

Red River State Recreation Area Management Plan

Red River of the North Watershed



Minnesota Department of Natural Resources
Division of Parks and Recreation
March 2002



Minnesota Department of Natural Resources

OFFICE OF THE COMMISSIONER

500 Lafayette Road
St. Paul, Minnesota 55155-4037

Department of Natural Resources Approval of Management Plan for Red River State Recreation Area

Minnesota Statutes 86A §09, Subdivision 1, requires that a master plan be prepared for units of Minnesota's outdoor recreation system, including state parks and state recreation areas. The Laws of Minnesota for 2000 (chpt.488, art. 3, sec. 21) established Red River State Recreation Area as part of Minnesota's Outdoor Recreation System (MS 85.013, subd.20a).

The Minnesota Department of Natural Resources worked in partnership with Minnesota citizens and an interdisciplinary resource team to develop a management plan for Red River State Recreation Area.

The management plan was approved by the Division of Parks and Recreation management team, and has been approved through the DNR's Statewide Interdisciplinary Review Service/Senior Managers' review process during June 2001.

A handwritten signature in cursive script, appearing to read "Allen Garber", written over a horizontal line.

Allen Garber, Commissioner
Minnesota Department of Natural Resources

A handwritten date "3/22/02" written over a horizontal line.

Date

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Red River State Recreation Area Management Plan

State of Minnesota Department of Natural Resources Division of Parks and Recreation

This management plan has been prepared as required by 2001 Minnesota Laws Chapter 86A.09, Subdivision 1.

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EXECUTIVE SUMMARY

The Red River State Recreation Area (SRA) Management Plan documents the work of a year-long planning process involving multiple Department of Natural Resources (DNR) disciplines, other local, state, and federal government agencies and Minnesota citizens. This plan sets a general direction for the management of Red River SRA for the next 20 years. The plan sets a general direction to allow management staff, in cooperation with Minnesota citizens, the flexibility to determine the specific actions that will be appropriate to carry out the management recommendations. The development of State Recreation Area mission, vision and niche statements help frame the recommendations made in this management plan. Target benefits were identified for the management of Red River SRA's cultural, natural, educational and recreational resources.

Red River SRA is located entirely within the city limits of East Grand Forks, Minnesota along the Minnesota-North Dakota border (Figure 1). The SRA stretches along 1,230 acres of open space between the U.S. Army Corps of Engineers flood protection system and the Red and Red Lake rivers. Red River SRA was established in 2000 as a direct result of the devastating flood of 1997. The SRA is designed as a model for sustainable floodplain management. The Red River SRA Management Plan describes how the open space between the levees and the river is designed to be attractive and usable while allowing high water to enter the floodplain.

Red River SRA will provide areas for walking, bicycling and other trail uses, camping, improved public water access, festivals, winter recreation and quiet areas for picnicking and relaxing. The area trails will enhance access to the river and to all parts of the community. Native plants will be used to minimize maintenance needs, enhance erosion control, and provide wildlife habitat. Fishery habitat will be enhanced and boat and shore access to the rivers will be improved. Red River SRA is also designed to complement and enhance the protective levee system and its recreational components. Interpretive services will center on area history, local resources of significance, floodplain architecture, and the hydrology of a flooding river. Development within the SRA has and will be closely coordinated with DNR Division of Waters, the Federal Emergency Management Agency (FEMA), and the U.S. Army Corps of Engineers (Corps).

The central location of the SRA within the Red River Basin creates opportunities for Conservation Connections between local communities and regional facilities. Conservation Connections are envisioned to be a statewide network of natural areas, wildlife habitat, working forests, parks, agricultural lands and other open spaces interconnected by land and water corridors.

According to Minnesota Statutes of 2000, the statutory boundary of Red River SRA encompasses 1,230 acres of floodplain within an urban setting. The Division of Parks and Recreation will accept the transfer of only those lands inside (riverward) of the Corps flood control project. The State of Minnesota will not assume any operation or maintenance costs associated with the Corps' flood control project. Because the Corps' flood control project alignment was not in place when the statutory boundary was delineated - and may not be determined until 2005 - the statutory boundary's legal description was set as close to the

Executive Summary

proposed dike alignment as possible. When the Corps' project is completed, the statutory boundary will be changed to match this alignment and allow for a right-of-way for annual inspection of the flood protection system.

Through the tireless efforts of numerous individuals and government agencies, Red River SRA will serve as a model of sustainable floodplain development and management, and will truly be a benefit to the State of Minnesota.

Executive Summary

Summary of Major Recommendations

Recreation

- Build a model, modern floodplain campground that is compatible with flooding to act as an overnight opportunity for visitors of the area and region.
- Assume operation and maintenance of U.S. Army Corps of Engineers' trailheads at 12th Street and 8th Avenue, and the Point (Confluence).
- Build mown grass and packed gravel trails (rather than paved), where appropriate, to minimize flood impacts and associated maintenance costs.
- Construct trails in concentric loops that connect with area bridges, schools and facilities to offer a variety of trail experiences.
- Work with DNR Divisions of Trails and Waterways and Fisheries to restore boat access to the rivers at the city's two boat launches (Downtown and Folson Park).
- Connect, where feasible, the trail system built by the Corps with the SRA trail system and existing local and regional trails.
- Pursue a legislative exemption for permits at River Heights, Visitor Center, and Point trailheads to avoid user confusion and ensure operational convenience.

Interpretive and Environmental Education

- Construct a visitor center as a central location for interpretive activities.
- Develop activities related to major themes for Red River SRA.
 - *Primary Theme: The Red River of the North
 - *Secondary Theme: History: From American Indians, traders, railroads and steamboats to the impacts of a flooding river.
- Create an information center for outdoor recreation opportunities throughout Minnesota and North Dakota.
- Provide interpretation from the overlook at the confluence of the Red and Red Lake rivers trailhead.
- Design most educational trails in brochure and post style, as opposed to permanent interpretive signs, due to the periodic flooding of the area.
- Explain floodplain architecture and sustainable recreation development within a floodplain (i.e. engineering of "flood proof" structures).
- Develop the campground as Sherlock Park Commemorative Campground with interpretation of the history of the former neighborhood.
- Work with DNR Fisheries staff to communicate fisheries management efforts within the Red River of the North watershed.
- Provide interpretation of Conservation Connections and greenway models.

Executive Summary

Natural Resources

- Create Conservation Connections through linear corridors of native vegetation, where possible, to establish wildlife habitat and recreation opportunities in a natural setting.
- Plant native vegetation along the river banks to promote soil stability, improve water quality, and control runoff.
- Use restoration efforts as educational tools to promote a sense of land stewardship among park visitors.
- Continue to monitor the area for sensitive species occurrences, and actively manage and protect their habitat if found.
- Conduct prescribed burns, where appropriate, to re-establish native vegetation along the river banks.
- Develop ongoing resource assessments and monitoring plans for the area.
- Form partnerships with local, state, and national groups and agencies to assist with the management of Red River SRA.

Cultural Resources

- Develop mown grass or gravel (class 2) trails that will not require digging below the surface for construction.
- Develop ongoing research and monitoring for cultural resources within the SRA.
- Promote appreciation and understanding of the rich history of the area through interpretive activities and development.

CHAPTER 1: INTRODUCTION

“On the heels of one of the most brutal winter storms in decades, the spring melt swiftly pushed the Red Lake River and the Red River of the North out of their banks. The swollen rivers submerged the gauges designed to measure their depth; the waters overran roads, bridges, and the dikes intended to contain them, and spread out to cover most of the cities of Grand Forks and East Grand Forks. The crest was finally determined to be 54.33 feet, nearly twice as high as the flood stage of 28 feet.” (Orvik and Larson, 1998, p.1).

Area History

Ten thousand years ago, Glacial Lake Agassiz was at its largest size and covered 135,000 square miles of eastern North Dakota, northwestern Minnesota and southern Manitoba. Sediments from the lake left the area that is now the Red River Valley an incredibly flat piece of land that stretches 17,000 square miles (see Figure 15, pg. 41). The unchanging topography of the Red River Valley is a major factor in the river’s propensity to flood (Krenz and Leitch, 1998).

Significant floods of the recent past include the floods of 1897, 1950, 1979, and 1997. Damage estimates of the 1950 flood totaled \$100 million, and caused between 70,000 and 100,000 people to evacuate their homes (Krenz and Leitch, 1998). The 1997 flood inundated 99 percent of the homes in East Grand Forks, and damage estimates for the Grand Forks - East Grand Forks area were \$1 to 1.5 billion (U.S. Army Corps of Engineers, 1998).

Project Background

In the spring of 1997, the cities of Grand Forks, North Dakota and East Grand Forks, Minnesota were swept over by a 210-year flood event. The flood water inundated over 90 percent of East Grand Forks, leaving the town severely damaged. Following the flood, volunteers, local groups, state and federal agencies poured into the Grand Forks-East Grand Forks area to provide much needed flood relief. Their efforts focused on flood recovery and a re-evaluation of the existing flood protection system. Careful planning was needed to establish wise use of the floodplain.

As part of the revitalization effort, a long-term solution to the flooding problem was needed. East Grand Forks teamed with the Army Corps of Engineers and the State of Minnesota to develop a flood protection plan which included a significant new flood levee system and land set aside for a recreational greenway. Through state and federal dollars, approximately 500 properties within the floodway were acquired and removed. This left space for a 1,200-acre recreational greenway between the Army Corps of Engineers flood control levees and the Red River of the North and the Red Lake River.

The recreational greenway idea, initiated by a grassroots community effort, turned into a legislative proposal in 2000 to create the Red River SRA (Figure 2). According to the Minnesota State Park System Land Study (2000), this project fills a significant gap in the State Park service area. The goal of the Red River SRA is to create a model of sustainable floodplain management, and to provide ecological, economic, and social benefits to the local area, region, and State of Minnesota.

Legislative History

*The Laws of Minnesota for 2000 (chpt.488, art. 3, sec. 21) established Red River State Recreation Area as part of Minnesota's Outdoor Recreation System (MS 85.013, subd.2c).

*The Laws of Minnesota for 2000 (chpt.492, art.1, sec.7, subd.10) allocate capitol bonding for Red River State Recreation Area.

*The Laws of Minnesota 2001 [1Sp2, Sec.5, Subd.5(8)] allocate operating funding for Red River State Recreation Area for fiscal year 2003.

Park Description

Red River SRA is located in the open space between the U.S. Army Corps of Engineers Flood Protection System and the Red and Red Lake rivers (see: Figure 2). The SRA Statutory Boundary currently encompasses 1,230 acres of open space, stretching four miles along the Red River of the North along the Minnesota-North Dakota border, and two and a half miles along the Red Lake River in Minnesota. The SRA is designed as a model for sustainable floodplain management. The open space between the levees and the river is designed to be attractive and usable while allowing the floodplain to absorb high flows. Native plants will be used to minimize maintenance needs and to provide wildlife habitat. Red River SRA is also designed to complement and enhance the protective levee system and its recreational components.

Facilities planned for the SRA include a 100-150 site campground in the former Sherlock Park neighborhood. The campground will provide an overnight opportunity for recreational vehicle and tent campers, making Red River SRA a destination point for travelers. Users of the Red River SRA will also find areas for walking, bicycling and other trail uses, enhanced fishing opportunities, festivals, winter recreation and quiet areas for picnicking and relaxing. The area trails will enhance access to the river and to all parts of the community. Boat and shore access to the rivers will be improved. Interpretative services will center on area history, local resources of significance, floodplain architecture, and the hydrology of a flooding river.

Role of Red River SRA in the State Park System

- *To serve as a model of sustainable recreation development and resource management within a floodplain.*
- *To illustrate the opportunities presented and benefits achieved through the use of urban greenspace as a state recreation area.*
- *To act as a Conservation Connections demonstration project.*

Mission and Vision Statements

Department of Natural Resources Mission Statement

“The mission of the Department of Natural resources is to work with citizens to protect and manage the state’s natural resources, to provide outdoor recreation opportunities, and to provide for commercial uses of natural resources in a way that creates a sustainable quality of life.”

Division of Parks and Recreation Mission Statement

“We will work with people to provide a state park system which preserves and manages Minnesota’s natural, scenic, and cultural resources for present and future generations while providing appropriate recreational and educational opportunities.”

Division of Parks and Recreation Vision

We will continue to work with the people of Minnesota to ensure that the Minnesota State Park System will be sensitive to the needs of current and future generations and guided by the following principles and values:

- A commitment to ensure deliberate and effective natural, cultural, historical, and archaeological resource management;
- A commitment to provide appropriate recreational opportunities;
- A commitment to maintain a proper balance between resource protection and recreational use of state park lands;
- A conscious recognition of our responsibility to the public for wise and prudent acquisition and development of state park lands;
- A recognition of our educational and interpretive roles;
- A conscious and continuous effort to respect the valuable human resources embodied in our employees and the public;
- A continued desire to actively seek and adopt innovative, effective, and efficient management practices;
- A commitment to manage state parks for the benefits that they provide to people, society, the environment, and the economy;
- A realization of our responsibility to secure and maintain the resources necessary to implement our mandates and mission;
- A pledge to provide high quality public service; and
- A promise to consistently seek public involvement and support in decision making.

Red River SRA Mission Statement

“We will work with the people of Minnesota to sustainably manage Red River State Recreation Area so that its significant natural, cultural, and scenic resources are protected and enhanced for current and future generations, while providing diverse educational and recreational opportunities.”

Red River SRA Vision

We will continue to work with the people of Minnesota to ensure that Red River State Recreation Area is managed to meet the needs of current and future generations and guided by the following principles:

- Become a model of sustainable floodplain management.
- Recognize Red River SRA’s role as a Conservation Connection in the watershed, region, Minnesota State Park System, and beyond.
- Sustainably manage the natural, cultural, scenic, and recreational resources to benefit current and future generations.
- Restore floodplain vegetation and wildlife habitat for an aesthetically pleasing and environmentally sound riverfront.
- Form partnerships with local, state, and national groups and agencies to assist with the development of Red River SRA.
- Provide a broad range of recreational opportunities that are sustainable within a floodplain.
- Use the SRA as a place for special events and community celebrations.
- Make park resources accessible to people of all abilities.
- Provide educational opportunities that help people understand the appropriate management and development techniques that are compatible with floodplains and to foster a sense of land stewardship.
- Continue to promote tourism in the area and region.
- Provide high quality customer service.
- Seek public involvement and input in decision making.

Unit Planning Process

Through implementation of the key principles of strategic unit planning, two committees were formed to provide input and recommendations for the SRA Management Plan. These two committees met on a monthly basis to discuss issues and develop recommendations for consideration by the DNR Division of Parks and Recreation Management Team.

A Citizens Advisory Committee was formed to lend local expertise to the planning project. This committee was asked to relate the significant local history of the area, determine local needs and benefits sought, and to provide creative ideas during the planning process.

An Area Team Committee was comprised of DNR professionals who provided technical assistance to the strategic unit planning process in their area of expertise. Each representative was called on to provide resource management recommendations in their respective field, based on the most current information.

In addition to the two committees, countless individuals and agencies contributed to the strategic planning process. The Army Corps of Engineers, U.S. Fish and Wildlife Service, FEMA, East Grand Forks (EGF) City Council, EGF Chamber of Commerce, Friends of the Greenway, local business leaders, and city officials worked closely with the DNR to identify issues and develop recommendations.

Once the list of management recommendations was generated, the draft plan was written and submitted to the Citizens' Advisory Committee and Area Team Committee for review. A 30-day public review period was initiated with a public open house to review plans with the larger public. Concurrent with the public review, a departmental review was initiated through the Statewide Interdisciplinary Review Service (SIRS). Upon approval by the public and SIRS, a letter, along with the management plan was sent to the Commissioner of the Department of Natural Resources for a signature of approval.

All meeting minutes and discussions can be gathered from DNR Parks planning at the Saint Paul central office.

CHAPTER 2: REGIONAL ANALYSIS

Ecosystem information, population figures, socioeconomic data, and regional recreation opportunities were identified within a 60-mile radius of East Grand Forks, MN to better understand the role of Red River SRA within the region and State of Minnesota (Figure 3). According to the Minnesota State Park System Land Study (2000), Minnesotans are willing to travel at least 30 miles for day use recreation. Additionally, while on vacation, people tend to visit recreation areas within 30 miles of their primary destination. Therefore, an area within a 60-mile radius of East Grand Forks was designated as the research area for this section.

East Grand Forks is approximately 80 miles north of Fargo, North Dakota, 145 miles south of Winnipeg, Manitoba and 320 miles northwest of Minneapolis-St. Paul, Minnesota. Among the cities located within a 60-mile radius of Red River SRA are Thief River Falls and Crookston, Minnesota. Cities within the 60-mile radius in North Dakota include Grand Forks and Grafton.

Ecological Classification System Subsection

The Ecological Classification System (ECS) is part of a nationwide mapping initiative developed to improve DNR's ability to manage all natural resources on a sustainable basis (Figure 4). This is done by integrating climatic, geologic, hydrologic and topographic soil and vegetation data.

Three of North America's ecological regions, or biomes, representing the major climate zones converge in Minnesota: prairie parklands, deciduous forest and coniferous forest. Each of these biomes can be seen within a two hour drive from Red River SRA. The presence of three biomes in one non-mountainous state is unusual and accounts for the diversity of ecological communities in Minnesota.

Red River Prairie Ecological Subsection

The western boundary of this subsection is the Red River of the North (Figure 5). The boundary on the east follows the eastern limits of continuous tall grass prairie pre-settlement vegetation. Portions of till plain are included within subsection boundaries. At the south end, the boundary follows the southern end of the till plain and Glacial Lake Agassiz.

The majority of this subsection is a glacial lake plain with silty, sandy, and clayey lacustrine deposits. The area is level, uniform, and featureless, broken only by wetlands, meandering waterways, and old beach ridges. Drainage is to the north via the Red River and its tributaries.

Regional Population Analysis

Red River SRA is located on the east side of the Red River in the town of East Grand Forks in Polk County, Minnesota. In 2000, the population of East Grand Forks was 7,501. The population in Polk County, for the same year, totaled 31,369. The City of Grand Forks is located on the west side of the Red River in Grand Forks County, North Dakota, less than one mile from East Grand Forks. In 2000, the population of Grand Forks was 49,321 (USDC, Bureau of the Census, 2001).

The 1997 Red River Valley flood had a large impact on the regional population. Estimates from the Minnesota State Demographic Center show a loss of approximately 1,900 people (or 6 percent of the population) over three years in Polk County. The U.S. Census Bureau estimates very minor changes in the regional populations in the next 20 years. Other counties located within a 60-mile radius of Red River SRA are Marshall, Pennington, Red Lake, Norman and Kittson counties in Minnesota and Walsh, Traill, Nelson and Pembina counties in North Dakota. The populations of these counties are as follows:

<u>Minnesota Counties</u>		<u>North Dakota Counties</u>	
Polk	31,369	Grand Forks	66,109
Marshall	10,155	Walsh	12,389
Pennington	13,584	Traill	8,477
Red Lake	4,299	Nelson	3,715
Norman	7,442	Pembina	8,585
Kittson	5,285		

There are several small cities within a 60-mile radius of Red River SRA. Cities within the 60-mile radius with populations between 500 and 1000 people are Argyle, Fertile, McIntosh, Stephen and Twin Valley in Minnesota and Thompson in North Dakota. Cities with 1999 populations in excess of 1000 are*:

Thief River Falls, Minnesota	8,410
Crookston, Minnesota	8,192
Grafton, North Dakota	4,516
Ada, Minnesota	1,657
Red Lake Falls, Minnesota	1,590

Communities with large populations that are located near the 60-mile radius are Fargo, North Dakota and Moorhead, Minnesota with a combined population of 153,296 and Winnipeg, Manitoba with a population of 667,000. According to East Grand Forks city planners, visitors from these communities tend to travel further than 30 miles for day use activities, and contribute to the regional economy during special events such as fishing tournaments and ski races.

*Because data from the 2000 Census was not available for North Dakota at the time this management plan was completed, estimated 1999 numbers were used. Estimates were made by the USDC, Census Bureau.

Socio-Economic Region Description

The East Grand Forks-Grand Forks area is the sixth largest metropolitan area in Minnesota. The region's economy relies heavily on business services, manufacturing, retail services, agriculture, transportation and construction. There has been an estimated 23% employment growth rate between 1990 and 1998. The fastest growing industries in the region are local transportation, business services, amusement services, auto repair, real estate and construction (MN Department of Trade and Economic Development, 2001). In 1998, the tourism industry employed over 750 people in the Northwest region of Minnesota. In the past eight years, this industry has experienced a 116% increase in employment growth rate.

The 1997 Red River Valley flood had a short term impact on the regional economy. The flood's negative impact on employment in Polk County was substantial, especially for retail and service employment. However, there was not a substantial decrease in long-term employment due to the strong economy. Clean-up projects created many new jobs and the tight labor market in the region provided other jobs (MN Planning Agency, 1997).

The median household income in Polk County is lower than the state average. In 1999, the Minnesota Planning Agency reported that the median household income in Polk County was \$23,376. This was 37% lower than the State of Minnesota average of \$37,042. A greater percentage of people in the region are unemployed when compared to the state average. The regional unemployment rate in 2001 is 4.4%, compared to 3.9% within the state.

Regional Recreation Opportunities

A range of outdoor recreation opportunities exist within a 60-mile radius of Red River SRA that include both public and private land holdings. The information about facilities in this area was obtained from the DNR data base of recreational facilities, the Minnesota Department of Tourism and the North Dakota Department of Tourism.

Many state-owned units are located within a 60-mile radius of Red River SRA. Among those in Minnesota are Pembina Trail Reserve Scientific and Natural Area (SNA), Two Rivers SNA, Malmberg Prairie SNA and several Wildlife Management Areas. Federal lands within a 60-mile radius are Rydell National Wildlife Refuge (2,120 ac.) and Agassiz National Wildlife Refuge (61,500 ac.). State lands located in North Dakota are Kelly's Slough Wildlife Project and Tetrault State Forest. Ardoch National Wildlife Refuge (2,696 ac.) is the only federally administered facility in North Dakota within a 60-mile radius of Red River SRA. Most of these public lands provide recreational opportunities such as hiking, nature viewing and bird watching.

Minnesota state parks within a 60-mile radius are Old Mill State Park and Lake Bronson State Park. Old Mill State Park provides visitors with opportunities for swimming, boating, picnicking and camping. Lake Bronson State Park offers visitors swimming, fishing, boating, and camping opportunities. Both state parks offer trails for hiking, biking, cross-country skiing, and snowmobiling.

In North Dakota, Icelandic State Park and Turtle River State Park are located within a 60-mile radius of Red River SRA. Icelandic State Park offers boating, swimming, fishing, hiking and camping opportunities. Turtle River State Park offers camping, hiking, biking and skiing opportunities.

The Red River SRA campground will act as a destination point for travelers to northwestern Minnesota, and will be complemented by these regional opportunities. During a stay at the campground, visitors will be able to explore not only Red River SRA, but a host of other facilities located within the surrounding area. As recreation demand increases across the state and country, recreational facilities become increasingly important. Red River SRA will provide facilities and opportunities for recreational vehicle camping and bird watching, two of the fastest growing recreation activities in the country. The proposed Visitor Center will act as an information clearinghouse for recreational and educational opportunities throughout the Red River Valley.

Overnight Opportunities

Camping

There are over 36 campgrounds within a 60-mile radius of East Grand Forks. The campgrounds are distributed evenly between Minnesota and North Dakota. About half of the campgrounds are publicly owned. Four of the campgrounds are located in state parks. About 45 percent of the campgrounds are managed by city or county governments. There are a total of 1,793 campsites in the region. More than half of these sites offer electric hook-ups. The remaining sites are non-electric or primitive campsites. About 27 percent of the campsites in the region are located in State Parks. Table 2.1 is a summary of the regional camping opportunities.

Table 2.1: Camping opportunities within a 60-mile radius of East Grand Forks, MN.

Managing Agency	Developed Camp-grounds	Drive-In Sites w/ Electricity	Drive -In Sites w/out Electricity	Backpack, Walk-In or Canoe-In Sites	Group Sites
Minnesota State Parks (MN-DNR)	2	45	185	6	2
North Dakota State Parks (ND Parks & Rec. Dept.)	2	60	190	0	0
Municipal	17	379	308	0	0
Private Ownership	15	451	167	0	0
TOTALS	36	935	850	6	2

Chapter 2: Regional Analysis

Other Lodging

There are over 45 privately owned businesses that provide overnight accommodations in the region. Facilities range from hotels and motels to bed and breakfasts and cabins. Over half of the accommodations are located in the city of Grand Forks. Two motels are located in East Grand Forks.

Trail Opportunities

There are year-round opportunities to enjoy trails in the region. The trails serve a wide variety of users and are located throughout the region. Table 2.2 (pg. 15) indicates the miles of trails, by category, within a 60-mile radius of East Grand Forks.

Hiking Trails

There are over 58 miles of designated hiking trails in the region. In Minnesota, there are 14 miles of hiking trails located in Lake Bronson State Park, and seven miles of designated hiking trails in Old Mill State Park. There are seven miles of hiking trails, some with ADA accessibility, within the Rydell National Wildlife Refuge, and 10.5 miles of hiking trails at Agassiz Environmental Learning Center. In North Dakota, there are 10 miles of hiking trails located in Turtle River State Park and three miles of hiking trails in Icelandic State Park. Additionally, most public lands in North Dakota have hiking trails of various lengths that are available for day use. Most of these trails are less than one mile in length.

Horseback Riding Trails

There are no designated horseback riding trails located within 60 miles of East Grand Forks. However, there are a number of horseback riding trails located near the region. In North Dakota, the North County National Scenic Trail, located approximately 80 miles from East Grand Forks, offers horseback riding opportunities. In Minnesota, there are numerous horseback riding trails located across the state.

Cross-Country Ski Trails

There are 34 miles of designated cross-country skiing trails located within a 60-mile radius of East Grand Forks. The majority of these designated trails are located within Minnesota and North Dakota State Parks.

Snowmobile Trails

There are a total of 1,243 miles of designated snowmobile trails located within a 60-mile radius of East Grand Forks. Over 70 percent of the trails are located in Minnesota. The Kittson Trail, MC Trail System and Riverland North Trail are three Minnesota Grant-In-Aid trails in the area that are over 100 miles long. County-managed trails over 100 miles long include the Red River Trail and Polk Knight Riders Trail. Minnesota State Parks within a 60-mile radius offer 7.6 miles of groomed snowmobile trails.

Designated Canoe Routes

The Red Lake River is a state designated canoe route. Within 60 miles of East Grand Forks, the Red Lake River meanders 150 miles to provide excellent canoeing opportunities. Canoe launch sites at Red River SRA will improve canoe access to the Red Lake River.

Paved Biking Trails

There are 46 miles of paved biking trails located within a 60-mile radius of East Grand Forks. In North Dakota, the 10-mile long North Star Trail is located in Turtle River State Park. The city of Thief River Falls, MN has almost six miles of designated biking trails. There are 25 miles of paved biking trails located in the city of Grand Forks. Located just north of the 60 mile radius, the Pembina Gorge area in North Dakota offers several biking opportunities. In addition, biking trails are currently being developed in Lake Bronson State Park.

Table 2.2: Trail opportunities within a 60-mile radius of East Grand Forks, MN (in miles).

Managing Agency	Hiking	Horse-back	X-C Skiing	Snow-mobile (GIA)*	Canoe Routes	Paved Biking
Minnesota State Parks (MN-DNR)	21	0	13.5	7.6	0	0
North Dakota State Parks (ND Parks & Rec.Dept.)	13	0	3	0	0	10
Minnesota County (Polk, Marshall, Pennington, Red Lake, Norman, Kittson)	0	0	0	415	0	0
North Dakota County (Grand Forks, Steele, Walsh, Traill, Nelson, Pembina)	0	0	0	348	0	18
State of Minnesota	0	0	0	473	150	0
Municipal	7	0	0	0	0	7
Federal	17.5	0	17.5	0	0	0
TOTALS (miles)	58.5	0	34	1243.6	150	35

* Grant-In-Aid

Other Day Use Activities

Public Water Access

Several popular recreational lakes are located within a 60-mile radius of East Grand Forks. There are 15 rivers and lakes with public water access sites located in Minnesota and 10 access sites in North Dakota. Five of the fifteen public water access sites in Minnesota are portage or carry in access only. Public water access facilities in Minnesota include sites located on Lake Bronson, Cameron Lake, Union Lake, Thief River, Tamarac River and the Red River. Lake Bronson State Park provides visitors with two public water access facilities within park boundaries and has two fishing piers. Fishing piers can also be found at the Thief River Falls reservoir and Florian Park in Marshall County. Old Mill State Park provides visitors with carry in boat access to the Middle River.

In North Dakota there are six dams with public water access facilities. Among these are the Fordville Dam Recreation Area and the Larimore Dam Recreation Area. There are three lakes and one river with public water access facilities in North Golden Lake Recreation Area. Icelandic State Park provides visitors with boat access to Lake Renwick and Turtle River State Park provides boat access to the Turtle River.

Visitor Centers, Interpretive Centers and Museums

There are 22 visitor centers, interpretive centers or museums located in the region. In Minnesota, Old Mill State Park and Lake Bronson State Park offer visitor centers with interpretive displays. Agassiz Environmental Learning Center and Wetland Pines Prairie Audubon Sanctuary also offer interpretive exhibits. Among the 11 facilities located in Minnesota are the Norman County Historical Museum, Kittson County History Center, Reder-Engelstad Pioneer Village, Marshall County History Museum and Polk County Museum. Also, the Rydell National Wildlife Refuge located in Polk County is partially open to the public and provides recreation and interpretation.

In North Dakota, Icelandic State Park offers the Pioneer Heritage Center with restored historic buildings and the Gunlogson Homestead. The Pembina County Historical Museum, Pioneer Heritage Center, North Dakota Museum of Art, Larimore Community Museum, and Northwood Pioneer Museum are among the 10 facilities located in North Dakota. Additionally, there is a North Dakota visitor information center located in the town of Grand Forks.

Annual Special Events

The town of East Grand Forks hosts many special events on an annual basis. The “Cats Incredible” fishing tournament is a nationally recognized event held each August. “Frosty Bobber Days,” held each January, presents ice fishing opportunities, and draws significant visitation each year. Other annual events such as Greenway Ski Days and Chili Cook-Off continue to grow and attract tourists. Park staff will be available to assist in the coordination and programming of these annual events.

Golf Courses

There are 22 golf courses located within a 60-mile radius of East Grand Forks. They consist of both public and private facilities. There are 13 golf courses located in Minnesota and nine in North Dakota. In Grand Forks there are two 18-hole courses and one 9-hole course. Currently in development is King's Walk, an Arnold Palmer Signature golf course located in Grand Forks. The clubhouse and driving range opened in spring 2001. The golf course is scheduled to open in spring 2002.

CHAPTER 3: RECREATION MANAGEMENT

“Red River Basin stakeholders most value abstract landscape opportunities. They want more than money and jobs from the land. They are looking to the Red River Basin’s natural landscape to help them attain overall lifestyle benefits. [Stakeholders] believe managers should work through a process of education and cooperative planning that addresses sustainability of valued landscape opportunities for continued quality of life benefits.” (Stein, 1997, p.101)

People in Grand Forks and East Grand Forks support a Greenway project bringing economic, recreational, educational, and scenic benefits to the community and river banks (Schroeder, 2000).

Introduction

There are many opportunities for both overnight and day-use recreational activities at the Red River SRA. An overview of these planned facilities is shown in Figure 6.

Target Benefits

The target benefits for the SRA’s recreation management and development program have been collectively identified by the citizens’ advisory committee, the area team of DNR resource professionals, and the Saint Paul management team. The target benefits are:

- Overnight opportunity that makes East Grand Forks a destination point for travelers.
- Alternative transportation opportunities within the area that minimize conflict between trail users.
- Outdoor recreation opportunities in an urban setting.
- Improved access to the Red River of the North and the Red Lake River within the SRA.

Overnight Opportunities

Sherlock Commemorative Campground

The campground area has a capacity for 100-150 sites in the former Sherlock Park neighborhood where 300 homes once stood (Figure 7). The objectives for this campground are to commemorate the neighborhood that was destroyed by the 1997 flood, and to provide sustainable floodplain recreation by constructing a campground that will allow flood waters to temporarily inundate it, with minimal damage to campground facilities. During the planning stages and a formal Environmental Assessment Worksheet process, campground design was coordinated with local, state, and federal floodplain administrators. Campground development complies with criteria for allowable uses in a floodplain as outlined in Section 11 of the FEMA Hazard Mitigation Grant Program (1999).

Campsites

Camping spurs will be constructed of pervious materials to allow water to infiltrate the surface. Campsites will include electrical outlets which will be removable in anticipation of a flood event. Additional campsite amenities will be considered at such time that funding becomes available. Additional amenities include campsite sewer and water hookups connected to the existing municipal system. These amenities will comply with federal and state laws governing allowable uses in a floodplain.

Chapter 3: Recreation Management

Campground Structures and Accessory Facilities

Campground sanitation buildings will be designed to be temporarily inundated with flood water with little or no damage. Sanitation buildings will be connected to the municipal waste water system. Vault toilets will be used to handle the large volumes of campers that use the campground. Vault toilets will be pumped in anticipation of a flood event. A shower building will not be provided in the floodplain.

The campground area will contain a picnic shelter area, a play structure, and drinking fountains. Drinking fountains will be connected to the municipal water lines. Minnesota DNR, Division of Parks and Recreation is also looking into possibilities of creating riverbank fishing sites in the campground area.

Contact Station

The campground contact station will initially be a temporary structure located on the dry side (town side, protected from flooding) of the Army Corps of Engineers levee (Figure 8). As funding becomes available, a Visitor Center will be constructed, which will include a camper registration area and parking. This building will include showers to serve campers.

Trail Opportunities (Figures 9 & 10)

There is much restoration work to be done along the river banks to create the natural type of experience trail users seek. Trails should be mown grass or packed gravel (Class 2). Some trails will be 14 feet wide to create fire breaks for prescribed burns. In some areas, prescribed burns will be conducted on an annual basis during the vegetative restoration of the river banks. Trails will be laid out in concentric loops, where possible, so that users of the SRA have a variety of choices of trail length to ride, hike or ski. The trail system will incorporate bank fishing sites that will range from hard-surfaced to primitive sites.

The trails are mown grass or gravel in surface because this will create a more natural setting for trail users. Mown grass and gravel trails will not have the operation and maintenance concern that would be associated with paved trails. The flood waters can do much damage to paved trails. Mown grass or gravel trail surfaces may be more easily cleaned off and less damaged than these other types of trails. Also, snowmobile traffic will not damage the mown grass trails as they would the paved trails.

The majority of paved trails in the area will be constructed by the Army Corps of Engineers. These will allow for road biking and rollerblading activities that cannot occur on the mown grass trails. Corps' trails will follow the alignment of the ring dikes, with some trails on top of the dike, some on the wet side (riverward of Corps levee), and some on the dry side (town side of Corps levee, protected from flooding). These paved trails will be 14 feet wide and provide enough space for two way pedestrian and bicycle traffic. Corps trails will be maintained by the City of East Grand Forks.

Chapter 3: Recreation Management

Snowmobile and cross-country ski trails will be kept separate to avoid conflicting uses. Approximately six miles of snowmobile trails will exist north of the Red Lake River, and roughly seven miles of cross-country ski trails will exist south of the Red Lake River. The snowmobile trails to the north will connect to the regional trail that enters at the north end of town. Cross-country skiers who wish to ski north of Red Lake River can do so on the Army Corps trail system.

Snowmobile Trails

A trail comes into Valley County Golf Club on 23rd Street and continues along the river to downtown East Grand Forks, where it dead-ends. Another trail follows the Highway 2 right-of-way from Crookston and ends at the Holiday Gas Station in East Grand Forks. The Red River Snowmobile Club would like a trail along the Red Lake River. The club is interested in a grass trail, not a paved trail. They would like to use a pedestrian bridge to cross the river. Snowmobilers also need a staging area to off-load snowmobiles, and to park their towing vehicle and trailers. Additional investigation needs to be conducted pertaining to the status of some abandoned railroad corridors that could possibly be used for snowmobile trails between East Grand Forks and Crookston.

Hiking and Cross-Country Skiing Trails

There is an interest and need for trails that could be used by hikers, bird watchers, river bank anglers, cross-country skiers, and runners. All these users would prefer a grass trail rather than a gravel or paved trail. Goals, Inc., a club representing cross-country skiers, runners and mountain bikers, is interested in sponsoring running races of various distances. Therefore, it favors an “H plan”, (i.e., races would go up one and down one side of the Red River, across to the other side, and then up and down the other side and the Red Lake River). Cross-country skiers prefer trails with changes in topography, so trails will run up and down the slopes along the river. Skiers prefer a 16 foot wide trail down along the river to get out of the wind. A ski trail should link all areas of the park with the visitor center and other facilities. This link can be accomplished by city efforts to construct a pedestrian bridge over the Red Lake River. Cross-country skiers who wish to access facilities north of the Red Lake River can do so on city or Corps developed trails. Hikers and cross-country skiers can use trailheads as staging areas to off-load and park.

Army Corps of Engineers recreation amenities

The Corps’ flood protection system consists of two ring dikes to both contain development and protect the town from periods of flooding. Associated recreational amenities are provided by the Corps to compliment the ring dikes’ development. The recreational features are seven trailheads, multiple use trails, picnic structures, and play structures (see: Figure 6). Two of these trailheads will be located on the wet side of the ring levees. DNR worked extensively with the Army Corps during the design phases of the trailhead buildings and will assume operation and maintenance of the trailheads located at the Point (confluence of the Red and Red Lake Rivers), and the River Heights trailhead located at 12th Street and 8th Avenue. The Corps is constructing four other trailheads throughout the city. These will be operated and maintained by the City of East Grand Forks.

Day Use Opportunities

Trailheads

Day use activities abound in the Red River SRA. Three trailheads, designed and built by the Army Corps of Engineers and operated by DNR, will be located at River Heights Park at the intersection of 12th Street and 8th Avenue, at the proposed visitor center in downtown, and at the confluence of the Red and Red Lake rivers (Figure 6). The River Heights and Point trailheads will contain picnicking areas, play structures and parking/staging areas for trail user groups. These trailheads will also contain interpretive and informational signage (trail maps) to orient the user. DNR will pursue a legislative exemption for permits at these trailheads to avoid user confusion and ensure operational convenience.

Shore Fishing

There is good fishing throughout the Red River SRA. High use areas include the confluence of the Red and Red Lake rivers, Riverside and Griggs rapids, River Heights Park, The Point, and the downtown area. Hard-surfaced bank fishing sites at each of the high use areas will be constructed and connected to the trail system to provide lower-impact fishing opportunities.

Boat Access

The DNR will relocate the Folsom Park access to provide better access to the Red Lake River, a State Designated Canoe Route, during all flow events. The downtown access will be improved with the two existing ramps. A new access with double ramps will be developed downstream of the Riverside rapids. Boat access development will be conducted by the Division of Parks and Recreation and coordinated with DNR Trails and Waterways and Fisheries disciplines.

Recommendations

- Assume operation and maintenance of U.S. Army Corps of Engineers' trailheads at 12th Street and 8th Avenue, and the Point (Confluence).
- Identify areas to provide solitude within an urban setting.
- Provide access to shore fishing opportunities along the rivers.
- Connect, where feasible, the trail system built by the Corps with the SRA trail system and existing local and regional trails.

Proposed Development

- Build a model, modern floodplain campground that is compatible with flooding to act as an overnight opportunity for visitors of the area and region.
- Build mown grass and packed gravel trails (rather than paved), where appropriate, to minimize flood impacts and associated maintenance costs.
- Construct trails in concentric loops that connect with area bridges, schools and facilities to offer a variety of trail experiences.
- Work with DNR Divisions of Trails and Waterways and Fisheries to restore boat access to the rivers at the city's two boat launches (Downtown and Folsom Park).
- Re-establish native vegetation in the recreation area in order to create wildlife and bird habitat for recreational viewing experiences.
- Pursue a legislative exemption for permits at River Heights, Visitor Center, and Point trailheads to avoid user confusion and ensure operational convenience.

CHAPTER 4: INTERPRETIVE and ENVIRONMENTAL EDUCATION SERVICES

Introduction

Interpretive and environmental education services should be designed and developed to provide valuable natural and historical education opportunities for local schools, the communities, and tourists to the area. There are sufficient and noteworthy historical sites and natural areas associated with the river, its aquatic ecosystem, and the river bottom forests to provide a very convenient, close and accessible education area for schools and the citizens of the two cities.

Target Benefits

The target benefits for the SRA's interpretive and environmental education program have been collectively identified by the citizens' advisory committee, the area team of DNR resource professionals, and the Saint Paul management team. The target benefits are:

- Enhanced understanding of the natural systems and communities found within the SRA.
- Enhanced understanding of the cultural and historical resources in the area.
- Partnerships with area schools for interpretive activities.
- Enhanced sense of land stewardship among SRA visitors.

Existing Opportunities

Currently, area school classes take advantage of environmental education programs at a variety of sites and learning centers in the region such as the Agassiz Learning Center near Fertile, MN, and state parks in North Dakota and Minnesota. However, almost all opportunities are a considerable distance from the cities requiring travel time and bus expense. The SRA will provide a local, quality, outdoor education area of statewide significance.

Themes for Interpretation/Education

Considering the themes and opportunities of the other environmental study areas in the region, and the natural and cultural resources of the Red River SRA, the following primary and secondary themes would be most appropriate as a focus for design and development of educational facilities.

Primary Theme: The Red River of the North

The action of the glaciers 7,000 years ago created a unique landscape: a major river flowing north and one of the flattest and richest farmlands in the world.

- Rich river bottom forests along the Red and Red Lake rivers provide a diversity of plant life and habitat for many animals.
 - Unique riverine ecosystem, which includes channel catfish, lake sturgeon, and other fish and aquatic life which collectively compose a special identity for the river ecosystem.
 - The river bottom forests, remnant prairies and the rivers themselves are rare habitats for birds and other fauna in a farming region where a great proportion of native habitats have been altered.
-

Chapter 4: Interpretive and Environmental Education Services

Secondary Theme: Red River Valley History

The historical component of interpretation includes both natural and cultural history.

- American Indians used the resources of the river and forests for centuries before the arrival of Europeans. Lake sturgeon were a very important part of the American Indian culture along the Red River and especially at the Red Lake and Clearwater Rivers confluence.
- The Red and Red Lake rivers, and their strategic location, provided early transportation routes for fur traders, ox carts and steamboats.
- The conversion of the Red River Valley prairie to farm fields changed the region's nature and culture forever.
- The Great Flood of 1997 devastated the two cities and created a new future for their citizens.

Recommended Education Development

Visitor Center

A visitor center should be constructed to provide a central orientation and education site for the Red River SRA as well as an information site for both Minnesota and North Dakota outdoor recreation opportunities.

The three primary purposes of the visitor center would be:

- An information center for outdoor recreation opportunities throughout Minnesota and North Dakota including places for camping, boating, skiing, hiking, fishing, birding and many more recreational pursuits.
- Provide for interpretation of the natural and cultural resources of the SRA.
- Tell the story of the Great Flood of 1997, and the birth of the SRA.

Visitor Center Discussion

The visitor center should be located close to downtown East Grand Forks yet on the edge of a quality river bottom forest area for easy access to nature trails (see Figure: Entrance Concept). Facilities needed in a new visitor center include:

- An information/lobby area with a large model of the entire SRA showing trails, boat access, camping areas, etc.
 - An information center and gift shop with enough space for brochures/maps that provide regional and state recreation information and sales of recreation maps and books.
-

- A central commons/exhibit area with large windows and a deck for a bird feeding display and wildlife observation. This room would have only limited permanent displays that might become static in the future. The room should be developed as a comfortable seating and reading area with bird observations as the major activity. Display space for small traveling displays or changeable exhibits by season would help bring visitors back to the facility and keep them interested and engaged throughout the year.
- A small outdoor presentation area adjoining the building as a staging area for outdoor education programs.
- Bathroom facilities adequate to serve the visitors of the center and shower facilities for campers.
- Storage space for interpretive materials.

Technology Discussion

There is a strong interest in the local area for utilizing innovative technology in the new visitor center that can increase visitors' interest as well provide accessible outreach activities.

- Plan the new visitor center to include high speed internet access and touch screen resource information computer terminals.
- Investigate installing outdoor digital cameras for live, up-close viewing of bird feeding and nesting activity. Live images can also be linked to the visitor center web page for students to view back at their classrooms.
- Provide educational materials on the visitor center web site for downloading at school sites for pre-field trip and post-field trip learning.

Interpretive Trails, Signage and Site Development

Trails should be developed throughout the SRA and should be viewed as the most valuable educational development. First-hand experiences along trails, within the riparian corridor, are more valuable learning experiences than viewing exhibits in a building. Three to five of the recreational trails in the SRA should be specifically designed for education. These trails should be of various lengths to accommodate a wide variety of visitor needs.

- A short ($\frac{1}{2}$ -mile or less) loop trail from the visitor center, along the river bottom forest, crossing the river and returning across the river at a different location to the visitor center. A trail that takes visitors across the river and returns on a different bridge would be most exciting.

Chapter 4: Interpretive and Environmental Education Services

- Plan a longer trail along the river south from the visitor center through the river bottom forest. It would also be most desirable to plan this trail as a loop trail crossing the river, if possible.
- In the south section of the SRA, plan a longer trail, with shorter loop cutoffs, located in such a manner that the East Grand Forks secondary school can easily gain access from their property.

Interpretive Approach

The most effective park interpretive programs use a mixture of interpretive approaches to reach a variety of audiences. Interpretation can occur either as personal or non-personal. Personal interpretation occurs during an interpretive program or naturalist-guided tour. Non-personal interpretation is accomplished through information boards, kiosks, self guided trails and brochures. To maximize the effort of both non-personal and personal interpretation, staff considerations should be made to hiring a resource and interpretive specialist year-round. The resource and interpretive specialist can develop programs based on the primary and secondary interpretive themes discussed earlier in this chapter. Recommendations for non-personal interpretive resources are listed below.

- Plan overlooks at strategic locations along with interpretive signage. An overlook at the confluence of the Red and Red Lake rivers is the first area where this should be developed.
 - Due to the periodic flooding of the area, plan most educational trails in brochure and post style, as opposed to permanent interpretive signs. This style has more advantages than just limiting damage to signs during flooding. The brochure that corresponds to each trail can be easily updated on computer, and even divided into seasonal topics. Information can also be available on the web site so schools can download information and teachers can plan their field trips and activities. A post and brochure trail is also less expensive to develop and maintain.
 - If safety can be assured (especially around dams), having kayaks or canoes available would allow people to explore the river and provide students with exciting aquatic study lessons on the river.
 - A pedestrian bridge across the river is not only important for an interesting trail experience, it also allows students to conduct river studies directly over the river, such as river flow calculations.
 - Recreational development for the SRA will integrate interpretation of the Great Flood.
 - The campground should be developed as a Sherlock Park Commemorative Campground with interpretation of the history of the former neighborhood.
-

Recommendations

- Develop activities related to major themes for Red River SRA.
 - *Primary Theme: The Red River of the North
 - *Secondary Theme: History: From American Indians, traders, railroads and steamboats to the impacts of a flooding river.
 - Provide for interpretation of the natural and cultural resources of the SRA to people of all ages and abilities.
 - Tell the story of the Great Flood of 1997 and the birth of the SRA.
 - Provide educational materials on the visitor center web site for downloading at school sites for pre- and post-field trip learning.
 - Provide interpretation from the overlook at the confluence of the Red and Red Lake rivers trailhead.
 - Promote private sector partnerships that make kayaks or canoes available at the visitor center to allow people to explore the river and provide students with exciting aquatic study lessons on the river.
 - Integrate interpretation of the Great Floods of the area into recreational facilities of the SRA (e.g. historic water levels marked on picnic shelter pillars).
 - Explain floodplain architecture and sustainable recreation development within a floodplain (i.e. engineering of “flood proof” structures)
 - Develop the campground as Sherlock Park Commemorative Campground with interpretation of the history of the former neighborhood.
 - Work with DNR Fisheries staff to communicate fisheries management efforts within the Red River of the North watershed.
 - Provide interpretation of Conservation Connections and greenway models.
-

Proposed Development

- Construct a visitor center as a central location for interpretive activities.
- Create an information center for outdoor recreation opportunities throughout Minnesota and North Dakota.
- Plan the new visitor center to include high speed internet access and touch screen resource information computer terminals.
- Investigate installing outdoor digital cameras for live, up-close viewing of bird feeding and nesting activity. Live images can also be linked to the visitor center web page for students to view back at their classrooms.
- Provide a short (½-mile or less) loop trail from the visitor center, along the river bottom forest, crossing the river and returning across the river at a different location to the visitor center.
- Develop a longer trail in the south section of the SRA, with shorter loop cutoffs, located in such a manner that the East Grand Forks secondary school can easily gain access from their property.
- Design most educational trails in brochure and post style, as opposed to permanent interpretive signs, due to the periodic flooding of the area,.

CHAPTER 5: NATURAL RESOURCE MANAGEMENT

Target Benefits

The target benefits for the SRA's natural resource management program have been collectively identified by the citizens' advisory committee, the area team of DNR resource professionals, and the Saint Paul management team. The target benefits are:

- Conservation Connections (linear corridors) of undeveloped land for the creation of habitat for area birds and wildlife.
- Restored native, river bank vegetation for habitat, shade for fisheries, and stable soil conditions.
- Enhanced sense of natural resource stewardship among area residents and visitors.

Inventory

Climate

The Red River Basin is part of a subhumid to humid continental climate. Warm summers, cold winters, and rapid changes in daily weather patterns are characteristic of the area. About three-fourths of the basin's precipitation occurs during the months of April through September. Two-thirds of the annual precipitation occurs in the summer months of May, June and July (Krenz and Leitch, 1998). Average temperatures in East Grand Forks throughout the year are 58 degrees Fahrenheit in the months April through October, and 16 degrees Fahrenheit in the months November through March (www.weather.com, 2001). The growing season ranges between 111 to 136 days. Total average precipitation is 21 inches per year. The area is mostly influenced by Polar air masses, and is marginally influenced by the Pacific Maritime Gulf air mass (www.dnr.state.mn.us, 2001).

Geology

Bedrock in the area consists of Cretaceous, Ordovician, and Jurassic sedimentary bedrock. The bedrock is overlain by 200-400 feet of fluvial glacial drift (Figure 11). The area just outside the boundaries of Red River SRA is classified as Lacustrine sedimentation, formed by Glacial Lake Agassiz (<http://www.dnr.state.mn.us>, 2001).

Soils

The most dominant soil types within the boundaries of Red River SRA are 667B Fairdale Loam (1-6% slopes) and 1963 Bearden-Colvin complex [Natural Resource Conservation Service (NRCS), 2001]. Other soil types are 422B Bygland silty clay loam (2-6% slopes), 694D2 Zell silt loam (6-20% slopes, eroded), 1323 Ladell silt loam (0-6% slopes), and 1006 Fluvaquents-Haploborolis complex (0-30% slopes) (Figure 12). Additional soils information can be found at the West Polk County Soil and Water Conservation District Office. Soil characteristics influence development and regeneration projects within the SRA.

Soil Characteristics: Natural Resource Regeneration

Regeneration projects (Point and Campground area) will occur on Fluvaquents-Haploborolis Complex and Fairdale Silt Loam.

Chapter 5: Natural Resource Management

1006 Fluvaquents - Haploborolis Complex is found along the river banks of the Red and Red Lake rivers. Its slope ranges from 0-30 percent. The texture of the surface layer of Fluvaquents is a very fine sandy loam that is very poorly drained, while the Haploborolis component is a well-drained clay loam. Species planted on this soil must be able to establish themselves under very wet conditions. Depth to bedrock averages more than 5 feet, with a surface layer that is relatively high in organic matter. Major uses of this soil are pasture and wildlife habitat (NRCS, 2001).

667B Fairdale Silt Loam is found most commonly in floodplains and terraces. The slope ranges from 1-6 percent. The texture of the surface layer is a silt loam with a high content of organic matter. The soil is moderately well-drained and has a depth to water table of three to five feet (NRCS, 2001). Regeneration projects occurring on this soil type will need to include species that exhibit a high rate of survivability under extremely wet and flooded conditions.

Soil Characteristics: Recreation Development

Sherlock Park Commemorative Campground development will occur on Fairdale Silt Loam. Typically, campgrounds are not built on this soil due to the frequency of flooding. However, construction design and seasonal operation of the campground will minimize flood impact.

Recreational trails will be built on a variety of soil types within the SRA. Those soils best suited for trail development are 422A,B,C Bygland Silty Clay Loam, 667B Fairdale Silt Loam, 694D2 Zell Silt Loam, and 1323B Ladell Silt Loam.

Vegetation

Pre-European Settlement (Figure 13)

No pre-settlement vegetation exists within the SRA. Major flood events, agriculture and other human activities have reduced the resource base to scant mature trees and wooded areas. Before European settlement, the land was unaltered by the nomadic peoples that occasionally inhabited the area near the confluence of the Red and Red Lake rivers. Early European settlers found a mixture of grasses (bluestem and Indian grass, among others), sedges, and wildflowers on the level areas of upland prairie, and patches of northern floodplain forests along the river banks (Army Corps of Engineers, 1998). Wet prairie was dominated by bluejoint grass, cordgrass, cattails, rushes and sedges (www.dnr.state.mn.us, 2001). Today, no remnants of this pre-European settlement vegetation have been found within Red River SRA.

Existing Vegetation

A tree inventory of the area was completed by the Minnesota DNR in 1999. Tree cover can be seen in Figure 14. The dominant trees on the landscape in the floodplain forest are Cottonwood, American Elm, Boxelder, and Willow.

Colorado Blue Spruce is located in the area, but suffers needle cast due to the wet conditions of the area. Bur Oak seem to grow well in the area, as evidenced by the large specimens in the area, despite their usual affinity for drier climates. Species planted on this soil must be able to establish themselves under very wet conditions (Appendix A).

Water Resources

The major water resources adjacent to the boundaries of the Red River SRA are the Red River of the North and the Red Lake River. The Red Lake River is a state designated canoe route. No lakes exist within the statutory boundary. The rivers are very turbid and are prone to flooding each spring, with an occasional flood in the summer months. The Red River Watershed (Figure 15) stretches out over a region that was once Glacial Lake Agassiz. When floods stretch out over the flat landscape, large sedimentary deposits are left behind once the flood waters recede. When the river is at average level, canoeing, kayaking, boating and fishing opportunities exist. It is important to note that river users participate in these activities at all river levels, but the amount of use varies with river levels. Division of Fisheries dam improvements (projected to occur in 2003) will enhance recreational boating opportunities.

Wildlife

The primary habitats in the SRA are riverine coulees, riparian grassy areas, forested and brushy riparian areas, along with some agricultural and urban lands. Although the Red River SRA is largely an urban state recreation area, the riverine ecosystem supports various forms of wildlife. Due to the urban nature of the area, many of the wildlife species have adapted to living in harmony with human development. Only one state or federally listed species (lake sturgeon) exists in the immediate area. Various edge species such as squirrels, rabbits, deer, fox, and over 75 species of birds call the Red River Valley home. These species rely primarily on linear corridors of vegetation adjacent to developed areas. As these corridors become fragmented, wildlife seek other areas to inhabit.

The Red River of the North is located on an especially important migratory route to many species of birds. The Red River SRA provides valuable habitat for migrant, breeding and resident birds and wildlife. The natural habitat along the river banks provides permanent and temporary homes for songbirds, hawks, bald eagles and owls (Greenways, Inc., 1999). Birding is one of the fastest growing forms of recreation in the United States. Several areas have the potential for providing the best birding in the East Grand Forks - Grand Forks area. As habitat is restored, park staff will identify the most optimal locations for bird watching and develop self-guided brochures for visitor use.

Riverward of the campground area, large bur oaks provide habitat for passerine (perching) birds. Robins, orioles, yellow-rumped warblers and barn swallows can be found here. Urban birds found within the SRA are Canadian geese, great blue herons, song sparrows, chipping sparrows, and dark-eyed juncos. Migrant passerines which occur in large numbers include Nashville warbler, black-throated green warbler, American redstart, scarlet tanager, and swamp sparrow.

Mammals found here include raccoon, river otter, gray and red squirrels, white-tailed deer, and several species of rodents. A number of reptiles and amphibians also use the wetland and riverine habitats found within the SRA.

Fisheries

The United States Geological Survey (USGS) has identified 77 species of fish native to the watershed. The most common species are common carp, common shiner, walleye, johnny darter, rock bass, black crappie, white sucker, shorthead redhorse, channel catfish, and black bullhead. Seven non-native fish have been stocked at one time or another primarily for sport fishing opportunities. The non-native species are rainbow trout, brown trout, brook trout, muskellunge, white bass, and flathead chub (www.usgs.gov,1998). Minnesota DNR is reintroducing 1,250, four to ten year-old lake sturgeon in an effort to establish a self-sustaining population.

The Red River of the North and the Red Lake River are regarded as world class catfish fisheries. The town holds special events such as the “Cats Incredible” fishing tournament in mid-August and “Frosty Bobber Days” in late January. People come from all over the nation to attend these fishing events.

Endangered, Threatened and Special Concern Species

Lake sturgeon is the only state or federally listed species of flora or fauna in Red River SRA. The newly created rapids within the SRA will provide spawning habitat for lake sturgeon. The reconnection of the Red and Red Lake rivers from East Grand Forks to Thief River Falls will provide the species access to 125 miles of the Red Lake River. The reconnection will also provide access to the Clearwater River. Historically, the confluence of the Clearwater and Red Lake rivers was a significant spawning site for lake sturgeon. As lake sturgeon numbers increase, visitors to the SRA can expect to catch and view lake sturgeon.

Recommendations

- Create Conservation Connections through linear corridors of native vegetation, where possible, to establish wildlife habitat and recreation opportunities in a natural setting.
- Plant native vegetation along the river banks to promote soil stability, improve water quality, and control runoff.
- Use restoration efforts as educational tools to promote a sense of land stewardship among park visitors.
- Continue to monitor the area for sensitive species occurrences, and actively manage and protect their habitat if found.
- Conduct prescribed burns, where appropriate, to re-establish native vegetation along the river banks.
- Develop ongoing resource assessments and monitoring plans for the area.
- Form partnerships with local, state, and national groups and agencies to assist with the management of Red River SRA.

CHAPTER 6: CULTURAL RESOURCE MANAGEMENT

Cultural Resource Management in State Parks and Recreation Areas

The four objectives listed below represent how cultural resources are managed in State Parks, and how they will be managed in Red River SRA. Objectives are to:

- Preserve, restore and protect the SRA's significant cultural and historical resources,
- Comply with appropriate state and federal laws governing cultural resource management,
- Provide interpretive opportunities, where appropriate, for the cultural resources located within the SRA, and
- Develop an ongoing research and monitoring program.

Target Benefits

The target benefits for the SRA's cultural and historical research program have been collectively identified by the citizens' advisory committee, the area team of DNR resource professionals, and the Saint Paul management team. The target benefits are:

- Preserved or restored cultural and historical features within the SRA.
- Enhanced understanding and appreciation of historic and cultural stories of East Grand Forks and the Red River Valley by residents of the area and visitors to the SRA.

Historical and Archaeological Setting

The following information was gathered from a study *Phase 1 Cultural Resources Investigation and Phase 2 Testing at the City of East Grand Forks, Polk County, Minnesota* by Florin Cultural Resource Services (April 2001). The information contained in this study is a detailed assessment of culturally significant sites within the Red River SRA.

Pre-Contact

Glacial Lake Agassiz covered what is now the Red River Valley during the Paleoindian period (11,500 to 7,500 B.P.), making the area inaccessible to early cultures. Although Late Paleoindian artifacts have been found along the beaches of Lake Agassiz, no remnants have been found in the project area. Native American occupants adapted to the post-glacial climate during the Archaic period (8,000 to 3,000 B.P.). Evidence of Prairie Archaic habitation is limited to surface finds (21PL57) and private collections. The Woodland period (3,000 to 250 B.P.) is fairly well documented in the Red River Valley. Evidence of habitation sites exist within the project area, and are documented in the "Inventory" section below.

Contact and Post-Contact Periods

The presence of several tribes has been documented in the northern Red River Valley during the Equestrian Nomadic tradition (1700 A.D. to 1900 A.D.). These tribes included the Assiniboine, Dakota, Metis, Ojibwe, and Plains Cree. "There are no known sites [in the project area] associated with this tradition, although it is likely that such sites exist" (Florin, 2001). During the early period of European settlement, the Red River Valley was controlled by both French and British traders. Settlements were developed along the Red River of the North according to strategic locations for the trade network. A fur trading post was located at the confluence of the Red and Red Lake rivers. Ox carts and steamboats were early means to transport goods, which later gave way to railroads and automobiles.

Chapter 6: Cultural Resource Management

The town of East Grand Forks was established after the Civil War by W.C. Nash, who originally named the town “Nashville.” In 1873, the town established a post office, and was officially named East Grand Forks.

Inventory

Information in this section was gathered from two studies sponsored by the U.S. Army Corps of Engineers Archaeological Unit (LTA, Inc., 2000 and Florin Cultural Resource Services, 2001). The investigations cover the majority of the lands within the Red River SRA statutory boundary, and all of the proposed recreational development areas. Much of the evidence of early settlement or human activity has been impacted by strong natural and human-caused forces. Little above-ground evidence of these sites exists today.

Habitation Sites

Archaic, Middle Woodland, and Late pre-historic habitation sites existed along the river banks. Sites 1 (21PL49), 2 (21PL54), 3 (21PL57), and 4 (21PL71) on Figure 16 are areas where evidence has been found of habitation, and have been declared as eligible for the National Register of Historic Places (NRHP). Sites 5 (21PL72) and 6 (FCRS 202-15) yielded evidence of prehistoric habitation, also. However, the time period of settlement has yet to be determined, and will be assessed in Phase II of the U.S. Army Corps’ archaeological survey.

Fur Trading Post

Historical records indicate that a fur trading post existed at the confluence of the Red and Red Lake rivers (Site 7 on Figure 16). Because this area has been heavily impacted by natural and human-caused forces, no evidence of the trading post was found in the 2000 survey conducted by LTA, Inc. If there was a trading post in this location, remnants have most likely been destroyed by later activities.

Early Industry

The University of North Dakota’s historical records indicate Site 8 (Figure 16) was the location of a Grand Forks Lumber Company sawmill that was in operation from 1899 to 1911. Investigations in 1999 yielded no new information about the site with the exception of a small piece of concrete foundation. The piece of concrete was relocated in 1999. The historical components of this site were declared not eligible for NHRP.

Recommendations

- Develop mown grass or gravel (class 2) trails that will not require digging below the surface for construction.
- Develop ongoing research and monitoring for cultural resources within the SRA.
- Promote appreciation and understanding of the rich history of the area through interpretive activities and development.

CHAPTER 7: PARK BOUNDARY

Existing Boundary and Land Ownership Issues

The Division of Parks and Recreation's original intent for Red River SRA's statutory boundary was to keep it inside (riverward) of the U.S. Army Corps of Engineers' flood control project. Only these lands will be considered to be transferred from the city to the state. Because the Corps' flood control project alignment may not be determined until 2005, and was not in place when the management plan was written, the statutory boundary was drawn as close to the proposed dike alignment as possible (Figure 17). When the Corps' project is completed, the statutory boundary will need to be modified to match this alignment and allow for a right-of-way for annual Corps inspection of the flood protection system. The State of Minnesota will not assume any operation or maintenance costs associated with the Corps' flood control project (estimated to be \$750,000 per year). Once the Corps' flood protection project is in place, the Division of Parks and Recreation will work with the legislature to make the necessary statutory boundary modifications.

Following the 1997 flood, structures within the floodplain were acquired and removed by FEMA. The FEMA acquired land, which is restored to city ownership once the removals are completed, carries allowable use constraints for subsequent development. Recreational development on FEMA acquired land within the SRA complies with criteria for allowable uses in a floodplain as outlined in Section 11 of the FEMA Hazard Mitigation Grant Program (1999).

Proposed Boundary Modifications

DNR Division of Parks and Recreation will not pursue statutory boundary expansion or land acquisition without community and land owner support. During the planning process, the Citizens' Advisory Committee and City Administration agreed that SRA expansion was a priority. Based on this support, Division of Parks and Recreation will consider statutory boundary expansion and land acquisition for lands within the Red River of the North and Red Lake River corridors.

The city has proposed that the golf course located north of town could provide space for a trail head and visitor center or park staff service area. This is a matter for future consideration for park management. The public should be involved in conversations regarding this possible acquisition.

Recommendations

- Modify the statutory boundary to match the alignment of the Corps flood protection system, allowing for a right-of-way for annual Corps inspection of the flood protection system
- Consider statutory boundary expansion and land acquisition for lands within the Red River of the North and Red Lake River corridors.

CHAPTER 8: SIGNIFICANT AREAS MAPPING

Introduction

Significant Areas Mapping is an integrated approach by which the existing natural and cultural resources in an SRA are identified and assessed in terms of their regional significance and then assessed for their capability to provide visitor experience opportunities. The purpose of Significant Areas Mapping is to identify the areas in the SRA where there is current conflict and opportunities between resource preservation and visitor use. DNR, along with citizen input, then generates management recommendations for how to best resolve the conflict between resource preservation and visitor use. This conflict resolution and opportunity identification produces the 20 year outlook for resource preservation and visitor use within the SRA.

Assessing Present Conditions

Significant Natural and Cultural Resources

Due to natural and human caused impacts to the landscape of Red River SRA, and the urban nature of Red River SRA, there are few existing sensitive resource areas. These few areas, primarily cultural resource areas, are shown in Figure 18. The existing vegetation is primarily mature trees and a low shrub layer along the river banks of the Red and Red Lake rivers. The river banks are not critical habitat to any listed species of wildlife, with the exception of the dam sites being possible congregation areas for lake sturgeon which have been reintroduced to the watershed, and are a state species of special concern.

Visitor Use Levels and Experience

DNR worked with the citizens of East Grand Forks to learn where local residents and visitors to the area are most commonly found (high use areas) along the river banks. The citizens outlined the areas where concentrated recreation exists. These areas are shown in Figure 19. The areas mainly represent shore fishing activities due to the fact that the SRA is not yet developed.

Opportunities and Conflicts

The present condition of Resource Protection and Visitor Levels do not come directly into conflict in any one area. The two present conditions are mapped in Figure 20. Management recommendations were not generated because conflicts do not currently exist.

Assessing Future Conditions (20 Year Outlook)

Significant Natural and Cultural Resources

Over the next twenty years, DNR intends to re-establish the vegetation within the Red River SRA with native grasses and forbs, sedges, and trees. These restoration projects should be kept away from trampling by human foot traffic, but will, at the same time, be available as examples of vegetative restoration for interpretation of land stewardship projects. These areas are shown in Figure 21. It should also be noted that creation of linear corridors and bird habitat could result in the occupancy of a listed species of wildlife that will require further consideration to make sure visitor levels do not interfere with habitat.

Visitor Use Levels and Experience

It is expected that the area of East Grand Forks and the SRA will see a substantial increase in visitation over the next 20 years with the development of this unit. The boat launch on the Red Lake River is expected to be more heavily used once it is restored to a more usable condition. Also, the campground area will see higher use over the next 20 years. Anticipated visitor levels (high use areas) in 20 years are shown in Figure 22. Because the SRA is entirely within city limits, visitor experience will be different than that of a typical state park or recreation area.

Opportunities and Conflicts

At this time, it is predicted that the only area that will present a conflict between visitor levels and natural resource protection is at the confluence of the Red and Red Lake rivers. The scenic overlook here, “The Grand Fork,” will include DNR signage indicating vegetative restoration work. Visitors to the area will be asked not to trample the restoration projects, and interpretive signage will communicate the “Science of Restoration” to create a sense of land stewardship among SRA visitors. Resource Protection and Visitor Levels can be seen in Figure 23.

As restoration projects continue to develop along the banks of the two rivers, signage will be posted to protect the resources, communicate DNR goals for the area, and identify the benefits achieved through the restoration program. The river banks are a popular spot for shore fishing. Restoration projects could be damaged if proper information is not posted.

CHAPTER 9: PARK OPERATIONS

Staffing and Operations

Staffing for the Red River SRA must be adequate to operate and maintain the campground and other facilities to an appropriate degree. The specific staffing will be dependent on funding and other variables that affect the Division of Parks and Recreation. A staffing and funding plan will be developed for this area and will address management, administration, maintenance, supplies, and other needs of the SRA.

Facility and Building Management

Minnesota State Parks contain almost 600 structures listed on the National Register of Historic Places (www.dnr.state.mn.us, 2001). However, no buildings listed on the National Register of Historic Places exist within the boundaries of Red River SRA.

Because Red River SRA is within the regulatory floodplain and flood fringe, few buildings will be constructed within the boundaries of this unit. Two sanitation buildings (each less than 500 square feet in size) and four vault toilets will be built in the campground. These buildings will be designed to minimize structural damage in times of high water, and will meet all local, state and federal policies regarding structures in a floodplain.

A shower building has been identified as a critical component of the campground. Due to federal, state, and local policies regarding structures in a floodplain, it may not be possible to construct a shower building in the campground. Options for its location need to be explored. One such option is to incorporate shower facilities into the visitor center. Campground users could access the shower facilities from a private, outside entrance

Office space is needed for SRA staff. The proposed visitor center, on the dry side of the flood control project, will be centrally located within the SRA and could include office space. Due to square footage restrictions in the proposed visitor center, office space options for other DNR staff should be explored within the city of East Grand Forks.

Space will be required for an SRA maintenance area. Options within the city will be explored. DNR will work with city officials on identification of a maintenance space.

Flood Emergency Procedures

Emergency procedures for state parks and recreation areas are addressed in the Minnesota DNR Emergency Management Plan. This document can be viewed at DNR's intranet site: dnrnet.state.mn.us/references. In accordance with the Department plan, each state park and recreation area must develop its own Emergency Management Plan. The Red River SRA Emergency Management Plan will be coordinated by Region 1 - Parks, Red River SRA Manager, the County Sheriff's Department, and city officials.

Red River SRA is prone to spring and summer flood events. The City of East Grand Forks and the Permits and Land Use Section Administrator (DNR, Division of Waters) know 1-2 weeks ahead of any flood potential. A time period of one to two weeks allows for adequate time to

Chapter 9: Park Operations

prepare for flood events. Regardless, emergency procedures in times of flood must be strongly addressed in the emergency management plan. Parks' staff will work closely with the Regional and Area Hydrologist to prepare for and recover from flood events, complying with rules and regulations that apply to Large Watershed and Extensive Floods (Appendix B).

Visitors to the SRA will be notified of closures through the DNR website and statewide press releases. These notifications will be coordinated by the DNR Information Center and Parks' Media Relations Coordinator. The State Parks' Campground Reservation Contractor is charged with notifying campers with reservations of any closures, and will route them to other campgrounds nearby.

Enforcement

Law enforcement within the SRA will comply with Minnesota State Statutes, Minnesota Department of Natural Resources Operational Orders, Minnesota State Park Rules, and other appropriate guidelines and directives.

Because Red River SRA's statutory boundary is located entirely within East Grand Forks city limits, coordination with county and local law enforcement will be necessary. Generally, the SRA manager will provide park security for activities in violation of state park rules, while local authorities would be called on to assist in special circumstances. Minnesota DNR Conservation Officers will also assist with enforcement in the SRA. Minnesota DNR regional parks management will continue to work with local authorities to create and maintain an appropriate and effective law enforcement system within the SRA.

CHAPTER 10: PLAN MODIFICATION PROCESS

State Park and State Recreation Area Management Plans document a partnership-based planning process, and the recommended actions resulting from that process. These comprehensive plans recognize that all aspects of park management are interrelated, and that management recommendations should also be interrelated.

Over time, however, conditions change that effect some of the plan recommendations or even an entire plan. Plans need to acknowledge changing conditions, and be flexible enough to allow for modifications as needed.

There are two scales or types of plan modifications: plan revisions and plan amendments. Minor plan revisions concern less controversial issues and can generally be made within the Division of Parks and Recreation as plan modifications. Larger issues that represent changes in management direction or involve other portions of the Department or other state agencies are addressed as plan amendments. The Division of Parks and Recreation Planning Manager will make the decision of whether a plan amendment or plan revision is appropriate.

To maintain consistency between plans and processes, all revisions and amendments will be coordinated through the Division of Parks and Recreation planning section. Requests for planning assistance should be directed to the Division of Parks and Recreation Planning Manager in the Central Office, St. Paul.

Major Plan Amendments

Plan Amendment Criteria

The criteria outlined below will be used to determine whether the proposed change warrants a plan amendment.

The proposed change:

- Alters the park mission, vision, goals, specific management objectives, or proposed development plans outlined in the plan;
- Is controversial between elected officials and boards, park user groups, the public, adjacent landowners, other DNR divisions or state agencies; or
- Directly affects other state agencies (e.g. Minnesota Historical Society).

Plan Amendment Process

The plan amendment process has a series of steps.

1. Review the proposed change at the park and regional level. Determine which stakeholders potentially have a major concern and how those concerns should be addressed. If the major concerns are within the Division of Parks and Recreation, the issue should be resolved within the Division, with input from the public. The proposed change is then reviewed with the Division Central Office Management Team.
 2. If the proposed change involves other DNR Divisions, the issue should be resolved by staff and approved by the affected Division Directors. This may require one or two area/regional integrated resource management team meetings. The proposed change
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Chapter 10: Plan Modification Process

- will be reviewed through the Department's review process (Statewide Interdisciplinary Review Services or SIRS).
3. If the proposed change issue involves other state agencies, the issue should be resolved by staff and approved by the Division Central Office Management Team with input from the public- and reviewed by SIRS.
 4. If the proposed change is potentially controversial among elected boards, park user groups, adjacent landowners or the public, an open house will be held that is advertised in the local and regional area.
 5. All plan amendments should be coordinated, documented, and distributed by the Division of Parks and Recreation planning staff.

Plan Revisions

If a plan change is recommended that does not meet the amendment criteria above, and generally follows the intent of the park management plan (through mission, vision, goals, and objectives), the Division of Parks and Recreation has the discretion to modify the plan without a major planning process.

Revisions Related to Physical Development Constraints and Resource Protection

Detailed engineering and design work may not allow the development to be completed exactly as it is outlined in the plan. A relatively minor modification, such as moving a proposed building site to accommodate various physical concerns, is common. Plans should outline a general direction and document the general "areas" for development rather than specific locations. For the most part, plans are conceptual, not detail-oriented. Prior to development, proposed development sites are examined for the presence of protected Minnesota Natural Heritage Program elements and historical/archaeological artifacts. If any are found, the planned project may have to be revised to accommodate the protection of these resources.

Program Chapter Revisions

The resource management and interpretive services plan sections should be updated periodically as needed. The Division of Parks and Recreation's Resource Management and Interpretive staff will determine when an update is needed, and coordinate the revision with the park planning section. Program sections should be rewritten in a format consistent with the plan as originally approved by the DNR. To retain consistency, Division of Parks and Recreation planning staff will be involved in the revision review, editing and distribution.

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Appendix A: Plan Recommendations

Recreation

- Assume operation and maintenance of U.S. Army Corps of Engineers' trailheads at 12th Street and 8th Avenue, and the Point (Confluence).
- Identify areas to provide solitude within an urban setting.
- Provide access to shore fishing opportunities along the rivers.
- Connect, where feasible, the trail system built by the Corps with the SRA trail system and existing local and regional trails.
- Build a model, modern floodplain campground that is compatible with flooding to act as an overnight opportunity for visitors of the area and region.
- Build mown grass and packed gravel trails (rather than paved), where appropriate, to minimize flood impacts and associated maintenance costs.
- Construct trails in concentric loops that connect with area bridges, schools and facilities to offer a variety of trail experiences.
- Work with DNR Divisions of Trails and Waterways and Fisheries to restore boat access to the rivers at the city's two boat launches (Downtown and Folsom Park).
- Re-establish native vegetation in the recreation area in order to create wildlife and bird habitat for recreational viewing experiences.
- Pursue a legislative exemption for permits at River Heights, Visitor Center, and Point trailheads to avoid user confusion and ensure operational convenience.

Interpretive and Environmental Education

- Develop activities related to major themes for Red River SRA.
 - *Primary Theme: The Red River of the North
 - *Secondary Theme: History: From American Indians, traders, railroads and steamboats to the impacts of a flooding river.
 - Provide for interpretation of the natural and cultural resources of the SRA to people of all ages and abilities.
 - Tell the story of the Great Flood of 1997 and the birth of the SRA.
 - Provide educational materials on the visitor center web site for downloading at school sites for pre- and post-field trip learning.
 - Provide interpretation from the overlook at the confluence of the Red and Red Lake rivers trailhead.
 - Promote private sector partnerships that make kayaks or canoes available at the visitor center to allow people to explore the river and provide students with exciting aquatic study lessons on the river.
 - Integrate interpretation of the Great Floods of the area into recreational facilities of the SRA (e.g. historic water levels marked on picnic shelter pillars).
 - Explain floodplain architecture and sustainable recreation development within a floodplain (i.e. engineering of "flood proof" structures).
 - Develop the campground as Sherlock Park Commemorative Campground with interpretation of the history of the former neighborhood.
 - Work with DNR Fisheries staff to communicate fisheries management efforts within the Red River of the North watershed.
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Appendix A: Plan Recommendations

- Provide interpretation of Conservation Connections and greenway models.
- Construct a visitor center as a central location for interpretive activities.
- Create an information center for outdoor recreation opportunities throughout Minnesota and North Dakota.
- Plan the new visitor center to include high speed internet access and touch screen resource information computer terminals.
- Investigate installing outdoor digital cameras for live, up-close viewing of bird feeding and nesting activity. Live images can also be linked to the visitor center web page for students to view back at their classrooms.
- Provide a short (½-mile or less) loop trail from the visitor center, along the river bottom forest, crossing the river and returning across the river at a different location to the visitor center.
- Develop a longer trail in the south section of the SRA, with shorter loop cutoffs, located in such a manner that the East Grand Forks secondary school can easily gain access from their property.
- Design most educational trails in brochure and post style, as opposed to permanent interpretive signs, due to the periodic flooding of the area.

Natural Resources

- Create Conservation Connections through linear corridors of native vegetation, where possible, to establish wildlife habitat and recreation opportunities in a natural setting.
- Plant native vegetation along the river banks to promote soil stability, improve water quality, and control runoff.
- Use restoration efforts as educational tools to promote a sense of land stewardship among park visitors.
- Continue to monitor the area for sensitive species occurrences, and actively manage and protect their habitat if found.
- Conduct prescribed burns, where appropriate, to re-establish native vegetation along the river banks.
- Develop ongoing resource assessments and monitoring plans for the area.
- Form partnerships with local, state, and national groups and agencies to assist with the management of Red River SRA.

Cultural Resources

- Develop mown grass or gravel (class 2) trails that will not require digging below the surface for construction.
- Develop ongoing research and monitoring for cultural resources within the SRA.
- Promote appreciation and understanding of the rich history of the area through interpretive activities and development.

Appendix B: Recommended Seed Mixes for Red River State Recreation Area.

[Source: Ingraham & Assoc. (1999) "Red River State Recreation Area East Grand Forks
Greenway Management Plan"]

Wildflower Seed Mix For Wet Conditions (Mix 1) East Grand Forks Greenway Plan, Demonstration Areas

Wildflowers	Mesic	Wet	Aquatic	Full Sun	Partial Shade	% of mix per lb
Yarrow (<i>Achillea millefolium</i>)	•	•		•	•	10
Fragrant giant hyssop (<i>Agastache foeniculum</i>)	•			•	•	1
Leadplant (<i>Amorpha canescens</i>)	•			•	•	1
Butterfly weed (<i>Asclepias tuberosa</i>)	•			•	•	2
Heath aster (<i>Aster ericoides</i>)	•			•		1
Smooth aster (<i>Aster laevis</i>)	•			•		3
Panicled aster (<i>Aster lanceolatus</i>)		•		•	•	1
Azure aster (<i>Aster oolentangiensis</i>)	•			•	•	4
Arrow-leaved aster (<i>Aster urophyllus</i>)	•				•	1
Milk vetch (<i>Astragalus canadensis</i>)	•			•	•	1
Stiff tickseed (<i>Coreopsis palmata</i>)	•			•	•	3
Canada tick trefoil (<i>Desmodium canadense</i>)	•			•	•	1
Stiff sunflower (<i>Helianthus rigidus</i>)	•			•		4
Common ox-eye (<i>Heliopsis helianthoides</i>)	•	•		•	•	9
Meadow blazing star (<i>Liatris ligulistylis</i>)	•			•	•	2
Tall blazing star (<i>Liatris pycnostachya</i>)	•	•		•	•	5
Wild bergamot (<i>Monarda fistulosa</i>)	•			•	•	2
White prairie clover (<i>Petalostemum candidum</i>)	•			•	•	2
Purple prairie clover (<i>Petalostemum purpureum</i>)	•	•		•	•	13
Prairie rose (<i>Rosa arkansana</i>)	•			•	•	1
Black-eyed Susan (<i>Rudbeckia hirta</i>)	•	•		•	•	14
Upland goldenrod (<i>Solidago ptarmicoides</i>)	•			•	•	1
Stiff goldenrod (<i>Solidago rigida</i>)	•	•		•	•	6
Showy goldenrod (<i>Solidago speciosa</i>)	•			•	•	3
Hoary vervain (<i>Verbena stricta</i>)	•			•	•	3
Golden alexanders (<i>Zizia aurea</i>)	•	•		•	•	6

Appendix B: Recommended Seed Mixes for Red River State Recreation Area.

[Source: Ingraham & Assoc. (1999) "Red River State Recreation Area East Grand Forks
Greenway Management Plan"]

Grass and Wildflower Seed Mix For Wet Conditions (Mix 2) East Grand Forks Greenway Plan, Demonstration Areas

Grasses	Mesic	Wet	Aquatic	Full Sun	Partial Shade	% of mix per lb
Big bluestem (<i>Andropogon gerardii</i>)	•	•		•	•	35
Canada wild rye (<i>Elymus canadensis</i>)		•		•	•	15
Blue joint grass (<i>Calamagrostis canadensis</i>)		•	•	•	•	13
Switch grass (<i>Panicum virgatum</i>)	•	•		•	•	8
Indian grass (<i>Sorghastrum nutans</i>)	•	•		•	•	7
Wild rye (<i>Elymus virginicus</i>)	•	•		•	•	2
Green Bulrush (<i>Scirpus atrovirens</i>)		•	•	•		1
Wool grass (<i>Scirpus cyperinus</i>)		•	•	•		3
Giant bur-reed (<i>Sparganium eurycarpum</i>)			•	•		
Cord grass (<i>Spartina pectinata</i>)		•	•	•	•	6
Wildflowers						
Sweet flag (<i>Acorus calamus</i>)		•	•	•		4
Swamp milkweed (<i>Asclepias incarnata</i>)		•	•	•		2
Black-eyed Susan (<i>Rudbeckia hirta</i>)	•	•	•	•		4

Appendix B: Recommended Seed Mixes for Red River State Recreation Area.

[Source: Ingraham & Assoc. (1999) "Red River State Recreation Area East Grand Forks
Greenway Management Plan"]

Grass and Wildflower Seed Mix For Wet Conditions (Mix 3) East Grand Forks Greenway Plan, Demonstration Areas

Grasses	Mesic	Wet	Aquatic	Full Sun	Partial Shade	% of mix per lb
Big bluestem (<i>Andropogon gerardii</i>)	•	•		•	•	35
Canada wild rye (<i>Elymus canadensis</i>)		•		•	•	15
Blue joint grass (<i>Calamagrostis canadensis</i>)		•	•	•	•	8
Bottlebrush sedge (<i>Carex comosa</i>)		•		•	•	4
Switch grass (<i>Panicum virgatum</i>)	•	•		•	•	8
Indian grass (<i>Sorghastrum nutans</i>)	•	•		•	•	8
Wild rye (<i>Elymus virginicus</i>)	•	•		•	•	2
Tall manna grass (<i>Glyceria grandis</i>)		•	•	•		1
Fox sedge		•		•		3
Giant bur-reed (<i>Sparganium eurycarpum</i>)			•	•		3
Cord grass (<i>Spartina pectinata</i>)		•	•	•	•	6
Wildflowers						
Sweet flag (<i>Acorus calamus</i>)		•	•	•		4
Black-eyed Susan (<i>Rudbeckia hirta</i>)	•	•	•	•		4
Swamp milkweed (<i>Asclepias incarnata</i>)		•	•	•		4

Appendix B: Recommended Seed Mixes for Red River State Recreation Area.

[Source: Ingraham & Assoc. (1999) "Red River State Recreation Area East Grand Forks
Greenway Management Plan"]

Grass and Wildflower Seed Mix For Mesic (Medium Moisture) Conditions (Mix 4) East Grand Forks Greenway Plan, Demonstration Areas

Grasses	Mesic	Wet	Aquatic	Full Sun	Partial Shade	% of mix per lb
Big bluestem (<i>Andropogon gerardii</i>)	•	•		•	•	32
Side oats grama (<i>Bouteloua curtipendula</i>)	•			•	•	7
Canada wild rye (<i>Elymus canadensis</i>)		•		•	•	4
Switch grass (<i>Panicum virgatum</i>)	•	•		•	•	3
Indian grass (<i>Sorghastrum nutans</i>)	•	•		•	•	22
Little bluestem (<i>Schizachyrium scoparium</i>)	•			•	•	24
Prairie dropseed (<i>Sporobolus heterolepis</i>)	•			•	•	1
Wildflowers						
Fragrant giant hyssop (<i>Agastache foeniculum</i>)	•		•	•		1
Yarrow (<i>Achillea millefolium</i>)	•		•	•		1
Black-eyed Susan (<i>Rudbeckia hirta</i>)	•	•	•	•		3
White prairie clover (<i>Petalostemum candidum</i>)	•		•	•		2

Appendix B: Recommended Seed Mixes for Red River State Recreation Area.

[Source: Ingraham & Assoc. (1999) "Red River State Recreation Area East Grand Forks
Greenway Management Plan"]

Grass and Wildflower Seed Mix For Mesic (Medium Moisture) Conditions (Mix 5) East Grand Forks Greenway Plan, Demonstration Areas

Grasses	Mesic	Wet	Aquatic	Full Sun	Partial Shade	% of mix per lb
Big bluestem (<i>Andropogon gerardii</i>)	•	•		•	•	30
Side oats grama (<i>Bouteloua curtipendula</i>)	•			•	•	7
Canada wild rye (<i>Elymus canadensis</i>)		•		•	•	4
Switch grass (<i>Panicum virgatum</i>)	•	•		•	•	3
Indian grass (<i>Sorghastrum nutans</i>)	•	•		•	•	24
Little bluestem (<i>Schizachyrium scoparium</i>)	•			•	•	24
Graceful sedge (<i>Carex gracillima</i>)	•				•	.5
Klam's brome (<i>Bromus kalmii</i>)	•			•	•	.5
Wildflowers						
Fragrant giant hyssop (<i>Agastache foeniculum</i>)	•		•	•		1
Yarrow (<i>Achillea millefolium</i>)	•		•	•		1
Black-eyed Susan (<i>Rudbeckia hirta</i>)	•	•	•	•		3
White prairie clover (<i>Petalostemum candidum</i>)	•		•	•		2

Appendix C: Departmental Emergency Management Plan

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D. Large Watershed and Extensive Floods

1. Waters Responsibilities and Procedures

a. Pre-Flood

- 1) The Permits and Land Use Section Administrator (or designee) will:
 - a) Participate in the National Weather Service flood warning and flood forecast meetings and develop press releases about information and assistance available, and

 - b) Maintain close contact with the Division of Emergency Management, the Corps of Engineers, the National Weather Service and the United States Geological Survey to track the course of the flood.

- 2) The Permits and Land Use Section Administrator (or designee) and the regional or area hydrologist will contact the affected communities and make flood preparedness and clean-up information available.

- 3) The regional or area hydrologist will determine particular community needs and determine, in consultation with the Permits and Land Use Section Administrator (or designee), the extent to which DNR can assist.

- 4) The state climatologist and the Permits and Land Use Section Administrator (or designee) will prepare climatological reports as well as other related weather data in support of emergency operations.

b. During Flood

- 1) The Permits and Land Use Section Administrator (or designee) will:
 - a) Maintain contact with the Division of Emergency Management, the DNR assistant commissioner for operations, and the Regional Director either independently or through the DNR State Emergency Operating Center representative/Emergency Coordination Center chief;

 - b) Contact the regional or area hydrologist when local involvement becomes necessary; and

 - c) Document the flood by collecting newspaper articles, daily forecasts, and peak flow information.

Appendix C: Departmental Emergency Management Plan

- 2) The regional or area hydrologist will:
 - a) Assist community officials by reviewing flood fighting and clean-up needs (e.g., pumps, clean-up materials -- see **Section V. Logistical Response**) and identify structures at risk for substantial damage and advise them about appropriate local zoning procedures;
 - b) Provide the Division of Waters with data on flood parameters, conditions, high water marks, etc.; and
 - c) Document the flood by collecting newspaper articles, daily forecasts, and peak flow information.

c. Post-Flood

- 1) The regional or area hydrologist will work with community officials to see that state and local permits are appropriately handled.
- 2) The Permits and Land Use Section Administrator (or designee) and the regional engineer or trained and designated staff will assist the Federal Emergency Management Agency and the Division of Emergency Management with preliminary damage assessments as required.
- 3) The Permits and Land Use Section Administrator (or designee) and the regional engineer or trained and designated staff will assist the Federal Emergency Management Agency and the Division of Emergency Management with detailed survey reports on damaged public facilities.
- 4) The Permits and Land Use Section Administrator (or designee) will submit and track detailed survey report requests for information on damage to DNR property.
- 5) The regional engineer or trained and designated staff will assist Department of Administration staff as requested in inspection of damaged public buildings and facilities.
- 6) The regional engineer or trained and designated staff will assist the Department of Transportation as requested in the inspection of damaged road systems.
- 7) The Permits and Land Use Section Administrator (or designee) will assign personnel to disaster application centers, if required, to disseminate information to and solicit information from flooding victims.

2. Enforcement Responsibilities and Procedures

The Division of Enforcement plays a support role in flood emergencies. Duties will generally occur during or immediately after the flood and might involve search and rescue, assistance with security, evacuation, or traffic control. Enforcement activities addressed in this plan will be requested either by the DNR State Emergency Operating Center representative or by Division of Emergency Management staff.

Appendix C: Departmental Emergency Management Plan

- a. Requests for Enforcement assistance during floods will be passed to the appropriate regional Enforcement supervisor and/or area officer by the DNR State Emergency Operating Center representative, Regional Director or other central office Enforcement staff.
- b. When contacted for assistance, the area Enforcement officer will:
 - 1) Contact local enforcement officials overseeing flood-related work;
 - 2) Consult with local law enforcement officials and relay requests for equipment or further assistance to the regional Enforcement supervisor; and
 - 3) Stay in contact with local law enforcement and continue to assist as requested for the duration of the flood.
- c. The regional Enforcement supervisor will mobilize more officers as necessary, act immediately on any requests for equipment or supplies (see **Section V. Logistical Response**), and keep records of equipment sent to the flood area.

3. Engineering Responsibilities and Procedures

- a. The Bureau of Engineering's assistant administrator or alternate will be the primary emergency contact for the Bureau of Engineering during a flood emergency. The bureau administrator will serve as alternate contact.
- b. When requested, the regional engineer or other trained and designated staff will:
 - 1) Before or during flooding, help identify any emergency protective measures which can be taken to prevent damage in the flood area;
 - 2) Make themselves available to conduct damage assessments and to serve as state inspectors on federal/state damage survey teams.
 - 3) Prepare damage survey reports with regard to debris clearance, damage to dikes, levees, irrigation works, drainage facilities, state parks, lands, etc., in the disaster area.