DNR	6							X	MODERATE
1c: Distribute information on how to reduce water consumption Task Leader: Wadena County SWCD	5							X	LOW
1d: Establish irrigation scheduling program and promote water mark blocks Task Leader: Wadena County SWCD	5		X						LOW
1e: Continue to monitor the 18 groundwater observation wells Task Leader: MN DNR	6							X	MODERATE

4.2.2 Groundwater Contamination

Resources:

Environmental Protection Agency www.epa.gov
 Minnesota Pollution Control Agency www.pca.state.mn.us
 MN Department
 of Agriculture <http://www.mda.state.mn.us/appd/waterprotect.htm>
 Minnesota Department
 of Health <http://www.health.state.mn.us/divs/eh/groundwater/programs.html>

Goal 1: Eliminate or reduce as much as feasible, risks associated with groundwater contamination

Objectives	P	Timeframe							Cost
		2007	2008	2009	2010	2011	2012	Ongoing	
1a: Encourage the development of local wellhead protection plans with the assistance of the Minnesota Department of Health Task Leader: Wadena County SWCD	6							X	MODERATE
1b: Support by providing public education and assistance to existing programs designed to provide support and education to landowners for individual well testing Task Leader: Wadena County SWCD	6							X	LOW

Goal 2: Eliminate or reduce as much as feasible, risks associated with surface water contamination

Objectives	P	Timeframe							Cost
		2007	2008	2009	2010	2011	2012	Ongoing	
2a: Provide support and assistance to local governments, property associations, lakes associations or similar groups in the development and implementation of local surface water management plans and in water quality related public education Task Leader: Wadena County SWCD	6							X	MODERATE
2b: Implement the goals, objectives, and policies of the Wadena County Water Plan Task Leader: Wadena County SWCD	6							X	MODERATE

4.2.3 Hazardous Material (Transport and Train)

Resources:

National Response Center
 Department of Transportation
 Disaster Help

<http://www.nrc.uscg.mil/nrchp.html>
<http://hazmat.dot.gov/>
www.disasterhelp.gov

Minnesota Emergency Planning and Community
 Right-to-Know Act Program

<http://www.epcra.state.mn.us/>

Goal 1: Ensure safe transportation of materials through pipelines in Wadena County

Objectives	P	Timeframe							Cost
		2007	2008	2009	2010	2011	2012	Ongoing	
1a: Educate and encourage the use of Gopher State One Call. "Call before you dig" Task Leader: Emergency Management Director, County Planning & Zoning, Planning & Zoning Administrator or Commission for the Cities of Aldrich, Menahga, Nimrod, Sebeka, Staples, Wadena, and Verndale, Pipeline Companies	5							X	LOW
1b: Ensure that proper measures to enhance pipeline integrity are being followed Task Leader: Emergency Management Director, Pipeline Companies	6							X	LOW
1c: Encourage pipeline companies to maintain an unobstructed right-of-way Task Leader: Emergency Management Director	6							X	LOW

Goal 2: Ensure the safe transportation of hazardous materials on roadways within Wadena County

Objectives	P	Timeframe							Cost
		2007	2008	2009	2010	2011	2012	Ongoing	
2a: Enforce laws regarding the transporting of hazardous materials Task Leader: Sheriff, City Police, State Patrol	2							X	MODERATE
2b: Support effort to increase funding for rural road safety programs Task Leader: Highway Engineer	6							X	LOW
2c: Ensure that the roadways within Wadena County can safely accommodate the vehicles hauling hazardous material Task Leader: Highway Engineer	2							X	HIGH

4.2.4 Hazardous Material (Fixed facilities)

Resources:

National Response Center
 Department of Transportation
 Disaster Help

<http://www.nrc.uscg.mil/nrchp.html>
<http://hazmat.dot.gov/>
www.disasterhelp.gov

Minnesota Emergency Planning and Community
 Right-to-Know Act Program

<http://www.epcra.state.mn.us/>

Goal 1: Ensure the safe operation, storage, and maintenance of facilities holding, distributing, or using hazardous material substances

Objectives	P	Timeframe								Cost
		2007	2008	2009	2010	2011	2012	Ongoing		
1a: Maintain an updated list of all hazardous materials sites as required by the Minnesota Emergency Response Commission Task Leader: Emergency Management Director	4								X	LOW
1b: Ensure all fire, police, and medical emergency response professionals are trained and equipped to respond to hazardous material incidents Task Leader: Emergency Management Director	2								X	HIGH
1c: Provide public education on hazardous material incidents in the form of media releases, articles, Wadena County Website, etc. Task Leader: Emergency Management Director	5								X	LOW

4.2.5 Power Grid Failure

Goal 1: Eliminate or reduce as much as feasible, the threat of a power loss in Wadena County

Objectives	P	Timeframe								Cost
		2007	2008	2009	2010	2011	2012	Ongoing		
1a: Encourage the building of generation sources within Wadena County Task Leader: Electrical Service Providers	6								X	VERY HIGH
1b: Continue with power management programs where there is a voluntary control of electrical use by individual users Task Leader: Electrical Service Providers	6								X	LOW
1c: Continue education efforts focused on conservation Task Leader: Electrical Service Providers, Emergency Management Director	6								X	LOW

Goal 2: Eliminate or reduce as much as feasible, the impact of a power failure in Wadena County

Objectives	P	Timeframe							Cost
		2007	2008	2009	2010	2011	2012	Ongoing	
2a: Encourage critical facilities to install back-up generators Task Leader: Emergency Management Director	3							X	MODERATE
2b: Educate citizens on steps to take in case of failure. Task Leader: Emergency Management Director, Electrical Service Providers	5							X	LOW

4.2.6 Dam Failure

Resources:

Association of State Dam Safety Officials

<http://www.damsafety.org/>

Minnesota DNR, Division of Waters, Dam Safety

http://www.dnr.state.mn.us/waters/surfacewater_section/damsafety/index.html

Goal 1: Eliminate or reduce as much as feasible, risks associated with the failure of dams within Wadena County

Objectives	P	Timeframe							Cost
		2007	2008	2009	2010	2011	2012	Ongoing	
1a: Maintain contact and coordination with the Minnesota Dam Safety Official Task Leader: Wadena County SWCD	6							X	LOW

4.2.7 Computer Viruses

Goal 1: Decrease the impact of computer viruses on response facilities, public health facilities, transportation industry, HAZMAT facilities, schools, etc.

Objectives	P	Timeframe							Cost
		2007	2008	2009	2010	2011	2012	Ongoing	
1a: Encourage all agencies to regularly update virus protection software Task Leader: MIS Director	3							X	MODERATE
1b: Support efforts to ensure that emergency response departments are adequately funded for technology updates and upgrades Task Leader: MIS Director, Emergency Management Director	6							X	MODERATE
1c: Continue strategies for comprehensive back-up of electronic data and systems Task Leader: MIS Director	2							X	LOW

4.2.8 Terrorism

Goal 1: Eliminate or reduce as much as feasible crime and terrorism

Objectives	P	Timeframe							Cost
		2007	2008	2009	2010	2011	2012	Ongoing	
1a: Continue to support local, state and federal anti-terrorism programs Task Leader: Sheriff, Emergency Management Director	6							X	MODERATE
1b: Continue to provide educational information on what to be aware of Task Leader: Sheriff, Emergency Management Director	5							X	LOW

4.2.9 Railroad Interference with Emergency Response

Goal 1: Eliminate or reduce as much as feasible the threat of death or injury due to delayed emergency vehicles

Objectives	P	Timeframe							Cost
		2007	2008	2009	2010	2011	2012	Ongoing	
1a: Promote duplicated emergency services on both side of railroad tracks Task Leader: Emergency Management Director	2							X	HIGH
1b: Increase and maintain communication with railroad during an emergency Task Leader: Sheriff, Emergency Management Director	6							X	LOW
1c: Examine the feasibility of building an under or over pass Task Leader: Highway Engineer	3			X					VERY HIGH

4.3 POTENTIAL FUNDING SOURCES

Implementation of the mitigation strategies is often dependent on funding assistance from Federal and State sources. FEMA provides funding for structural projects through hazard mitigation grant programs, such as the Hazard Mitigation Grant Program, Pre-Disaster Mitigation Assistance Program, and the Flood Mitigation Assistance Program. Strategies that qualify for FEMA assistance include structural improvements to dams, bridges, culvert replacement, as well as emergency generators and warning sirens. Financial support for other mitigation strategies proposed in this plan may be sought through alternative funding sources. Projects may be implemented with the assistance of non-profit organizations, or funds secured from Community Foundations. There are many State and Federal programs, in addition to private funding sources, that are available. A summary table of sources is provided as Appendix K.

Many communities believe they are unable to take steps in preventing damage from hazards due to lack of funding. Appendix K is intended to provide some examples of funding options. This list is not comprehensive and should be added to when new funding programs are created and recognized.

4.4 CITY PARTICIPATION IN MITIGATION OBJECTIVES

Cities throughout Wadena County two opportunities to identify their willingness to participate in the implementation of the tasks presented within Section 4.0 of this plan. Any city may, at any time, participate in the implementation of any of the tasks identified by this plan. To be included within this plan a city must first contact the Wadena County Emergency Management Director. Below is a list of the level of participation offered by Wadena County cities:

Section/Task Number	Participating Cities
4.1.1 Tornados (p. 78)	
1a	Staples & Wadena
1b	Staples & Wadena
1c	Staples & Wadena
1d	Staples & Wadena
1e	Staples & Wadena
1f	Staples & Wadena
1g	Staples & Wadena
1h	Staples & Wadena
4.1.2 Flooding (p. 79)	
1a	Staples & Wadena
1b	Staples & Wadena
1c	Staples & Wadena
1d	Staples
2a	Staples & Wadena
2b	Staples & Wadena
2c	Staples & Wadena
2d	Staples & Wadena
4.1.3 Winter Storms (p. 80)	
1a	Staples & Wadena
1b	Staples & Wadena
1c	Staples & Wadena
1d	Staples & Wadena
2a	Staples & Wadena
2b	Staples & Wadena
2c	Staples & Wadena
2d	Staples & Wadena
3a	Staples & Wadena
3b	Staples & Wadena
4a	Staples & Wadena
4b	Staples & Wadena
4c	Staples & Wadena
4.1.4 Drought (p. 82)	
1a	Staples & Wadena
1b	Wadena
1c	Staples & Wadena
2a	None
3a	None
3b	Staples & Wadena

Section/Task Number	Participating Cities
4.1.5 Summer Storms (p. 84)	
1a	Staples & Wadena
1b	Staples & Wadena
1c	Staples & Wadena
1d	Staples & Wadena
1e	Staples & Wadena
1f	Staples & Wadena
1g	Staples & Wadena
1h	Staples & Wadena
1i	Staples & Wadena
1j	Staples & Wadena
1k	Staples & Wadena
2a	Staples & Wadena
4.1.6 Wind Storms (sustained) (p. 85)	
1a	Staples & Wadena
1b	Staples & Wadena
1c	Staples & Wadena
2a	None
2b	None
4.1.7 Extreme Heat (p. 86)	
1a	Staples & Wadena
1b	Staples & Wadena
4.1.8 Wildfire (p. 87)	
1a	Staples & Wadena
1b	Staples
1c	Staples & Wadena
2a	None
2b	Staples
2c	Staples & Wadena
4.1.9 Infectious Disease (p. 87)	
1a	Staples & Wadena
4.2.1 Groundwater Depletion (p. 89)	
1a	Staples & Wadena
1b	Staples & Wadena
1c	Staples & Wadena
1d	None
1e	Staples & Wadena
4.2.2 Groundwater Contamination (p. 90)	
1a	Staples & Wadena
1b	Staples & Wadena
2a	Staples & Wadena
2b	Staples & Wadena
4.2.3 Hazardous Material (Transport & Train) (p. 91)	
1a	Staples & Wadena
1b	Staples & Wadena
1c	Staples & Wadena
2a	Staples & Wadena
2b	Staples & Wadena
2c	Staples & Wadena

Section/Task Number	Participating Cities
4.2.4 Hazardous Material (Fixed facilities) (p. 92)	
1a	Staples & Wadena
1b	Staples & Wadena
1c	Staples & Wadena
4.2.5 Power Grid Failure (p. 92)	
1a	Staples & Wadena
1b	Staples & Wadena
1c	Staples & Wadena
2a	Staples & Wadena
2b	Staples & Wadena
4.2.6 Dam Failure (p. 93)	
1a	None
4.2.7 Computer Viruses (p. 94)	
1a	Staples & Wadena
1b	Staples & Wadena
1c	Staples & Wadena
4.2.8 Terrorism (p. 94)	
1a	Staples & Wadena
1b	Staples & Wadena
4.2.9 Railroad Interference with Emergency Response (p. 95)	
1a	Staples & Wadena
1b	Staples & Wadena
1c	Staples & Wadena

City of Aldrich

Population

	Number	Percent %
1970	85	
1980	88	
1990	70	
2000	53	
2002	49	
Percent % of Change 1990-2000	-17	-24.30
Percent % of Change 1970-2000	15	-37.65
65 and Over of 2000 Population	2	28.29
85 and Over of 2000 Population	2	3.77

Population By Race

	Number	Percent %
White	52	98.10
Black or African American	0	0.00
American Indian or Alaska Native	0	0.00
Asian	0	0.00
Native Hawaiian and Other Pacific Islanders	0	0.00
Other Single Race	0	0.00
Two or More Races	1	1.90
Hispanic or Latino	0	0.00
Total	53	100.00
Hispanic or Latino	0	0.00

Education Attainment

	Number	Percent %
No Schooling completed	0	0.00
Nursery to 4th grade	0	0.00
5th to 6th grade	0	0.00
7th to 8th grade	2	5.56
9th grade	3	8.33
10th grade	2	5.56
11th grade	2	5.56
12th grade, no diploma	0	0.00
High school graduate (include equivalency)	16	44.44
Some college, less than 1 year	0	0.00
Some college, 1 or more years, no degree	6	16.67
Associate degree	4	11.11
Bachelor's degree	0	0.00
Master's degree	0	0.00
Professional school degree	1	2.78
Doctorate Degree	0	0.00
Total	21	100.00

Housing

	Number	Percent %
Number of Households	26	
Persons per Household	2.04	
Number of Housing Units	31	
Vacant Units Non Seasonal	4	12.90
Vacant Units Seasonal	1	3.23
Owner Occupied Units	23	74.19
Renter Occupied Units	3	9.68

Age of Housing

	Number	Percent %
Built 1989 to March 2000	0	0.00
Built 1985 to 1988	0	0.00
Built 1980 to 1984	0	0.00
Built 1970 to 1979	6	19.35
Built 1960 to 1969	2	6.45
Built 1950 to 1959	0	0.00
Built 1940 to 1949	5	16.13
Built 1939 and Earlier	18	58.06
Total	31	100.00

Heating Method

	Number	Percent %
Utility Gas	3	12.50
Bottled, tank, or LP gas	11	45.83
Electricity	2	8.33
Fuel Oil, kerosene, etc.	8	33.33
Coal or coke	0	0.00
Wood	0	0.00
Solar energy	0	0.00
Other fuel	0	0.00
No fuel used	0	0.00
Total	24	100.00

Group Quarter

	Number	Percent %
Correctional institutions	0	0
Nursing Homes	0	0
Other institutions	0	0
College dormitories	0	0
Military quarters	0	0
Other non institutional group quarters	0	0
Total	0	0

Market Values

Estimated Market Value	1,507,300
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Economic Development

	Number
Average Income	31,564
Median Income	30,417
Per Capita Income	14,598
Total Population	53
Total Income	773,700

Poverty

	Number
Income below poverty level	2
Income at or above poverty level	23

Industry

	Number	Percent %
Agriculture, forestry, Fishing and hunting and mining	0	0
Agriculture, forestry, fishing and hunting	0	0
Mining	0	0
Construction	4	19.05
Manufacturing	4	9.52
Wholesale trade	4	19.05
Retail trade	6	28.57
Transportation and warehousing, and utilities	6	28.57
Transportation and warehousing	6	28.57
Utilities	0	0
Information	0	0
Finance, insurance, real estate and rental and leasing	0	0
Finance and insurance	0	0
Real estate and rental and leasing	0	0
Professional , scientific, management, administrative, and waste management services	1	4.76
Professional ,scientific, and technical services	1	4.76
Management of companies and enterprises	0	0
Administrative and support and waste management services	0	0
Educational, health and social services	2	9.52
Educational services	2	9.52
Health care and social assistance	0	0
Arts, entertainment, recreation, accommodation and food services	0	0
Arts, entertainment, and recreation	0	0
Accommodation and food services	0	0
Other services	0	0
Public Administration	2	9.52
Total	21	100

Top 3 Employers

	Number of Employees
Total	

Transportation

	Number	Percent %
Car, Truck or van	14	66.67
Drive alone	14	66.67
Carpooled	0	0
Public Transportation	0	0
Bus or trolley bus	0	0
Streetcar or trolley car	0	0
Subway or elevated	0	0
Railroad	0	0
Ferry boat	0	0
Taxicab	0	0
Motorcycle	0	0
Bicycle	0	0
Walked	2	9.52
Other means	0	0
Worked at home	5	23.81
Total	21	100

Mean Travel Time to Work

Mean Travel Time to Work	17.3
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City of Menahga

Population

	Number	Percent %
1970	835	
1980	980	
1990	1076	
2000	1220	
2002	1217	
Percent % of Change 1990-2000	144	13.40
Percent % of Change 1970-2000	404	46.11
65 and Over of 2000 Population	91	7.46

Population By Race

	Number	Percent %
White	1200	98.40
Black or African American	1	0.10
American Indian or Alaska Native	12	1.00
Asian	1	0.10
Native Hawaiian and Other Pacific Islanders	0	0.00
Other Single Race	1	0.10
Two or More Races	5	0.40
Total	1220	100.00
Hispanic or Latino	4	0.32

Education Attainment

	Number	Percent %
No schooling completed	2	0.23
Nursery to 4th grade	14	1.62
5th to 6th grade	17	1.97
7th to 8th grade	167	19.35
9th grade	30	3.48
10th grade	33	3.82
11th grade	10	1.16
12th grade, no diploma	18	2.09
High school graduate (include equivalency)	291	33.72
Some college, less than 1 year	41	4.75
Some college, 1 or more years, no degree	119	13.79
Associate degree	45	5.21
Bachelor's degree	45	5.21
Master's degree	23	2.67
Professional school degree	2	0.23
Doctorate degree	6	0.70
Total	863	100.00

Housing

	Number	Percent %
Number of Households	491	
Persons per Household	2.22	
Number of Housing Units	556	
Vacant Units Non Seasonal	37	6.65
Vacant Units Seasonal	28	5.04
Owner Occupied Units	369	66.36
Renter Occupied Units	122	21.94

Age of Housing

	Number	Percent %
Built 1999 to March 2000	6	1.09
Built 1985 to 1998	35	6.34
Built 1960 to 1994	35	6.34
Built 1980 to 1989	44	7.97
Built 1970 to 1979	125	27.64
Built 1960 to 1969	73	13.22
Built 1950 to 1959	58	10.51
Built 1940 to 1949	56	10.14
Built 1939 and Earlier	120	21.74
Total	552	100.00

Heating Method

	Number	Percent %
Utility Gas	246	49.90
Bottled, tank, or LP gas	27	5.48
Electricity	120	24.34
Fuel Oil, kerosene, etc.	80	16.23
Coal or coke	0	0.00
Wood	14	2.84
Solar energy	0	0.00
Other fuel	0	0.00
No fuel used	6	1.22
Total	493	100.00

Group Quarter

	Number	Percent %
Correctional institutions	0	0
Nursing Homes	128	100
Other institutions	0	0
College dormitories	0	0
Military quarters	0	0
Other non institutional group quarters	0	0
Total	128	100

Market Values

Estimated Market Value	37,063,800
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Economic Development

	Number
Average Income	34,332
Median Income	22,232
Per Capita Income	14,360
Total Population	17,604,800
Total Income	1,220

Poverty

	Number
Income below poverty level	96
Income at or above poverty level	380

Industry

	Number	Percent %
Agriculture, forestry, fishing and hunting and mining	17	4.11
Agriculture, forestry, fishing and hunting	17	4.11
Mining	0	0.00
Construction	38	9.18
Manufacturing	53	12.80
Wholesale trade	9	2.17
Retail trade	73	17.63
Transportation and warehousing, and utilities	23	5.56
Transportation and warehousing	23	5.56
Utilities	0	0.00
Information	2	0.48
Finance, insurance, real estate and rental and leasing	21	5.07
Finance and insurance	18	4.35
Real estate and rental and leasing	3	0.72
Professional, scientific, management, administrative, and waste management services	16	3.86
Professional, scientific, and technical services	8	4.76
Management of companies and enterprises	0	0.00
Administrative and support and waste management services	8	1.93
Educational, health and social services	110	26.57
Educational services	28	6.76
Health care and social assistance	82	19.80
Arts, entertainment, recreation, accommodation and food services	15	3.62
Arts, entertainment, and recreation	5	1.21
Accommodation and food services	10	2.42
Other services	29	7.00
Public Administration	8	1.93
Total	414	100

Top 3 Employers

	Number of Employees
Total	

Transportation

	Number	Percent %
Car, Truck or van	362	88.51
Drive alone	313	76.53
Carpooled	49	11.98
Public Transportation	0	0
Bus or trolley bus	0	0
Streetcar or trolley car	0	0
Subway or elevated	0	0
Railroad	0	0
Ferry boat	0	0
Taxicab	0	0
Motorcycle	0	0
Bicycle	0	0
Walked	15	3.67
Other means	6	1.47
Worked at home	26	6.36
Total	409	100

Mean Travel Time to Work

	18.1
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City of Nimrod

Population

	Number	Percent %
1970	64	
1980	69	
1990	65	
2000	75	
2002	75	
Percent % of Change 1990-2000	10	15.40
Percent % of Change 1970-2000	15	17.19
65 and Over of 2000 Population	2	2.67

Population By Race

	Number	Percent %
White	75	100
Black or African American	0	0
American Indian or Alaska Native	0	0
Asian	0	0
Native Hawaiian and Other Pacific Islanders	0	0
Other Single Race	0	0
Two or More Races	0	0
Total	75	100
Hispanic or Latino	0	0

Education Attainment

	Number	Percent %
No Schooling completed	2	3.33
Nursery to 4th grade	0	0.00
5th to 6th grade	0	0.00
7th to 8th grade	4	6.67
9th grade	0	0.00
10th grade	2	3.33
11th grade	0	0.00
12th grade, no diploma	1	1.67
High school graduate (include equivalency)	42	70.00
Some college, less than 1 year	1	1.67
Some college, 1 or more years, no degree	2	3.33
Associate degree	6	15.00
Bachelor's degree	0	0.00
Master's degree	0	0.00
Professional school degree	0	0.00
Doctorate degree	0	0.00
Total	60	100.00

Housing

	Number	Percent %
Number of Households	35	
Persons per Household	2.14	
Number of Housing Units	47	
Vacant Units Non Seasonal	6	12.77
Vacant Units Seasonal	6	12.77
Owner Occupied Units	32	68.09
Renter Occupied Units	3	6.38

Age of Housing

	Number	Percent %
Built 1999 to March 2000	2	4.65
Built 1995 to 1998	0	0.00
Built 1990 to 1994	4	9.30
Built 1980 to 1989	4	9.30
Built 1970 to 1979	11	25.59
Built 1960 to 1969	4	9.30
Built 1950 to 1959	0	0.00
Built 1940 to 1949	9	20.30
Built 1939 and Earlier	9	20.30
Total	43	100.00

Heating Method

	Number	Percent %
Utility Gas	0	0.00
Bottled, tank, or LP gas	12	32.43
Electricity	0	0.00
Fuel Oil, kerosene, etc.	13	35.14
Coal or coke	0	0.00
Wood	10	27.03
Solar energy	0	0.00
Other fuel	2	5.41
No fuel used	0	0.00
Total	37	100.00

Group Quarter

	Number	Percent %
Correctional institutions	0	0
Nursing Homes	0	0
Other institutions	0	0
College dormitories	0	0
Military quarters	0	0
Other non institutional group quarters	0	0
Total	0	0

Market Values

Estimated Market Value	2,001,000
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Economic Development

	Number
Average Income	38,478
Median Income	30,313
Per Capita Income	15,413
Total Population	75
Total Income	1,356,300

Poverty

	Number
Income below poverty level	6
Income at or above poverty level	31

Industry

	Number	Percent %
Agriculture, forestry, fishing and hunting and mining	2	9.10
Agriculture, forestry, fishing and hunting	2	9.10
Mining	0	0.00
Construction	2	9.10
Manufacturing	4	18.18
Wholesale trade	0	0.00
Retail trade	2	9.10
Transportation and warehousing, and utilities	0	0.00
Transportation and warehousing	0	0.00
Utilities	0	0.00
Information	2	9.10
Finance, insurance, real estate and rental and leasing	4	18.18
Finance and insurance	4	18.18
Real estate and rental and leasing	0	0.00
Professional, scientific, management, administrative, and waste management services	0	0.00
Professional, scientific, and technical services	0	0.00
Management of companies and enterprises	0	0.00
Administrative and support and waste management services	0	0.00
Educational, health and social services	4	18.18
Educational services	2	9.10
Health care and social assistance	2	9.10
Arts, entertainment, recreation, accommodation and food services	2	9.10
Arts, entertainment, and recreation	0	0.00
Accommodation and food services	2	9.10
Other services	0	0.00
Public Administration	0	0.00
Total	22	100.00

Top 3 Employers

	Number of Employees
Total	

Transportation

	Number	Percent %
Car, Truck or van	17	77.27
Drive alone	13	59.09
Carpooled	4	18.18
Public Transportation	0	0.00
Bus or trolley bus	0	0.00
Streetcar or trolley car	0	0.00
Subway or elevated	0	0.00
Railroad	0	0.00
Ferry boat	0	0.00
Taxicab	0	0.00
Motorcycle	0	0.00
Bicycle	2	9.09
Walked	0	0.00
Other means	0	0.00
Worked at home	3	13.64
Total	22	100.00

Mean Travel Time to Work

	25.3
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City of Sebek

Population

	Number	Percent %
1970	668	
1980	774	
1990	662	
2000	710	
2002	696	
Percent % of Change 1990-2000	48	7.30
Percent % of Change 1970-2000	117	6.29
65 and Over of 2000 Population	22	16.48
85 and Over of 2000 Population		3.10

Population By Race

	Number	Percent %
White	703	99.00
Black or African American	1	0.10
American Indian or Alaska Native	2	0.30
Asian	0	0.00
Native Hawaiian and Other Pacific Islanders	0	0.00
Other Single Race	0	0.00
Two or More Races	4	0.60
Total	710	100.00
Hispanic or Latino	18	2.54

Education Attainment

	Number	Percent %
No Schooling completed	3	0.61
Nursery to 4th grade	0	0.00
5th to 6th grade	5	1.02
7th to 8th grade	56	11.45
9th grade	15	3.07
10th grade	11	2.25
11th grade	15	3.07
12th grade, no diploma	9	1.84
High school graduate (include equivalency)	176	35.99
Some college, less than 1 year	33	6.75
Some college, 1 or more years, no degree	69	14.11
Associate degree	27	5.52
Bachelor's degree	58	11.86
Master's degree	10	2.04
Professional school degree	2	0.41
Doctorate degree	0	0.00
Total	489	100.00

Housing

	Number	Percent %
Number of Households	332	
Persons per Household	2.13	
Number of Housing Units	378	
Vacant Units Non Seasonal	36	9.52
Vacant Units Seasonal	10	2.65
Owner Occupied Units	252	66.67
Renter Occupied Units	80	21.16

Age of Housing

	Number	Percent %
Built 1999 to March 2000	16	4.24
Built 1995 to 1998	31	8.22
Built 1990 to 1994	2	0.53
Built 1980 to 1989	21	5.57
Built 1970 to 1979	54	14.32
Built 1960 to 1969	45	11.94
Built 1950 to 1959	46	12.20
Built 1940 to 1949	55	14.59
Built 1939 and Earlier	107	28.38
Total	377	100.00

Heating Method

	Number	Percent %
Utility Gas	186	55.69
Bottled, tank, or LP gas	6	1.80
Electricity	60	17.96
Fuel Oil, kerosene, etc.	79	23.65
Coal or coke	0	0.00
Wood	3	0.90
Solar energy	0	0.00
Other fuel	0	0.00
No fuel used	0	0.00
Total	334	100.00

Group Quarter

	Number	Percent %
Correctional institutions	0	0.00
Nursing Homes	0	0.00
Other institutions	0	0.00
College dormitories	0	0.00
Military quarters	0	0.00
Other non institutional group quarters	3	100.00
Total	3	100.00

Market Values

Estimated Market Value	17,201,900
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Economic Development

	Number
Average Income	321.79
Median Income	23.693
Per Capita Income	14.933
Total Population	710
Total Income	10,826,600

Poverty

	Number
Income below poverty level	56
Income at or above poverty level	275

Industry

	Number	Percent %
Agriculture, forestry, Fishing and hunting and mining	10	3.27
Agriculture, forestry, fishing and hunting	10	3.27
Mining	0	0.00
Construction	22	7.19
Manufacturing	50	16.40
Wholesale trade	9	2.94
Retail trade	31	10.13
Transportation and warehousing, and utilities	9	2.94
Transportation and warehousing	9	2.94
Utilities	0	0.00
Information	0	0.00
Finance, insurance, real estate and rental and leasing	16	5.23
Finance and insurance	11	3.59
Real estate and rental and leasing	5	1.63
Professional , scientific, management, administrative, and waste management services	23	7.52
Professional ,scientific, and technical services	10	3.27
Management of companies and enterprises	0	0.00
Administrative and support and waste management services	13	4.25
Educational, health and social services	963	31.37
Educational services	58	18.95
Health care and social assistance	38	12.42
Arts, entertainment, recreation, accommodation and food services	15	4.90
Arts, entertainment, and recreation	0	0.00
Accommodation and food services	15	4.90
Other services	13	4.25
Public Administration	11	3.59
Total	306	100.00

Top 3 Employers

	Number of Employees
Total	

Transportation

	Number	Percent %
Car, Truck or van	259	86.05
Drive alone	218	72.43
Carpooled	41	13.62
Public Transportation	3	1.00
Bus or trolley bus	3	1.00
Streetcar or trolley car	0	0.00
Subway or elevated	0	0.00
Railroad	0	0.00
Ferry boat	0	0.00
Taxicab	0	0.00
Motorcycle	0	0.00
Bicycle	0	0.00
Walked	31	10.30
Other means	0	0.00
Worked at home	8	2.66
Total	301	100.00

Mean Travel Time to Work

	21
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City of Staples (Wadena County Portion Only)

Population

	Number	Percent %
1970	98	
1980	264	
1990	397	
2000	642	
2002	651	
Percent % of Change 1990-2000	245	61.71
Percent % of Change 1970-2000	154	55.10
65 and Over of 2000 Population	24.00	
85 and Over of 2000 Population	49	7.63

Population By Race

	Number	Percent %
White	628	97.80
Black or African American	0	0.00
American Indian or Alaska Native	9	1.40
Asian	1	0.20
Native Hawaiian and Other Pacific Islanders	0	0.00
Other Single Race	2	0.30
Two or More Races	2	0.30
Total	642	100.00
Hispanic or Latino	21	3.27

Education Attainment

	Number	Percent %
No schooling completed	2	0.48
Nursery to 4th grade	5	1.20
5th to 6th grade	7	1.68
7th to 8th grade	358	8.39
9th grade	28	6.71
10th grade	15	3.60
11th grade	14	3.36
12th grade, no diploma	0	0.00
High school graduate (include equivalency)	144	34.53
Some college, less than 1 year	44	10.55
Some college, 1 or more years, no degree	46	11.03
Associate degree	20	4.80
Bachelor's degree	47	11.27
Master's degree	9	2.16
Professional school degree	1	0.24
Doctorate degree	0	0.00
Total	417	100.00

Housing

	Number	Percent %
Number of Households	198	
Persons per Household	2.78	
Number of Housing Units	209	
Vacant Units Non Seasonal	10	4.78
Vacant Units Seasonal	1	0.48
Owner Occupied Units	140	66.99
Renter Occupied Units	58	27.75

Age of Housing

	Number	Percent %
Built 1999 to March 2000	35	17.50
Built 1995 to 1998	6	3.00
Built 1990 to 1994	26	13.00
Built 1980 to 1989	16	8.00
Built 1970 to 1979	56	28.00
Built 1960 to 1969	36	18.00
Built 1950 to 1959	18	9.00
Built 1940 to 1949	1	0.50
Built 1939 and Earlier	6	3.00
Total	200	100.00

Heating Method

	Number	Percent %
Utility Gas	116	60.10
Bottled, tank, or LP gas	10	5.18
Electricity	63	32.64
Fuel Oil, kerosene, etc.	4	2.07
Coal or coke	0	0.00
Wood	0	0.00
Solar energy	0	0.00
Other fuel	0	0.00
No fuel used	0	0.00
Total	193	100.00

Group Quarter

	Number	Percent %
Correctional institutions	0	0.00
Nursing Homes	92	100.00
Other institutions	0	0.00
College dormitories	0	0.00
Military quarters	0	0.00
Other non institutional group quarters	0	0.00
Total	92	100.00

Market Values

Estimated Market Value	17,131,600
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Economic Development

	Number
Average Income	40,318
Median Income	29,792
Per Capita Income	14,920
Total Population	642
Total Income	9,399,400

Poverty

	Number
Income below poverty level	30
Income at or above poverty level	187

Industry

	Number	Percent %
Agriculture, forestry, fishing and hunting and mining	7	2.86
Agriculture, forestry, fishing and hunting	4	1.63
Mining	3	1.22
Construction	7	2.86
Manufacturing	60	24.49
Wholesale trade	20	8.16
Retail trade	27	11.20
Transportation and warehousing, and utilities	5	2.04
Transportation and warehousing	5	2.04
Utilities	0	0.00
Information	7	2.86
Finance, insurance, real estate and rental and leasing	6	6.53
Finance and insurance	6	2.45
Real estate and rental and leasing	10	4.08
Professional, scientific, management, administrative, and waste management services	12	4.90
Professional, scientific, and technical services	12	4.90
Management of companies and enterprises	0	0.00
Administrative and support and waste management services	0	0.00
Educational, health and social services	59	24.08
Educational services	33	13.47
Health care and social assistance	26	10.61
Arts, entertainment, recreation, accommodation and food services	20	85.16
Arts, entertainment, and recreation	7	2.86
Accommodation and food services	13	5.30
Other services	5	2.04
Public Administration	0	0.00
Total	245	100.00

Top 3 Employers

	Number of Employees
Total	

Transportation

	Number	Percent %
Car, Truck or van	232	94.69
Drive alone	202	82.45
Carpooled	30	12.24
Public Transportation	0	0.00
Bus or trolley bus	0	0.00
Streetcar or trolley car	0	0.00
Subway or elevated	0	0.00
Railroad	0	0.00
Ferry boat	0	0.00
Taxicab	0	0.00
Motorcycle	0	0.00
Bicycle	0	0.00
Walked	10	4.08
Other means	0	0.00
Worked at home	3	1.22
Total	245	100.00

Mean Travel Time to Work

	21.4
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City of Verndale

Population

	Number	Percent %
1970	570	570
1980	504	504
1990	560	560
2000	575	575
2002	575	575
Percent % of Change 1990-2000	15	2.70
Percent % of Change 1970-2000	112	0.88
65 and Over of 2000 Population	13	19.48
85 and Over of 2000 Population	13	2.26

Population By Race

	Number	Percent %
White	556	96.70
Black or African American	2	3.00
American Indian or Alaska Native	7	1.20
Asian	3	0.50
Native Hawaiian and Other Pacific Islanders	0	0.00
Other Single Race	4	0.70
Two or More Races	3	0.50
Total	575	100.00
Hispanic or Latino	9	1.56

Education Attainment

	Number	Percent %
No Schooling completed	0	0.00
Nursery to 4th grade	0	0.00
5th to 6th grade	0	0.00
7th to 8th grade	31	9.20
9th grade	8	2.37
10th grade	12	3.56
11th grade	14	4.15
12th grade, no diploma	12	3.56
High school graduate (include equivalency)	140	41.54
Some college, less than 1 year	20	5.93
Some college, 1 or more years, no degree	53	15.73
Associate degree	18	5.34
Bachelor's degree	16	4.75
Master's degree	8	2.37
Professional school degree	5	1.48
Doctorate degree	0	0.00
Total	337	100.00

Housing

	Number	Percent %
Number of Households	234	
Persons per Household	2.46	
Number of Housing Units	260	
Vacant Units Non Seasonal	23	8.85
Vacant Units Seasonal	3	1.15
Owner Occupied Units	163	62.69
Renter Occupied Units	71	27.31

Age of Housing

	Number	Percent %
Built 1999 to March 2000	2	0.79
Built 1995 to 1998	7	2.77
Built 1990 to 1994	6	2.37
Built 1980 to 1989	53	20.95
Built 1970 to 1979	32	12.65
Built 1960 to 1969	24	9.49
Built 1950 to 1959	32	12.65
Built 1940 to 1949	22	8.70
Built 1939 and Earlier	75	2.96
Total	253	100.00

Heating Method

	Number	Percent %
Utility Gas	152	66.38
Bottled, tank, or LP gas	8	3.49
Electricity	11	4.80
Fuel Oil, kerosene, etc.	50	21.83
Coal or coke	0	0.00
Wood	58	25.33
Solar energy	0	0.00
Other fuel	0	0.00
No fuel used	0	0.00
Total	229	100.00

Group Quarter

	Number	Percent %
Correctional institutions	0	0
Nursing Homes	0	0
Other institutions	0	0
College dormitories	0	0
Military quarters	0	0
Other non institutional group quarters	0	0
Total	0	0

Market Values

Estimated Market Value	12,234,300
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Economic Development

	Number
Average Income	29,673
Median Income	26,000
Per Capita Income	12,448
Total Population	575
Total Income	6,622,400

Poverty

	Number
Income below poverty level	28
Income at or above poverty level	194

Industry

	Number	Percent %
Agriculture, forestry, fishing and hunting and mining	16	7.24
Agriculture, forestry, fishing and hunting	16	7.24
Mining	0	0.00
Construction	11	4.98
Manufacturing	55	24.89
Wholesale trade	16	7.24
Retail trade	10	4.52
Transportation and warehousing, and utilities	14	6.33
Transportation and warehousing	14	6.33
Utilities	0	0.00
Information	0	0.00
Finance, insurance, real estate and rental and leasing	1	0.45
Finance and insurance	1	0.45
Real estate and rental and leasing	0	0.00
Professional, scientific, management, administrative, and waste management services	5	2.26
Professional, scientific, and technical services	3	1.36
Management of companies and enterprises	0	0.00
Administrative and support and waste management services	2	0.90
Educational, health and social services	58	26.24
Educational services	18	8.14
Health care and social assistance	40	189.10
Arts, entertainment, recreation, accommodation and food services	21	9.50
Arts, entertainment, and recreation	0	0.00
Accommodation and food services	21	9.50
Other services	11	4.98
Public Administration	3	1.36
Total	221	100.00

Top 3 Employers

	Number of Employees
Verndale Public Schools	70
Verndale Custom Homes	35
Verndale Truss Inc.	30
Total	135

Transportation

	Number	Percent %
Car, Truck or van	199	91.28
Drive alone	172	78.90
Carpooled	27	12.39
Public Transportation	0	0.00
Bus or trolley bus	0	0.00
Streetcar or trolley car	0	0.00
Subway or elevated	0	0.00
Railroad	0	0.00
Ferry boat	0	0.00
Taxicab	0	0.00
Motorcycle	0	0.00
Bicycle	0	0.00
Walked	13	5.96
Other means	0	0.00
Worked at home	6	2.75
Total	218	100.00

Mean Travel Time to Work

Mean Travel Time to Work	20.5
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City of Wadena (Wadena County portion only)

Population

	Number	Percent %
1970	4,640	
1980	4,699	
1990	4,109	
2000	4,244	
2002	4,242	
Percent % of Change 1990-2000	135	3.29
Percent % of Change 1970-2000	-853	-8.53
65 and Over of 2000 Population	1,033	24.34
85 and Over of 2000 Population	207	4.88

Population By Race

	Number	Percent %
White	4,156	97.90
Black or African American	36	0.80
American Indian or Alaska Native	12	0.30
Asian	8	0.20
Native Hawaiian and Other Pacific Islanders	1	0.00
Other Single Race	7	0.20
Two or More Races	24	0.60
Total	4,244	100.00
Hispanic or Latino	26	0.61

Education Attainment

	Number	Percent %
No Schooling completed	9	0.32
Nursery to 4th grade	17	0.61
5th to 6th grade	387	1.37
7th to 8th grade	246	8.88
9th grade	78	2.82
10th grade	64	2.31
11th grade	66	2.38
12th grade, no diploma	77	2.78
High school graduate (include equivalency)	895	32.35
Some college, less than 1 year	242	8.74
Some college, 1 or more years, no degree	400	14.45
Associate degree	196	7.08
Bachelor's degree	232	8.38
Master's degree	138	4.98
Professional school degree	71	2.56
Doctorate degree	0	0.00
Total	2769	100.00

Housing

	Number	Percent %
Number of Households	1,857	
Persons per Household	2.19	
Number of Housing Units	1,950	
Vacant Units Non Seasonal	82	4.21
Vacant Units Seasonal	11	0.56
Owner Occupied Units	1,179	60.46
Renter Occupied Units	678	34.77

Age of Housing

	Number	Percent %
Built 1999 to March 2000	18	0.94
Built 1995 to 1998	34	1.77
Built 1990 to 1994	62	3.23
Built 1980 to 1989	139	7.24
Built 1970 to 1979	293	15.26
Built 1960 to 1969	339	17.66
Built 1950 to 1959	308	16.04
Built 1940 to 1949	191	9.95
Built 1939 and Earlier	536	27.92
Total	1,920	100.00

Heating Method

	Number	Percent %
Utility Gas	1,120	6.05
Bottled, tank, or LP gas	67	0.36
Electricity	438	23.66
Fuel Oil, kerosene, etc.	187	10.10
Coal or coke	0	0.00
Wood	28	1.51
Solar energy	0	0.00
Other fuel	9	0.48
No fuel used	2	0.10
Total	1,851	100.00

Group Quarter

	Number	Percent %
Correctional institutions	22	12.72
Nursing Homes	106	61.27
Other institutions	0	0.00
College dormitories	0	0.00
Military quarters	0	0.00
Other non institutional group quarters	45	26.01
Total	173	100.00

Market Values

Estimated Market Value	118,609,200
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Economic Development

	Number
Average Income	34,384
Median Income	26,683
Per Capita Income	15,442
Total Population	4,244
Total Income	65,087,600

Poverty

	Number
Income below poverty level	329
Income at or above poverty level	1511

Industry

	Number	Percent %
Agriculture, forestry, fishing and hunting and mining	26	1.45
Agriculture, forestry, fishing and hunting	26	1.45
Mining	0	0.00
Construction	1407	5.96
Manufacturing	299	16.67
Wholesale trade	102	5.69
Retail trade	290	16.16
Transportation and warehousing, and utilities	48	2.67
Transportation and warehousing	40	2.23
Utilities	8	0.45
Information	19	1.06
Finance, insurance, real estate and rental and leasing	54	3.01
Finance and insurance	46	2.56
Real estate and rental and leasing	8	0.45
Professional, scientific, management, administrative, and waste management services	76	4.24
Professional, scientific, and technical services	29	1.62
Management of companies and enterprises	0	0.00
Administrative and support and waste management services	47	2.62
Educational, health and social services	496	27.65
Educational services	225	12.54
Health care and social assistance	271	15.11
Arts, entertainment, recreation, accommodation and food services	154	8.58
Arts, entertainment, and recreation	0	0.00
Accommodation and food services	154	8.58
Other services	79	4.40
Public Administration	44	2.45
Total	1794	100.00

Top 3 Employers

	Number of Employees
Homecrest Industries Inc	364
Tri County Hospital	227
Wadena Deer Creek Public Schools	215
Total	

Transportation

	Number	Percent %
Car, Truck or van	1,532	88.20
Drive alone	1,292	74.38
Carpooled	240	13.82
Public Transportation	40	2.30
Bus or trolley bus	40	2.30
Streetcar or trolley car	0	0.00
Subway or elevated	0	0.00
Railroad	0	0.00
Ferry boat	0	0.00
Taxicab	0	0.00
Motorcycle	0	0.00
Bicycle	9	0.52
Walked	63	3.63
Other means	18	1.04
Worked at home	75	4.32
Total	1737	100.00

Mean Travel Time to Work

Mean Travel Time to Work	14.7
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Township of Aldrich

Population

	Number	Percent %
1970	445	
1980	559	
1990	475	
2000	418	
2002	418	
Percent % of Change 1990-2000	-57	-12.00
Percent % of Change 1970-2000	47	-6.07
65 and Over of 2000 Population	47	11.24
85 and Over of 2000 Population	2	0.48

Population By Race

	Number	Percent %
White	407	97.40
Black or African American	0	0.00
American Indian or Alaska Native	1	0.20
Asian	0	0.00
Native Hawaiian and Other Pacific Islanders	0	0.00
Other Single Race	5	1.20
Two or More Races	5	1.20
Total	418	100.00
Hispanic or Latino	9	2.15

Education Attainment

	Number	Percent %
No Schooling completed	2	0.69
Nursery to 4th grade	0	0.00
5th to 6th grade	0	0.00
7th to 8th grade	11	3.82
9th grade	3	1.04
10th grade	4	1.39
11th grade	7	2.43
12th grade, no diploma	10	3.47
High school graduate (include equivalency)	136	47.22
Some college, less than 1 year	19	6.60
Some college, 1 or more years, no degree	47	16.32
Associate degree	15	5.21
Bachelor's degree	23	7.99
Master's degree	11	3.82
Professional school degree	0	0.00
Doctorate degree	0	0.00
Total	158	100.00

Housing

	Number	Percent %
Number of Households	151	
Persons per Household	2.77	
Number of Housing Units	164	
Vacant Units Non Seasonal	11	6.71
Vacant Units Seasonal	2	1.22
Owner Occupied Units	138	84.15
Renter Occupied Units	13	7.93

Age of Housing

	Number	Percent %
Built 1999 to March 2000	7	4.02
Built 1985 to 1998	19	10.92
Built 1960 to 1994	10	5.75
Built 1980 to 1989	24	13.79
Built 1970 to 1979	20	11.49
Built 1960 to 1969	9	5.17
Built 1950 to 1959	17	9.77
Built 1940 to 1949	12	6.90
Built 1939 and Earlier	56	32.18
Total	174	100.00

Heating Method

	Number	Percent %
Utility Gas	10	6.17
Bottled, tank, or LP gas	57	38.19
Electricity	33	20.37
Fuel Oil, kerosene, etc.	24	14.81
Coal or coke	0	0.00
Wood	36	22.22
Solar energy	0	0.00
Other fuel	2	1.23
No fuel used	0	0.00
Total	162	100.00

Group Quarter

	Number	Percent %
Correctional institutions	0	0
Nursing Homes	0	0
Other institutions	0	0
College dormitories	0	0
Military quarters	0	0
Other non institutional group quarters	0	0
Total	0	0

Market Values

Estimated Market Value	28,150,700
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Economic Development

	Number
Average Income	37,611
Median Income	33,000
Per Capita Income	13,335
Total Population	418
Total Income	6,254,300

Poverty

	Number
Income below poverty level	20
Income at or above poverty level	150

Industry

	Number	Percent %
Agriculture, forestry, fishing and hunting and mining	41	16.02
Agriculture, forestry, fishing and hunting	41	16.03
Mining	0	0.00
Construction	20	7.81
Manufacturing	35	13.67
Wholesale trade	17	6.64
Retail trade	20	7.81
Transportation and warehousing, and utilities	13	5.08
Transportation and warehousing	9	3.52
Utilities	4	1.56
Information	2	0.78
Finance, insurance, real estate and rental and leasing	8	3.13
Finance and insurance	3	1.17
Real estate and rental and leasing	5	1.95
Professional, scientific, management, administrative, and waste management services	9	3.52
Professional, scientific, and technical services	5	1.95
Management of companies and enterprises	0	0.00
Administrative and support and waste management services	4	1.56
Educational, health and social services	53	20.70
Educational services	25	9.77
Health care and social assistance	28	10.94
Arts, entertainment, recreation, accommodation and food services	18	7.03
Arts, entertainment, and recreation	0	0.00
Accommodation and food services	18	7.03
Other services	14	5.47
Public Administration	6	2.34
Total	256	100.00

Transportation

	Number	Percent %
Car, Truck or van	195	77.69
Drive alone	177	70.52
Carpooled	18	7.17
Public Transportation	3	1.20
Bus or trolley bus	3	1.20
Streetcar or trolley car	0	0.00
Subway or elevated	0	0.00
Railroad	0	0.00
Ferry boat	0	0.00
Taxicab	0	0.00
Motorcycle	0	0.00
Bicycle	0	0.00
Walked	16	6.37
Other means	0	0.00
Worked at home	37	14.74
Total	251	100.00

Mean Travel Time to Work

17.9

Township of Blueberry

Population

	Number	Percent %
1970	338	
1980	567	
1990	526	
2000	732	
2002	730	
Percent % of Change 1990-2000	206	39.16
Percent % of Change 1970-2000	136	116.57
65 and Over of 2000 Population	136	18.63
85 and Over of 2000 Population	6	0.82

Population By Race

	Number	Percent %
White	721	98.50
Black or African American	7	1.00
American Indian or Alaska Native	1	0.10
Asian	1	0.10
Native Hawaiian and Other Pacific Islanders	0	0.00
Other Single Races	0	0.00
Two or More Races	2	0.30
Total	723	100.00
Hispanic or Latino	6	0.83

Education Attainment

	Number	Percent %
No Schooling completed	1	0.20
Nursery to 4th grade	0	0.00
5th to 6th grade	0	0.00
7th to 8th grade	34	6.97
9th grade	11	2.25
10th grade	5	1.02
11th grade	14	2.87
12th grade, no diploma	13	2.66
High school graduate (include equivalency)	167	34.22
Some college, less than 1 year	55	11.27
Some college, 1 or more years, no degree	51	10.45
Associate degree	50	10.25
Bachelor's degree	56	11.48
Master's degree	18	3.69
Professional school degree	8	1.64
Doctorate degree	5	1.02
Total	488	100.00

Housing

	Number	Percent %
Number of Households	285	
Persons per Household	2.57	
Number of Housing Units	435	
Vacant Units Non Seasonal	29	6.67
Vacant Units Seasonal	121	27.82
Owner Occupied Units	256	58.85
Renter Occupied Units	29	6.67

Age of Housing

	Number	Percent %
Built 1999 to March 2000	4	5.09
Built 1995 to 1998	20	28.00
Built 1990 to 1994	29	16.73
Built 1980 to 1989	48	17.82
Built 1970 to 1979	107	0.00
Built 1960 to 1969	85	32.39
Built 1950 to 1959	50	0.00
Built 1940 to 1949	30	0.00
Built 1939 and Earlier	59	0.00
Total	432	100.00

Heating Method

	Number	Percent %
Utility Gas	14	5.09
Bottled, tank, or LP gas	77	28.00
Electricity	46	16.73
Fuel Oil, kerosene, etc.	49	17.82
Coal or coke	0	0.00
Wood	89	32.36
Solar energy	0	0.00
Other fuel	0	0.00
No fuel used	0	0.00
Total	275	100.00

Group Quarter

	Number	Percent %
Correctional institutions	0	0
Nursing Homes	0	0
Other institutions	0	0
College dormitories	0	0
Military quarters	0	0
Other non institutional group quarters	0	0
Total	0	0

Market Values

Estimated Market Value	42,938,000
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Economic Development

	Number
Average Income	43,221
Median Income	35,833
Per Capita Income	17,780
Total Population	732
Total Income	12,197,400

Poverty

	Number
Income below poverty level	26
Income at or above poverty level	256

Industry

	Number	Percent %
Agriculture, forestry, fishing and hunting and mining	21	6.81
Agriculture, forestry, fishing and hunting	21	6.81
Mining	0	0.00
Construction	27	8.77
Manufacturing	35	11.36
Wholesale trade	7	2.27
Retail trade	38	12.34
Transportation and warehousing, and utilities	14	4.55
Transportation and warehousing	12	3.90
Utilities	2	0.65
Information	2	0.65
Finance, insurance, real estate and rental and leasing	11	3.57
Finance and insurance	9	2.92
Real estate and rental and leasing	2	0.65
Professional, scientific, management, administrative, and waste management services	13	4.22
Professional, scientific, and technical services	8	2.60
Management of companies and enterprises	0	0.00
Administrative and support and waste management services	5	1.62
Educational, health and social services	74	24.03
Educational services	30	9.74
Health care and social assistance	44	14.29
Arts, entertainment, recreation, accommodation and food services	24	7.79
Arts, entertainment, and recreation	4	1.30
Accommodation and food services	20	6.49
Other services	28	9.10
Public Administration	14	4.55
Total	308	100.00

Transportation

	Number	Percent %
Car, Truck or van	283	92.48
Drive alone	230	75.16
Carpooled	53	17.32
Public Transportation	1	0.33
Bus or trolley bus	1	0.33
Streetcar or trolley car	0	0.00
Subway or elevated	0	0.00
Railroad	0	0.00
Ferry boat	0	0.00
Taxicab	0	0.00
Motorcycle	0	0.00
Bicycle	0	0.00
Walked	10	3.27
Other means	0	0.00
Worked at home	12	3.92
Total	306	100.00

Mean Travel Time to Work

20.9

Township of Bullard

Population

	Number	Percent %
1970	129	
1980	163	
1990	156	
2000	207	
2002	213	
Percent % of Change 1990-2000	51	32.69
Percent % of Change 1970-2000	19	60.47
65 and Over of 2000 Population	0	9.18
85 and Over of 2000 Population	0	0

Population By Race

	Number	Percent %
White	199	96.10
Black or African American	0	0.00
American Indian or Alaska Native	5	2.40
Asian	0	0.00
Native Hawaiian and Other Pacific Islanders	0	0.00
Other Single Race	2	1.00
Two or More Races	1	0.50
Total	207	100.00
Hispanic or Latino	3	1.45

Education Attainment

	Number	Percent %
No Schooling completed	0	0.00
Nursery to 4th grade	0	0.00
5th to 6th grade	0	0.00
7th to 8th grade	3	2.24
9th grade	0	0.00
10th grade	7	5.22
11th grade	5	3.73
12th grade, no diploma	0	0.00
High school graduate (include equivalency)	54	40.30
Some college, less than 1 year	17	12.69
Some college, 1 or more years, no degree	23	17.16
Associate degree	16	11.94
Bachelor's degree	9	6.72
Master's degree	0	0.00
Professional school degree	0	0.00
Doctorate degree	0	0.00
Total	134	100.00

Housing

	Number	Percent %
Number of Households	79	
Persons per Household	2.62	
Number of Housing Units	151	
Vacant Units Non Seasonal	6	3.97
Vacant Units Seasonal	66	43.71
Owner Occupied Units	72	47.68
Renter Occupied Units	7	4.64

Age of Housing

	Number	Percent %
Built 1999 to March 2000	6	3.64
Built 1985 to 1998	15	9.09
Built 1960 to 1994	14	8.48
Built 1980 to 1989	14	8.48
Built 1970 to 1979	46	27.88
Built 1960 to 1969	26	15.76
Built 1950 to 1959	8	4.85
Built 1940 to 1949	18	10.91
Built 1939 and Earlier	18	10.91
Total	165	100.00

Heating Method

	Number	Percent %
Utility Gas	0	0.00
Bottled, tank, or LP gas	34	40.00
Electricity	8	9.41
Fuel Oil, kerosene, etc.	13	15.29
Coal or coke	0	0.00
Wood	30	35.29
Solar energy	0	0.00
Other fuel	0	0.00
No fuel used	0	0.00
Total	85	100.00

Group Quarter

	Number	Percent %
Correctional institutions	0	0
Nursing Homes	0	0
Other institutions	0	0
College dormitories	0	0
Military quarters	0	0
Other non institutional group quarters	0	0
Total	0	0

Market Values

Estimated Market Value	12,220,100
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Economic Development

	Number
Average Income	27,989
Median Income	23,125
Per Capita Income	9,659
Total Population	207
Total Income	2,275,000

Poverty

	Number
Income below poverty level	17
Income at or above poverty level	64

Industry

	Number	Percent %
Agriculture, forestry, fishing and hunting and mining	11	10.78
Agriculture, forestry, fishing and hunting	11	10.78
Mining	0	0.00
Construction	9	8.82
Manufacturing	21	20.59
Wholesale trade	5	4.90
Retail trade	11	10.78
Transportation and warehousing, and utilities	6	5.88
Transportation and warehousing	4	3.92
Utilities	2	1.96
Information	2	1.96
Finance, insurance, real estate and rental and leasing	5	4.90
Finance and insurance	3	2.94
Real estate and rental and leasing	2	1.96
Professional, scientific, management, administrative, and waste management services	9	8.82
Professional, scientific, and technical services	0	0.00
Management of companies and enterprises	0	0.00
Administrative and support and waste management services	9	8.82
Educational, health and social services	15	14.71
Educational services	3	2.94
Health care and social assistance	12	11.77
Arts, entertainment, recreation, accommodation and food services	6	5.88
Arts, entertainment, and recreation	0	0.00
Accommodation and food services	6	5.88
Other services	0	0.00
Public Administration	2	1.96
Total	102	100.00

Transportation

	Number	Percent %
Car, Truck or van	76	76.00
Drive alone	61	61.00
Carpooled	15	15.00
Public Transportation	3	3.00
Bus or trolley bus	3	3.00
Streetcar or trolley car	0	0.00
Subway or elevated	0	0.00
Railroad	0	0.00
Ferry boat	0	0.00
Taxicab	0	0.00
Motorcycle	0	0.00
Bicycle	0	0.00
Walked	5	5.00
Other means	0	0.00
Worked at home	16	16.00
Total	100	100.00

Mean Travel Time to Work

31.1

Township of Huntersville

Population

	Number	Percent %
1970	70	
1980	89	
1990	105	
2000	128	
2002	129	
Percent % of Change 1990-2000	23	21.90
Percent % of Change 1970-2000	13	82.86
65 and Over of 2000 Population	13	10.16
85 and Over of 2000 Population	2	1.56

Population By Race

	Number	Percent %
White	127	99.20
Black or African American	0	0.00
American Indian or Alaska Native	1	0.80
Asian	0	0.00
Native Hawaiian and Other Pacific Islanders	0	0.00
Other Single Race	0	0.00
Two or More Races	0	0.00
Total	128	100.00
Hispanic or Latino	0	0.00

Education Attainment

	Number	Percent %
No Schooling completed	0	0.00
Nursery to 4th grade	0	0.00
5th to 6th grade	0	0.00
7th to 8th grade	6	6.18
9th grade	2	2.06
10th grade	6	6.18
11th grade	5	5.15
12th grade, no diploma	2	2.06
High school graduate (include equivalency)	55	56.70
Some college, less than 1 year	2	2.06
Some college, 1 or more years, no degree	11	11.34
Associate degree	4	4.12
Bachelor's degree	2	2.06
Master's degree	0	0.00
Professional school degree	2	2.06
Doctorate degree	0	0.00
Total	97	100.00

Housing

	Number	Percent %
Number of Households	51	
Persons per Household	2.51	
Number of Housing Units	84	
Vacant Units Non Seasonal	5	5.95
Vacant Units Seasonal	28	33.33
Owner Occupied Units	48	57.14
Renter Occupied Units	3	3.57

Age of Housing

	Number	Percent %
Built 1999 to March 2000	4	4.71
Built 1985 to 1998	6	7.06
Built 1960 to 1994	0	0.00
Built 1980 to 1989	9	10.59
Built 1970 to 1979	22	25.88
Built 1960 to 1969	15	17.65
Built 1950 to 1959	2	2.35
Built 1940 to 1949	12	14.12
Built 1939 and Earlier	15	17.65
Total	85	100.00

Heating Method

	Number	Percent %
Utility Gas	0	0.00
Bottled, tank, or LP gas	24	41.38
Electricity	6	10.34
Fuel Oil, kerosene, etc.	12	20.69
Coal or coke	0	0.00
Wood	16	27.59
Solar energy	0	0.00
Other fuel	0	0.00
No fuel used	0	0.00
Total	58	100.00

Group Quarter

	Number	Percent %
Correctional institutions	0	0
Nursing Homes	0	0
Other institutions	0	0
College dormitories	0	0
Military quarters	0	0
Other non institutional group quarters	0	0
Total	0	0

Market Values

Estimated Market Value	9,720,900
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Economic Development

	Number
Average Income	31,774
Median Income	32,500
Per Capita Income	12,320
Total Population	128
Total Income	1,811,000

Poverty

	Number
Income below poverty level	13
Income at or above poverty level	45

Industry

	Number	Percent %
Agriculture, forestry, fishing and hunting and mining	9	13.24
Agriculture, forestry, fishing and hunting	9	13.24
Mining	0	0.00
Construction	4	5.88
Manufacturing	14	20.59
Wholesale trade	2	2.94
Retail trade	9	13.24
Transportation and warehousing, and utilities	2	2.94
Transportation and warehousing	2	2.94
Utilities	0	0.00
Information	0	0.00
Finance, insurance, real estate and rental and leasing	6	8.82
Finance and insurance	4	5.88
Real estate and rental and leasing	2	2.94
Professional, scientific, management, administrative, and waste management services	0	0.00
Professional, scientific, and technical services	0	0.00
Management of companies and enterprises	0	0.00
Administrative and support and waste management services	0	0.00
Educational, health and social services	14	20.59
Educational services	8	11.76
Health care and social assistance	6	8.82
Arts, entertainment, recreation, accommodation and food services	2	2.94
Arts, entertainment, and recreation	0	0.00
Accommodation and food services	2	2.94
Other services	5	7.35
Public Administration	1	1.47
Total	68	100.00

Transportation

	Number	Percent %
Car, Truck or van	65	95.59
Drive alone	47	69.12
Carpooled	18	26.47
Public Transportation	0	0.00
Bus or trolley bus	0	0.00
Streetcar or trolley car	0	0.00
Subway or elevated	0	0.00
Railroad	0	0.00
Ferry boat	0	0.00
Taxicab	0	0.00
Motorcycle	0	0.00
Bicycle	0	0.00
Walked	0	0.00
Other means	0	0.00
Worked at home	3	4.41
Total	68	100.00

Mean Travel Time to Work

33.8

Township of Leaf River

Population

	Number	Percent %
1970	748	
1980	663	
1990	575	
2000	515	
2002	501	
Percent % of Change 1990-2000	-60	-10.43
Percent % of Change 1970-2000	64	-31.15
65 and Over of 2000 Population	12.43	
85 and Over of 2000 Population	4	0.78

Population By Race

	Number	Percent %
White	486	94.40
Black or African American	11	2.10
American Indian or Alaska Native	9	1.70
Asian	3	0.60
Native Hawaiian and Other Pacific Islanders	1	0.20
Other Single Race	0	0.00
Two or More Races	5	1.00
Total	515	100.00
Hispanic or Latino	0	0.00

Education Attainment

	Number	Percent %
No Schooling completed	0	0.00
Nursery to 4th grade	0	0.00
5th to 6th grade	0	0.00
7th to 8th grade	20	5.25
9th grade	11	2.89
10th grade	11	2.89
11th grade	14	3.67
12th grade, no diploma	23	6.04
High school graduate (include equivalency)	151	39.63
Some college, less than 1 year	19	4.99
Some college, 1 or more years, no degree	59	15.48
Associate degree	18	4.72
Bachelor's degree	33	8.66
Master's degree	13	3.41
Professional school degree	4	1.05
Doctorate degree	5	1.31
Total	381	100.00

Housing

	Number	Percent %
Number of Households	174	
Persons per Household	2.68	
Number of Housing Units	196	
Vacant Units Non Seasonal	17	8.67
Vacant Units Seasonal	5	2.55
Owner Occupied Units	163	83.16
Renter Occupied Units	11	5.61

Age of Housing

	Number	Percent %
Built 1999 to March 2000	0	0.00
Built 1995 to 1998	12	5.85
Built 1990 to 1994	4	1.95
Built 1980 to 1989	31	15.12
Built 1970 to 1979	32	15.61
Built 1960 to 1969	24	11.71
Built 1950 to 1959	20	9.76
Built 1940 to 1949	13	6.34
Built 1939 and Earlier	69	33.66
Total	205	100.00

Heating Method

	Number	Percent %
Utility Gas	0	0.00
Bottled, tank, or LP gas	58	31.01
Electricity	42	22.46
Fuel Oil, kerosene, etc.	52	27.81
Coal or coke	0	0.00
Wood	33	17.65
Solar energy	0	0.00
Other fuel	2	1.07
No fuel used	0	0.00
Total	187	100.00

Group Quarter

	Number	Percent %
Correctional institutions	0	0.00
Nursing Homes	0	0.00
Other institutions	0	0.00
College dormitories	0	0.00
Military quarters	0	0.00
Other non institutional group quarters	49	100.00
Total	49	100.00

Market Values

Estimated Market Value	23,256,200
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Economic Development

	Number
Average Income	43,734
Median Income	37,292
Per Capita Income	14,661
Total Population	515
Total Income	8,118,700

Poverty

	Number
Income below poverty level	22
Income at or above poverty level	153

Industry

	Number	Percent %
Agriculture, forestry, fishing and hunting and mining	24	10.08
Agriculture, forestry, fishing and hunting	21	8.83
Mining	3	1.26
Construction	17	7.14
Manufacturing	26	10.92
Wholesale trade	15	6.30
Retail trade	16	6.72
Transportation and warehousing, and utilities	15	6.30
Transportation and warehousing	12	5.04
Utilities	3	1.26
Information	10	4.20
Finance, insurance, real estate and rental and leasing	11	4.62
Finance and insurance	9	3.78
Real estate and rental and leasing	2	0.84
Professional, scientific, management, administrative, and waste management services	2	0.84
Professional, scientific, and technical services	2	0.84
Management of companies and enterprises	0	0.00
Administrative and support and waste management services	0	0.00
Educational, health and social services	66	27.73
Educational services	14	5.88
Health care and social assistance	52	21.85
Arts, entertainment, recreation, accommodation and food services	10	4.20
Arts, entertainment, and recreation	0	0.00
Accommodation and food services	10	4.20
Other services	13	5.46
Public Administration	13	5.46
Total	238	100.00

Transportation

	Number	Percent %
Car, Truck or van	208	88.51
Drive alone	188	80.00
Carpooled	20	8.51
Public Transportation	0	0.00
Bus or trolley bus	0	0.00
Streetcar or trolley car	0	0.00
Subway or elevated	0	0.00
Railroad	0	0.00
Ferry boat	0	0.00
Taxicab	0	0.00
Motorcycle	0	0.00
Bicycle	0	0.00
Walked	4	1.70
Other means	4	1.70
Worked at home	19	8.09
Total	235	100.00

Mean Travel Time to Work

22.2

Township of Lyons

Population

	Number	Percent %
1970	162	
1980	185	
1990	162	
2000	180	
2002	184	
Percent % of Change 1990-2000	18	11.11
Percent % of Change 1970-2000	31	11.11
65 and Over of 2000 Population	31	17.22
85 and Over of 2000 Population	2	1.11

Population By Race

	Number	Percent %
White	167	92.80
Black or African American	1	0.60
American Indian or Alaska Native	6	3.30
Asian	0	0.00
Native Hawaiian and Other Pacific Islanders	0	0.00
Other Single Race	0	0.00
Two or More Races	6	3.30
Total	180	100.00
Hispanic or Latino	2	1.11

Education Attainment

	Number	Percent %
No Schooling completed	0	0.00
Nursery to 4th grade	3	3.62
5th to 6th grade	0	0.00
7th to 8th grade	6	7.23
9th grade	5	6.03
10th grade	8	9.64
11th grade	3	3.62
12th grade, no diploma	0	0.00
High school graduate (include equivalency)	59	71.08
Some college, less than 1 year	16	19.28
Some college, 1 or more years, no degree	7	8.43
Associate degree	8	9.61
Bachelor's degree	3	3.62
Master's degree	5	6.02
Professional school degree	0	0.00
Doctorate degree	0	0.00
Total	83	100.00

Housing

	Number	Percent %
Number of Households	78	
Persons per Household	2.31	
Number of Housing Units	121	
Vacant Units Non Seasonal	8	6.61
Vacant Units Seasonal	35	28.93
Owner Occupied Units	75	61.98
Renter Occupied Units	3	2.48

Age of Housing

	Number	Percent %
Built 1999 to March 2000	4	3.45
Built 1995 to 1998	15	12.93
Built 1990 to 1994	2	1.72
Built 1980 to 1989	28	24.14
Built 1970 to 1979	18	15.52
Built 1960 to 1969	11	9.48
Built 1950 to 1959	4	3.45
Built 1940 to 1949	13	11.21
Built 1939 and Earlier	21	18.10
Total	116	100.00

Heating Method

	Number	Percent %
Utility Gas	0	0.00
Bottled, tank, or LP gas	22	30.56
Electricity	16	22.22
Fuel Oil, kerosene, etc.	12	16.67
Coal or coke	0	0.00
Wood	22	30.56
Solar energy	0	0.00
Other fuel	0	0.00
No fuel used	0	0.00
Total	72	100.00

Group Quarter

	Number	Percent %
Correctional institutions	0	0
Nursing Homes	0	0
Other institutions	0	0
College dormitories	0	0
Military quarters	0	0
Other non institutional group quarters	0	0
Total	0	0

Market Values

Estimated Market Value	15,321,400
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Economic Development

	Number
Average Income	40,770
Median Income	35,000
Per Capita Income	20,031
Total Population	180
Total Income	2,924,500

Poverty

	Number
Income below poverty level	14
Income at or above poverty level	56

Industry

	Number	Percent %
Agriculture, forestry, fishing and hunting and mining	11	13.58
Agriculture, forestry, fishing and hunting	11	13.58
Mining	0	0.00
Construction	4	4.94
Manufacturing	19	23.46
Wholesale trade	2	2.47
Retail trade	8	9.88
Transportation and warehousing, and utilities	6	7.41
Transportation and warehousing	6	7.41
Utilities	0	0.00
Information	0	0.00
Finance, insurance, real estate and rental and leasing	0	0.00
Finance and insurance	0	0.00
Real estate and rental and leasing	0	0.00
Professional, scientific, management, administrative, and waste management services	9	1.11
Professional, scientific, and technical services	7	8.64
Management of companies and enterprises	0	0.00
Administrative and support and waste management services	2	2.47
Educational, health and social services	14	17.28
Educational services	3	3.70
Health care and social assistance	11	13.58
Arts, entertainment, recreation, accommodation and food services	0	0.00
Arts, entertainment, and recreation	0	0.00
Accommodation and food services	0	0.00
Other services	2	2.47
Public Administration	6	7.41
Total	81	100.00

Transportation

	Number	Percent %
Car, Truck or van	69	85.19
Drive alone	57	70.37
Carpooled	12	14.81
Public Transportation	0	0
Bus or trolley bus	0	0
Streetcar or trolley car	0	0
Subway or elevated	0	0
Railroad	0	0
Ferry boat	0	0
Taxicab	0	0
Motorcycle	0	0
Bicycle	0	0
Walked	4	4.94
Other means	0	0
Worked at home	8	9.88
Total	81	100

Mean Travel Time to Work

31.4

Township of Meadow

Population

	Number	Percent %
1970	2,40	
1980	270	
1990	215	
2000	228	
2002	231	
Percent % of Change 1990-2000	13	6.05
Percent % of Change 1970-2000	30	-5.00
65 and Over of 2000 Population	30	13.16
85 and Over of 2000 Population	2	0.88

Population By Race

	Number	Percent %
White	227	99.60
Black or African American	0	0.00
American Indian or Alaska Native	0	0.00
Asian	0	0.00
Native Hawaiian and Other Pacific Islanders	0	0.00
Other Single Race	0	0.00
Two or More Races	1	0.40
Total	228	100.00
Hispanic or Latino	0	0.00

Education Attainment

	Number	Percent %
No Schooling completed	4	6.88
Nursery to 4th grade	0	0.00
5th to 6th grade	2	1.25
7th to 8th grade	8	5.00
9th grade	8	5.00
10th grade	2	1.25
11th grade	2	0.25
12th grade, no diploma	8	5.00
High school graduate (include equivalency)	65	40.63
Some college, less than 1 year	26	16.25
Some college, 1 or more years, no degree	16	10.80
Associate degree	7	4.38
Bachelor's degree	10	6.25
Master's degree	0	0.00
Professional school degree	0	0.00
Doctorate degree	2	1.25
Total	160	100.00

Housing

	Number	Percent %
Number of Households	83	
Persons per Household	2.75	
Number of Housing Units	116	
Vacant Units Non Seasonal	12	10.34
Vacant Units Seasonal	21	18.10
Owner Occupied Units	73	62.93
Renter Occupied Units	10	8.62

Age of Housing

	Number	Percent %
Built 1999 to March 2000	2	1.67
Built 1995 to 1998	4	3.33
Built 1990 to 1994	0	0.00
Built 1980 to 1989	11	9.17
Built 1970 to 1979	36	30.00
Built 1960 to 1969	20	16.67
Built 1950 to 1959	4	3.33
Built 1940 to 1949	12	10.00
Built 1939 and Earlier	31	25.83
Total	120	100.00

Heating Method

	Number	Percent %
Utility Gas	2	2.27
Bottled, tank, or LP gas	22	25.00
Electricity	2	2.27
Fuel Oil, kerosene, etc.	47	53.41
Coal or coke	0	0.00
Wood	15	17.05
Solar energy	0	0.00
Other fuel	0	0.00
No fuel used	0	0.00
Total	88	100.00

Group Quarter

	Number	Percent %
Correctional institutions	0	0
Nursing Homes	0	0
Other institutions	0	0
College dormitories	0	0
Military quarters	0	0
Other non institutional group quarters	0	0
Total	0	0

Market Values

Estimated Market Value	15,331,600
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Economic Development

	Number
Average Income	37,626
Median Income	34,500
Per Capita Income	12,844
Total Population	228
Total Income	3,133,900

Poverty

	Number
Income below poverty level	14
Income at or above poverty level	70

Industry

	Number	Percent %
Agriculture, forestry, fishing and hunting and mining	15	13.16
Agriculture, forestry, fishing and hunting	15	13.16
Mining	0	0.00
Construction	8	7.02
Manufacturing	21	18.42
Wholesale trade	0	0.00
Retail trade	18	15.79
Transportation and warehousing, and utilities	5	4.39
Transportation and warehousing	5	4.39
Utilities	0	0.00
Information	5	4.39
Finance, insurance, real estate and rental and leasing	5	4.39
Finance and insurance	3	2.63
Real estate and rental and leasing	2	1.75
Professional, scientific, management, administrative, and waste management services	3	2.63
Professional, scientific, and technical services	0	0.00
Management of companies and enterprises	0	0.00
Administrative and support and waste management services	3	2.63
Educational, health and social services	25	21.93
Educational services	5	4.39
Health care and social assistance	20	17.54
Arts, entertainment, recreation, accommodation and food services	0	0.00
Arts, entertainment, and recreation	0	0.00
Accommodation and food services	0	0.00
Other services	4	3.51
Public Administration	4	3.51
Total	114	100.00

Transportation

	Number	Percent %
Car, Truck or van	90	81.82
Drive alone	82	74.55
Carpooled	8	7.27
Public Transportation	0	0.00
Bus or trolley bus	0	0.00
Streetcar or trolley car	0	0.00
Subway or elevated	0	0.00
Railroad	0	0.00
Ferry boat	0	0.00
Taxicab	0	0.00
Motorcycle	0	0.00
Bicycle	0	0.00
Walked	1	0.91
Other means	0	0.00
Worked at home	19	17.27
Total	110	100.00

Mean Travel Time to Work

26.2

Township of North Germany

Population

	Number	Percent %
1970	373	
1980	374	
1990	322	
2000	327	
2002	315	
Percent % of Change 1990-2000	5	1.55
Percent % of Change 1970-2000		-12.33
65 and Over of 2000 Population	50	15.29
85 and Over of 2000 Population	1	0.31

Population By Race

	Number	Percent %
White	321	98.20
Black or African American	0	0.00
American Indian or Alaska Native	0	0.00
Asian	1	0.30
Native Hawaiian and Other Pacific Islanders	2	0.60
Other Single Race	0	0.00
Two or More Races	3	0.90
Total	327	100.00
Hispanic or Latino	0	0.00

Education Attainment

	Number	Percent %
No Schooling completed	0	0.00
Nursery to 4th grade	0	0.00
5th to 6th grade	0	0.00
7th to 8th grade	31	14.03
9th grade	3	1.36
10th grade	6	2.71
11th grade	6	2.71
12th grade, no diploma	4	1.81
High school graduate (include equivalency)	99	4.48
Some college, less than 1 year	12	5.43
Some college, 1 or more years, no degree	20	9.05
Associate degree	23	10.41
Bachelor's degree	9	4.07
Master's degree	6	2.71
Professional school degree	0	0.00
Doctorate degree	2	0.90
Total	221	100.00

Housing

	Number	Percent %
Number of Households	121	
Persons per Household	2.7	
Number of Housing Units	150	
Vacant Units Non Seasonal	9	6.00
Vacant Units Seasonal	20	13.33
Owner Occupied Units	103	68.67
Renter Occupied Units	18	12.00

Age of Housing

	Number	Percent %
Built 1999 to March 2000	8	4.76
Built 1985 to 1998	14	8.33
Built 1960 to 1994	11	6.55
Built 1980 to 1989	20	11.90
Built 1970 to 1979	18	10.71
Built 1960 to 1969	17	10.12
Built 1950 to 1959	12	7.14
Built 1940 to 1949	8	4.76
Built 1939 and Earlier	60	35.71
Total	168	100.00

Heating Method

	Number	Percent %
Utility Gas	4	3.10
Bottled, tank, or LP gas	36	27.90
Electricity	10	7.75
Fuel Oil, kerosene, etc.	38	29.46
Coal or coke	0	0.00
Wood	41	31.78
Solar energy	0	0.00
Other fuel	0	0.00
No fuel used	0	0.00
Total	129	100.00

Group Quarter

	Number	Percent %
Correctional institutions	0	0
Nursing Homes	0	0
Other institutions	0	0
College dormitories	0	0
Military quarters	0	0
Other non institutional group quarters	0	0
Total	0	0

Market Values

Estimated Market Value	19,308,100
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Economic Development

	Number
Average Income	33,316
Median Income	29,167
Per Capita Income	12,998
Total Population	327
Total Income	4,354,300

Poverty

	Number
Income below poverty level	19
Income at or above poverty level	109

Industry

	Number	Percent %
Agriculture, forestry, fishing and hunting and mining	18	11.92
Agriculture, forestry, fishing and hunting	18	11.92
Mining	0	0.00
Construction	13	8.61
Manufacturing	26	17.22
Wholesale trade	10	6.62
Retail trade	12	7.95
Transportation and warehousing, and utilities	6	3.97
Transportation and warehousing	6	3.97
Utilities	0	0.00
Information	0	0.00
Finance, insurance, real estate and rental and leasing	0	0.00
Finance and insurance	0	0.00
Real estate and rental and leasing	0	0.00
Professional, scientific, management, administrative, and waste management services	12	7.95
Professional, scientific, and technical services	10	6.62
Management of companies and enterprises	0	0.00
Administrative and support and waste management services	2	1.32
Educational, health and social services	37	24.50
Educational services	10	6.62
Health care and social assistance	27	17.88
Arts, entertainment, recreation, accommodation and food services	4	2.65
Arts, entertainment, and recreation	0	0.00
Accommodation and food services	4	2.65
Other services	8	5.30
Public Administration	5	3.31
Total	151	100.00

Transportation

	Number	Percent %
Car, Truck or van	128	85.91
Drive alone	109	73.15
Carpooled	19	12.75
Public Transportation	0	0.00
Bus or trolley bus	0	0.00
Streetcar or trolley car	0	0.00
Subway or elevated	0	0.00
Railroad	0	0.00
Ferry boat	0	0.00
Taxicab	0	0.00
Motorcycle	0	0.00
Bicycle	0	0.00
Walked	3	2.01
Other means	0	0.00
Worked at home	18	12.08
Total	149	100.00

Mean Travel Time to Work

27.2

Township of Orton

Population

	Number	Percent %
1970	187	
1980	234	
1990	217	
2000	220	
2002	226	
Percent % of Change 1990-2000	3	1.38
Percent % of Change 1970-2000	35	17.65
65 and Over of 2000 Population	4	1.82
85 and Over of 2000 Population		

Population By Race

	Number	Percent %
White	209	95
Black or African American	0	0
American Indian or Alaska Native	0	0
Asian	1	0.5
Native Hawaiian and Other Pacific Islanders	0	0
Other Single Race	9	4.1
Two or More Races	1	0.5
Total	220	100
Hispanic or Latino	10	4.55

Education Attainment

	Number	Percent %
No schooling completed	0	0
Nursery to 4th grade	0	0
5th to 6th grade	0	0
7th to 8th grade	18	13.04
9th grade	2	1.45
10th grade	4	2.9
11th grade	3	2.17
12th grade, no diploma	0	0
High school graduate (include equivalency)	69	50
Some college, less than 1 year	2	1.45
Some college, 1 or more years, no degree	10	7.25
Associate degree	6	4.35
Bachelor's degree	8	5.8
Master's degree	3	2.17
Professional school degree	3	2.17
Doctorate degree	0	0
Total	138	100

Housing

	Number	Percent %
Number of Households	85	
Persons per Household	2.59	
Number of Housing Units	112	
Vacant Units Non Seasonal	9	8.04
Vacant Units Seasonal	18	16.07
Owner Occupied Units	78	69.64
Renter Occupied Units	7	6.25

Age of Housing

	Number	Percent %
Built 1999 to March 2000	0	0.00
Built 1995 to 1998	7	6.36
Built 1990 to 1994	2	1.82
Built 1980 to 1989	12	10.91
Built 1970 to 1979	29	26.36
Built 1960 to 1969	13	11.82
Built 1950 to 1959	6	5.45
Built 1940 to 1949	13	11.82
Built 1939 and Earlier	28	25.45
Total	110	100.00

Heating Method

	Number	Percent %
Utility Gas	0	0.00
Bottled, tank, or LP gas	24	30.77
Electricity	9	11.54
Fuel Oil, kerosene, etc.	28	35.90
Coal or coke	0	0.00
Wood	17	21.79
Solar energy	0	0.00
Other fuel	0	0.00
No fuel used	0	0.00
Total	78	100.00

Group Quarter

	Number	Percent %
Correctional institutions	0	0
Nursing Homes	0	0
Other institutions	0	0
College dormitories	0	0
Military quarters	0	0
Other non institutional group quarters	0	0
Total	0	0

Market Values

Estimated Market Value	15,329,700
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Economic Development

	Number
Average Income	34,181
Median Income	26,875
Per Capita Income	12,625
Total Population	220
Total Income	2,790,100

Poverty

	Number
Income below poverty level	14
Income at or above poverty level	65

Industry

	Number	Percent %
Agriculture, forestry, fishing and hunting and mining	22	31.88
Agriculture, forestry, fishing and hunting	22	31.88
Mining	0	0.00
Construction	6	8.70
Manufacturing	19	27.54
Wholesale trade	0	0.00
Retail trade	2	2.90
Transportation and warehousing, and utilities	3	4.35
Transportation and warehousing	3	4.35
Utilities	0	0.00
Information	0	0.00
Finance, insurance, real estate and rental and leasing	4	5.80
Finance and insurance	4	5.80
Real estate and rental and leasing	0	0.00
Professional, scientific, management, administrative, and waste management services	7	10.15
Professional, scientific, and technical services	7	10.15
Management of companies and enterprises	0	0.00
Administrative and support and waste management services	0	0.00
Educational, health and social services	6	8.70
Educational services	2	2.90
Health care and social assistance	4	5.80
Arts, entertainment, recreation, accommodation and food services	0	0.00
Arts, entertainment, and recreation	0	0.00
Accommodation and food services	0	0.00
Other services	0	0.00
Public Administration	0	0.00
Total	69	100.00

Transportation

	Number	Percent %
Car, Truck or van	47	68.12
Drive alone	34	49.28
Carpooled	13	18.84
Public Transportation	0	0.00
Bus or trolley bus	0	0.00
Streetcar or trolley car	0	0.00
Subway or elevated	0	0.00
Railroad	0	0.00
Ferry boat	0	0.00
Taxicab	0	0.00
Motorcycle	0	0.00
Bicycle	0	0.00
Walked	6	8.70
Other means	0	0.00
Worked at home	16	23.19
Total	69	100.00

Mean Travel Time to Work

31.4

Township of Red Eye

Population

	Number	Percent %
1970	332	
1980	406	
1990	378	
2000	421	
2002	431	
Percent % of Change 1990-2000	43	11.38
Percent % of Change 1970-2000	46	26.81
65 and Over of 2000 Population	46	10.93
85 and Over of 2000 Population	2	0.48

Population By Race

	Number	Percent %
White	418	99.30
Black or African American	0	0.00
American Indian or Alaska Native	0	0.00
Asian	3	0.70
Native Hawaiian and Other Pacific Islanders	0	0.00
Other Single Race	0	0.00
Two or More Races	0	0.00
Total	421	100.00
Hispanic or Latino	0	0.00

Education Attainment

	Number	Percent %
No Schooling completed	0	0.00
Nursery to 4th grade	0	0.00
5th to 6th grade	3	1.19
7th to 8th grade	11	4.37
9th grade	7	2.78
10th grade	13	5.16
11th grade	6	2.38
12th grade, no diploma	5	1.98
High school graduate (include equivalency)	106	42.06
Some college, less than 1 year	28	11.11
Some college, 1 or more years, no degree	33	13.10
Associate degree	27	10.71
Bachelor's degree	10	3.97
Master's degree	3	1.19
Professional school degree	0	0.00
Doctorate degree	0	0.00
Total	252	100.00

Housing

	Number	Percent %
Number of Households	146	
Persons per Household	2.88	
Number of Housing Units	172	
Vacant Units Non Seasonal	12	6.98
Vacant Units Seasonal	14	8.14
Owner Occupied Units	137	79.65
Renter Occupied Units	9	5.23

Age of Housing

	Number	Percent %
Built 1999 to March 2000	4	2.35
Built 1985 to 1998	6	3.53
Built 1960 to 1994	8	4.71
Built 1980 to 1989	21	12.35
Built 1970 to 1979	33	19.41
Built 1960 to 1969	22	12.94
Built 1950 to 1959	8	4.71
Built 1940 to 1949	15	8.87
Built 1939 and Earlier	53	31.18
Total	170	100.00

Heating Method

	Number	Percent %
Utility Gas	11	7.69
Bottled, tank, or LP gas	43	30.07
Electricity	22	15.38
Fuel Oil, kerosene, etc.	27	18.88
Coal or coke	0	0.00
Wood	40	27.97
Solar energy	0	0.00
Other fuel	0	0.00
No fuel used	0	0.00
Total	143	100.00

Group Quarter

	Number	Percent %
Correctional institutions	0	0
Nursing Homes	0	0
Other institutions	0	0
College dormitories	0	0
Military quarters	0	0
Other non institutional group quarters	0	0
Total	0	0

Market Values

Estimated Market Value	21,352,600
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Economic Development

	Number
Average Income	43,455
Median Income	37,500
Per Capita Income	15,184
Total Population	421
Total Income	6,210,200

Poverty

	Number
Income below poverty level	15
Income at or above poverty level	129

Industry

	Number	Percent %
Agriculture, forestry, fishing and hunting and mining	24	11.77
Agriculture, forestry, fishing and hunting	24	11.77
Mining	0	0.00
Construction	22	10.78
Manufacturing	23	11.27
Wholesale trade	8	3.92
Retail trade	36	17.65
Transportation and warehousing, and utilities	16	7.84
Transportation and warehousing	15	7.35
Utilities	1	0.49
Information	5	2.45
Finance, insurance, real estate and rental and leasing	0	0.00
Finance and insurance	0	0.00
Real estate and rental and leasing	0	0.00
Professional, scientific, management, administrative, and waste management services	4	1.96
Professional, scientific, and technical services	4	1.96
Management of companies and enterprises	0	0.00
Administrative and support and waste management services	0	0.00
Educational, health and social services	39	19.12
Educational services	19	9.31
Health care and social assistance	20	9.80
Arts, entertainment, recreation, accommodation and food services	14	6.76
Arts, entertainment, and recreation	1	0.49
Accommodation and food services	13	6.37
Other services	12	5.88
Public Administration	1	0.49
Total	204	100.00

Transportation

	Number	Percent %
Car, Truck or van	164	82.83
Drive alone	144	72.73
Carpooled	20	10.10
Public Transportation	0	0.00
Bus or trolley bus	0	0.00
Streetcar or trolley car	0	0.00
Subway or elevated	0	0.00
Railroad	0	0.00
Ferry boat	0	0.00
Taxicab	0	0.00
Motorcycle	0	0.00
Bicycle	0	0.00
Walked	6	3.03
Other means	0	0.00
Worked at home	28	14.14
Total	198	100.00

Mean Travel Time to Work

23.5

Township of Rockwood

Population

	Number	Percent %
1970	465	
1980	491	
1990	375	
2000	388	
2002	385	
Percent % of Change 1990-2000	13	3.47
Percent % of Change 1970-2000	54	-16.56
65 and Over of 2000 Population	54	13.92
85 and Over of 2000 Population	2	0.52

Population By Race

	Number	Percent %
White	382	98.50
Black or African American	1	0.30
American Indian or Alaska Native	0	0.00
Asian	1	0.30
Native Hawaiian and Other Pacific Islanders	0	0.00
Other Single Race	2	0.50
Two or More Races	2	0.50
Total	388	100.00
Hispanic or Latino	2	0.52

Education Attainment

	Number	Percent %
No Schooling completed	0	0.00
Nursery to 4th grade	0	0.00
5th to 6th grade	0	0.00
7th to 8th grade	12	4.74
9th grade	12	4.74
10th grade	4	1.58
11th grade	3	1.19
12th grade, no diploma	6	2.37.00
High school graduate (include equivalency)	98	38.74
Some college, less than 1 year	15	5.93
Some college, 1 or more years, no degree	58	22.93
Associate degree	20	7.90
Bachelor's degree	15	5.93
Master's degree	10	3.95
Professional school degree	0	0.00
Doctorate degree	0	0.00
Total	253	100.00

Housing

	Number	Percent %
Number of Households	135	
Persons per Household	2.87	
Number of Housing Units	145	
Vacant Units Non Seasonal	7	4.83
Vacant Units Seasonal	3	2.07
Owner Occupied Units	123	84.83
Renter Occupied Units	12	8.28

Age of Housing

	Number	Percent %
Built 1999 to March 2000	1	0.65
Built 1995 to 1998	8	5.23
Built 1990 to 1994	10	6.54
Built 1980 to 1989	20	13.07
Built 1970 to 1979	26	16.99
Built 1960 to 1969	9	5.88
Built 1950 to 1959	19	12.42
Built 1940 to 1949	15	9.80
Built 1939 and Earlier	45	29.41
Total	153	100.00

Heating Method

	Number	Percent %
Utility Gas	2	1.45
Bottled, tank, or LP gas	42	30.43
Electricity	9	6.52
Fuel Oil, kerosene, etc.	46	33.33
Coal or coke	0	0.00
Wood	39	28.26
Solar energy	0	0.00
Other fuel	0	0.00
No fuel used	0	0.00
Total	138	100.00

Group Quarter

	Number	Percent %
Correctional institutions	0	0
Nursing Homes	0	0
Other institutions	0	0
College dormitories	0	0
Military quarters	0	0
Other non institutional group quarters	0	0
Total	0	0

Market Values

Estimated Market Value	20,518,000
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Economic Development

	Number
Average Income	38,642
Median Income	34,625
Per Capita Income	13,546
Total Population	388
Total Income	5,255,800

Poverty

	Number
Income below poverty level	13
Income at or above poverty level	124

Industry

	Number	Percent %
Agriculture, forestry, fishing and hunting and mining	53	28.34
Agriculture, forestry, fishing and hunting	53	28.34
Mining	0	0.00
Construction	21	11.23
Manufacturing	23	12.30
Wholesale trade	9	4.81
Retail trade	11	5.88
Transportation and warehousing, and utilities	4	2.14
Transportation and warehousing	4	2.14
Utilities	0	0.00
Information	5	2.67
Finance, insurance, real estate and rental and leasing	5	2.67
Finance and insurance	5	2.67
Real estate and rental and leasing	0	0.00
Professional, scientific, management, administrative, and waste management services	2	1.07
Professional, scientific, and technical services	0	0.00
Management of companies and enterprises	0	0.00
Administrative and support and waste management services	2	1.07
Educational, health and social services	37	19.79
Educational services	8	4.28
Health care and social assistance	29	15.51
Arts, entertainment, recreation, accommodation and food services	5	2.67
Arts, entertainment, and recreation	0	0.00
Accommodation and food services	5	2.67
Other services	6	3.21
Public Administration	6	3.21
Total	187	100.00

Transportation

	Number	Percent %
Car, Truck or van	119	63.64
Drive alone	106	56.68
Carpooled	13	6.95
Public Transportation	2	1.07
Bus or trolley bus	0	0.00
Streetcar or trolley car	0	0.00
Subway or elevated	0	0.00
Railroad	0	0.00
Ferry boat	0	0.00
Taxicab	0	0.00
Motorcycle	0	0.00
Bicycle	0	0.00
Walked	8	4.28
Other means	0	0.00
Worked at home	58	31.02
Total	187	100.00

Mean Travel Time to Work

22.1

Township of Shell River

Population

	Number	Percent %
1970	153	
1980	220	
1990	233	
2000	276	
2002	271	
Percent % of Change 1990-2000	43	18.45
Percent % of Change 1970-2000	32	80.39
65 and Over of 2000 Population	1	11.59
85 and Over of 2000 Population	1	0.36

Population By Race

	Number	Percent %
White	264	95.70
Black or African American	2	7.00
American Indian or Alaska Native	3	1.10
Asian	0	0.00
Native Hawaiian and Other Pacific Islanders	0	0.00
Other Single Race	0	0.00
Two or More Races	7	2.50
Total	276	100.00
Hispanic or Latino	2	0.36

Education Attainment

	Number	Percent %
No Schooling completed	0	0.00
Nursery to 4th grade	0	0.00
5th to 6th grade	0	0.00
7th to 8th grade	25	13.44
9th grade	7	3.76
10th grade	2	1.08
11th grade	4	2.15
12th grade, no diploma	0	0.00
High school graduate (include equivalency)	76	40.86
Some college, less than 1 year	8	4.30
Some college, 1 or more years, no degree	8	15.05
Associate degree	8	4.30
Bachelor's degree	22	11.82
Master's degree	3	1.61
Professional school degree	0	0.00
Doctorate degree	3	1.61
Total	186	100.00

Housing

	Number	Percent %
Number of Households	102	
Persons per Household	2.71	
Number of Housing Units	185	
Vacant Units Non Seasonal	13	7.03
Vacant Units Seasonal	70	37.84
Owner Occupied Units	89	48.11
Renter Occupied Units	13	7.03

Age of Housing

	Number	Percent %
Built 1999 to March 2000	6	3.11
Built 1995 to 1998	6	3.11
Built 1990 to 1994	11	5.70
Built 1980 to 1989	30	15.54
Built 1970 to 1979	56	29.02
Built 1960 to 1969	14	7.25
Built 1950 to 1959	8	4.15
Built 1940 to 1949	44	22.80
Built 1939 and Earlier	18	9.33
Total	193	100.00

Heating Method

	Number	Percent %
Utility Gas	4	3.85
Bottled, tank, or LP gas	31	29.81
Electricity	17	16.35
Fuel Oil, kerosene, etc.	22	21.15
Coal or coke	0	0.00
Wood	30	28.85
Solar energy	0	0.00
Other fuel	0	0.00
No fuel used	0	0.00
Total	104	100.00

Group Quarter

	Number	Percent %
Correctional institutions	0	0
Nursing Homes	0	0
Other institutions	0	0
College dormitories	0	0
Military quarters	0	0
Other non institutional group quarters	0	0
Total	0	0

Market Values

Estimated Market Value	17,782,400
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Economic Development

	Number
Average Income	43,075
Median Income	30,000
Per Capita Income	16,529
Total Population	276
Total Income	4,628,200

Poverty

	Number
Income below poverty level	11
Income at or above poverty level	91

Industry

	Number	Percent %
Agriculture, forestry, fishing and hunting and mining	14	10.94
Agriculture, forestry, fishing and hunting	14	10.94
Mining	0	0.00
Construction	21	16.41
Manufacturing	16	1.25
Wholesale trade	4	3.13
Retail trade	8	6.25
Transportation and warehousing, and utilities	14	10.94
Transportation and warehousing	14	10.94
Utilities	0	0.00
Information	0	0.00
Finance, insurance, real estate and rental and leasing	3	2.34
Finance and insurance	3	2.34
Real estate and rental and leasing	0	0.00
Professional, scientific, management, administrative, and waste management services	7	5.47
Professional, scientific, and technical services	7	5.47
Management of companies and enterprises	0	0.00
Administrative and support and waste management services	0	0.00
Educational, health and social services	20	15.63
Educational services	4	3.13
Health care and social assistance	16	1.25
Arts, entertainment, recreation, accommodation and food services	9	7.03
Arts, entertainment, and recreation	3	2.34
Accommodation and food services	6	4.69
Other services	9	7.03
Public Administration	3	2.34
Total	128	100.00

Transportation

	Number	Percent %
Car, Truck or van	101	78.91
Drive alone	89	69.53
Carpooled	12	9.38
Public Transportation	0	0.00
Bus or trolley bus	0	0.00
Streetcar or trolley car	0	0.00
Subway or elevated	0	0.00
Railroad	0	0.00
Ferry boat	0	0.00
Taxicab	0	0.00
Motorcycle	0	0.00
Bicycle	0	0.00
Walked	10	7.81
Other means	0	0.00
Worked at home	17	13.28
Total	128	100.00

Mean Travel Time to Work

16.1

Township of Thomastown

Population

	Number	Percent %
1970	650	
1980	987	
1990	887	
2000	714	
2002	713	
Percent % of Change 1990-2000	-173	-19.50
Percent % of Change 1970-2000	83	9.85
65 and Over of 2000 Population	6	0.84

Population By Race

	Number	Percent %
White	704	98.60
Black or African American	0	0.00
American Indian or Alaska Native	1	0.10
Asian	2	0.30
Native Hawaiian and Other Pacific Islanders	0	0.00
Other Single Race	2	0.30
Two or More Races	5	0.70
Total	714	100.00
Hispanic or Latino	7	0.98

Education Attainment

	Number	Percent %
No Schooling completed	0	0.00
Nursery to 4th grade	1	0.23
5th to 6th grade	0	0.00
7th to 8th grade	11	2.49
9th grade	1	0.23
10th grade	3	0.68
11th grade	11	2.49
12th grade, no diploma	4	0.90
High school graduate (include equivalency)	126	28.51
Some college, less than 1 year	38	8.60
Some college, 1 or more years, no degree	82	18.55
Associate degree	31	7.01
Bachelor's degree	82	18.55
Master's degree	31	7.01
Professional school degree	13	2.94
Doctorate degree	8	1.81
Total	442	100.00

Housing

	Number	Percent %
Number of Households	251	
Persons per Household	2.84	
Number of Housing Units	311	
Vacant Units Non Seasonal	18	5.79
Vacant Units Seasonal	42	13.50
Owner Occupied Units	238	76.58
Renter Occupied Units	13	4.18

Age of Housing

	Number	Percent %
Built 1999 to March 2000	9	2.92
Built 1995 to 1998	29	9.42
Built 1990 to 1994	26	8.44
Built 1980 to 1989	59	19.16
Built 1970 to 1979	89	28.90
Built 1960 to 1969	23	7.47
Built 1950 to 1959	8	2.60
Built 1940 to 1949	11	3.57
Built 1939 and Earlier	54	17.53
Total	308	100.00

Heating Method

	Number	Percent %
Utility Gas	2	0.80
Bottled, tank, or LP gas	56	22.58
Electricity	102	41.13
Fuel Oil, kerosene, etc.	36	14.52
Coal or coke	0	0.00
Wood	47	18.95
Solar energy	0	0.00
Other fuel	0	0.00
No fuel used	5	2.02
Total	248	100.00

Group Quarter

	Number	Percent %
Correctional institutions	0	0
Nursing Homes	0	0
Other institutions	0	0
College dormitories	0	0
Military quarters	0	0
Other non institutional group quarters	0	0
Total	0	0

Market Values

Estimated Market Value	43,794,200
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Economic Development

	Number
Average Income	59,064
Median Income	48,000
Per Capita Income	20,017
Total Population	714
Total Income	14,232,200

Poverty

	Number
Income below poverty level	22
Income at or above poverty level	224

Industry

	Number	Percent %
Agriculture, forestry, fishing and hunting and mining	41	11.95
Agriculture, forestry, fishing and hunting	41	11.95
Mining	0	0.00
Construction	23	6.71
Manufacturing	43	12.54
Wholesale trade	9	2.62
Retail trade	24	7.00
Transportation and warehousing, and utilities	22	6.41
Transportation and warehousing	19	5.54
Utilities	3	0.87
Information	5	1.46
Finance, insurance, real estate and rental and leasing	3	0.87
Finance and insurance	3	0.87
Real estate and rental and leasing	0	0.00
Professional, scientific, management, administrative, and waste management services	13	3.79
Professional, scientific, and technical services	9	2.62
Management of companies and enterprises	0	0.00
Administrative and support and waste management services	4	1.67
Educational, health and social services	128	37.32
Educational services	86	25.07
Health care and social assistance	42	12.24
Arts, entertainment, recreation, accommodation and food services	10	2.92
Arts, entertainment, and recreation	3	0.87
Accommodation and food services	7	2.04
Other services	13	3.79
Public Administration	9	2.62
Total	343	100.00

Transportation

	Number	Percent %
Car, Truck or van	277	82.44
Drive alone	243	72.32
Carpooled	34	10.12
Public Transportation	3	0.89
Bus or trolley bus	3	0.89
Streetcar or trolley car	0	0.00
Subway or elevated	0	0.00
Railroad	0	0.00
Ferry boat	0	0.00
Taxicab	0	0.00
Motorcycle	0	0.00
Bicycle	3	0.89
Walked	15	4.46
Other means	0	0.00
Worked at home	38	11.31
Total	336	100.00

Mean Travel Time to Work

21

Township of Wadena

Population

	Number	Percent %
1970	794	
1980	1,094	
1990	1,134	
2000	1,010	
2002	994	
Percent % of Change 1990-2000	-124	-10.93
Percent % of Change 1970-2000	112	27.20
65 and Over of 2000 Population	112	11.09
85 and Over of 2000 Population	7	0.69

Population By Race

	Number	Percent %
White	997	98.70
Black or African American	3	0.30
American Indian or Alaska Native	6	0.60
Asian	0	0.00
Native Hawaiian and Other Pacific Islanders	0	0.00
Other Single Race	0	0.00
Two or More Races	4	0.40
Total	1,010	100.00
Hispanic or Latino	9	0.89

Education Attainment

	Number	Percent %
No schooling completed	0	0.00
Nursery to 4th grade	0	0.00
5th to 6th grade	2	0.31
7th to 8th grade	28	4.33
9th grade	4	0.62
10th grade	8	1.24
11th grade	11	1.70
12th grade, no diploma	9	1.39
High school graduate (include equivalency)	285	44.05
Some college, less than 1 year	43	6.65
Some college, 1 or more years, no degree	134	20.71
Associate degree	48	7.42
Bachelor's degree	68	10.51
Master's degree	5	0.77
Professional school degree	2	0.31
Doctorate degree	0	0.00
Total	647	100.00

Housing

	Number	Percent %
Number of Households	346	
Persons per Household	2.92	
Number of Housing Units	365	
Vacant Units Non Seasonal	12	3.29
Vacant Units Seasonal	7	1.92
Owner Occupied Units	310	84.93
Renter Occupied Units	36	9.86

Age of Housing

	Number	Percent %
Built 1999 to March 2000	18	4.66
Built 1995 to 1998	6	1.55
Built 1990 to 1994	7	1.81
Built 1980 to 1989	56	14.51
Built 1970 to 1979	128	33.16
Built 1960 to 1969	40	10.36
Built 1950 to 1959	189	48.96
Built 1940 to 1949	23	5.96
Built 1939 and Earlier	90	23.32
Total	386	100.00

Heating Method

	Number	Percent %
Utility Gas	24	7.06
Bottled, tank, or LP gas	94	27.65
Electricity	69	20.29
Fuel Oil, kerosene, etc.	111	32.65
Coal or coke	0	0.00
Wood	40	11.76
Solar energy	0	0.00
Other fuel	2	0.59
No fuel used	0	0.00
Total	340	100.00

Group Quarter

	Number	Percent %
Correctional institutions	0	0
Nursing Homes	0	0
Other institutions	0	0
College dormitories	0	0
Military quarters	0	0
Other non institutional group quarters	0	0
Total	0	0

Market Values

Estimated Market Value	39,612,900
------------------------	------------

Economic Development

	Number
Average Income	46,772
Median Income	41,250
Per Capita Income	16,109
Total Population	1,010
Total Income	16,339,100

Poverty

	Number
Income below poverty level	31
Income at or above poverty level	318

Industry

	Number	Percent %
Agriculture, forestry, fishing and hunting and mining	51	10.00
Agriculture, forestry, fishing and hunting	51	10.00
Mining	0	0.00
Construction	41	8.04
Manufacturing	68	13.33
Wholesale trade	40	7.84
Retail trade	58	11.37
Transportation and warehousing, and utilities	36	7.06
Transportation and warehousing	32	6.27
Utilities	4	0.78
Information	1	0.19
Finance, insurance, real estate and rental and leasing	29	5.69
Finance and insurance	24	4.71
Real estate and rental and leasing	5	0.98
Professional, scientific, management, administrative, and waste management services	5	0.98
Professional, scientific, and technical services	1	0.19
Management of companies and enterprises	0	0.00
Administrative and support and waste management services	4	0.78
Educational, health and social services	101	19.80
Educational services	44	8.62
Health care and social assistance	57	11.18
Arts, entertainment, recreation, accommodation and food services	23	4.51
Arts, entertainment, and recreation	4	0.78
Accommodation and food services	19	3.73
Other services	17	3.33
Public Administration	40	7.84
Total	510	100.00

Transportation

	Number	Percent %
Car, Truck or van	435	87.70
Drive alone	392	79.03
Carpooled	43	8.67
Public Transportation	0	0.00
Bus or trolley bus	0	0.00
Streetcar or trolley car	0	0.00
Subway or elevated	0	0.00
Railroad	0	0.00
Ferry boat	0	0.00
Taxicab	0	0.00
Motorcycle	0	0.00
Bicycle	0	0.00
Walked	17	3.43
Other means	4	0.81
Worked at home	40	8.06
Total	496	100.00

Mean Travel Time to Work

17.1

Township of Wing River

Population

	Number	Percent %
1970	366	
1980	512	
1990	455	
2000	430	
2002	428	
Percent % of Change 1990-2000	-25	-5.49
Percent % of Change 1970-2000	68	17.49
65 and Over of 2000 Population	9	15.81
85 and Over of 2000 Population	9	2.09

Population By Race

	Number	Percent %
White	425	98.80
Black or African American	1	0.20
American Indian or Alaska Native	1	0.20
Asian	0	0.00
Native Hawaiian and Other Pacific Islanders	0	0.00
Other Single Race	3	0.70
Two or More Races	0	0.00
Total	430	100.00
Hispanic or Latino	3	0.70

Education Attainment

	Number	Percent %
No Schooling completed	2	0.75
Nursery to 4th grade	0	0.00
5th to 6th grade	0	0.00
7th to 8th grade	30	11.28
9th grade	9	3.38
10th grade	8	3.01
11th grade	5	1.88
12th grade, no diploma	8	3.01
High school graduate (include equivalency)	90	33.84
Some college, less than 1 year	19	7.14
Some college, 1 or more years, no degree	50	18.80
Associate degree	22	8.27
Bachelor's degree	23	8.65
Master's degree	0	0.00
Professional school degree	0	0.00
Doctorate degree	0	0.00
Total	266	100.00

Housing

	Number	Percent %
Number of Households	166	
Persons per Household	2.59	
Number of Housing Units	196	
Vacant Units Non Seasonal	15	7.65
Vacant Units Seasonal	15	7.65
Owner Occupied Units	151	77.04
Renter Occupied Units	15	7.65

Age of Housing

	Number	Percent %
Built 1999 to March 2000	3	1.73
Built 1995 to 1998	13	7.51
Built 1990 to 1994	8	4.62
Built 1980 to 1989	16	9.25
Built 1970 to 1979	40	23.12
Built 1960 to 1969	15	8.67
Built 1950 to 1959	7	4.05
Built 1940 to 1949	18	10.40
Built 1939 and Earlier	53	30.64
Total	173	100.00

Heating Method

	Number	Percent %
Utility Gas	0	0.00
Bottled, tank, or LP gas	59	37.34
Electricity	30	18.99
Fuel Oil, kerosene, etc.	27	17.09
Coal or coke	0	0.00
Wood	42	26.58
Solar energy	0	0.00
Other fuel	0	0.00
No fuel used	0	0.00
Total	158	100.00

Group Quarter

	Number	Percent %
Correctional institutions	0	0
Nursing Homes	0	0
Other institutions	0	0
College dormitories	0	0
Military quarters	0	0
Other non institutional group quarters	0	0
Total	0	0

Market Values

Estimated Market Value	24,067,600
------------------------	------------

Economic Development

	Number
Average Income	36,466
Median Income	35,469
Per Capita Income	13,634
Total Population	430
Total Income	5,440,100

Poverty

	Number
Income below poverty level	10
Income at or above poverty level	141

Industry

	Number	Percent %
Agriculture, forestry, fishing and hunting and mining	21	12.58
Agriculture, forestry, fishing and hunting	21	12.58
Mining	0	0.00
Construction	20	11.98
Manufacturing	22	13.17
Wholesale trade	13	7.78
Retail trade	28	16.77
Transportation and warehousing, and utilities	8	4.79
Transportation and warehousing	8	4.79
Utilities	0	0.00
Information	3	1.80
Finance, insurance, real estate and rental and leasing	4	2.40
Finance and insurance	4	2.40
Real estate and rental and leasing	0	0.00
Professional, scientific, management, administrative, and waste management services	5	2.99
Professional, scientific, and technical services	0	0.00
Management of companies and enterprises	0	0.00
Administrative and support and waste management services	5	2.99
Educational, health and social services	23	13.77
Educational services	7	4.19
Health care and social assistance	16	9.58
Arts, entertainment, recreation, accommodation and food services	8	4.79
Arts, entertainment, and recreation	4	2.40
Accommodation and food services	4	2.40
Other services	7	4.19
Public Administration	5	2.99
Total	167	100.00

Transportation

	Number	Percent %
Car, Truck or van	137	83.54
Drive alone	127	77.44
Carpooled	10	6.10
Public Transportation	2	1.22
Bus or trolley bus	2	1.22
Streetcar or trolley car	0	0.00
Subway or elevated	0	0.00
Railroad	0	0.00
Ferry boat	0	0.00
Taxicab	0	0.00
Motorcycle	0	0.00
Bicycle	0	0.00
Walked	4	2.44
Other means	2	1.22
Worked at home	19	11.59
Total	164	100.00

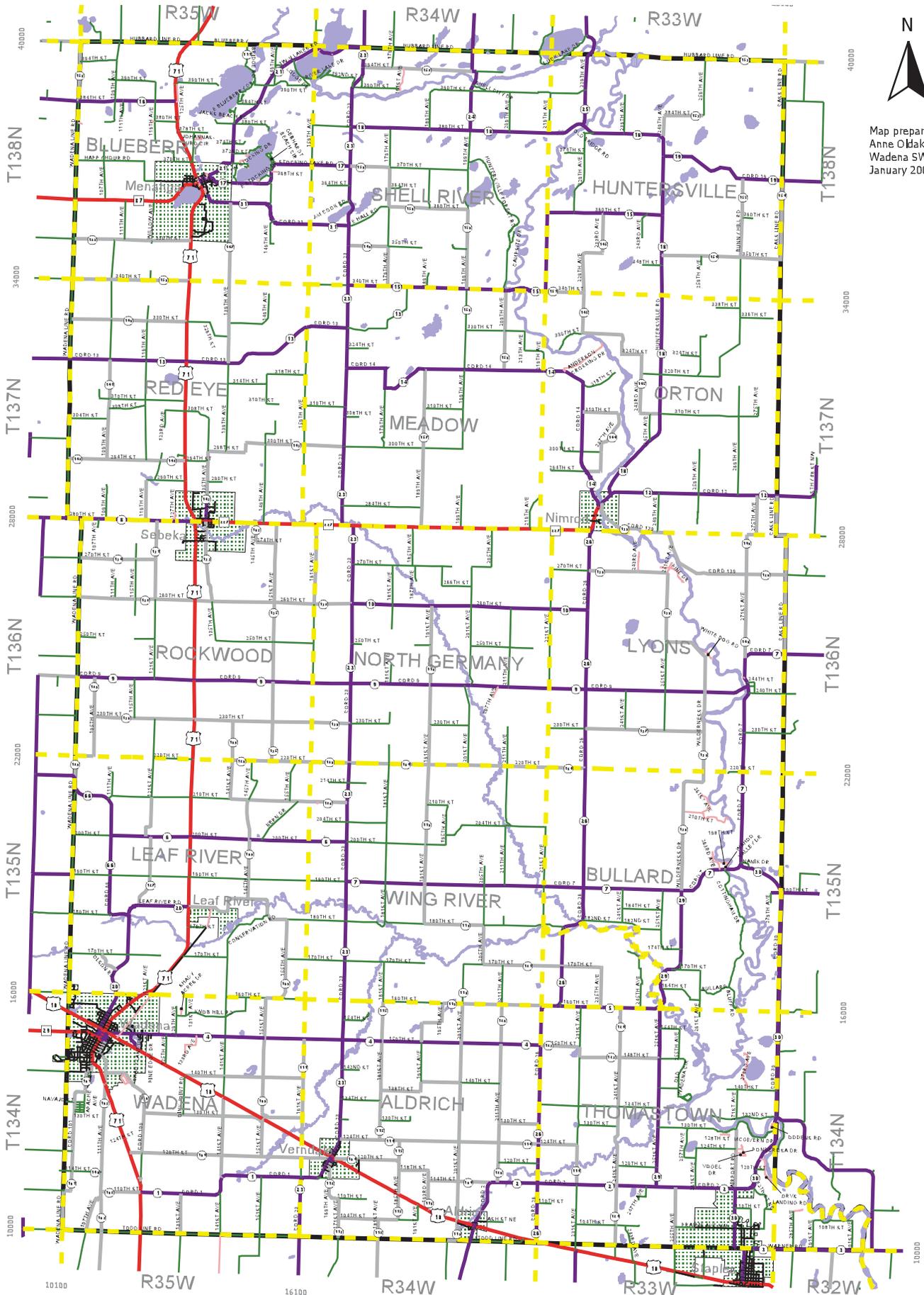
Mean Travel Time to Work

24.2

Wadena County



Map prepared by:
Anne Oldakowski
Wadena SWCD
January 2003

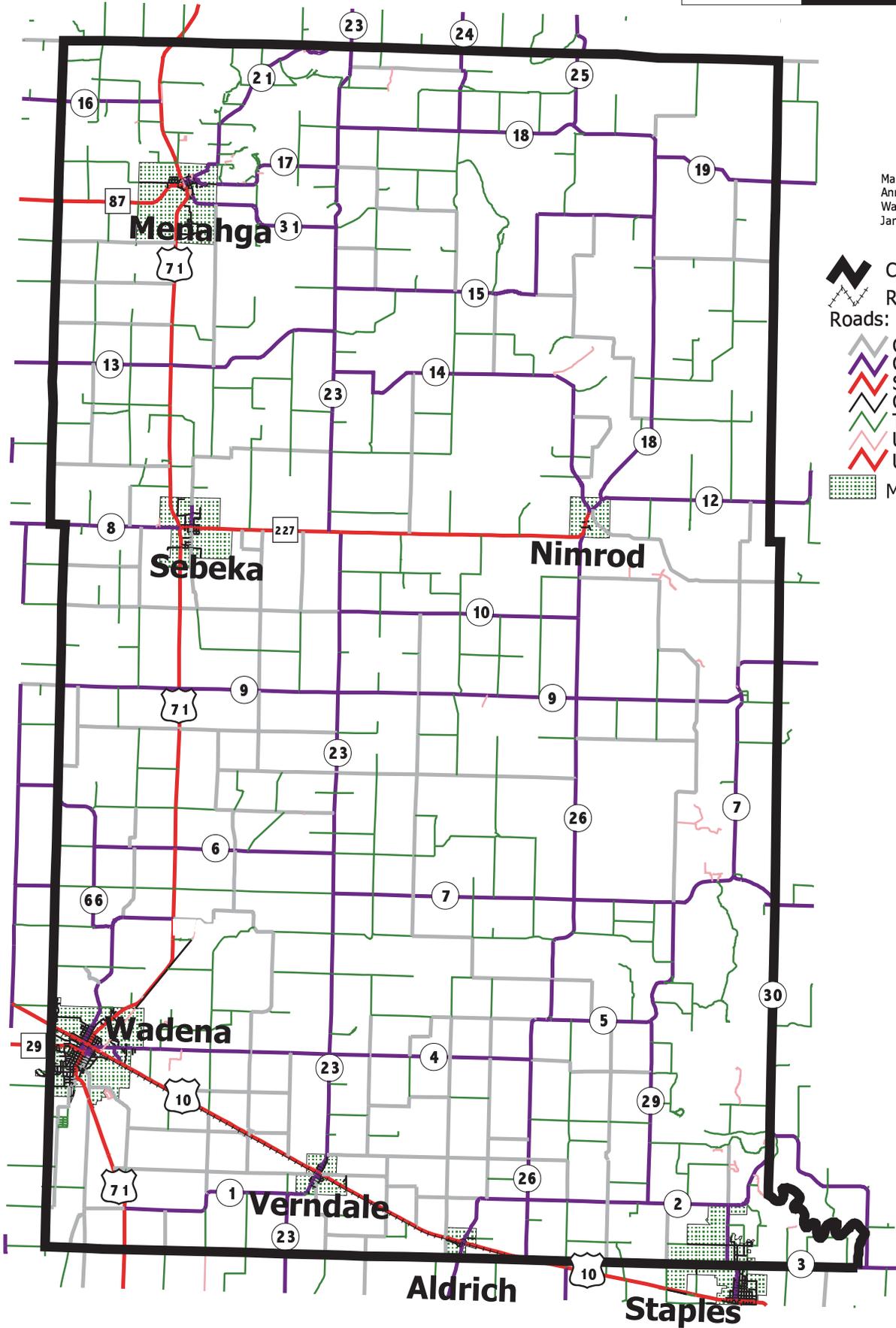


Wadena County



Map prepared by:
Anne Oldakowski
Wadena SWCD
January 2003

-  County Line
-  Railroads
- Roads:
 -  County Roads
 -  CSAH
 -  State Road
 -  City Streets
 -  Township Roads
 -  Undesignated
 -  US Highway
-  Municipalities

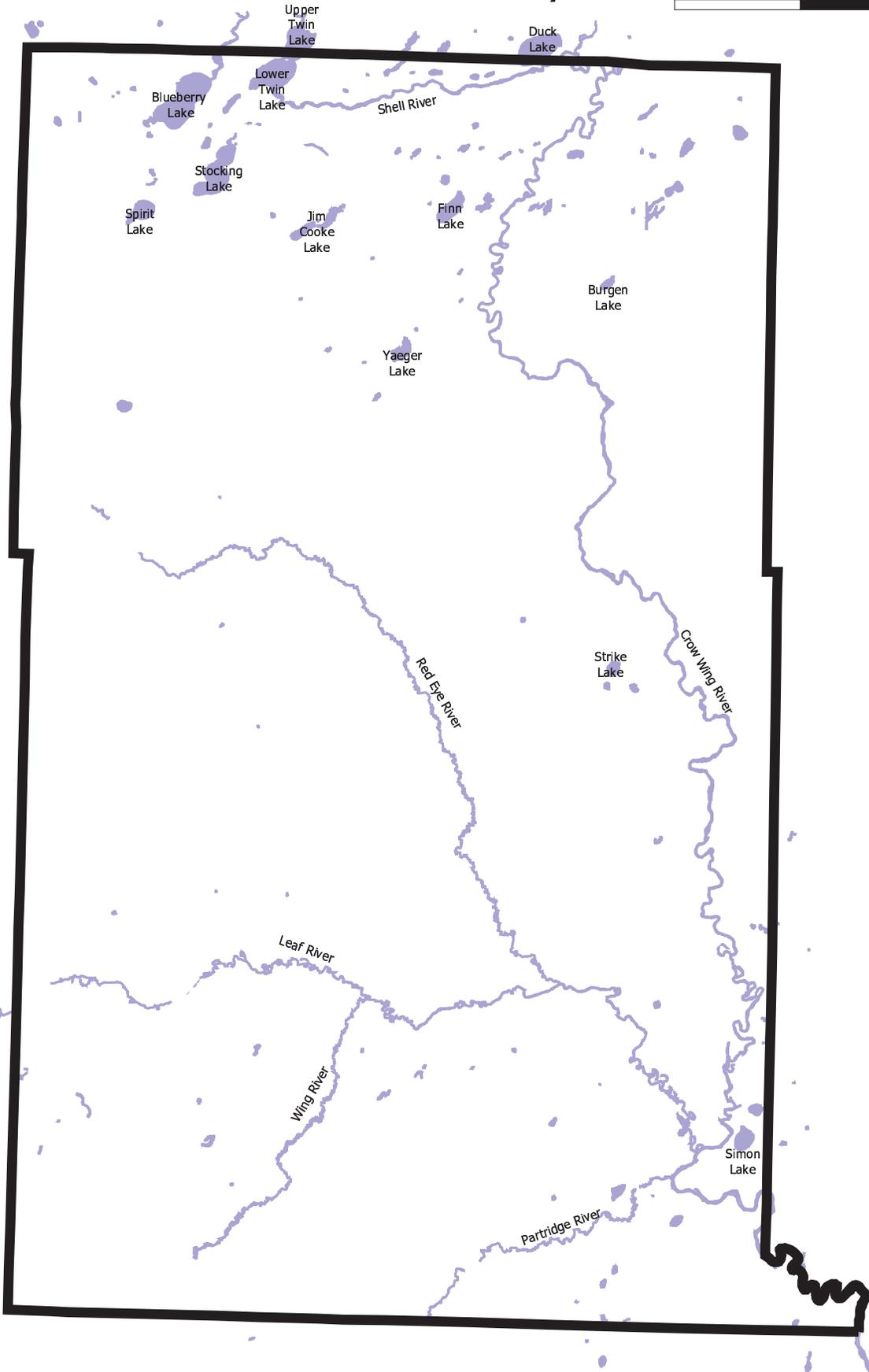


Wadena County Waterways

0 3 6 Miles



Map prepared by:
Anne Oldakowski
Wadena SWCD
January 2003

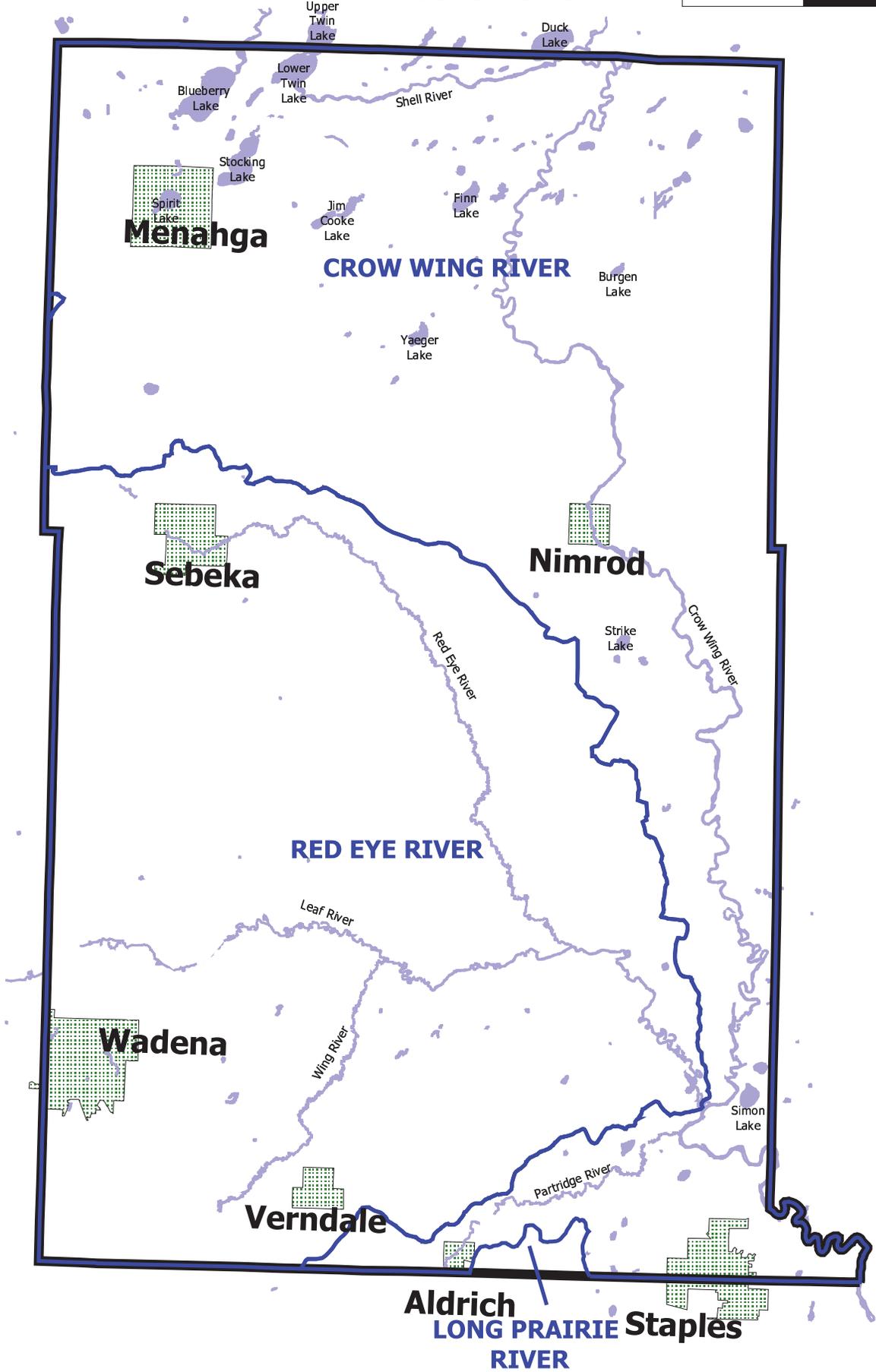


Wadena County Watersheds

0 3 6 Miles



Map prepared by:
Anne Oldakowski
Wadena SWCD
January 2003

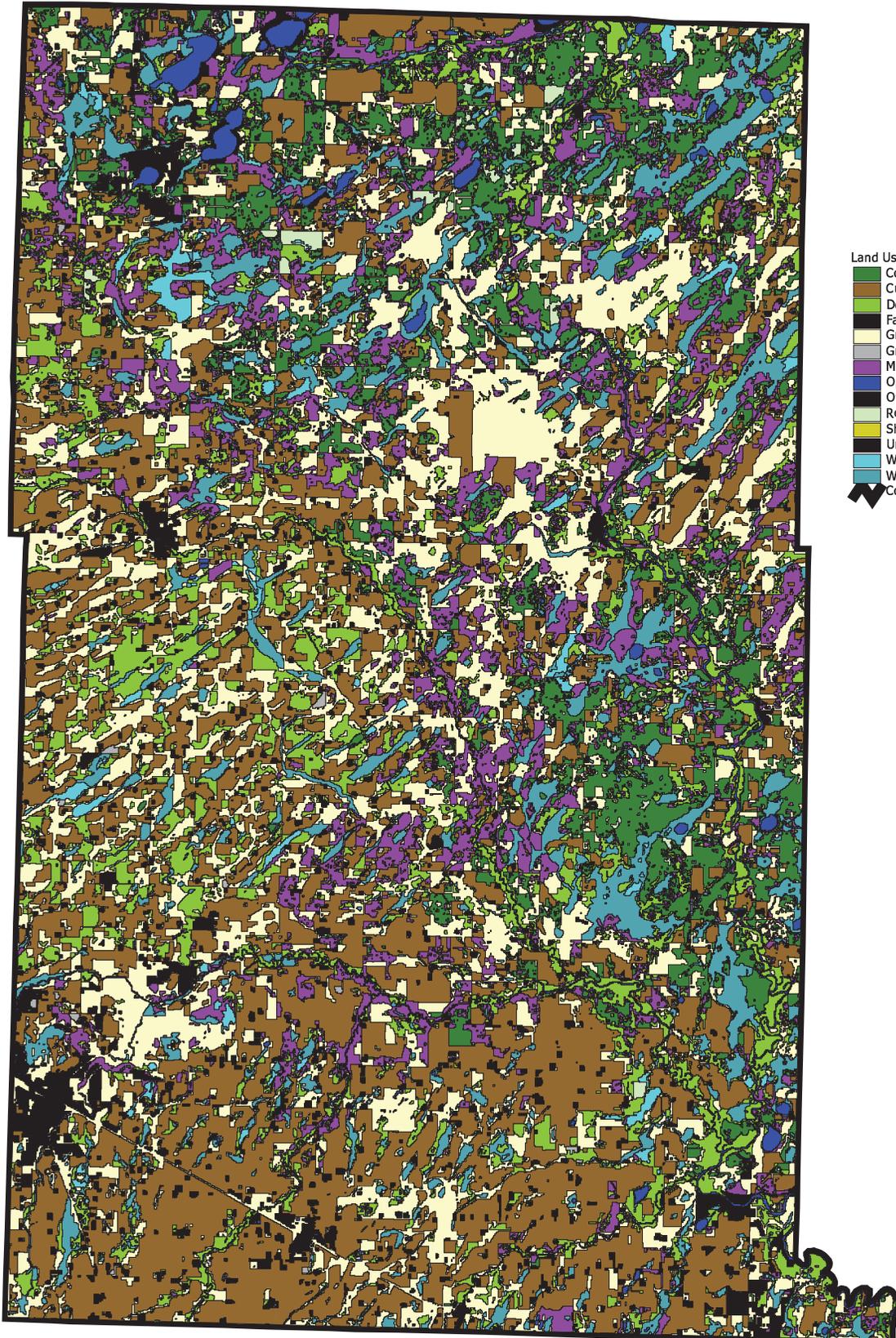


Wadena County Land Use

0 3 6 Miles



Map prepared by:
Anne Oldakowski
Wadena SWCD
January 2003



- Land Use
- Coniferous forest
 - Cultivated land
 - Deciduous forest
 - Farmsteads and rural residences
 - Grassland
 - Gravel pits and open mines
 - Mixedwood forest
 - Open water
 - Other rural developments
 - Regeneration/Young Forests
 - Shrubby grassland
 - Urban/industrial (cities & towns)
 - Wetlands - bogs
 - Wetlands - marsh and fens
 - County Line

Table D-1 Underground Storage Tanks

CITY	MATERIAL	NAME	QUANTITY (GAL.)	STATUS
Aldrich	Fuel Oil	Friedli, John	7000	Abd/Empty
Huntersville	Gasoline	Jordy's Crowbar	2000	Active
Menahga	Diesel	City of Menahga	1000	Active
Sebeka	Diesel	Menahg Public School	12000	Active
	Diesel	Northwoods General	3000	Active
	Gasoline	Chucks Country Foods	4000	Active
	Gasoline	Chucks Country Foods	6000	Active
	Gasoline	City of Menahga	1000	Active
	Gasoline	Northwoods General	8000	Active
	Gasoline	Northwoods General	8000	Active
	Gasoline	Orton's/Menahga	12000	Active
	Gasoline	Orton's/Menahga	12000	Active
	Gasoline	Orton's/Menahga	8000	Active
	Gasoline	Pete's Conoco	12000	Active
	Gasoline	Pete's Conoco	12000	Active
	Gasoline	Chucks Country Foods	6000	Active
Staples	Diesel	Lake Construction	1000	Abd/Empty
	Diesel	Rife Stop N Shop	1000	Reconditioned
	Diesel	Rife Stop N Shop	4000	Reconditioned
	Fuel Oil	Lake Construction	300	Active
	Fuel Oil	Sebeka Public Schools	14100	Active
	Gasoline	Lake Construction	3000	Active
	Gasoline	Marv's 66	10000	Active
	Gasoline	Rife Stop N Shop	6000	Reconditioned
	Gasoline	Rife Stop N Shop	6000	Reconditioned
	Gasoline	Marv's 66	10000	Active
	Gasoline	Rife Stop N Shop	6000	Reconditioned
	Kerosene	Lake Construction	300	Active
Verndale	Alcohol Blend	Staples Self-Serv	8000	Active
	Diesel	Bus Garage ISD 2170	12000	Active
Verndale	Fuel Oil	Greater Staples Hospital	4000	Active
	Gasoline	Bus Garage ISD 2170	12000	Active
	Gasoline	Staples Self-Serv	8000	Active
	Gasoline	Staples Self-Serv	6000	Active
	Diesel	Aldrich Tractor	14000	Abd/Empty
	Diesel	Verndale Public School	1000	Active
Wadena	Fuel Oil	Verndale Public School	10000	Active
	Gasoline	Aldrich Tractor	12000	Abd/Empty
	Gasoline	Aldrich Tractor	12000	Abd/Empty
	Gasoline	Verndale All Star	4000	Active
	Gasoline	Verndale All Star	4000	Active
	Gasoline	Verndale All Star	10000	Active
	Diesel	Peterson-Biddick Co.	5900	Abd/Filled-in
	Diesel	Todd Wadena Electric	6000	Active

Appendix D – Hazardous Materials Information

Wadena	Diesel	Peterson-Biddick Co.	5000	Abd/Filled-in
	Diesel	Tri-County Hospital	2000	Abd/Filled-in
	Diesel	Peterson-Biddick Co.	3000	Reconditioned
	Diesel	Peterson-Biddick Co.	15000	Reconditioned
	Diesel	Mason Brothers Co.	6000	Abd/Empty
	Diesel	Mason Brothers Co.	10000	Active
	Diesel	Wadena Feed Supply	3000	Active
	Fuel Oil	Shady Lane Nursing	4000	Abd/Filled-in
	Fuel Oil	Thompson Raymond A	3000	Abd/Filled-in
	Fuel Oil	Peterson-Biddick Co.	5000	Abd/Filled-in
	Fuel Oil	Peterson-Biddick Co.	2500	Abd/Filled-in
	Fuel Oil	Peterson-Biddick Co.	15000	Abd/Filled-in
	Fuel Oil	Peterson-Biddick Co.	1000	Abd/Filled-in
	Fuel Oil	Peterson-Biddick Co.	5000	Abd/Filled-in
	Fuel Oil	Pepsi Building	3500	Abd/Filled-in
	Fuel Oil	Jacobson Oil Co.	1000	Active
	Fuel Oil	Wadena State Bank	1000	Active
	Fuel Oil	MJ Ebner Inc	1500	Active
	Fuel Oil	NWTI/Wadena	10000	Active
	Fuel Oil	Bottemiller M M	3000	Inactive
	Fuel Oil	Wadena	8000	Active
	Fuel Oil	Wadean Silo Co	4000	Abd/Filled-in
	Fuel Oil	Bottemiller MM	3000	Inactive
	Fuel Oil	Wadena High School	8000	Active
	Fuel Oil	Wadena County	3000	Active
	Gasoline	Casey's General Store	10000	Active
	Gasoline	Holiday Station #93	8000	Active
	Gasoline	Holiday Station #93	8000	Active
	Gasoline	Holiday Station #93	8000	Active
	Gasoline	Breid Carl A	2000	Abd/Empty
	Gasoline	Carter Service Station	2000	Active
	Gasoline	Holiday Station #93	8000	Active
	Gasoline	Casey's General Store	10000	Active
	Gasoline	Peterson-Biddick Co.	5000	Abd/Filled-in
	Gasoline	Peterson-Biddick Co.	1000	Abd/Filled-in
	Gasoline	Peterson-Biddick Co.	5000	Abd/Filled-in
	Gasoline	Wadena Municipal	2000	Active
	Gasoline	Wadena Municipal	500	Active
	Gasoline	Bus Garage ISD 2155	8000	Reconditioned
	Gasoline	Bus Garage ISD 2155	8000	Reconditioned
Gasoline	Todd Wadena Electric	10000	Active	
Molasses	Peterson-Biddick Co.	0	Abd/Filled-in	
Unknown	Culligan	2000	Abd/Filled-in	
Waste Oil	Northern Cooperative	560	Active	
Waste Oil	Johnson Bearing Co	800	Abd/Empty	
Waste Oil	Alexandria Diesel	6000	Abd/Filled-in	

Source: Wadena County Comprehensive Local Water Plan

Table D-2 Hazardous Waste Generators

Generator Activity Code		Generator Activity Size	
Type	Description	Size	Name
9	Multi-Program site	E	<100 kg/Month
G	Generator	N	Non-Generator
GC	Generator, Oil Only	Size	100-1000 kg/month
NO	Non-Generator	X	Exempt Facility
GB	Generator, Out of Business	GI	Generator, Intermittent, E<->S

COMPANY NAME	LOCATION	ACTIVITIES	SIZE
10 Star Auto	Wadena	G	E
Ace Automotive	Wadena	GB	N
Ace Automotive	Wadena	GB	N
Aldrich Battery Outlet	Aldrich	GB	N
Alexnadia Diesel INC	Wadena	G	E
All Areas Welding Co.	Menahga	G	E
Anderson Auto Body	Menahga	G	E
Auto Tri Co.	Wadena	GB	N
Baso Battery	Menahga	NO	N
Bills Service	Sebeka	NO	N
Blue Star Camper	Wadena	GB	N
Boedigheimer Daniel DDS	Wadena	G	E
Bounds Body Shop	Verndale	G	E
Burkel Turkey Farms	Menahga	G	E
Burns Signs	Wadena	NO	N
Carter Oil Co.	Wadena	G	E
Central Lakes College	Staples	G	S
Central Lakes College West Campus	Staples	G	E
Charlenes Magic Mirror	Staples	NO	N
Chets Body Shop	Wadena	G	E
Chucks Auto Repair	Wadena	G	E
City	Wadena	G	E
Class A Auto Repair	Verndale	GB	N
Coast to Coast Store	Wadena	GC	N
Cooperative Power Station	Wadena	GB	N
Cooperative Sampo Inc	Menahga	GB	N
Cooperative Sampo True Value	Menahga	G	N
County Hwy Dept	Wadena	G	E
D and M Auto	Sebeka	GB	N
D F Boline DC	Wadena	NO	N
Dans Painting	Wadena	G	E
Dicks Repair	Wadena	NO	N
Domino Ford	Wadena	G	E
Dowlite of MN Inc	Wadena	GB	N
Electric Motor Serv	Wadena	NO	N
Elementary School	Wadena	GB	E
Elsner Well Drilling Inc	Menahga	GC	N

Appendix D – Hazardous Materials Information

Evergreen Equipment	Wadena		
Fisher Auto Sales	Wadena	GB	N
Folkestad Craig Farm	Verndale	NO	N
G and L Service	Wadena	GC	N
Greater Staples Hospital	Staples	G	E
Grunst Chiropractic Clinic	Wadena	G	E
High School	Wadena	G	E
Hjermstad Oil Co.	Sebeka	GC	E
Hockerts Inc	Wadena	NO	N
Homecrest Industries Inc	Wadena	G	S
Howard Wayne DDS	Wadena	NO	N
Hunkes Transfer	Wadena	G	E
Hunkes Transfer Inc	Wadena	GB	N
Hunkes Transfer Inc	Wadena	GB	N
ISD 2155 Bus Garage	Wadena	G	E
ISD 820	Sebeka	G	E
ISD 821 Bus Garage	Menahga	G	E
J Scott Industries	Wadena		
Johns Car Care Center	Wadena	G	E
Johnson Auto SVC Shop	Wadena	G	E
Johnson Bearing Co	Wadena	GC	N
Johnson Memorial Home	Wadena	NO	N
Juers Repair	Wadena	GB	N
Juers Repair Inc	Wadena	G	S
Kens Repair	Menahga	NO	N
Kern and Tabery Inc	Wadena	G	E
Kingsley Press	Wadena	GB	N
Krause Drug Co.	Wadena	NO	N
Lakewood Clinic PA	Staples	GB	N
Marjon Printers	Sebeka	G	E
Martin Body Shop	Wadena	G	E
Mason Brothers	Wadena	G	E
Matthiae James H DDS	Wadena	G	E
McDonald Std Pht Syrex	Wadena	G	E
McKechnie Tooling and Engineering	Staples	G	E
Menahga Concrete Products	Menahga	G	E
Menahga Shop	Menahga	GC	N
Mid Central Federal Savings Bank	Wadena	GB	N
Mid Central Savings and Loan site	Wadena	NO	N
MN Dept of Ag Irrigation Cntr	Staples	NO	N
Mn/DOT District 3A	Wadena	GB	N
Mn/DOT Wadena	Wadena	G	E
Mn/DOT Wadena	Wadena	GB	N
Modern Cleaners	Wadena	GB	N
Moench Body Shop	Wadena	G	E
Monahan Edward J DDS	Wadena	G	E
MPCA Wadena Arsenic site	Wadena	GB	N
National Guard Armory	Wadena	GI	E

Appendix D – Hazardous Materials Information

Nimrod Shop	Nimrod	GC	N
Northwest Technical	Wadena	NO	N
NWTI (automotive)	Wadena	GB	N
Olson Auto Repair	Verndale	G	E
Olsons Custom Farm Svcs	Sebeka	G	E
Pamida Inc	Wadena	G	E
Pine Tree Photography	Menahga	NO	N
Pioneer Journal	Wadena	NO	N
Polman Transfer Inc	Wadena	G	E
Precision Auto Body	Wadena	GB	N
R and L Fiberglassing	Wadena	G	E
Ramel Industries	Wadena	GB	N
Raymond A Brink Jewelry	Wadena	NO	N
Restameyer Charles R DDS	Menahga	G	E
Rife Chevrolet	Sebeka	NO	N
Ritari Post and Pole Superfund	Sebeka	9	X
Rons Auto Repair	Staples	G	E
RPM Press Inc	Verndale	NO	N
Russ Davis Wholesale	Wadena	GC	N
Salo Manufacturing Inc	Menahga	G	E
Schwartzwald Snyder Drug	Wadena	NO	N
Sebeka Salvage	Sebeka	NO	N
Sebeka Shop	Sebeka	GC	N
Service Master of Wadena	Wadena	NO	N
Sharp Jack	Sebeka	NO	N
Southbrook Vet Hosp	Wadena	NO	N
Spectrum Printing	Wadena	G	E
St. Ann School	Wadena	NO	N
Standard Auto Parts	Wadena	G	E
State Special Waste Facility	Sebeka	GB	N
Sunnybrook Auto Body	Wadena	G	E
Time Jewelry	Wadena	NO	N
Todd Wadena Electric	Wadena	G	S
Torvinens Auto Body	Menahga	G	E
Torvinens Machine	Menahga	G	E
Tri County Hospital	Wadena	G	E
Twin City Freight	Wadena	NO	N
Ultra Color Inc	Staples	G	E
United Parcel Service	Wadena	G	E
Uselman Electric Inc	Wadena	GC	N
Uselman R R Truck and Trailer	Wadena	G	E
Uselman Repair	Wadena	G	E
Verndale Public Schools	Verndale	G	E
Verndale Shop	Verndale	GC	N
Verndale Sun	Verndale	NO	N
Viking Gas Transmission	Wadena	GB	N
Wadena Air Force Station	Wadena	NO	N
Wadena Auto Mall	Wadena	G	E

Appendix D – Hazardous Materials Information

Wadena Auto Mall	Wadena	GB	N
Wadena Auto Supply	Wadena	G	E
Wadena Chiropractic Clinic	Wadena	G	E
Wadena City Branch Library	Wadena	NO	N
Wadena Farm Supply	Wadena	GB	N
Wadena Feed Supply	Wadena	GC	N
Wadena Hide and Fur	Wadena	G	E
Wadena Lanes Inc	Wadena	G	E
Wadena Motor Co.	Wadena	GB	N
Wadena Printing Co.	Wadena	G	E
Wadena Ready Mix	Wadena	G	E
Wadena Saw Mills	Wadena	G	E
Wadena Television Center	Wadena	G	E
Wadena Tire and Auto Clean Up	Wadena	NO	N
Waln Construction	Wadena	NO	N
Water and Light Dept	Wadena	NO	N
Westside Sports	Wadena	G	E
Woods and Son Repair	Wadena	NO	N

Table E-1

Non-Transient Non-Community Water Systems

Water Systems that serve the same people, but not year-round (e.g. schools that have their own water system).

Water System Name	Population Served	Primary Water Source Type	System Status	Date Closed	Water System ID
CENTRAL LKS COLLEGE-STAPLES WEST CAMPUS	60	Ground water	Active		MN5800090
BLUE STAR CAMPERS MFG	25	Ground water	Closed	12/1/1995	MN5800005
CHRISTIAN LIBERTY SCHOOL	25	Ground water	Closed	12/1/1995	MN5800014
FAITH ACADEMY CHRISTIAN SCHOOL	35	Ground water	Closed	12/1/1995	MN5800088
GATEWAY INDUSTRIES	25	Ground water	Closed	12/1/1995	MN5800011
GREEN MEADOW SCHOOL	25	Ground water	Closed	12/1/1995	MN5800071
ITASCA MANUFACTURING	25	Ground water	Closed	12/1/1995	MN5800010
MAGNUM INDUSTRIES	25	Ground water	Closed	12/1/1995	MN5800017
MCCOURTNEY PLASTICS INC	25	Ground water	Closed	12/1/1995	MN5800063
MENAHGA SCHOOL SHOP	25	Ground water	Closed	12/1/1995	MN5800009
RIVER HILLS MOB HOME PARK	25	Ground water	Closed	12/1/1995	MN6800080
SCHOOL BUS GARAGE SCHOOL DIST	25	Ground water	Closed	12/1/1995	MN5800089
STAPLES HOSPITAL	25	Ground water	Closed	12/1/1995	MN6800056
STERN RUBBER AND TOOL CO	25	Ground water	Closed	12/1/1995	MN5800062
WADENA SAW MILL	34	Ground water	Closed	12/1/1995	MN5800025

Table E-2

Transient Non-Community Water Systems

Water Systems that do not consistently serve the same people (e.g. rest stops, campgrounds, gas stations).

ALDRICH COMMUNITY CENTER	25	Ground water	Active		MN5800204
ANDERSON CROSSING CAMPGROUND	25	Ground water	Active		MN5800001
BETHANY FREE LUTHERAN CHURCH	90	Ground water	Active		MN5800047
BLUEBERRY PINES GOLF CLUB INC	25	Ground water	Active		MN5800210
BROOKSIDE MOTEL	25	Ground water	Active		MN5800026
BULLARD BLUFF CAMPGROUND	25	Ground water	Active		MN5800053
CAMP EMMAUS	25	Ground water	Active		MN5800211
CENTRAL LAKES AGRICULTURAL CENTER	25	Ground water	Active		MN5800087
CENTRAL UNITED METHODIST CHURCH	30	Ground water	Active		MN5800083
COTTINGHAM PARK CAMPSITE	25	Ground water	Active		MN5800054
COUNTRYSIDE MOBILE HOME COURT	25	Ground water	Active		MN5800212
DAVID PAULSON AGENCY	25	Ground water	Active		MN5800206
DIAMOND TOOL, INC	30	Ground water	Active		MN5800284

Appendix E – Drinking Water

ENGLAND PRAIRIE PIONEER CLUB	100	Ground water	Active		MN5800285
FRAME'S LANDING CAMPSITE	25	Ground water	Active		MN5800097
GB'S AUTOGLASS AND SERVICE	25	Ground water	Active		MN5800033
H AND R BLOCK	25	Ground water	Active		MN5800029
HOPE CHAPEL ALLIANCE CHURCH	50	Ground water	Active		MN5800104
HUNTERSVILLE OUTPOST BAR & GRILL	25	Ground water	Active		MN5800214
HUNTERSVILLE STATE FOREST CAMPGROUND	25	Ground water	Active		MN5800040
KNOB HILL CAMPSITE	25	Ground water	Active		MN5800055
LITTLE WHITE DOG CAMPSITE	25	Ground water	Active		MN5800101
MCGIVERN PARK CAMPSITE	25	Ground water	Active		MN5800095
MENAHGA ASSEMBLY OF GOD	70	Ground water	Active		MN5800283
MENAHGA CONCRETE PRODUCTS, INC	25	Ground water	Active		MN5800016
NIMROD EVANGELICAL LUTHERAN CHURCH	65	Ground water	Active		MN5800086
NIMROD SENIOR CITIZEN CENTER	25	Ground water	Active		MN5800085
NORTHWEST TECHNICAL COLLEGE	25	Ground water	Active		MN5800209
OLD WADENA CAMPSITE	25	Ground water	Active		MN5800100
PINE COVE INN	25	Ground water	Active		MN5800006
R & R BAR AND GRILL	25	Ground water	Active		MN5800213
RENNEBERG HARDWOOD, INC	50	Ground water	Active		MN5800094
RIVER INN	25	Ground water	Active		MN5800019
SEVENTH DAY ADVENTIST CHURCH	70	Ground water	Active		MN5800081
SHELL CITY CAMPGROUND	25	Ground water	Active		MN5800044
ST HUBERT'S CATHOLIC CHURCH	50	Ground water	Active		MN5800037
TED AND GEN'S BAR BQ	25	Ground water	Active		MN5800020
TERRY MOTEL	25	Ground water	Active		MN5800078
THOMASTOWN COVENANT CHURCH	80	Ground water	Active		MN5800060
TREE FARM CAMPSITE	25	Ground water	Active		MN5800096
TWIN LAKES LODGE	25	Ground water	Active		MN5800046
VERNDALE TRUSS, INC	25	Ground water	Active		MN5800282
VINTAGE AT STAPLES	25	Ground water	Active		MN5800216
WAHOO VALLEY	25	Ground water	Active		MN5800217
WHITETAIL RUN GOLF COURSE	25	Ground water	Active		MN5800007
ZION LUTHERAN CHURCH	30	Ground water	Active		MN5800102
ALDRICH COMMUNITY CENTER	25	Ground water	Closed	12/1/1995	MN5800203
ARDEN EWERT OIL COMPANY	25	Ground water	Closed	12/1/1995	MN5800048
BELL HILL RECOVERY CENTER	25	Ground water	Closed	12/1/1995	MN5800200
BIBLE MISSION CHURCH	25	Ground water	Closed	12/1/1995	MN5800024

Appendix E – Drinking Water

BIG BEN CAMPGROUND	25	Ground water	Closed	12/1/1995	MN5800070
CAMP EMMAUS	25	Ground water	Closed	12/1/1995	MN5800072
CARTERS STATION	25	Ground water	Closed	12/1/1995	MN5800021
CHRISTIAN MISSIONARY ALLIANCE	25	Ground water	Closed	12/1/1995	MN5800038
CITY AIRPORT	25	Ground water	Closed	12/1/1995	MN5800030
COUNTRY MANOR MOTEL	25	Ground water	Closed	12/1/1995	MN5800073
D AND G NORTHSIDE	25	Ground water	Closed	12/1/1995	MN5800059
FUNKS CANOE OUTFITTERS	25	Ground water	Closed	12/1/1995	MN5800003
HORTON	25	Ground water	Closed	12/1/1995	MN5800034
HUNTERSVILLE CANOE OUTFTR	25	Ground water	Closed	12/1/1995	MN5800041
JEANNES TWIN LAKE RESORT	25	Ground water	Closed	12/1/1995	MN5800042
LUTHERAN CHURCH	25	Ground water	Closed	12/1/1995	MN5800035
MCGIVERN PARK CAMPSITE	25	Ground water	Closed	12/1/1995	MN5800066
MEADOW TOWN HALL	25	Ground water	Closed	12/1/1995	MN5800036
MEMORIAL FOREST PARK	25	Ground water	Closed	12/1/2002	MN5800215
MENAHGA APOSTOLIC LUTHERAN CHURCH	25	Ground water	Closed	8/1/2002	MN5800098
MENAHGA PALLET, INC	25	Ground water	Closed	8/1/1996	MN5800091
MILLER TRUE VALUE	25	Ground water	Closed	12/1/1995	MN5800058
MINNESOTA KILNS, INC	25	Ground water	Closed	4/1/2002	MN5800018
NIMROD FORESTRY	25	Ground water	Closed	12/1/1995	MN5800068
NIMROD FORESTRY	25	Ground water	Closed	12/1/1995	MN5800069
NIMROD RANGER STATION	25	Ground water	Closed	12/1/2002	MN5800004
NORTHWEST TECHNICAL COLLEGE	25	Ground water	Closed	5/1/1996	MN5800208
NORTHWOODS GENERAL STORE	25	Ground water	Closed	9/1/2002	MN5800084
OLD WADENA COUNTY PARK	25	Ground water	Closed	12/1/1995	MN5800067
OLSON'S CUSTOM FARM SERVICES	25	Ground water	Closed	7/1/2000	MN5800201
OMEGA HARDWOODS INC	25	Ground water	Closed	8/1/2002	MN5800281
OYLEN GROCERY	25	Ground water	Closed	12/1/1995	MN5800039
PINE CREST RESORT	25	Ground water	Closed	12/1/1995	MN5800045
REDEEMER LUTHERAN CHURCH	70	Ground water	Closed	9/1/2001	MN5800099
RIVER HILLS MOBILE HOME COURT	25	Ground water	Closed	4/1/1997	MN5800080
RIVERSIDE GROCERY	25	Ground water	Closed	12/1/1995	MN5800031
ROD	25	Ground water	Closed	12/1/1995	MN5800015
SEBEKA MILK PRODUCTS	25	Ground water	Closed	12/1/1995	MN5800049
SOUTHGATE HTG AND INSUL	25	Ground water	Closed	12/1/1995	MN5800013
STAPLES SPORTSMEN'S CLUB	25	Ground water	Closed	12/1/1995	MN5800103
STAPLES TECHNICAL COLLEGE -	25	Ground water	Closed	12/1/1995	MN5800207
STAPLES VOCATIONAL INST	25	Ground water	Closed	12/1/1995	MN5800064
SUNSHINE WAREHOUSE MARKET	25	Ground water	Closed	12/1/1995	MN5800057
TODD-WADENA ELECTRIC	25	Ground water	Closed	12/1/1995	MN5800027

Appendix E – Drinking Water

ULTRA COLOR INC	25	Ground water	Closed	12/1/1995	MN5800061
VERNDALE PRAIRIE FEEDS	25	Ground water	Closed	11/1/1999	MN5800205
VERNDALE PRAIRIE FEEDS	25	Ground water	Closed	12/1/1995	MN5800202
WADENA COUNTY GARAGE	25	Ground water	Closed	12/1/1995	MN5800023
WADENA DRIVE-IN THEATER	25	Ground water	Closed	12/1/1995	MN5800051
WADENA IMPLEMENT	25	Ground water	Closed	12/1/1995	MN5800028
WAGON WHEEL INN	25	Ground water	Closed	12/1/1995	MN5800050
WW PRODUCTS, INC	25	Ground water	Closed	5/1/1996	MN5800093

Creating a Community Assessment

The most important aspect of preparing a mitigation plan is to understand the hazards facing your community. Understanding the various hazards' risks and consequences is the first part of mitigating the adverse effects of future events. This can be accomplished by:

- Identifying hazards
- Profiling hazards
- Developing a community profile
- Identifying sectors within the community and evaluate hazards within them

Step 1 – Identify Existing Hazards (Worksheet 1)

What hazards occur in the community? Finding out what hazards are present in a community is the first step in any effort to reduce community risk. It is important to identify all hazards that potentially threaten a community and analyze them individually to determine the degree of overall threat. Put a list together of what hazards are known to or may impact the community. Consider all types of hazards, including those addressed in the state's plan.

Hazard groupings in Minnesota should typically include:

Natural Hazards – thunderstorms, lightning, tornadoes, windstorms, hailstorms, blizzards, ice storms, extreme heat, drought, earthquakes, wildfires, land subsidence and floods

Technological Hazards – dam failures, fires, hazardous materials events and nuclear events

Human Attributed Hazards – rioting, large demonstrations, terrorism

Don't reinvent the wheel. Start by reviewing what the community has already identified in existing plans and documents and drawing on the knowledge of community experts. Identify those hazards needing updated information.

Keep in mind the following concepts:

- Do all the hazards identified still pose a threat to the community?

- Are there hazards that are not currently included that now pose a threat to the community?
- Does the current hazard analysis specifically consider the possibility of cascading hazards; that is, one event (e.g., a tornado) leading to another (e.g., gas leaks)?

Step 2 – Profile Hazards (Worksheet 2)

How do hazards impact my community? A hazard profile is a description and analysis of a specific type of local hazard. It is performed for each hazard identified in Worksheet 1. Hazards can occur naturally or be human induced. Hazards are rated on their magnitude, frequency and onset potential and can affect communities in varying and unpredictable ways.

Profile should include:

Description – Define and describe the type of hazard.

Magnitude – How extensive an area could the event affect?

Frequency – How often is the event likely to occur?

Seasonal Patterns – What time of year is the event likely to occur?

Duration – How long would the event be expected to last?

Speed of Onset – How much warning time is likely before an event takes place?

Profiles also should include a map of the area(s) that could be affected. Maps can clearly depict vulnerabilities and areas at risk in relation to people, facilities and infrastructure. They cover location – where the event likely to strike – and

probable spatial extent – how large an area it is likely to affect.

Compare any existing hazard analysis with the hazard profiles to determine if any changes are needed or gaps exist in the information collected and assembled.

Keep in mind the following concepts:

- Are you missing any profiles that may impact the community?
- Is any type of information generally missing from the hazard profile?
- Have the relative threats of a hazard changed?
- Have community priorities changed since the last hazard event?

Step 3 – Develop the Community Profile

What does the community look like? A community profile provides a base for overlay analysis and for discussing a hazards impacts on a community. It can be used in conjunction with the hazard maps prepared in Step 2 to determine the potential consequences on a community. This profile looks at the overall geography and spatial patterns of a community and helps decision-makers understand what in their community is affected by a hazard event. The community profile should be broken into five components:

Geography profile includes:

- Land cover
- Topography
- Slope
- Aspect
- Lakes
- Streams
- Wetlands
- Watersheds
- Soils

Property profile includes:

- Land use
- Types of construction
- Location of homes
- Location of manufactured homes
- Zoning map
- Building codes

- Fire stations
- Ambulance locations
- Police stations/law enforcement
- Hospitals
- Schools
- Senior centers

Infrastructure profile includes:

- Utility lines
- Water lines
- Sewer lines
- Gas lines
- Roads
- Bridge locations
- Communication facilities
- Transit routes
- Major energy sources

Demographic profile includes:

- Population size by county and minor civil division
- Population distribution in county and minor civil divisions
- Population concentrations
- Special populations – children and elderly
- Animal populations

Response profile includes:

- Ambulance service areas
- Fire districts
- Emergency first response districts
- Early warning systems

Step 4 – Identify Sectors

How is the community broken up in terms of geography? Not all areas of a community are affected equally by an unforeseen event. Sectoring is dividing a community into manageable segments or portions based on local geography in relation to a specific hazard. It allows you to categorize parts of your community in terms of response and impacts.

Sectoring is used to identify local service areas in relationship to a hazard and physical features. It allows a community to identify vulnerable areas, evaluate how an area could be or has been affected and what can be done to respond to a specific event. Knowing what is threatened and the potential severity of the impact in each

sector allows a community to better identify appropriate mitigation actions and warning and emergency response needs. Sectors also can be used as a way to organize and conduct emergency response needs within a sector or between adjacent sectors.

Sectors should be defined by include easily identifiable boundaries that can be seen on the ground. Features such as bluffs, rivers and major highways are quick and easy to use. In addition, these features often dictate who responds and how responses are managed.

Things to think about in identifying sectors

People

- How many people are in each sector
- How many subdivisions are located in a sector
- Where do people work
- Where do people recreate
- Where do people live
- Where do people gather for civic events
- Where are the special needs populations located

Animals and Livestock

- Where are animals located
- What types of animals are in a specific sector

Housing and Living Quarters

- How many housing units are in the sector
- What types of housing units are present
- Are all the units insured?

Critical Facilities and Response

- Fire Station locations
- Ambulance locations
- Hospital locations
- Emergency first response locations
- Emergency Coordination locations
- What are the responding zones

Special Facilities and Community Resources

- School locations
- Nursing home locations
- Health care service locations
- Prison and jail locations
- Important historical or cultural locations

Infrastructure and Lifelines

- Utilities, including pipelines and power lines
- Roads and bridges
- Railroads and yards
- Airports
- Navigable waterways
- Dikes, dams and flood protection

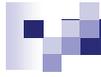
Hazmat Facilities/ Public Health Concerns

- Lust Sites
- MES Sites
- Chemical Storage Sites
- Hazardous material locations
- Funeral Homes
- Radioactive sites

Commercial and Industrial Facilities

- Commercial business areas defined
- Industrial business areas defined
- Agricultural business areas defined
- Port facilities identified





WORKSHEET 1

Hazard Identification Worksheet

#	HAZARD	Likelihood of Event/ Frequency	Affected Sector(s)	Impact	Total
1	HazMat Spill				
2	Animal Disease				
3	Power Grid Failure				
4	Surface Water Contamination				
5	Groundwater Contamination				
6	Groundwater Depletion				
7	Train Derailment				
8	Trucking Accident				
9	Accidents involving oil/gas/amonia/etc. storage				
10	Pipeline Failure				
11	OHV Misuse				
12	Wetland Destruction				
13	RR Interference W/ Emrgncy rspnse				

Frequency Score

- 4 - Highly Likely, in next year.
- 3 – Likely, at least once in 10 years.
- 2 – Occasional, at least once in 100 years.
- 1- Unlikely, less than 1% probability in next 100 years.

Impact Scoring (Life & Property)

- 4 – Substantial damage/wide-scale loss of life and property.
- 3 – Major damage/injury to persons and property.
- 2 – Minor damage/injury to persons and property.
- 1- Limited, light damage/injury to persons and property.



WORKSHEET 2



Hazard Profile Worksheet (County Wide)

Hazard:

Hazard Number:

Description of Hazard:

Potential size of are affected:

- 4 Catastrophic: More than 50% of area affected
- 3 Critical: 25 to 50%
- 2 Limited: 10 to 25%
- 1 Negligible: Less than 10%

Frequency of Occurrence:

- 4 Highly Likely: Near 100% probability in next year.
- 3 Likely: Between 10 and 100% probability in next year, or at least one chance in ten years.
- 2 Occasional: Between 1 and 10% probability in next year, or at least one chance in next 100 years.
- 1 Unlikely: Less than 1% probability in next 100 years.

Probable Duration:

- 4 More than 24 hours
- 3 12 to 24 hours
- 2 1 to 12 hours
- 1 Less than 1 hour

Potential Speed of Onset: (Probable amount of warning time)

- 4 None to minimal
- 3 3 to 6 hours
- 2 6 to 12 hours
- 1 More than 12 hours

Seasonal Pattern:

Identify Existing Warning Systems:

Identify Location and Spatial Extent of Potential Event: (Use map to identify areas, paths or points of impact on a community)

Total Score



WORKSHEET 3

Community Vulnerability Assessment

Hazard:

Hazard Number:

Sector:

Comments:

Rate and describe the risk level for each impact group within this sector of the community.

1. Citizens and People:

- 4 Very High
- 3 High
- 2 Limited
- 1 Minimal

5. Special Facilities and Community Resources:

- 4 Very High
- 3 High
- 2 Limited
- 1 Minimal

2. Animals and Livestock:

- 4 Very High
- 3 High
- 2 Limited
- 1 Minimal

6. Infrastructure and Lifelines:

- 4 Very High
- 3 High
- 2 Limited
- 1 Minimal

3. Housing and Living Quarters:

- 4 Very High
- 3 High
- 2 Limited
- 1 Minimal

7. Hazmat Facilities and Public Health Concerns:

- 4 Very High
- 3 High
- 2 Limited
- 1 Minimal

4. Critical Facilities and Response:

- 4 Very High
- 3 High
- 2 Limited
- 1 Minimal

8. Commercial and Industrial Facilities:

- 4 Very High
- 3 High
- 2 Limited
- 1 Minimal



WORKSHEET 4

Hazard Impact and Risk Summary by Sector Worksheet

Hazard:

Hazard Number:

Sector 1 **Frequency of Occurrence**

- 1 Unlikely
- 2 Occasional
- 3 Likely
- 4 Highly Likely

Warning Time

- 1 More than 12 hours
- 2 6 – 12 Hours
- 3 3 – 6 Hours
- 4 None - Minimal

Potential Severity*

- 1 Limited
- 2 Minor
- 3 Major
- 4 Substantial

Total

Sector 2 **Frequency of Occurrence**

- 1 Unlikely
- 2 Occasional
- 3 Likely
- 4 Highly Likely

Warning Time

- 1 More than 12 hours
- 2 6 – 12 Hours
- 3 3 – 6 Hours
- 4 None - Minimal

Potential Severity*

- 1 Limited
- 2 Minor
- 3 Major
- 4 Substantial

Total

Sector 3 **Frequency of Occurrence**

- 1 Unlikely
- 2 Occasional
- 3 Likely
- 4 Highly Likely

Warning Time

- 1 More than 12 hours
- 2 6 – 12 Hours
- 3 3 – 6 Hours
- 4 None - Minimal

Potential Severity*

- 1 Limited
- 2 Minor
- 3 Major
- 4 Substantial

Total

Comments:

***Refer to Worksheets 1 and 2**

Risk Assessment and Vulnerability Determination

How will the community be affected by a hazard?

This exercise helps the community assess the overall impact a hazard or hazards might have on its various sectors. Using the Hazard Profile information, the community profile data and the sectors from Step 1, communities can assess risks and identify areas of concern. This is accomplished through two worksheets: Community Vulnerability Assessment, and Hazard Impact and Risk Summary by Sector.

The Community Vulnerability Assessment, Worksheet 3, is the identification of the population groups and types of facilities that could be affected by a particular hazard. The assessment is conducted by hazard and sector. It draws on the community profile to identify an overall risk level for a particular hazard and sector. Vulnerabilities or risk levels are determined for people, housing areas, key public facilities, infrastructure,

industrial facilities and other factors. These individual risk levels are then compiled to give an overall rate for the hazard in the sector.

The Hazard Impact and Risk Summary by Sector, Worksheet 4, is a summary of the potential or probability that an incident will occur and that a hazard will cause an adverse impact to whatever is vulnerable to that hazard. It is completed by overlay analysis that draws on information from the Hazard Profiles (Worksheet 2) and Community Vulnerability Assessment (Worksheet 3) to identify the priority of a particular hazard in each sector of the community. Priority is based on frequency of occurrence, warning time, potential severity and risk level.

Finally, the priorities for each hazard within a sector are combined to give an overall picture of the priority of the sector.

**WADENA
COUNTY**



Hazard Assessments

Definitions:

Frequency of Occurrence – There was a possible score of 1, 2, 3 or 4

- 4 – Highly Likely in the next year; did it happen last year?
- 3 – Likely, at least once in 10 years; has it happened in the last 10 years?
- 2 – Occasional, at least once in 100 years; has it happened in the last 100 years?
- 1 – Unlikely, less than 1% probability in the next 100 years; has this ever happened?

Warning Time – There was a possible score of 1, 2, 3, or 4

- 4 – None to minimal (0 to 3 hours)
- 3 – 3 to 6 hours
- 2 – 6 to 12 hours
- 1 – More than 12 hours

Impact (on lives and property) – There was a possible score of 1, 2, 3, or 4

- 4 – Substantial damage/wide scale loss of life and property. Devastation. For example: Wipe out 4 city blocks and potential loss of several lives.
- 3 – Major damage/injury to persons and property. Substantial damage to property and possibility of loss of at least one life.
- 2 – Minor damage/injury to persons and property. Potential major damage to property and no loss of life.
- 1 – Limited, light damage/injury to persons and property. Some damage to property, more of an inconvenience to the life.

Potential size of area affected – There was a possible score of 1, 2, 3, or 4

- 4 – Catastrophic: More than 50% of the County affected
- 3 – Critical: 25 – 50% of the County affected
- 2 – Limited: 10 – 25% of the County affected
- 1 – Negligible: Less than 10% of the County affected

Probable Duration – There was a possible score of 1, 2, 3, or 4

- 4 – More than 24 hours
- 3 – 12 to 24 hours
- 2 – 1 to 12 hours
- 1 – Less than 1 hour

Risk - This worksheet measured the vulnerability of impact groups (different parts of a community) to each of the hazards. The sub-committee tried to determine whether the hazard would affect the impact groups or not. Each impact group could receive a score of 1, 2, 3, or 4.

- 4 – The risk of being affected is Very High
- 3 – The risk of being affected is High
- 2 – The risk of being affected is Limited
- 1 – The risk of being affected is Minimal

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EXECUTIVE SUMMARY

WADENA COUNTY PRE-DISASTER MITIGATION PLANNING SURVEY

METHODOLOGY

The Wadena County Pre-Disaster Mitigation planning survey was sent to a random sampling of 820 Wadena County households to gather community opinions regarding past and potential disasters within the County. Out of the 820 survey forms sent, 194 households responded to the survey resulting in a 24% rate of response. Most significant in the rate of response was the response to the survey by residents and landowners in every city and township within the County. Results of this survey are as followings:

GENERAL FINDINGS

Experience with Hazard Mitigation Planning

- Overall, the majority of respondents to the survey indicated they were not familiar with hazard mitigation or pre-disaster mitigation planning.

Impacts by Disasters (Natural Disasters)

- Approximately 75% of respondents to the survey indicated they have not had previous experience with a natural disaster that impacted them, their family, or property and approximately 22% indicated they had such experience.
- When asked what types of natural disasters they were impacted by, respondents indicated windstorm (21), drought (14), and damage-causing thunderstorm (13) most frequently.
- Overall, approximately 77% of respondents who reported experiencing a natural disaster also reported that they experienced property damage or bodily injury as a result of a natural disaster.
- Overall, 58% of survey respondents indicated they felt that there were no mitigation measures that could have been taken to prevent or lessen the impacts of the natural disaster they had experienced, while 35% felt there such measures would have prevented or lessened the impacts of the disasters.

Impacts by Disasters (Human-caused, Technological)

- Approximately 86% of respondents to the survey indicated they have not had previous experience with a human-caused or technological disaster that impacted them, their family, or property, while approximately 11% indicated they had such experience.

- When asked what human-caused or technological disaster they had experience with, motor vehicle accidents (14), and crimes against persons and property (10), including arson (3) were most frequently indicated.
- Overall, approximately 77% of respondents indicating experience with human-caused or technological disasters also indicated they felt mitigation measures could have been taken to prevent or lessen the impacts of the disaster they had experienced.

Citizen Concerns

The survey questionnaire gave respondents the opportunity to rank the level of concern they have regarding a variety of natural, human-caused, and technological disasters based on a scale from one to five. This scale is as follows:

- 1 = Extremely Concerned
- 2 = Very Concerned
- 3 = Concerned
- 4 = Somewhat Concerned
- 5 = Not Concerned

The rankings for each of the natural disasters listed were as follows:

1.	2.97	Tornado
2.	3.26	Drought
3.	3.39	Wildfire
4.	3.39	Winter Storm
5.	3.52	Wind Storm
6.	4.14	Flood
7.	4.34	Dust Storm

The rankings for each of the human-caused or technological disasters listed were as follows:

1.	2.91	Crimes Against Persons or Property
2.	3.05	Drinking Water Contamination
3.	3.06	Household Fire
4.	3.09	Motor Vehicle Accident
5.	3.54	Hazardous Material Accidents
6.	3.61	Railroad Accidents
7.	3.70	Arson
8.	4.04	Industrial Accidents
9.	4.13	Civil Disorder
10.	4.16	Aircraft Accident
11.	4.18	Nuclear Accident
12.	4.72	Dam Failure

APPENDIX

H

Adoption Resolutions

WADENA

R'vd	Jurisdiction	Date
<input checked="" type="checkbox"/>	County	<u>7/16/07</u>
<input checked="" type="checkbox"/>	Aldrich	<u>6-22-07</u>
<input checked="" type="checkbox"/>	Menahga	<u>2</u>
<input checked="" type="checkbox"/>	Nimrod	<u>8/23/07</u>
<input checked="" type="checkbox"/>	Sebeka	<u>7/31/07</u>
<input checked="" type="checkbox"/>	Staples	<u>7/12/07</u>
<input checked="" type="checkbox"/>	Verndale	<u>8/23/07</u>
<input checked="" type="checkbox"/>	Wadena	<u>7/16/07</u>

Wadena County

RESOLUTION FOR APPROVAL OF THE HAZARD MITIGATION PLAN

WHEREAS, the County of Wadena [the County] is participating in a hazard mitigation planning process as established under the Federal Disaster Mitigation Act of 2000; and

WHEREAS, the Region Five Development Commission, under the guidelines established by the Act, has provided a framework for the development of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 and FEMA require communities to adopt a hazard mitigation action plan to be eligible for pre-disaster and post-disaster federal funding for mitigation purposes; and

WHEREAS, the County by resolution on August 19, 2004 approved the 2004 version of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the plan is a record of the County's potential risks and hazards and commitment to reducing the long-term consequences of natural, human caused and technological hazards; and

WHEREAS, the plan outlines mitigation goals, identifies risk reduction strategies for hazards that threaten the area, and discusses the ongoing risk reduction strategies to be undertaken with the jurisdiction; and

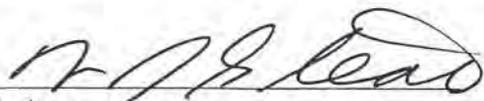
WHEREAS, the plan has been reviewed by members of this Board, staff, and the public; and

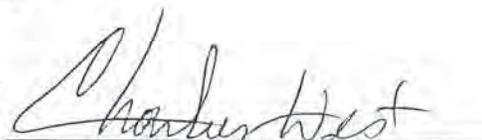
WHEREAS, the plan has been approved by FEMA pending final adoption by each participating jurisdiction, and

WHEREAS, County Board adoption and adoption by local units of government is required for final approval by FEMA Region V.

NOW THEREFORE BE IT RESOLVED, that the Wadena County's Hazard Mitigation Plan is approved in its entirety, and that the County will pursue available funding opportunities for implementation of the proposals designated therein, will upon receipt of such funding or other necessary resources, seek to implement the actions contained in the mitigation objectives and also upon approval authorize the Region Five Development Commission to submit on the County's behalf the plan to all cities within the County for approval.

Adopted this 3rd day of July, 2007


Chairman

Attest: 

City of Aldrich

RESOLUTION FOR APPROVAL OF THE HAZARD MITIGATION PLAN

WHEREAS, the County of Wadena [the County] is participating in a hazard mitigation planning process as established under the Federal Disaster Mitigation Act of 2000; and

WHEREAS, the City of Aldrich has had the opportunity to participate in the planning process; and

WHEREAS, the City of Aldrich by resolution on October 13, 2004 approved the 2004 version of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Region Five Development Commission, under the guidelines established by the Act, has provided a framework for the development of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 and FEMA require communities to adopt a hazard mitigation action plan to be eligible for pre-disaster and post-disaster federal funding for mitigation purposes; and

WHEREAS, the plan is a record of the County's potential risks and hazards and commitment to reducing the long-term consequences of natural, human caused and technological hazards; and

WHEREAS, the plan outlines mitigation goals, identifies risk reduction strategies for hazards that threaten the area, and discusses the ongoing risk reduction strategies to be undertaken with the jurisdiction; and

WHEREAS, the plan has been reviewed by members of this Board, staff, and the public; and

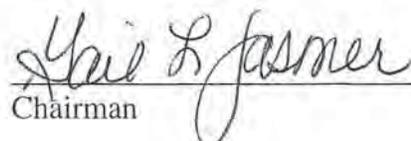
WHEREAS, the plan has been approved by FEMA pending final adoption by each participating jurisdiction, and

WHEREAS, County Board adoption and adoption by local units of government is required for final approval by FEMA Region V; and

WHEREAS, this resolution does not preclude the City of Aldrich from preparing a separate plan sometime in the future should it desire to do so.

NOW THEREFORE BE IT RESOLVED, that the Wadena County's Hazard Mitigation Plan is approved in its entirety, and that the City of Aldrich will support the County's effort to implement the *Action Plan* of the *Wadena County Hazard Mitigation Plan* to the extent specified by the City, and support City and County efforts to secure necessary funding for implementation actions.

Adopted this 20th day of June, 2007


Chairman

Attest: 
Clerk

City of Menahga

RESOLUTION FOR APPROVAL OF THE HAZARD MITIGATION PLAN

WHEREAS, the County of Wadena [the County] is participating in a hazard mitigation planning process as established under the Federal Disaster Mitigation Act of 2000; and

WHEREAS, the City of Menahga has had the opportunity to participate in the planning process; and

WHEREAS, the City of Menahga by resolution supported the Wadena County planning efforts; and

WHEREAS, the City of Menahga by resolution on October 29, 2004 approved the 2004 version of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Region Five Development Commission, under the guidelines established by the Act, has provided a framework for the development of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 and FEMA require communities to adopt a hazard mitigation action plan to be eligible for pre-disaster and post-disaster federal funding for mitigation purposes; and

WHEREAS, the plan is a record of the County's potential risks and hazards and commitment to reducing the long-term consequences of natural, human caused and technological hazards; and

WHEREAS, the plan outlines mitigation goals, identifies risk reduction strategies for hazards that threaten the area, and discusses the ongoing risk reduction strategies to be undertaken with the jurisdiction; and

WHEREAS, the plan has been reviewed by members of this Board, staff, and the public; and

WHEREAS, the plan has been approved by FEMA pending final adoption by each participating jurisdiction, and

WHEREAS, County Board adoption and adoption by local units of government is required for final approval by FEMA Region V; and

WHEREAS, this resolution does not preclude the City of Menahga from preparing a separate plan sometime in the future should it desire to do so.

NOW THEREFORE BE IT RESOLVED, that the Wadena County's Hazard Mitigation Plan is approved in its entirety, and that the City of Menahga will support the County's effort to implement the *Action Plan* of the *Wadena County Hazard Mitigation Plan* to the extent specified by the City, and support City and County efforts to secure necessary funding for implementation actions.

Adopted this 9 day of July, 2007

Sumna J. Anderson
Chairman

Attest: Jeri Osterman

City of Nimrod

RESOLUTION FOR APPROVAL OF THE HAZARD MITIGATION PLAN

WHEREAS, the County of Wadena [the County] is participating in a hazard mitigation planning process as established under the Federal Disaster Mitigation Act of 2000; and

WHEREAS, the City of Nimrod has had the opportunity to participate in the planning process; and

WHEREAS, the City of Nimrod by resolution supported the Wadena County planning efforts; and

WHEREAS, the City of Nimrod by resolution on November 1, 2004 approved the 2004 version of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Region Five Development Commission, under the guidelines established by the Act, has provided a framework for the development of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 and FEMA require communities to adopt a hazard mitigation action plan to be eligible for pre-disaster and post-disaster federal funding for mitigation purposes; and

WHEREAS, the plan is a record of the County's potential risks and hazards and commitment to reducing the long-term consequences of natural, human caused and technological hazards; and

WHEREAS, the plan outlines mitigation goals, identifies risk reduction strategies for hazards that threaten the area, and discusses the ongoing risk reduction strategies to be undertaken with the jurisdiction; and

WHEREAS, the plan has been reviewed by members of this Board, staff, and the public; and

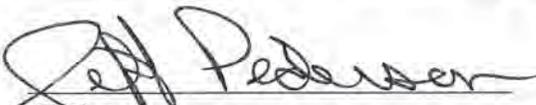
WHEREAS, the plan has been approved by FEMA pending final adoption by each participating jurisdiction, and

WHEREAS, County Board adoption and adoption by local units of government is required for final approval by FEMA Region V; and

WHEREAS, this resolution does not preclude the City of Nimrod from preparing a separate plan sometime in the future should it desire to do so.

NOW THEREFORE BE IT RESOLVED, that the Wadena County's Hazard Mitigation Plan is approved in its entirety, and that the City of Nimrod will support the County's effort to implement the *Action Plan* of the *Wadena County Hazard Mitigation Plan* to the extent specified by the City, and support City and County efforts to secure necessary funding for implementation actions.

Adopted this 21 day of August, 2007


Chairman

Attest: 
Clerk

City of Sebeka

RESOLUTION FOR APPROVAL OF THE HAZARD MITIGATION PLAN

WHEREAS, the County of Wadena [the County] is participating in a hazard mitigation planning process as established under the Federal Disaster Mitigation Act of 2000; and

WHEREAS, the City of Sebeka has had the opportunity to participate in the planning process; and

WHEREAS, the City of Sebeka by resolution supported the Wadena County planning efforts; and

WHEREAS, the City of Sebeka by resolution on September 15, 2004 approved the 2004 version of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Region Five Development Commission, under the guidelines established by the Act, has provided a framework for the development of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 and FEMA require communities to adopt a hazard mitigation action plan to be eligible for pre-disaster and post-disaster federal funding for mitigation purposes; and

WHEREAS, the plan is a record of the County's potential risks and hazards and commitment to reducing the long-term consequences of natural, human caused and technological hazards; and

WHEREAS, the plan outlines mitigation goals, identifies risk reduction strategies for hazards that threaten the area, and discusses the ongoing risk reduction strategies to be undertaken with the jurisdiction; and

WHEREAS, the plan has been reviewed by members of this Board, staff, and the public; and

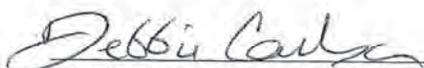
WHEREAS, the plan has been approved by FEMA pending final adoption by each participating jurisdiction, and

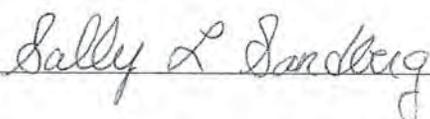
WHEREAS, County Board adoption and adoption by local units of government is required for final approval by FEMA Region V; and

WHEREAS, this resolution does not preclude the City of Sebeka from preparing a separate plan sometime in the future should it desire to do so.

NOW THEREFORE BE IT RESOLVED, that the Wadena County's Hazard Mitigation Plan is approved in its entirety, and that the City of Sebeka will support the County's effort to implement the *Action Plan* of the *Wadena County Hazard Mitigation Plan* to the extent specified by the City, and support City and County efforts to secure necessary funding for implementation actions.

Adopted this 17th day of July, 2007


Chairman

Attest: 

City of Staples

RESOLUTION FOR APPROVAL OF THE HAZARD MITIGATION PLAN

WHEREAS, the County of Wadena [the County] is participating in a hazard mitigation planning process as established under the Federal Disaster Mitigation Act of 2000; and

WHEREAS, the City of Staples has had the opportunity to participate in the planning process; and

WHEREAS, the City of Staples by resolution supported the Wadena County planning efforts; and

WHEREAS, the City of Staples by resolution on October 12, 2004 approved the 2004 version of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Region Five Development Commission, under the guidelines established by the Act, has provided a framework for the development of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 and FEMA require communities to adopt a hazard mitigation action plan to be eligible for pre-disaster and post-disaster federal funding for mitigation purposes; and

WHEREAS, the plan is a record of the County's potential risks and hazards and commitment to reducing the long-term consequences of natural, human caused and technological hazards; and

WHEREAS, the plan outlines mitigation goals, identifies risk reduction strategies for hazards that threaten the area, and discusses the ongoing risk reduction strategies to be undertaken with the jurisdiction; and

WHEREAS, the plan has been reviewed by members of this Board, staff, and the public; and

WHEREAS, the plan has been approved by FEMA pending final adoption by each participating jurisdiction, and

WHEREAS, County Board adoption and adoption by local units of government is required for final approval by FEMA Region V; and

WHEREAS, this resolution does not preclude the City of Staples from preparing a separate plan sometime in the future should it desire to do so.

NOW THEREFORE BE IT RESOLVED, that the Wadena County's Hazard Mitigation Plan is approved in its entirety, and that the City of Staples will support the County's effort to implement the *Action Plan* of the *Wadena County Hazard Mitigation Plan* to the extent specified by the City, and support City and County efforts to secure necessary funding for implementation actions.

Adopted this 10th day of July, 2007


Bruce Nelsen
Mayor

Attest: 
Phil Lindaman
City Clerk

**CITY OF VERNDALE
RESOLUTION #07-0702B
RESOLUTION FOR APPROVAL OF THE HAZARD MITIGATION PLAN**

WHEREAS, the County of Wadena is participating in a hazard mitigation planning process as established under the Federal Disaster Mitigation Act of 2000; and

WHEREAS, the City of Verndale has had the opportunity to participate in the planning process; and

WHEREAS, the City of Verndale by resolution supported the Wadena County planning efforts; and

WHEREAS, the City of Verndale by resolution on November 4, 2004 approved the 2004 version of the *Wadena County Hazard Mitigation Plan*; and

WHEREAS, the Region Five Development Commission, under the guidelines established by the Act, has provided a framework for the development of the *Wadena County Hazard Mitigation Plan*; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 and FEMA require communities to adopt a hazard mitigation action plan to be eligible for pre-disaster and post-disaster federal funding for mitigation purposes; and

WHEREAS, the plan is a record of the County's potential risks and hazards and commitment to reducing the long-term consequences of natural, human caused and technological hazards; and

WHEREAS, the plan outlines mitigation goals, identifies risk reduction strategies for hazards that threaten the area, and discusses the ongoing risk reduction strategies to be undertaken with the jurisdiction; and

WHEREAS, the plan has been reviewed by members of this Board, staff, and the public; and

WHEREAS, the plan has been approved by FEMA pending final adoption by each participating jurisdiction; and

WHEREAS, County Board adoption and adoption by local units of government is required prior to approval by FEMA Region V; and

WHEREAS, this resolution does not preclude the City of Verndale from preparing a separate plan sometime in the future should it desire to do so.

NOW THEREFORE BE IT RESOLVED, that the Wadena County's Hazard Mitigation Plan is approved in its entirety, and that the City of Verndale will support the County's effort to implement the *Action Plan* of the *Wadena County Hazard Mitigation Plan* and to the extent specified by the City, and support City and County efforts to secure necessary funding for implementation actions.

I HEREBY CERTIFY that the above resolution was adopted by the Verndale City Council on this 2nd day of July, 2007.

Signed:

Wayne Starn
(Signature)
Mayor
(Title)
7-2-07
(Date)

Witnessed:

James Nelson
(Signature)
City Treasurer
(Title)
7-2-2007
(Date)

City of Wadena

RESOLUTION FOR APPROVAL OF THE HAZARD MITIGATION PLAN

WHEREAS, the County of Wadena [the County] is participating in a hazard mitigation planning process as established under the Federal Disaster Mitigation Act of 2000; and

WHEREAS, the City of Wadena has had the opportunity to participate in the planning process; and

WHEREAS, the City of Wadena by resolution supported the Wadena County planning efforts; and

WHEREAS, the City of Wadena by resolution on November 4, 2004 approved the 2004 version of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Region Five Development Commission, under the guidelines established by the Act, has provided a framework for the development of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 and FEMA require communities to adopt a hazard mitigation action plan to be eligible for pre-disaster and post-disaster federal funding for mitigation purposes; and

WHEREAS, the plan is a record of the County's potential risks and hazards and commitment to reducing the long-term consequences of natural, human caused and technological hazards; and

WHEREAS, the plan outlines mitigation goals, identifies risk reduction strategies for hazards that threaten the area, and discusses the ongoing risk reduction strategies to be undertaken with the jurisdiction; and

WHEREAS, the plan has been reviewed by members of this Board, staff, and the public; and

WHEREAS, the plan has been approved by FEMA pending final adoption by each participating jurisdiction, and

WHEREAS, County Board adoption and adoption by local units of government is required for final approval by FEMA Region V; and

WHEREAS, this resolution does not preclude the City of Wadena from preparing a separate plan sometime in the future should it desire to do so.

NOW THEREFORE BE IT RESOLVED, that the Wadena County's Hazard Mitigation Plan is approved in its entirety, and that the City of Wadena will support the County's effort to implement the *Action Plan* of the *Wadena County Hazard Mitigation Plan* to the extent specified by the City, and support City and County efforts to secure necessary funding for implementation actions.

Adopted this 10 day of July, 2007


Chairman

Attest: 

Wadena County

RESOLUTION FOR APPROVAL OF THE HAZARD MITIGATION

WHEREAS, the County of Wadena [the County] is participating in a hazard mitigation planning process as established under the Federal Disaster Mitigation Act of 2000; and

WHEREAS, the Region Five Development Commission, under the guidelines established by the Act, has provided a framework for the development of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 and FEMA require communities to adopt a hazard mitigation action plan to be eligible for pre-disaster and post-disaster federal funding for mitigation purposes; and

WHEREAS, the plan is a record of the County's potential risks and hazards and commitment to reducing the long-term consequences of natural, human caused and technological hazards; and

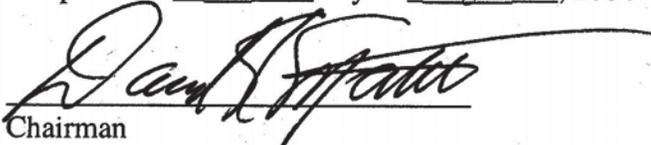
WHEREAS, the plan outlines mitigation goals, identifies risk reduction strategies for hazards that threaten the area, and discusses the ongoing risk reduction strategies to be undertaken with the jurisdiction; and

WHEREAS, the plan has been reviewed by members of this Board, staff, and the public; and

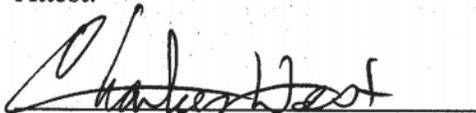
WHEREAS, County Board adoption and adoption by local units of government is required prior to approval by FEMA Region V.

NOW THEREFORE BE IT RESOLVED, that the Wadena County's Hazard Mitigation Plan is approved in its entirety, and that the County will pursue available funding opportunities for implementation of the proposals designated therein, will upon receipt of such funding or other necessary resources, seek to implement the actions contained in the mitigation objectives and also upon approval authorize the Region Five Development Commission to submit on the County's behalf the plan to FEMA and to submit the plan to all local units of government within the County for approval.

Adopted this 19th day of August, 2004


Chairman

Attest:



City of Aldrich

RESOLUTION FOR APPROVAL OF THE HAZARD MITIGATION

WHEREAS, the County of Wadena [the County] is participating in a hazard mitigation planning process as established under the Federal Disaster Mitigation Act of 2000; and

WHEREAS, the City of Aldrich has had the opportunity to participate in the planning process; and

WHEREAS, the Region Five Development Commission, under the guidelines established by the Act, has provided a framework for the development of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 and FEMA require communities to adopt a hazard mitigation action plan to be eligible for pre-disaster and post-disaster federal funding for mitigation purposes; and

WHEREAS, the plan is a record of the County's potential risks and hazards and commitment to reducing the long-term consequences of natural, human caused and technological hazards; and

WHEREAS, the plan outlines mitigation goals, identifies risk reduction strategies for hazards that threaten the area, and discusses the ongoing risk reduction strategies to be undertaken with the jurisdiction; and

WHEREAS, the plan has been reviewed by members of this Board, staff, and the public; and

WHEREAS, County Board adoption and adoption by local units of government is required prior to approval by FEMA Region V; and

WHEREAS, this resolution does not preclude the City of Aldrich from preparing a separate plan sometime in the future should it desire to do so.

NOW THEREFORE BE IT RESOLVED, that the Wadena County's Hazard Mitigation Plan is approved in its entirety, and that the City of Aldrich will support the County's effort to implement the *Action Plan* of the *Wadena County Hazard Mitigation Plan* and to secure necessary funding for implementation actions; and also submit the plan to the Federal Emergency Management Agency for approval on the behalf of the County and the City of Aldrich.

Adopted this 13th day of October, 2004

L. L. Haddad - Mayor
Chairman

Attest:

Christine L. Starck
Clerk

City of Menahga

RESOLUTION FOR APPROVAL OF THE HAZARD MITIGATION

WHEREAS, the County of Wadena [the County] is participating in a hazard mitigation planning process as established under the Federal Disaster Mitigation Act of 2000; and

WHEREAS, the City of Menahga has had the opportunity to participate in the planning process; and

WHEREAS, the City of Menahga by resolution supported the Wadena County planning efforts; and

WHEREAS, the Region Five Development Commission, under the guidelines established by the Act, has provided a framework for the development of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 and FEMA require communities to adopt a hazard mitigation action plan to be eligible for pre-disaster and post-disaster federal funding for mitigation purposes; and

WHEREAS, the plan is a record of the County's potential risks and hazards and commitment to reducing the long-term consequences of natural, human caused and technological hazards; and

WHEREAS, the plan outlines mitigation goals, identifies risk reduction strategies for hazards that threaten the area, and discusses the ongoing risk reduction strategies to be undertaken with the jurisdiction; and

WHEREAS, the plan has been reviewed by members of this Board, staff, and the public; and

WHEREAS, County Board adoption and adoption by local units of government is required prior to approval by FEMA Region V; and

WHEREAS, this resolution does not preclude the City of Menahga from preparing a separate plan sometime in the future should it desire to do so.

NOW THEREFORE BE IT RESOLVED, that the Wadena County's Hazard Mitigation Plan is approved in its entirety, and that the City of Menahga will support the County's effort to implement the *Action Plan* of the *Wadena County Hazard Mitigation Plan* and to secure necessary funding for implementation actions; and also submit the plan to the Federal Emergency Management Agency for approval on the behalf of the County and the City of Menahga.

Adopted this 29 day of October, 2004

Thomas R. Lounsbury
Chairman

Attest:

Debi Osterman

City of Nimrod

RESOLUTION FOR APPROVAL OF THE HAZARD MITIGATION

WHEREAS, the County of Wadena [the County] is participating in a hazard mitigation planning process as established under the Federal Disaster Mitigation Act of 2000; and

WHEREAS, the City of Nimrod has had the opportunity to participate in the planning process; and

WHEREAS, the City of Nimrod by resolution supported the Wadena County planning efforts; and

WHEREAS, the Region Five Development Commission, under the guidelines established by the Act, has provided a framework for the development of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 and FEMA require communities to adopt a hazard mitigation action plan to be eligible for pre-disaster and post-disaster federal funding for mitigation purposes; and

WHEREAS, the plan is a record of the County's potential risks and hazards and commitment to reducing the long-term consequences of natural, human caused and technological hazards; and

WHEREAS, the plan outlines mitigation goals, identifies risk reduction strategies for hazards that threaten the area, and discusses the ongoing risk reduction strategies to be undertaken with the jurisdiction; and

WHEREAS, the plan has been reviewed by members of this Board, staff, and the public; and

WHEREAS, County Board adoption and adoption by local units of government is required prior to approval by FEMA Region V; and

WHEREAS, this resolution does not preclude the City of Nimrod from preparing a separate plan sometime in the future should it desire to do so.

NOW THEREFORE BE IT RESOLVED, that the Wadena County's Hazard Mitigation Plan is approved in its entirety, and that the City of Nimrod will support the County's effort to implement the *Action Plan* of the *Wadena County Hazard Mitigation Plan* and to secure necessary funding for implementation actions; and also submit the plan to the Federal Emergency Management Agency for approval on the behalf of the County and the City of Nimrod.

Adopted this 8 day of Nov, 2004



Chairman

Attest:



Margaret Rathcke, Clerk

City of Sebeka

RESOLUTION FOR APPROVAL OF THE HAZARD MITIGATION

WHEREAS, the County of Wadena [the County] is participating in a hazard mitigation planning process as established under the Federal Disaster Mitigation Act of 2000; and

WHEREAS, the City of Sebeka has had the opportunity to participate in the planning process; and

WHEREAS, the City of Sebeka by resolution supported the Wadena County planning efforts; and

WHEREAS, the Region Five Development Commission, under the guidelines established by the Act, has provided a framework for the development of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 and FEMA require communities to adopt a hazard mitigation action plan to be eligible for pre-disaster and post-disaster federal funding for mitigation purposes; and

WHEREAS, the plan is a record of the County's potential risks and hazards and commitment to reducing the long-term consequences of natural, human caused and technological hazards; and

WHEREAS, the plan outlines mitigation goals, identifies risk reduction strategies for hazards that threaten the area, and discusses the ongoing risk reduction strategies to be undertaken with the jurisdiction; and

WHEREAS, the plan has been reviewed by members of this Board, staff, and the public; and

WHEREAS, County Board adoption and adoption by local units of government is required prior to approval by FEMA Region V; and

WHEREAS, this resolution does not preclude the City of Sebeka from preparing a separate plan sometime in the future should it desire to do so.

NOW THEREFORE BE IT RESOLVED, that the Wadena County's Hazard Mitigation Plan is approved in its entirety, and that the City of Sebeka will support the County's effort to implement the *Action Plan* of the *Wadena County Hazard Mitigation Plan* and to secure necessary funding for implementation actions; and also submit the plan to the Federal Emergency Management Agency for approval on the behalf of the County and the City of Sebeka.

Adopted this 15th day of September, 2004

Debbie Carlson
Chairman

Attest:

Julie Kerk

City of Staples

RESOLUTION FOR APPROVAL OF THE HAZARD MITIGATION

WHEREAS, the County of Wadena [the County] is participating in a hazard mitigation planning process as established under the Federal Disaster Mitigation Act of 2000; and

WHEREAS, the City of Staples has had the opportunity to participate in the planning process; and

WHEREAS, the City of Staples by resolution supported the Wadena County planning efforts; and

WHEREAS, the Region Five Development Commission, under the guidelines established by the Act, has provided a framework for the development of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 and FEMA require communities to adopt a hazard mitigation action plan to be eligible for pre-disaster and post-disaster federal funding for mitigation purposes; and

WHEREAS, the plan is a record of the County's potential risks and hazards and commitment to reducing the long-term consequences of natural, human caused and technological hazards; and

WHEREAS, the plan outlines mitigation goals, identifies risk reduction strategies for hazards that threaten the area, and discusses the ongoing risk reduction strategies to be undertaken with the jurisdiction; and

WHEREAS, the plan has been reviewed by members of this Board, staff, and the public; and

WHEREAS, County Board adoption and adoption by local units of government is required prior to approval by FEMA Region V; and

WHEREAS, this resolution does not preclude the City of Staples from preparing a separate plan sometime in the future should it desire to do so.

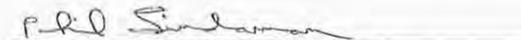
NOW THEREFORE BE IT RESOLVED, that the Wadena County's Hazard Mitigation Plan is approved in its entirety, and that the City of Staples will support the County's effort to implement the *Action Plan* of the *Wadena County Hazard Mitigation Plan* and to secure necessary funding for implementation actions; and also submit the plan to the Federal Emergency Management Agency for approval on the behalf of the County and the City of Staples.

Adopted this 12th day of October, 2004



Bruce Nelsen, Mayor

Attest:



Phil Lindaman, City Clerk

**CITY OF VERNDALE
RESOLUTION #04-1004
RESOLUTION FOR APPROVAL OF THE HAZARD MITIGATION PLAN**

WHEREAS, the County of Wadena is participating in a hazard mitigation planning process as established under the Federal Disaster Mitigation Act of 2000; and

WHEREAS, the City of Verndale has had the opportunity to participate in the planning process; and

WHEREAS, the City of Verndale by resolution supported the Wadena County planning efforts; and

WHEREAS, the Region Five Development Commission, under the guidelines established by the Act, has provided a framework for the development of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 and FEMA require communities to adopt a hazard mitigation action plan to be eligible for pre-disaster and post-disaster federal funding for mitigation purposes; and

WHEREAS, the plan is a record of the County's potential risks and hazards and commitment to reducing the long-term consequences of natural, human caused and technological hazards; and

WHEREAS, the plan outlines mitigation goals, identifies risk reduction strategies for hazards that threaten the area, and discusses the ongoing risk reduction strategies to be undertaken with the jurisdiction; and

WHEREAS, the plan has been reviewed by members of this Board, staff, and the public; and

WHEREAS, County Board adoption and adoption by local units of government is required prior to approval by FEMA Region V; and

WHEREAS, this resolution does not preclude the City of Verndale from preparing a separate plan sometime in the future should it desire to do so.

NOW THEREFORE BE IT RESOLVED, that the Wadena County's Hazard Mitigation Plan is approved in its entirety, and that the City of Verndale will support the County's effort to implement the *Action Plan* of the *Wadena County Hazard Mitigation Plan* and to secure necessary funding for implementation actions; and also submit the plan to the Federal Emergency Management Agency for approval on behalf of the County and the City of Verndale.

I HEREBY CERTIFY that the above resolution was adopted by the Verndale City Council on this 4th day of October, 2004.

Signed:



(Signature)

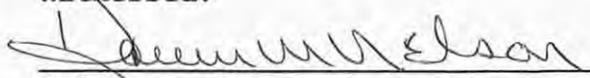
Mayor

(Title)

10/07/2004

(Date)

Witnessed:



(Signature)

Clerk/Treasurer

(Title)

10/07/2004

(Date)

City of Wadena

RESOLUTION FOR APPROVAL OF THE HAZARD MITIGATION

WHEREAS, the County of Wadena [the County] is participating in a hazard mitigation planning process as established under the Federal Disaster Mitigation Act of 2000; and

WHEREAS, the City of Wadena has had the opportunity to participate in the planning process; and

WHEREAS, the City of Wadena by resolution supported the Wadena County planning efforts; and

WHEREAS, the Region Five Development Commission, under the guidelines established by the Act, has provided a framework for the development of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 and FEMA require communities to adopt a hazard mitigation action plan to be eligible for pre-disaster and post-disaster federal funding for mitigation purposes; and

WHEREAS, the plan is a record of the County's potential risks and hazards and commitment to reducing the long-term consequences of natural, human caused and technological hazards; and

WHEREAS, the plan outlines mitigation goals, identifies risk reduction strategies for hazards that threaten the area, and discusses the ongoing risk reduction strategies to be undertaken with the jurisdiction; and

WHEREAS, the plan has been reviewed by members of this Board, staff, and the public; and

WHEREAS, County Board adoption and adoption by local units of government is required prior to approval by FEMA Region V; and

WHEREAS, this resolution does not preclude the City of Wadena from preparing a separate plan sometime in the future should it desire to do so.

NOW THEREFORE BE IT RESOLVED, that the Wadena County's Hazard Mitigation Plan is approved in its entirety, and that the City of Wadena will support the County's effort to implement the *Action Plan* of the *Wadena County Hazard Mitigation Plan* and to secure necessary funding for implementation actions; and also submit the plan to the Federal Emergency Management Agency for approval on the behalf of the County and the City of Wadena.

Adopted this 4th day of November, 2004


Wayne Wolden
Mayor

Attest:


Bradley A. Swenson
City Administrator

Township of Aldrich

RESOLUTION FOR APPROVAL OF THE HAZARD MITIGATION

WHEREAS, the County of Wadena [the County] is participating in a hazard mitigation planning process as established under the Federal Disaster Mitigation Act of 2000; and

WHEREAS, the Township of Aldrich has had the opportunity to participate in the planning process; and

WHEREAS, the Township of Aldrich by resolution supported the Wadena County planning efforts; and

WHEREAS, the Region Five Development Commission, under the guidelines established by the Act, has provided a framework for the development of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 and FEMA require communities to adopt a hazard mitigation action plan to be eligible for pre-disaster and post-disaster federal funding for mitigation purposes; and

WHEREAS, the plan is a record of the County's potential risks and hazards and commitment to reducing the long-term consequences of natural, human caused and technological hazards; and

WHEREAS, the plan outlines mitigation goals, identifies risk reduction strategies for hazards that threaten the area, and discusses the ongoing risk reduction strategies to be undertaken with the jurisdiction; and

WHEREAS, the plan has been reviewed by members of this Board, staff, and the public; and

WHEREAS, County Board adoption and adoption by local units of government is required prior to approval by FEMA Region V; and

WHEREAS, this resolution does not preclude the Township of Aldrich from preparing a separate plan sometime in the future should it desire to do so.

NOW THEREFORE BE IT RESOLVED, that the Wadena County's Hazard Mitigation Plan is approved in its entirety, and that the Township of Aldrich will support the County's effort to implement the *Action Plan* of the *Wadena County Hazard Mitigation Plan* and to secure necessary funding for implementation actions; and also submit the plan to the Federal Emergency Management Agency for approval on the behalf of the County and the Township of Aldrich.

Adopted this 9th day of September, 2004

Richard White
Chairman

Attest:

Barb Johnson, clerk

Township of Blueberry

RESOLUTION FOR APPROVAL OF THE HAZARD MITIGATION

WHEREAS, the County of Wadena [the County] is participating in a hazard mitigation planning process as established under the Federal Disaster Mitigation Act of 2000; and

WHEREAS, the Township of Blueberry has had the opportunity to participate in the planning process; and

WHEREAS, the Township of Blueberry by resolution supported the Wadena County planning efforts; and

WHEREAS, the Region Five Development Commission, under the guidelines established by the Act, has provided a framework for the development of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 and FEMA require communities to adopt a hazard mitigation action plan to be eligible for pre-disaster and post-disaster federal funding for mitigation purposes; and

WHEREAS, the plan is a record of the County's potential risks and hazards and commitment to reducing the long-term consequences of natural, human caused and technological hazards; and

WHEREAS, the plan outlines mitigation goals, identifies risk reduction strategies for hazards that threaten the area, and discusses the ongoing risk reduction strategies to be undertaken with the jurisdiction; and

WHEREAS, the plan has been reviewed by members of this Board, staff, and the public; and

WHEREAS, County Board adoption and adoption by local units of government is required prior to approval by FEMA Region V; and

WHEREAS, this resolution does not preclude the Township of Blueberry from preparing a separate plan sometime in the future should it desire to do so.

NOW THEREFORE BE IT RESOLVED, that the Wadena County's Hazard Mitigation Plan is approved in its entirety, and that the Township of Blueberry will support the County's effort to implement the *Action Plan* of the *Wadena County Hazard Mitigation Plan* and to secure necessary funding for implementation actions; and also submit the plan to the Federal Emergency Management Agency for approval on the behalf of the County and the Township of Blueberry.

Adopted this 11 day of Sept, 2004



Chairman

Attest:



Township of Huntersville

RESOLUTION FOR APPROVAL OF THE HAZARD MITIGATION

WHEREAS, the County of Wadena [the County] is participating in a hazard mitigation planning process as established under the Federal Disaster Mitigation Act of 2000; and

WHEREAS, the Township of Huntersville has had the opportunity to participate in the planning process; and

WHEREAS, the Region Five Development Commission, under the guidelines established by the Act, has provided a framework for the development of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 and FEMA require communities to adopt a hazard mitigation action plan to be eligible for pre-disaster and post-disaster federal funding for mitigation purposes; and

WHEREAS, the plan is a record of the County's potential risks and hazards and commitment to reducing the long-term consequences of natural, human caused and technological hazards; and

WHEREAS, the plan outlines mitigation goals, identifies risk reduction strategies for hazards that threaten the area, and discusses the ongoing risk reduction strategies to be undertaken with the jurisdiction; and

WHEREAS, the plan has been reviewed by members of this Board, staff, and the public; and

WHEREAS, County Board adoption and adoption by local units of government is required prior to approval by FEMA Region V; and

WHEREAS, this resolution does not preclude the Township of Huntersville from preparing a separate plan sometime in the future should it desire to do so.

NOW THEREFORE BE IT RESOLVED, that the Wadena County's Hazard Mitigation Plan is approved in its entirety, and that the Township of Huntersville will support the County's effort to implement the *Action Plan* of the *Wadena County Hazard Mitigation Plan* and to secure necessary funding for implementation actions; and also submit the plan to the Federal Emergency Management Agency for approval on the behalf of the County and the Township of Huntersville.

Adopted this 14th day of September, 2004

Steve Zoellich
Chairman

Attest:

Curtis Sumner

Township of Leaf River

RESOLUTION FOR APPROVAL OF THE HAZARD MITIGATION

WHEREAS, the County of Wadena [the County] is participating in a hazard mitigation planning process as established under the Federal Disaster Mitigation Act of 2000; and

WHEREAS, the Township of Leaf River has had the opportunity to participate in the planning process; and

WHEREAS, the Township of Leaf River by resolution supported the Wadena County planning efforts; and

WHEREAS, the Region Five Development Commission, under the guidelines established by the Act, has provided a framework for the development of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 and FEMA require communities to adopt a hazard mitigation action plan to be eligible for pre-disaster and post-disaster federal funding for mitigation purposes; and

WHEREAS, the plan is a record of the County's potential risks and hazards and commitment to reducing the long-term consequences of natural, human caused and technological hazards; and

WHEREAS, the plan outlines mitigation goals, identifies risk reduction strategies for hazards that threaten the area, and discusses the ongoing risk reduction strategies to be undertaken with the jurisdiction; and

WHEREAS, the plan has been reviewed by members of this Board, staff, and the public; and

WHEREAS, County Board adoption and adoption by local units of government is required prior to approval by FEMA Region V; and

WHEREAS, this resolution does not preclude the Township of Leaf River from preparing a separate plan sometime in the future should it desire to do so.

NOW THEREFORE BE IT RESOLVED, that the Wadena County's Hazard Mitigation Plan is approved in its entirety, and that the Township of Leaf River will support the County's effort to implement the *Action Plan* of the *Wadena County Hazard Mitigation Plan* and to secure necessary funding for implementation actions; and also submit the plan to the Federal Emergency Management Agency for approval on the behalf of the County and the Township of Leaf River.

Adopted this 7 day of September, 2004


Chairman

Attest:



Township of Lyons

RESOLUTION FOR APPROVAL OF THE HAZARD MITIGATION

WHEREAS, the County of Wadena [the County] is participating in a hazard mitigation planning process as established under the Federal Disaster Mitigation Act of 2000; and

WHEREAS, the Township of Lyons has had the opportunity to participate in the planning process; and

WHEREAS, the Region Five Development Commission, under the guidelines established by the Act, has provided a framework for the development of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 and FEMA require communities to adopt a hazard mitigation action plan to be eligible for pre-disaster and post-disaster federal funding for mitigation purposes; and

WHEREAS, the plan is a record of the County's potential risks and hazards and commitment to reducing the long-term consequences of natural, human caused and technological hazards; and

WHEREAS, the plan outlines mitigation goals, identifies risk reduction strategies for hazards that threaten the area, and discusses the ongoing risk reduction strategies to be undertaken with the jurisdiction; and

WHEREAS, the plan has been reviewed by members of this Board, staff, and the public; and

WHEREAS, County Board adoption and adoption by local units of government is required prior to approval by FEMA Region V; and

WHEREAS, this resolution does not preclude the Township of Lyons from preparing a separate plan sometime in the future should it desire to do so.

NOW THEREFORE BE IT RESOLVED, that the Wadena County's Hazard Mitigation Plan is approved in its entirety, and that the Township of Lyons will support the County's effort to implement the *Action Plan* of the *Wadena County Hazard Mitigation Plan* and to secure necessary funding for implementation actions; and also submit the plan to the Federal Emergency Management Agency for approval on the behalf of the County and the Township of Lyons.

Adopted this 13th day of Sept., 2004

Maynard Benson
Chairman

Attest:

Raymond L. Heedman

Township of Meadow

RESOLUTION FOR APPROVAL OF THE HAZARD MITIGATION

WHEREAS, the County of Wadena [the County] is participating in a hazard mitigation planning process as established under the Federal Disaster Mitigation Act of 2000; and

WHEREAS, the Township of Meadow has had the opportunity to participate in the planning process; and

WHEREAS, the Township of Meadow by resolution supported the Wadena County planning efforts; and

WHEREAS, the Region Five Development Commission, under the guidelines established by the Act, has provided a framework for the development of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 and FEMA require communities to adopt a hazard mitigation action plan to be eligible for pre-disaster and post-disaster federal funding for mitigation purposes; and

WHEREAS, the plan is a record of the County's potential risks and hazards and commitment to reducing the long-term consequences of natural, human caused and technological hazards; and

WHEREAS, the plan outlines mitigation goals, identifies risk reduction strategies for hazards that threaten the area, and discusses the ongoing risk reduction strategies to be undertaken with the jurisdiction; and

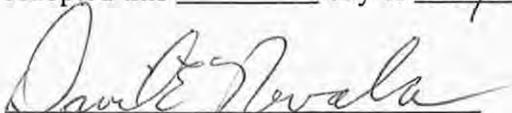
WHEREAS, the plan has been reviewed by members of this Board, staff, and the public; and

WHEREAS, County Board adoption and adoption by local units of government is required prior to approval by FEMA Region V; and

WHEREAS, this resolution does not preclude the Township of Meadow from preparing a separate plan sometime in the future should it desire to do so.

NOW THEREFORE BE IT RESOLVED, that the Wadena County's Hazard Mitigation Plan is approved in its entirety, and that the Township of Meadow will support the County's effort to implement the *Action Plan* of the *Wadena County Hazard Mitigation Plan* and to secure necessary funding for implementation actions; and also submit the plan to the Federal Emergency Management Agency for approval on the behalf of the County and the Township of Meadow.

Adopted this 9 day of Sept, 2004


Chairman

Attest:


Clerk.

Township of North Germany

RESOLUTION FOR APPROVAL OF THE HAZARD MITIGATION

WHEREAS, the County of Wadena [the County] is participating in a hazard mitigation planning process as established under the Federal Disaster Mitigation Act of 2000; and

WHEREAS, the Township of North Germany has had the opportunity to participate in the planning process; and

WHEREAS, the Township of North Germany by resolution supported the Wadena County planning efforts; and

WHEREAS, the Region Five Development Commission, under the guidelines established by the Act, has provided a framework for the development of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 and FEMA require communities to adopt a hazard mitigation action plan to be eligible for pre-disaster and post-disaster federal funding for mitigation purposes; and

WHEREAS, the plan is a record of the County's potential risks and hazards and commitment to reducing the long-term consequences of natural, human caused and technological hazards; and

WHEREAS, the plan outlines mitigation goals, identifies risk reduction strategies for hazards that threaten the area, and discusses the ongoing risk reduction strategies to be undertaken with the jurisdiction; and

WHEREAS, the plan has been reviewed by members of this Board, staff, and the public; and

WHEREAS, County Board adoption and adoption by local units of government is required prior to approval by FEMA Region V; and

WHEREAS, this resolution does not preclude the Township of North Germany from preparing a separate plan sometime in the future should it desire to do so.

NOW THEREFORE BE IT RESOLVED, that the Wadena County's Hazard Mitigation Plan is approved in its entirety, and that the Township of North Germany will support the County's effort to implement the *Action Plan* of the *Wadena County Hazard Mitigation Plan* and to secure necessary funding for implementation actions; and also submit the plan to the Federal Emergency Management Agency for approval on the behalf of the County and the Township of North Germany.

Adopted this 9th day of September, 2004

James W. Michalski
Chairman

Attest:

Wendy K. London, Clerk

Township of Orton

RESOLUTION FOR APPROVAL OF THE HAZARD MITIGATION

WHEREAS, the County of Wadena [the County] is participating in a hazard mitigation planning process as established under the Federal Disaster Mitigation Act of 2000; and

WHEREAS, the Township of Orton has had the opportunity to participate in the planning process; and

WHEREAS, the Township of Orton by resolution supported the Wadena County planning efforts; and

WHEREAS, the Region Five Development Commission, under the guidelines established by the Act, has provided a framework for the development of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 and FEMA require communities to adopt a hazard mitigation action plan to be eligible for pre-disaster and post-disaster federal funding for mitigation purposes; and

WHEREAS, the plan is a record of the County's potential risks and hazards and commitment to reducing the long-term consequences of natural, human caused and technological hazards; and

WHEREAS, the plan outlines mitigation goals, identifies risk reduction strategies for hazards that threaten the area, and discusses the ongoing risk reduction strategies to be undertaken with the jurisdiction; and

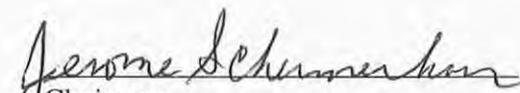
WHEREAS, the plan has been reviewed by members of this Board, staff, and the public; and

WHEREAS, County Board adoption and adoption by local units of government is required prior to approval by FEMA Region V; and

WHEREAS, this resolution does not preclude the Township of Orton from preparing a separate plan sometime in the future should it desire to do so.

NOW THEREFORE BE IT RESOLVED, that the Wadena County's Hazard Mitigation Plan is approved in its entirety, and that the Township of Orton will support the County's effort to implement the *Action Plan* of the *Wadena County Hazard Mitigation Plan* and to secure necessary funding for implementation actions; and also submit the plan to the Federal Emergency Management Agency for approval on the behalf of the County and the Township of Orton.

Adopted this 3 day of Nov, 2004


Chairman

Attest:



Township of Red Eye

RESOLUTION FOR APPROVAL OF THE HAZARD MITIGATION

WHEREAS, the County of Wadena [the County] is participating in a hazard mitigation planning process as established under the Federal Disaster Mitigation Act of 2000; and

WHEREAS, the Township of Red Eye has had the opportunity to participate in the planning process; and

WHEREAS, the Township of Red Eye by resolution supported the Wadena County planning efforts; and

WHEREAS, the Region Five Development Commission, under the guidelines established by the Act, has provided a framework for the development of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 and FEMA require communities to adopt a hazard mitigation action plan to be eligible for pre-disaster and post-disaster federal funding for mitigation purposes; and

WHEREAS, the plan is a record of the County's potential risks and hazards and commitment to reducing the long-term consequences of natural, human caused and technological hazards; and

WHEREAS, the plan outlines mitigation goals, identifies risk reduction strategies for hazards that threaten the area, and discusses the ongoing risk reduction strategies to be undertaken with the jurisdiction; and

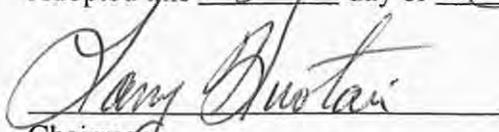
WHEREAS, the plan has been reviewed by members of this Board, staff, and the public; and

WHEREAS, County Board adoption and adoption by local units of government is required prior to approval by FEMA Region V; and

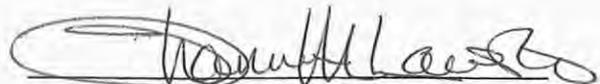
WHEREAS, this resolution does not preclude the Township of Red Eye from preparing a separate plan sometime in the future should it desire to do so.

NOW THEREFORE BE IT RESOLVED, that the Wadena County's Hazard Mitigation Plan is approved in its entirety, and that the Township of Red Eye will support the County's effort to implement the *Action Plan* of the *Wadena County Hazard Mitigation Plan* and to secure necessary funding for implementation actions; and also submit the plan to the Federal Emergency Management Agency for approval on the behalf of the County and the Township of Red Eye.

Adopted this 8th day of Sept., 2004


Chairman

Attest:



Township of Rockwood

RESOLUTION FOR APPROVAL OF THE HAZARD MITIGATION

WHEREAS, the County of Wadena [the County] is participating in a hazard mitigation planning process as established under the Federal Disaster Mitigation Act of 2000; and

WHEREAS, the Township of Rockwood has had the opportunity to participate in the planning process; and

WHEREAS, the Township of Rockwood by resolution supported the Wadena County planning efforts; and

WHEREAS, the Region Five Development Commission, under the guidelines established by the Act, has provided a framework for the development of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 and FEMA require communities to adopt a hazard mitigation action plan to be eligible for pre-disaster and post-disaster federal funding for mitigation purposes; and

WHEREAS, the plan is a record of the County's potential risks and hazards and commitment to reducing the long-term consequences of natural, human caused and technological hazards; and

WHEREAS, the plan outlines mitigation goals, identifies risk reduction strategies for hazards that threaten the area, and discusses the ongoing risk reduction strategies to be undertaken with the jurisdiction; and

WHEREAS, the plan has been reviewed by members of this Board, staff, and the public; and

WHEREAS, County Board adoption and adoption by local units of government is required prior to approval by FEMA Region V; and

WHEREAS, this resolution does not preclude the Township of Rockwood from preparing a separate plan sometime in the future should it desire to do so.

NOW THEREFORE BE IT RESOLVED, that the Wadena County's Hazard Mitigation Plan is approved in its entirety, and that the Township of Rockwood will support the County's effort to implement the *Action Plan* of the *Wadena County Hazard Mitigation Plan* and to secure necessary funding for implementation actions; and also submit the plan to the Federal Emergency Management Agency for approval on the behalf of the County and the Township of Rockwood.

Adopted this 11th day of November, 2004

Dean E. Malone
Chairman

Attest:
[Signature]

Township of Thomastown

RESOLUTION FOR APPROVAL OF THE HAZARD MITIGATION

WHEREAS, the County of Wadena [the County] is participating in a hazard mitigation planning process as established under the Federal Disaster Mitigation Act of 2000; and

WHEREAS, the Township of Thomastown has had the opportunity to participate in the planning process; and

WHEREAS, the Township of Thomastown by resolution supported the Wadena County planning efforts; and

WHEREAS, the Region Five Development Commission, under the guidelines established by the Act, has provided a framework for the development of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 and FEMA require communities to adopt a hazard mitigation action plan to be eligible for pre-disaster and post-disaster federal funding for mitigation purposes; and

WHEREAS, the plan is a record of the County's potential risks and hazards and commitment to reducing the long-term consequences of natural, human caused and technological hazards; and

WHEREAS, the plan outlines mitigation goals, identifies risk reduction strategies for hazards that threaten the area, and discusses the ongoing risk reduction strategies to be undertaken with the jurisdiction; and

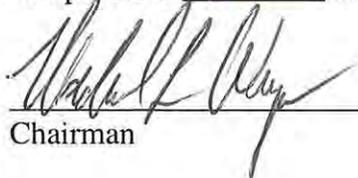
WHEREAS, the plan has been reviewed by members of this Board, staff, and the public; and

WHEREAS, County Board adoption and adoption by local units of government is required prior to approval by FEMA Region V; and

WHEREAS, this resolution does not preclude the Township of Thomastown from preparing a separate plan sometime in the future should it desire to do so.

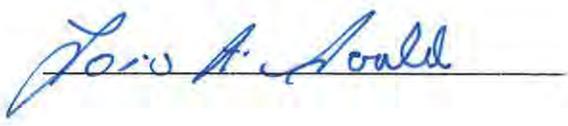
NOW THEREFORE BE IT RESOLVED, that the Wadena County's Hazard Mitigation Plan is approved in its entirety, and that the Township of Thomastown will support the County's effort to implement the *Action Plan* of the *Wadena County Hazard Mitigation Plan* and to secure necessary funding for implementation actions; and also submit the plan to the Federal Emergency Management Agency for approval on the behalf of the County and the Township of Thomastown.

Adopted this 2th day of Sept., 2004



Chairman

Attest:



Township of Wing River

RESOLUTION FOR APPROVAL OF THE HAZARD MITIGATION

WHEREAS, the County of Wadena [the County] is participating in a hazard mitigation planning process as established under the Federal Disaster Mitigation Act of 2000; and

WHEREAS, the Township of Wing River has had the opportunity to participate in the planning process; and

WHEREAS, the Township of Wing River by resolution supported the Wadena County planning efforts; and

WHEREAS, the Region Five Development Commission, under the guidelines established by the Act, has provided a framework for the development of the Wadena County Hazard Mitigation Plan; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 and FEMA require communities to adopt a hazard mitigation action plan to be eligible for pre-disaster and post-disaster federal funding for mitigation purposes; and

WHEREAS, the plan is a record of the County's potential risks and hazards and commitment to reducing the long-term consequences of natural, human caused and technological hazards; and

WHEREAS, the plan outlines mitigation goals, identifies risk reduction strategies for hazards that threaten the area, and discusses the ongoing risk reduction strategies to be undertaken with the jurisdiction; and

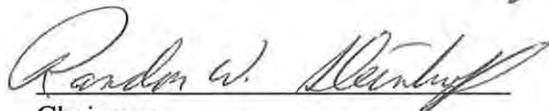
WHEREAS, the plan has been reviewed by members of this Board, staff, and the public; and

WHEREAS, County Board adoption and adoption by local units of government is required prior to approval by FEMA Region V; and

WHEREAS, this resolution does not preclude the Township of Wing River from preparing a separate plan sometime in the future should it desire to do so.

NOW THEREFORE BE IT RESOLVED, that the Wadena County's Hazard Mitigation Plan is approved in its entirety, and that the Township of Wing River will support the County's effort to implement the *Action Plan* of the *Wadena County Hazard Mitigation Plan* and to secure necessary funding for implementation actions; and also submit the plan to the Federal Emergency Management Agency for approval on the behalf of the County and the Township of Wing River.

Adopted this 13th day of Sept, 2004


Chairman

Attest:



First Nam	Last Name	Title	Agency	Address	City	St	Zip	Phone (work)	Email Address
			American Legion		Sebeka	MN	56477	(218) 837-5445	
			American Red Cross Central Minnesota	1204 7th St S	St Cloud	MN	56301	(800) 560-7641	
			Arvig Communications	160 2nd Ave SW	Perham	MN	56573	(218) 346-5500	
Dan	Holm		Becker County Emergency Management	PO Box 787	Detroit Lakes	MN	56502	(218) 846-7310	daholm@co.becker.mn.us
Michael	Carey	Emergency Management Director	Cass County	PO Box 1119	Walker	MN	56484	(218) 547-1424	mike.carey@co.cass.mn.us
Jeff	Etter	Fire Chief	City of Menahga	PO Box C	Menahga	MN	56464	(218) 564-4557	
Bill	Wilson	Fire Chief	City of Sebeka	PO Box 305	Sebeka	MN	56477	(218) 837-5773	cityofsebeka@wcta.net
Joe	Hassler	Fire Chief	City of Staples	611 Iowa Ave NE	Staples	MN	56479		
Kyle	Huber	Chief	City of Staples	611 Iowa Ave NE	Staples	MN	56479		
Bob	Blessing	Emergency Manager	City of Staples	319 8th St NE	Staples	MN	56479		
Wayne	Steve	Fire Chief	City of Verndale	PO Box 156	Verndale	MN	56481	(218) 445-5400	verncity@wcta.net
Nathan	Selander	Chief	City of Verndale	PO Box 156	Verndale	MN	56481	(218) 445-5400	
Roger	Anderson	Mayor	City of Verndale	PO Box 156	Verndale	MN	56481	(218) 445-5400	
Sam	Wain	Fire Chief	City of Wadena	PO Box 30	Wadena	MN	56482	(218) 631-7707	wadena@wcta.net
			County Sheriff	415 Jefferson St. S	Wadena	MN	56482		
			Department of Economic Security	1919 6th St. S	Brainerd	MN	56401		
			HRA	222 2nd St SE	Wadena	MN	56482	(218) 631-7723	
John	Lombard		Hubbard County Emergency Management	301 Court Ave	Park Rapids	MN	56470	(218) 732-3135	jlombard@co.hubbard.mn.us
Arnie	Mattson	Lions	Menahga Food Shelf	PO Box 271	Menahga	MN	56464	(218) 564-4881	
Gary	Ryhni	Chief	Menahga Lions Club	RR 4	Menahga	MN	56464	(218) 564-4950	
Amy	Filipek	Regional Program Director	Menahga Police Dept. Minnesota Department of Public Safety	PO box C 444 Cedar St. Suite 223	Menahga	MN	56464	(218) 564-4511	
			Minnesota DNR	1601 Minnesota Dr	St. Paul	MN	55101		
Dan	Steward		MN BWSR	217 S 7th St. Suite 202	Brainerd	MN	56401		
Mary	Safgren		MN DOT	1991 Industrial Park Rd	Brainerd	MN	56401		
Walt	Haas		MN PCA Brainerd	1800 College Rd S	Baxter	MN	56425		
Sheldon	Holm		Ottertail County Emergency Management	121 W Junius Ave	Fergus Falls	MN	56537	(218) 739-2271	tholm@co.otter-tail.mn.us
			Ottertail Wadena CAC	109 Walker Ave S	New York Mills	MN	56567		
Norm	Pettis	Chief	Sebeka Food Shelf	PO Box 233	Sebeka	MN	56477	(218) 837-5545	
Mike	Goff		Sebeka Police Dept Staples Ambulance	PO Box 305 401 Prairie Ave E	Sebeka Staples	MN	56477	(218) 837-5911	
			Staples Food Shelf	611 Iowa Ave NE	Staples	MN	56479		

			Suburban Propane	800 Se Main Ave	Staples	MN	56479	(218) 894-1350	
Dave	Kircher	Sheriff	Todd County Sheriffs Department	115 3rd St. S	Long Prairie	MN	56347	(320) 732-2157	dave.kircher@co.todd.mn.us
Dale	Hendrickson		Todd Wadena Electric Coop	Hwy 10 East	Wadena	MN	56482		
Don	Snorek	Director	Tri County Hospital EMS	415 Jeferson ST N	Wadena	MN	56482		
			VFW Club Room	213 1st St. SE	Wadena	MN	56482	(218) 632-6951	
			VFW Post 6206		Menahga	MN	56464	(218) 564-9533	
Wayne	Terry	Emergency Management Director	Wadena County	415 Jefferson St. S	Wadena	MN	56482	(218) 631-7617	wayne.terry@co.wadena.mn.us
Gloria	Junker		Wadena Crisis and Referral Program	PO Box 167	Wadena	MN	56482	(218) 631-1127	wccrp@uslink.net
Vernell	Roberts		Wadena Food Shelf	PO Box 574	Wadena	MN	56482	(218) 631-3910	
Bruce	Uselman	Chief	Wadena Light and Power	222 2nd St SE	Wadena	MN	56482	(218) 631-7712	
			Wadena Police Dept.	121 colfax Ave SE	Wadena	MN	56482	(218) 631-7700	
			West Central Telephone Association	PO Box 304	Sebeka	MN	56477	(218) 837-5151	
			West Central Telephone Company	308 Frontage Road	Sebeka	MN	56477	(218) 837-5151	
		Superintendent	Verndale Public Schools	Rt 1 Box 1	Verndale	MN	56481		
		Superintendent	Wadena-Deer Creek Public Schools ISD #2155	520 SW Colfax Ave	Wadena	MN	56482		
		Superintendent	Staples Motley Public Schools ISD 2170	202 Pleasant Ave	Staples	MN	56479		
		Superintendent	Menahga Public Schools ISD #821	216 Aspen Ave SE	Menahga	MN	56464		
		Superintendent	Sebeka Public Schools		Sebeka	MN	56477		
			Wadena County Soil & Water Conservation District	4 Alfred St. NE	Wadena	MN	56482		
			Lakewood Health System	401 Prairie Ave E	Staples	MN	56479		
			Central Lakes College	1830 Airport Rd	Staples	MN	56479		
			Minnesota State Community & Technical College	PO Box 566, 405 Colfax Ave SW	Wadena	MN	56479		

OPEN HOUS ATTENDEES 12/4/03

NAME	ADDRESS	PHONE	COPY	EMAIL
Cunningham, Milt	19576 121st Ave	631-1883	Yes	
Scheller, Jeri	Courthouse	631-7633	No	
Paavola, Bev	Courthouse	631-7633	Yes	beverly.paavola@courts.state.r
Blessing, Bob	319 8th St NE Staples	894-1108	Yes	
Huber, Kyle	611 Iowa Ave Ne Staples	894-1841	Yes	
Haas, Walt		828-6073	No	
Pettis, Norman	PO Box 204 Sebek	837-5911	Yes	
Skov, Deana	Courthouse	631-7904	Yes	
Terry, Wayne	Courthouse	631-7617	Yes	
Gorman, Tammy	401 Prairie Ave NE	894-1515 Ext 507	Yes	
Waldahl, Lane	15468 Shady Acres Dr	631-3253	Yes	
McLeod, Sharon	1042 Fir Ave	631-1335	Yes	
Goff, Mike	801 2nd Ave NE Staples	894-3784	Yes	
Wegscheid, Vince	11554 110th St Wadena	631-3139	Yes	
Carlson, Debbie	703 Wells Ave N Sebek	837-5937	Yes	
Anderson, Roger	513 SW Brown Sebek	445-5564	Yes	
Berquist, Jim	10700 193rd Ave Verndale	445-5315	Yes	
Schmitz, Jerome	14172 120th St Wadena	631-3885	Yes	
Holmquist, David	Verndale Schools	445-5184	Yes	
Belch, Deb	Wadena County Public Health	631-7329	Yes	
Johnson, Pat	Todd/Wadena Elec CO-OP	631-3120	Yes	
Reinke, Ivan	4 Alfred St NE	631-3195 Ext 3	Yes	
Aldeen, Dave	4 Alfred St NE	631-3195 Ext 3	Yes	
Tomperi, Kari	39310 Lodge Dr Menahga	564-5335	Yes	
Lorentz, Dan	Wadena Township	631-4729	Yes	
Uselman, Bruce	Wadena Police	631-7701	Yes	
Kern, Bill	Verndale			

FUNDING SOURCES

Funding Source	Tornado	Flooding	Winter Storms	Drought	Severe Summer Storms	Wind Storm	Extreme Temp	Wildfire	Infectious Disease	Groundwater Depletion	Groundwater Contamination	Hazardous Material Accident (Transportation)	Hazardous Material Accident (Fixed Facilities)	Power Grid Failure	Dam Failure	Computer Viruses	Terrorism	Railroad Interference with Emergency Response	Financial Assistance	Technical Assistance	
FEDERAL SOURCES																					
Business and Industry Loans																					
CDC - Investigations and Technical Assistance																					
CEPP Technical Assistance Grants Program																					
Community Assistance Program - State Support Services Element (NIL)																					
Community Development Block Grant/Economic Development Initiative																					
Community Development Block Grant/ Entitlement Grants																					
Community Development Block Grant/ Small Cities Program																					
Community Disaster Loans																					
Community Facilities Loans and grants																					
Community Outreach Partnership Center Program																					
Conservation Reserve Program																					
Cooperative Forestry Research																					
Cora Brown Fund																					
Direct Housing Natural Disaster (very low/low income loans																					
Disaster Housing Program																					
Economic Adjustment Assistance																					
Economic Development Tech Assistance																					
Emergency Advance Measures for Flood Protection																					
Emergency Community Water Assistance Grants																					
Emergency Conservation Program																					
Emergency Flood and Shelter National Board Program																					

FUNDING SOURCES

Funding Source	Tornado	Flooding	Winter Storms	Drought	Severe Summer Storms	Wind Storm	Extreme Temp	Wildfire	Infectious Disease	Groundwater Depletion	Groundwater Contamination	Hazardous Material Accident (Transportation)	Hazardous Material Accident (Fixed Facilities)	Power Grid Failure	Dam Failure	Computer Viruses	Terrorism	Railroad Interference with Emergency Response	Financial Assistance	Technical Assistance	
FEDERAL SOURCES																					
Emergency Management Institute-Resident Ed Program	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Emergency Management Institute-Training Assistance	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Emergency Management Performance Grants	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Emergency Operations Flood Response and Post-Flood Response		X													X				X		
Emergency Rehabilitation of Flood Control Works		X													X				X		
Engineering Grants	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Farmland Protection Program	X	X																			
Fire Suppression Assistance								X													
Flood Insurance		X													X				X		
Flood Mitigation Assistance		X													X				X		
Flood Plain Management Services		X													X				X		
Flood Control Projects		X													X				X		
Forestry Incentives Program	X																				
Forestry Research	X					X															
Grants for Public Works and Economic Development		X												X							
Grants-in-Aid for Railroad Safety		X												X							
Hazard Mitigation Grant Program	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
HazMat Training Program for Implementation of SARA																					
Health Program for toxic Substance and Disease Registry													X						X		
Historic Preservation Funds Grants-in Aid	X	X			X																
HOME Investment Partnerships Program		X			X														X		
Hydrologic Research		X									X								X		
Individual and Family Grant Program		X		X			X	X											X		

FUNDING SOURCES

Funding Source	Tornado	Flooding	Winter Storms	Drought	Severe Summer Storms	Wind Storm	Extreme Temp	Wildfire	Infectious Disease	Groundwater Depletion	Groundwater Contamination	Hazardous Material Accident (Transportation)	Hazardous Material Accident (Fixed Facilities)	Power Grid Failure	Dam Failure	Computer Viruses	Terrorism	Railroad Interference with Emergency Response	Financial Assistance	Technical Assistance
FEDERAL SOURCES																				
Planning Grants (HazMat Emergency Preparedness Grant)												X							X	
Motor Carrier Safety															X					X
National Dam Safety Program																				
National Pollutant Discharge Elimination System											X								X	
National Urban Search and Rescue Response System	X													X					X	
North American Wetlands Conservation Fund										X									X	
Planning(Land and Water Conservation Fund Grants)										X									X	
Physical Disaster Loans	X	X	X		X						X			X						
Pipeline Safety																				
Project Impact: Building Disaster - Resistant Communities	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Protection Clearing and Straightening Channels		X																		
Public Assistance Grant Program	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Public Health and Social Services Emergency Fund									X											
Railroad Safety																				
Resource Conservation and Development		X		X																X
River, Trails, and Conservation Assistance	X	X								X										X
Rural Business Opportunity Grants	X	X																		X
Rural Development Grants																				
Rural Electrification Loans	X	X	X		X	X								X						
Rural Housing and Economic Development	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Rural Housing Site Loans and Self - Help Housing and Development Loans		X																		
Snagging and Clearing for Flood Control	X	X																	X	
Soil and Water Conservation	X	X		X			X	X		X	X								X	X

FUNDING SOURCES

Funding Source	Tornado	Flooding	Winter Storms	Drought	Severe Summer Storms	Wind Storm	Extreme Temp	Wildfire	Infectious Disease	Groundwater Depletion	Groundwater Contamination	Hazardous Material Accident (Transportation)	Hazardous Material Accident (Fixed Facilities)	Power Grid Failure	Dam Failure	Computer Viruses	Terrorism	Railroad Interference with Emergency Response	Financial Assistance	Technical Assistance	
FEDERAL SOURCES																					
Superfund Technical Assistance Grants for Citizen Groups at Priority Sites																					
Surveys, Studies, Investigations and Special Purpose Grants									X		X										
Technology Development for Environmental Management																					
Very Low Income Housing Repair Loans/Grants	X	X			X	X	X														
Very Low to Moderate Income Housing Loans	X	X			X	X															
Water and Waste Disposal System for Rural Communities		X						X						X							
Water/Waste Disposal Loans/Grants		X						X	X					X							
Watershed Protection and Flood Prevention		X						X	X												
Watershed Surveys and Planning		X								X	X										
Weatherization Assistance for Low-Income Persons																					
Wetlands Protection -Development Grants		X																			
Wetlands Reserve Program		X																			
Wildlife Habitat Incentive Program		X																			

FUNDING SOURCES

Funding Source
STATE & LOCAL SOURCES
Minnesota Department of Public Safety Programs
Flood Damage Reduction Grant Assistance Program
Citizen Corps Grant Program
Local Taxes & Levies
Bonds
General Fund
Debt Capacity
Self Insurance Funds
Increased Rates
Corporate & Private Donations
Benefit Services Charges
Reserve Funds
Local Improvement Districts

TO: Wayne Terry
Wadena County Emergency Management Director

Here are some projects that Ron Bucholz our Public Works Director felt might pertain to your hazard mitigation project identification form.

1. Repair spring frost boil road heaves on Greenwood Ave NW and Alfred St NW (Placement of fabric in sub grade.)
2. Infrastructure replacement in SW Wadena
3. Clean out storm ditch line on Union Creek (Homecrest Ave to T.H. Hwy 10)
4. Add overflow structure for storm water pond at Carter Addition (drainage to west)
5. Clean storm ditch line Union Creek Sunnybrook Rd to Leaf River
6. Railroad under-over pass in town
7. Cost estimates and time lines can be put together if need be, let us know.



Bradley A. Swenson
City Administrator

HAZARD MITIGATION PROJECT IDENTIFICATION FORM

1. Name of Jurisdiction: City of Wadena

2. If no Hazard Mitigation related project can be identified by your local unit of government please check the following box and fax or mail this form.

3. Project Name: see attached
(or briefly explain project)

4. Location or Area of Project: see attached
(Please use best possible description)

5. Estimated Project Cost: _____
(Please use best possible estimate)

6. Project Funding Sources (Federal, State, Local, Private, etc.):

7. Estimated Project Timeline: _____
(Please use best possible estimate)

8. What type of hazard is this project intended to prevent or lessen the impacts of, i.e. flooding, fire, violent storm or tornado, winter storm related hazards, hazardous chemicals, traffic accidents, etc.? Be sure to include the exact or specific location of the hazard you are identifying (Township, Range, Section, etc.)

9. Has Federal funding been received as a result of this particular hazard occurring in this particular area in the past? (Please Circle One) YES NO

10. If so, when? (Please write in exact date if known) _____ / _____ / _____
Month Day Year

11. How will this project help to prevent or lessen the impacts of the identified hazard?

RECEIVED
JUN 18 2004
REGION 5 RDC

HAZARD MITIGATION PROJECT IDENTIFICATION FORM

1. Name of Jurisdiction: City of Nimrod

2. If no Hazard Mitigation related project can be identified by your local unit of government please check the following box and fax or mail this form.

3. Project Name: _____
(or briefly explain project)

4. Location or Area of Project: _____
(Please use best possible description)

5. Estimated Project Cost: _____
(Please use best possible estimate)

6. Project Funding Sources (Federal, State, Local, Private, etc.): _____

7. Estimated Project Timeline: _____
(Please use best possible estimate)

8. What type of hazard is this project intended to prevent or lessen the impacts of, i.e. flooding, fire, violent storm or tornado, winter storm related hazards, hazardous chemicals, traffic accidents, etc.? Be sure to include the exact or specific location of the hazard you are identifying (Township, Range, Section, etc.)

9. Has Federal funding been received as a result of this particular hazard occurring in this particular area in the past? (Please Circle One) YES NO

10. If so, when? (Please write in exact date if known) _____ / _____ / _____
Month Day Year

11. How will this project help to prevent or lessen the impacts of the identified hazard?

RECEIVED
JUN 16 2004
REGION 5 RDC

HAZARD MITIGATION PROJECT IDENTIFICATION FORM

1. Name of Jurisdiction: City of Sebeka
2. If no Hazard Mitigation related project can be identified by your local unit of government please check the following box and fax or mail this form.
3. Project Name: _____
(or briefly explain project)
4. Location or Area of Project: _____
(Please use best possible description)
5. Estimated Project Cost: _____
(Please use best possible estimate)
6. Project Funding Sources (Federal, State, Local, Private, etc.):

7. Estimated Project Timeline: _____
(Please use best possible estimate)
8. What type of hazard is this project intended to prevent or lessen the impacts of, i.e. flooding, fire, violent storm or tornado, winter storm related hazards, hazardous chemicals, traffic accidents, etc.? Be sure to include the exact or specific location of the hazard you are identifying (Township, Range, Section, etc.)

9. Has Federal funding been received as a result of this particular hazard occurring in this particular area in the past? (Please Circle One) YES NO
10. If so, when? (Please write in exact date if known) _____ / _____ / _____
Month Day Year
11. How will this project help to prevent or lessen the impacts of the identified hazard?

HAZARD MITIGATION PROJECT IDENTIFICATION FORM

1. Name of Jurisdiction: City of Verdale

2. If no Hazard Mitigation related project can be identified by your local unit of government please check the following box and fax or mail this form.

3. Project Name: 6th Ave S. Tarring of street
(or briefly explain project)

4. Location or Area of Project: Complete length of 6th Ave. S.
(Please use best possible description)

5. Estimated Project Cost: \$ 25,000
(Please use best possible estimate)

6. Project Funding Sources (Federal, State, Local, Private, etc.):
Local Funding

7. Estimated Project Timeline: June - July 2005
(Please use best possible estimate)

8. What type of hazard is this project intended to prevent or lessen the impacts of, i.e. flooding, fire, violent storm or tornado, winter storm related hazards, hazardous chemicals, traffic accidents, etc.? Be sure to include the exact or specific location of the hazard you are identifying (Township, Range, Section, etc.)
remove dust after a vehicle drives by - remove washboard of road.

9. Has Federal funding been received as a result of this particular hazard occurring in this particular area in the past? (Please Circle One) YES NO

10. If so, when? (Please write in exact date if known) _____ / _____ / _____
Month Day Year

11. How will this project help to prevent or lessen the impacts of the identified hazard?
by Paving the street, there will be no more dust blowing into the homes along 6th Av.

by Paving the street there will be no more washboarding of the street - causing less wear & tear on vehicles traveling on the street

Please use this form to indicate your City's participation in implementing the Wadena County Hazard Mitigation Plan. The numbering in the far left column corresponds with each task item contained within the enclosed Action Plan. Please complete and return by December 29, 2006.

CITY NAME: Staples

Section/Task Number	City Assistance with Completion. Please circle one (yes/no)	Comments (if any):
4.1.1 Tornadoes (p. 78)		
1a	<input checked="" type="radio"/> Yes / No	
1b	<input checked="" type="radio"/> Yes / No	
1c	<input checked="" type="radio"/> Yes / No	Work w/ Planning & Zoning Task Ldr
1d	<input checked="" type="radio"/> Yes / No	on going
1e	<input checked="" type="radio"/> Yes / No	
1f	<input checked="" type="radio"/> Yes / No	
1g	<input checked="" type="radio"/> Yes / No	
1h	<input checked="" type="radio"/> Yes / No	Have TV interrupt for city
4.1.2 Flooding (p. 79)		
1a	<input checked="" type="radio"/> Yes / No	Planning & Zoning Task Ldr (permits if needed)
1b	<input checked="" type="radio"/> Yes / No	
1c	<input checked="" type="radio"/> Yes / No	
1d	<input checked="" type="radio"/> Yes / No	
2a	<input checked="" type="radio"/> Yes / No	
2b	<input checked="" type="radio"/> Yes / No	
2c	<input checked="" type="radio"/> Yes / No	Work w/ Adm. County
2d	<input checked="" type="radio"/> Yes / No	Wadena City Planning & Zoning
4.1.3 Winter Storms (p. 80)		
1a	<input checked="" type="radio"/> Yes / No	
1b	<input checked="" type="radio"/> Yes / No	
1c	<input checked="" type="radio"/> Yes / No	
1d	<input checked="" type="radio"/> Yes / No	
2a	<input checked="" type="radio"/> Yes / No	on going
2b	<input checked="" type="radio"/> Yes / No	
2c	<input checked="" type="radio"/> Yes / No	City Crew
2d	<input checked="" type="radio"/> Yes / No	
3a	<input checked="" type="radio"/> Yes / No	
3b	<input checked="" type="radio"/> Yes / No	
4a	<input checked="" type="radio"/> Yes / No	
4b	<input checked="" type="radio"/> Yes / No	City & County crews
4c	<input checked="" type="radio"/> Yes / No	on going
4.1.4 Drought (p. 82)		
1a	<input checked="" type="radio"/> Yes / No	
1b	Yes <input checked="" type="radio"/> No	No crops in city
1c	<input checked="" type="radio"/> Yes / No	on going
2a	Yes <input checked="" type="radio"/> No	Farmland not in city
3a	Yes <input checked="" type="radio"/> No	
3b	<input checked="" type="radio"/> Yes / No	on going

Please use this form to indicate your City's participation in implementing the Wadena County Hazard Mitigation Plan. The numbering in the far left column corresponds with each task item contained within the enclosed Action Plan. Please complete and return by December 29, 2006.

4.1.5 Summer Storms (p. 84)		
1a	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
1b	<input checked="" type="radio"/> Yes / <input type="radio"/> No	On going
1c	<input checked="" type="radio"/> Yes / <input type="radio"/> No	on going
1d	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
1e	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
1f	<input checked="" type="radio"/> Yes / <input type="radio"/> No	work w/ County EMD
1g	<input checked="" type="radio"/> Yes / <input type="radio"/> No	NWS Hazardous Wk instruction
1h	<input checked="" type="radio"/> Yes / <input type="radio"/> No	on going - City & County
1i	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
1j	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
1k	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
2a	<input checked="" type="radio"/> Yes / <input type="radio"/> No	County Engr & City Street crew
4.1.6 Wind Storms (sustained) (p. 85)		
1a	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
1b	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
1c	<input checked="" type="radio"/> Yes / <input type="radio"/> No	Staples City crew
2a	Yes / <input checked="" type="radio"/> No	No lake shore in city
2b	Yes / <input checked="" type="radio"/> No	No lake shore in city
4.1.7 Extreme Heat (p. 86)		
1a	<input checked="" type="radio"/> Yes / <input type="radio"/> No	Public Health - ongoing
1b	<input checked="" type="radio"/> Yes / <input type="radio"/> No	ongoing
4.1.8 Wildfire (p. 87)		
1a	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
1b	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
1c	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
2a	Yes / <input checked="" type="radio"/> No	Staples has no forests in city
2b	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
2c	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
4.1.9 Infectious Disease (p. 87)		
1a	<input checked="" type="radio"/> Yes / <input type="radio"/> No	Todd City Public Health
4.2.1 Groundwater Depletion (p. 89)		
1a	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
1b	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
1c	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
1d	Yes / <input checked="" type="radio"/> No	
1e	<input checked="" type="radio"/> Yes / <input type="radio"/> No	City Water & Light
4.2.2 Groundwater Contamination (p. 90)		
1a	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
1b	<input checked="" type="radio"/> Yes / <input type="radio"/> No	Public Health
2a	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
2b	<input checked="" type="radio"/> Yes / <input type="radio"/> No	

Please use this form to indicate your City's participation in implementing the Wadena County Hazard Mitigation Plan. The numbering in the far left column corresponds with each task item contained within the enclosed Action Plan. Please complete and return by December 29, 2006.

4.2.3 Hazardous Material (Transport & Train) (p. 91)		
1a	<input checked="" type="radio"/> Yes / <input type="radio"/> No	Water/Light - Emerg Mngmt Dir
1b	<input checked="" type="radio"/> Yes / <input type="radio"/> No	Pipeline Companies - Emerg Mngmt Dir
1c	<input checked="" type="radio"/> Yes / <input type="radio"/> No	Emerg Mngmt Dir
2a	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
2b	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
2c	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
4.2.4 Hazardous Material (Fixed facilities) (p. 92)		
1a	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
1b	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
1c	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
4.2.5 Power Grid Failure (p. 92)		
1a	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
1b	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
1c	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
2a	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
2b	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
4.2.6 Dam Failure (p. 93)	<input type="radio"/> Yes / <input checked="" type="radio"/> No	No Large Dams
1a	<input type="radio"/> Yes / <input checked="" type="radio"/> No	No Large Dams
4.2.7 Computer Viruses (p. 94)	<input type="radio"/> Yes / <input type="radio"/> No	
1a	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
1b	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
1c	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
4.2.8 Terrorism (p. 94)		
1a	<input checked="" type="radio"/> Yes / <input type="radio"/> No	Law Enforcement / Emerg Mngmt Dir
1b	<input checked="" type="radio"/> Yes / <input type="radio"/> No	Law Enforcement / Emerg Mngmt Dir
4.2.9 Railroad Interference with Emergency Response (p. 95)		
1a	<input checked="" type="radio"/> Yes / <input type="radio"/> No	City Administrator / Emerg Mngmt Dir
1b	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
1c	<input checked="" type="radio"/> Yes / <input type="radio"/> No	City / County Engineer

Please use this form to indicate your City's participation in implementing the Wadena County Hazard Mitigation Plan. The numbering in the far left column corresponds with each task item contained within the enclosed Action Plan. Please complete and return by December 29, 2006.

CITY NAME: Wadena

Section/Task Number	City Assistance with Completion. Please circle one (yes/no)	Comments (if any):
4.1.1 Tornadoes (p. 78)		
1a	<input checked="" type="radio"/> Yes / No	
1b	<input checked="" type="radio"/> Yes / No	
1c	<input checked="" type="radio"/> Yes / No	Work with Planning & Zoning Task Leader
1d	<input checked="" type="radio"/> Yes / No	On going plan -
1e	<input checked="" type="radio"/> Yes / No	Weather radios - Schools
1f	<input checked="" type="radio"/> Yes / No	on going
1g	<input checked="" type="radio"/> Yes / No	
1h	<input checked="" type="radio"/> Yes / No	N/A Early Notification System in place.
4.1.2 Flooding (p. 79)		
1a	<input checked="" type="radio"/> Yes / No	Planning Zoning Task Leader (permits)
1b	<input checked="" type="radio"/> Yes / No	Conservation Areas
1c	<input checked="" type="radio"/> Yes / No	on going
1d	<input checked="" type="radio"/> Yes / <input type="radio"/> No	No areas in flood plain
2a	<input checked="" type="radio"/> Yes / No	
2b	<input checked="" type="radio"/> Yes / No	
2c	<input checked="" type="radio"/> Yes / No	Work w/ County Engineer
2d	<input checked="" type="radio"/> Yes / No	County Planning & Zoning
4.1.3 Winter Storms (p. 80)		
1a	<input checked="" type="radio"/> Yes / No	on going Public Health
1b	<input checked="" type="radio"/> Yes / No	Public Service Announcements
1c	<input checked="" type="radio"/> Yes / No	
1d	<input checked="" type="radio"/> Yes / No	winter survival
2a	<input checked="" type="radio"/> Yes / No	on going
2b	<input checked="" type="radio"/> Yes / No	
2c	<input checked="" type="radio"/> Yes / No	City W & L
2d	<input checked="" type="radio"/> Yes / No	Wadena Street & Sewer
3a	<input checked="" type="radio"/> Yes / No	City W & L
3b	<input checked="" type="radio"/> Yes / No	County Zoning & Planning
4a	<input checked="" type="radio"/> Yes / No	Wadena Street & Parks
4b	<input checked="" type="radio"/> Yes / No	Wadena Street & Sewer
4c	<input checked="" type="radio"/> Yes / No	on going
4.1.4 Drought (p. 82)		
1a	<input checked="" type="radio"/> Yes / No	Wadena Light & Water
1b	<input checked="" type="radio"/> Yes / No	on going w/ County Plan - Zoning
1c	<input checked="" type="radio"/> Yes / No	
2a	<input checked="" type="radio"/> Yes / <input type="radio"/> No	Active Farms in County only
3a	<input checked="" type="radio"/> Yes / <input type="radio"/> No	No livestock in City
3b	<input checked="" type="radio"/> Yes / No	Pet care - WFO assist

Please use this form to indicate your City's participation in implementing the Wadena County Hazard Mitigation Plan. The numbering in the far left column corresponds with each task item contained within the enclosed Action Plan. Please complete and return by December 29, 2006.

4.1.5 Summer Storms (p. 84)		
1a	<input checked="" type="radio"/> Yes / <input type="radio"/> No	on going
1b	<input checked="" type="radio"/> Yes / <input type="radio"/> No	City County Planning & Zoning
1c	<input checked="" type="radio"/> Yes / <input type="radio"/> No	on going
1d	<input checked="" type="radio"/> Yes / <input type="radio"/> No	weather radio NOAA
1e	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
1f	<input checked="" type="radio"/> Yes / <input type="radio"/> No	FEMA Grants
1g	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
1h	<input checked="" type="radio"/> Yes / <input type="radio"/> No	County City - on going
1i	<input checked="" type="radio"/> Yes / <input type="radio"/> No	Soil Water - Planning Zoning
1j	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
1k	<input checked="" type="radio"/> Yes / <input type="radio"/> No	
2a	<input checked="" type="radio"/> Yes / <input type="radio"/> No	County Engineer City Street - Sewer
4.1.6 Wind Storms (sustained) (p. 85)		
1a	<input checked="" type="radio"/> Yes / <input type="radio"/> No	Planning Zoning on-going
1b	<input checked="" type="radio"/> Yes / <input type="radio"/> No	Wadena Light & Water
1c	<input checked="" type="radio"/> Yes / <input type="radio"/> No	Wadena Street & Sewer
2a	<input checked="" type="radio"/> Yes / <input type="radio"/> No	No lake shore in city
2b	<input checked="" type="radio"/> Yes / <input type="radio"/> No	No lake shore in city
4.1.7 Extreme Heat (p. 86)		
1a	<input checked="" type="radio"/> Yes / <input type="radio"/> No	Public Health on going
1b	<input checked="" type="radio"/> Yes / <input type="radio"/> No	" "
4.1.8 Wildfire (p. 87)		
1a	<input checked="" type="radio"/> Yes / <input type="radio"/> No	Minnesota DNR - City Parks
1b	<input checked="" type="radio"/> Yes / <input type="radio"/> No	No forest area in city
1c	<input checked="" type="radio"/> Yes / <input type="radio"/> No	Wadena F.D. - DNR
2a	<input checked="" type="radio"/> Yes / <input type="radio"/> No	No forest areas (Wadena)
2b	<input checked="" type="radio"/> Yes / <input type="radio"/> No	" " "
2c	<input checked="" type="radio"/> Yes / <input type="radio"/> No	Wadena Water & Light
4.1.9 Infectious Disease (p. 87)		
1a	<input checked="" type="radio"/> Yes / <input type="radio"/> No	Wadena County Public Health - TCH
4.2.1 Groundwater Depletion (p. 89)		
1a	<input checked="" type="radio"/> Yes / <input type="radio"/> No	Wadena Light & Water - Soil & Water
1b	<input checked="" type="radio"/> Yes / <input type="radio"/> No	Wadena L & W - Soil & Water
1c	<input checked="" type="radio"/> Yes / <input type="radio"/> No	Wadena Light & Water
1d	<input checked="" type="radio"/> Yes / <input type="radio"/> No	No rivers
1e	<input checked="" type="radio"/> Yes / <input type="radio"/> No	Wadena Light & Water
4.2.2 Groundwater Contamination (p. 90)		
1a	<input checked="" type="radio"/> Yes / <input type="radio"/> No	Wadena Light & Water - Public Health
1b	<input checked="" type="radio"/> Yes / <input type="radio"/> No	Wadena Public Health TCH
2a	<input checked="" type="radio"/> Yes / <input type="radio"/> No	Wadena Public Health - Soil & Water
2b	<input checked="" type="radio"/> Yes / <input type="radio"/> No	" " " "

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4.2.3 Hazardous Material (Transport & Train) (p. 91)		
1a	<input checked="" type="radio"/> Yes / No	Wadena Water & Light Emergency Management
1b	<input checked="" type="radio"/> Yes / No	Pipeline Companies EMD
1c	<input checked="" type="radio"/> Yes / No	EMD
2a	<input checked="" type="radio"/> Yes / No	L.E. State Patrol - Sheriff
2b	<input checked="" type="radio"/> Yes / No	County Highway Engineer - City Streets
2c	<input checked="" type="radio"/> Yes / No	on going
4.2.4 Hazardous Material (Fixed facilities) (p. 92)		
1a	<input checked="" type="radio"/> Yes / No	EMD
1b	<input checked="" type="radio"/> Yes / No	EMD
1c	<input checked="" type="radio"/> Yes / No	EMD
4.2.5 Power Grid Failure (p. 92)		
1a	<input checked="" type="radio"/> Yes / No	Wadena Water & Light
1b	<input checked="" type="radio"/> Yes / No	Wadena Water & Light
1c	<input checked="" type="radio"/> Yes / No	" " "
2a	<input checked="" type="radio"/> Yes / No	" " " EMD
2b	<input checked="" type="radio"/> Yes / No	" " " EMD
4.2.6 Dam Failure (p. 93)	<input checked="" type="radio"/> Yes / <input checked="" type="radio"/> No	No large dams
1a	<input checked="" type="radio"/> Yes / <input checked="" type="radio"/> No	" " " (Call dam inspector)
4.2.7 Computer Viruses (p. 94)	<input checked="" type="radio"/> Yes / No	
1a	<input checked="" type="radio"/> Yes / No	City Financial Officer - City Administrator
1b	<input checked="" type="radio"/> Yes / No	EMD - City Administrator
1c	<input checked="" type="radio"/> Yes / No	Financial Officer EMD City Administrator
4.2.8 Terrorism (p. 94)		
1a	<input checked="" type="radio"/> Yes / No	Police, EMD on-going
1b	<input checked="" type="radio"/> Yes / No	" " " on-going
4.2.9 Railroad Interference with Emergency Response (p. 95)		
1a	<input checked="" type="radio"/> Yes / No	City Administrator - EMD
1b	<input checked="" type="radio"/> Yes / No	911 Dispatch EMD
1c	<input checked="" type="radio"/> Yes / No	Wadena County Highway Engineer - City Administrator

Bruce A. Udelman
 Emergency Management Director
 City of Wadena

12-11-06

Wadena County Hazard Mitigation Plan

Future Updates

The following are brief suggestions of what future updates of this plan should include. These suggestions are based on information received from reviewing agencies.

- ✓ Show an annual percent chance of occurrence or number of events per year.
- ✓ A description of vulnerability of current buildings, infrastructure and critical facilities for each hazard area.
- ✓ A description of vulnerability of future buildings, infrastructure and critical facilities for each hazard area. This type of information could come from comprehensive plans or local development / zoning plans.
- ✓ Include dollar loss estimates for buildings, infrastructure, and critical facilities as they relate to each hazard.
- ✓ Show how loss estimates for each hazard area were determined.
- ✓ General land use is addressed however in future updates development trends should be discussed in the plans. A helpful tool, if available, would be to include a current land use map next to a 20 year old land use map to show any changes in the county.
- ✓ Identify any projects that were addressed for structures in the floodplain. (relocation, buy out, elevation).
- ✓ Address if relocation or elevation projects were considered for structures vulnerable to flooding.
- ✓ Update all historical information to current date.