MCCONE COUNTY

COMMUNITY WILDFIRE PROTECTION AND PRE-DISASTER MITIGATION PLAN

Red Water River, June 2005

(Photo courtesy of Tanja Fransen, NOAA, Glasgow, Montana)

Prepared by: Cossitt Consulting
and
Rand Herzberg

December 2005

MCCONE COUNTY COMMUNITY WILDFIRE PROTECTION AND PRE-DISASTER MITIGATION PLAN DECEMBER 2005

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A RESOLUTION TO APPROVE AND ADOPT THE McCONE COUNTY COMMUNITY WILDFIRE PROTECTION AND PRE-DISASTER MITIGATION PLAN

WHEREAS, McCone County has prepared a Community Wildfire Protection and Pre-Disaster Mitigation Plan (Plan); and

WHEREAS, the Plan covers rural areas and communities of the county, including the Town of Circle; and

WHEREAS, the Plan meets all of the requirements of the Interim Final Rule published in the Federal Register on February 26, 2003, in 44 CFR Part 201, as part of the Disaster Mitigation Act of 2000.

NOW, THEREFORE BE IT RESOLVED that the McCone County Commissioners believe that it is in the best interest of McCone County to adopt the McCone County Community Wildfire Protection and Pre-Disaster Mitigation Plan; and

BE IT FURTHER RESOLVED that the Plan is to be followed and added to or incorporated into any future planning documents for McCone County and the Town of Circle; and

BE IT FURTHER RESOLVED that McCone County will work and cooperate with all of the communities in the county and the Town of Circle in implementing the McCone County Community Wildfire Protection and Pre-Disaster Mitigation Plan.

APPROVED AND ADOPTED in regular session this 7th day of November, 2005.

McCONE COUNTY COMMISSIONERS

Connie Eissinger

Connie Eissinger, Chairman

Kenton Larson

Kenton Larson, Member

ABSENT

Patrick Eggebrecht, Member

ATTEST:

(SEAL)

Maridel L Kassner

Maridel L. Kassner, Clerk & Recorder

RESOLUTION NO. 11-14-05-2

A RESOLUTION TO APPROVE AND ADOPT THE MCCONE COUNTY COMMUNITY WILDFIRE PROTECTION AND PRE-DISASTER MITIGATION PLAN

WHEREAS, McCone County has prepared a Community Wildfire Protection and Pre-Disaster Mitigation Plan ("the Plan");

WHEREAS, the Plan covers rural areas and communities of the county and , including the Town of Circle; and

WHEREAS, the Plan meets all the requirements of the Interim Final Rule published in the Federal Register on Febraruy 26, 2003, at 44 CFR Part 201 as part of the Disaster Mitigation Act of 2000.

NOW, THEREFORE BE IT,

RESOLVED, the McCone County Community Wildfire Protection and Pre-Disaster Mitigation Plan is approved and adopted.

FURTHER RESOLVED, the McCone County Community Wildfire Protection and Pre-Disaster Mitigation Plan is to be followed and incorporated into planning for the County and the Town of Circle.

FINALLY RESOLVED, the County will work and cooperate with the communities in the County and the Town of Circle to implement the McCone County Community Wildfire Protection and Pre-Disaster Mitigation Plan.

PASSED and APPROVED by the Town of Circle Commission this 14th day of November, 2005.

FOR THE TOWN OF CIRCLE, MONTANA

By: R E McFarland
Ronald McFarland

Attest: Carol Markuson
Carol Markuson

Executive Summary

McCone County and the town of Circle intend to become disaster resistant by preparing and implementing this Community Wildfire Protection and Pre-Disaster Mitigation Plan (CWPP/PDM). The plan identifies hazards and mitigation measures to reduce or prevent the effects of those hazards, and raises the awareness about the importance of taking personal and collective (public and private) responsibility for reasonably foreseeable natural disasters.

The plan was developed with leadership from McCone County Commissioners and mayor and council members of Circle. Throughout the process, from identifying hazards to developing mitigation measures, efforts were made to encourage public involvement and to draw all interested parties into the preparation of the plan whether formally at the series of public meetings, or informally through one-on-one conversations. A Steering Committee appointed by the county commissioners oversaw the preparation of the plan by a contractor. The mitigation goals, objectives, and actions or projects were developed utilizing a wide range of expertise and interests located within the county.

Each of the signing entities to the plan, McCone County and the incorporated community of Circle, participated in the development of the plan through the Steering Committee or via other meetings and phone calls, specifically by providing data, helping to set priorities, and identifying mitigation projects.

The natural disasters of most concern to participants in the planning process were (in order of priority) drought, winter storm, wildfire, hazardous materials, and tornadoes. Each of these priority hazards and other hazards (including flooding, severe thunderstorms, hail, wind, insects, and others) is profiled in the plan with a discussion of historic occurrences and vulnerability.

Generally speaking, there are no specific patterns to the ways in which various disasters strike the county. Just about any area of the county has potential for effects from drought, winter storms, wildfire, severe thunderstorms, and wind storms.

Flooding and flash flooding can occur along the major river corridors, and also along intermittent drainages throughout the county. With the exception of the town of Circle, the county has not been part of the National Flood Insurance Program and consequently there are no maps of significant 100-year floodplain areas, such as along the Redwater River. The county experienced significant flash flood damage in June of 2005 and has history of past occurrences and potential for future significant events.

Transportation-related accidents will primarily occur along road corridors, although plane crashes can occur just about anywhere. The county also has pipelines and power corridors, where accidents can occur.

Seven goals with corresponding objectives and projects were developed for the identified hazards of concern:

- Reduce flood damage.
- Reduce the economic impacts of drought.
- Improve the warning systems and public preparedness for disasters.
- Reduce effects of hazardous material spills.
- Improve county residents' ability to respond to power outages.
- Reduce potential for spread of vector-born and other serious diseases.

This plan serves McCone County and the town of Circle.

ACRONYMS USED IN THIS PLAN

BLM	Bureau of Land Management
CWPP	Community Wildfire Protection Plan
DES	Disaster and Emergency Services
DNRC	Department of Natural Resources and Conservation
FEMA	Federal Emergency Management Agency
FSA	Farm Service Agency (US Department of Agriculture)
FWP	Montana Fish, Wildlife and Parks
MACO	Montana Association of Counties
MDOT	Montana Department of Transportation
MFWP	Montana Fish, Wildlife and Parks
NFIP	National Flood Insurance Program
NFP	National Fire Plan
NOAA	National Oceanic and Atmospheric Administration
PDM	Pre-Disaster Mitigation
USGS	U.S. Geological Survey
WUI	Wildland Urban Interface

CHAPTER 1: INTRODUCTION

Authority

McCone County and the incorporated community of Circle intend to become disaster resistant by preparing and implementing this Community Wildfire Protection Plan (CWPP) and Pre-Disaster Mitigation (PDM) Plan. State law (MCA 10-3-401) gives local governments the authority to plan for disasters and emergencies (Jelinski). The plan identifies hazards and mitigation measures to reduce or prevent the effects of those hazards, and raises the awareness about the importance of taking personal and collective (public and private) responsibility for reasonably foreseeable natural disasters. The plan has been prepared utilizing funds from the Bureau of Land Management supplemented by county match. The plan meets the requirements of the National Fire Plan and the Interim Final Rule published in the Federal Register on February 26, 2003, at 44 CFR Part 201 as part of the Disaster Mitigation Act of 2000.

Comment [LD1]:

Comment [LD2R1]:

Scope and Plan Organization

This plan is organized into six major chapters plus the crosswalk documentation showing how the plan meets federal requirements for pre-disaster planning.

- Chapter 1. Introduction

This chapter provides background material to put the plan and mitigation strategies into the context of McCone County's unique assets, resources, and hazards.

- Chapter 2. Planning Process

This chapter describes how the plan was developed, including public involvement.

- Chapter 3. Hazard Evaluation and Risk Assessment

This chapter gives information about historical disaster occurrences in the county then lists potential hazards, hazard profiles, critical facilities, and vulnerabilities. Chapter 3 also provides information about asset values, for example, how much the county courthouse, the town hall, or the municipal water treatment plant would cost to replace if it was lost in a disaster.

- Chapter 4. Mitigation Strategy

This chapter takes the hazard information and develops goals, objectives and projects that can be accomplished to lessen the chances and/or severity of a

potential disaster. Recognizing the limitation of resources to accomplish all projects identified, Chapter 6 also provides the local priorities for the projects.

- Chapter 5. Wildfire Protection

This chapter addresses wildland fire issues for the county and comprises the Community Wildfire Protection Plan (CWPP) element of this plan. The current situation with respect to vegetation and fuels, past occurrences of fire, values at risk, and potential losses are described. This chapter also contains goals, objectives, and mitigation actions (projects) that can be done to reduce risk of wildland fire. The projects are prioritized.

- Chapter 6. Plan Maintenance

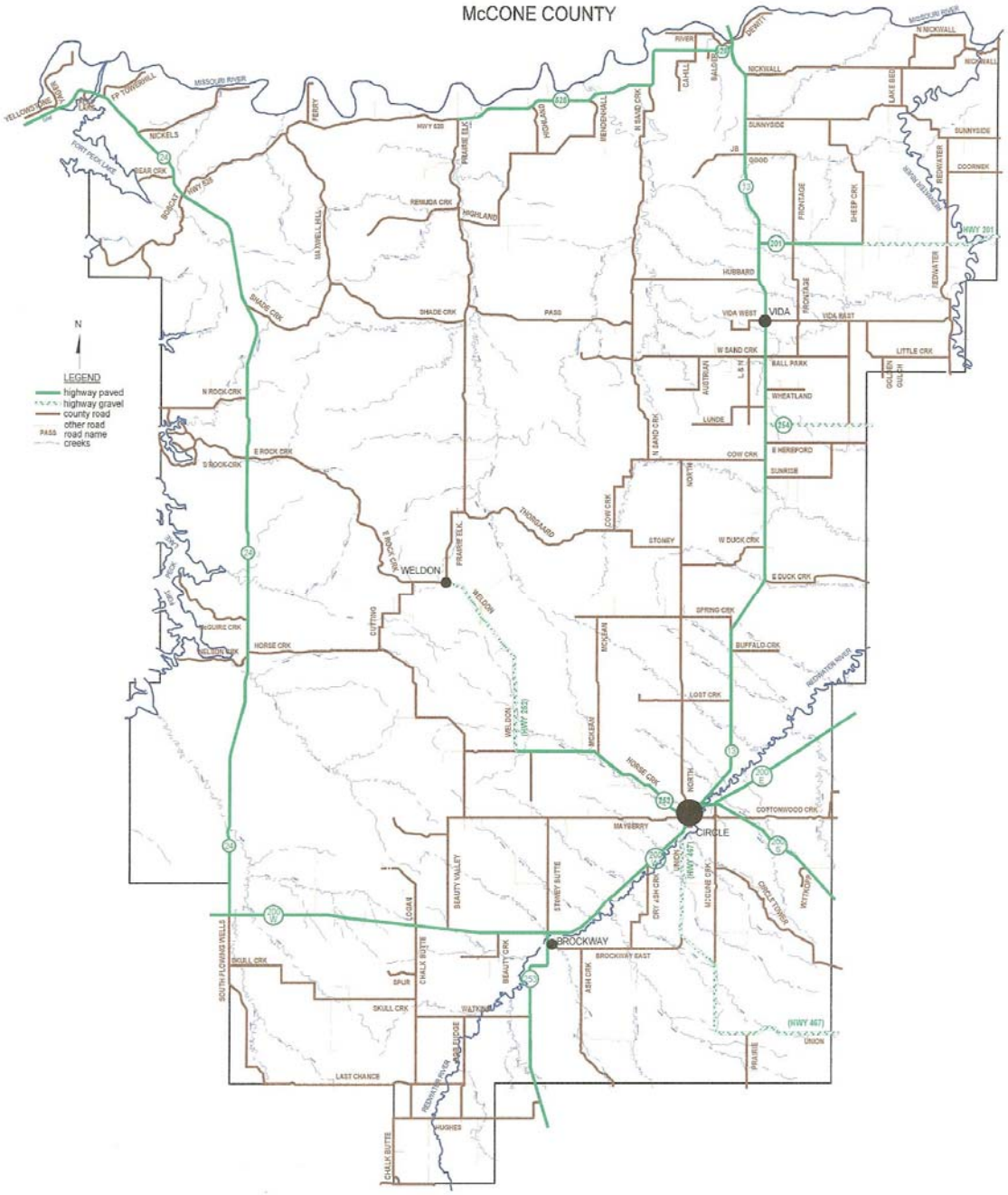
This chapter describes how the plan is to be maintained and kept current.

Preparation of the Plan

The plan was developed with leadership from McCone County Commissioners and town of Circle. Throughout the process, from identifying hazards to developing mitigation measures, public involvement was encouraged at a variety of levels. (Details of public involvement are included in Chapter 2.) Each of the signing entities to the plan, McCone County and the incorporated community of Circle, participated in the development of the plan through the Steering Committee or via other meetings and phone calls, specifically by providing data, helping to set priorities, and identifying mitigation projects.

The County hired Cossitt Consulting of Park City, Montana to assist in developing the plan, including writing the plan document. The pre-disaster mitigation section of the plan was prepared by Anne Cossitt, and the community wildfire assessment and mitigation was prepared by Rand Herzberg. County Disaster and Emergency Services Coordinators, Alan Stempel and Mistica Hisdahl, served as the primary contact for the county and assisted in data collection, public involvement, and document review. Fire staff were key in developing the wildfire risk assessment and mitigation. A portion of the photographs utilized in the news releases and the plan, and maps contained in the plan were provided by District IV Disaster and Emergency Services Representative, Norman Parrent.

Figure 1.1 Map of McCone County



Source: McCone County

General

The project area for this plan is McCone County, Montana, established in 1919, and named in honor of state senator George McCone. (Soil Survey of McCone County, 1984) McCone County is located in northeastern Montana, south of the Missouri River. It is bordered to the east by Richland and Dawson Counties, to the south by Prairie and Garfield Counties, and to the west by Garfield County.

McCone County encompasses 2,594 square miles. (Soil Survey, 1984) Circle is the single incorporated community in the county and also the county seat. Other communities include Brockway and Vida.

Physical Characteristics

Topography in the county is primarily rolling hills and terraces in the southern and eastern parts of the county, and sloping terraces, breaks, and badland areas in the western portion. (Soil Survey, 1984)

Most of the water for domestic and livestock use comes from wells, ranging from 15 feet in depth in areas near creeks to more than 900 feet in upland areas. Wells are the single water supply source for the towns of Circle, Brockway, and Vida. (Soil Survey, 1984) Water supply for livestock also comes from a variety of impoundments (dams) throughout the county.

Perennial surface water includes Redwater Creek and portions of Fort Peck Lake's "Dry Arm" which extends along the eastern boundary of McCone County. Redwater Creek enters the county at its southernmost point, flows northeasterly through Brockway and Circle. It exits the county northeast of Circle and re-enters in the northeast corner of the county, where it flows north-northwest-northeast to its confluence with the Missouri River.

The county includes numerous other drainages with intermittent surface water flow. Major drainages include Timber Creek and Nelson Creek, which flow into the Dry Arm of Fort Peck Lake in the southwestern portion of McCone County. Prairie Elk Creek and Sand Creek flow into the Missouri River in the northern portion of the county. Horse Creek, Cow Creek, and Wolf Creek flow into the Redwater River.

Mineral resources in McCone County include large quantities of coal; some natural gas and oil potential (there are some oil wells scattered throughout the county); and sand, gravel, and bentonite deposits. (Soil Survey, 1984; Montana Atlas and Gazeteer, 1994)

Vegetation in the county is primarily grassland and grain crops, with some areas of woody shrubby vegetation scattered in draws, particularly in the badland breaks along the Missouri River and in the western portion of the county. (USGS National Landcover Dataset via the Montana Natural Resource Information System-NRIS)

Land Use and Development Trends

Generally, land use in McCone County has been relatively stable and predominately agriculture-based. In 2000, population density was 0.7 persons per square mile (quickfacts.census.gov). Residential development is clustered in the communities of Circle, Brockway, and Vida and otherwise consists of scattered homesteads across the county. There are more homes along the Missouri River than in other areas outside of the existing communities (comments from public meeting held in February 2005).

The population in McCone County was 1,977 in the year 2000, down about 13% from the 1990 population. The town of Circle had 644 persons or 33% of the county population in 2000. (U.S. Census Bureau)

Table 1.1 Population and Housing Units in McCone County and Circle in 2000

	Circle	McCone County
Population in 2000	644	1,977
Change from 1990	-20%	-13.1%
Housing Units in 2000	399	1,087

Source: U.S. Census Bureau, Table DP-1.

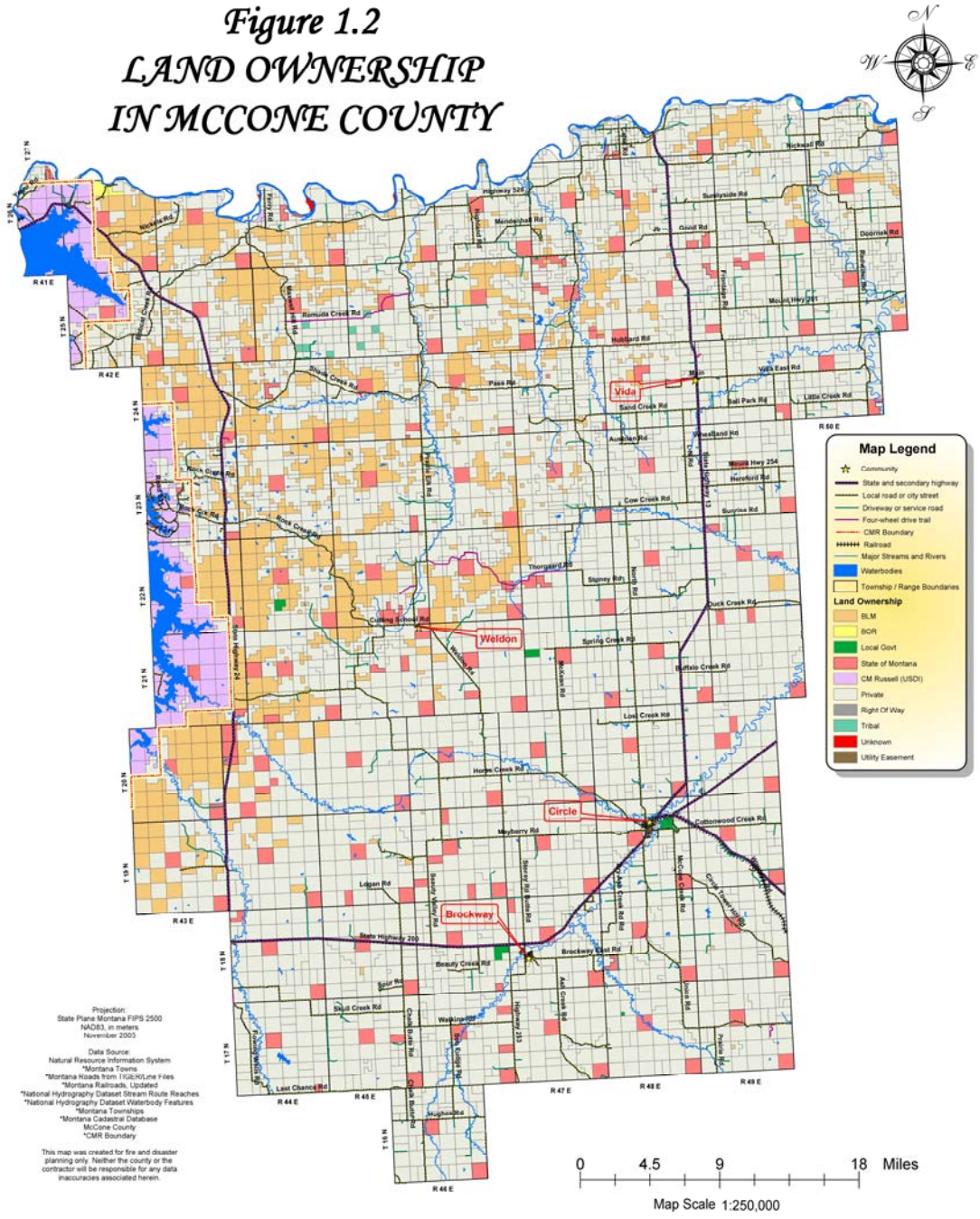
The number of private non-farm business establishments with paid employees in 2001 was 51. (quickfacts.census.gov) Commercial businesses are primarily located in or around the town of Circle.

According to the 2004 *Montana Agricultural Statistics*, a total of 1,346,271 acres were in production on 496 farms in McCone County in the year 2002. The total number of farms and land in farm production increased between 1997 and 2002. Agricultural production in the county includes wheat, barley, oats, hay, sugar beets, safflower, mustard seed, cattle, and sheep. McCone County ranked 7th in the state in wheat production in 2004, 16th in sheep inventory (with 6,000 sheep and lambs) and 34th in cattle (with 33,000).

Land ownership in the county is predominately private. Public land ownership includes scattered state sections throughout the county (generally 2 sections in each township), and federal lands managed by the Bureau of Land Management and by U.S. Fish and Wildlife for the C.M. Russell National Wildlife Refuge along the Dry Arm of Fort Peck Lake. The BLM-managed lands fall within a band that extends from the southwest

corner of the county to the northeast corner and includes scattered small parcels (less than a section) as well as large contiguous areas (comprising several square miles each).

Figure 1.2
LAND OWNERSHIP IN MCCONE COUNTY



Based on historic trends, future land use development is likely to remain similar to existing, with one exception. There is the potential of a coal mine to be developed north of Circle. No application has yet been submitted to the state, but Great Northern Properties has been working on background research for a few years. If developed, the coal mine could result in new jobs and new residents during the construction and operations phases. The prospect of a coal mine has been on and off again over the past few decades, and was discussed in the 1979 Draft Comprehensive Plan. (Conversations with County Commissioners, County Planner, DEQ staff)

McCone County does not have an adopted growth policy or comprehensive plan at this time. Counties and municipal jurisdictions in Montana are responsible for local subdivision and floodplain regulations.

Transportation

Public road systems in McCone County consist of the state highways and county roads. All of the state highways are two-lane. Highway 200 is an east-west highway across the central portion of the state. Highway 200 runs through Circle and Brockway. Highway 200S enters the county from the southeast (from Glendive) and intersects with Highway 200 at Circle. Highway 13 runs north from Circle through Vida to the Missouri River and continues to the Canadian border. Highway 24 runs north from Highway 200 through the western part of the county and continues to Glasgow in Valley County (and beyond to Canada). Highway 253 connects Brockway to the town of Terry. This road is not currently paved for its entirety but is scheduled for upgrade to total pavement in 2005. Highway 201 connects Highway 13 north of Vida with Fairview to the east, and is paved for six miles in McCone County. County and town (Circle) roads complete the rest of the road system, along with private ranch and farm roads.

Comment [ac3]: Per March 14, 2005 phone call from Mistica Hisdahl

There is a public airport at Circle (FAA ID #4U6). No commercial air travel is available in McCone County, however daily commercial air service is available in Glendive.

There are no active rail lines in the county.

Economy

The agricultural sector and other non-agricultural private establishments (including major private sector employers such as McCone Electric, Mid-Rivers Communications, and Harvest States Elevator and others), and government sector are main forces in the county's economy. Personal income from other non-work related sources (primarily dividends, interest,

rent, and transfer receipts such as retirement, disability, and Medicare and Medicaid payments) is a growing component of total personal income in McCone County. (Circle Chamber of Commerce and Bureau of Economic Analysis)

In 2002, McCone County had per capita income of $19,202 (ranking it 44th in the state), and total personal income of $35.5 million. Total personal income includes net earnings by place of residence; dividends, interest, and rent; and personal current transfer receipts (including retirement, disability, and Medicare and Medicaid payments). From 1992 to 2002 net earnings decreased on average 0.8 percent each year; dividends, interest, and rent increased on average 0.7 percent; and personal current transfer receipts increased on average 2.1 percent. Of the total personal income in the county in 2002, 46% came from dividends, interest, rent, and transfer payments. (Bureau of Economic Analysis "Bearfacts" webpage, and Table CA05, www.bea.gov/bea)

Grain Elevators in Circle

Photo by Anne Cossitt

Personal income from earnings (income that does not come from dividends, interest, rent or transfer receipts) totaled $19.97million of which 11% was farm earnings, and 89% was non-farm. Of non-farm earnings, private earnings comprised 73% and government work comprised 27%. (Bureau of Economic Analysis, Table CA05)

In 2002, total cash receipts (including government payments) for agricultural products in McCone County were $36.1 million.

In March of 2002, there were 59 business establishments in McCone County with a total annual payroll of $7.5 million. The industry sectors with the highest annual payroll were wholesale trade (4 establishments with $734,000 in annual payroll) and retail trade (9 establishments with $787,000 in annual payroll). (2002 County Business Patterns, http://censtats.census.gov)

Based on the 2000 census data, there were 1,011 persons employed in the county. Private wage and salary workers comprised 57.2%, government workers 15.9%, and self-employed workers 24.6%. Unpaid family workers made up the balance. (U.S. Bureau of the Census, Table DP-3)

Climate and Weather

McCone County is located east of the Continental Divide and subject to continental weather patterns. In general summers are hotter, winters are colder, precipitation is less evenly distributed, skies are sunnier, and winds are stronger than on the west side of the divide. (Western Regional Climate Center, Climate of Montana)

Average maximum and minimum temperatures recorded at three locations in McCone County indicate that average monthly minimum temperatures can range from as low as 2 degrees (January) to average maximum temperatures of 86 degrees (August). Table 2 shows the monthly averages for Circle.

Table 1.2 Average Temperatures 1963-2002

	Jan	*Feb*	*Mar*	*Apr*	*May*	*Jun*	*Jul*	*Aug*	*Sep*	*Oct*	*Nov*	*Dec*	*Ann*
Ave max	25	33	43	57	69	78	86	86	73	60	42	29	57
Ave min	3	11	19	31	42	50	56	54	43	32	19	8	31

Notes: Temperatures are from the Circle weather station location. Temperatures have been rounded to nearest 1 degree Fahrenheit.
Source: Western Regional Climate Center Period of Record Monthly Climate Summary (wrcc.dri.edu)

McCone County has average annual precipitation ranging from 11 to 15 inches per year. (Data from 1948-2002 for four weather sites, Western Regional Climate Center) Most of the county averaged between 12-14 inches per year between 1961 and 1990. The northwestern corner of the county and an isolated area around Brockway received an average of 10-12 inches during that period. A portion of the county in the northeastern part of the county including Vida and extending to Richland County to the east received an average of 14-16 inches. (Montana Natural Resource Information System, Map of Average Annual Precipitation 1961-1990)

Most precipitation falls when it is warmer, with heaviest precipitation in late spring and early summer. Winter snowfall normally is moderate, and winds generally blow the snow into drifts. (Soil Survey)

Average annual snowfall is 27 inches (as measured in Circle). The largest amount of snow received in one year was 90 inches in Vida in 1970. (Western Regional Climate Center)

Prevailing wind is from the west. Average wind speed is highest, about 12 miles per hour, in the spring (Soils Survey).

Extreme weather in the county can include storms with hail, lightning, and strong winds and winter storms with ice, snow, cold temperatures, and strong winds. Weather events are covered in more detail in Chapter 3.

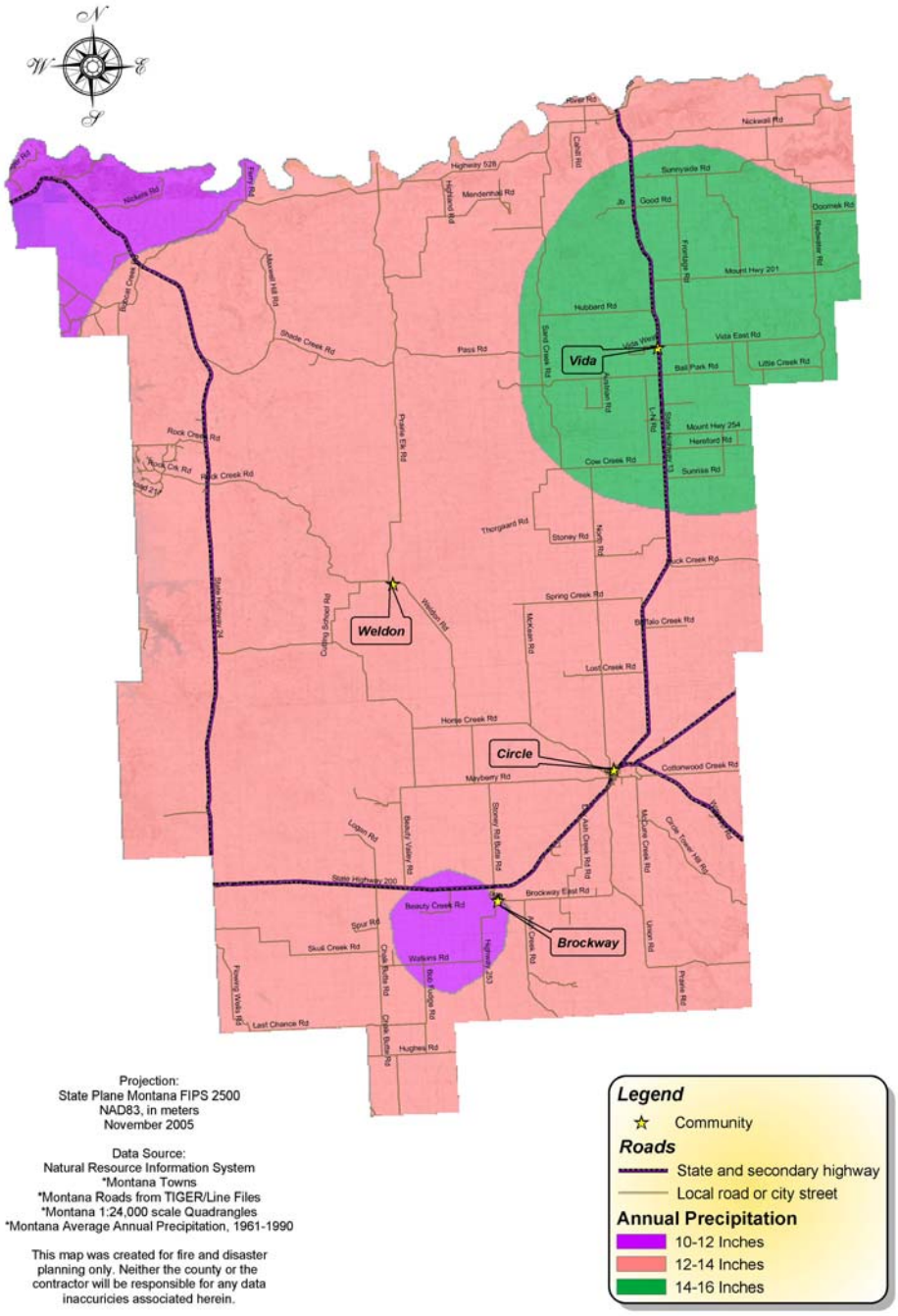


Figure 1.3
McCone County Precipitation

Sources:

Circle Chamber of Commerce. Information via the Montana Department of Commerce.

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Montana Natural Resource and Information System. Various maps available on line. January-July 2005. http://nris.state.mt.us/

U.S. Census Bureau. Various tables and data available on-line. http://www.census.gov/

U.S. Department of Agriculture. Soil Conservation Service. *Soil Survey of McCone County, Montana. 1984.*

U.S. Department of Commerce. Bureau of Economic Analysis. "Bearfacts" webpage, and Table CA05, www.bea.gov/bea)

USGS National Landcover Dataset via the Montana Natural Resource Information System-NRIS

Western Regional Climate Center, Climate of Montana. http://wrcc.dri.edu/

CHAPTER 2: PLANNING PROCESS

This chapter describes:

- **The overall approach to developing the plan**
- **The plan process, including:**
  - **Who was involved in the planning process and how they were involved**
  - **Efforts to involve the general public**
  - **Efforts to involve various interests including government, business, education, and others**

Supporting documents at the end of this chapter include:

- **Meeting agendas**
- **Meeting summaries**
- **Meeting sign-in sheets**
- **Flyers and News Releases**
- **Correspondence**

Overall Approach and Philosophy

The development of this plan was based on the premise that plans with the greatest likelihood of being implemented are those with local momentum, where individuals in the groups in the community(ies) are actively involved and have a stake in accomplishing goals and specific projects.

From the start it was important that any and all interested individuals be offered the opportunity to participate. Special efforts were made to invite persons representing a wide variety of interests that could be affected by disasters or that play a role in disaster response. It was recognized that a number of individuals were critical resources to the process by virtue of their knowledge and expertise. The process sought to engage both these knowledgeable individuals and the general public.

Many individuals committed considerable amounts of personal time to the development of this plan. Without their involvement, this document would not have been possible.

Process

The process used to develop this plan was geared toward developing a PDM plan as well as a Community Wildfire Protection Plan. Because wildfire is one of the significant hazards in McCone County, these two

planning efforts dovetailed smoothly into the process that developed this document. The following describes the general process used for the PDM Plan. More detail on the process for the Community Wildfire Protection Plan is provided in Chapter 5.

There were several key participants in the process:

- **County Commissioners—initiated the effort and approved the plan on November 7, 2005**
- **Town of Circle—participated and approved the plan on November 14, 2005**
- **Steering Committee—functioned as the planning committee (see detailed description below under "Public Involvement and Outreach")**
- **General Public—encouraged to participate, attend steering committee meetings, stay informed (See more under "Public Involvement and Outreach")**
- **County DES Coordinator—lead staff person in the county for coordinating with the contractor and liaison for local expertise**
- **Consulting Team—provided the staffing to research and write the report, facilitating discussion at meetings leading to hazard evaluation and risk assessment, mitigation measures (goals, objectives, projects)**
- **Technical Experts and Others. A number of individuals were contacted for information and were extremely responsive and helpful. These included the following:**

    - **Steering Committee Members**
    - **Local Government officials and staff**
    - **Business and nonprofit institutions**
    - **Norman Parrent, Montana DES District IV Representative**
    - **Tanja Fransen, National Weather Service-Glasgow Office**

There were four basic elements of plan development:

1. **Getting Started - Understanding the Purpose and Need for the Plan**
2. **Public Involvement and Outreach**
3. **Plan Document Development and Review**
4. **Plan Approval**

The process for each of these elements is described in more detail below.

<u>Understanding the Purpose and Need for the Plan-Getting Started</u>

The McCone County Commissioners initiated the efforts to develop a PDM plan and already had a good understanding of the need for such a plan. Work had begun a year or two earlier when the County DES Coordinator had attended training workshops. A first draft document was produced at that time. In December 2004, McCone County Commissioners, in coordination with four other adjacent counties, hired contracted technical assistance from Cossitt Consulting to complete the PDM and prepare a Community Wildfire Protection Plan. Anne Cossitt was the lead contract staff for the PDM portion and Rand Herzberg was the lead contract staff for the Community Wildfire Protection Plan.

Cossitt Consulting team members Anne Cossitt and Barb Beck met with the County Commissioners in early January 2005 to review purpose and approach to the plan, identify how best to involve various interests and the general public, and to finalize the schedule and products. The agenda and meeting notes for that meeting are included in this chapter.

Soon after that meeting the County Commissioners sent letters to dozens of individuals inviting them to participate on the Steering Committee. Information about the basic need for the plan was included in that letter and was reviewed at each Steering Committee Meeting.

The Mayor of Circle received an invitation letter from the County Commissioners and a follow-up letter from Anne Cossitt. Ms. Cossitt also spoke with the Mayor over the phone regarding the plan—it's purpose as well as the role of the town council (the governing body) in the adoption of the plan.

McCone County and the town of Circle have considerable experience in disaster and emergency response. At the onset of the work by Cossitt Consulting there was already an active Local Emergency Planning Committee (LEPC) with diverse participation.

<u>Public Involvement and Outreach</u>

Efforts to include and inform the public included Steering Committee participation and public outreach via meeting announcements and general information.

Steering Committee

The Steering Committee functioned as a planning committee and guided the work of the consultant. The role of the Steering Committee was to represent a wide range of interests, serve as a technical resource, guide the planning process, and finally, review the draft document for accuracy and completeness.

The County Commissioners sent invitations to the following individuals to participate on the Steering Committee. The intent was to start with persons already participating on the LEPC and to encourage participation from business interests, utilities, health care, education, transportation infrastructure, news media, law enforcement, and local, state, and federal government. Lists of who attended each meeting are included at the end of this chapter.

Some of the Steering Committee Members at the Third Meeting

Photo by Anne Cossitt

Invited to participate on the Steering Committee:

Gerry Anderson	**Midrivers**
Jess Beery	**Fire Chief**
Tammy Bock	**Senior Center Director**
Kim Bradley	**Insurance Agent**
Scot Brown	**President Ambulance**
Mark Dreesen	**Manager Farmer's Elevator**
Pat Eggebrecht	**Commissioner**
Connie Eissinger	**Commissioner**
Mary Garfield	**County Planner**
Sue Good-Brown	**Public Health Nurse**

Ryan Grigg	**Circle Banner Editor**
Jana Hance	**Pres Chamber of Commerce**
Dave Harris	**Sheriff/Harris Spraying**
Mistica Hisdahl	**LEPC Ambulance/County DES Coordinator***
Todd Kasten	
Mike Kays	**McCone Electric Director**
Jeanne Kirkegard	**Soil Conservation**
Larry Kwasney	**Oil station Branch Manager**
Ken Larson	**Principal**
Kent Larson	**Commissioner**
Kendall Link	**County Attorney**
Carol Markuson	**Town of Circle**
Ron McFarland	**Mayor of Circle**
Ken Nelson	**Extension Agent**
Dan Peter	**Chemical sales (Strand's)**
Mike Radakovich	**Superintendent**
Jarrell Schock	**Insurance Agent**
Dick Sheetz	**NRCS**
Marc Speer	**Chief of Police Circle**
Alan Stempel	**County DES Coordinator***
Julie Trower	**FSA Director**
Della Van Horn	**Clerk of Schools**
Dennis Wolff	**Circle Insurance**
Stacey Wolff	**Midrivers Safety Committee**

***Alan Stempel was called to active duty in February 2005 and at that time Mistica Hisdahl took over as the County DES Coordinator**

The Steering Committee met three times. At the first meeting, participants identified and prioritized hazards. At the second meeting, the committee worked on drafting goals. At the third meeting, participants identified and prioritized projects.

Meetings were facilitated by the planning consultant according to an agenda developed prior to each meeting. Each meeting began with introductions and an explanation of the purpose of the plan and planning process. Anyone who attended a meeting, whether they had been formally invited or had simply learned of the meeting through news articles or other means, was welcome to participate and comment. Meetings were focused and time spent efficiently. Following each meeting, a meeting summary was prepared, copies of which are provided later in this chapter.

Public Outreach and Information

Public outreach began immediately following the consultant meeting with the county commissioners in January 2005. A news release summarizing that meeting and announcing the commencement of the plan process was sent to the *Circle Banner*.

Each steering committee meeting was noticed in the *Circle Banner* with one or more articles. Articles explained the purpose of the meetings, planning schedule, topic for upcoming meetings, and provided contact information. Following the meetings, news releases were sent to the paper on the meeting results, and identifying next meeting date/time/location, and other next steps. Printed articles are included at the end of this chapter. Also included are flyers that were posted in various locations around the county.

Notice of the availability of the draft plan for public review was also posted in the paper along with comment deadlines.

Plan Document Development and Review

The Cossitt Consulting team prepared the plan document, starting with elements identified at the various meetings. A detailed description of the methodology for the hazard evaluation and risk assessment for the PDM is included in Chapter 3. That chapter also discusses the review and incorporation of existing plans, studies, reports, and technical information. Methodology for specific sections of the Community Wildfire Protection Plan is included in Chapter 5.

Drafts of plan chapters were submitted to the County DES Coordinator for review as they were completed. Following the third Steering Committee meting, a draft of the entire document was assembled and provided to the county for public review. The draft document was made available at the town of Circle, McCone County, and the McCone County library. The comment period was open for 30 days through October 14, 2005.

Comments were sent to the County DES Coordinator and subsequently incorporated into the final document by the contractor.

Plan Approval

Following incorporation of the comments received, the plan was finalized. Draft resolutions were prepared for Circle and McCone County for adoption and approval of the plan. These signed resolutions can be found on the first pages of this plan.

Meeting Agendas

McCone County CWPP/PDM Plan
Kick-Off Meeting Agenda
January 10, 2005
(2 hours)

Introductions

What is a PDM Plan, why do one, and what is the planning process?
- **Quick overview by planning consultant**

Review of contract deliverables
- **Discuss any county or contractor concerns**

Coordination
- **Meeting logistics**
- **Meeting scheduling considerations**
- **Working with the Steering Committee**
- **Communications during the project**

Getting to work!
- **Recollections of past natural disasters**
- **What hazards are of most concern to you?**
- **Information sources (local or county plans, maps, knowledgeable individuals, county records, etc.)**
- **Media contacts**
- **Develop list of potential Steering Committee members**
- **Set first public meeting date, time, and location**

Exchange contact information

Other items

McCone County CWPP/PDM Steering Committee
February 10, 2005 7 p.m.
Meeting Agenda

Introductions

Community Wildfire and Pre-Disaster Mitigation Planning

- **What is a CWPP/PDM Plan and why do one?**
- **What is the role of the Steering Committee?**
- **What are the overall timeframes and schedule for the project?**

Recollections

- **Steering Committee recollections of past natural disasters in the county (what, when, and where)**
- **Other resources to obtain this/related information?**

Potential natural disasters

- **Group brainstorm of natural hazards**
- ***Prioritize list of potential disasters***
- **Hazard Rating Sheet**

Critical facilities and vulnerable populations

- **What are the critical facilities and infrastructure?**
- **What are the vulnerable populations?**

Wrap-up

- **Next steps**
- **Next meeting date/location/time**
- **Questions and comments**
- **Adjourn**

MCCONE COUNTY
CWPP/Pre-Disaster Mitigation Plan
Steering Committee/Public Meeting Agenda
April 27, 2005

- Welcome and introductions
- Recap**:**
  Why do a CWPP/PDM Plan?
  What is in the plan?
- Discussion and products of first meeting
  Risk evaluation and hazard assessment
- Develop goal statements
- Develop preliminary list of projects
- Wrap-up

Comments/questions on meeting

Review schedule
Next steps, next meeting

MCCONE COUNTY CWPP/PDM PLAN
Steering Committee/Public Meeting Agenda
May 25, 2005

Welcome/introductions

Quick Review
- **Purpose of PDM Plan**
- **Where we are in the planning process**
- **Tonight's tasks**

Goals and Objectives
- **Goals statements, objectives**
- **Review preliminary list of projects identified at last meeting**
- **Review preliminary list of fire projects**

Project identification
- **List additional project ideas under the objectives**

Project Prioritization
- **Prioritize all projects in high, medium, and low bands**

Wrap-up
- **Schedule for finalizing the plan**
- **Where to find copies**
- **How to comment**
- **Thank you for your participation!**

Meeting Summaries

CWPP-PDM Kick-Off Meeting in McCone County
January 10, 2005

Attending:

Commissioners:
- **Connie Eissinger, Chair**
- **Kent Larson, Vice-Chair**
- **Pat Eggebrecht**

Alan Stempel, McCone County DES Coordinator
Norman Parrent, Montana DES Regional Representative
Anne Cossitt, Cossitt Consulting

Introductions

Cossitt introduced herself as the primary contact for the consulting team for work in McCone County. Rand Herzberg will be the primary contact for the development of the Community Wildfire Protection Plan (CWPP). Barb Beck will be doing the PDM plans under this contract for Dawson and Wibaux Counties, and will serve as back-up to Anne Cossitt on McCone County.

What is a CWPP-PDM Plan and Why Do One?

Anne Cossitt reviewed what a CWPP-PDM plan is and why preparing this plan will benefit the county. Cossitt explained that the plan would address the current situation, past disasters, and develop goals and projects. Once the plan is completed the county will be eligible to compete for funds to complete projects.

Date-Time-Location of First Steering Committee Meeting

Date of the meeting was set for Thursday, February 10 at 7:00. Alan will check on availability of Schmidt's meeting room for that time. If not there, it could be held at the school in Circle.

Steering Committee—Invitations to Participate

Participants brainstormed names of persons to invite to represent a diverse group of interests on the steering committee. Commissioners agreed to send out a letter of invitation (to be drafted by Cossitt).

Communications and Roles

- **Anne Cossitt:**

- **will be the primary consultant staff contact for McCone County on PDM Planning issues.**
- **Obtain the meeting schedule for the BLM Resource Management Plan (RMP) process. Talk to BLM staff to ensure that BLM staff running the RMP meetings are aware of the concurrent effort to develop the CWPP and PDM plans in these counties.**

- **Alan Stempel:**
  - **Will clip all newspaper articles and notices and send to Cossitt**
  - **Will be the primary contact for McCone County for Cossitt**
  - **Will pull together all the contact information (addresses, phone numbers, etc.) for the invitation list for the steering committee**
  - **Will get the invitation letters signed by the commissioners and mailed out**
  - **Will arrange for the meeting space, confirm availability, and arrange for refreshments**

Hazards-Recollections of Past Disasters

- **Flash floods**
- **Hail Storms**
- **Thunderstorms and lighting strikes—leading to fires**
- **2001 Microbust that knocked a grain elevator down**
- **Tornados**
- **Major winter storms—in 2000, one storm knocked "everything" down. Power was out for a couple of weeks at some of the more remote farms and ranches in the area**
- **Hazardous Materials—spills—there are lots of miles of roadways in the county and lots of trucks coming through the county to Canada. No hazardous materials response capabilities in the county. Anhydrous ammonia is stored at the Co-op just outside town. Trucks carrying it go right through town. In addition, a lot of fuel is also hauled around the county**
- **CRP lands can create a real fire hazard—it would be real possible for a fire to get a real good three mile run on CRP land and then really take off**
- **Circle has concerns for fire—homes are close together—not all built up to fire standards (the newest building in town is 35 years old)**

Resources

- **Two county plans were developed, one in the 1980s and another in the 1990s, but neither was adopted.**
- **Commissioner Eissinger gave the following documents to Anne Cossitt for use on this project (need to be returned)**
    - **McCone County Comprehensive Plan 1979**
    - **Overall Economic Development Plan, 1997 (Great Northern Development Corporation)**

Other General Discussion

- **Work is underway to develop a major coal-fired power plant in Circle. Great Northern Properties (Burlington Northern affiliate) is working on this. The construction phase would employ 300-400 people. Employment after construction would stabilize around 100 jobs.**
- **Power development in area could also include a wind farm**
- **Water pipeline to bring water down from Missouri in the works (particularly as the coal-fired power plant gets started)**
- **Town of Circle water supply is 2 wells—both at approximately 2,500 feet deep (Fox Hills Sands Aquifer). A new one needed to be constructed because of sand problems associated with the old one. The new well was funded by BLM.**
- **Circle is the only incorporated community**
- **Brockway and Vida are the other major communities in the area. Vida has a school; Brockway does not.**
- **County economy is basically farming and ranching. The county is "maxed" out on the amount acres eligible for CRP**
- **Connie Eissinger, Chair of County Commissioners, sits on the National Association of Counties (NACO) Public Lands Committee and is an appointee to the NACO Methamphetamines Action Group**
- **The County Sheriff is working to combine town-county law enforcement**

Fire Information

- **One fire district covers the entire county**
- **One city/county volunteer fire department**
- **Jess Beery is the contact for the fire department**
- **There is basically no year-round surface water source in this county. Water supply is wells. Local ranchers fill up their spray trucks with water as a back-up fire protection (when not in use for spraying weeds, etc.)**

Communications Media

- **Circle Banner**

- **No radio stations in county --radio stations that serve area are:**
  - **660-Williston**
  - **770-Miles City**
  - **92.3 Miles City**
  - **92.7 Wolf Point**
- **A new weather radio station is up—they do their test once a week and could also announce meetings then**
- **Mid-Rivers/Bresnan Communications will put short announcements on the Channel 2 local news/banners**

Meeting Summary
McCone County PDM-CWPP Steering Committee
Schmidt's Banquet Room-Circle
February 10, 2005

Welcome

Alan Stempel, County DES Coordinator, welcomed the group and introduced Anne Cossitt, contractor to the county on the disaster planning, who gave an overview of the meeting agenda. Cossitt introduced Rand Herzberg, who will be doing the fire portion of the disaster planning. Cossitt also announced that the first part of the meeting would be on the overall disaster planning effort, and that after a short break, the second half of the meeting would be a more detailed discussion of just the fire portion. Participants introduced themselves.

What is a CWPP-PDM Plan?

Cossitt presented the benefits of preparing a county Pre-Disaster Mitigation (PDM) Plan and generally what goes into the plan. The resulting plan will among other things identify projects which can be done to make the county and town more disaster-resistant. She explained that PDM process focuses on all types of natural disasters in the county and that more depth would be added through the CWPP process.

Rand Herzberg then presented an overview of the Community Wildfire Protection Plan (CWPP), which parallels and will be incorporated into the overall disaster planning effort.

Participants in the Planning Process

Cossitt discussed role and membership of the Steering Committee. The steering committee provides information and ideas, sets priorities and will be asked to review the draft plan. The steering committee is made up of emergency service providers, businesses, education (schools), medical providers, agricultural services, insurance providers, and others to get a

broad scope of sectors that could be affected by disasters. County commissioners and mayors and town councils are also involved as they will adopt the final product. The entire process is open to the public. Cossitt Consulting team members Anne Cossitt and Rand Herzberg will research and write the plan with Anne taking primary responsibility for the PDM portion and Rand taking the CWPP tasks.

Time Frames and Schedule

The plan will be completed and adopted by the county, and the incorporated community of Circle by December 31, 2005. Future meetings will be dedicated to goal setting and project identification. Potential projects will be prioritized by the Steering Committee and the public.

Recollections of Past Disasters

Cossitt asked participants to provide information on previous disasters. This information will be checked against other records as part of the historical disaster write-up of the plan.

Type	Where	Notes	When
Flood-Dam break	**List Creek**	**Polly Wishman, Tim at the County Road Dept.for more information; note that there are a number of dams throughout the county and flooding related to the dams is a potential hazard**	**Frequently—last fixed in 96 or 97**
Flood	**West of Circle—Horse and Cow Creeks**		**1960s, and multiple**
Flood	**Redwater Creek-near Circle Park**	**Polly Wishman-Snow melt/ice jams can cause the floods—creates problems for EMS because have to find other ways around**	**multiple**
Tornado		**Tornadoes usually accompanied by severe storms, hail, wind**	
Tornado	**North of Circle**	**County Sheriff-took out airplane hangers**	**1997**
Tornado	**Near Vida**	**Resulted in a human fatality**	**July 1983**
Tornado	**15 miles SW of Brockway**	**Damage to farm structures**	**1995**
Tornado	**8 miles from Circle**	**Damage to various structures; 29 powerline structures**	**2001**
Hail	**Various in county**		**Multiple**

Hail	**Circle**	**Hail in three consecutive years took out all roofs in town**	**2001, 2002, 2003**
Power Outages	**Throughout county**	**Have lasted for up to a few days in various locations of county**	**Multiple, frequent**
Power Outage		**Result of wind event, took down power lines; took out power for 12 hours or more; lots of loss—appliances, computers, etc. as a result o the surges**	**2004**
Fire	**North end of county**	**Fire started in Roosevelt county, jumped the Missouri River; burned 10,000 acres**	**Halloween 1999**
Fire	**Timber Creek**	**Burned approximately 4,000 acres**	**Mid-1970s**
Plane Crashes	**Various**	**Some historical crashes in county, some concern about the airport in Glasgow also expressed as potential hazard**	**1950s**
Haz Mat	**Various**	**See discussion below regarding potential disasters**	**?**
Drought	**County-wide**		**Many years-ongoing**
Winter Storms	**County-wide**	**Snowed in for 9 days**	**2004**
Winter Storms	**County-wide**	**Can be very severe, with power outages, potentially hazardous school bus routes**	**Multiple, 1978, 1963-64, 1930s**
Rain Storm	**?**	**11 or 12 inches of rain in 24 hours—record for Montana**	
Ice Storms	**County wide**	**Power lines affected**	**Late 1970s, October 1991**
Insects		**Extension—good source of information**	**Multiple**
Grasshoppers	**County-wide**	**Can result in big economic losses**	**1988 and other years**
Sawfly	**County-wide**		**Various**
Disease/Other			**Various**
West Nile Virus		**3 cases confirmed, total of 6 unconfirmed cases, some horse deaths**	**2003**
Rabies	**North part of county**	**Rabies in pigs—resulted in vaccination program for humans**	**?**
Anthrax		**In cattle—contact Nels Boe for more information**	

Hazards of Concern

Participants brainstormed a list of potential hazards and went through a quick prioritization using dots to vote. Numbers in parentheses after the type of hazard indicate the number of votes given to that hazard.

- **Drought (15)**
- **Winter Storm (12)**
- **Wildfire (10)**
- **Hazardous Materials (4)**
- **Tornado (2)**
- **Insects (1)**
- **Power Outage (1)**
- **Earthquake**
- **Microburst**
- **Dam Failure**
- **Power Outages**
- **Hail**
- **Volcano**

In the process of prioritization, several participants raised the question about whether they were prioritizing based on economic loss or potential human safety and life loss issues. Some disasters, drought for example, can have large economic losses, but pose relatively little damage to human life or safety.

During the discussion of past disasters, some potential disasters were discussed in more detail.

- **Plane crashes—some concern about the airport in Glasgow**
- **Railroad accidents/explosions—although there are no railroad lines in McCone County, the main line across northern Montana is just a short distance north of the Missouri River**
- **Hazardous Materials—There is the potential for some serious spills from truck traffic using Highway 200 through Circle. Hazardous materials in the area of Circle also include hazardous materials used at the water treatment plant, 30,000 gallons of anhydrous ammonia, 18,000 gallons of propane storage. It's anticipated that Vida will also be getting more anhydrous ammonia storage in the future. (Contact Rick Johnson for more information.)**

Attendees completed worksheets ranking the history, probability, and potential consequences of various hazards. The results were tallied as follows:

Tally for all Participants- Hazard Worksheet

Type	*History*	*Probability*	*Consequences*
Drought	**Low Mod High** **1 20**	**Low Mod High** **1 3 17**	**Low Mod High** **1 3 16**
Flood	**Low Mod High** **1 10 9**	**Low Mod High** **2 10 8**	**Low Mod High** **4 6 9**
Tornado	**Low Mod High** **3 8 10**	**Low Mod High** **2 10 8**	**Low Mod High** **1 10 8**
Wildfire	**Low Mod High** **2 2 16**	**Low Mod High** **1 7 12**	**Low Mod High** **3 7 12**
Wind Storm/Hail	**Low Mod High** **3 16**	**Low Mod High** **4 16**	**Low Mod High** **1 6 12**
Winter storm	**Low Mod High** **6 14**	**Low Mod High** **1 8 11**	**Low Mod High** **6 6 8**

Note: N = 21, but not all participants filled out each box.

How to rate history
Low = 0-1 major incidents in the last 100 years
Moderate = 2-3 major incidents in the last 100 years
High = 4 or more major incidents in the last 100 years

How to rate probability

Low = 0-1 major incidents in a 5-year period
Moderate = 2-9 incidents in a 5-year period
High = 10 or more incidents in a 5-year period

How to rate consequences (an average event, not the worst case)

Low = no serious injury or loss of human life, damage is less than $500,000.
Moderate = Loss of human life and/or damage between $500,000 and $3 million.
High = Multiple lives lost and/or damage greater than $3 million.

Critical Facilities

Participants were asked to identify "critical facilities," facilities that could affect the response to disasters or that would create major effects if they were incapacitated from a disaster.

- **Power systems**
- **Transportation (roads)**
- **Medical facilitates**
- **Telephone/communications**
- **Williston Gas Pipeline and pumping stations**
- **Grain elevator**
- **Law enforcement**
- **Water Treatment facilities in Circle**
- **Sewer system lift stations in Circle**
- **Fire suppression equipment and facilities**
- **NOTE: ADD LIST FROM ALAN'S DOCUMENT**

Vulnerable Populations

The group then identified populations that would be vulnerable in the event of a natural disaster.

- **Nursing home in Circle**
- **Day care**
- **Homebound folks**
- **Schools (Vida and Circle)**

(Note: Sue Good Brown is a contact for more information on vulnerable populations.)

Wrap-Up

Cossitt thanked everyone for their participation and ideas. The next meeting was scheduled for either Monday or Tuesday April 25 or April 26 at 7:00 p.m. Notices will be put in the newspapers. Cossitt will also try to send out advance notices to steering committee members via email.

Meeting Summary
McCone County PDM-CWPP Steering Committee
Schmidt's Meeting Hall
April 27, 2005

Welcome

Mistica Hisdahl, County DES Coordinator, welcomed the group and introduced Anne Cossitt, who gave an overview of the meeting agenda, reviewed the purpose and content of a Pre-Disaster Mitigation Plan and Community Wildfire Protection Plan.

Key Issues

Cossitt reviewed the issues that the group had reviewed and prioritized at the last meeting, noting that wildfire was being addressed with a separate planning group.

Cossitt also provided a quick overview of some of the research on the issues to date.

Goal Statements

Persons present at the meeting developed the following goal statements.

Reduce flood damage.

Minimize damage due to flooding of the Redwater and Missouri Rivers, and of other drainages in McCone County.

Look at county participation in the national flood insurance program.

Examine methods to reduce the effects of dam failure, including public education for dam owners in the county.

Identify the alert procedure to be used by the Corps of Engineers in the event of Ft. Peck Dam Failure and identify any improvements that could be made.

Reduce the economic impacts of drought.

Encourage producers to continue to use and expand use of no-till, reduced till to minimize moisture loss.

Provide education and other assistance regarding livestock water supply systems that reduce water losses and improve water conservation.

Develop a comprehensive approach (e.g., block-by-block) to replacing leaky water supply lines in the town of Circle.

Improve the warning systems and public preparedness for disasters.

Expand the use of NOAA weather radios, focusing first on critical facilities and vulnerable populations, and then in all homes in McCone County.

Use the NOAA system and weather radios for announcements of all emergencies/disasters, not just weather-related disasters.

Provide public education on the need for weather radios and how to use them.

Develop a system to provide information to new people moving into the county who may be unaware of disaster/emergency responses systems. (Examples included brochures or information sheets that could be included with telephone bills or otherwise sent to county residents)

Request Mid-Rivers develop a web site and satellite station to reach out to all in the county with public announcements, including emergency/disaster information.

Provide public education on how to prepare for various types of emergencies/disasters, including power outages.

Assess the current situation of the emergency "phone tree" and evaluate its effectiveness, cost, and long-term efficiency compared to other notification systems.

Reduce effects of hazardous material spills.

Acquire HAZMAT spill kits for Fire Department and continue to ensure staff training in use of the kits.

Improve county residents' ability to respond to power outages.

Provide public education regarding preparedness for power outages.

Identify mechanisms to reduce health-related effects of power outages for especially vulnerable populations—the elderly, persons on oxygen or other medical equipment requiring a power source, and others.

Reduce potential for spread of vector-born and other serious diseases.

Assess the need for and extent of a mosquito control district.

NEXT MEETING**—The next meeting was scheduled for May 25 at 7:00.**

MCCONE COUNTY CWPP/PDM PLAN
Steering Committee/Public Meeting
May 25, 2005

Welcome

Anne Cossitt welcomed participants and explained that this was the third and final planning meeting for the CWPP/PDM plan for the County.

Quick Review

Contractor Cossitt reviewed the purpose of PDM and CWPP Plan and schedule for completion. She explained that the tasks for the meeting were to review the goals, objectives and projects, and prioritize the projects.

Goals and Objectives

A preliminary draft of the goals, objectives, and projects was handed out. The group read through the draft, discussed each item and made changes or deletions as needed.

Project Prioritization

Meeting participants went through each project as a whole group and prioritized them into high, medium, or low based upon subjective judgment against the following criteria.

- **Number of lives at risk**
- **Value of property at risk**
- **Infrastructure at risk**
- **Risk of business interruption/loss**
- **Cost/benefit of the project**

Wrap-up

Anne explained that a draft of the entire document would be available for a 30-day public review period once the maps and fire goals have been finalized. The review period will likely begin later in the summer. Once the review period has ended, the plan will be finalized and submitted for approval by the town, city, and county. Following that it will go through state and federal review. Participants were thanked for their involvement in the planning process.

Sign-in Sheets

Attendance Sheet

Activity CWPP – PDM – Kick-off

Location Circle **Date(s)** 01-10-05

Duration 1.5 hrs

Name & Title	Affiliation	E-Mail Address & Phone#	Agency Use Only H	M	T
Name: Anne Cossitt Title: Cossitt Consulting					
Name: Norman Parrent Title:					
Name: Alan Stamped Title:	County DES – 2 hrs.				
Name: Kent Larson Title: Co. Commissioner					
Name: Muriel L. Kassmir Title: Clerk & Recorder		clerk@midrivers.com P.O. Box 109, Circle 59215 485-3505			
Name: Connie Eissinger Title: County Commissioner	mcconeco@midrivers.com	ceissngr@midriverstel.com 406-485-2274 (H)			
Name: Title:					
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Attendance Sheet

Page 1 of 2

Activity DDM - CWPP Steering Committee

Location Circle Date(s) 02-10-05

Duration 2 hrs

Name & Title	Affiliation	E-Mail Address & Phone#	Agency Use Only H	M	T
Name: Alan Stempel Title: DES Coordinator		alan.stempel@us.army.mil 485-2419			
Name: JESS BEERY Title: FIRE CHIEF		406 939 3318 jess.beery@chsinc.com			
Name: Randy Sanders Title: Fire Program Manager	ONRC	rasanders@mt.gov 233-2904			
Name: Dena Lang Title: Fire Mitigation & Education	BLM	dslang@mt.blm.gov 233-2907			
Name: NELS BOE RETIRED Title:		485 2178			
Name: Tod KASTEN Title:	Rancher: Economic Development Dir. Redwater Board	KRANCHES@midrivers.com Water System 485-3374			
Name: Dave Harris Title: Sheriff	Harris Spraying Inc McCone CO SD	mcso@midrivers.com 485-3405			
Name: Angela Metzenberg Title: City Council		485-8772			
Name: Ron McFarland Title: Mayor		485-2416 mcfarlan@midrivers.com			
Name: VIC SHEFFELBINE Title: FIRE CAPTAIN - EMT	McCONE FIRE	vnjs@midrivers.com 525-3637 or 263-4145			
Name: Everett Russell Title: Refuge Operations Specialist	FWS	everett_russell@fws.gov 406-526-3464 x20			
Name: CONNIE EISSINGER Title: COUNTY COMMISSIONER	McCone Co.	ceissngr@midrivers.com 485-2274			
Name: TAMMY BOCK Title: County Coordinator for Aging/Sr. Ctr. Dir. RSVP Coor.	McCone Co.	485-2418 seniors@midrivers.com			
Name: Title:					
Name: Title:					
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Name: Title:					
Name: Title:					
Name: Title:					

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Attendance Sheet

Page 2 of 2

Activity PDM-CWPP Steering Committee

Location Circle Date(s) 02-10-05

Duration 2 hours

Name & Title	Affiliation	E-Mail Address & Phone#	H	M	T
Name: Joel Haynie Title:	City Council	JDHay@midrivers.com			
Name: Roger Schaeco Title:	McCone County fire	RJM&S @ midrivers.com			
Name: Scot Brown Title:	EMS	Sheap@midrivers.com			
Name: Rick Johnson Title: asst chief	McCone Co. Fire	DMAY@midrivers.com			
Name: Tim McCloy Title: Road Dept. Leadman	McCone Co. Road Dept	Skuter@midRivers.com			
Name: Ken Larson Title: High School Principal	Circle Public Schools	KLarson@circleschools.k12.mt.us			
Name: Mary Garfield Title: County Planner	McCone County	mcconejp@midrivers.com			
Name: Jackie Becker Title: Co Treas/Supt of Schools	McCone Co.	mctreas@midrivers.com			
Name: Kim Bradley Title:	EMS AIM INS. County INS.	KK4NS@midrivers.com			
Name: Sue Good-Brown Title: PH Nurse/Director	Public Health	mcconeph@midrivers.com			
Name: Mistica Hisdahl Title:	EMS	scooter2@midrivers.com			
Name: Marsha Burbidge Title:	EMS	gem@midrivers.com			
Name: Title:					
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FC 205

Attendance Sheet

Activity PDM – CWPP

Location McCone Co Date(s) 04-27-05

Duration 700 – 900

Name & Title	Affiliation	E-Mail Address & Phone#	Agency Use Only H	M	T
Name: Mistica Hisdahl Title: McCone Co DES Coordinator		scooter2@midrivers.com mccondes@midrivers 485-2347			
Name: Norman R. Jarrett Title: District II Rep	DNRC	DNRC@midrivers.com 406-234-2509			
Name: Julie Trower Title: County Exec. Director	USDA - FSA	julie.trower@mt.usda.gov			
Name: Kim Bradley Title: EMS - SRA	Am Insurance EMS	KB4AS@midrivers.com 485-2083			
Name: Nancy Hanson Title: Administrator	McCone City Health Center	mcmanfnh@midrivers.com 485-3381			
Name: Sue Good-Brown Title: Nurse/Director	McCone Co. Public Health	mcconeph@midrivers.com 406-485-2444			
Name: Ron McFarland Title: Mayor	Town of Circle	mcfarlan@midrivers.com 406-485-2416			
Name: Joel Haynie Title: Council member	Town of Circle	406-485-2957			
Name: Mike Kays Title: General Mgr.	McCone Elec. Co-op	mkays@mcconeelectric.coop 406-485-3430			
Name: Jack Miles Title: Member Serv. Director	"	jmiles@mcconeelectric.coop 406-485-3430			
Name: Roger Schera Title:	McCone Co. Fire Dept.	RJMAS@midrivers.com 406-485-2449			
Name: Lonny Jensen Title: Under Sheriff	McCone Co. Sheriff Office	Jensenlonny@hotmail 406-485-3405			
Name: JESS BEERY Title: Fire Chief	mccone co FIRE	JABEERY@m-drivers.com 406 939 7318			
Name: Ted KASTEN Title:	RANCHER	Krranches@midrivers.com 485 3374			
Name: Title:					
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Attendance Sheet

Activity PDM/CWPP Meeting – McCone County

Location Circle   Date(s) MAY 25, 2005

Duration 7:00 – 9:00

Name & Title	Affiliation	E-Mail Address & Phone#	Agency Use Only H	M	T
Name: PATRICK EGGEBRECHT Title: COMMISSIONER	McCONE	EEEFARMS@NEMONTEL.NET 406-525-3525			
Name: Mistica Hisdahl Title: McCone DES Coordinator	McCone	mcondes@midrivers.com 406-485-2347			
Name: Kim Beadles Title: Aim Insurance - CSR	Cowts Insurance	caim@midrivers.com 406-485-2083			
Name: Larry Bruce Title: OFF. MGR.	McCone Electric	lbruce@McCone electric.coop 485-3430			
Name: Norman R Parrot Title: District Rep.	Denny Rehberg	DYPET@midrivers.com 406-234-2809			
Name: Cory W. Da… Title: [illegible]		CKdrew@midrivers.com			
Name: Rick Johnson Title: Asst Fire Chief	McCone Co Fire	485-2262 Dmay@midrivers			
Name: Sue Good-Brown Title: PH NURSE	McCone PH	mcconeph@midrivers.com 485-2444			
Name: Roger Scharn Title: Fire Dept	McCone Fire	485-2449			
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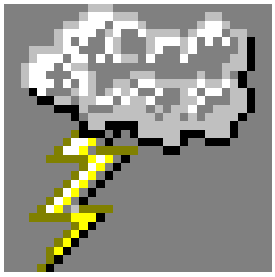
Rev. 4/23/03

Meeting Flyers, Notices and News Articles



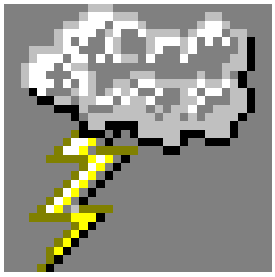
MCCONE COUNTY
DISASTER PLANNING MEETING

Wednesday, April 27
7:00 p.m.
Schmidt's Banquet Room

Open to the public.
Anyone with an interest is encouraged to attend and participate.

For more information, contact:
County Disaster Emergency Coordinator, Mistica Hisdahl 485-2851
Contractor, Anne Cossitt, 633-2213


nvtech.com
nvtech.com



MCCONE COUNTY
DISASTER PLANNING MEETING

Wednesday, May 25, 2005
7:00 p.m.
Schmidt's Banquet Room

Open to the public.
Anyone with an interest is encouraged to attend and participate.

For more information, contact:
County Disaster Emergency Coordinator, Mistica Hisdahl 485-2851
Contractor, Anne Cossitt, 633-2213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The Circle Banner • January 20, 2005

Disaster planning underway for McCone County

Disaster Mitigation Planning Underway in McCone County

Several years ago, a severe winter storm knocked down power lines, shutting down electric supply around the county. Some of the more remote parts of the county were without power for up to two weeks. Floods, wild fires, winter storms, and droughts are the primary natural disasters McCone County has experienced through time.

Each natural disaster has the potential to take lives, destroy property, and interrupt transportation and commerce. And, natural disasters are costly. For all these reasons, McCone County is joining other counties across the country to prepare a Community Wildfire Protection and Pre-Disaster Mitigation Plan. Preparing the plan is a requirement for eligibility for emergency relief funds from the Federal Emergency Management Agency should the county experience a natural disaster. The project is made possible by funding from the Bureau of Land Management.

Cossitt Consulting out of Park City, Montana, will be preparing the fire/disaster plan under the guidance of an expanded Local Emergency Planning Committee (LEPC) with representation from elected officials, law enforcement, emergency medical services, fire protection, disaster emergency services, county public health, public works, the chamber, the insurance industry, transportation, utilities, and the public school system. Referring to natural disasters in the county at the project kick-off meeting held with the contractors on January 10th, Commissioner Kent Larson stated, "We've had more drought than anything else." Commissioner Connie Eissinger added, "There might some kinds of disaster mitigation available through this program, such as dry hydrants to help with fire."

The first meeting of the LEPC/Steering Committee is scheduled for 7 p.m. on Thursday, February 10 at Schmidt's Banquet room. A total of three meetings to develop the plan will be scheduled in McCone County over the next six months and anyone interested in participating is encouraged to do so.

As a part of developing the plan, past disasters need to be documented and analyzed. "I'm really interested in hearing from long-time residents who have memories--even if they are just vague memories--of floods, wild fires, winter storms, or other natural disasters" stated Anne Cossitt. Anyone with information to share or questions about the project is encouraged to contact Cossitt at 633-2213.

The Circle Banner • February 10, 2005

Emergency meeting planned for February 10th

The first meeting of the Local Emergency Planning Committee(LEPC)/Steering Committee for the McCone County Wildfire and Pre-Disaster Plan is scheduled for 7 p.m. on Thursday, February 10. The meeting will be held in Schmidt's Banquet room in Circle. A total of three two-hour meetings to develop the plan will be scheduled over the next six months in the county. The effort will build upon work already initiated by the LEPC and the county. The planning meetings will be open to the public, and anyone interested in participating is encouraged to attend one or more of the meetings.

"Preparing the plan is a requirement for eligibility for emergency relief funds from the Federal Emergency Management Agency should we experience a natural disaster in the county" according to County Disaster and Emergency Services Coordinator, Alan Stempel. In addition, developing the plan will increase the ability of the county to avoid and/or deal with disasters, and will make the county eligible for state and federal funds to do mitigation projects. The project is made possible by funding from the Bureau of Land Management.

The pre-disaster mitigation planning effort will be combined with the preparation of a wildfire protection and mitigation plan. Anne Cossitt of Park City, Montana and Rand Herzberg of Red Lodge will be preparing the plan under the guidance of an expanded Local Emergency Planning Committee (LEPC) with representation from town, city and county elected officials, local and county law enforcement, emergency medical services, fire protection, disaster emergency services, county public health, sanitarian, public works, businesses, the insurance industry, transportation, utilities, local media, and the public school system. "We realize that we can't prevent natural disasters from occurring, but we can better prepare for them so that losses are minimized," stated Cossitt.

Anyone with information to share about past natural disasters or questions about the project is encouraged to contact Anne Cossitt at 633-2213 or by email at cossitt@usadig.com.

The Circle Banner • February 17, 2005

Steering Committee discusses potential hazards

By Anne Cossitt
Cossitt Consulting

Approximately 25 people from the county participated in the first meeting of the Steering Committee for the McCone County Wildfire and Pre-Disaster Plan on Thursday night February 10. The meeting, open to the public, included persons from throughout the county representing fire departments, emergency service providers, medical services, law enforcement, business and industry, schools and county and city governments, and others.

Anne Cossitt and Rand Herzberg, members of the consulting team hired by the county to prepare the plans, facilitated the meeting. After first providing a brief overview of the content and purpose of the Community Wildfire Protection and Pre-Disaster Plans, Cossitt and Herzberg focused discussion on past disasters, potential future hazards, and critical facilities that might be impacted by disasters.

Participants identified a number of past disasters including tornadoes, winter storms, hail, and drought, among others. One participant noted, "We've just about got all the extremes here." Drought, wildlife, and winter storms were identified as the highest potential hazards in the county, but individuals noted that some disasters have greater impact for human safety (such as winter storms) and others have greater long-term economic effects (such as drought).

The group also touched on a number of other issues, such as flooding and resultant road and bridge problems. One participant noted, "Power outages can be such a problem. When winds took down the power lines people throughout the county had to replace electrical appliances, ruined from poser surges." Hail is another significant problem—Circle residents have replaced roofs in three years out of the past five.

Fire was the single-focus topic during the second half of the meeting. Issues raised by the group included the potential for wildfires to spread on land in CRP.

The Cossitt Consulting team will take information and priorities developed at the steering committee meeting and begin developing detailed hazard and risk assessments as part the plan. These will be presented at the next meeting, set for the last week in April. Notices of the date, time, and location will be sent to the Circle Banner.

Anyone with information to share about past natural disasters or questions about the project is encouraged to contact Anne Cossitt at 633-2213 or by email at cossitt@usadig.com.

The Circle Banner • April 14, 2005

Disaster meetings planned

The second of three public meetings to prepare a Pre-Disaster Mitigation Plan for McCone County is scheduled for Wednesday, April 27th. The meeting will be held at 7p.m. at Schmidt's Banquet Room. While the Steering Committee and Local Emergency Planning Committee (LEPC) are helping to guide the work of the contractor, all meetings are open to the public and anyone with an interest in the effort is encouraged to attend and participate. According to the County Disaster and Emergency Coordinator Mistica Hisdahl, "The purpose of the plan is to think ahead of time about what disasters could occur and be prepared for them. That way the risk of loss of life can be reduced and the potential for property damage can be minimized where possible."

At their first meeting, the Steering Committee members listed potential natural and other hazards, identified critical facilities, and listed vulnerable populations among other things. The hazards that meeting participants identified as being of most concern in the county were:

Drought
Winter Storm
Wildfire
Hazardous Materials
Tornado(Summer Storms)
Insects (e.g. Grasshopper Infestations)

Other items of concern included microbursts, dam failures, hail, and power outages.

At this second upcoming meting on April 27, the group will work on goals and projects to make the county more disaster resistant. Projects can include such things as awareness and education or actions to

Continued on Page 9

Continued from Page 3

reduce potential damage in the event of a disaster.

At the third and final meeting to be held later this spring, specific actions or projects will be further developed and prioritized. The contractor will put together a draft of the plan that will be made available at the library, town hall, and county courthouse for anyone to review and comment on. Once the plan has been completed, the county and the Town of Circle will be asked to adopt it. Following review of the plan by the state and federal government to ensure legal requirements are met, the county and the town will be eligible to compete for grant funds to carry out the projects in the plan that exceed local resources.

If you would like more information about the planning process or to learn how to get involved, you can contact County Disaster Emergency Coordinator, Mistica Hisdahl at 485-2851 or contractor, Anne Cossitt at 633-2213.

The Circle Banner • April 21, 2005

Disaster Meetings

The second of three public meetings to prepare a Pre-Disaster Mitigation Plan for McCone County is scheduled for Wednesday, April 27th. The meeting will be held at 7p.m. at Schmidt's Banquet Room. While the Steering Committee and Local Emergency Planning Committee (LEPC) are helping to guide the work of the contractor, all meetings are open to the public and anyone with an interest in the effort is encouraged to attend and participate.

At this second upcoming meeting on April 27, the group will work on goals and projects to make the county more disaster resistant.

If you would like more information about the planning process or to learn how to get involved, you can contact County Disaster Emergency Coordinator, Mistica Hisdahl at 485-2851 or contractor, Anne Cossitt at 633-2213.

The Circle Banner May 12, 2005

Pre-Disaster committee meets

The County Steering Committee for Pre-Disaster Mitigation Planning met on Wednesday, April 27 at Schmidt's Banquet Room. At their previous meeting in February, the group had identified drought, wildfire, winter storms, and wind storms as priority focus areas. At the April 27 meeting, participants worked on identifying goals and projects to address those issues.

Mistica Hisdahl, acting County DES Coordinator, kicked off the meeting by welcoming all and by introducing Anne Cossitt, who has been contracted to provide technical assistance on the project. After a quick review by Cossitt of past disasters, the group identified a number of goals and action steps. The following includes each of the main issue/goals and some of the potential projects identified at the meeting.

Reduce flood damage:

Potential projects: Examine methods to reduce effects of dam failure and look at need for county participation in the national flood insurance program.

Reduce the economic impacts of drought:

Potential projects: Provide education and other assistance regarding livestock water supply systems that reduce water losses and improve water conservation and develop a comprehensive approach (e.g., block-by-block) to replacing leaky water supply lines in the town of Circle.

Improve the warning systems and public preparedness for disasters:

Potential projects: Expand the use of NOAA weather radios, focusing first on critical facilities and vulnerable populations, and then in all homes in McCone County and provide public education on how to prepare for various types of emergencies/disasters, including power outage.

Reduce effects of hazardous material spills:

Potential project: Acquire HAZMAT spill kits for Fire Department and continue to ensure staff training in use of the kits.

Improve county residents' ability to respond to power outages:

Potential projects: Provide public education regarding preparedness for power outages and identify mechanisms to reduce health-related effects of power outages for especially vulnerable populations-the elderly, persons on oxygen or other medical equipment requiring a power source, and others.

Reduce potential for spread of vector-born and other serious diseases:

Potential project: Assess the need for and extent of a mosquito control district.

At the next meeting, scheduled for Monday, May 25, the Steering Committee will select and prioritize projects. These will be included in the draft plan, which is scheduled for release later this summer for public review and comment.

Anyone interested is encouraged to attend the meetings. If you would like more information about the planning process or to learn how to get involved, you can contact the acting County Disaster Emergency Coordinator, Mistica Hisdahl at 485-2851, or contractor, Anne Cossitt at 633-2213.

Circle Banner, September 22, 2005

Fire and Disaster Plan ready for review

McCone County Disaster and Emergency Service Coordinator, Mistica Hisdahl, announced that the draft Community Wildfire Protection and Pre-Disaster Mitigation Plan will be ready for the public to review on September 15th 2005.

"The plan is the result of work over the past seven months or so, and we certainly appreciate all of the efforts put into this by the persons who attended the meetings and everyone else who participated."

The county started working on the plan in January. A citizen Steering Committee, established to guide the plan development, included the local emergency services committee, members of the fire departments, local businesses, town and county government, schools, law enforcement, and others. The purpose of the plan is to

Identify what can be done in advance to lesson the impacts of disasters. Disasters of most concern to those who participated in the planning process are drought, winter storms, wildfire, hazardous materials, severe summer storms(thunderstorms, high winds, and tornadoes), insect infestations, and power outages.

Since the plan efforts began in January, McCone County has been hit by ice storms that caused hundreds of thousands of dollars of damage and flooding that washed out roads and bridges. "Project, such as the one to assess and enlarge drainage facilities (such as culverts) as needed across county roads could hopefully reduce damage in future," stated plan contractor Anne Cossitt. That project and others are identified in the draft plan.

Copies of the draft plan will be available at McCone County DES, McCone County Clerk and Recorders office, and McCone County Public Library.

The county will accept comments until October 14th 2005. You can submit comments in any form by submitting them to Mistica Hisdahl at 485-2851, 493 Stoney Road or email to mcondes@midrivers.com

There will also be comment sheet located in each rough draft available to the public. Please feel free to add comments or changes you would like to see in this area

"Once we've received and incorporated comments, the plans will go the county commissioners and town council for adoption," commented Mrs. Hisdahl. Completing the plan will allow the county and communities to compete for grant funds to do projects identified in the plan and will also allow the county to be eligible for post-disaster relief..

Correspondence

January 24, 2005

Dear Anne,

You are invited to serve on the Steering Committee to guide the preparation of McCone County's Community Wildfire Protection and Pre-Disaster Mitigation (CWPP/PDM) Plan.

So, what is this plan and what purpose does it serve? The primary purpose of the CWPP/PDM Plan is to increase the county's resistance to natural disasters. Among other things, the PDM will look at historic disasters, identify those types of disasters the county is at most risk from, and propose projects to address those hazards. The portions of the plan that address wildfire will describe the current situation and values at risk, and also propose goals and projects to address the areas of concern.

And, there are important benefits for the county in preparing the plan. Once the plan is done, we will be eligible to compete for federal grant funds to complete projects, and the county will be eligible for assistance from the Federal Emergency Management Agency (FEMA) in the event we do experience a disaster such as a devastating flood, wildfire, or winter storm, for example.

The commitment we are asking of you is simple. Between now and the end of June, we'd like to have you attend one or more of the three two-hour evening Steering Committee/Public meetings. At these meetings, the Steering Committee and interested participants will provide guidance to the contractor we've hired to write the plan. The first of these meetings is scheduled for Thursday, February 10 at 7:00 p.m at Schmidt's Banquet room. We hope to see you at as many of the three meetings as you can make, preferably all three.

Your participation will ensure that we end up with the highest quality plan possible. If you have any questions about the plan or your role as a Steering Committee member, please call our County Disaster Emergency Coordinator, Alan Stempel, at 485-2419.

Sincerely,
THE BOARD OF COMMISSIONERS
McCONE COUNTY

Connie Eissinger, Chairman

Kenton Larson, Member

Patrick Eggebrecht, Member

January 25, 2005

Ron McFarland
Mayor, Town of Circle
Box 140
Circle, MT 59215

RE: Community Disaster Planning

Dear Mayor McFarland:

I'm writing to let you know about a planning effort being initiated by the county. This effort will help the county and the town of Circle become more disaster resistant, make the county and the community eligible for project funds, and ensure the county is eligible for disaster relief funds if a natural disaster does occur.

When completed, the plan must be approved by the state and the Federal Emergency Management Agency (FEMA.) The plan will need to be adopted by the county commissioners and the incorporated community of Circle.

I have been contracted to prepare the plan for the county and wanted to let you know about the effort right from the start. I've enclosed a business card in case you have any questions about the project.

You will be receiving an invitation in the mail from the commissioners soon inviting you to participate as a Steering Committee member for the project. We plan to hold three Steering Committee/public meetings. The first meeting is scheduled for Thursday, February 10, at 7:00 p.m. at Schmidt's Banquet room in Circle. I hope you or someone from the Circle town council is able to attend. I'll look forward to meeting you at some point in the process, Ron. Please feel free to call if you have any questions at all.

Sincerely,

Anne Cossitt

cc: Alan Stempel, County DES Coordinator

CHAPTER 3:
HAZARD EVALUATION AND RISK ASSESSMENT

This chapter identifies:

- **Hazards to which McCone County is susceptible**
- **What effects the hazards can have on the County's physical, social, and economic assets**
- **Which areas are most vulnerable to damage from these hazards**
- **Estimated costs of damage**

Chapter 3 includes a short description of methodology**; followed by a list of the** identified hazards **discussed in this chapter and rationale for why each hazard was included; detailed profiles of each hazard type including** historic occurrences **and** vulnerability and potential loss estimates**; and** assets **and** vulnerable populations **that could be affected by various hazards.**

Methodology

Hazards were evaluated as follows:

1. **<u>Identify hazards that may occur</u>. Hazards that may occur were identified through:**
    a. **Meetings and discussions with community leaders (county commissioners, town officials, and county DES Coordinator)**
    b. **The Steering Committee meetings (steering committee and members of the public identified past disasters and potential future disasters)**
    c. **Review of hazard lists in the FEMA "How-to Guide: Understanding your Risks" and initial research on websites recommended in the Guide**
    d. **Review of the State of Montana Multi-Hazard Mitigation Plan and Statewide Hazard Assessment**
    e. **Researching other plans and reports**
    f. **Discussion with technical experts (included in the Sources section at the end of the chapter) and a visit to the NOAA National Weather Service Glasgow to review weather-related natural hazards and obtain storm information.**

2. **<u>Prioritize the hazards and focus on the most prevalent</u>. Hazards were prioritized at the 1st Steering Committee meeting. (See also discussion below on "Identified Hazards" for more detail on methodology for identifying and prioritizing hazards.)**

3. **Profile hazard events. Using a variety of information sources (listed at the end of this chapter), this step basically answers the question, "How bad can it get?" This included:**
    a. **Identifying maps of the geographic extent of hazards that can occur in predictable areas (note that hazards with "predictable occurrence areas" were limited to flood hazards identified in Federal Insurance Rate maps).**
    b. **Obtaining data on historical occurrences—frequency, severity, and related damage**

Vulnerability and potential loss estimates were assessed as follows:

1. **Identify the future potential for the hazard to result in damages. This was done primarily by looking at past occurrences and by considering factors that could potentially increase risk. Land uses (described in Chapter 1) are not anticipated to change dramatically in the foreseeable future, with the exception of a potential future coal mine and coal-fired power plant north of Circle. Consequently, the analysis focuses on existing land uses and conditions.**

2. **Inventory assets and identify what might be affected by the different hazard events. This includes structures, operations important to the county's economy as well as vulnerable populations that could be particularly hard-hit by a disaster. Critical facilities and vulnerable populations were identified at the 1st steering committee meeting, when participants were asked to identify important features of their community that could potentially be affected by a disaster. Inventories of critical facilities included location and replacement value, identified using tax assessments, and via conversations and information provided by representatives of the various facilities. Because most of the hazards in McCone County can essentially occur anywhere, the inventory of assets is included as a separate section in this chapter. For the flood hazard, for which specific maps are available, more detailed asset information is included in the Flood section of this chapter.**

3. **Estimate losses. Generally, losses were estimated using information from past events, since most hazards in McCone County can vary in location and extent. In cases where there is little or no damage information in terms of dollar cost for the county, information may include costs from other locations.**

   For the mapped flood hazards, the cost estimate is more detailed (because the data can be limited to a specific area), and includes dollar costs based on various scenarios (% of loss).

Identified Hazards

Table 3.1 includes potential hazards for McCone County, how and why they were identified, how they were ranked at the public meeting, and where they are discussed in this chapter.

Table 3.1 McCone County Hazards

Type	*How Identified*	*Why Identified*	*Location in Chapter 3*	*Rank at Public Meeting*
Drought	**Commissioners Steering Committee/Public Meeting The State of Montana Multi-Hazard Mitigation Plan and Statewide Hazard Assessment Disaster Declarations, National Weather Service**	**Drought affects agriculture, one of the basic economic drivers of the county**	**Drought**	**1**
Flood	**Commissioners Steering Committee/Public Meeting Newspaper accounts Disaster Declarations, National Weather Service**	**The county is subject to flash floods and other flood events.**	**Flooding**	**None**
Summer Storms	**Steering Committee/Public Meeting, National Weather Service**	**Crop and property damage have occurred in the past**	**Severe Thunderstorms Storms**	**None**
Hailstorm	**Steering Committee/Public Meeting**	**Crop and property damage have occurred in the past**	**Severe Thunderstorms**	**See Summer Storms**
Hazardous Materials	**Steering Committee/Public Meeting**	**History of past occurrences. Consequences could be severe.**	**Hazardous Materials**	**4**
Severe Winter Storm	**Commissioners Steering Committee/Public Meeting**	**Historic occurrences, some severe and costly.**	**Winter Storms**	**2**

	Disaster Declarations, National Weather Service			
Type	***How Identified***	***Why Identified***	***Location in Chapter 3***	***Rank at Public Meeting***
Tornado and High Winds	**Steering Committee/Public Meeting, National Weather Service**	**History of tornadoes; potential for serious damage, history of high velocity winds**	**Severe Thunderstorms**	**5**
Wildfire	**Commissioners Steering Committee/Public Meeting Disaster Declarations**	**Drought, fine fuels, high winds, and historic fires**	**In Chapter 5**	**3**
Type	**How Identified**	**Why Identified**	**Location in Chapter 3**	**Rank at Public Meeting**
Dam Failure	**Steering Committee/Public Meeting National Inventory of Dams**	**There are 125 dams in the county. Dam failure is a potential hazard.**	**Flooding**	**None**
Insects/Disease	**Steering Committee/Public Meeting**	**There have been historical incidents of serious diseases as well as damage from insects in the county.**	**Insect Infestations and Disease**	**6**
Power Outages	**Steering Committee/Public Meeting**	**County has experienced significant power outages from weather and other events**	**Assets**	**6**
Earthquakes	**Steering Committee/Public Meeting**	**McCone County falls in an area of potential earthquake with a force of 3 g**	**Earthquakes**	**None**
Volcanic Events	**Steering Committee/Public Meeting**	**McCone County could have some effects from volcanic events to the west (Pacific Northwest and Yellowstone Park area)**	**Volcanic Eruptions**	**None**
Microbursts	**Steering Committee/Public Meeting**	**Have been known to occur and cause damage**	**Severe Thunderstorms**	**None**
Plane Crashes	**Steering Committee/Public Meeting**	**Have occurred in the past**	**Hazardous Materials/Transportation Related**	**None**

			Accidents	

FEMA identifies seven major hazards to be considered in the development of a Pre-Disaster Mitigation Plan. Of these seven major hazards, four were identified as potential hazards in McCone County--floods, tornadoes, earthquakes, and wildfires. The wildfire hazard and mitigation are addressed in Chapter 5 of this document. Although a narrow band along the Missouri River is identified by the USGS as an area with high susceptibility-moderate incidence of landslides, this was not identified as a problem by locals.

FEMA identifies seven major hazards (floods, earthquakes, tsunamis, tornadoes, coastal storms, landslides, and wildfires) to be considered in the development of a Pre-Disaster Mitigation Plan. Of these seven major hazards, four were identified as potential hazards in McCone County--floods, tornadoes, earthquakes, and wildfires. The wildfire hazard and mitigation are addressed in Chapter 5 of this document.

The other three hazards were eliminated from more detailed review in this plan for the following reasons:

- **Tsunamis are not applicable to McCone County.**
- **Coastal storms are not applicable to McCone County.**
- **Landslides. The U.S. Geological Survey (USGS) national landslide map shows a narrow band along the Missouri River as an area with high susceptibility-moderate incidence of landslides. Participants at the public meetings did not identify landslides as a problem in their county. The area subject to landslides is not an area of major development. There were no reported incidences of landslides causing damage.**

Drought

"Drought is an extended period of below normal precipitation which causes damage to crops and other ground cover; diminishes natural stream flow; depletes soil and subsoil moisture; and because of these effects causes social, environmental, and economic impacts to Montana." (Montana Drought Response Plan, 1995)

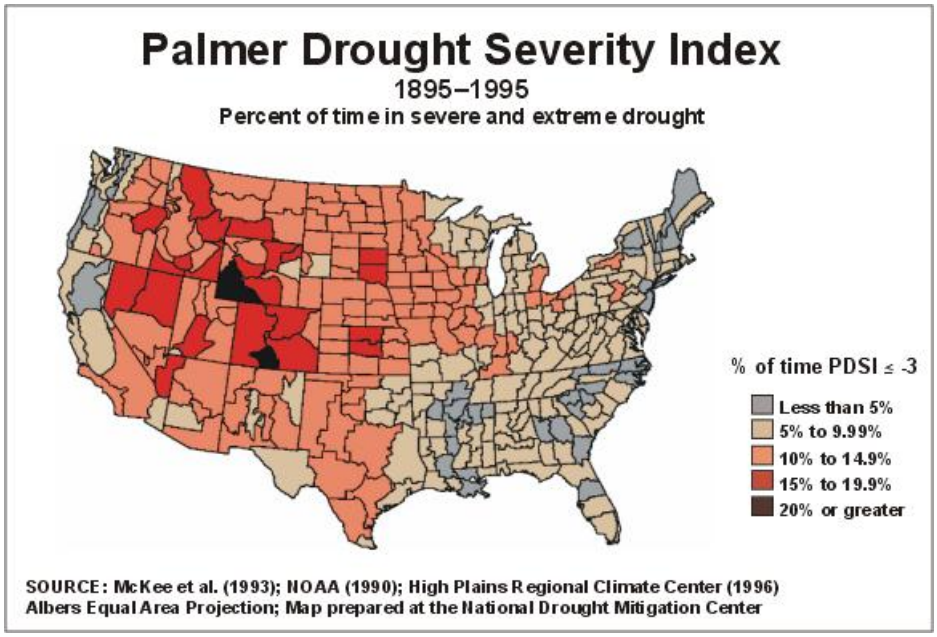
Drought can occur throughout the county.

Historic Occurrences

Legendary drought occurred in eastern Montana in the 1930s. Impacts were severe across not just Montana, but the entire Great Plains and led to changes in farm practices that have lessened the impacts of subsequent droughts, such as the one in the 1950s.

As shown in Figure 3.1, the area that includes McCone County has been in severe or extreme drought 10 to 15% of the time between the years 1895 and 1995. Figure 3.1 is based on the Palmer Drought Severity Index (PDSI), which quantifies drought in terms of moisture demand and moisture supply.

Figure 3.1 Palmer Drought Severity Index



Annual average precipitation in McCone County is between 10-16 inches. (See Chapter 1, "Climate and Weather for more detail.) In Circle, where the annual average is 13 inches per year (as measured between 1963 and 2004), the lowest annual average was 6.75 inches in 1988. (Western Regional Climate Center)

Drought also brings other related hazards—grasshoppers, plant disease, wind erosion, and wildfires. Table 3.2 lists declarations related to drought (excluding wildfires, which are covered in Chapter 5 of this report).

Table 3.2 Drought-related Disaster Declarations

Type	Period	Number	Notes
Presidential Declarations		0	Drought is excluded from presidential declarations*
USDA Secretarial Declarations	1998- 2004	7	McCone was listed as a "contiguous" county or as part of other disaster listings
FEMA Declarations	1974-2003	0	
State Declarations	1975-2004	0	

Source: USDA, FEMA
*** Abers, Jesse, Montana Drought Advisory Committee.**

After years of drought, dams that provide water for livestock and other agricultural purposes are drying up as are some springs in the county. Drought conditions resulted in virtually no hay crop across the county in 2004. (Public Steering Committee meeting, April 2005)

Vulnerability and Potential Loss Estimates

Based on past history, there is continued probability that drought will occur in the future in McCone County. Participants in the steering committee ranked drought as having a high probability of occurrence. McCone County is vulnerable to losses from drought because:

1) Drought affects commercial viability of agricultural production, which is one of the primary drivers of the county's economy
2) Drought in areas outside of the county can affect the supply of irrigation water (e.g., along the Missouri River)

The Montana Multi-Hazard Mitigation Plan listed the ten counties in Montana with the highest percentage of farm income to personal income as measured in 1999. McCone County, with a farm income to total personal income ratio of 25% in 1999 was ranked second on the list. (Total personal income includes earnings and "non-earned income, which includes dividends, interest, rent, and transfer payments. "Non-earned" income is a growing portion of total personal income and in 2002 comprised 46% of all personal income.)

Drought produces a complex web of impacts that spans many sectors of the economy. Direct effects of drought include reduced crop, livestock, and rangeland productivity, increased fire hazard, reduced water levels, and damage to wildlife and fish habitat. Reduced incomes for farmers and ranchers result in indirect economic effects, such as reduced business and income for local retailers, increased credit risk for financial institutions, capital shortfalls, loss of tax revenues and reduction in government services, unemployment, and out-migration.

The Montana Governor's Drought Report of May, 2004 referenced the economic and societal effects of drought:

> **The state's biggest drought story remains the deepening socio-economic drought. The drought threatens to change the very fabric of Montana's rural communities and landscape. It is the final straw that can bankrupt 4th- and 5th-generation farmers and ranchers, placing the birthright of descendants of pioneer families on the auction block. And like the changing vistas, many of the well-established county agri-businesses are disappearing forever, along with other main street institutions.**

There is no standardized method for tracking economic losses related to drought in Montana. Historical data for direct economic effects of drought include the following:

- **Continued lack of moisture in 1985 resulted in a state-wide wheat crop that was the smallest in 45 years. For a typical 2500 acre farm/ranch, the operation lost more than $100,000 in equity over the course of that year. (www.state.mt.us/dma/DES/Drought.htm)**

- **In 2001, the Montana Department of Livestock estimated a decrease in Montana cattle herds of approximately 450,000 head of cattle, or 18%, due to drought. The loss estimate consisted primarily of cattle moved out of state for change of pasture (and includes those that were sold). (Drought Relief Activities of the Montana Department of Livestock and Montana Agricultural Statistics Service)**

Drought does not directly affect structures and infrastructure in the same dramatic and immediately costly ways that other hazards, such as flooding, can and to which there are existing disaster aid responses, such as through FEMA. The primary effect of drought is on the land and the following analyses of potential effects on crops and livestock production is intended to provide an estimate of some initial costs associated with drought. Indirect cost effects, such as reduced business with local merchants, etc.), would be in addition to direct losses to agricultural

producers. The combined direct and indirect costs of drought are estimated to be double that of the direct costs alone (Aber, personal communication).

Table 3.3 presents estimates for key crops in McCone County comparing typical yields with drought year yields. The table also provides an economic loss estimate for these crops, which are only a part of the overall loss because the table does not include all crops in McCone County.

Table 3.3 Drought Loss Estimation for Key Crops in McCone County for 2004

Crop	Normal Precip Year Yield Per Acre	Drought Year Yield (per acre)	Average Price Per Unit	2003 Acres Planted	Economic Loss
Wheat Grain (bushels/acre)	25.0	15.0	3.35	232,386	7,784,931
Barley (bushels/acre)	35.0	20.0	1.85	11,491	318,875
Oats (bushels/acre)	45.0	25.0	1.35	3,511	94,797
Grass Hay (tons/acre)	1.0	0.1	72.17	15,803	1,026,452
Alfalfa Hay (tons/acre)	2.0	0.2	72.17	7,353	955,199
Millet-Hay (tons/acre	1.5	0.7	72.17	1,816	104,849
Mixed Forage-hay (tons/acre)	1.0	0.2	72.17	8,398	484,867
Grass Gazing (AUD/acre)	0.13	0.08	0.53	606,193	16,064
Total					10,786,034

Source:
USDA FSA Damage Assessment Report for McCone County for 2004

Identifying the direct economic loss from drought for livestock producers involves many factors, most of which are difficult to track with existing systems. Over the past 10 years (1995-2004), cattle and calf numbers have been as low as 33,000 (2004) and as high as 36,400 (2001). (www.nass.usda.gov and Montana Agricultural Statistics 2004)

Livestock numbers, however, are not necessarily a good indicator of economic impacts. For example, cattle numbers can remain relatively stable over a period, but ranchers can be experiencing any number of economic impacts that include:

- **Reduced productivity of rangeland**
- **Forced reduction of foundation stock**
- **Closure/limitation of public lands for grazing**
- **Cost of supplemental feed and/or cost of moving to other locations with pasture**
- **High cost/unavailability of water for livestock**

- **Cost of new or supplemental water resource development (wells, etc.)**
- **Increased feed transportation costs**
- **Disruption of reproduction cycles (delayed breeding, more miscarriages, etc.)**
- **Decreased stock rates**
- **Range fires**

In summary, drought has the potential to cost McCone County residents millions of dollars annually. The estimates above indicate annual losses of over $10.7 million for some crop types alone. Considering losses to other crops and livestock, the direct costs could be many more millions of dollars annually.

Winter Storms

Extreme winter weather events occur throughout McCone County and include blizzards, extreme cold temperatures, heavy snow, ice storms, freezes, and dangerous foggy conditions. Winter weather events have occurred in McCone County from October through May.

A blizzard is defined as a storm with winds over 35 mph with snow and blowing snow reducing visibility to near zero.

Average annual snowfall is 27 inches (as measured in Circle). (Western Regional Climate Center)

Historic Occurrences

The earliest documented winter storm in eastern Montana was wide-spread and legendary. This storm cost the lives of large numbers of open range cattle. During the winter and spring of 1887 there were 40 days of blinding blizzard and snowstorm.

The Secretary of Agriculture declared two winter storm-related disasters in McCone County between 1998 and 2004—one for a severe winter storm (November 2000) and for a freeze in October 2000. McCone County was part of two state declarations for winter storms—one in 1978 and one in 1979.

Data from the NOAA offices in Glasgow indicate 25 separate winter weather events that affected McCone County between June 1996 and mid-March 2005. The National Climate Data Center indicates there have been 2 deaths and 5 injuries in McCone County as a result of severe winter events during that same time period. The following provides a narrative account of some of these major winter storm events.

January 1997
Very strong winds and wind chill to 80 below zero at times. Hit McCone, Richland, Dawson, Prairie and Wibaux counties. One man died after he decided to walk for help after his vehicle was stuck in a snow drift. He was found 500 feet from his car.

February 1997
Unusual widespread dense fog developed throughout eastern Montana. Visibility was near zero over portions of the area and overnight travel was discouraged.

February 1998
Throughout McCone, Richland, Dawson, Prairie, and Wibaux Counties—up to 1.5 ft of snow in combination with sustained winds of 30-40 mph and visibility to zero. Snow drifts ranged between 5-12 feet.

December 2000
A blizzard on the 15th and 16th, and then an ice storm on the 27th that closed nearly all paved roads in several counties.

December 2003
At the onset of blizzard conditions that lasted for two days, there was a period of freezing rain that produced up to a quarter of an inch of ice across portions of Prairie, Wibaux, Dawson, Richland, Roosevelt, and McCone Counties.

January 2004
Throughout eastern Montana, extreme cold/wind chill on Jan 4-5—windchill in McCone County was recorded at 50 below 0. Then eastern Montana was hit by two winter storms later in the month and both resulted in roads closed for emergency travel only across several counties. At least a dozen people were stranded (in the multi-county area) and had to be rescued by state and county road crews, who had to travel in near 0 visibility.

December 2004
A mix of sleet, freezing rain, and snow spread across northeast Montana during the late evening hours of the 29th, and changed to snow overnight. The snow continued during the day on the 30th. The snow was accompanied by northwest wind of 20 to 30 mph with gusts around 45 mph. By the evening of the 30th many roads were

either closed or open to emergency travel only. The winter storm continued into the New Year.

April 2005
Ice, wind, and snow conditions that resulted in 300-400 power transmission structures damaged or destroyed. Damage was estimated at $600,000 (Hisdahl).

Vulnerability and Potential Loss Estimate

Given the location of McCone County in eastern Montana and weather patterns for the northcentral United States, winter storms, ice storms, and related colder weather events will continue to be a potential hazard for McCone County. Participants in the planning process rated winter storms as having a moderate to high probability of occurrence.

Winter storm events in McCone County can have a number of potential effects and related costs:

- **Loss of human life and other human risks—hypothermia, stranded motorists**
- **Damage to electric transmission facilities and power outages**
- **Livestock loss and stress (and increased cost of hay/feed)**
- **Crop losses and stress**
- **Road closures**
- **Snow removal and sanding**
- **Business interruption expenses**
- **Overtime loads on emergency and law enforcement personnel**
- **Vehicle accidents**
- **Other property damage (e.g., structural to buildings, water, sewer lines)**

In addition, the county faces challenges of winter storm related safety factors for isolated rural residents. Providing emergency services to persons located far from emergency operation centers and health care facilities can be hazardous for emergency personnel as well.

Based on information from the SHELDUS Data Base, 10 winter weather events between 1960 and 2000 resulted in a total of $381,100 in property damage and $258,290 in crop damage (amounts not adjusted for inflation). The SHELDUS Data Base calculates dollar losses on reported amounts and primarily relies on government assistance payment amounts and amounts

that may be reported through other means (e.g., newspaper accounts). Consequently the cost estimates do not include costs that may be paid by private individuals or private insurance companies unless those were publicly reported.

Participants at the Steering Committee/Public Meeting felt that the SHELDUS amounts were low and did not reflect actual costs. One event alone, the ice storm of April 2005, resulted in approximately $600,000 in damage to electric transmission lines (Hisdahl).

In summary, winter storms and related events can be costly in terms of human health and safety as well as economic costs. McCone County has had at least one death and injuries related to winter storm events. Economic costs could be as high as a million dollars or more depending on the severity and duration of the event (given the reported amounts from SHELDUS for Prairie County to the south).

Severe Thunderstorms (including Hail, Wind, and Tornadoes)

McCone County is subject to severe storms that include lightning, hail, wind, and tornadoes throughout the entire area of the county.

A severe thunderstorm is a thunderstorm that produces tornadoes, hail 0.75 inches or more in diameter, or winds of 50 knots (58 mph) or more. (Montana Multi-Hazard Mitigation Plan)

A tornado is a violently rotating column of air in contact with the ground and extending from the base of a thunderstorm. Tornadoes are categorized by the Fujita scale. The Fujita scale ranges from F0 (with estimated speeds less than 73 mph) to F5 (with estimated wind speeds greater than 261 mph). (Montana Multi-Hazard Mitigation Plan) The wind speeds are an estimate only. The Fujita scale is a damage scale. The worse the damage, the higher the F scale rating. In eastern Montana, with plenty of wide open spaces, if a really wide, fast spinning tornado hits an area with no buildings, it still has a rating of F0. (Fransen)

Electric Transmission Facility downed by July 2001 Thunderstorm Wind Event

Photo courtesy of Tanja Fransen, NOAA weather office in Glasgow

High wind events (exceeding 50 knots) can and do occur at any time of the year. When combined with snow, they create blizzard conditions and are discussed in the section above on "Winter Storms." Straight line winds are more likely to occur in eastern Montana than tornadoes, and the resulting damage can be worse than a tornado. (Fransen) A microburst is defined as "a small downburst with its outburst, damaging winds extending only 4 km (2.5 miles) or less. In spite of its small horizontal scale, an intense microburst could induce damaging winds as high as 75 m/sec (168 mph). (Caracena)

Historic Occurrences

The National Climate Data Center indicates a total of 46 thunderstorm-wind events, 78 hail events, and 21 high wind events (not associated with thunderstorms or blizzards) in McCone County between 1990 and 2004. There were 3 injuries related to hail events, and 2 injuries from high wind events.

McCone County was included in 5 USDA disaster declarations between 1998 and 2004 for events including high winds, tornadoes, wind, rain, and hail.

Records from the NOAA weather office in Glasgow indicate McCone County has had 21 hail events with golf-ball sized hail (larger than 1.75

inches), and 4 events with baseball-sized hail (larger than 3.75 inches). The hail event database goes back to 1950, but the majority of the information is since the mid 90's when the NWS got the new radars and added a lot more staffing to many of its offices. (Fransen)

There have been seven reported tornadoes in McCone County between 1954 and 2004 with intensities from an F0 to and F2 on the Fujita scale. An F1 tornado in August 1983 passed near Vida, throwing a car with two people inside for 200 yards, and resulted in one fatality and one injury. (Montana Multi-Hazard Mitigation Plan)

Table 3.4 Tornadoes in McCone County 1954-2004

Date	Type	$ Damage	Killed	Injured
Aug 26, 1954	F2	$25,000		
July 9, 1983	F1	$250,000	1	1
May 10, 1991	F0	$3,000		
Aug 13, 1993	F0			
June 21, 1995	F0			
July 11, 1995	F2	$300,000		
July 20, 2001	F0			

Sources: Tornado Project, McCone County PDM Draft 2003

Data from the NOAA offices provides narrative accounts of some of these events between 1996 and 2005, as shown in Table 3.5.

Table: 3.5 Selected Thunderstorm, High Wind, and Hail events in McCone County

Date	Location	Type	Estimated Damage	Loss/Damage and Notes
July 1996	2 miles SE of Circle	Thunderstorm-Wind	$30,000 property $10,000 – crop	Strong thunderstorm winds and one inch hail battered a farm southeast of Circle. 100% wheat loss reported in some areas around Brockway and Circle.
July 1997	12 mi N of Circle	Thunderstorm-Wind	$40,000	An airplane hanger housing two airplanes was destroyed as its roof was lifted off and the walls caved in. Airplanes inside were significantly damaged.
Aug 1997	40 miles WNW of Vida	Thunderstorm-Wind		Thunderstorm winds up to 80 mph with one inch hail destroyed wheat which was almost ready to be combined
Oct 1998	McCone, Richland, Dawson, Prairie and Wibaux	High Wind		High winds sustained at 50 to 60 mph and gusts to nearly 80 miles mph caused damage. Winds responsible for rapid spread of several wildfires.

	counties			
July 3, 2000	**Circle**	**Thunderstorm-Wind**	**$35,000 property**	**Severe thunderstorm winds too down eight power lines in Circle leaving 100 customers without power. Also took the top off of a grain bin.**
July 4, 2000	**Circle**	**Hail**	**$150,000 property $200,000 crop**	**Baseball sized hail 6 inches deep fell on the community of Circle breaking windows and destroying crops.**
July 2001	**10 miles N-NW of Circle**	**Thunderstorm-Wind**	**$1.6 m property $500,000 crop**	**Downburst winds blew down 25 steel electric towers as well as 25 wooden power poles. Caused 100% crop damage over a 20 mile long area of one to five miles in width. Circle elevators were crushed in. Damage to houses and vehicles. Gust at Circle airport measured at 113 mph.**
Jan 2003	**County-wide**	**High winds**		**Strong winds in McCone, Dawson and Prairie Counties. 70 mph wind gust 19 miles northwest of Vida.**

Source: NOAA weather office in Glasgow

A high wind event in 2004 took out power in parts of the county for 12 hours or more, resulting in surges that damaged appliances, computers, and associated costs to county residents. (Steering Committee Meeting, February 10, 2005)

A high wind event in July 2005 between Brockton and Culbertson, just northeast of McCone County, caused considerable damage. Winds gusting to 100 mph "flattened mobile homes, peeled shingles from roofs, and scattered steel grain bins across fields. Fourteen rail cars parked at Brockton were derailed…" (Billings Gazette)

<u>Vulnerability and Potential Loss Estimate</u>

Thunderstorms, windstorms and related weather events will continue to be a hazard for the county for existing and future development wherever it may be located in the county. Participants in the planning process indicated a high probability of occurrence for these events.

Severe thunderstorms (including damaging straight line winds, microbursts, tornadoes, and hail) have the potential for:

- **loss of life and injury**

- **property damage (complete destruction possible in the case of tornadoes, other damage to roofs, siding, windows, vehicles, equipment, from strong winds, tornadoes, and hail)**
- **power outages and related effects**
- **crop damage (particularly from hail)**
- **livestock fatalities and injuries**
- **damage to utility infrastructure (power lines, etc.)**

SHELDUS data indicates property and crop damage from severe thunderstorms, hail, and wind events for the period 1960 through 2000 as follows:

Table 3.6 Damage Summary of Thunderstorm/Wind Events from SHELDUS data

Type	# of Events	Property Damage	Crop Damage
Strong Winds	**10**	**$ 517,000**	**$ 734,000**
Hail	**10**	**353,000**	**1,100,000**
Severe Thunderstorms	**10**	**154,000**	**447,000**
Total		**$1,024,000**	**$2,281,000**

Source: SHELDUS data base

As noted above under the discussion of winter storms, steering committee participants did not feel that the SHELDUS information was very accurate. Information from the NOAA weather office in Glasgow indicates that from one event alone, the July 2001 thunderstorm wind event, damages were $1.6 million for property and $500,000 for crop damage.

Tornadoes, straight-line winds, and downbursts (microbursts) have the potential to completely destroy or significantly damage a building. Tornadoes have occurred in McCone County and have the potential to take out any of the structures listed as critical facilities at the end of this chapter.

Because of the potential to completely destroy major facilities, tornadoes have some of the highest potential cost implications to the economy of any single hazard event. Losses could be in dollar amounts of hundreds of millions. Losses from hail and thunderstorm events could also be over a million dollars for a single event.

Storm Clouds above Circle

Photo Courtesy of Tanja Fransen, NOAA weather office in Glasgow

Flooding

"A flood is a natural event for rivers and streams. Excess water from snowmelt, rainfall, or storm surge accumulates and overflows onto the banks and adjacent floodplains." (FEMA, *Understanding Your Risks*).

Flooding can occur throughout the county. The Redwater River flows across portions of the county and through the county seat of Circle. Numerous other creeks and drainages cross the county.

Historic Occurrences

Flooding in McCone County has occurred from storm events, snow melt, ice jams, and flash floods. McCone County was part of a state and federal FEMA disaster declaration for flooding in 1986. There has been no other state or federal declaration for flooding in McCone County in the past 20 years.

Circle has the statewide 24 hour rainfall record of 11.5 inches on June 20, 1921, which is nearly the annual average of 12-14 inches for the McCone County area. (Fransen)

Flash floods are events "occurring with little or no warning where water levels rise at an extremely fast rate." (FEMA, *Understanding Your Risks*) Flash floods have occurred throughout McCone County as shown in Table 3.7.

Participants at the Steering Committee meetings also indicated flooding had occurred along List Creek (as a result of dam failure), and that flooding was an issue west of Circle along Horse and Crow Creeks (multiple events prior to 1996).

Table 3.7 Selected Flood Events in McCone County (1996-2004)

Date/Type	Location	Type	Estimated Damage	Loss/Damage and Notes
Aug 1995		Flash Flood		
April 1999	10 mi SE of Vida	Flash Flood		Rain falling at rate of nearly 2 inches per hour inundated portions of McCone County
July 2000	5 mi SE of Weldon	Flash Flood	$30,000 property	Heavy rain caused a bridge on the Weldon Road to be washed out.
Aug 2002	Northwestern portion of county	Flash Flood	$20,000 property $25,000 crop	Stationary thunderstorms and baseball sized hail resulted in flooding along Highway 528 in northern McCone County.
Mar 2004	Circle	Flood		Minor flooding on the Redwater River covered Cemetery Road in Circle.
June 2005	West of Circle	Flood-Flash Flood	$172,000 initial estimate	6-8 inches of rain fell in 2 hours causing damage to county roads and bridges at 26 locations. Initial estimate is preliminary and based on materials costs only.

Sources:
Hisdahl, Mistica. County DES Coordinator.
McCone County PDM Plan Draft 2003.
"Storm Data and Unusual Weather Phenomena" June 1996-March 2005, NOAA

Vulnerability and Potential Loss Estimates

Based on past history, there is continued probability that flooding will occur in the future in McCone County. Participants in the planning process indicated flooding has a moderate to high probability of occurrence in their county.

The following examines the vulnerability and loss estimates for the following specific flood hazards:

- **Town of Circle**
- **Dams and Dam Failure**

Circle

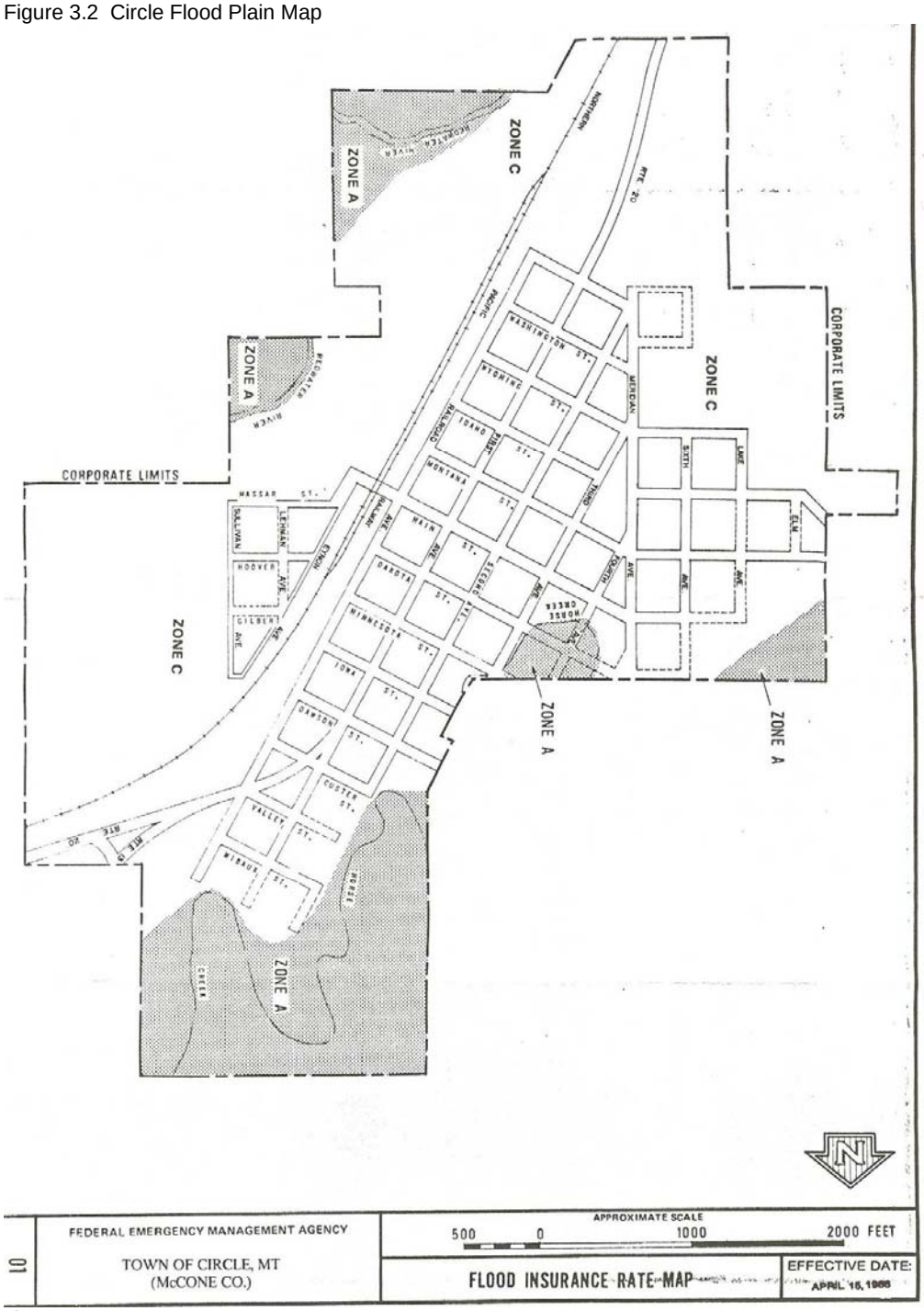
The town of Circle participates in the national flood insurance program. As part of the program, FEMA has prepared flood insurance studies and prepared Flood Insurance Rate Maps (FIRMs) showing special flood hazard areas in Circle.
Circle has one flood insurance policy in force with a value of $50,000. (Heddin)

Maps prepared by FEMA indicate the area of the 100-year flood designation. The 100-year flood designation applies to the area that has a 1% chance on average of flooding in any given year. The 100-year flood is also referred to as the base flood, a national standard that has been adopted for the National Flood Insurance Program (NFIP). (FEMA, *Understanding Your Risks)* There is actually a range of floods that could occur, other than just the 100-year flood. For example, an "annual flood" occurs much more frequently and produces less damage than a 100-year flood. The 100-year flood would produce much greater damage but occur less frequently.

Flooding in Circle, June 2005

Photo Courtesy of Tanja Fransen

Figure 3.2 Circle Flood Plain Map



Source: FEMA

The town of Circle includes portions of the 100 year floodplains of Redwater Creek to the southeast and Horse Creek to the west and northwest. These areas are shown as "Zone A" in Figure 3.2. Zone A is primarily undeveloped, but does include a few residences and commercial property.

Table 3.8 provides estimates of flood losses, based on existing development. The flood plain area is in an established portion of town with some limited potential for in-fill development in the future. (Past trends indicate newer development on the fringes of the town, rather than in the town center.) In addition to the costs shown in the table, there could also be losses from business interruption, and repair costs for sewage distribution, water supply, and storm drain facilities if any repairs are necessitated.

Table 3.8 Estimation of Potential Flood Loss in Zone A of the 100-year Flood Plain in Circle

Description	Market Value	Estimated % located in floodplain	Total vulnerable to Risk	50% loss	10% loss
Residential	6,999,951	2%	$139,999	$ 70,000	$14,000
Commercial	3,673,739	5%	73,475	36,737	7,347
Railroad property	286,003	0%	0	0	0
Business Personal Property	2,393,838	1%	23,938	11,969	2,394
Town Roads	$60,000/city block	Estimate 4 blocks of town roads	240,000	120,000	24,000
Total			$477,412	$238,706	$47,741

Sources:
Montana Department of Revenue for tax year 2004 for property values
Kuntz, Perry. Circle Public Works.
Hisdahl, Mistica. County DES Coordinator.

Dams and Dam Failure

The National Inventory of Dams lists 125 dams in McCone County. Only the Fort Peck Dam is classified as a high hazard dam. Eight are classified as significant, and the remaining dams are classified as low hazard. (National Inventory of Dams website)

Table 3.9 Hazard Categories for Dams in McCone County

Hazard Category	Number of Dams in McCone County
High	**1**
Significant	**8**
Low	**116**
Undetermined	**0**
Total	**125**

Source: National Inventory of Dams
Definitions:

High: Where failure or misoperation will probably cause loss of human life.
Significant: where failure or misoperation results in no probable loss of human life but can cause economic loss, environmental damage, disruption of lifeline facilities, or impact other concerns.
Low: Where failure or misoperation results in no probable loss of human life and low economic and/or environmental losses. Losses are principally limited to the owner's property.

In addition, there may be other dams upstream of the county boundaries that may pose risks for county residents. One example is the high hazard dam on the West Fork of Duck Creek in Prairie County. The Bureau of Land Management is listed as the owner/operator. As a high hazard dam, it is required to be inspected at least once every five years and to have an Emergency Operations Plan. The dam is upstream of the community of Brockway in McCone County.

More costly damages associated with significant hazard dams can include roads and bridges. (Siroky)

Summary

Table 3.10 summarizes some of the potential losses that might occur from flooding in McCone County. Data from the Spatial Hazard Events and Losses Database for the United States (SHELDUS) identified 10 flood events between 1960 and 2000 with totals of $453,657 in property damage and $1.3 million in crop damage.

Table 3.10 Summary of potential loss impacts from flooding in McCone County

Type	Description	Notes
Agricultural	**Total loss, reduced production**	**SHELDUS data indicates costs of $384,615 for a single incident in McCone County**
	Damage to equipment and buildings and potential harm to livestock	
Residential	**Potential loss or damage to homes**	**$42,600 (median value of McCone County housing unit in 2000)**
Businesses	**Damage to buildings, interruptions to business**	
Highway	**Potential for inundation, weather-related accidents**	
Roads, culverts and bridges	**Washouts and road damage, roads closed and potential for difficulty with emergency service response**	**Costs of replacing county roads in flooded areas could be as high as $90,000 per mile plus the additional cost of culverts and drainage facilities**
Emergency Services	**Potential for difficulties in reaching people in need if roads are out**	**Identified as an issue at the steering committee meetings**

Sources:
SHELDUS data, U.S. Census Bureau

Hazardous Materials/Transportation Related Accidents

Hazardous materials are chemical substances, which if released or misused, can pose a threat to the environment or health. Hazardous materials come in the form of explosives, flammable and combustible substances, poison, and radioactive materials. These substances can be released because of transportation accidents, pipeline releases or accidents, mechanical or human error at various facilities. (Montana Multi-Hazard Mitigation Plan) A hazardous material incident could occur anywhere in McCone County.

As many as 500,000 products pose physical or health hazards and can be defined as "hazardous chemicals." Nationwide, most discharges are from fixed facilities (52%) and discharges from mobile facilities (railroads, trucking, etc.) are about 18%. (Montana Multi-Hazard Mitigation Plan)

Based on information received at the planning meetings, issues of concern for McCone County include hazardous spills of all types, including transportation-related spills.

Transportation

Transportation facilities in McCone County include roads and highways, railroad, and pipelines.

The highest annual average daily traffic (AADT) counts in McCone County, as collected by the Montana Department of Transportation, are on Highway 200 between Montana and Main in Circle. Average annual daily traffic counts for 2003 were 2,000 vehicles per day. (Cook)

There is no longer any railroad serving McCone County.

The Williston Basin Pipeline crosses the county. (McCone County PDM Plan Draft 2003)

There is a public airport in McCone County at Circle.

Fixed Sources

Fixed sources include non-mobile machinery, refineries, manufacturing plants, and numerous other fixed facilities. In McCone County, fixed facilities include the anhydrous ammonia facilities, the water treatment facility in Circle, and smaller fixed facilities including gas stations, farm and ranch supply facilities, etc.

Historic Occurrences

The National Response Center is the national point of contact for reporting oil and chemical spills in the United States. Data for McCone County from the National Response Center for the period 1990 to 2004 indicated a total of 6 reported incidents, of which four were associated with the Fort Peck Power Plant, one was a fertilizer incident in Circle, and one was an "unknown sheen" on land near Weldon.

The Montana DEQ also keeps a data base of reported incidents. The data are organized somewhat differently than that of the National Response Center website. DEQ spill data for McCone County for the period from January 1997 through April 15, 2005 indicated a total of 11 spill reports. Four were related to traffic accidents the others were at fixed facilities. Of the 11 spills, 6 were diesel, oil, or other refined oil product, one was concentrated orange juice (spilled when a truck trailer overturned, one was pesticide, two were fertilizer, and one was mineral oil. (Coleman)

There were 15 plane crashes in McCone County between 1965 and 2000. Two of these crashes resulted in fatalities. (McCone County Draft PDM Plan 2003)

Vulnerability and Potential Loss Estimate

McCone County has potential for hazardous materials related accidents from both fixed and mobile sources.

Hazardous materials incidents can result in:

- **injury or loss of life**
- **damage to structures (e.g., explosions)**
- **business interruption (e.g., during evacuations)**

Engine from an airplane crash (ca. 1998-1999)

Photo Courtesy of Norman Parrent, State DES

Between 1982 and 1991, there was an annual average of 6,774 hazardous materials transportation incidents nationwide that resulted in 10 deaths and 436 injuries. The most common type of transportation hazardous material incident is from highway crashes, followed by railroad incidents. (Montana Multi-Hazard Mitigation Plan)

Although there is no rail service in McCone County, participants at the steering committee meetings expressed some concern about rail accidents across the Missouri River that could potentially result in hazardous materials transported via the environment (water or air) to McCone County. Participants also expressed concern about similar effects from a major plane crash at the airport in Fort Peck or Glasgow.

The Billings Gazette cited statistics from the Association of American Railroads that 99.99% of hazardous materials that travel by rail make it safely. (February 28, 2005) Still the small percent can result in serious

consequences. For example, an April 1996 rail crash in Alberton, Montana, resulted in the second largest chlorine spill in the history of the nation. One death and the evacuation of 1,000 people resulted. In February 1998, 48 rail cars rolled backward and downgrade into Helena. The crash caused an explosion that forced the evacuation of 2,000 people and cost $6 million. (Montana Multi-Hazard Mitigation Plan)

Hazardous material events can vary from relatively small spills and leaks to major events. Clean-up and damages are typically borne by the responsible party, but in some cases, effects can be widespread and far-reaching with public cost implications. A single incident can have serious effects. Economic costs could be in millions of dollars as illustrated above.

Other transportation-related accidents, such as the historical airplane crashes in McCone County, have the potential for non-hazardous materials effects, including injuries, fatalities. In addition, there is also the potential for damage to structures, facilities, and other assets.

Insect Infestations and Disease

Insect infestations that can affect McCone County can include mosquitoes, grasshoppers, and other insects that affect humans, livestock, and crops. The Steering Committee identified West Nile Virus, rabies, anthrax, and sawfly as issues in McCone County. Insect infestations and/or disease could occur anywhere in the county.

Generally, there are any number of insects, pests, and diseases that could harm humans, livestock, crops, and the economy of McCone County. Residents of McCone County have access to information and assistance on these issues through a number of local (Agricultural Extension, County Public Health), state (e.g., Montana Departments of Health and Human Services, Agriculture, and Livestock), and federal programs.

West Nile Virus

West Nile Virus can cause serious illness and death in humans, horses, and birds. The following was extracted from the Montana Department of Health and Human Services website in May of 2005:

> **West Nile virus is carried primarily by birds but can be transmitted by mosquitoes to humans, horses, and some other animals. The first documented case in the United States occurred in New York in 1999, and the disease has since spread westward into nearly every state. Only Alaska,**

Hawaii, and Washington have so far been virus-free, according to the U.S. Centers for Disease Control and Prevention (CDC).

Montana's first confirmed case of West Nile virus involved a horse in Shepherd in late August 2002.

Anthrax

Anthrax can cause severe, sudden illness and death. The following was extracted from the Montana Department of Livestock website in May of 2005:

All mammals appear to be susceptible to anthrax to some degree, but ruminants such as cattle, sheep, and goats are the most susceptible and commonly affected, followed by horses, and then swine.

The presence of the disease depends on two factors working together:

- **the presence of anthrax spores in the soil,** and
- **suitable weather conditions**

The bacteria grow and contaminate the surface soil and grass after periods of wet, cool weather, followed by several weeks of hot, dry conditions. Outbreaks in animals usually end when cool weather arrives and the bacteria become dormant. Animals are usually infected by ingesting soil-borne spores, such as in contaminated food or water.

Rabies

Rabies causes serious illness and death in humans and animals. Rabies is generally transmitted by the saliva of infected animals. There is no treatment for rabies after clinical signs appear. Most exposures occur through the bite of a rabid animal. (Montana Department of Livestock)

Sawfly

Sawfly larvae feed inside the stems of wheat, weakening the stems until they break or bend over in the wind and fall to the ground, becoming unharvestable. (Montana Department of Agriculture)

Historic Occurrences

There were three equine cases of West Nile Virus in 2002, two positive human cases in 2003 and one equine case, and no reported human or equine cases reported in 2004. (Montana Department of Health and Human Services)

There were two cases of anthrax diagnosed in cattle in Montana in the summer of 1999, one in May and one in August. The two incidents were unrelated, having occurred far apart from each other in isolated parts of eastern Montana. Both cases were contained early and led to no additional problems. Prior to 1999, the last case of naturally occurring anthrax in Montana was reported in 1985. The organism naturally occurs in the soil in many parts of Montana, as well as other states.

Over 60 cases of rabies are diagnosed annually in Montana, with most cases occurring in skunks and bats. In 1999, two swine from McCone County tested positive for rabies.

Sawfly has been a persistent and costly pest to Montana's wheat producers, causing as much as $20 million to $30,000 million in losses annually across the state. (Montana Department of Agriculture)

Vulnerability and Potential Loss Estimate

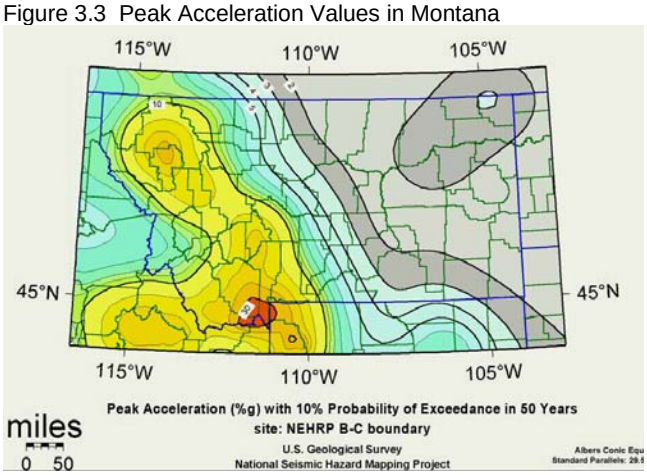
McCone County remains vulnerable to a number of insect-borne and other diseases that can affect animals, crops, and humans. Potential direct losses can include:

- **human sickness and death**
- **sickness and death in domestic and wild animals**
- **reductions in crop yields**

Earthquakes

An earthquake is "a sudden motion or trembling that is caused by a release of strain accumulated within or along the edge of Earth's tectonic plates. Coomon effects of earthquakes are ground motion and shaking, surface fault ruptures, and ground failure." (Understanding Your Risks)

Figure 3.3 Peak Acceleration Values in Montana



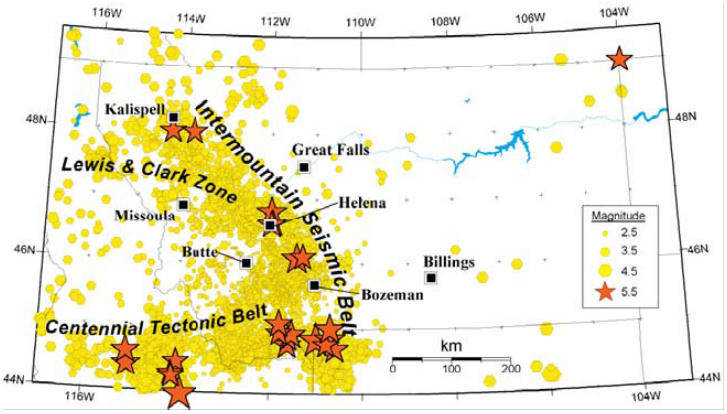
Source: USGS, 2004a.

The FEMA guidebook "Understanding Your Risks: Identifying Hazards and Estimating Losses" recommends that if there is an area of 3% g peak acceleration or more then the hazard should be profiled more closely. Earthquake severity is often expressed as a comparison to the normal acceleration due to gravity and is expressed as "g" force. A 100% g earthquake is very severe. The oblong shape in the northeastern corner of Montana is a band of 3% g peak acceleration. A portion of this area cuts across most of McCone County, as shown in Figure 3.3.

<u>Historic Occurrences</u>

Only one earthquake of a magnitude of 5.5 (Modified Mercalli Scale) or greater has been recorded in the northeastern part of Montana since 1900. The most seismically active portion of the state is in the southwestern Montana as shown in Figure 3.4. Figure 3.4 also shows smaller historic earthquakes in northeastern Montana. (State of Montana Multi-Hazard Mitigation Plan)

Figure 3.4 Intermountain Seismic Belt



Source: MBMG, 2004.

Vulnerability and Potential Loss Estimate

The Montana Multi-Hazard Mitigation Plan identifies earthquake losses for the 10 Montana counties with the highest potential for earthquake damage. All of these counties were in the western portion of the state. Annualized loss estimates ranged from $225,000 in Madison County to $2.3 million in Gallatin County. Estimates were made using the HAZUS (beta v 28.b) Earthquake model developed by the Federal Emergency Management Agency (FEMA).

Using that methodology, the annualized loss estimate for McCone County as a result of an earthquake would be less than $225,000. (Montana Multi-Hazard Mitigation Plan)

Volcanic Eruptions

The state of Montana is within a region with potential for volcanic activity. The two volcanic centers affecting Montana in recent geologic time are: 1) the Cascade Range of Washington, Oregon and California; and 2) the Yellowstone Caldera in Wyoming and eastern Idaho.

Volcanic eruptions are generally not a major concern in Montana due to the relatively low probability (compared with other hazards) of events in any given year. Volcanic eruptions in the Cascade Mountains are more likely to impact Montana than Yellowstone eruptions, based on the historic trends of past eruptions. (Montana Multi-Hazard Mitigation Plan)

The primary effect of the Cascade volcanic eruptions on Montana would be ashfall. According to the Montana Multi-Hazard Mitigation Plan, ashfall can create significant damage including:

- **Short-circuiting and causing failure of electronic components, especially high-voltage circuits and transformers**
- **Interrupting or preventing radio and telephone and radio communication**
- **Damage to air filters and affecting internal combustion engines**
- **Making roads, highways, and airport runways slippery and treacherous**
- **Reducing visibility to near 0**
- **Causing crop damage depending on the thickness of ash, type and maturity of plants, and timing of subsequent rainfall.**
- **Posing health risks, especially to children, the elderly, and people with cardiac or respiratory conditions**

Historic Occurrences

After the eruption of Mount St. Helens in May 1980, a coating of up to 5.0 mm (0.2 inches) of ash fell on Western Montana. Ash deposits were thickest in the western portions of the state, tapering to near zero on the eastern part of the state. (Montana Multi-Hazard Mitigation Plan)

Vulnerability and Potential Loss Estimate

The Montana Multi-Hazard Mitigation Plan assesses vulnerability as follows:

> **Due to the numerous variables involved, it is difficult to assess the vulnerability of the State of Montana to a volcanic eruption. The primary hazard to which the State may be vulnerable at some future time, is ashfall from a Cascade volcano. The effect would depend on the interaction of such variables as source location, frequency, magnitude and duration of eruptions, the nature of the ejected material and the weather conditions. Therefore, the entire state may be considered vulnerable to ashfall to some degree in the event of a volcanic eruption.**
>
> **Although the probability is minimal, there is the potential for a catastrophic eruption in the vicinity of Yellowstone National Park that would have very serious consequences for Montana and neighboring states. Again, assessing the vulnerability of the State to such an event is impossible due**

to the numerous variables and uncertainties that must be considered.

Costs of a major ashfall event could be in the millions. It is estimated that the ashfall cost Missoula County nearly $6 million in cleanup and lost work time. The statewide cost has been estimated at between $15 and $20 million. (Montana Multi-Hazard Mitigation Plan)

Assets and Vulnerable Populations that Could Be Affected

This section provides more information on physical, social, and economic assets in McCone County that might be affected by a hazard. With the exception of the mapped 100-year floodplains in Circle, the identified hazard area is the entire county.

Any hazard might affect any of the approximate 1,977 individuals living in McCone County (as of the 2000 census). Any hazard might also affect any of the 1,087 housing units in McCone County, (of which approximately 399 are in Circle), the estimated 59 private non-farm business establishments, or 496 farms/ranches in McCone County. With the exception of the potential development of a coal mine north of Circle (with potential for related commercial and residential development), participants in the planning process did not identify any other major future building, infrastructure, or critical infrastructure projects.

In addition, a disaster could affect critical facilities**, facilities essential to health and welfare and especially important following hazard events. Critical facilities include medical facilities, transportation systems, utility systems (such as potable water and wastewater distribution systems), and high potential loss facilities.**

Social assets include vulnerable populations**, people who may be at special risk for a hazard. Identifying these populations assists in providing emergency assistance if and when it may be needed during a disaster.**

Critical Facilities

Table 3.11 identifies critical facilities in McCone County and their estimated replacement value in the event of a complete loss. It is intended to provide an initial yardstick measurement of loss because actual damages could range from relatively minor damage to complete destruction, and interruption of service or business. Costs of providing services in temporary locations and loss of business revenue would be additional to the replacement costs.

Power outages were identified at the public steering committee meetings as a serious issue for critical facilities and for general residents in McCone County. Hazards most likely to cause serious damage to power and communications facilities are those that will affect overhead transmission. The key hazards are high winds and ice. Flooding can affect a pole or poles in a few places, but high winds and ice can take out hundreds of poles at a time. Power outages have lasted up to a few days at various locations in the county and have resulted in damaged appliances and other costs for county residents.

Table 3.11 Critical Facilities in McCone County

Description	Insured/Replacement Value	Notes
Health/Senior Facilities		
Medical Assistance Facility And Nursing Home	**$4.8 million**	
Senior Citizen Center	**$65,000**	
Description	**Insured/Replacement Value**	**Notes**
Schools		
Circle High School	**$4.4 million**	
Redwater School	**$1.9 million**	
Bo-Peep Elementary	**$728,000**	
Vida Elementary School	**$600,000**	
Band Building	**$168,000**	
Auto Shop	**$836,000**	
Other (Storage buildings, equipment, bleachers, etc.)	**$93,000**	
McCone County Operations		
Court House	**$3.1 million**	
Vejtassa Building	**$1.3 million**	**Houses the sheriff's office, volunteer fire department and their equipment, dispatch, county extension agent, and city/county attorney**
Ambulance Barn	**$19,000**	
Town of Circle Operations		
Town Hall/Shop and other facilities at 105 Main St.	**$480,000**	
Sewage Lagoons and Collection System	**$1.6 million**	
Water Treatment Plant	**$3 million**	
Transportation Infrastructure		
Circle Streets	**$60,000 per city block**	
County Roads	**$90,000 per mile**	
County Bridges	**$180,000/each**	**For average county bridge**
Highway	**$500,000-$1million/mile**	
Highway Bridges	**$5-10 million/bridge**	
Power and Communications		
Transmission line	**$25,000-$28,000 per mile**	**For a three phase power line**
Telecommunications Property (assessed value)	**$109,000**	**Telephone lines are virtually all underground and are not very vulnerable to most natural hazards**
Rural Electric	**$11.9 million**	

(assessed value)		
Utilities (assessed value)	**$1.4 million**	
Major Employers/Businesses		
McCone Electric	**Values included under "Power and Communications-Rural Electric" above**	
Description	**Insured/Replacement Value**	**Notes**
Mid Rivers Communication	**Values included under "Power and Communications-Telecommunications" above**	**Employs 50 people in Circle**
Farmers' Elevator		
Williston Gas Pipeline and pumping Stations	**$100,000-$500,000 for costs of replacing a compressor station**	**One compressor station near Vida Pipeline is underground—major potential problem is related to 3rd party digging rather than natural hazards—if punctured or ruptured, costs include cost of lost gas and cost of repairs**
Main Street Businesses (assessed value)	**$2.4 million**	
Historic and Cultural		
Library	**$961,000**	
Museum	**$2.3 million**	

Sources: Various facilities, local governments, property tax records, etc.
Notes:

- **Replacement values include contents wherever that information was available**
- **For values less than a million dollars, numbers rounded to thousands**

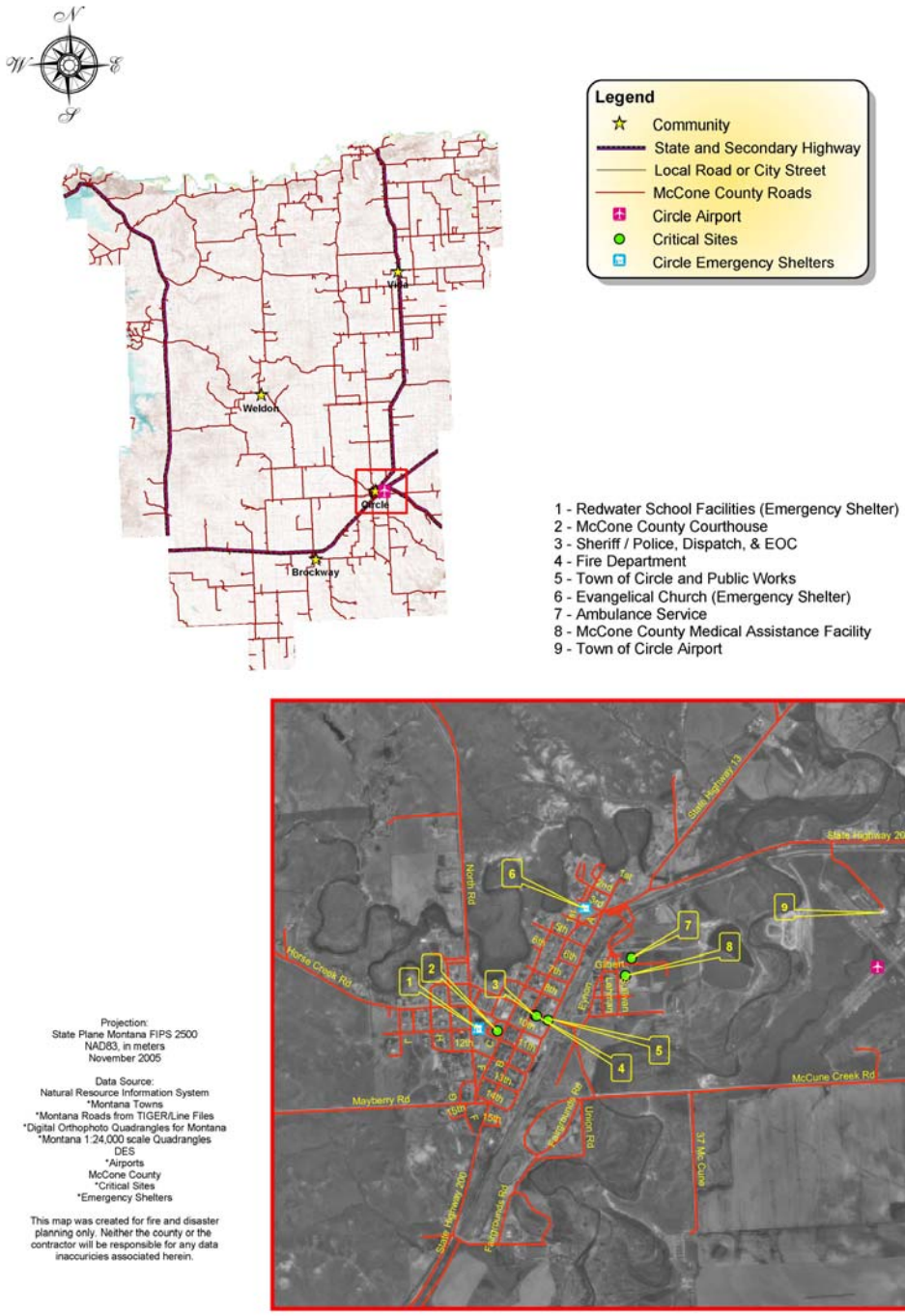


Figure 3.5
Select Critical Facilities in McCone County

Vulnerable Populations

The following were identified by the steering committee as populations that may require special care or assistance during or after a disaster:

- **Elderly—nursing home, senior center**
- **Children/Schools**
- **Handicapped/disabled**
- **Homebound**

Elderly

There is a nursing home and senior citizen center in McCone County in the town of Circle. According to the 2000 census, there were 374 persons in McCone County 65 years or older (19% of the total populations)

Circle Medical Assistance Facility and Nursing Home

Photo by Anne Cossitt

Children/Schools

According to the 2000 census, there were 491 children under the age of 18 in McCone County. Schools are listed in the "Critical Facilities" table above.

People at Risk Medically and Homebound

Currently, there is no roster in the county of non-institutionalized (e.g., hospitalized or in a nursing home or assisted living facility) persons with

medical issues. Developing such a list and maintaining it is a major undertaking and one that is being initiated by the public health nurse and others in the county.

The 2000 census reported that there were 299 non-institutionalized persons in McCone County with a disability.

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CHAPTER 4: MITIGATION STRATEGY

This chapter identifies the "blueprint" for reducing losses associated with the hazards described in Chapter 3. The mitigation strategy for wildfire is addressed in Chapter 5.

This chapter includes:

- **a short description of the** methodology **used to develop the mitigation strategy, which is also discussed to some extent in Chapter 2;**
- **the** Goals and Mitigation Actions
- Project Ranking and Prioritization **and**
- Implementation **and administration of the plan**

Methodology

The initial goal statements and a preliminary list of projects were formulated at the steering committee meeting/public meeting held in Circle on April 27, 2005. Goals and projects were drafted as presented in this chapter during the meeting held in Circle on May 25, 2005. Projects were prioritized during the May 25 meeting.

After an overview of the hazard risk assessment, the meeting facilitator asked participants to consider goals to address the hazards, starting with the highest priority hazards identified at the previous meeting. Participants discussed a variety of mitigation actions, and some were eliminated because they had no support and other new actions were added. Participants discussed feasibility, technical difficulties, and other considerations as they worked through the goals, objectives, and projects.

Goals and Mitigation Actions

The following goals were developed in response to the hazards of most concern to residents of the county.

Participants felt that the best way to reduce the effects of a number of hazards was to provide preparedness information to residents. Summer storms, hail, wind events, winter storms, ice storms, tornadoes, earthquakes, volcanic events, and plane crashes all basically fell into this category. Projects for these types of hazards fall under Goal Three: "Improve the warning systems and public preparedness for disasters."

The following projects would be for both new and existing buildings and infrastructure where applicable. For example, assessing road capacity to handle flood events would apply to existing public roads as well as any new public roads that may be developed in the future.
The incorporated jurisdiction of Circle has essentially the same risk as elsewhere in the county for most hazards and it is understood that the following goals and actions will generally apply to the town of Circle as well as county-wide. The town of Circle, however, unlike the rest of the county, has Federal Flood Insurance Rate Maps and is eligible to participate in the National Flood Insurance Program. Through the planning process, participants commented on particular concerns related to water supply for the town of Circle. That concern is addressed below with a specific action for Circle regarding water conservation.

Goal One: Reduce flood damage.

Objective 1: Reduce effects of flooding of the Redwater and Missouri Rivers, and of other drainages in McCone County.

Mitigation Actions/Projects:

1.1.1. Look at county participation in the national flood insurance program and assess cost-benefit before initiating.
1.1.2. Examine methods to reduce the effects of dam failure, including public education for dam owners in the county.
1.1.3. Identify the alert procedure to be used by the Corps of Engineers in the event of Ft. Peck Dam Failure and identify any improvements that could be made.
1.1.4. Assess road capacity to handle flood events and mitigate as necessary.

Bridge Repair after June 6, 2005 Flooding in McCone County

Photo courtesy of Tanja Fransen

Goal Two: Reduce the economic impacts of drought.

Objective 1: Encourage water conservation.

Mitigation Actions/Projects:

2.1.1 Encourage producers to continue to use and expand use of no-till, reduced till to minimize moisture loss.
2.1.2 Provide education on water conservation measures for residents of the county and of the town of Circle.
2.1.3 Develop a comprehensive approach to replacing leaky water supply lines in the town of Circle.

Circle Water Tower

Photo by Anne Cossitt

Goal Three: Improve the warning systems and public preparedness for disasters.

Objective 1: Expand use of NOAA weather radios.

Mitigation Actions/Projects:

3.1.1 Focus efforts first on ensuring that critical facilities and vulnerable populations obtain weather radios, then expand efforts for weather radios in all homes in McCone County.

3.1.2 Use the NOAA system and weather radios for announcements of all emergencies/disasters, not just weather-related disasters.
3.1.3 Provide public education on the need for weather radios and how to use them.

Objective 2: Expand public information methods and information on weather and other disasters.

Mitigation Actions/Projects:

3.2.1 Develop a system to provide information to new people moving into the county who may be unaware of disaster/emergency response systems.
3.2.2 (Examples include brochures or information sheets that could be included with electric company "new customer" packets; telephone, town water or other bills, or otherwise sent to county residents).
3.2.3 Consider development of a county web site to reach out to all in the county with public announcements, including emergency/disaster information.
3.2.4 Provide public education on how to prepare for various types of emergencies/disasters.

Goal Four: Reduce effects of hazardous material spills.

Objective 1: Continue to provide equipment and training.

Mitigation Actions/Projects:

4.1.1 Acquire HAZMAT spill kits for Fire Department and continue to ensure staff training in use of the kits.

Goal Five: Improve county residents' ability to respond to power outages.

Mitigation Actions/Projects:

5.1 Provide public education regarding general preparedness for power outages.
5.2 Identify mechanisms to reduce health-related effects of power outages for especially vulnerable populations—the elderly, persons on oxygen or other medical equipment requiring a power source, and others.
5.3 Encourage McCone Electric to provide information on how to hook-up and maintain stand-by electric units to the owners of such units and to identify periodic "triggers" for providing such information and encouraging periodic maintenance checks.

Goal Six: Reduce potential for spread of vector-born and other serious diseases.

Mitigation Actions/Projects:

6.1 Assess the need for and extent of a mosquito control district.

Project Ranking and Prioritization

Ranking projects helps to set the local priorities for accomplishing the plan. Resources to accomplish objectives can be limited in any planning process and in rural Montana counties, such as McCone County, this can be especially true. Prioritizing helps to identify which projects to start on, given that there are typically far more projects than can be addressed at any one time.

The mitigation projects were prioritized by the participants at the final planning meeting held on May 26, 2005, in Circle. Projects were ranked by high, medium, or low, by consensus of the meeting participants based upon subjective assessment against the following criteria:

- **Number of lives at risk**
- **Value of property at risk**
- **Infrastructure at risk**
- **Risk of business interruption/loss**
- **Cost/benefit of the project.**

Table 4.1 displays the mitigation actions and the priorities assigned to each, as well as potential resources for implementing the action.

Table 4. 1. Mitigation Project Prioritization

Project Number	***Project description***	***Rank***	***Potential Resources***
GOAL ONE	Reduce flood damage.		
1.1.1.	**Examine county participation in national flood insurance program.**	**L**	**Town, County, DES, FEMA,**
1.1.2.	**Examine methods to reduce dam failure, including public education**	**L**	**Town, County, DES, FEMA, DNRC**
1.1.3.	**Identify alert procedure for Fort Peck Dam failure and identify any potential improvements**	**L**	**Town, County, DES, Bureau of Reclamation, FEMA, DNRC**
1.2.1.	**Assess road capacity to handle flood events and mitigate as necessary**	**H**	**Town, County, DES, FEMA,**
GOAL TWO	Reduce the economic impacts of drought.		
2.1.1	**Encourage producers to continue to use and expand methods to minimize moisture loss.**	**H**	**County, Extension, USDA, MT Department of Agriculture**
2.1.2.	**Water conservation education**	**L**	**Town, County, Extension**
2.1.3.	**Address leaky water supply lines in town of Circle**	**H**	**Town**
GOAL THREE	Improve the warning systems and public preparedness for disasters.		
3.1.1	**Work to expand acquisition and use of NOAA weather radios, focusing first on critical facilities and vulnerable populations.**	**H**	**Town, County, County Public Health, DES, FEMA**
3.1.2.	**Use NOAA radio system for emergency disaster announcements of any type**	**H**	**Town, County, County Public Health, DES, FEMA, NOAA**
3.1.3.	**Provide public education on need for and how to use weather radios**	**H**	**Town, County, County Public Health, DES, FEMA, NOAA**
3.2.1.	**Develop mechanisms to inform new residents of disaster response systems.**	**H**	**Town, County, County Public Health, DES, FEMA, Chamber of Commerce, private businesses, non-profits**
3.2.2	**Consider county website to disseminate emergency/disaster information**	**M**	**Town, County, County Public Health, DES, FEMA**
3.2.3	**Provide public education on how to prepare for various types of disasters**	**H**	**County DES, County Public Health, DES, FEMA, NOAA**

Project Number	*Project description*	*Rank*	*Potential Resources*
GOAL FOUR	Reduce effects of hazardous material spills.		
4.1.1	**Acquire Hazmat spill kits and continue to ensure staff training in use of the kits.**	**H**	**Town, County, County Public Health, Fire Departments, DES, FEMA**
GOAL FIVE	Improve county residents' ability to respond to power outages.		
5.1	**Provide public education on power outage preparedness.**	**H**	**Town, County, DES, FEMA, energy companies**
5.2	**Identify mechanisms to reduce health-related effects of power outages for especially vulnerable populations**	**H**	**Town, County, DES, FEMA, County Public Health, energy companies**
5.3	**Encourage McCone Electric to provide information on how to hook-up and maintain stand-by electric units**	**H**	**Town, County, DES, FEMA, McCone Electric**
GOAL SIX	Reduce potential for spread of vector-born and other serious diseases		
6.1	**Assess need for and extent of a mosquito control district.**	**H**	**Town, County, County Public Health, DES, FEMA**

Project Implementation

The projects listed above are the means by which the town and county intend to realize the goals to become more disaster resistant. Accomplishing the projects will be dependent on funding, staff, and technical resources from a variety of sources including the town, the county, the state and federal government, not-for-profits, and the business community.

Some of the projects can be undertaken by the county within existing resources. One example of this would be to examine county participation in the national flood insurance program. Another would be to provide information on how to prepare for various types of disasters.

Some of the projects can be completed by the town or county with additional funding. The amount of funding needed depends on the project. One example would be the project to address the leaky water supply pipes in the town of Circle. This would take financial resources that would likely require additional funding.

Some of the projects will require a public-private partnership to accomplish. An example of this would be working with McCone Electric to

provide information on how to properly install and maintain stand-by electric generators.

Some projects may require expertise not available in the county. For example, identifying methods to reduce dam failure may necessitate expertise from outside the county.

Projects will be accomplished as resources, either at the local, state or federal levels, become available. Implementation of the plan will be the responsibility of the LEPC and the McCone County Disaster and Emergency Services Coordinator acting on the behalf of the town of Circle and McCone County. Plan implementation also depends on the willingness of private corporations such as McCone Electric, and not-for-profit organizations such as the American Red Cross to participate in specific mitigation actions and projects.

In selecting projects to compete for funding whether it is existing internal funding or funding from state and federal sources, emphasis should be placed on the relative benefits compared to the cost of the project. Criteria such as number of people educated or protected and the dollar value of assets mitigated from potential hazards should be considered and weighed. Where possible a basic cost benefit and/or value analyses should be completed during the planning of the project.

The town and county understand that while completion of the plan will make them eligible to compete for additional funds, it is in the best interests of the local jurisdictions and residents to proceed with those projects that can be done within existing resources while exploring avenues to obtain assistance for those projects beyond local capabilities.

CHAPTER 5: COMMUNITY WILDFIRE PROTECTION

McCone County, Montana

Community Wildfire Protection Plan
Approval Signatures

McCone County Fire Warden and McCone Fire Department Chief

Date: 11/14/05 _____ _____
Jess Beery

McCone County Disaster and Emergency Services Coordinator

Date: November 14, 2005 _____
Mistica Hisdahl

Dept. of Natural Resources and Conservation, Eastern Area Land Office, Area Manager

Date: 12-6-05 _____
Rick Strohmyer

CHAPTER 5: COMMUNITY WILDFIRE PROTECTION

Executive Summary

This Community Wildfire Protection Plan (CWPP) was prepared as a part of McCone County's Pre-Disaster Mitigation (PDM) plan for the purpose of making the county more disaster resistant and better prepared to deal with wildfire when it strikes. The plan was written so that fire departments and other local government departments can use it as a stand-alone document, even though it is a chapter in the overall pre-disaster mitigation plan. The CWPP is written to meet the intent of the National Fire Plan objective to have communities or as in this case McCone County, assess the current situation and then develop and prioritize mitigation actions to address the values at risk. The plan takes the proactive approach of assessing risks and vulnerabilities, then identifying locally supported actions that can be implemented to prevent or eliminate the potential for loss and damage from a natural disaster. This plan meets the requirements for pre-disaster project funding and post-disaster assistance from the Federal Emergency Management Agency.

This CWPP is consistent with the national fire policy expressed in the National Fire Plan (NFP). The NFP was developed in August of 2000, "with the intent of actively responding to severe wildland fires and their impacts to communities while ensuring sufficient firefighting capacity for the future." (www.fireplan.gov) The NFP has fire key areas: 1) firefighting, 2) rehabilitation, 3) hazardous fuels reduction, 4) community assistance and 5) accountability. Federal agencies like the Bureau of Land Management are directed to assist communities that have been or are at risk from wildfire. The assistance for McCone County has come from the Rural Fire Assistance program in the form of funding for planning, training, equipment and education.

Collaboration between the local fire departments, DES Coordinator, local governments, Bureau of Land Management (BLM), Farm Services Agency (FSA) and Montana Department of Natural Resources and Conservation (DNRC) throughout this effort was key in producing this plan.

Fuel types vary from large stands of grasses, crops such as a hay fields, wheat, barley, and oats. There is sagebrush to scattered juniper to heavier concentrations of juniper in the western part of the county. Cottonwood bottomlands adjacent to the Missouri River also present some unique wildfire challenges. Fuel loading is light to moderate for most of the county. Wildfire ignitions in McCone County are both natural and human-caused. The dry climate coupled with the recent years of drought, wind, flashy fuels, remoteness and ruggedness of the county contribute to the

wildfire hazard. Poor access roads and long driving times often slow response times for the fire departments.

From the identification of hazards in the risk assessment, a mitigation plan was prepared which includes a strategic plan to decrease the county's risk to losses by wildfire.

This fire protection plan has two distinct parts, 1) risk assessment and 2) mitigation of those risks. The risk assessment identifies fuel hazards, values, and assets. It also presents a synopsis of the fire protection preparedness of the county. The mitigation section identifies goals, objectives, and projects to reduce or mitigate the wildfire risk.

Methodology

This risk assessment and mitigation plan was developed by using the following steps:

Hazards were evaluated as follows:

1. <u>Identify hazards that may occur.</u>

- **a. The contractor conducted meetings and discussions with community leaders (county commissioners, town officials, firefighters and county DES Coordinator)**
- **b. The first CWPP meeting was held in conjunction with the PDM meeting, so a variety of interests that were in attendance had an opportunity to provide input for the CWPP. (see sign-in sheet in chapter 2) During this meeting the attendees provided examples of past wildfires and their concerns for future incidents. This group then agreed to allow the Circle Fire Department to focus on the CWPP portion of the PDM (see meeting notes, 2-10-05).**
- c. A Core Group was identified during that first meeting with the key firefighters in the county.

Table 5.1 CWPP Core Group

Name	Title
Rick Johnson	Assistant Fire Chief
Roger Schara	Firefighter
Mistica Hisdahl	**DES Coordinator**

This Core Group was established to give the contractor a team of firefighters to provide local information about hazards and review the information the contractor was to prepare. They also provided some of the values at risk. After the first meeting a list of wildfire hazards were prepared by the contractor and sent to the Core Group for review and the validation was done at a second meeting.

d. **The contractor facilitated the second meeting and the priorities for protection were discussed and additional items and locations were added. A base map was prepared after this meeting and included the critical infrastructure, wildland urban interface, areas of lightning ignitions, storm patterns and fire equipment locations. (see meeting notes, March 29, 2005)**
e. **The contractor made subsequent phone conversations with members of the Core Group and County DES Coordinator helped to characterize the county's wildfire issues and fine tune information in the risk assessment.**
f. **Research by the contractor of other plans, websites, reports and newspapers.**

2. <u>Prioritize the hazards</u>.
a. **Hazards were given a preliminary priority at the first meeting.**
b. **During the second meeting there were additions made to the list and priorities were finalized.**

3. <u>Profile hazard events</u>.
a. **Through discussions with the Core Group and help from the DES Coordinator the most significant concerns for the county surfaced. Several key areas of higher probability were identified as well as some areas of potential life and property losses.**
b. **Obtaining data on historical fires and their locations.**

Mitigation measures were developed as follows:

The Mitigation Plan was developed by gathering ideas and information from the CWPP Core Group, the PDM Steering Committee, BLM, DNRC, the DES Coordinator and the contractor.

The draft CWPP-PDM document was made available in the offices of McCone County and the town of Circle, and the McCone County library. The comment period was open for 30 days beginning in September, 2005.

Following incorporation of the comments received, the plan was finalized.

Community Assessment

Area to be Evaluated

The entire county was evaluated for the Risk Assessment. Relatively low elevation, flat agricultural lands characterize the county with some badlands in the western portion. The northern boundary of the county is the Missouri River. The highest elevation in the county is 3440 feet. The Bureau of Land Management has approximately 200,808 acres of federal land in the county. There are 141,968 acres of land in the CRP. A portion of the Charles M. Russell National Wildlife Refuge's eastern boundary is in McCone County (the National Park Service has their own fire fighting crew for the refuge).

Circle is the largest community in the county with 644 people and the county seat. Other communities include Brockway, Vida, and a cluster of 5 homes about 10 miles west of Brockway. There are also cabin sites at the North and South Forks of Rock Creek. The Prairie Elk Hutterite Colony in Northern McCone County has a population of about 20. All of the communities except the area west of Brockway (which was not ranked) were ranked as moderate risk in the Communities at Risk in the Federal Register (Volume 66, #160, August 17, 2001). The Wildland Urban Interface (WUI) boundaries established by the fire department follows the standard one half mile buffer around each community. In addition to the named communities, the Fire Department established a WUI boundary around the cluster of homes about 10 miles west of Brockway located on Spur Road. The Circle Fire Department is responsible for the protection of the entire county, but noted that there are two powerhouses, a natural gas pumping station, Fort Peck Dam and NH3 facilities. The BLM and DNRC also have suppression capabilities with equipment and personnel.

For more detailed information about the characteristics of McCone County please refer to Chapter 1 (PDM) of this plan.

Historic Occurrences

The average numbers of fires per year responded to by the fire department is estimated at 55. The average fire size is estimated at 10-20 acres. In the last 25 years, several large fires occurred in the county.

Recent fires include: In 1999 at Halloween time a fire started in Roosevelt County, jumped the Missouri River and burned 10,000 acres (about 1200 acres in McCone County).

The Haber fire in 1994 was about 1200 acres.

In the mid 1970s a fire in Timber Creek burned approximately 1800 acres.

The Fire Department also reported that they have had circumstances with lightning storms where they have 5 or 6 fires starts at one time.

Information provided by the local firefighters indicates that their lightning fires occur mostly in the southern half of the county with the storm patterns moving generally from west to east. By extrapolating the information from the BLM from the past 30 years and information from the local firemen the probability for a large fire in the county is likely to occur three to five times per decade.

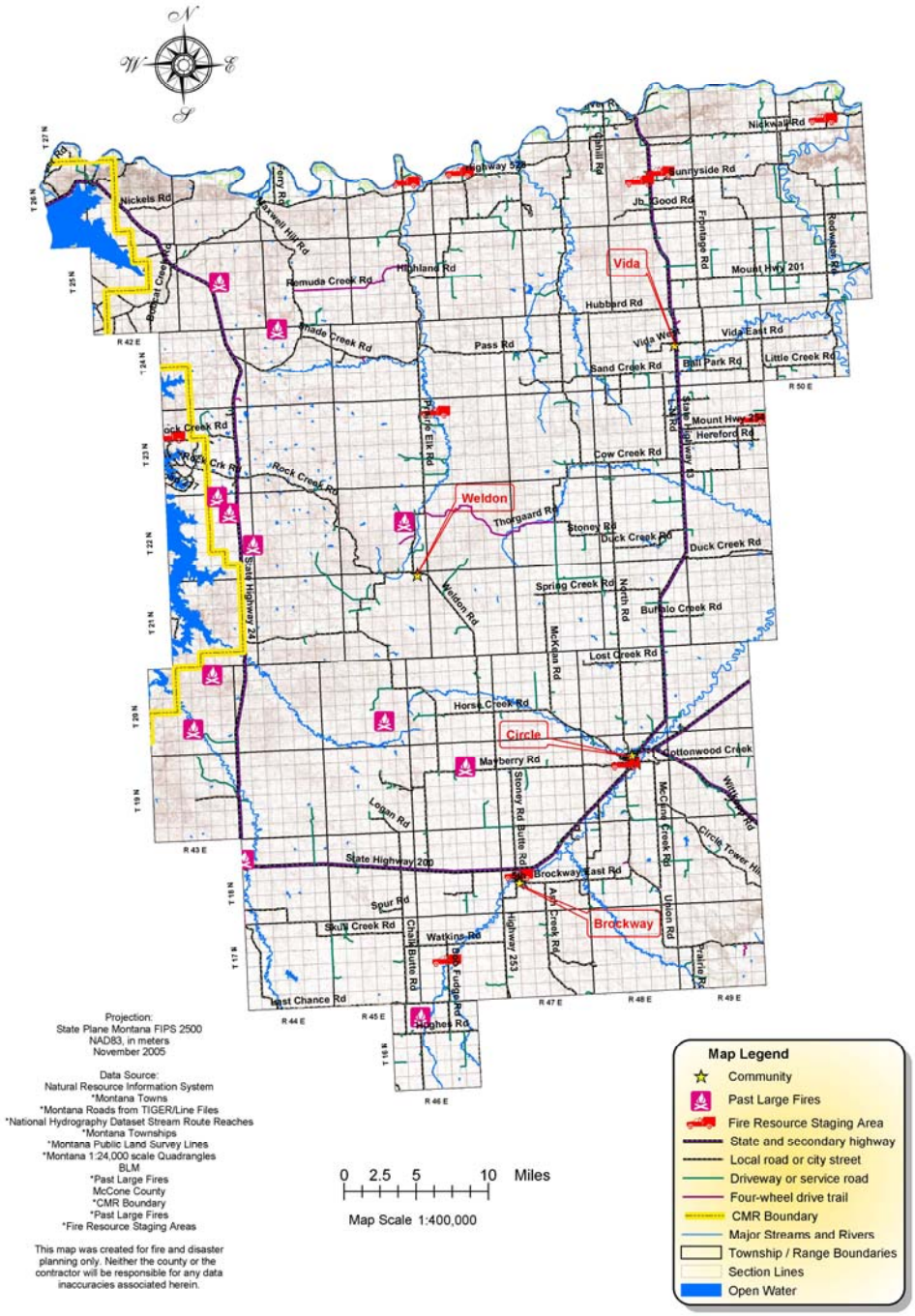


Figure 5.1
Fire Resources and Past Large Fires

Table 5.2 McCone County Fires on BLM lands over 100 acres in the past 30 years.

YEAR	FIRE NAME	CONTROLLED SIZE
1998	MCCONE	364.8
1980	TIMBER CRK	7680.0
1980	MENDENHAL	200.0
1983	MCGUIRE	500.0
1985	GERMAINE	100.0
1988	BUG CREEK	152.0
2002	LINE CREEK	9700.0

Source: Randy Schardt, GIS Specialist, BLM State Office, Billings

Individual Community Assessments

Circle
(Source: Roger Schara and Rick Johnson, Circle Fire Department)

Current Situation

This community is located in the southeastern portion of the county at the junction of State Highways 13 and 200. The assets protected by the fire department are all of the communities within the county including residences and clusters of homes in the area, downtown business districts, farms, ranches and oil and gas field facilities. Grasslands and fields of crops, which present a moderate risk in late summer or early fall, surround Circle. Within the city limits the risk of wildfire is low. CRP acres on many of the farms are a risk to wildfire ignitions both from farm machinery and lightning. There are places within the county with potential for large fires exist because of many contiguous acres of CRP. The Fire Department is very concerned about these areas because they can be very volatile under dry, windy conditions.

Future Development

There has been some new activity in the oil fields recently and the projected activity will remain high as long as fuel prices are elevated. There are new oil wells in the planning stages and some production has already begun. This activity is taking place in the northeastern part of the county. Additional construction and the related impacts of more oil field workers in the area will most likely increase the activity for the fire department.

About 17 miles west-northwest of Circle a coal-fired electric plant is being proposed for construction. If this facility is built, there will be additional needs for fire planning and for fire suppression. An estimate of an additional 150 families will be added to the area when the facility is in production (Roger Schara and Rick Johnson, Circle Fire Department).

Vida
(Source: Mistica Hisdahl, DES Coordinator, June 2005).

Current Situation

Vida is an unincorporated community with a population of about 50 people. The surrounding area is almost entirely cropland and the fire probability is low to moderate depending on the time of year and the dryness of the cropland. There is currently no oil activity near the community.

Future Development

The increased activity in the oil fields just north of Vida has started a trend of more activity for the fire department. Vida may be getting a new propane storage facility.

State Highway 13 looking north into Vida

Photo by Rand Herzberg

Brockway
(Source: Mistica Hisdahl, DES Coordinator, June 2005).

Current Situation

Brockway is also an unincorporated community with a population of about 25 (estimate provided by Mistica Hisdahl, DES Coordinator) It is located southwest from Circle near the junction of State Highways 200W and 253. Like Vida it is mostly surrounded by flat croplands and the fire risk is low to moderate. The greatest threat to the community would be when the crops are cured out and susceptible to human caused or lightning ignitions.

There is another small cluster of homes about 10 miles west of Brockway on Spur Road. There are seven families living in this location. The same kind of surroundings applies as Brockway.

Future Development

No major development is planned for either of these locations in the near future.

Highway
to
Phot

Assessment of Fuel Hazard

Vegetative Fuels

McCone County has basically three types of topography, flat lowland areas primarily used for agriculture, Missouri river-bottom and the badlands. In the agricultural areas other than the croplands, vegetation consists of light to moderate areas of grasslands.

Agriculture in McCone County consists mainly of farming and ranching. Improvements at risk from wildfire include homesteads and range improvements.
The agricultural lands of the county have low potential for fire until crops cure out and become dry from mid summer into the fall. In a dry year, the fire danger increases greatly. There can be thousands of acres of dry crops, which are very susceptible to both lightning and man or machinery caused ignitions. Many of these large fields are contiguous and once fire is established difficult to control.

The river bottomlands are a problem because of the large amounts of cottonwood trees, which are notorious for holding fire for long periods.

The badlands areas of the county present a very different situation. McCone County has some remote and difficult areas to access in the western and northern parts of the county. Detection of fire starts is also a problem in the badlands. Low population densities and the remoteness can allow a fire to burn for some time before it is detected. In very dry years natural grasses and juniper can support rapidly spreading fire. McCone County like most of eastern Montana experiences strong winds much of the year. Thunderstorms are also a source of ignition and strong winds.

Grassland fire in McCone County

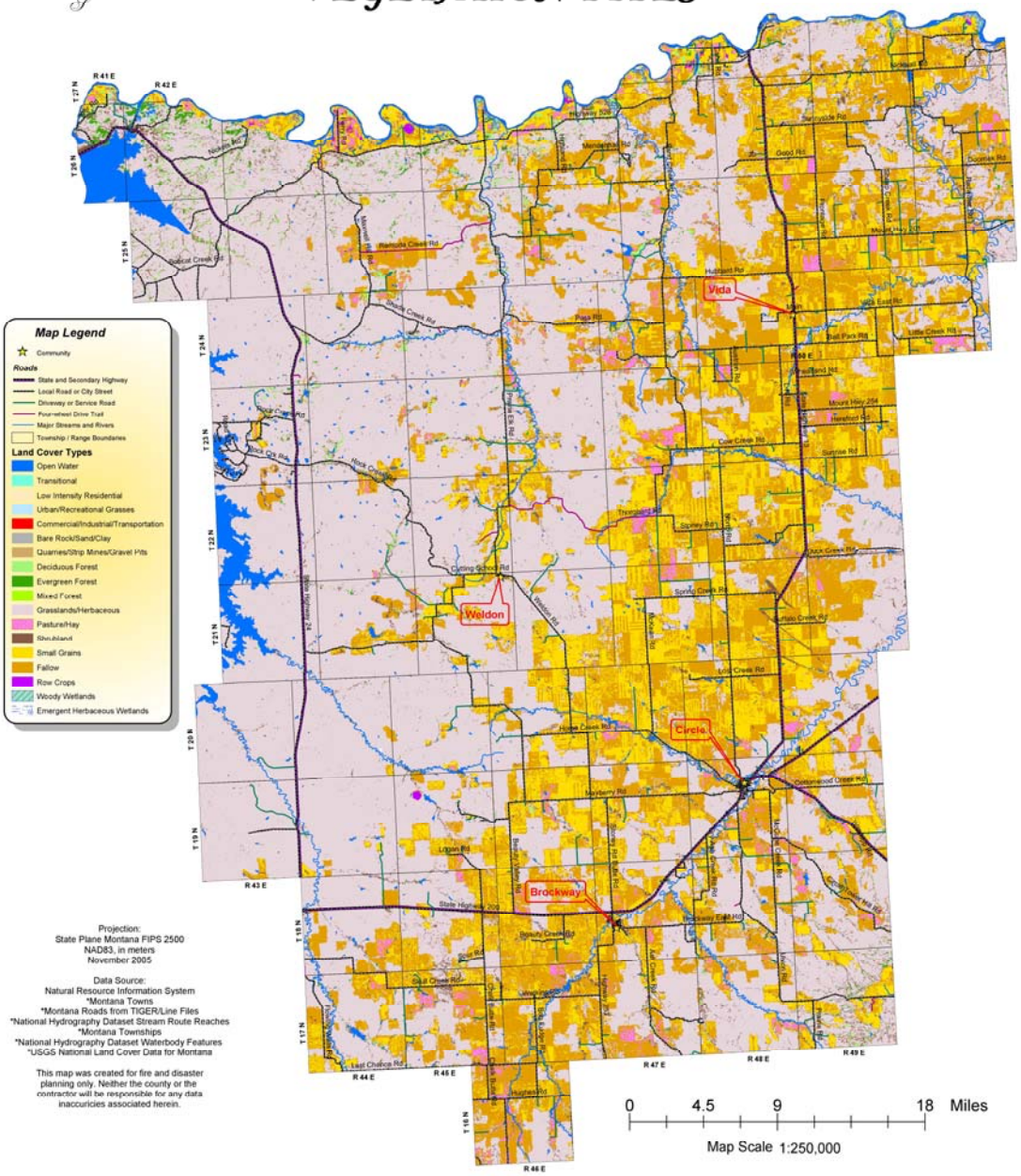
Photo courtesy of Roger Schara

Structural Fuels

With the exception of rural residences, structural fuel hazards are located within or in close proximity to the various communities, subdivisions or clusters of rural homes. From personal observation most homes are typical stick frame construction with wooden or manufactured siding. Most have composite asphalt roofing materials.

There has been an increase in the establishment of summer/recreation residences along the Missouri River. These facilities are being sited in the river bottoms where the fuel build-up from grasses, brush and cottonwoods are present. Typically not much attention is paid to the type of building materials or defensible space for reduction of loss to wildfire.

Figure 5.2
VEGETATION TYPES



Structure lost while burning trash

Photo courtesy of Angie Beery

Assessment of Risk

Ignition Profile

In 2001, all of the communities in McCone County were identified as a medium risk to wildfire in the Federal Register. The listed communities at risk were Circle, Brockway and Vida.

The Core Group members for the CWPP identified these ignition sources for wildland fire during the second meeting held in Circle in March, 2005.

1. **Lightning**
2. **Rural residents**
3. **Power lines**
4. **Highways/roads**
5. **Recreation activities**
6. **Escaped residential control burns**
7. **Haying/combining activities**
8. **Oil field activities**
9. **Methamphetamine labs**

The Core Group identified a number of areas most often hit by lightning storms. These areas are almost entirely located in the southern half of the county. There are no longer any active railroad lines in the county. The escaped residential control burns were mostly related to burning trash in a barrel on private property. Haying and combining fire starts in the latter part of the summer were mostly caused by equipment malfunctions.

Risk of human-caused ignition is highest along roads and highways, power lines and around recreation sites. Risks of human-caused ignition are moderate in areas of dispersed recreation and rural residences. Risks of ignition to wildlands are lowest within the developed areas and on agricultural properties (except in late summer in dry years).

Hunting season appears to be the most active time of human-caused ignitions.

Behavior and Development Trends

There is little or no activity by the county for encouraging development of new structures or subdivisions that increase the defensibility for wildfire. This leaves new development without any guidance to consider wildfire in the choices for location, building materials, defensible space, and access for emergency vehicles. Many people would be willing to consider these things when building, but typically they are not aware of the items they should be thinking about. The challenges presented by development differ depending on the fuel types, terrain, access, and response times.

Much of eastern Montana and western North Dakota is experiencing a boom in oil field activity. This oil field activity is and will continue to increase the Fire Department's response numbers. More traffic incidents have been occurring and with those come wildfire ignitions and hazardous material spills.

Firefighters have expressed concerns about the growing possibility of methamphetamine labs having the potential for fire ignitions in remote areas.

Unique Wildfire Severity Factors

Farm assets that could be at risk include crops and the farm compound including grain and hay storage, housing, barns, livestock, sheds and machinery.

Drought over the past 7 or 8 years in the county has left the cedar (juniper) trees in the badlands in a stressed condition. Live fuel moistures in these trees have been very low and are conducive to greater spread rates for fire (Brad Sauer, Fuels Specialist, BLM, Miles City Office, Miles City, MT, June 2005).

Wheat, oats, barley, peas, lentils, yellow mustard, safflower and alfalfa hay production are the main crops for the county (Julie Trower, Farm Services Agency, Circle, MT, May 2005). Oil and gas is produced and stored in the Vida North and Weldon Field (north and east portions of the county). Wildland fire in the areas of oil production has the potential to interrupt production for short periods of time. Human activity in the oil fields also increases the chances for ignition of wildfire.

Critical community infrastructure was identified by the PDM steering committee and the CWPP Core Group. The values for the critical infrastructure are provided in Chapter 3 (PDM) of this plan. Most of the county's critical facilities are at low risk for wildfire. Structures/infrastructures located away from any of the communities include the pump site on Highway 201 (Williston Basin) and both the Eissinger and Haglund ranches (Roger Schara, Circle,MT, June 2005).

Tourism/recreation is an increasing sector in the economy of McCone County. Both residents and visitors enjoy outdoor activities year-round in the county. Most of this activity is either fishing the Missouri River in the spring and summer months and the upland bird and deer hunting in the fall.

Values to be Protected

1. **Health and Safety of the public and firefighters**
2. **Real property, public and private infrastructure**
3. **Cropland/Grazing lands**
4. **Recreation/Economic Impacts**

1. Health and Safety

McCone County has a well-staffed volunteer firefighting force that has its main operation in the fire hall located in Circle. Other fire equipment and firefighters are spread out into the county remote locations. Sparse population numbers, and poor communication systems between firefighters, EMS personnel and other support functions can add more safety challenges to fighting wildfire.

McCone County is concerned about the health and safety of their volunteer fire department personnel.

Adding to that concern the county has been in a drought situation for nearly a decade. The potential for greater number of fires at one time and large fires exist under these strained drought conditions. McCone County Fire Department has a good safety record in suppression of wildfires and desires to maintain that record. Circumstances related to these conditions

demand that attention be paid to the safety of the firefighting staff and the public.

2. Real Property, Public and Private Infrastructure

In many parts of McCone County, wildfires are not only a threat to the landscape, but also to communities, homes, ranches, businesses or infrastructure facilities. All of the communities in the county have a medium rating for wildfire in the Communities At Risk list established for Montana. Two of the biggest concerns in fuel concentrations are found in either CRP acres or in the badlands area in the northwest part of the county. These two categories of lands should be looked at closely in terms of putting people and property at risk.

3. Cropland and Grazing Lands

McCone County depends heavily upon agriculture for much of its income. Croplands, especially in late summer can be at risk to wildfire. Losses of crops can be very devastating to ranchers and farmers. These losses also affect other businesses and the county tax base.

Grazing of private, state and federal land is also an important component to some ranching operations. Losses of forage to wildfire have the same impact as noted above.

4. Recreation and Economic Impacts

Fish and Wildlife Resource

McCone County has a large amount of intact native wildlife habitat. The two primary habitat types are grasslands and riparian areas. According to John Ensign, Montana Department of Fish, Wildlife and Parks (FWP), Region 7 Wildlife Manager there has been very little formal wildlife population inventories in the county, however there are inventories for mule deer and antelope.

Big game species include mule deer, white-tailed deer and antelope. Small mammals such as fox, badgers, hares, raccoon and coyotes are common.

Numerous raptors are found in the county including golden and bald eagles, kestrels, red-tailed hawks, Swainson's hawk and ferruginous hawks, prairie falcons and owls. Sharp-tailed and sage grouse, turkey,

**Fish, Wildlife
Special Mana
near Crane---
flashy ground
up. Feb. 200**

Hungarian partridge and pheasant are found in the uplands. Migrating ducks and geese pass through the county and shorebirds frequent the Missouri River. Small numbers of year-around songbirds and numbers of migratory birds pass through and/or spend some portion of the year here.

The fishery in McCone County is composed almost exclusively of warm water species in the ponds and in the Missouri River, including small-mouthed bass, catfish and walleye. Fort Peck Reservoir has walleye, northern pike, lake trout and salmon. Painted turtles, various snakes including rattlesnakes, other reptiles and amphibians are present.

Recreation Resource

Hunting and fishing provide recreation experiences in the county for residences and non-residents. According to Bea Sturtz of the FWP, Block Management Division, there are 22 landowner participants in the program. Block management lands are private lands that are made available for public hunting through this program. Non-resident hunters come primarily from the upper Midwest.

Wildfire has the ability to impact recreation in McCone County. The hunting season, both big game and upland bird have a positive economic impact. Wildfire season usually occurs during late summer and fall when these activities are occurring and can easily deter deer and bird hunters from coming to the area if there are fire closures or active wildfires going on. Fishing season on the Missouri River may also be impacted by an active wildfire season.

Assessment of Economic Values

Detailed economic information is provided in Chapter 1 of the PDM plan.

Assessment of Ecological Values

As a result of the ranges in elevation, aspect, temperature, precipitation, vegetation, and terrain in the county, McCone County provides a moderate amount of wildlife habitat. The county supports species such as white-tailed and mule deer, upland game birds, mostly pheasant as well as warm water fish species in the rivers and ponds. In addition, numerous small mammals, fur-bearers, and migratory and non-migratory songbirds reside in the county.

Air quality is generally excellent due to natural dispersal and lack of major industrial in and to the west of the county. Short-duration impacts to air quality include smoke from wildland fire in the summer and fall, smoke

from ditch burning in the spring, dust from travel on unpaved roads and dust from agricultural practices.

Potential Loss Estimate-Wildfire Scenario

A wildland fire scenario has been developed in order to estimate potential losses. Roger Schara from the Circle Fire Department and Randy Sanders, DNRC, provided assistance in developing this wildfire scenario.

A lightning storm moves into the southwest part of McCone County in late August. The storm is dry and several fires are started, one in CRP lands near a homestead. The fire quickly moves into the homestead and destroys a house, hay barn, machine shed and several farm implements. Due to the rapid rate of spread and the long driving time for the Fire Department, they were only able to keep the fire from entering another homestead about a mile away. The fire burns 450 acres before it is controlled. Damages totaled $211,715.

Table 5. 3 Farmstead Fire-McCone County

Asset	Number	Cost per each	Total cost
Residence	**1**	**$89,000**	**$89,000**
Hay barn	1	**$28,000**	**$28,000**
80 tons of hay	**1**	**$6,400**	**$6,400**
Machine shed	**1**	**$18,000**	**$18,000**
Tractor	**1**	**$44,000**	**$44,000**
Hay baler	**1**	**$13,500**	**$13,500**
Swather	**1**	**$8,500**	**$8,500**
Suppression costs	**1**	**$4,315**	**$4,315**
Total			**$211,715**

Suppression costs were determined by conversations with Roger Schara, Circle Fire Department and Randy Sanders, DNRC (and also past volunteer fireman for the Savage Fire Department.) These figures are what the DNRC pays approximately for contracting these types of fully staffed engines:

Two Type 6 engines, fully staffed at $1330/14 hour shift	**$2660**
Structure engine, fully staffed at $1600/14 hour shift	**$1600**
Food and water	**$55**
Total	**$4315**

Assessment of Fire Protection Preparedness and Capability

Table 5.4 Fire Fighting Capability Ratings

Department	*ISO* Rating for Structure Fires*	*Rating for grass fire capability*	*Rating for wildfire capability*	*Number of firefighters in Department*
Circle	**7**	**1**	**2**	**20**

***ISO=Insurance Services Organization**

Source of ratings came from the Fire Chief of the above department. Those were based on 1 being very able and 10 being unable.

Over the past 30 years McCone County received the following funds through the Rural Community Fire Protection Grant (RCFP), the Volunteer Fire Assistance Grant (VFA) and the Rural Fire Assistance Grant (RFA). The funds received through these programs have improved the capability of the Fire Departments, especially in the last four years, primarily in the purchasing of equipment.

Table 5.5 Fire Assistance Funds to McCone County

	RCFP	VFA/RFA	VFA/RFA	VFA/RFA	VFA/RFA	Total
Year	**75-2000**	**2001**	**2002**	**2003**	**2004**	
McCone	**$14,283**	**$21,729**	**$34,404**	**$20,273**	**$20,000**	**$110,689**

Source: Mike Weiderhold, DNRC, Missoula, June 2, 2005.

Table 5.6 Fire Apparatus in McCone County

Department	Description	Capacities/Features/Comments
Circle	**FT-2 71 IN, City Pumper Truck, 1971**	**Town use only**
Circle	**FT-4 Pumper, 1972**	
Circle	**Rescue 1, 2004**	**450 Ford**
Circle	**FT-19, Ford F-350, 2004**	**Type 6, 300 gal.**
Circle	**FT-25, Ford F-350, 2000**	**Type 6, 300 gal.**
Circle	**FT-22, Chevy Tender, 2003**	**1750 gal. (can pump and roll)**
Circle	**FT-21, Kenworth Tender, 1989**	**3500 gal.**
Circle	**FT-20, Chevy 3500, 1994**	**300 gal.**
Circle	**FT-13, Ford F-350,**	**Type 6, 300 gal. located in Brockway**
Circle	**FT-11 IN Tender**	**1000 gal. located in Brockway**
Circle	**FT-7, Ford, 1985**	**Type 6, 200 gal. located in Vida**
Circle	**FT-9, Ford, 1986**	**Type 6, 200 gal. located in Vida**
Circle	**FT-10, 6x6**	**+/- 800 gal.**
Circle	**FT-12, DSL Dodge**	**Type 6, 200 gal.**
Circle	**FT-18, DSL Dodge**	**Type 6, 200 gal.**
Circle	**FT-14, DSL 1 Ton Jeep**	**Type 6, 200 gal.**
Circle	**FT-15, DSL 1 Ton Jeep**	**Type 6, 200 gal.**
Circle	**FT-16, DSL 1 Ton Jeep**	**Type 6, 200 gal.**
Circle	**FT-17, DSL 1 Ton Jeep**	**Type 6, 200 gal.**
Circle	**Each truck has 2 way radio**	
Circle	**Each truck has SCBA's**	**10 each**

Circle	**Each truck in Circle has turnouts**	**22 each**
Circle	**Wildland coveralls**	**35 each**
Circle	**Portable radios, Motorola**	**8 each**
Circle	**Portable radios, Bendix King**	**2 each**
Circle	**Portable skid pumpers, 200 gal.**	**4 each**

Source: Circle Fire Department

In addition to the above resources, the BLM has one Type 6 engine with a response time of one hour from Jordan (to Circle); one Type 6 engine and two Type 4 engines with a response time of two hours and two Single Engine Airtankers (SEAT's) with a response time of one hour from Miles City (to Circle).

Mitigation Plan

Background

Existing situation

Most of the critical infrastructure in the county is in defensible space for wildfire.

McCone County has been in a drought for almost a decade. Historically this is a common cycle in weather patterns broken by periods of above average moisture. In the spring and early summer of 2005 rainfall has been far above average. However, live fuel moistures in juniper trees are still below normal. (Brad Sauer, Fuels Specialist, BLM, Miles City, MT, June 2005). The drought may have been mitigated some, but it is still in effect. To recover from the current drought situation, it will likely take years of above average precipitation.

Recent history indicates that most wildfires are relatively small, about 25 acres and have not been a serious threat to the communities. However there have been several large fires in McCone County and adjacent counties and the potential under the right weather and fuel conditions wildfire could enter the urban interface or certainly impact rural residences. The county does have some notable issues with structures and facilities near CRP lands across the county, river bottomlands and crops from mid-summer into the fall. There are also some safety issues with some of these areas, primarily from a fire equipment access standpoint.

The wildland fire service in the county has a number of positive attributes.

The single fire department is located in Circle. The fire department has been proactive in positioning their satellite equipment in strategic locations. They have trained firefighters near them for staffing. The equipment for the fire departments appears to be relevant to their needs; however some of it is outdated. Volunteer firefighter numbers seem to be appropriate, but as with almost any volunteer fire department, many of the firefighters are not available part of the time. Training for volunteer firefighters is usually a challenge for most departments. It is difficult to find the time to work in training, when most have jobs and other responsibilities. The level of fire protection in McCone County is good and the county works well with adjacent counties. There is a clear need to educate county residents about wildfire dangers and what they can do to reduce the impacts of wildfire. McCone County with only one fire department has a very large area of responsibility. The county would like to expand it's firefighting capability.

Organizational structure

During the first CWPP meeting a number of firefighters from throughout the county were present. In order to have a smaller working group, the Core Group was established at the first meeting. The Core Group consisted of two key firefighters and the county DES Coordinator. There was also assistance from the Montana DNRC, BLM, District IV DES Representative, and Farm Services Agency. The contractor took feedback provided from the Core Group to develop this mitigation plan. Once the plan was written the Core Group and the others mentioned above had the opportunity to review the plan to add, subtract or modify it. Public involvement was solicited at the third PDM meeting and those items were included in this plan. The draft CWPP went out for a 30-day public review in September, 2005 and those comments were considered in the finalization of the CWPP.

Goals and Objectives

McCone County firefighters and the County DES Coordinator developed the following goals, objectives, and projects with additional suggestions from the Pre-Disaster Mitigation Steering Committee and the contractor.

Goal: Reduce the impacts of wildfire.

Objective 1: Reduce the area of Wildland Urban Interface and critical resources burned.

1.1 Provide information (via FSA and others) to CRP landowners on projects to reduce risk of fire to improvements and buildings. Examples include information on haying perimeters of CRP areas as a type of firebreak.
1.2 Encourage the BLM/DNRC to plan and implement fuel reduction projects in strategic locations.

Objective 2: Educate the public about wildfire in the county.

2.1 Have the Fire Department sponsor a booth that explains fire preparedness measures at the County Fair.
2.2 Place a fire danger sign in Circle and determine who will be responsible for maintenance, and how maintenance costs will be covered.
2.3 In high danger fire years in the hunting season, develop information (such as posters, flyers, placemats, and other) aimed at sportsmen to put in motels, restaurants, bars, sporting good stores, etc. Work with the Montana Department of Fish, Wildlife and Parks to have information posted at Block Management entrance points.
2.4 Have the Fire Department publicize their willingness for firefighters to come to a farm, ranch, business, cabin or home and offer suggested methods of reducing fire danger around their properties.

Objective 3: Expand firefighting capabilities.

3.1 Continue training opportunities for firefighters.
3.2 Look into providing training for meth lab ignited fires.

Desired Condition/Strategic Plan

The desired condition for McCone County is to maintain a safety conscious, well-trained firefighting force with adequate personal protective equipment and up-to-date fire apparatus commensurate with the county's needs. The strategic plan to reach this desired condition is in the table below. Accomplishment of this strategic plan will follow the same kind of collaboration that went into the development of the CWPP, utilizing DES, BLM, DNRC, FSA and other interested stakeholders.

Table 5.7 Strategic Plan

Project Number	***Project description***	***Rank***	***Potential Resources***

1.1	**Provide information to CRP landowners to reduce risk to buildings**	**H**	**Fire Department, FSA and landowner**
1.2	**Encourage BLM/DNRC to plan and implement fuels reduction projects**	**M**	**Fire Department**
2.1	**Sponsor fire preparedness booth at county fair**	**H**	**Fire Department**
2.2	**Place fire danger sign in Circle**	**H**	**Fire Department**
2.3	**In high fire danger years prepare a poster for hunting season aimed at sportsmen**	**H**	**Fire Department, local businesses and FWP**
2.4	**Publicize the Fire Department's willingness to come to property to give advice on fire danger reduction**	**L**	**Fire Department and DES Coordinator**
2.5	**Utilize "Living with Fire" publication**	**M**	**Fire Department, landowners**
3.1	**Continue training opportunities for firefighters**	**H**	**Fire Department, BLM and DNRC**
3.2	**Look into getting some training for fighting fires started by methamphetamine labs**	**H**	**Fire Department and Law Enforcement**

(Letters H, M, L before a project indicate the level of priority given to the project H=High priority; M=Moderate priority, L=Low priority, NR=No Ranking made)

Roles and Responsibilities

The responsibility for this plan lies with the county commissioners. Assistance and expertise to implement this plan will come primarily from the fire department's leadership and the DES Coordinator. There will be many opportunities for a variety of other sources such as the Farm Services Agency, businesses; local governments, DNRC, BLM and volunteers to help make parts of this plan come to fruition.

Plan Review and Updating

This plan should be reviewed for currency every three to five years, unless there are major changes in the county that would require an earlier update. Items that may initiate a need for a change in the plan would be things like a major wildfire, accidents involving serious injury or loss of life related to wildfire or a change in county leadership. The county commissioners have the responsibility to make that determination. They may wish to enlist the help of the Local Emergency Planning Committee.

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CWPP MEETING NOTES
AND
SIGN-IN SHEETS

Meeting notes

Community Wildfire Protection Plan for McCone County, Feb 10, 2005
(Notes prepared by Rand Herzberg)

Objectives for this meeting

***Give you an introduction to the project**
***Explain the purpose of the project and the scheduling to get it accomplished**
***Enlist your help…..you have the knowledge of the local situation and know best**
what your county needs
***Need your help to identify the wildfire hazards and prioritize those**
***Have you identify the critical facilities and the vulnerable populations in communities and the county**
***Give me a sense of the values at risk (examples: high value forage, critical wildlife habitats, etc)**
***Have you understand that this is a plan for the county's use and the more involvement I get from you and the county, the more useful it will be and the better your chances are for funding of additional on-the-ground projects.**
*Establish a Core Group of key individuals to work with me on this project

Funding

***Funds from the BLM have paid for the contract to develop these plans for your county. The contract products are both a Predisaster Mitigation Plan and a Community Wildfire Protection Plan. Cossitt Consulting out of Park City, MT has been awarded the contract….we have 5 counties, McCone, Richland, Dawson, Wibaux and Prairie. McCone County has agreed to be the primary contact for all of these counties for the administration of the contract. However, the contents of the plans will come from each of the counties. The PDM plan will take into account all hazards and the CWPP focuses on wildfire as part of that plan. My job is to help these counties develop a CWPP that suits the county's needs.**

A little background on Community Wildfire Protection Plans

***2003 Healthy Forest Restoration Act (primarily affects BLM and Forest Service)**
***provides incentives for communities to get involved in fire protection**
***several reasons, who knows better than the local folks what they need**

***once a plan is developed, makes counties and communities more competitive for project $'s**
***allows lots of flexibility---some minor requirements, but depth is really up to you**

***Minimum requirements of CWPP are:**

***1 Collaboration….developed by local and state government reps in consultation with federal agencies (in this case the BLM)**
***2 Prioritized Fuel Reduction… identifies and prioritizes areas for hazardous fuel reduction treatments & recommend the types and methods of treatment that will protect one or more at-risk communities and essential infrastructure---usually done by the local fire depts..**
***3 Treatment of Structural Ignitability…. recommends measures that homeowners and communities can take to reduce the ignitability of structures throughout the area of the plan.**

Who must mutually agree to the final contents of the plan?

***Local governments (county and communities)**
***The local fire departments**
***State entity responsible for forest management, DNRC**

The above group will need to consult with local representatives of the BLM…my contact for the BLM for this project is through Dena Lang from Miles City, who I have found to be very helpful and interested in seeing the county get a grassroots-based plan.

What kinds of things can be addressed in the plans?

***wildfire response, hazard mitigation (projects to reduce hazards), community preparedness, structure protection…whatever you think best suits your communities**

Other benefits

***the process can help communities clarify and refine its priorities for protection of life, property, and critical infrastructure (water plant as example) in the Wildland Urban Interface (more on that in just a minute) It also allows you to determine the boundaries of what your WUI's are.**

Your role

***In a series of meetings (probably just 2), phone calls, etc. you can help me describe the setting of your county, identify existing hazards in terms of wildfire, what capabilities the county has for suppression, what projects you would like to do, what the priorities of those projects are and determine what the substance and detail of your plans will be. You will also have the say so on what the WUI boundaries for your communities will be. There are some guidelines for this, but they do allow quite a lot of flexibility. You can also help me by identify other key people who should be involved in this process.**

Wildland Urban Interface

I want to talk just briefly about this. This is something your group will need to give some thought to in the next few months. The WUI is describes as the zone where structures and other human development meet and intermingle with undeveloped wildland or vegetative fuels. This is where a high percentage of the risk to life and property occurs…where it hits the fan so to speak. It is where the most complex and dangerous situations for firefighters exist.

One of the most important benefits of having a CWPP completed is that it allows you to establish your WUI interface. Without a CWPP the boundaries are limited to within ½ mile of a communities boundary or within 1 and ½ miles when mitigating circumstances exist (example….a long steep slope leading into a community with heavy vegetation) This is a canned definition that may not fit your communities, but with a CWPP you dictate where that boundary is to be drawn. Once the plan is accepted, the WUI boundary is given a higher priority for funding than non-WUI lands. Half of the Healthy Forest Restoration Act funds must be spent in the WUI. I should also mention that fuel treatments can occur along evacuation routes regardless of the distance from the community.

Questions?

What are the hazards related to wildfire in this county and in your communities?

McCone County responds to about 55 fires per year. They range in size from 1 to 1000 acres and average about 25 acres.

1980-2001 there were 245 fires on the Charles M. Russell National Wildlife Refuge, 10 of which were in McCone County for a total of 340 acres.

Conservation Reserve Program (CRP) acres are involved in many of the fires in the county. There are approximately 142,000 acres of CRP in McCone County. July through September is the prime fire season.

Farm equipment is responsible for starting many fires.

Brockway and Vida are surrounded by CRP lands. Vida has some trees too.

Lots of homes in the river bottom communities (primarily on the Missouri River)

Rough country contributes to the difficulty of fire suppression in the county.

Can you give me your first cut on how you would prioritize them?

First priority is the CRP lands
River bottom communities
Farm equipment ignitions (usually around buildings)
Economic values of losing forage/crops to fire

What other values besides people and infrastructure do you want to include in this plan?

Recreational values – bird hunting and activities related to the Fort Peck Lake

What are the vulnerable populations in the county?

Nursing home in Circle
Day care
Homebound folks
Schools (Vida and Circle)

What mapping resources can you give me to serve as a Base Map for this project?

NRCS has CRP acres in digital form. (I have requested these to be sent to Mary Garfield to see if they are in a format that we might use on the base map)

What the group would like to see in a base map is land ownership, residences, vulnerable people, communication facilities, radio towers,

substations, CRP acres, roads, contours, water sources, equipment-data inventory, pump sites on the Missouri River.

McCone County is also developing a rural water system and the planned hydrants may be available to put on the base map as well. (Contact-Interstate Engineering)

I would like to establish a Core Group of people this evening for the CWPP so that we can agree upon who should be involved and is willing to work on the plan.

Before we do this, I think you need to understand what my philosophy is and that I think the Core Group's job is to provide me with the needed information. It is my job to put this in writing in a format that is acceptable to you and to the BLM. Said in another way, you give me the data and what you want to see and I will put it down in writing to get us to something that is usable for you when we are finished. I also would like, depending on your wishes is to get almost all of the information I need from you before July 1st. I know that you and I are likely to be busy with the fire season and I would prefer to not have the extra burden of the fire season and the added busyness of the summer get in our way. I need some feedback from you if you are OK with what I just said--both on how I see this going and when I would like to have the bulk of your input to me. That means we will have a nearly complete CWPP before the fire season hits.

Who should be on the Core Group and their titles?

NAME	TITLE
Jess Beery	**Chief of Fire Department**
Rick Johnson	**Asst. Chief and Chair for Core Group**
Roger Schara	**Captain on Fire Department**

I would also like to ask that there be a chairman of the Core Group so that I have a single contact that I can work through to get feedback from the Committee. Who should that be?

Rick Johnson, Asst. Chief

My <u>recommendation</u> is for one of the members of the CORE GROUP take this list to your County Commissioners and asks them to bless it. I think you want them to be comfortable right up front with who is on the CORE GROUP.

<u>What I will be asking you for at the next (2nd) meeting.</u>

I will have a draft of the Risk Assessment ready for your review ahead of the meeting. It will involve:

1. **Fuel Hazards,**
2. **Risk of Wildfire Occurrence,**
3. **Homes, Businesses and Essential Infrastructure at Risk,**
4. **Other Community Values at Risk and**
5. **Local Preparedness and Firefighting Capability.**

You will give me feedback on what needs to be changed, what needs to be added for the purpose of having me finalize the Risk Assessment to be part of the plan. I see this as a face-to-face meeting in late March, depending on the Core Group's concurrence.

Set tentative date for 2nd meeting.

March 29th at 6 pm. Place to be decided. (This may be a change from what was discussed in Circle----I will contact Rick Johnson, Core Group Chair to make sure this date and time will work)

What I will be asking for in late May or early June

There are 3 things that need to be completed:

1. **Establish final prioritization of recommended fuel treatment projects and the preferred treatment methods.**
2. **Develop an Action Plan and Assessment Strategy, which define roles and responsibilities, funding needs and timetables for highest priority projects.**
3. **Finalize the Community Wildfire Protection Plan….the Core Group will decide on the treatment locations, method of treatment, establish the WUI boundaries, structural ignitability recommendations and any other information or actions you want in the final plan.**

Other available resources for you to consider:

BLM office in Miles City….Dena Lang as a contact person.
Eastern Land Office of the DNRC…Randy Sanders as a contact person.

These sources have expertise in fuels management, lands issues, mapping, fuel types, etc. My contacts with these people have found them interested and willing to help wherever they can.

See sign-up sheets for the first meeting in Chapter 2.

Second round of meetings for CWPP with Core Group for McCone County

Meeting was held at 6 p.m. on March 29, 2005 at the Circle Fire Hall

Attendees sign in sheet is attached.

CRP lands

After introductions we discussed what the possibilities are with Conservation Reserve Program lands are. A handout sheet given to me by Nancy Heins of the Farm Services Agency (FSA) of Sidney was passed out. I gave them a quick rundown on what Nancy had talked about in Sidney earlier that day. She believes that there is a less of problem in the last few years with CRP being a fire danger. The rules of CRP lands have changed since 2002 and those changes allow for some mowing to reduce the fire danger. Firebreaks are also now acceptable. There are two kinds of firebreaks, barren ground or mowing. In order to conduct firebreaks on CRP lands an amendment must be made to the conservation plan through the FSA office.

If there is a going fire it is permissible to blade or disk on CRP ground to stop a fire. This does not require contact with the FSA in an emergency situation.

A portion of the risk assessment (values at risk and the assessment of fire protection preparedness and capability) was handed out for the Core Group to look at for changes or omissions. They were given a month to review and give their comments back to me.

Fire Frequency/Fuels hazards

We revisited what fuel types they typically fight fire in and they validated that the information gathered on the first meeting was sufficient. We talked about fire frequency and if there were any places in the county that seem to show a pattern of lightning starts. No readily identifiable pattern exists.

For future feedback I asked for several items:

From the portion of the Risk Assessment I handed out I asked them to validate the preparedness and firefighter capability.

We had a discussion about what should be on the base map and the items asked for where: 1. critical infrastructure/water sources/etc, 2. Wildland Urban Interface boundaries, and 3. a wish list of attributes they would like to see on a base map.

Draft Goals for the CWPP

We reviewed the draft goals and the core group agreed to the ones as presented.

Ignition Sources

We went over the draft list of these and the group added 1. agriculture activities, 2. noted they no longer have any active railroads 3. remove industry and add oil field activity. 4. add meth labs

Project Proposals

We had a discussion about hazardous fuels reduction and educational component is desired (both for firefighters and the public). We talked about that this effort was not for acquisition of equipment or gear. I did encourage them to include projects on state and BLM lands. Signing is also a possibility for a proposal, such a fire danger rating signs in key locations. I told them that we were interested in a wide range of projects and if they had any questions about whether or not a project would be considered to call Dena Lang 233-2907 or me at 446-2121.

I asked for a list of <u>preliminary projects</u> by April 30th.

We talked about what was next in the project. I told them that my job was to collect their information to create a final draft of the risk assessment, which they will have a chance to review. After I get their comments back I will finalize the risk assessment and then begin on the mitigation plan.

Additional items

The firemen suggested that they would like to see some training related to methamphetamine lab ignited fires. They believe they have some potential for this to occur in the county.

Rand Herzberg

Attendance Sheet

Activity CWPP Core Group Meeting

Location Circle Date(s) March 29, 2005

Duration 1.25 hours

Name & Title	Affiliation	E-Mail Address & Phone#	Agency Use Only H	M	T
Name: Rick Johnson Title: asst. Chief					
Name: ROGER SCHARA Title:					
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Rev. 4/23/03

CHAPTER 6:

PLAN MAINTENANCE AND COORDINATION

Responsible Parties

The McCone County Commissioners will be responsible for ensuring that the CWPP/PDM Plan is kept current and also for evaluating its effectiveness. With the adoption of this plan, the commissioners designate the McCone County Disaster and Emergency Services Coordinator and the Chair of the Local Emergency Planning Committee (LEPC) as the co-leads in accomplishing this ongoing responsibility on their behalf.

Review Triggers

Any of the following three situations could trigger review of the plan's effectiveness or currency and update of the CWPP/PDM Plan.

1. The occurrence of a major natural disaster either in the county or nearby.
2. The passage of time.
3. A change in state or federal regulations with which the county must comply.

Criteria for Evaluating the Plan

When review of the CWPP/PDM plan is triggered by one of the three situations listed above, the plan will also be evaluated for effectiveness and comprehensiveness. The criteria against which the plan will be evaluated will include, but not be limited to:

- Whether any potential natural hazards have developed that were not addressed in the plan,
- Whether any disasters have occurred which were not addressed in the plan,
- Whether any unanticipated development has occurred that could be vulnerable to natural disasters, and
- Whether any additional project ideas have been developed.

Procedures

Should a major natural disaster occur in McCone County the LEPC shall meet following the disaster to review the after action report. Upon review of this report, any changes needed to the CWPP/PDM Plan will be recommended to the County Commission and made by the County Disaster and Emergency Services Coordinator following their concurrence.

In the absence of a major natural disaster, each January starting in 2007, the LEPC will meet to review the PDM Plan and recommend any needed changes. The primary emphasis of such review will be on the goals, objectives, and specific actions/projects portion of the plan. The LEPC will:

- review the work of the past year, identifying key factors that may have affected accomplishing priority projects, and identifying completed projects
- identify any needed changes or additions to the mitigation strategy (new or changed goals, objectives, actions/projects)
- clarify priorities for projects for the upcoming year and the work tasks needed to accomplish those projects

The LEPC meeting will be noticed in the *Circle Banner* newspaper and the public and individuals who served on the Steering Committee for development of the original plan will be encouraged to attend. In the interim, the County Disaster and Emergency Services Coordinator will maintain a file into which comments or input on changes to the plan can be kept. The comments in this file will be provided at the LEPC/public meeting to review the plan.

Finally, should state or federal regulations with which the County must comply be significantly changed, the County Disaster and Emergency Services Coordinator will notice and hold an LEPC meeting. At this meeting he/she will inform the LEPC of the new requirements and together with the LEPC, determine whether changes to the CWPP/PDM Plan are warranted.

Every five years, beginning in 2010, the CWPP/PDM Plan will be updated and submitted to Montana Disaster Emergency Services and subsequently to the Federal Emergency Management Agency (FEMA) for approval.

Incorporation into other Plans

Town of Circle staff and county staff have been made aware of the CWPP/Pre-Disaster Mitigation Plan by the County Disaster and Emergency Services Coordinator and through the planning process. The projects in the CWPP/PDM Plan can be incorporated as appropriate into existing plans, annual budgets, and any Growth Policy that may be developed for McCone County or the town of Circle.

The County Disaster and Emergency Services Coordinator was extensively involved in the preparation of the CWPP/PDM Plan and will continue to identify options for incorporation into other plans.

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