

DES MOINES RIVER VALLEY STATE TRAIL MASTER PLAN



Minnesota Department of Natural Resources
Division of Parks and Trails
April 2013



The Minnesota Department of Natural Resources, Parks and Trails Division would like to thank all who participated in this master planning process. Many individuals and groups in trail communities have been working for many years to help establish this trail. The Friends of Jackson County Trails has played a leading role in these efforts and continues to do so. Many DNR staff, city, county, state and federal officials, trail association members and local citizens contributed their time and energy to the planning process as well.

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April 2013, Minnesota Department of Natural Resources.

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Department of Natural Resources Approval of Des Moines River Valley State Trail Master Plan

Minnesota Statutes, Section 86A.09, requires that a master plan be prepared for units of Minnesota's outdoor recreation system, including state trails. This master plan addresses the proposed Des Moines River Valley State Trail, extending from the Iowa border through Jackson County to Kilen Woods State Park and through Cottonwood and Murray counties to the Casey Jones State Trail at Lake Shetek State Park. The trail was authorized in 2009 in *Minnesota Statutes*, Section 85.015, Subdivision 27.

The Minnesota Department of Natural Resources interdisciplinary team developed the Master Plan, with the assistance of the Friends of the Jackson County Trails, the National Park Service Rivers, Trails and Conservation Assistance Program, and representatives from the three counties and the cities of Jackson and Windom. The plan received extensive public input and review, including four public open houses and multiple meetings with county and regional agencies.

The Des Moines River Valley State Trail Master Plan has been reviewed by the Division of Parks and Trails and by the Southern Region Management Team.

I have reviewed this master plan and determined that it complies with *Minnesota Statutes* 86A.09 and find it provides for the administration of the planned trail in a manner that is consistent with the purpose for which the trail was authorized.

Erika R. Rivers

Erika Rivers
Assistant Commissioner

4/19/13

Date

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Executive Summary

Trail Alignment and Development

The Des Moines River Valley State Trail was authorized by the Minnesota Legislature in 2009. The authorizing legislation states that the trail will generally follow the Des Moines River corridor from the Iowa border through the cities of Jackson and Windom and connect to the Casey Jones State Trail in Currie. The trail will link southwestern Minnesota's Kilen Woods and Lake Shetek state parks, city and county parks, wildlife preserves and historic sites, and connect to Iowa's extensive Spirit Lake parks and trails system.

This plan identifies a search corridor that extends for approximately five miles on either side of the Des Moines River and along the Iowa border to Spirit Lake. The corridor is approximately 70 miles in length and is divided into four segments for the purpose of analysis. Within each segment, the master plan identifies one or more potential alignments for the trail in or near this search corridor. The search corridor was originally defined as extending three miles from the river. Based on comments received during the plan review period regarding the lack of services closer to the river, the corridor has been expanded to encompass many of the small cities within this wider area.

Since most of the land along the Des Moines River is in private ownership, the trail alignments may follow county or township road corridors. However, it is not envisioned that the trail will be located entirely in or along road rights-of-way. The goal is to find alignments that take trail users away from the road to provide access to scenic views of the river and natural and cultural amenities. The trail must also avoid wetlands, high quality plant communities, and other sensitive resources. Land acquisition from willing sellers will be necessary in order to accomplish this goal.

Phasing and Interim Routes

It is anticipated that the first phases of the trail would be developed in southern Jackson County, connecting the Spirit Lake / Dickinson County trail system and Jackson County's own Loon Lake trails with trails within the city of Jackson. An interim step towards off-road trail development is identification of on-road cycling routes, using road shoulders or signed bike routes in cities. This plan identifies county highways or other roads that could provide such connections.

Recommended Trail Uses

The trail will accommodate the range of uses found on most state trails, including bicycling, walking and running, dog walking, and in-line skating. Other uses may include cross-country skiing, access for fishing, and environmental education/ interpretation. Horseback riding, snowmobiling and hunting will be generally allowed except where regulated or prohibited by community ordinance or state park rules and regulations. (Most state trails are open to

snowmobiles, either on a separate treadway or sharing the paved surface. Some trails include segments of separate natural-surface treadways used for horseback riding.)

Limitations of width, landowner agreements and land use restrictions may dictate that not all recommended uses can be accommodated at all times for the entire length of the trail. Additional alternative trail alignments will be pursued as necessary to accommodate proposed uses. Trail development will be accessible to people with disabilities wherever possible.

Trail Management

The plan contains recommendations for maintenance, enforcement, and interpretation of natural and cultural resources. Trail maintenance is critical to provide and sustain the quality experience trail users expect and appreciate. The plan recommends that an adequate level of enforcement be provided via a multifaceted approach, to help maintain a safe and secure trail environment. It is also a goal to encourage trail users to understand and obey trail rules, respect other trail users and respect adjoining properties.

Natural and Cultural Resources

The ecological value of the trail corridor will be enhanced wherever possible through intensive resource management. The vegetation within the trail right-of-way will be managed to provide a healthy diversity of native woodland, wetland, and prairie communities for wildlife habitat and for the enjoyment of trail users and adjoining landowners. Native flowers, grasses, trees and shrubs that are consistent with the natural plant communities of the area will be planted and managed. Areas disturbed during construction will be seeded with native plants. Cultural resources will be preserved and managed for interpretive purposes. Some native plant community management may include cooperative efforts with adjacent land owners. Trail users will have opportunities to experience the history of the region through existing historical and proposed interpretive sites.

Public Involvement

Public involvement in the planning process has been extensive, with multiple public and committee meetings, presentations to city and county boards and agencies, and outreach at community events. The trail concept has attracted both support and opposition, as documented in the following section and Appendix A.

1. Planning Process, Vision and Goals

The Des Moines River Valley State Trail Master Plan was prepared by the Minnesota Department of Natural Resources, Division of Parks and Trails, with assistance from the National Park Service Rivers, Trails and Conservation Assistance Program, Friends of Jackson County Trails, and the Des Moines River Valley Trail Steering Committee.

Planning History

The Des Moines River Valley State Trail was authorized by the Minnesota Legislature in 2009. This step marked the culmination of over a decade of work by the Friends of Jackson County Trails and local governments.

The initial impetus for trail development in Jackson County was an effort by a group of tourism professionals in Jackson County and the Belmont Foundation to develop a trail near the Fort Belmont site south of I-90. Participants organized as the Friends of Jackson County Trails and toured over 90 miles of the county in search of trail routes. With the participation of the Jackson County Highway Department and the City of Jackson, trail development began. Today the county trail system includes four completed trails and at least three additional trails in the planning stage. Completed trails (shown in Figures 3, 5 and 6) are located in the City of Jackson and adjacent to the Iowa border, connecting to the Spirit Lake area trail system.

The Friends group began to imagine a future trail system that would connect to Kilen Woods State Park and potentially to the Casey Jones Trail. The group worked with area legislators to advocate for designation of a state trail extending the length of the Des Moines River in Minnesota. The river is already designated as a State Water Trail used for canoeing and canoe camping between the Minnesota-Iowa border and Talcot Lake County Park, a distance of 68 river miles.

Following the state trail designation in 2009, Friends of Jackson County Trails applied for and received technical assistance from the National Park Service's Rivers, Trails and Conservation Assistance Program. NPS is working with DNR on trail planning and meeting facilitation, with an emphasis on building awareness and support for the trail and local planning capacity.

Why Plan?

Master planning for state trails is conducted in order to satisfy the requirement of Minnesota Statutes, Section 86A.09, which requires that a master plan be prepared for state trails. The planning process is intended to:

- Provide a unifying vision for trail advocates who are working to secure a trail alignment and funds for development and maintenance of the trail.

- Guide the development, management, maintenance and operation of the trail so that quality recreational, transportation and healthful exercise opportunities are provided.
- Provide a forum for open public discussion concerning trail use and trail development options, trail maintenance and management issues, and trail operations and enforcement needs.
- Support partnerships and processes that will help execute the plan and contribute to providing quality trail opportunities.
- Assess the projected impacts of trail development on natural, cultural and historic resources in the area as well as the impacts on local communities.

The State and Regional Context:

The Legacy Plan

The trail master plan is being developed within the context of a major statewide planning effort: the *Parks and Trails Legacy Plan; A 25-Year Long-Range Plan for Minnesota*, completed in early 2011. The plan was mandated by the Minnesota Legislature to help guide how funds from the Clean Water Land and Legacy Act (the “Legacy Amendment”) should be spent for parks and trails of regional significance. The Legacy Plan process has helped to identify those parks and trails in Southwest Minnesota that meet “state and regional significance” criteria, and has provided a method for identifying and addressing the recreational needs and preferences of each region.¹

The University of Minnesota’s Center for Changing Landscapes conducted a Parks and Trails Inventory as part of the Legacy Plan process for each region of the state. Southwest Minnesota is considered part of the South Region. The inventory identified Loon Lake and Robertson County Parks in Jackson County as being of regional significance. The South Region was identified as having relatively fewer built trails in its western half compared to the eastern portion of the region, which includes the relatively dense Blufflands Trail system. The report recommends regional strategies that include the following:

- Create a parks/trails/byway network that uses scenic byways as interim connections between parks and communities, “standing in” for as yet unbuilt state trails;
- Use road construction projects to help build trails;
- Strengthen water trails by improving facilities and increasing visibility.

¹ Center for Changing Landscapes, University of Minnesota. 2011. *Minnesota's Network of Parks & Trails: Framework and Summary Inventory*.

The Southwest Minnesota Trail Corridor Plan Update

The Southwest Regional Development Commission, serving the nine counties in southwest Minnesota, prepared a regional trail plan in 1999 and updated it in 2011. The plan establishes trail development priorities for each county, identifies existing and potential trailheads, and identifies project partners, funding resources, and other resource information for trail planning.

The plan includes the 2010 regionally prioritized list of trail projects in Southwest Minnesota. The Des Moines River Valley Trail, Jackson County segment, is the third highest priority project, while the Cottonwood County segment is eighth on the priority list. (Completion of the Casey Jones State Trail segment west of Lake Shetek State Park in Murray County received the highest score on the regional priorities list.)

Public Involvement and Partnerships

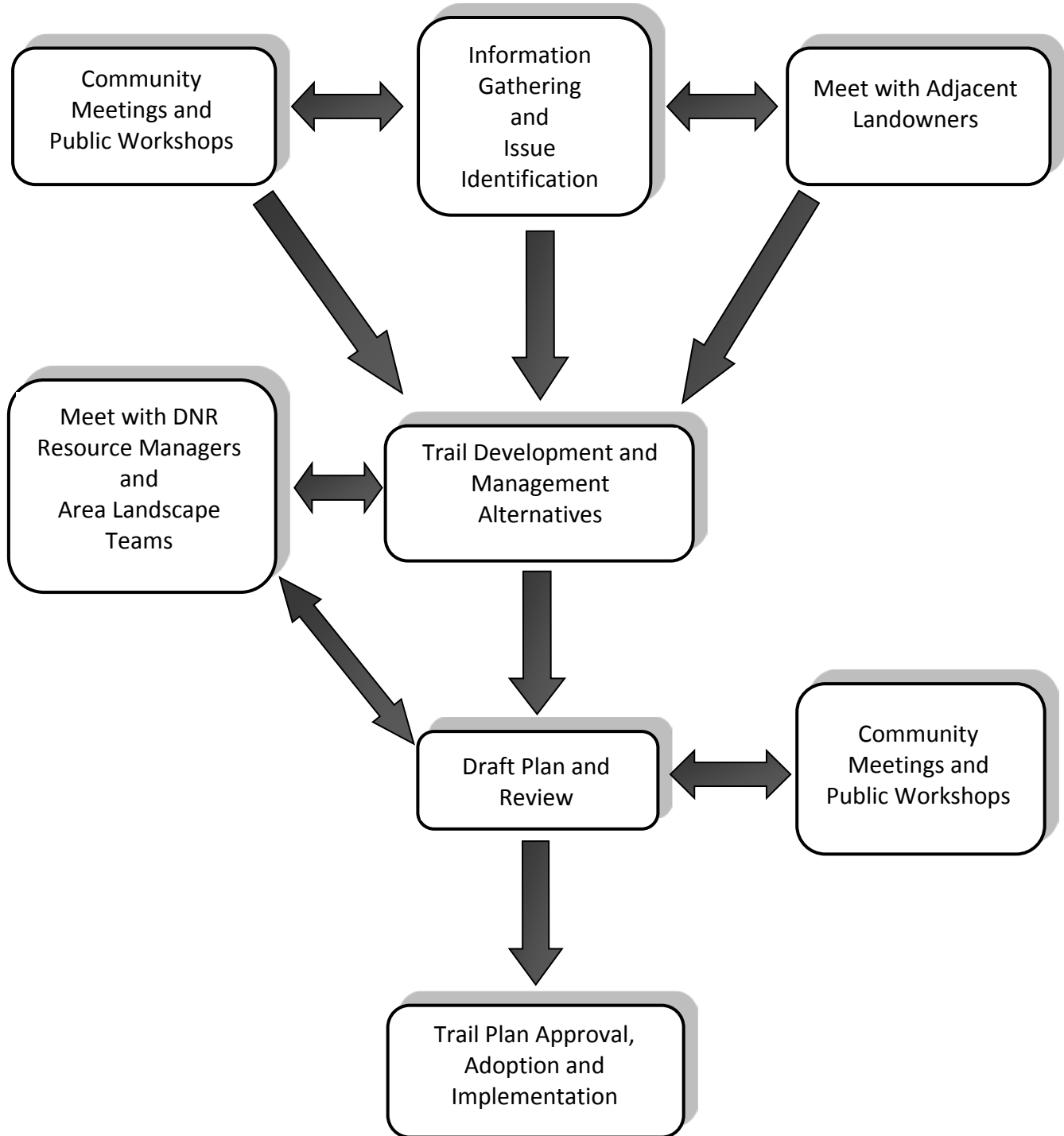
The state trail planning process began in fall of 2010 with site visits and meetings among DNR, NPS, Friends of Jackson County Trails, Jackson County public works staff, and other interested citizens. These participants began publicizing the project to the other counties and communities in the trail search corridor. A kick-off meeting was held on February 8, 2011 at the DNR Area Office in Windom, attended by over 50 people. The meeting included an overview of the planning process, discussion of the concerns and interests of area landowners and residents, and a visioning exercise.

A steering committee was organized, with members from Jackson, Cottonwood and Murray counties and cities in the corridor, and met twice in the spring of 2011. The committee focused on creating a vision statement for the trail and on assessing potential trail routes and connections. Throughout the summer months, the trail planning team focused on spreading the word about the trail, with display booths at events such as the Cottonwood County Fair, the End-o-Line Park Open House, and a number of events in Jackson, in collaboration with the Statewide Health Improvement Program. Planners met with city and county staff, chambers of commerce, economic development agencies, park and recreation commissions, and other interested groups.

A draft of the master plan was released for public review in November 2011. Three open houses were held in November and December 2011 to review the draft plan, in the cities of Jackson, Windom and Currie. Presentations were also made to the board of commissioners of Jackson, Cottonwood and Murray counties. Comments received during the plan review period are summarized in Appendix A.

The master plan has been revised to address many of the comments received during the public review process. Specifically, the trail search corridor has been expanded to include nearby communities within 5-10 miles of the Des Moines River. At the same time, trail segment maps have been generalized to focus on the expanded corridor rather than specific alignments. The process of identifying and securing trail alignments is a long-term one, and will be guided in large part by community interest.

Trail Planning Process



STATE PARKS AND TRAILS



Figure 1: Minnesota State Trails with Major Regional Trails

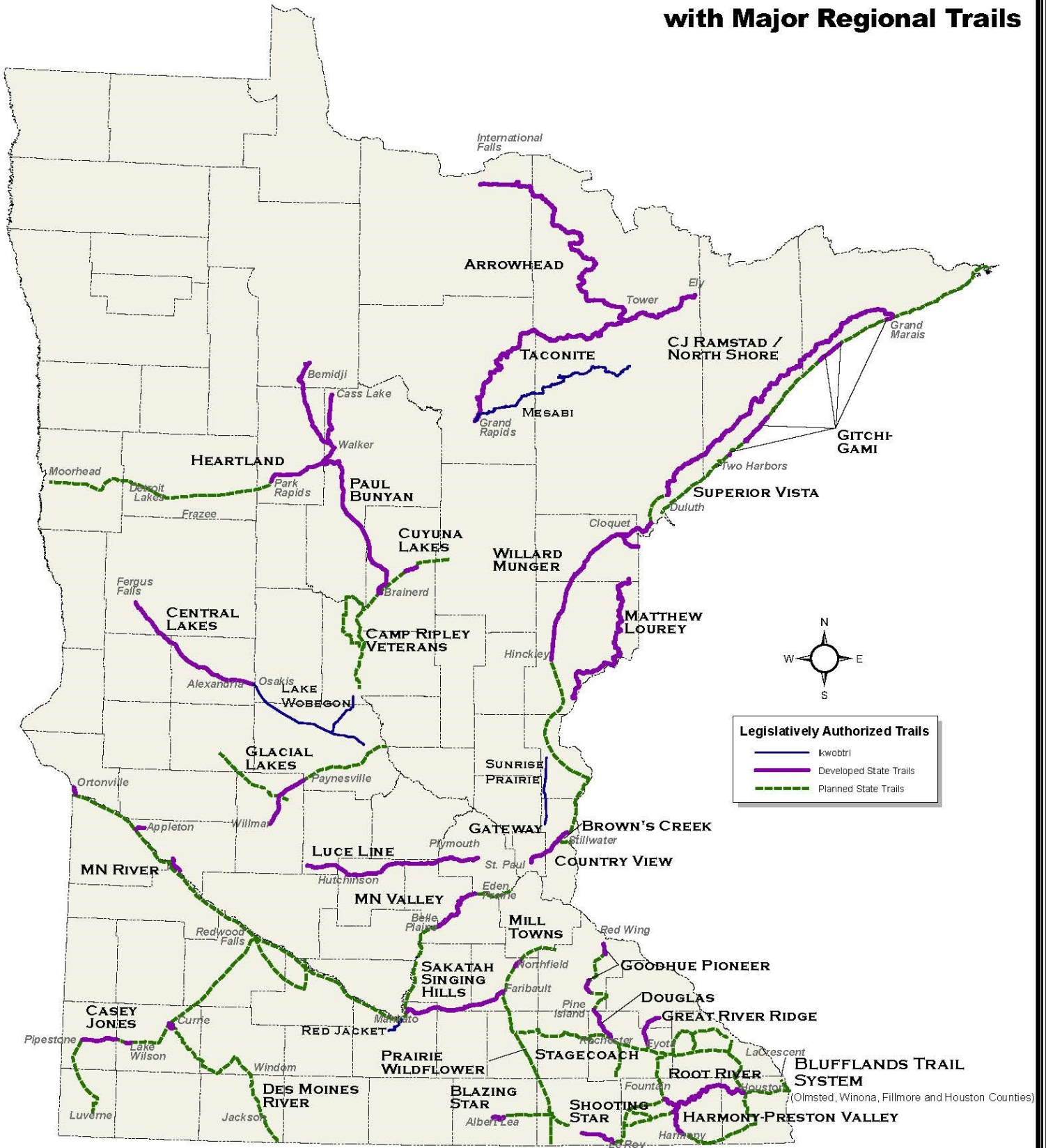
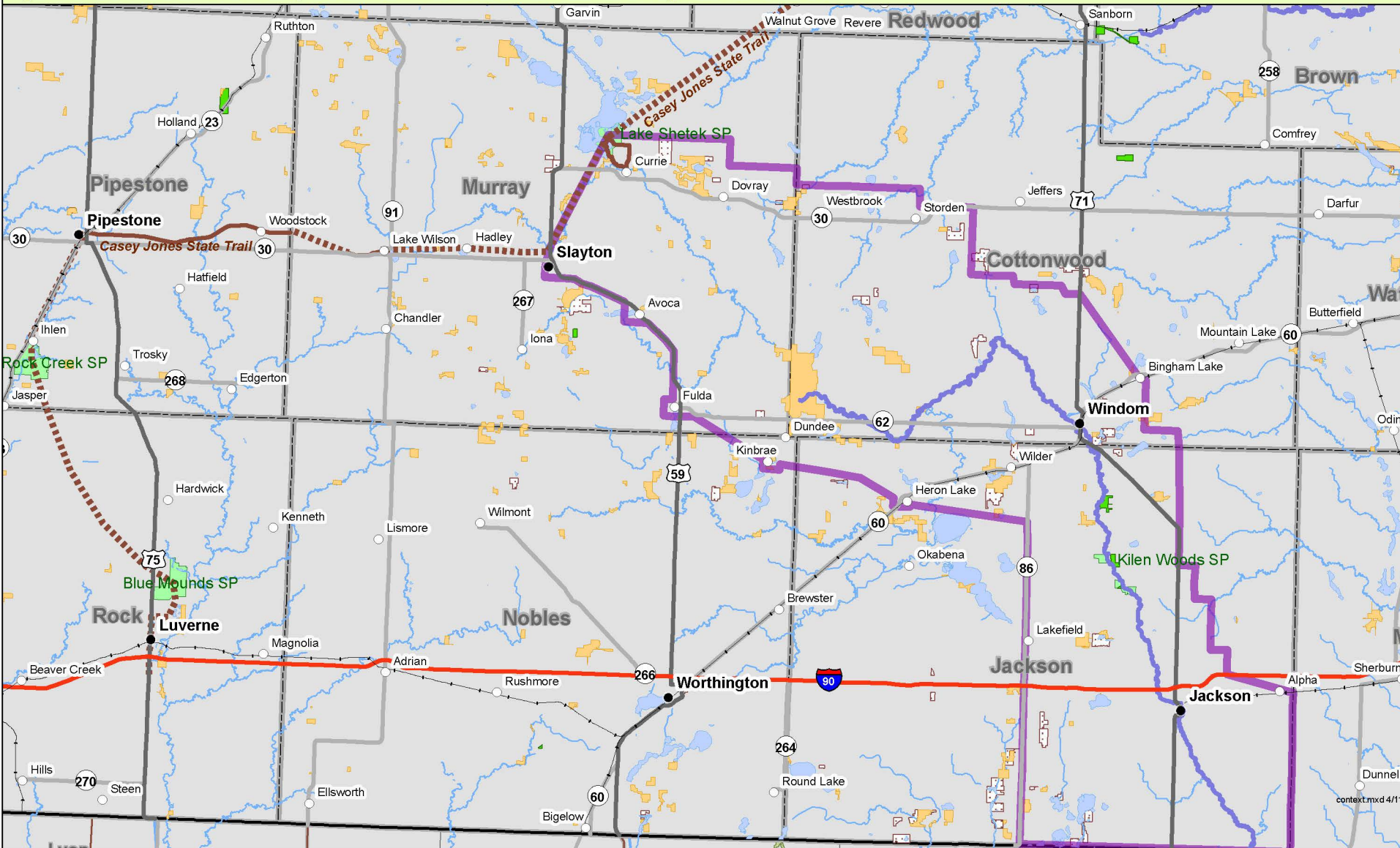


Figure 2: Des Moines River Valley State Trail: Trail Search Corridor and Regional Connections



Legend

Minnesota State Trails	State Parks	Interstates
Authorized Undeveloped State Trails	Scientific and Natural Areas	Federal Trunk Highways
Trail Search Corridor	Wildlife Management Areas	State Trunk Highways
Minnesota Water Trails	USFWS Waterfowl Production Areas	Railroads
	Iowa Parks and Conservation Areas	

DNR Division of Parks and Trails
February 2012

Miles

Legislative Authorization

The Des Moines River Valley State Trail was authorized by the Minnesota Legislature in 2009 (Minnesota Statutes, Chapter 85.015). The legislation is as follows:

Subd. 27. Des Moines River Valley State Trail. The trail shall originate in Jackson County at the Minnesota-Iowa border and connect with the Dickinson Trail in Mini-Wakan State Park in Iowa. To the greatest extent possible, the trail shall follow the Des Moines River Valley, extending northwesterly through Jackson County to Kilen Woods State Park, through Cottonwood County, and into Murray County. The trail shall terminate at Casey Jones Trail in Murray County. 85.015 Subd. 27 MN Statutes.

Outdoor Recreation Act

The Des Moines River Valley State Trail is one of the legislatively authorized state trails in the Minnesota State Trail System (see Figure 1). State trails are one unit of the state's outdoor recreation system established by the Legislature. In 1975, the Minnesota Legislature enacted the Outdoor Recreation Act (ORA) (Minnesota Statutes, Chapter 86A.05, Subdivision 4 and Chapter 85.015). This act established an outdoor recreation system comprised of eleven components or "units" classifying all state-managed recreation lands. The ORA requires that the managing agency prepare a master plan for the establishment and development of each unit. This plan fulfills this mandate. The Des Moines River Valley State Trail meets the following criteria established for state trails in the ORA:

- a. *A state trail shall be established to provide a recreational travel route which connects units of the outdoor recreational system or the national trail system, provides access to or passage through other areas which have significant scenic, historic, scientific, or recreational qualities or reestablishes or permits travel along an historically prominent travel route or which provides commuter transportation.*
- b. *No unit shall be authorized as a state trail unless its proposed location substantially satisfies the following criteria:*
 1. *permits travel in an appropriate manner along a route which provides at least one of the following recreational opportunities:*
 - (i). *travel along a route which connects areas or points of natural, scientific, cultural, and historic interest;*

There is a rich diversity of natural, scientific, cultural and historical resources along the Des Moines River Valley trail corridor, as illustrated by the sampling below:

- In Jackson County, a cluster of three regionally significant county parks, Anderson, Brown and Robertson, around Loon and Pearl Lakes
- Village of Petersburg – creamery and town hall in a scenic rural setting
- The Jackson Commercial Historic District, County Courthouse, and other historic buildings – cultural and visitor attractions

- Historical sites of interest, including the former townsites of Brownsburg and Big Bend, historic buildings at Pat's Grove County Park, and the original Fort Belmont site
- Kilen Woods State Park – steep ravines, oak savanna, prairie and river bottom meadows
- Three Scientific and Natural Areas (SNAs) – Des Moines River Prairie, Holthe Prairie, and Prairie Bush Clover – include outstanding examples of hill prairies, calcareous fens, and shrub swamps
- In Windom, the historic county courthouse and courthouse square, plus other cultural and visitor attractions
- In Cottonwood County, Talcot Lake and Pat's Grove county parks, both with water access; the former has camping and other facilities
- Lake Shetek State Park – remnants of tallgrass prairie, wooded ravines, lakes and sloughs; history of early exploration and settlement; WPA/Rustic Style Historic District and Group Camp
- Historic railroad turntable and collected historic buildings in End-o-Line Park, Currie.

(ii) travel through an area which possesses outstanding scenic beauty;

The trail will be situated in the agricultural landscape of the upper Great Plains, offering striking contrasts between the rolling farmland of the uplands, the deep wooded ravines of creek and river valleys, and the vast shallow lakes and marshes that provide critical waterfowl habitat. Remnant and restored prairies provide glimpses of the landscape prior to European-American settlement.

(iii) travel over a route designed to enhance and utilize the unique qualities of a particular manner of travel in harmony with the natural environment;

The trail will be designed, where possible, to provide views of the landscape and particularly of the river valley. The segment between Jackson and Windom is particularly scenic, as the river flows between wooded bluffs 100 to 200 feet in height.

Additionally, the trail will afford biker, hikers, and wildlife enthusiasts a way to safely enjoy the scenery and cultural and natural amenities by separating slower-paced trail users from faster-paced highway users.

(iv) travel along a route which is historically significant as a route of migration, commerce, or communication;

The proposed trail corridor traverses an area shaped by successive eras of settlement and transportation, from riverboat, horse and oxcart to the era of the railroads. While the trail search corridor generally does not follow former railroad routes, it crosses many such routes and links small communities created or shaped by the railroads in the late 1800s.

(v) travel between units of the state outdoor recreation system or the national trail system; and

The Des Moines River Valley State Trail will eventually link Kilen Woods and Lake Shetek state parks, the Casey Jones State Trail, regional trails and natural areas. It will provide a scenic route paralleling and providing access to the Des Moines River, a designated State Water Trail for much of its length. It will also provide a connection to the Great Lakes region of northwestern Iowa, with numerous state parks, trails and natural areas.

2. *Utilizes, to the greatest extent possible consistent with the purposes of this subdivision, public lands, rights-of-way, and the like;*

Public land will be used when trail development is compatible with management objectives of the administering agency. State, county, and township road rights-of-way may also be used.

3. *Provides maximum potential for the appreciation, conservation, and enjoyment of significant scenic, historical, natural, or cultural qualities of the areas through which the trail may pass; and*

Overlooks and interpretive facilities are proposed to increase trail users' appreciation and understanding of the natural and cultural resources of the area. Plant community restoration projects, wildlife habitat improvement projects, and development of environmental education information are all projects that could benefit trail users.

The trail corridor can be a corridor for both habitat and recreation, across landscapes developed for agricultural, commercial, and residential use. The ecological value of the corridor could be enhanced by working to restore healthy native plant communities.

4. *Takes into consideration predicted public demand and future uses.*

The master plan evaluates and uses current research on existing trail use, demand for trail opportunities, demographic data and recreational trends. Current demographic data is taken into account, as well as information gathered at public workshops and through other avenues of public participation.

Guiding Principles for Sustainable Trails

Guiding principles for ecologically sustainable trails, developed by DNR, provide the underlying rationale for actions related to protecting, restoring, and managing natural environments associated with trail development. There are seven core principles:

1. Avoid sensitive ecological areas and critical habitats.
2. Develop trails in areas already influenced by human activity.
3. Provide buffers to protect sensitive ecological and hydrologic systems.
4. Use natural infiltration and best practices for stormwater management.
5. Provide ongoing stewardship of the trails and adjoining natural systems.
6. Ensure that trails remain sustainable.

7. Formally decommission and restore unsustainable trail corridors.²

Applications of these principles will minimize the impact of trails on natural resources and sensitive ecological systems. Importantly, the strict application of these guiding principles has to be balanced against the need to locate trails where they will be of high recreational value to the targeted users, who often want to be close to nature, enjoy beautiful scenes, and observe wildlife. This is an important consideration and underscores the need for resource managers, trail designers, and other interested individuals to work together to determine which values are the most important for any given trail alignment.

Vision and Goals for the Des Moines River Valley State Trail

Vision

The Des Moines River Valley State Trail is a multi-use interstate trail that provides recreational opportunities for visitors and residents, and connects communities to existing parks, trails, historical sites, and natural points of interest in Southwest Minnesota in order to promote active and healthier lifestyles.

Goals

- Improve the quality of life for local residents of all ages.
- Provide a safe way to recreate, and to commute to work or school.
- Attract visitors, promote tourism and showcase the scenic, historic and natural assets and amenities of Southwest Minnesota.
- Encourage tourism related businesses, such as lodging and retail services.
- Design, construct, and maintain the trail in a way that enhances the natural environment and minimizes trail users' impact.
- Restore and manage plant communities, wildlife, soil and water resources in a manner appropriate to the landscape setting.
- Provide access for a wide range of people with varying degrees of capabilities, including those with disabilities.
- Develop and maintain the trail so that impacts on adjacent landowners are avoided or minimized.
- Coordinate land management activities with adjacent land owners when possible and appropriate.

² MN DNR, *Trail Planning, Design and Development Guidelines*. 2007.

2. Recommended Trail Uses

The Des Moines River Valley State Trail will be a multi-use, multi-seasonal trail. In areas where the width of the right-of-way is limited, not all uses will be able to be accommodated. The trail is intended for pedestrian, equestrian, and non-motorized vehicle use only, except for snowmobiles in winter. The trail and its supporting facilities will be universally accessible to the greatest extent possible, as required by the Americans with Disabilities Act.

Bicycling. The length of the trail, the relative flatness of much of the alignment, the variety of landscapes, and the connections to tourist attractions make this trail appropriate for recreational and touring cyclists of all ages and abilities. The trail will add approximately 70 to 80 miles to the state inventory of about 600 miles of paved state trails. Bicycling is recommended as a use along the entire length of the trail.

Hiking and Walking. On state trails, hiking or walking is second only to bicycling as popular low-impact cardiovascular fitness activities on state trails. Grades are likely to be moderate throughout the majority of the trail route, making it suitable for most people to walk and hike. Hiking and walking are recommended as uses on the entire length of the trail. (The use of electric wheelchairs, electric mobility scooters and similar devices is considered equivalent to walking.)

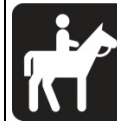
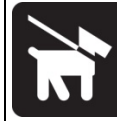
Running and Jogging. Many people use the state trails for running and jogging. In addition to individuals who regularly use the trails for exercise, local school track and cross-country teams will be able to use this scenic trail for training purposes. Running and jogging are recommended uses along the entire length of the trail.

In-Line Skating / Skate Skiing. In-line skating levels of use have declined, but it remains a popular sport. This activity requires a paved trail with a smooth, wide surface, and is a recommended use on paved segments of the trail.

Dog Walking. Dog walking is allowed along the entire length of the trail so long as dogs are leashed and owners properly dispose of pet wastes. State trail rules require all pets to be attended and restrained by a leash of not more than six feet in length.

Horseback Riding. Horseback riding is a popular activity in this area, and informal trail riding occurs along many county and township roads. A horseback trail would need to be located on a separate treadway from the primary trail, or within an entirely separate corridor. Horseback riding is recommended along sections of the trail where the right-of-way is wide enough to accommodate this additional use, or where a separate trail corridor can be established.

Snowmobiling. Minnesota has over 21,000 miles of public snowmobile trails, serving over 254,000 registered snowmobiles (2010 figures). Besides the extensive grant-in-aid trail system, snowmobiles can legally ride in the right-of-way of roads unless prohibited by local ordinance and on frozen public waters. Snowmobilers are interested in trail connections, quality of trail grooming, safety, and funding stability for their programs. As urban and suburban development expands, existing grant-in-aid routes may be lost. Snowmobiling is recommended as a use along the



entire length of the trail except where restricted by local ordinances or park regulations.

Cross-Country Skiing and Snowshoeing. The relatively flat terrain of much of this trail corridor makes cross-country skiing a possible winter use when snow conditions permit. Snowshoeing is also feasible within the trail corridor, outside of cross-country ski lanes. Snowmobile use on portions of the trail may make it less desirable for skiing and snowshoeing.

Hunting. State trails allow hunting within the trail right-of-way during the legal hunting season, except where restricted by local ordinance. The current rule states: “No firearm or bow and arrow shall be discharged within the trail at any time, except for the purpose of lawful hunting during the period from September 15 to March 30 only. No rifle, shotgun with slug, or bow and arrow shall be discharged upon, over, or across the trail treadway at any time.”

Communities may restrict firearms or bow and arrow discharge, or trapping, by ordinance. These ordinances take precedence over state trail rules.

Environmental Education/Interpretation. Use of the state trail for environmental education, both for individual trail users and formal groups, is encouraged. Schools or organizations that wish to use a trail can work with DNR staff on specific projects. Interpretive displays on the environment and history of the trail can enhance the trail users’ experience.

Accessibility. The trail will be accessible to people with disabilities wherever possible. Grades in excess of 5% may be unavoidable in some locations where the trail must match a parallel transportation corridor or where one of the exceptions in the Federal accessibility guidelines is met.

Fishing Access. The trail will provide access to the Des Moines River and its tributaries, many of which are popular for fishing. Depending on the location and conditions of the trail right-of-way, this activity may be accommodated from the trail where practical. Connections to public water accesses on the river or nearby lakes will be made where feasible.

3. Trail Segments and Connections

For purposes of planning, the trail has been divided into four segments from south to north:

- Segment 1: Iowa border to City of Jackson
- Segment 2: City of Jackson to City of Windom
- Segment 3: Two alternative segments:
 - Segment 3A – Windom to Talcot Lake County Park
 - Segment 3B – Windom to City of Storden
- Segment 4: Two alternative segments:
 - Segment 4A – Talcot Lake to City of Currie
 - Segment 4B – Storden to Currie

This section of the plan includes the following:

- A description of the highlights of each trail segment listed above, key connections and specific criteria for the location of the trail, and a description of potential trail corridor alternatives;
- Maps providing an overview of each segment;
- A description of each community the trail will connect;
- Descriptions and maps of the state parks, county parks, Scientific and Natural Areas and other open space resources within each segment.

Overview of Potential Trail Alignments

A broad trail search corridor was defined at the beginning of this project, extending for approximately five miles on either side of the Des Moines River, including the cities that are closest to the river, and including a connection to Mini-Wakan (Iowa) State Park on Spirit Lake. The search corridor is approximately 70 miles in length. Within this corridor, there are a variety of possible alignments, some paralleling county or township roads, others that may cross public or private lands. The goal is to find alignments that take trail users off road rights-of-way, provide access to natural and cultural amenities, and showcase the landscape. Trail alignments should avoid wetlands, high quality plant communities, and other sensitive natural and cultural resources.

It is important to note that the potential alignments discussed in this chapter are by no means the only ones within the search corridor; they are simply those that have been identified to date through fieldwork and local knowledge.

Priorities and Sequence of Development

This master plan assumes that trail segments between the City of Jackson and the Iowa Great Lakes Trail System are the first priority for acquisition and development, followed by a connection to Kilen Woods State Park. Trail segments to the north

and west, ultimately connecting to the Casey Jones State Trail, are equally important, but are expected to be developed over a longer time frame.

This assumption is based on the past history of trail development in this area. The motivation for trail development, and development of local and regional trails to date, have come from Jackson County, the Friends group and the City of Jackson. Meanwhile, the priority in Murray County has been completion of the Casey Jones State Trail from Pipestone to the trail loop in Currie. It is anticipated that as southerly segments of the Des Moines River Valley State Trail are developed, interest and support will increase in Cottonwood and Murray County.

Criteria for Trail Location

The following criteria will apply generally throughout the trail search corridor. More specific criteria will apply to specific trail segments.

- Work with willing landowners to acquire right-of-way that showcases features of the landscape.
- Seek alignments that detour away from roads to follow property boundaries and field edges wherever possible. Default to road rights-of-way when necessary.
- Avoid acquisition of high quality agricultural lands.
- Minimize impact on wetlands.
- Avoid negative impacts on rare and endangered species and avoid fragmentation or disturbance of significant native plant communities.
- Make connections to nearby communities wherever practicable, and to state and county parks and historic sites.

Segment 1: Jackson County South - Iowa border to City of Jackson

Existing Trails and Points of Interest

Southeastern Jackson County is oriented both to the City of Jackson and to the lake-oriented communities of Iowa's Great Lakes area (see profile below under "Segment 1 Communities"). The Iowa Great Lakes Trail System in Dickinson County includes a 14-mile "Spine Trail" connecting the communities of Spirit Lake, Okoboji, Arnolds Park and Milford and additional non-motorized off-road trails (see Figure 5).

The Loon Lake Trail extends for about 2 miles from Mini-Wakan State Park on the Iowa border north to Loon Lake, where it connects three Jackson County parks, Anderson, Brown and Robertson, to the Iowa Great Lakes Trail System.

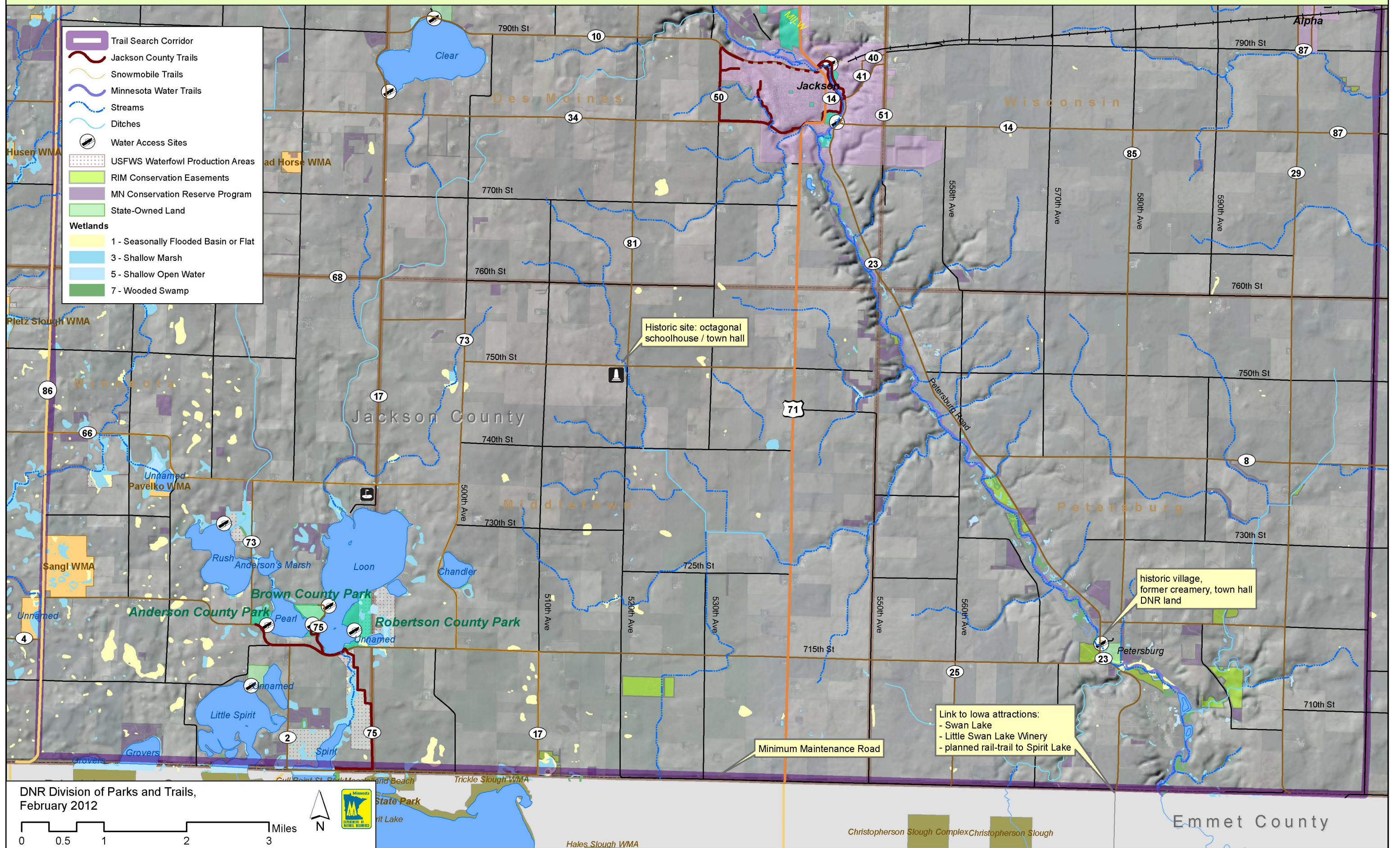
Mini-Wakan State Park is located on the northern shore of Spirit Lake, near the Minnesota border. This 12.5 acre park offers a large open picnic shelter, a boat ramp, and shore and pier fishing opportunities. The park also provides access to the Great Lakes trail system. The park, like many others in the Upper Midwest, was constructed by the Civilian Conservation Corps in 1934, and is a National Register historic district. The shelter building, of stone construction, is scheduled for restoration.



Mini-Wakan State Park



Figure 3: Segment 1 - Iowa Border to City of Jackson



	Trail Search Corridor
	Jackson County Trails
	Snowmobile Trails
	Minnesota Water Trails
	Streams
	Ditches
	Water Access Sites
	USFWS Waterfowl Production Areas
	RIM Conservation Easements
	MN Conservation Reserve Program
	State-Owned Land
Wetlands	
	1 - Seasonally Flooded Basin or Flat
	3 - Shallow Marsh
	5 - Shallow Open Water
	7 - Wooded Swamp

DNR Division of Parks and Trails,
February 2012

0 0.5 1 2 3 Miles

N

Link to Iowa attractions:
 - Swan Lake
 - Little Swan Lake Winery
 - planned rail-trail to Spirit Lake

Minimum Maintenance Road

historic village,
 former creamery, town hall
 DNR land

Historic site: octagonal
 schoolhouse / town hall

Emmet County

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Alternative Trail Alignments

The enabling legislation for the state trail specifies that it will “*originate in Jackson County at the Minnesota-Iowa border and connect with the Dickinson Trail in Mini-Wakan State Park in Iowa.*” In addition to the connection to the Great Lakes Trail system, it will also be desirable to follow the Des Moines River to and across the Iowa border. The **Petersburg Road (County Highway 23)** follows the river for seven miles from Jackson to the picturesque hamlet of Petersburg, offering scenic views of the river valley. Jackson County plans to develop this trail segment when the road is next reconstructed, probably within the next 10 years.

Within the unincorporated hamlet of Petersburg, the old Petersburg Road alignment borders a state-owned 18-acre parcel, providing a scenic path of about one-third mile along the old roadbed, leading to the abutments of the former bridge. A public water access here was washed out by recent floods, but the site would be a valuable trail segment and potential trailhead.

County Highway 23 continues south for about two miles to the Iowa border, providing connections to a local winery, to Swan Lake, and the town of Superior.

Potential east-west connections between Petersburg and Mini-Wakan State Park include routes on both sides of the state border.

- **County Road 4/715th Street** right-of-way.
- **700th Street along the Minnesota-Iowa border** – this road is not continuous, and a portion of it is a minimum maintenance road, making it potentially usable as a trail alignment.
- The **Superior-Swan Lake Loop** is a bicycle route defined as part of Dickinson County trail system. It includes Jackson County Highways 4, 2 and 17 and County Roads N16, A15 and M56 in Dickinson County (see Figure 4). Another future east-west option is a planned rail-trail along the Iowa Northwestern Railroad grade that will extend from Superior to Swan Lake, and eventually to Sibley, Iowa.

Potential trail alignments between Mini-Wakan State Park and the City of Jackson include:

- Some combination of **County Highways 73, 17 and 66** around the Loon Lake “chain of lakes” and the three county parks. Another option to be explored in this area is a former wagon trail right-of-way, now privately owned, that follows the west side of Loon Lake past the Loon Lake Golf Course.
- **County Highway 17** north to **County 10**, which follows the shoreline of Clear Lake and connects to the Springfield Parkway trail in the City of Jackson.



Old Petersburg road area



- Other options could include some combination of east-west section-line roads such as **County Highways 34, 6 and 68, or 770th Street, and the north-south 530th Avenue**. The township roads have lower traffic volumes, but are largely unpaved, creating some challenges for trail development.

These alternative alignments are not intended to exclude other potential alignments within the trail search corridor.

Interim Road Routes

Several county highways within this part of the corridor are already in use or potentially usable as bicycle and walking routes, starting in the city of Jackson.

These include:

- **County 10** (east-west to Clear Lake and Co. 17)
- **County Highway 17** (south to Loon Lake)
- **Petersburg Road (County Highway 23)**
- **County Highway 4** (east-west to the Loon Lake Trails)

Segment 1 Communities and Resources

Iowa Great Lakes Region

Northwest Iowa's chain of lakes extends from the Minnesota border southwest for about 15 miles and covers approximately 15,000 acres. The Iowa Great Lakes include Iowa's largest natural lake, Spirit Lake and five interconnected lakes: West Okoboji, East Okoboji, Upper Gar, Lower Gar, and Minnewashta. The system of lakes, including the Little Spirit Lake and Loon Lake in Jackson County, mark the southwest edge of the ice sheet known as the Des Moines Lobe, which advanced southward about 13,500 years ago.³

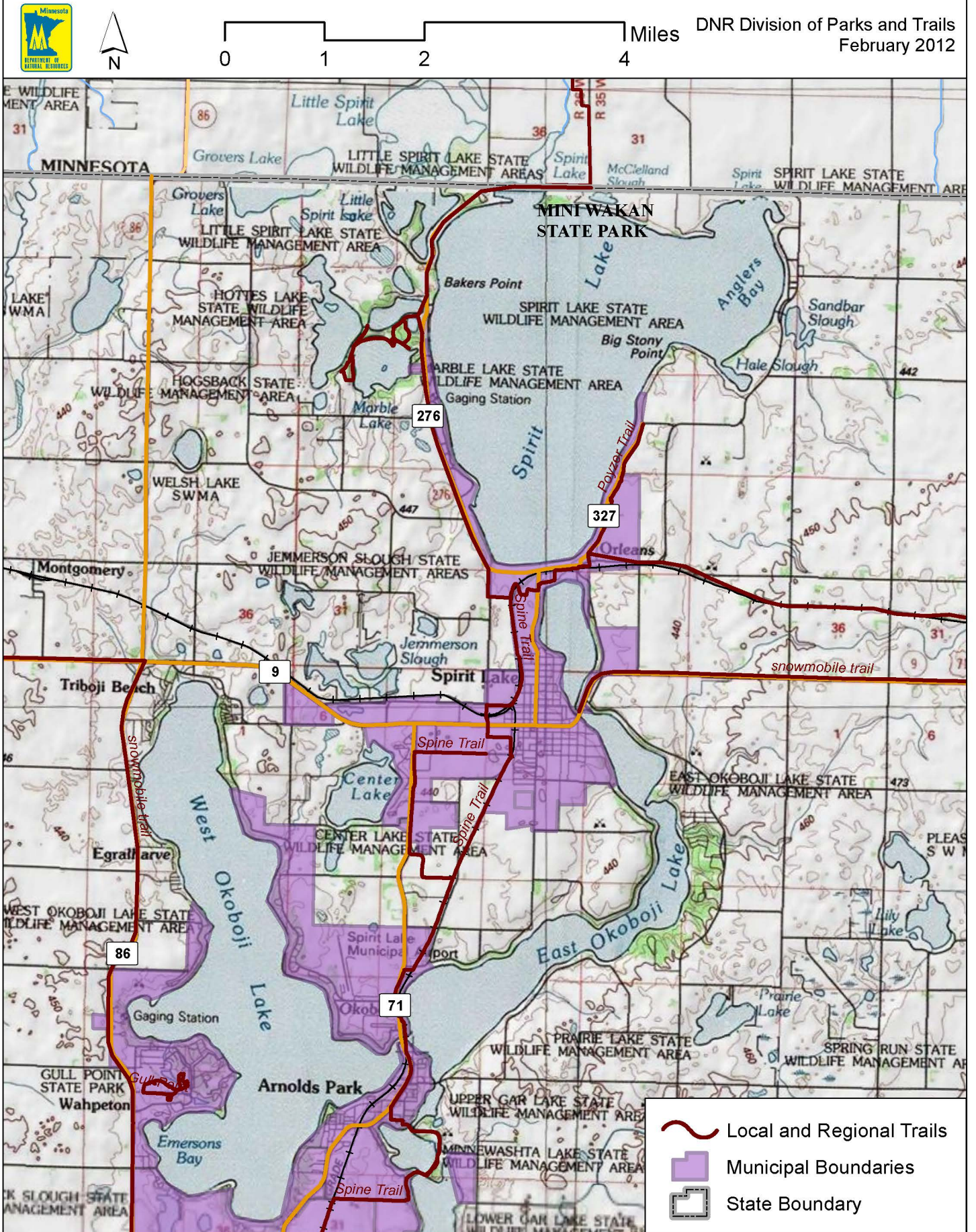
The Iowa Great Lakes region is located in Dickinson County, Iowa and includes the communities of Spirit Lake, Orleans, Arnolds Park, Milford, West Okoboji, Wahpeton, and Okoboji. The region is one of Iowa's most popular vacation destinations, with year-round recreation opportunities that include boating, fishing, swimming, an amusement park, numerous parks and trails, historical sites, and golf courses.

History

The Iowa Great Lakes region was probably used primarily as a hunting ground and temporary encampment by nomadic bands of Dakota (Sioux) Indians. Settlers were in the area by the 1850s, drawn by the rich soil, abundant water, and wild game. In 1857 a Wahpetuke band of Santee Sioux attacked settlements near Okoboji and Spirit lakes, killing 35-40 settlers and taking four young women captive. One of them, Abbie Gardner, was released after several months and eventually wrote a popular memoir. Her family cabin remains as a museum in Arnolds Park.

³ Seigley, Lynette S. and Deborah J. Quade. Gull Point State Park: A Glacial Legacy. *Iowa Geology 1996, No.21*, Iowa Department of Natural Resources. igsb.uiowa.edu

Figure 5: Iowa Great Lakes Region Parks and Trails



As the area was resettled in the 1860s, it became famous for both recreational and market fishing, and as a vacation destination.

The Great Lakes Region Today

The 2010 population of Dickinson County was 16,667, with a larger seasonal population; the population has increased by about 12% since 1990.

Tourism is the largest industry in the Great Lakes region with many lodging, entertainment and shopping opportunities throughout the area. There are also numerous state parks, wildlife management areas, preserves, beaches, and city parks. The Iowa Great Lakes Recreational Trails system is made up of 25 miles of multi-use trails that allow for year-round recreation and provide access to beaches, parks, and 60 miles of biking routes.

Mini-Wakan State Park is located on the northern shore of Spirit Lake, near the Minnesota border. The park offers fishing, both from shore and on a pier, a boat launch, and a picnic shelter. The Great Lakes trail system goes through Mini-Wakan State Park and connects to the Jackson County trail system. Other state parks provide access to the lakes throughout the area.

Jackson County Parks

The three interconnected county parks that border the Loon Lake chain of lakes include the following.

- **Robertson County Park:** Located on the east shore of Loon Lake, this 46-acre park is completely wooded and is abundant with natural flora and fauna. The park was purchased and developed with federal Land and Water Conservation Funds as well as state funds. Facilities include a picnic area, rest rooms, shelter house with fireplace and electricity, well with hand pump, observation tower, trails and playground equipment; a full-service campground with 22 trailer campsites, and a primitive tent camping area. A contact station provides park and activity information as well as snacks, bait, and fishing and hunting licenses.
- **Brown County Park:** This 15-acre park is located on the shores of both Pearl and Loon lakes and combines woodland and open space. A creek runs through the center of the park and serves as the outlet from Pearl Lake, which enters into Loon Lake. Facilities include a picnic area, restrooms, shelter house with fireplace and electricity, pressure water system, footbridge, playground equipment; and a 30-unit full-service campground.
- **Anderson County Park:** This 25-acre park, purchased in the early 1970s, is located on the west shore of Pearl Lake. Major improvements have increased the use of this park over the past few years. Facilities include rest rooms, boat ramp, dock, picnic area with grills and tables, shelter house with fireplace and electricity, observation tower; playground equipment, and a 25-unit full-service campground.

The Loon Lake Trail connects all three parks. Robertson and Brown parks were surveyed by the Minnesota Historical Society in 1975 and are considered important archaeological sites dating from the Woodland cultural period.



Historic boulevard in Spirit Lake

City of Jackson

The City of Jackson is the county seat of Jackson County and is located approximately 9 miles north of the Iowa border. The Des Moines River flows through the center of town, providing many recreational opportunities including canoeing and fishing.

History

During the first half of the nineteenth century the entire southern part of Minnesota was still inhabited by Dakota (Sioux) peoples. What is now Jackson County was the domain of the Lower Sisseton Sioux Tribe until 1851 when the Traverse Des Sioux treaty ceded 23,750,000 acres to the U.S. government at a price of \$2,968,750 and officially opened up the area to white settlement.

Although early trappers and explorers are likely to have visited the area, the first white settlers in Jackson were brothers – William, George, and Charles Wood of Indiana, by way of Mankato. In July of 1856, they established a trading post and named the proposed town “Springfield” because there was a spring near where they built their cabin, a large one-room log building near the Des Moines River. Forty settlers followed in that summer of 1856, most of them of English and Scottish descent, coming from Webster City, Iowa. Over a dozen log cabins were built by that fall.

The winter of 1856-1857 was one of the most severe that was ever experienced because of its bitter cold, deep snows, and violent storms. Food was scarce as all the white settlers had come too late to raise a crop or plant gardens. Consequently, all provisions had to be hauled from the nearest settlements of Webster City or Mankato. Tensions between white settlers and Dakota (Sioux) tribes in the region resulted in attacks in the Okoboji and Spirit Lake area, and culminated in an attack on the Springfield settlement in March of 1857. Seven settlers were killed and the remaining settlers left for Fort Dodge.

Just two months after the attacks and when the area was completely depopulated, the Minnesota State Legislature made the county a political division, naming it Jackson County – after the first merchant of St. Paul. The temporary county seat was located the town site of Springfield, now renamed “Jackson.” Resettlement was slow; the federal census of 1860 listed 52 households and 181 people in the county. The census recorded the settlers’ birthplaces: most of them were born in eastern states, with a substantial number from Norway.⁴

During the Dakota conflict of 1862, the settlement of Belmont, about seven miles northwest of Jackson, was attacked and 13 settlers were killed; the survivors fled to Iowa. Resettlement of the area did not resume in earnest until after the Civil War in

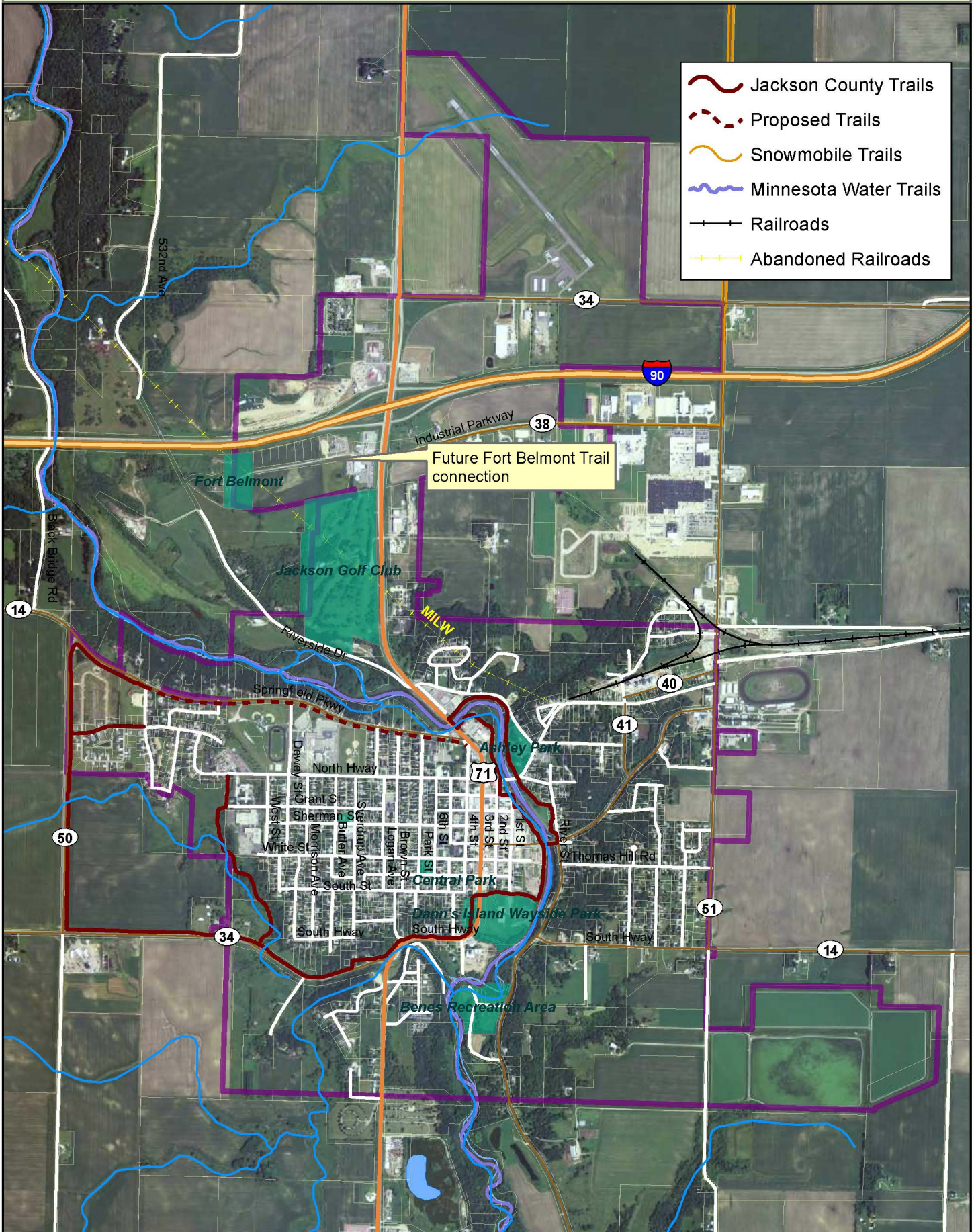
⁴ Rose, Arthur P. *An Illustrated History of Jackson County, Minnesota*. Northern History Publishing Company, Jackson, Minnesota, 1910. Reprint usgwarchives.org

Figure 6: City of Jackson



0 0.25 0.5 1 Miles

DNR Division of Parks and Trails
February 2012



1865. The 1865 Minnesota State Census showed 47 households within Jackson County.

Settlers turned the prairie into farms and towns. The advent of railroads hastened the influx of immigrants into the county, and with them, the conversion of the prairie into cropland. However, many of the steep slopes and valley bottoms along the Des Moines River were kept as woodlots and used for hunting. Blizzards, droughts, grasshoppers and windstorms plagued early settlers of the river valley throughout the years.

Jackson Today

Jackson's 2010 population is 3,299. While agriculture is the main industry, Jackson is also home to many other businesses. The farm machinery and equipment manufacturing company AGCO Corporation is the largest employer in the community, employing over 1,000 people. In early 2011, the company announced the expansion of its Jackson operations to include the production of high-horsepower row crop tractors and a visitor's center. The expansion is expected to bring new jobs to the community along with a boost in the local economy caused by increased tourism related to the AGCO visitors' center.

Parks and Trails

As discussed in the Introduction, the city has recently developed a non-motorized trail system, much of which follows the Des Moines River.

Trails in the City include:

- Des Moines River Trail: 1.8 miles on both sides of the Des Moines River
- Nelson Creek Trail: 1.5 miles along this tributary of the Des Moines River
- Sunset View Trail: 1.9 miles on the south and west sides of the city; another 1 mile segment is planned along Springfield Parkway



Nelson Creek Trail



Fort Belmont Park



Downtown Jackson

The trails connect to the schools and to some of the town's parks. A campground and various hotels are available for lodging along with many restaurant options. Downtown Jackson, a National Register Historic District, offers opportunities for shopping and entertainment. There are many historical sites throughout the city including Jackson County Courthouse. Fort Belmont Park, located just south of Interstate 90, offers a re-creation of Fort Belmont as it was in the 1800s. The park includes a sod house, 1873 farmhouse, a blacksmith shop, log cabin, and stockade.

Jackson is home to many community festivals, activities, and events throughout the year. Through the Jackson Active Living Partnership, the city works with Jackson



County and other partners to identify increase physical activity, improve nutrition and promote healthy lifestyles.

A project to remove the Des Moines River Dam in Jackson was completed in 2010. The dam was originally built in 1913 as part of a municipal hydroelectric plant. The deteriorating dam caused dangerous currents and did not allow fish and other aquatic species to pass. The dam was replaced by a series of rapids that will bring additional recreational opportunities such as canoeing, kayaking, and fishing along the Des Moines River.

Trail Routes and Potential Trailheads in Jackson

Connections to Jackson's trail system can be made from the south and west via County Highway 34 (780th Street), which connects with the Nelson Creek and Des Moines River trails, County Highway 10/14, which joins the Springfield Parkway trail, and via the Petersburg Road (County 23), which connects with the downtown trail system on the east bank of the river.

Connections to the north may include one of the following options:

- The Fort Belmont Trail, currently in the design stage, is expected to parallel Highway 71 through the Jackson Golf Course to Fort Belmont. From the park, a former railroad overpass, once part of the Southern Minnesota Railroad, leads across Interstate 90. It may be possible to establish a trail alignment across the bridge to connect with 532nd Avenue, or possibly to a new river crossing. (The former rail grade leads to the abutments of the "Black Bridge," once a well-known railroad landmark).
- County Highway 14, located about a mile west of Jackson, is a paved road that also provides a crossing of Interstate 90.

There are many trailhead options within the city, including Ashley Park and Dann's Island Wayside Park. The city's riverfront park system is being expanded with land around the former dam site, which will be developed as parkland.

Segment 2: Jackson County North – City of Jackson to Windom

Points of Interest

This segment extends for about fifteen miles between Interstate 90 and the city of Windom. This area is particularly scenic: the river flows between wooded bluffs 100 to 200 feet in height. Roads on bluff tops provide sweeping views across the valley, and roads that cross the river are generally quite steep. The valley has remained largely wooded because of its steep topography. It was divided into woodlots when first platted, and used as such by early settlers. Many of these wooded parcels are currently used as private hunting lands.

Belmont County Park and Kilen Woods State Park both provide camping, trails, canoe access points, picnic grounds and other amenities. Several Scientific and Natural Areas protect important native plant communities, including hill prairies and rare calcareous seepage fens, where cold groundwater wells up on hillsides and valley side slopes.

This corridor segment includes a number of historic sites that are largely unknown except to local residents, including the original Fort Belmont site, the site of the now vanished village of Brownsburg, and the Holthe Cabin, used as a stopping point for fur traders coming from Lake Shetek en route to Des Moines and points east. A number of historic churches, former church sites and cemeteries are also found in the area.

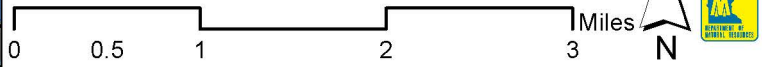
Alternative Trail Alignments

As mentioned above, there are several potential trail alignments on both the east and west sides of the Des Moines River that connect to Kilen Woods State Park.

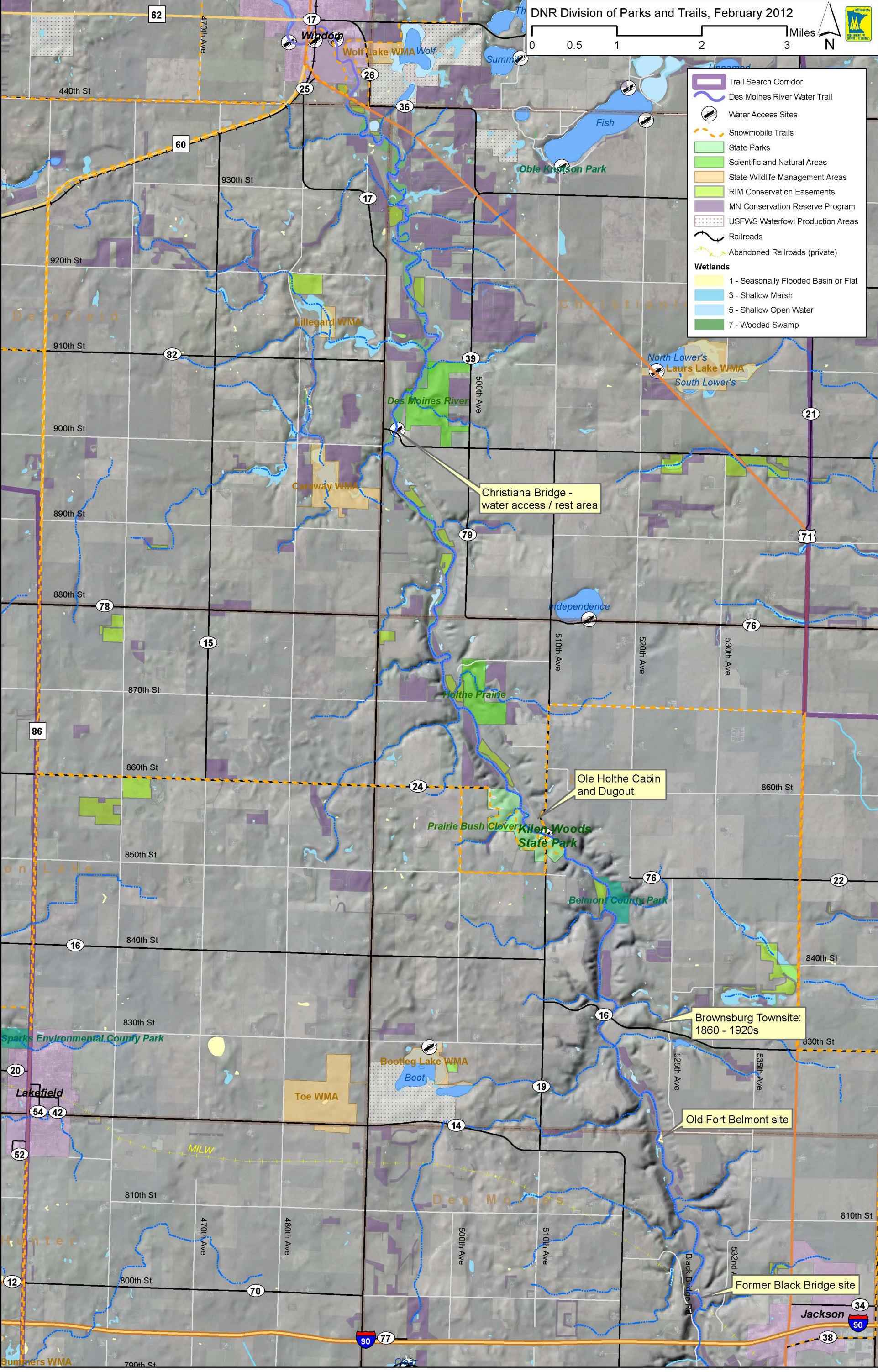
- On the east side, some combination of township roads (**532nd, 535th and 525th avenues**) could lead north to Belmont County Park and from there to **County Highway 76** and the river crossing at Kilen Woods. (County Highway 16 also crosses the river, and connects to County 19, but is too steep for most cyclists).
- On the west side, some combination of north-south **County Highways 14, 19 and 17** and other connecting township roads. County Highway 24 provides east-west access to the main park entrance.
- Highway 17 turns west and continues north toward Windom, crossing the county line to become **Cottonwood County Highway 25**, which intersects with **Trunk Highway 71**. Finding a viable route through Windom that avoids TH 71 traffic is challenging.
- An alternative alignment on the east side of the Des Moines River could parallel **510th Avenue/ County Highway 19** past Lake Independence, then north along **County Highway 39** to the county line. **County Highway 36** runs east-west to **Cottonwood County Highway 26**, which could provide a route into the city that avoids the high-speed traffic of Trunk Highway 71.

Figure 7: Segment 2 - Jackson to Windom

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	Trail Search Corridor
	Des Moines River Water Trail
	Water Access Sites
	Snowmobile Trails
	State Parks
	Scientific and Natural Areas
	State Wildlife Management Areas
	RIM Conservation Easements
	MN Conservation Reserve Program
	USFWS Waterfowl Production Areas
	Railroads
	Abandoned Railroads (private)
Wetlands	
	1 - Seasonally Flooded Basin or Flat
	3 - Shallow Marsh
	5 - Shallow Open Water
	7 - Wooded Swamp



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- On the other hand, this route would require crossing TH 71 about one mile south of the city boundary.

As shown in Figure 7, much of the farmland along County 39 is restricted by easements for the Conservation Reserve Program. As these easements near their expiration dates, possibilities should be explored for negotiating trail alignments along property or field boundaries or less productive farmland.

- Property boundaries, edges, and other options that allow trail users to detour away from the road and enjoy the natural and scenic qualities of the landscape should also be explored.

Interim Road Routes

Several county highways within this part of the corridor are already in use or potentially usable as bicycle and walking routes, starting in the city of Jackson. These include:

- **County Highways 14 and 19** (north-south) to County 16 (east-west to County 17)
- **County Highway 14** (east-west) to Lakefield
- **County Highways 17 and 24** to Kilen Woods; County 17 continues north to Windom

Segment 2 Communities and Resources

Kilen Woods State Park

Kilen Woods State Park has been referred to as “an oasis in the farm belt of Minnesota.” At 228 acres in size, Kilen Woods is one of the smaller parks in the state system, but includes a wide diversity of habitats, from oak forest to river bottom meadows, flood plain forest, oak savanna and prairie. Oak trees grow on the steep river valley slopes. Scattered bur oak trees, wild plums and hawthorns occur among prairie grasses and wildflowers at the edge of the Des Moines River Valley. Species such as big bluestem, Indian grass, blazing-star, and purple coneflowers grow along the grassy ravines. Seven-foot tall prairie grasses, butterfly milkweed, and grey-headed coneflowers dominate the late summer river bottom prairie. The park includes five miles of hiking trails and 3.5 miles of un-groomed snowmobile trail, a semi-modern drive-in campground, and a trail shelter with fireplace.

The Des Moines River within the park provides aquatic habitat for beaver and muskrat. Anglers can catch walleyes, northern pike, catfish, and bullheads from the river's pools and numerous snags. Wood ducks nest in tree cavities along the river's edge while herons quietly stalk the shallows and back waters. Deer, squirrels and woodpeckers are abundant in the park. Red admiral butterflies are seen all summer long while the swallowtail butterflies are around during late summer.

In 1945, the Minnesota State Legislature authorized the creation of a state park along the Des Moines River. The park was named for Agil Kilen, from whom most of the 178 acres of parkland was purchased. Included in the purchase were 21 pioneer homestead woodlots.

Various proposals to expand the park's statutory boundary were discussed in the 1970s but were never acted upon due to local opposition. Kilen Woods remains one of the smallest parks in the state system, at 228 acres. Addition of trail connections to and through the park could increase its appeal to visitors and broaden the base of park users.

Potential Trail Routes Through Kilen Woods State Park

County Highway 19 crosses the southern end of the park but does not provide a connection to the main entrance, which is on County Highway 24. Two township roads, 850th Street and 500th Avenue, connect the two county highways. Ideally, a trail alignment through the park can be determined. An existing snowmobile trail follows the southern and western edges of the park. A trail alignment would need to be sited to avoid steep slopes and rare plant communities, while connecting the south side of the park to the facilities on the north side. The Prairie Bush Clover SNA, located adjacent to the park's southwest corner, is not a suitable location for a paved trail, although an existing walking trail provides access to this site.

Belmont County Park

This 80-acre park is located a short distance south of Kilen Woods, on the east bank of the river, and could potentially be accessed via the trail. The park has an interesting history: the Sioux Uprising of 1857 involved this area, the well-documented Belmont Massacre during the Dakota War of 1862 centered around the park area, and the original site of Fort Belmont is within three miles of the park. The park area was first surveyed in 1874 by the St. Paul Railroad and divided into woodlots ranging from three to five acres in size. These woodlots provided food, fuel and shelter for pioneers moving into the area. Park facilities include restrooms, log shelter house with fireplace and electricity, well with hand pump, grills and picnic tables, self-guiding nature trail, and a canoe-access campsite.

Scientific and Natural Areas

Important native plant communities are protected and highlighted in several Scientific and Natural Areas located in the river corridor.

- The **Prairie Bush Clover SNA** consists of 13 acres located within Kilen Woods State Park on the west side of the Des Moines River. The hill prairies within this SNA, although dominated by sideoats grama and little bluestem, support one of the world's largest populations of the federally threatened prairie bush clover. Also notable is a small calcareous fen located on one of the prairie hillsides.
- **Holthe Prairie SNA** is located on the east side of the Des Moines River Valley a short distance north of Kilen Woods State Park. This 148-acre SNA has the largest known calcareous seepage fen in the Des Moines River Valley, along with a hill prairie from which over 60 species of native forbs have been documented. A small population of the federally threatened prairie bush clover is also found at the site. The combination of native fen indicator species, tall and dry prairie grasses, and many wildflowers make a summer visit to this unusual site an interesting and colorful expedition. A total of 94 bird species have been recorded in the SNA.

- **Des Moines River Prairie SNA** is located on the east side of the river just north of the Christiania (County 30) Bridge. This 210-acre high quality hill prairie is home to numerous prairie plant species, including one of the largest known populations of the federally threatened prairie bush clover. The prairie bush clover is now rare, its dry gravelly hill prairie habitat largely destroyed. A member of the pea family, prairie bush clover is silvery green in color, with narrow, clover-like leaves, and pale pink to cream colored flowers that bloom briefly in mid-July. Other prairie plants include bird's foot violets, puccoon, finger tickseed, blazing stars and wild bergamot. Several old fields on the site are being planted with seeds collected from the site to provide better habitat for native plant and animal species. Trees that have grown up in the absence of wildfires are also being removed to enhance the prairie community. Future prescribed burns will keep trees from recolonizing the site in the future.

City of Lakefield

Lakefield is located along County Highway 14 about six miles west of County Highway 19, in the geographical center of Jackson County. The city was founded by Anders R. Kilen, a Norwegian-born Jackson County pioneer whose family had homesteaded in Belmont Township in 1867. He selected a tract in Heron Lake Township that was higher in elevation than the surrounding area well drained on all sides. For many years the earliest trappers who passed through the area had known of this beautiful piece of ground called "The First Mound" by the Indians. The lakes in the area were abundant in fish and waterfowl, which provided early residents a source of food, and there were many muskrats to be trapped for fur. Heron Lake, just a mile and a half away, was famous as a hunters' paradise and was the site of considerable market hunting.

Kilen had visions of a town being located on this tract of land. Not knowing who owned the land, he walked to Jackson, the county seat, consulted the records and learned in whose name the 80-acre tract was assessed. He then walked to Windom and took a train to St. Paul, where he located the owner of the land and returned home with the deed in his pocket. He had purchased the townsite from the St. Paul and Sioux City Railroad Company for \$420. Kilen then met with officials of the Southern Minnesota Railroad (later known as the Milwaukee Road) and reached an agreement for a side-track on the land. Finally, he hired James E. Palmer to survey and plat the new townsite.

The new town was initially called Bethania, but was dedicated by Anders Kilen in September of 1879 as Lakefield. A train depot was built and train service began on November 3, 1879, less than two months after the town's christening. Within a year a hotel, a post office, two hardware stores, a lumber yard, a saloon, several grocery stores and several grain dealers had sprung up to serve the people of the surrounding area.

One of Anders Kilen's sons, Agil Kilen, sold the land and lent his name to Kilen Woods State Park in 1945.

Lakefield's 2010 population was 1,694. The city is home to several parks, a swimming pool, and the Jackson County Historical Society and Museum, which offers exhibits and archival material. The Prairie Ecology Bus, a mobile nature center classroom that offers school workshops, camps and programs, is headquartered in Sparks County Park on the northwest side of the city.

Lakefield's trail plans include a connection to the Des Moines River Valley State Trail via **County Highway 14 / 820th Street**. The city's planned Old Mill Trail will connect the elementary school on 820th Street to the City Pool and Ballpark, and from there to the Prairie Ecology Bus Center.

City of Windom

The city of Windom is the county seat of Cottonwood County and is located approximately 20 miles upstream from Jackson along the Des Moines River, which flows through the center of town. The river and many surrounding lakes provide many recreational opportunities including boating, canoeing and fishing.

History

Cottonwood County was established on May 23, 1857. The only inhabitants in the area prior to settlement were Native Americans, specifically the Dakota tribe. Early settlers of Cottonwood County were a mix of Yankees and immigrants with diverse ethnic heritages.

Windom was named by Gen. Judson W. Bishop of St. Paul in honor of William Windom, a state senator and Secretary of Treasury under Presidents Garfield and Harrison. The village was platted in 1871 by A.L. Beach, an engineer of the Sioux City and St. Paul Railroad. Plats for other towns along the railroad, such as Worthington in Minnesota and Sibley in Iowa, were laid out the same as Windom, with a central square surrounded by business lots. But Windom was the only village to place a courthouse on the central square, and one of only two Minnesota county seats to follow this pattern (the other one is Preston).

About a dozen lots were sold on the first day of sales for \$100 each. By August of that year, many stores were open for business including a hardware store, a saloon, two bakeries, a grocery store, a meat market, among others. Windom was named the county seat of Cottonwood County in 1872.

The first school house was built in 1873 and the first lessons were taught there in the winter of 1873-1874. A flouring mill was built in 1878 along with a mill dam. The dam consistently washed out and was replaced in 1885 by a dam made of brush, hay and gravel. By 1890, Windom's population had reached 835 and in 1900 it was 1,944.

Windom Today

Windom's 2010 population was 4,646. Its location at the junction of US Highway 71 and Minnesota Highway 60 makes it a transportation hub for the region. The City has a diverse economy including agriculture, manufacturing, medical care and adult care facilities. Manufacturing is the largest industry in Windom, employing over 25% of the work force. The Toro Company, a lawnmower manufacturer, and a meat-packing plant, PM Windom, are major employers.

Local events in Windom include a weekly farmers' market, the Cottonwood County Fair, and Riverfest, a weeklong celebration in mid-June that includes a softball tournament, turtle races, live music, a parade and fireworks, among other activities.

Windom offers many recreational amenities, including 14 parks covering 124 acres. The Windom Recreation Area has three softball fields, a baseball field, soccer field, and over a mile of walking trails. Island Park, located along the Des Moines River, has a camping area and a community pool that is open during the summer months. Kastle Kingdom, a 10,000 sq ft playground, and a skateboard park are other popular attractions. A disc golf course was recently developed in Mayflower Park, located on the east side of the river. The U.S. Fish and Wildlife Service Visitor Center, located just east of Wolf Lake on County Road 17, includes a Waterfowl Production Area with a three-quarter mile walking and nature trail located in a

Trail users can find opportunities for lodging in Windom's campground at Island Park or various hotels. There are also many different restaurants and a grocery store. Windom has a variety of retail opportunities including department stores, gift shops, antique shops, and a flower shop. The Cottonwood County Courthouse, located in the heart of Windom, is listed on the National Register of Historic Places.

In addition to its parks, Windom is also home to the Cottonwood County Fairgrounds, which includes the Windom Arena, a multi-purpose facility containing racquetball courts, two ice rinks, and an indoor batting cage and golf driving range. Racquetball and wallyball tournaments, youth hockey games, figure skating lessons, broomball and open skating are held at the Arena. During the summer, the facility hosts horse shows, auto shows, county fair activities, and other special events.

The Windom dam, located on the Des Moines River in Island Park, originally built in 1878, has periodically washed out and been rebuilt until 2007, when the abutment washed out and the dam failed. The city worked with the DNR, the U.S. Army Corps of Engineers, and an engineering firm conducted feasibility studies looking at both repairing and removing the dam. The city is currently moving ahead with plans to remove the dam and ultimately replace it with a series of rock riffles, similar to the Jackson dam project.

Trail Routes and Potential Trailheads in Windom

As mentioned above, bringing a trail into the city from the south is challenging, because of the alignment of Highway 71, which enters the city from the southeast, and of Highway 60, which enters from the southwest in tandem with an active railroad line. As a result, the only potential routes into the city must cross Highway 71 at some point.

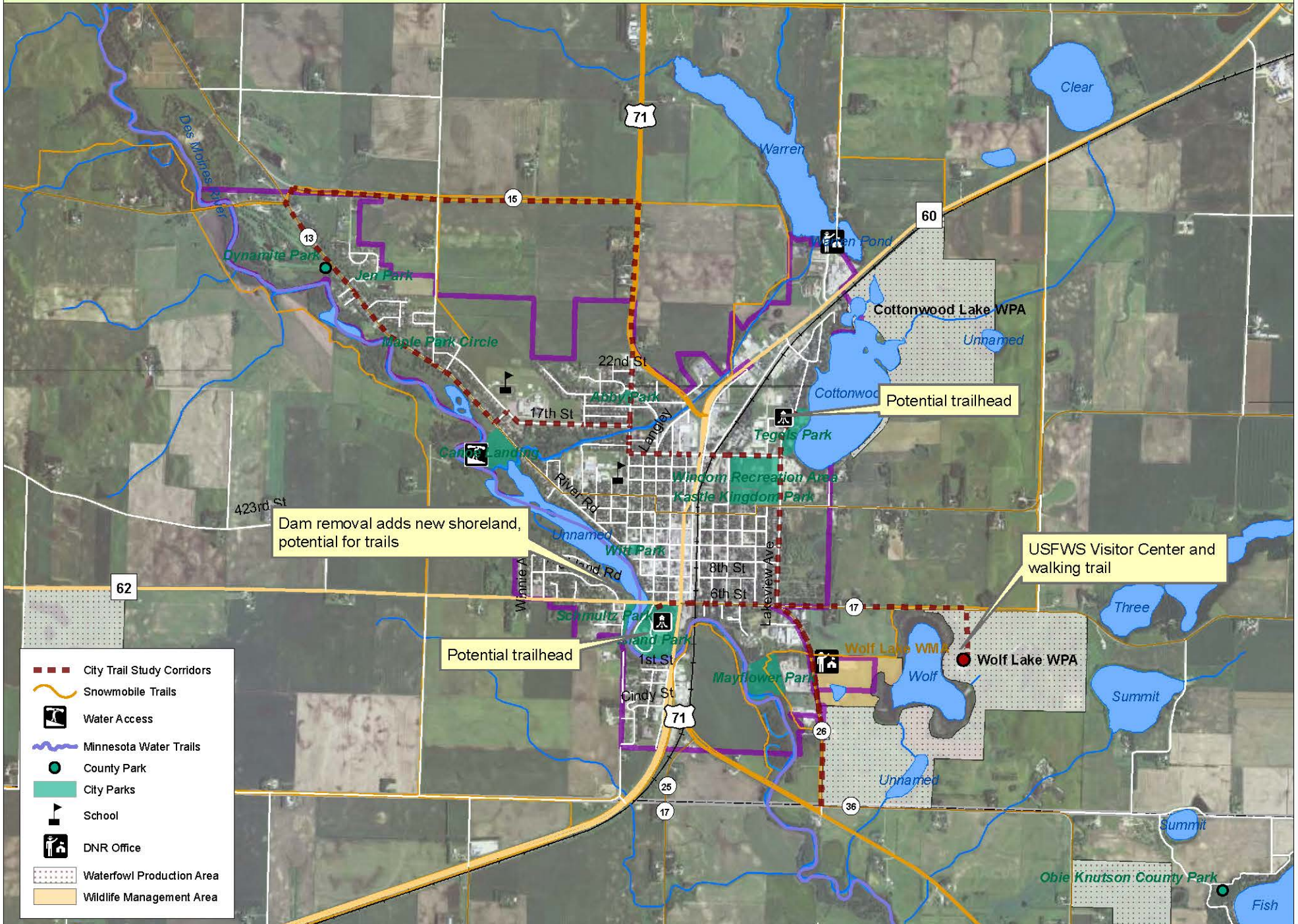
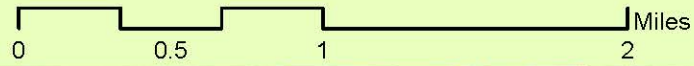


Cottonwood County Courthouse



Windom business district

Figure 9: City of Windom





The river valley's broad floodplain viewed from River Road in Windom



Floodwaters viewed from Dynamite County Park, River Road

Several potential trail routes, sidewalks and on-street bike routes through the city are being studied by city and county park and planning staff. As shown in Figure 9, these include County Roads 26 and 17, Lakeview Avenue, 6th Street, 16th and 17th Streets. The state trail and/or local trails should provide access to city parks and schools, and to the USFWS Visitor Center and walking trail. The city has received a Safe Routes to School grant to improve walking and biking access to the Windom Area High School, located on 17th Street. The results of these studies and initiatives will help to determine an alignment for the state trail or for connecting local trails through the city.

Segment 3A: Windom to Talcot Lake

Points of Interest

This segment, which spans Cottonwood County, is quite different in landscape character from segments 1 and 2, where the Des Moines River runs generally north-south. The river makes a large bend as it flows through Cottonwood County – as indicated by place names such as Great Bend Township – meandering north and then south as one travels upstream. Hills and broad floodplains are found along the river in the eastern half of the county, while the landscape becomes flatter to the west. Heron Lake drains a large subwatershed, and the Heron Lake Outlet contributes much of the Des Moines River’s flow.

The remains of several historic sites are located within the river valley, but none have been restored or interpreted.

One site of potential recreational and historic value is Pat’s Grove County Park, located where the Heron Lake Outlet joins the main channel of the Des Moines River. Talcot Lake County Park, located at the western edge of this segment, is developed for seasonal recreational use, and could serve as an important rest stop (see descriptions below).

Alternative Trail Alignments

One of the challenges to be considered in this segment is the lack of nearby services. Depending on the chosen alignment, the nearest services for over 15 miles may be located in one of the small towns near the corridor – Heron Lake, Dundee or Kinbrae (see discussion under “Communities”).

A related issue is which points of interest should be accessed by the trail. Pat’s Grove, while currently undeveloped, seems to have great potential as a rest stop and trailhead. **Trunk Highway 62** leads to a pair of township roads, **423rd Street** and **420th Street**, which provide access to the park and also offer a scenic route through a gently rolling wooded area between the String Lakes. This route offers the most direct access to Talcot Lake County Park, via **County Highway 6** and **TH 62**. However, the route would presence of extensive wetlands along Highway 62 near Talcot Lake could present challenges for a trail alignment.

Another option is a longer route that more closely follows the “great bend” of the Des Moines River. This alignment could follow **County Highways 14 and 15** (continuing as 400th Street), connecting to **County Highway 7**, leading south to TH 62 and Talcot Lake County Park. This route would provide better views of the river valley but is considerably longer and more distant from services.

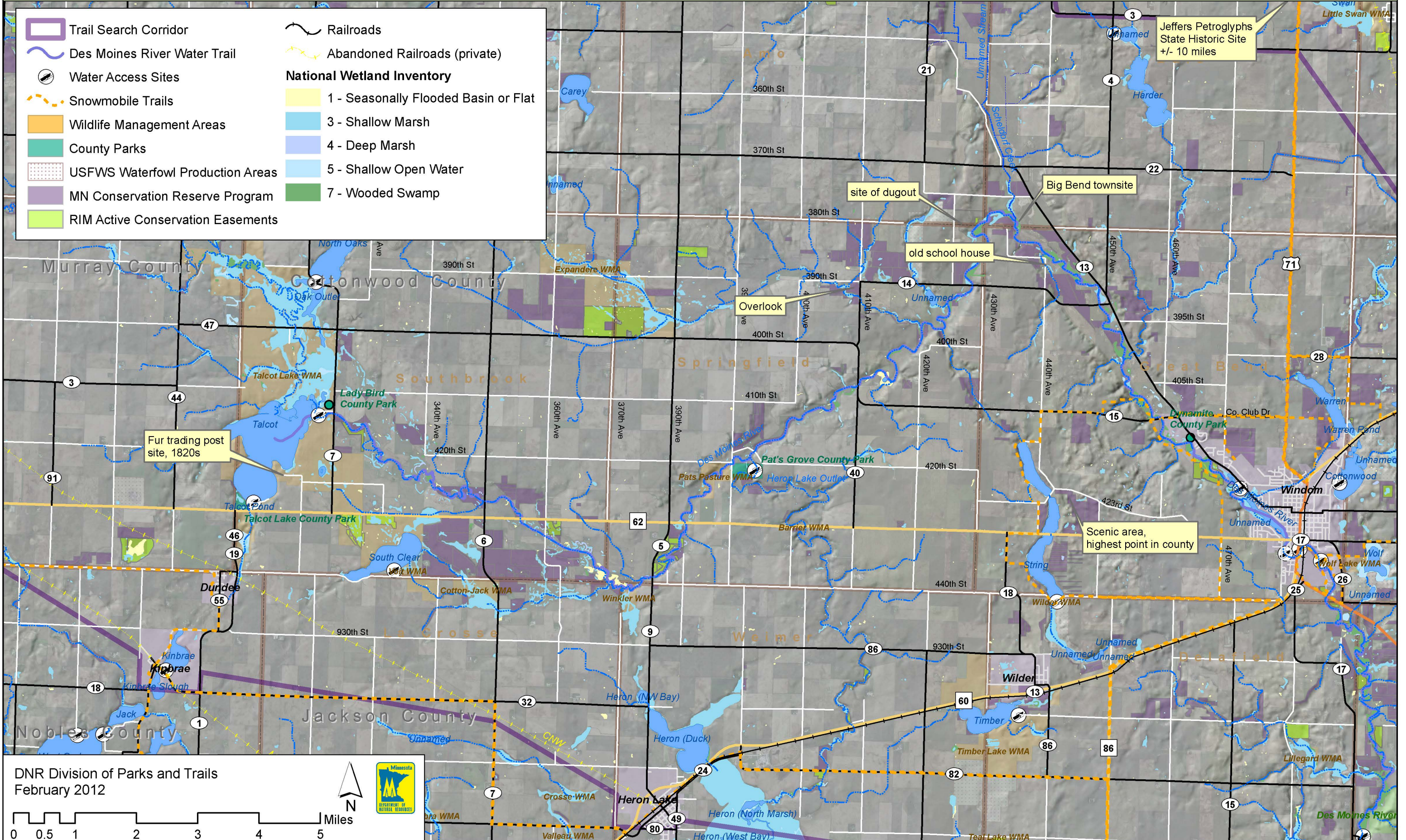
A third option is a more northerly alignment that would follow the valley of Scheldorf Creek, a tributary of the Des Moines River, which extends north, ultimately linking to the city of Storden. This valley, once a primary glacial channel of the Des Moines River, passes through scenic rolling hills, past the Lake Augusta Waterfowl Production Area. This option is described below as Segment 3B.

Interim Road Routes

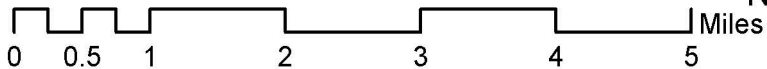
Several county highways within this part of the corridor are already in use or potentially usable as bicycle and walking routes, including routes that could connect adjacent communities such as Heron Lake, Dundee and Kinbrae to parks and other amenities in the corridor. These include the following:

- **Trunk Highway 62** provides a direct east-west route between Windom and Talcot Lake County Park.
- **County Highway 13** parallels the Des Moines River and connects to the east-west **County 14 and 15**, which provide a fairly direct east-west route across the “great bend” of the river.
- **Jackson County Highway 9**, which becomes **Cottonwood County Highway 5**, runs north-south between Heron Lake, the Des Moines River, and TH 62.
- Dundee and Kinbrae are connected to Talcot Lake and TH 62 via **Jackson County Highway 55** and **Cottonwood County Highway 19**.

Figure 10: Segment 3A: Windom to Talcot Lake



DNR Division of Parks and Trails
February 2012



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Segment 3A Communities and Resources

Pat's Grove County Park

The site has an interesting history, having been settled as early as 1866 by Pat Conlan, one of the region's earliest settlers. A stone house on the property, built in 1878, is assumed to be the remains of an unfinished flour mill, with walls more than a foot thick and 20 feet tall. Two log cabins are also located on the site. The park includes large stands of black walnut and basswood, providing habitat for a diversity of birds and wildlife. This county park is currently maintained in a primitive condition. An entrance road and a basic canoe launch site provide access to the Heron Lake Outlet, but there are no sanitary or other facilities.

Talcot Lake County Park

Talcot Lake County Park started as a hunting preserve on state-owned land in 1957. In 1976 it was leased to the Cottonwood County Park System for development and maintenance under the DNR's guidance. In 1975, the County purchased 30 acres adjacent to the state-owned leased property. A LAWCON/ LCMR grant provided for park facility development. The county and the DNR recently undertook a joint shoreline restoration project along the southwest shore of Talcot Lake adjacent to the county-owned land. This state-owned property now serves as a public access and day use area. The park now occupies 40 acres and includes:

- 67 camping sites with water and electricity
- Tenting areas
- Shelter house
- Picnic tables and grills
- Bathrooms with shower facilities
- Swimming area with sandy beach
- Playground area
- Sand volleyball
- Camper dump station

Talcot Lake WMA

This WMA is comprised of 4,676 acres, and includes Talcot Lake and its marshes, bottomlands along the west branch of the Des Moines River, and adjacent grassland and cropland. This unit has been historically important for migrating waterfowl. The WMA includes a wildlife sanctuary where hunting and trespassing are prohibited, and a waterfowl refuge where no waterfowl hunting is allowed. Hunting options include: deer, small game, pheasant, waterfowl, and doves. Facilities include wheelchair-accessible blinds

Dundee and Kinbrae

These small cities are located in the northeast corner of Nobles County close to the boundaries of Cottonwood, Murray and Jackson counties and a short distance south of Talcot Lake County Park in Cottonwood County. Dundee was established in 1879 on a branch line of the St. Paul and Sioux City Railway Company, known as the Heron Lake & Black Hills Railroad. Most of the city's growth occurred in the 1890s.

As of the 2010 census, Dundee's population was 68 and Kinbrae's population was 12, making it the third smallest city in Minnesota. Both cities lost population during

the 2000-2010 period, but both offer services for trail users. The Kinbrae Supper Club, located in the city's downtown, is a local landmark and one of the few restaurants in this area.

Heron Lake

Heron Lake is located in northwestern Jackson County, about 10 miles southwest of Windom, and about five miles south of Pat's Grove Lake County Park in Cottonwood County.

Heron Lake was founded in 1871 and named after the nearby lake, on the main line of the Chicago, St. Paul, Minneapolis, & Omaha railroad. The town was the terminus of the Black Hills branch of that line. Once the railroad was in place, the town developed very quickly. Its merchants drew trade from a large territory, since it was the only railroad town in the area. Heron Lake was also the distributing point for a much larger territory, much of the goods sold to merchants of Jackson, Spirit Lake, Iowa, and other interior points coming by way of Heron Lake. The early settlers in the area were predominately families seeking opportunities for themselves and their children. The three priorities of settlers were to build shelters for themselves and livestock, to establish churches, and to provide education. By 1875, Heron Lake had a population of nearly 100.

The area became well-known in the late 19th century for its waterfowl nesting and staging areas, making it a center for market and recreational hunting. Drainage of wetlands and stream channelization has resulted in loss of much of this habitat. Heron Lake is a designated Wildlife Lake, managed by the DNR Division of Fish and Wildlife for waterfowl production. This designation allows the DNR to temporarily lower lake levels periodically to improve wildlife habitat and regulate motorized watercraft and recreational vehicles on the lake.

The city's population was 698 at the 2010 census. The Heron Lake BioEnergy ethanol plant is located one mile northeast of the city. Amenities include stores and restaurants, a city park and community center.

Fulda

The city of Fulda is located about seven miles west of Talcot Lake County Park. The city was another of the Catholic colonies established by Bishop John Ireland in 1879 and incorporated in 1881. It was settled primarily by German settlers, along with Scandinavian and Irish, and was named after a city in central Germany.

Fulda's population was 1,318 at the 2010 census. Fulda is located on the north shore of Fulda Second Lake, a 179-acre recreational lake. The city is home to an elementary school and a high school, and offers several restaurants and stores. Although the rail line was discontinued in 1980, the two-story depot building, along with a section of track, has been preserved and is listed on the National Register of Historic Places. The lower level of the depot is currently used as an antique museum and store. The former Citizens State Bank building is also listed on the National Register.

Segment 3B: Windom to Storden

Points of Interest

This segment is a north-south alternative to Segment 3 that would follow the valley of Scheldorf Creek, a tributary of the Des Moines River, which extends north, ultimately linking to the city of Storden. Scheldorf Creek is a designated trout stream, one of the few streams so designated in Southwest Minnesota, and is stocked with brown trout by DNR's Windom Area Fisheries Office. Its valley, once a primary glacial channel of the Des Moines River, passes through scenic rolling hills, past the Lake Augusta Waterfowl Production Area and near Sara County Park on Lake Augusta.

Storden, located about 12 miles north of Windom, offers a popular local restaurant and other services. From Storden, an east-west route would provide linkages between the small towns of Westbrook and Dovray before terminating in Currie (see description of Segment 4B below).

Alternative Trail Alignments

This segment, like Segment 3A, could include **County Highways 14 or 15**, or portions of **County Highway 13** paralleling the Des Moines River and Scheldorf Creek, a designated trout stream. County 13 turns west at the Cottonwood County Landfill. From this point, a minimum maintenance road (signed as **County Road 56**) continues northwest up the glacial valley. Because of the landfill and gravel mining activities, truck traffic is heavy on the major county highways in this area. Several township roads, including **430th, 440th, and 425th Avenues** and **375th Street**, also provide access to this area.

Additional routes to Augusta Lake include **County Road 21** (unpaved) and **410th Avenue**. From Augusta Lake, County 21 continues north to **310th Street**, which runs west to join **Trunk Highway 30** at the edge of Storden.

Interim Road Routes

Several paved county highways within this part of the corridor are potentially usable as bicycle and walking routes, including the following:

- **County Highways 13, 14 and 15** (as mentioned under Segment 3A).
- **County Highway 5** runs north-south from County 13 to Storden.

Segment 3B Communities and Resources

Lake Augusta

Lake Augusta, 470 acres in size, is a designated Wildlife Lake, managed by the DNR Division of Fish and Wildlife for waterfowl production. This designation allows the DNR to temporarily lower lake levels periodically to improve wildlife habitat and regulate motorized watercraft and recreational vehicles on the lake.

Sara County Park

Sara County Park is located on the southern shore of Lake Augusta. This small 0.9 acre park primarily provides access to the lake and is used for wildlife observation.

Storden

The city of Storden was originally part of Storden Township, originally organized as Westbrook Township in 1875. The settlement was platted in 1903 around a station of the Chicago, St. Paul, Minneapolis and Omaha Railroad, and incorporated as a village in 1921.

Storden's 2010 population was 214. The city is home to the popular Shady Drive-In restaurant, a grocery store, and other businesses. The 1866 Nels Hystad Cabin is located in the city's park. The cabin was built near what became the village of Sunburg in Kandiyohi County. Hystad was a carpenter and a Norwegian immigrant from the island of Stord, for which Storden is named. The cabin was displayed in the city of Sunburg from 1955 until 1995, when that city donated it to the citizens of Storden.⁵

The **Jeffers Petroglyphs Historic Site** is located about fifteen miles northeast of Storden in northern Cottonwood County. Over 2,000 images have been drawn in the rock that was worn smooth by glaciers 14,000 years ago. The carvings show depictions of bison, turtles, elk, salamanders, human stick figures, thunderbirds, and weapons such as atlatls, spear points, arrowheads, and lances. The oldest drawings are roughly 7,000 to 9,000 years old. The exposed rock is approximately 150 ft by 600 ft and is surrounded by virgin prairie. The Jeffers Petroglyphs site is listed on the National Register of Historic Places and is maintained by the Minnesota Historical Society. The visitor center has interpretive and hands-on exhibits and offers many educational events and programs.

⁵ Hanson, Krista Finstad. 2007. *Minnesota Open House: A Guide to Historic House Museums*. Minnesota Historical Society.

Segment 4A: Talcot Lake to Currie

Points of Interest

This segment extends from Talcot Lake about 13 miles north and 10 miles west to the city of Currie, where Lake Shetek State Park and a loop of the Casey Jones Trail are located. Like the Cottonwood County segment, it is largely composed of farmland, interspersed with a few wildlife preserves and gravel mining areas. The Des Moines River is relatively narrow throughout this segment as it meanders through a level landscape of numerous small waterways, shallow lakes and wetlands.

Several sites of interest include a gravel-mining area that may have potential for future off-highway vehicle recreational use, a former brick factory site that may have historical interest, historic buildings and sites in Avoca and Slayton, and the End-o-Line County Park in Currie, as well as Lake Shetek State Park.

Alternative Trail Alignments

County Highways 44, 6, 42 and 7 could provide connections to Dovray, although County 42 experiences heavy traffic related to gravel mining. County Highway 6 provides an east-west connection to the city of Avoca, and County 7 provides a similar connection to Slayton. **County Highway 38** connects Avoca to Currie, while **County Highway 35** connects Slayton to Currie.

The trail search corridor in this area overlaps that of the planned **Casey Jones State Trail** between Slayton and Currie. The master plan for the Casey Jones State Trail identifies Beaver Creek as a potential route between the cities. It is therefore possible, depending on local interest and the availability of development funding, that the two trails could ultimately intersect in Slayton.

Township roads that connect Talcot Lake, Avoca and Currie include **61st Street, 240th Avenue** and **141st Street**.

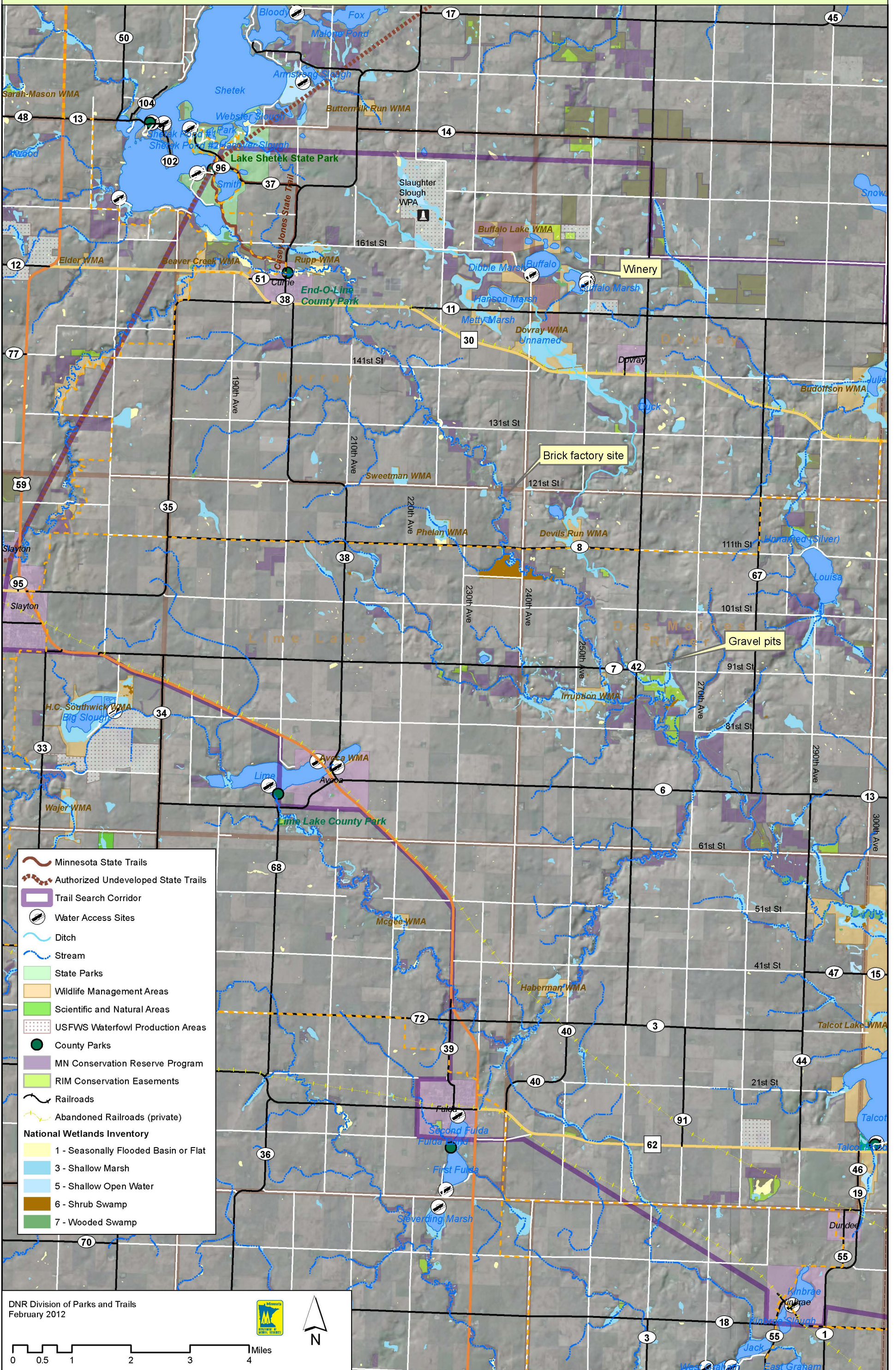
The trail search corridor in this segment is close to the planned corridor for the Casey Jones State Trail between Pipestone, Lake Wilson, Slayton and Currie. If that segment is developed prior to the Des Moines River Valley State Trail in this area, connections to Casey Jones trail communities such as Slayton will become more important.

An alternative alignment, shown as **Segment 4B**, would continue Segment 3B (extending from Windom to Storden) in a westerly direction to Currie. Segments 4A and 4B overlap in the Dovray-Currie area. The area between Dovray and Currie north of Trunk Highway 30 is discussed under Segment 4B.

Interim Road Routes

Some of the paved county highways within this part of the corridor are potentially usable as bicycle and walking routes, particularly **County Highways 44, 6, 38 and 35**.

Figure 12: Segment 4A - Talcot Lake to Currie



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Segment 4A Communities and Resources

Avoca

Avoca is located 10 miles south of Currie on the shores of Lime Lake. Its location about one mile from the edge of the trail search corridor makes it of interest for possible connecting trails or bike routes, and as a location of trail user services.

The town, named after a river in County Wicklow, Ireland, was founded in 1878 as one of the Catholic colonies established by Bishop John Ireland and the Catholic Colonization Bureau (see discussion under “Cultural Resources”). The presence of the Chicago Northwestern Railroad helped bring settlers and in the early 1900s, early erection of a church, immigrant house, and other public buildings greatly facilitated settlement.

Avoca was one of the larger communities in Murray County, but devastating fires in 1907 and 1952 destroyed much of the business district. Avoca’s population was 147 at the 2010 census. There are various festivals and events throughout the year, including Fun in the Sun Days in July and an annual area softball tournament in June. Lime Lake County Park offers a boat landing, fishing area off the dam, a picnic shelter and campground. The Avoca City Park has a playground, picnic shelter, and tennis court.

Slayton

Located about 10 miles southwest of Currie, Slayton is the Murray County seat, and serves as the county’s service, retail, government and medical center. Located at the junction of two major highways, U.S. Highway 59 and State Highway 30, Slayton is known as the “Hub City” of southwest Minnesota. The city’s population was 2,173 in 2010.

Slayton was established as a train station for the St. Paul and Sioux City Railroad Company in 1881, and named after Charles Wesley Slayton, a land agent for the railroad company. The town was platted in 1881 and incorporated in 1887.

Slayton offers many services and amenities to trail users, including coffee shops and restaurants, downtown retail and lodging. Recreational amenities include four city parks and an aquatic center, Slaytona Beach West. Points of interest include the historic 4-H Round Barn at the Murray County Fairgrounds, and the Murray County Historical Museum, which consists of three buildings: the museum proper, a building containing antique and vintage agricultural machinery and equipment, and an 1872 log cabin.

The planned alignment of the Casey Jones State Trail connects Slayton to Currie. No specific alignment for the trail has been identified. However, Slayton is located on Beaver Creek, which flows into the Des Moines River just below the dam in Currie, and a trail alignment following the creek would be desirable.

Currie

Currie was founded by Archibald Currie and his son Neil, immigrants from Scotland by way of Canada, in 1872. Both were prominent businessmen, with Archibald serving as county treasurer and Neil building the first store, founding a bank, and serving as postmaster. The pair also built a flour mill on the Des Moines River one

mile from Lake Shetek. Currie was also the first county seat in Murray County from 1872 until 1889, when it was moved to Slayton.

In the 1880s, Currie became the site of one of the Catholic colonies established under the auspices of Bishop John Ireland of St. Paul for impoverished immigrants (see discussion under “Cultural Resources”). The Currie colony was established by John Sweetman, a wealthy landowner from County Meath, Ireland, who divided his time between Currie and his Irish estate.

The Omaha Railroad opened a branch line in 1899 connecting Bingham Lake to Currie. The railroad brought new prosperity to Currie.

With a population of 233 at the 2010 census, Currie has several restaurants and stores. Lake Shetek is one of the major attractions in the area, with many seasonal homes, resorts, and campgrounds that can provide lodging to trail users. A six mile paved loop segment of the Casey Jones State Trail connects Currie to Lake Shetek State Park.

Currie is home to the End-O-Line Railroad Park and Museum which serves as a trailhead for the Casey Jones State Trail. The park includes a variety of historic buildings and structures, including a section foreman’s house, a diesel switcher and caboose, and a manually-operated turntable, among other historical buildings. The park also has nature trails, a picnic area with a shelter, a playground, modern restrooms, and a visitor center.



New sign marks the Currie Loop Segment of the Casey Jones State Trail

Lake Shetek State Park

Lake Shetek State Park is located 1 mile from Currie on the southeastern shore of Lake Shetek. Shetek is an Ojibwe word for “pelican.” There are an estimated 150,000 visits to the park annually. The park consists of 1,108 acres of fields, prairie, and oak, basswood, hackberry, elm, and ash forests.

The wooded shoreline of Lake Shetek provides cover for white-tail deer, fox, mink, beaver, fox squirrels, muskrat, woodchuck and coyote. Several wetlands in the park provide opportunities to view waterfowl, reptiles and amphibians. At Eastlick Marsh, interpretive signs and an observation deck with a spotting scope allow for close-up viewing and easy identification of coots, grebes, ducks, herons, and pelicans. Many species of waterfowl nest in and around the park in spring and early summer.

Fourteen miles of hiking trails meander throughout the prairie with five miles of snowmobile trails open each winter. Other recreational opportunities for park users include boat rental and access, a swimming beach, two campgrounds, playground, and picnic areas.

Before modern agriculture was introduced, most of the Lake Shetek area was a treeless prairie with hundreds of species of wildflowers and grasses. In an effort to restore the natural prairie, prescribed burns and invasive species control are used. Although it will take decades to even partially restore the prairie, progress is being made. Blazing star, black-eyed Susans, coneflowers, vervain, sunflowers, and bottle gentian are a few of the showy wildflowers growing in the park.

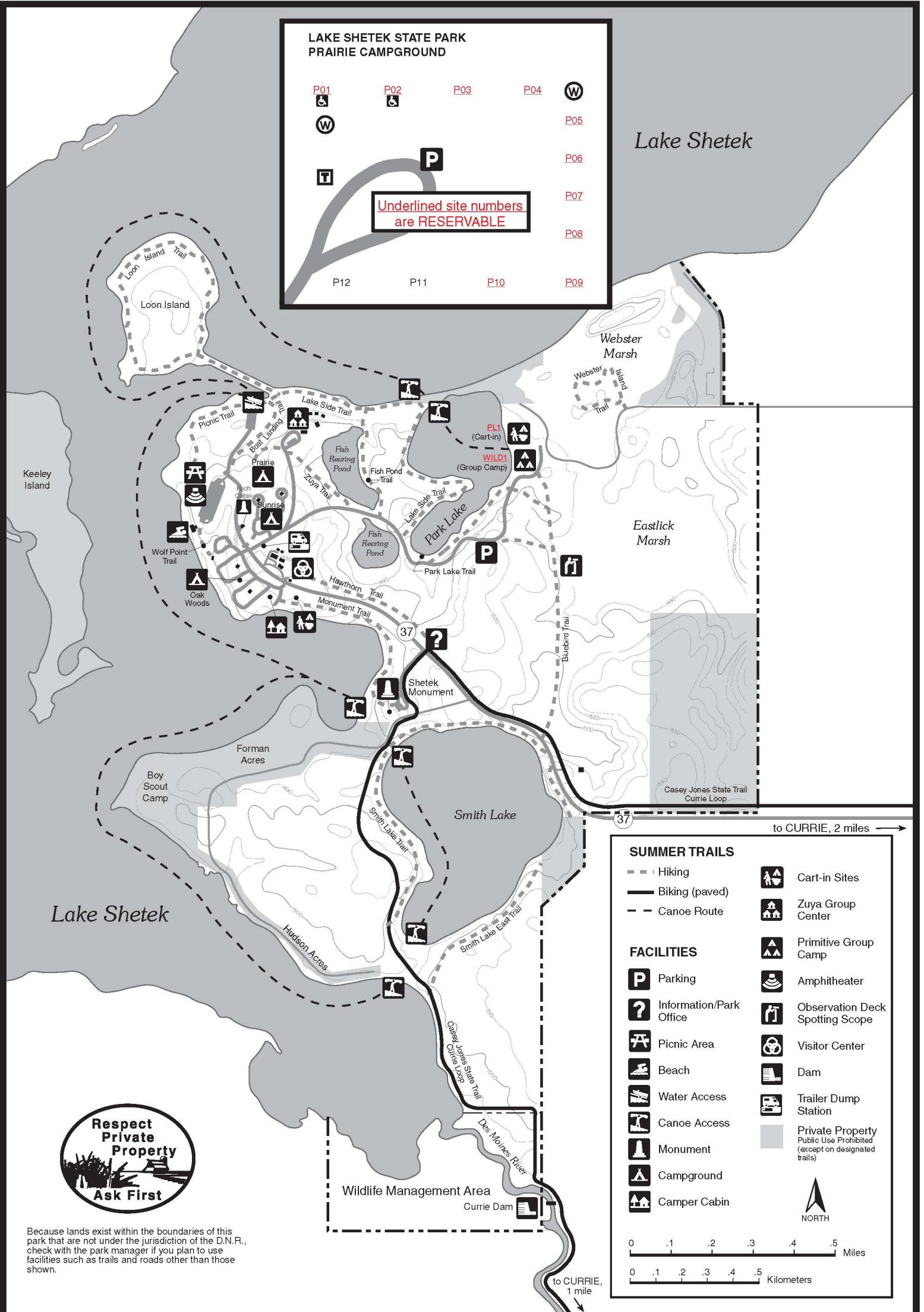
LAKE SHETEK STATE PARK

FACILITIES AND FEATURES:

- 70 drive-in campsites (Oak Woods and Sunrise Campgrounds)
- 64 electrical (32 have sewer, water and electric with 50 amp service)
- 7 cart-in sites
- 12 rustic campsites (Prairie Campground)
- 1 primitive group camp (Wilderness camp)
- Zuya Group Center; 80-person capacity
- 4 Camper Cabins
- Picnic area with 2 shelters (1 winter warming shelter)
- Boat and canoe launch
- Rowboat, canoe and kayak rental
- 8 miles of Summer hiking trails
- 6 miles of paved bike trail
- 5 miles of snowmobile trails

VISITOR FAVORITES:

- Swimming beach
- Koch Cabin
- Loon Island
- Fish Rearing ponds
- Interpretive center
- Nature Store
- Shetek Monument
- Eastlick Marsh observation deck and spotting scope



Segment 4B: Storden to Currie

Points of Interest

This segment extends for about 17 miles in an east-west direction between the cities of Storden, Westbrook, Dovray and Currie. The cities are linked by Trunk Highway 30, which closely follows the right-of-way of the former Chicago, St. Paul, Minneapolis and Omaha Railroad. The cities (formerly villages) were platted five to seven miles apart by the railroad or by speculative land companies, in order to provide fuel and water services and as the locus of real estate investment. Depots and hotels sprang up to serve travelers in each new community, while townspeople built village halls and commercial buildings. Grain elevators and other industries developed that depended on the railroad for hauling raw materials and finished goods.

One advantage of this alignment is that the short distances between cities provide frequent opportunities for services and trailheads for trail users. Points of interest in this area include a number of small lakes north of TH 30, Dutch Charlie County Park, and a large complex of lakes and marshes north and west of Dovray. Two Wildlife Management Areas, Buffalo Lake and Dovray WMAs, are located here, along with several public water accesses. West of Buffalo Lake is the Slaughter Slough Waterfowl Production Area, a U.S. Fish and Wildlife Service site. This WPA is also a historic site: during the 1862 U.S.-Dakota War, this was the site of a battle in which thirteen settlers and two Dakota were killed. The slough was later drained and farmed until 2003. USFWS, together with Ducks Unlimited, has worked since 2002 to restore the upland prairie and refill the slough, where a monument now stands.

Alternative Trail Alignments

County Highways 53 and 30 offer a direct route between Storden and Westbrook, crossing the south section of Double Lake. **County Highway 24** links Westbrook and Dovray. Parallel township roads, including **151st and 161st streets**, cross the hilly and scenic Buffalo Lake – Slaughter Slough area, and 161st Street continues west to Currie.

Interim Road Routes

The east-west county highways – **Highways 53, 30 and 24** – may be usable as bicycle and walking routes between Storden and Dovray. Between Dovray and Currie, there are no paved county roads within the corridor, although portions of **Trunk Highway 30** may be usable for expert bicyclists.

Segment 4B Communities and Resources

Storden

See segment 3B.

Westbrook

Westbrook is located about six miles west of Storden. Westbrook Township was organized in 1870 and named for the west branch of Highwater Creek, which flows

across the southeast part of this township. The city of Westbrook developed around a station of the Chicago, St. Paul, Minneapolis and Omaha Railroad. Westbrook was platted in 1900 by the Interstate Land Company and incorporated as a village on February 16, 1901. The village was already the site of a boardinghouse, hotel, general store and post office.

Westbrook's population was 739 at the 2010 census. The city is home to an elementary school, community/senior center, grocery and convenience stores, library, medical clinic, and a good mix of other local businesses. The community park, located in the center of town, includes a swimming pool, ball field, playground, sand volleyball and picnic shelter. A campground offers sites with water and electric service.

Dovray

Dovray is located on Trunk Highway 30, about six miles east of Currie. The first settlers in the area came from Dovre, Gudbrandsdalen in Norway, and when the town was organized, it was named Dovray. Today, the Norwegian traditions continue in the town's celebration of Uffda Day, which is held every even numbered year.

The village was originally platted one mile north and one mile east of the present location in 1895. In 1904 the town site was moved to be closer to the Chicago - St. Paul railroad line. The town flourished until 1916 when the "big fire" destroyed many of the buildings.

This small agricultural town had a population of 58 at the 2010 census. Community spirit and involvement can be seen in the volunteers of the fire department and members of the Booster Club. The Painted Prairie Vineyard, located near Buffalo Lake about two miles north of the city, is open for tastings and tours on weekends during the summer season.

Currie

See segment 4A.

South Dutch Charlie County Park

This Cottonwood County park is located along Dutch Charlie Creek between Storden and Westbrook, about a mile north of the trail search corridor. The creek, a tributary of the Cottonwood River flows in a northeasterly direction through a steep, wooded valley that comprises the 24-acre park. The park was the home of its namesake, Charley Zierke, also known as Dutch Charlie, the first settler in Cottonwood County. The park, 24 acres in size, includes a camping area with water and electric service, a picnic area with shelter, and playground.

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4. Trail Management

Projected Trail Use

It is difficult to project the level of trail use based on levels of use on other state and regional trails in Southwest Minnesota and Iowa, since trail usage has not been surveyed in this area. However, similar trails in other parts of Minnesota show high levels of use. Summer use of the Douglas State Trail, a 12-mile trail from Rochester to Pine Island that is predominantly used by local residents, had about 65,000 “user hours” in the summer season of 2007. By comparison, the popular Root River State Trail, used predominantly by tourists, had over 111,500 hours of use (a trail user spending one hour on the trail is a “user hour”)

State park attendance figures at nearby parks also indicate the numbers of recreational users in the area. State park attendance is measured in visitor-days (one person visiting the park on one day)

2009 State Park Annual Attendance (visitor-days)

Lake Shetek State Park: 124,281

Kilen Woods State Park: 16,350

Trail use will vary by segment and proximity to communities and area attractions. For example, a connection from the cities of Jackson or Windom to Kilen Woods State Park is likely to attract local trail users from both cities. Connections from the Spirit Lake trail system to Jackson are more likely to attract tourists who may be vacationing in the Iowa Great Lakes area.

Trail Maintenance

Adequate maintenance of state trails is critical to provide and sustain the experience trail users appreciate. Maintenance activities are numerous and diverse, as the following list illustrates. Specifically, maintaining the Des Moines River Valley State Trail will include:

- Monitoring trail conditions, which includes scheduling and documentation of inspections; monitoring the condition of railings, bridges, trail surfaces, and signage; hazard tree inspection; and removal of debris such as downed trees
- Scheduling of maintenance tasks
- Mowing of vegetation: shoulders, rest areas, and parking lots (see Recommendation 3 below)
- Winter grooming and plowing
- Tree and shrub pruning
- Trash removal
- Trail repair – fixing washouts and controlling erosion are examples
- Maintaining bridge decking and railings
- Trail drainage control

- Trail surface maintenance
- Repair of animal damage to trail or facilities
- Checking and repairing fence lines and gates
- Mowing and brushing farm crossings
- Cleaning out ditches and culverts, replacing failing culverts
- Controlling invasive species
- Maintaining equipment
- Painting posts and picnic tables
- Graffiti control and vandalism repair, especially to signs
- Maintaining boundary signs, and working to resolve encroachment issues
- Coordination of volunteer efforts
- Training and supervision of employees, Conservation Corps of Minnesota, or Sentence to Service crews
- Sweeping asphalt surfaces

In areas with sensitive natural resources, such as Kilen Woods State Park, and at any water accesses along the corridor, the Parks and Trails Division would follow the guidelines established under Operational Order #113, "Invasive Species," in consultation with the Division of Ecological and Water Resources. The guidelines prescribe methods for avoiding the introduction or spread of invasive species, and managing and treating infestations of such species.

Maintenance Recommendations

Recommendation 1: Additional maintenance funds will be required to maintain the trail after it is developed.

Recommendation 2: The trail should be seal coated approximately six years after initial development. Research shows that this will prolong the life of the trail.

Recommendation 3: Consideration should be given to mowing remnant and restored prairie once in the fall to retain robust prairie species and reduce the risk of introducing invasive species. Resource management staff will provide additional direction regarding maintenance within Kilen Woods State Park.

Recommendation 4: Prescribed burning on prairie areas should be a priority maintenance practice. Portions of the trail may need to be closed during a prescribed burn event.

Information and Education

Trail User Orientation

Trail users must have good information about the trail system so they can make choices about destinations appropriate for their time frame, skill level, need for services such as food and lodging, links to regional or local trails, and the type of scenery and other recreational opportunities available along the route. This type of information should be displayed on information boards at parking areas, in communities and at trail junctions. It should be available on maps, and on the DNR Website. It should include distances between communities, options for other trail



connections and locations of services. If any significant deviation from the typical trail design occurs – e.g., when a trail enters a community – it should be noted on signs or informational kiosks to assist trail users in understanding what the trail experience will be.

Identification of Services

Trail users benefit from knowing where they can obtain services (medical assistance, telephones, gasoline, food, lodging, restrooms, campgrounds, repair facilities, or other retail) and local businesses benefit from an increase in customers. A listing of the services available in each community developed, maintained and updated by the community could be displayed on information boards at parking areas in each community.

Trail Courtesy and Safety Information

Trail courtesy and safety information aimed at educating trail users about appropriate behavior, promoting safe trail use, and protecting the quality of the trail environment should be developed and posted at trailheads and other key locations.

Volunteer trail ambassadors could be used to distribute information on appropriate trail behavior and etiquette relative to specific problems such as unleashed dogs, passing of other users, and the need to clean equipment to prevent the spread of invasive species.

Interpretation of Natural and Cultural Resources

There are many natural and cultural resources of significance and interest along the trail. These include varied topography, native vegetation, wildlife habitat, wetlands, rivers and lakes. In addition, there are many places that tell the history of the region. Providing information about these resources can add enjoyment to the trail experience.

One or more interpretive themes are identified for state trails during the planning process. The interpretive theme helps tie together spatially separated interpretive sites and provides continuity in the messages presented.

Each state park has interpretive themes, programs, and signs for interpreting its cultural and natural resource setting covering the themes identified for the state trail as well as others. Coordination between park and trail interpretation and programming will benefit park visitors and trail users. The interpretive themes used for the state parks in the region indicate some potential directions for trail interpretation. Themes highlighted at Kilen Woods State Park include:

- The long history of nomadic indigenous people in the region;
- The history of exploration of the “Coteau des Prairie,” or “highland of the prairie”
- Early European exploration and settlement patterns, treaties and conflicts
- The glacial processes that formed the landscape

Themes highlighted at Lake Shetek State Park include:



- Human use of the land over time; human influence on the landscape, i.e. from prairie to agriculture, prairie restoration
- Native American settlement patterns and use of resources
- White settlement and the U.S.– Dakota Conflict of 1862

Both parks also highlight the glacial processes that formed the Coteau Moraines landscape. Additional themes that could be interpreted include agriculture as the dominant activity in the region, the history of the ethnic groups that settled the area, and the role of the railroads in spurring settlement. Other interpretive elements include geology, wind farms, plant communities and plant species found in and adjacent to the corridor, and wildlife species likely to be observed by trail users.

Interpretive signs will be developed in consultation with other DNR divisions and the Minnesota Historical Society (MHS). Some initial ideas are listed above. Additional sites will be interpreted over time.

Information and Education Recommendations

Recommendation 1: Develop a kiosk and trail logo design that reflects the interpretive theme for the trail that can be used in communities and at rest areas along the trail. Use of native stone should be used in the design of kiosks and/or sites as they are located.

Recommendation 2: Community services information, trail orientation, trail rules and trail courtesy information should be developed and installed on a kiosk at the same time the trail is developed.

Recommendation 3: Parks and Trails staff should cooperate with schools to use the trail for environmental education purposes.

Recommendation 4: Interpret the natural and cultural features along the trail. Include information on the fishing opportunities of the trail. The Division of Fisheries local offices and MinnAqua staff should be consulted as resources.

Enforcement

Minnesota State Trails are very safe and generate very few complaints. However, adequate enforcement is a vital aspect of maintaining a safe and secure trail environment. User conflicts, unauthorized use of the trail, and trail users leaving the treadway designated for their use are often among the concerns identified during the planning process, and are all likely areas for enforcement.

Enforcement of state trails rules and regulations, information and education, trail design, trail maintenance, and the mix of trail uses are all factors that contribute to the maintenance of a safe, secure trail environment. The DNR has the primary responsibility for law enforcement on DNR-owned and operated recreation areas. Enforcement assistance is also sought from local police departments and county sheriffs as necessary.

The DNR's goal is to deal with issues as they arise and provide an adequate level of enforcement to maintain a safe and secure trail environment, to encourage trail

users to understand and obey trail rules and respect other trail users and adjoining properties.

Recommendations for Enforcement

Recommendation 1: Provide an adequate level of enforcement via a multifaceted approach, to help maintain a safe and secure trail environment, and to encourage trail users to understand and obey trail rules, and respect other trail users and adjoining properties.

Recommendation 2: Develop on-site information that targets important trail courtesies and rules necessary for a safe and enjoyable experience, specific to uses of a particular segment and problems and conflicts occurring there.

Recommendation 3: Increase visibility of Parks and Trails staff during peak use times for an enforcement effect.

Recommendation 4: Investigate the feasibility of a state trail ambassadors program to communicate with trail users regarding trail safety and etiquette.

Recommendation 5: Parks and Trails will include the cost of enforcement when providing information about the cost of the trail when communicating with legislators, trail advocates, and local government officials.

5. Trail Corridor Resources

Landscape Overview and Ecological Classification System

Scientific information, such as geologic features, soils, and fossil pollen grains and algae accumulated in lake basins, tells us the story of the deepest past. From these sources we know that the landscape of southwestern Minnesota is the legacy of ice and meltwater. Successive waves of glaciations covered the land, most recently the Des Moines Lobe about 14,000 years ago. The glaciers shaped landforms, soils and water features.⁶

The Ecological Classification System is part of a nationwide system for ecological mapping and landscape classification. The ECS classifies regions based on climate, geology, topography, soils, hydrology, and vegetation information. There are six tiers to the ECS: provinces, sections, subsections, land type associations, land types, and communities. The ECS allows for natural resource managers to better understand the landscape and manage resources in a more sustainable manner.

Minnesota is located in the center of North America and has four ecological provinces: the Eastern Broadleaf Forest, the Laurentian Mixed Forest, the Prairie Parkland, and the Tallgrass Aspen Parklands. Southwestern Minnesota is located completely within the Prairie Parkland province. This province extends north into Manitoba, west into the Dakotas, and south into the Central Plains region of the United States. All the prairie counties of southern Minnesota and neighboring portions of Iowa lie in the Prairie Parkland Province, which coincides with the part of the state formerly dominated by tallgrass prairie. Mean annual temperatures range from 36° F near the Canadian border to 48°F along the Iowa border. Evaporation generally exceeds precipitation. Along with the strong west winds, low winter precipitation and comparatively shorter duration of snow cover contribute to conditions that favor grassland over forest. Historically, these conditions favored frequent fire, which, in turn, rejuvenated prairie and diminished forests except where they were sheltered by lakes, wetlands, or rivers.

The Des Moines River Valley Trail is located within the North Central Glaciated Plains section. This region of the state is covered with glacial till that predates the Wisconsin glaciations. The area is dominated by upland prairie and other treeless, fire-dependent communities such as rolling till plains, moraines, lake plains, and outwash plains.

The trail's search corridor spans two subsections: the Minnesota River Prairie and the Coteau Moraines⁷. The Minnesota River Prairie covers a very small area along the southeastern edge of the search corridor.

⁶ Information in this section drawn from reports by Nancy Sather, DNR Ecologist. See References.

⁷ <http://www.dnr.state.mn.us/ecs/251Bb/index.html>

The Minnesota River Prairie is an area of rolling hills and end moraines on the western portion near the Coteau Moraines. Much of this section is covered by 100 to 400 feet of glacial drift over bedrock that is made of cretaceous shales, sandstones, and clays. The soils are well- to moderately well-drained loams with the rolling areas having dry prairie soils.

The Coteau Moraines subsection is part of a high glacial landform that extends into southeastern South Dakota and northwestern Iowa, topped by the Buffalo Ridge (1,995 feet above sea level) in northern Pipestone County.

On the basis of surface features and soils, geologists divide southwestern Minnesota into six geomorphic regions, the most prominent of which is the Bemis Moraine, more commonly known as Buffalo Ridge, which is most notable in Lincoln County. West of this ridge, the elevated Inner Coteau escaped the last wave of glaciation. East of the ridge, the landscape was glaciated by the Des Moines Lobe. Western Jackson County is part of the Outer Coteau, a slope that trends diagonally from northwest to southeast through Lyon, eastern Murray, Nobles, and parts of Cottonwood and Jackson Counties, draining the landscape to the east. The Des Moines River valley marks the eastern edge of this feature in Jackson County. East of the valley, the rolling landscape is formed on ground moraine.

The portion of the Des Moines River between Windom and Jackson passes through a valley with up to 100 feet relief between the valley floor and uplands within a mile or the river. This valley has supported the largest single block of forest west of the Blue Earth and south of the Minnesota rivers, and continues to do so.

A steep escarpment marks the northeast edge of the Coteau Moraines subsection, which becomes less pronounced to the southeast. Most of the bedrock in this subsection is covered by 600 to 800 feet of glacial till. Well-drained loamy soils are most common, with drier soils around areas that have experienced erosion. This subsection is divided into two distinct landforms. The middle Coteau is a landscape of rolling moraine ridges of late-Wisconsin drift mantled with loess 1 to 3 feet thick.

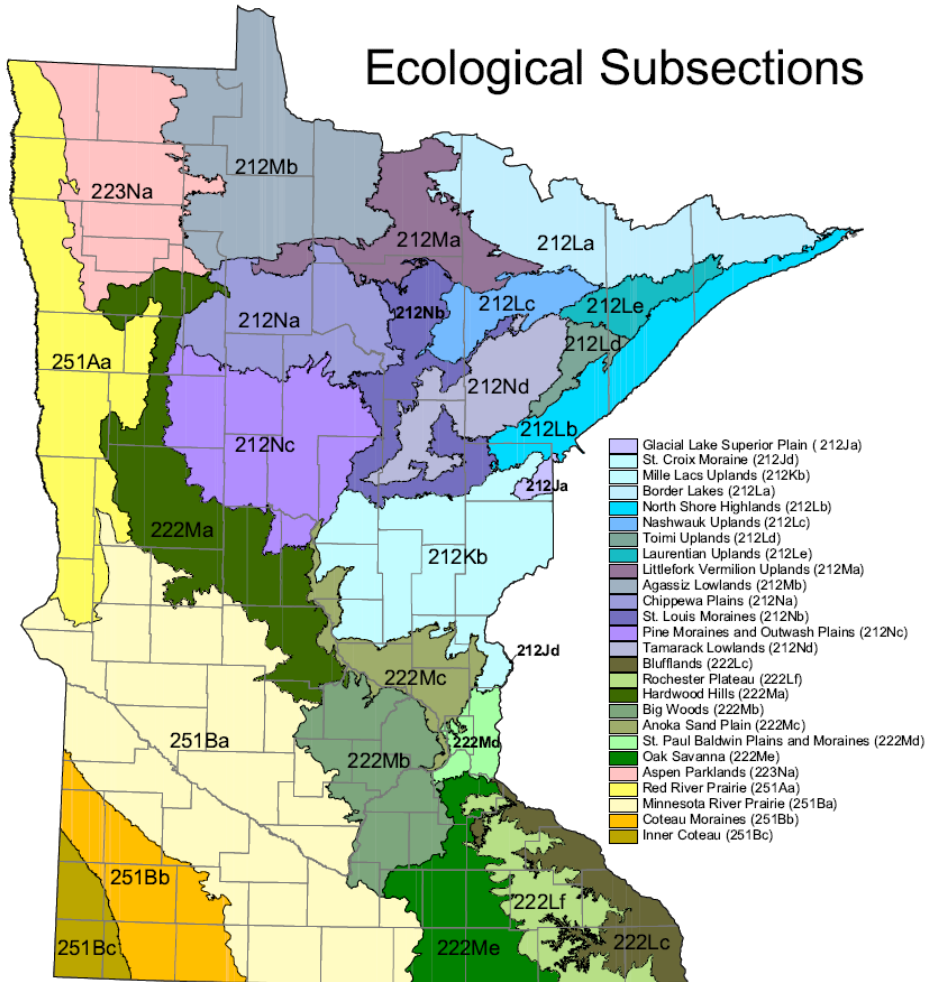
Agriculture, including both row crops and pastures, is the predominant land use in the Coteau Moraines subsection today. This type of use has led to tiling and ditching of the land and channelization of the river systems, causing habitat degradation and disturbed aquatic connectivity.

This topography is described in this master plan because it represents the composite ecological features that are important to interpret along the trail and to protect during trail development and operations.

Climate

Southwestern Minnesota experiences a continental climate which is influenced by cold Arctic air in the winter and warm air from the Gulf of Mexico in the summer months. The area experiences long and harsh winters compared to warm and semi-humid summers. Occasional severe storms and drought can occur in the summer months. The majority of the search corridor receives 24 to 27 inches of precipitation annually with the northwest receiving the least amount of precipitation and southeast receiving the most. The majority of precipitation in this

part of Minnesota occurs between April and October. The mean annual snowfall for this area of the state is 35 inches. The average length of the growing season is 145 to 150 days and windy conditions are common.



Vegetation

Presettlement Vegetation

Presettlement vegetation in the vicinity of the trail search corridor is based on the Public Land Survey records from 1853-1854, as interpreted by Francis J. Marschner.⁸

⁸ Marschner, F.J. 1974. *The original vegetation of Minnesota, compiled from U.S. General Land Office Survey notes* [map, scale 1:500,000]. U.S. Department of Agriculture, Forest Service, North Central Forest Experiment Station, St. Paul. (redraft of the 1930 original).

Nearly the entire search corridor area was characterized as “prairie,” now known as tallgrass prairie. This type of prairie is an herbaceous plant community with species such as big bluestem, prairie dropseed, little bluestem, and other mid-height grasses. Tallgrass prairie plants have extensive root systems that help protect against erosion by holding the plants in place. The root systems also make the plants more resistant to times of little or no rainfall. Wet prairies, comprised of many of the same species found in tallgrass prairies, made up a small portion of the area, generally near lakes and the Des Moines River. A small section along the Des Moines River in Jackson County consisted of oak openings and barrens with species such as bur oak, basswood, and ferns. Small sections near the “great bend” of the Des Moines River in Cottonwood County and in the Lake Shetek area were river bottom forests.

Prior to settlement, fire was the most common disturbance in this part of Minnesota. These fires played an important role in maintaining the prairie plant communities. Tornadoes associated with thunderstorms were, and continue to be, common disturbances in this area.

Present Day Vegetation

Less than one percent of the original tallgrass prairie remains in Minnesota today. The loss of this ecosystem has been caused by extensive agriculture, the primary land use in the region. Over 80% of the current land cover for the Coteau Moraines Subsection is dedicated to row crops. An additional 13% is in pasture. The soils in the trail search area are primarily loams and are well drained with thick dark surface horizons. Soil erosion is often a concern in the area.

Other native plant communities found in the area include dry hill prairie, mesic prairie⁹, Basswood – Burr Oak forests and wet prairie. Floodplain forests are concentrated within the Des Moines River valley, specifically in the southern Cottonwood and northern Jackson County stretch of the river. As mentioned above, the river valley in Jackson County has always supported the unique westernmost Minnesota limits of the rich maple basswood forest found there today.

Kilen Woods State Park has an oak forest, river bottom meadows, floodplain forests, oak savanna, and prairie landscapes. Bur oaks, wild plums, and hawthorns grow among prairie grasses and wildflowers along the Des Moines River Valley.

Fig 15 Presettlement Vegetation Map

⁹ The term mesic refers to the normal moisture content of the prairie soil, which in this case is somewhere between wet and dry. Mesic prairies are fire-dependent communities. They were once the dominant vegetation type in southern and western Minnesota, but since the time of European settlement they have been largely replaced by agriculture. See dnr.state.mn.us/restoreyourshore

Prescribed burns and invasive species management are being used within Lake Shetek State Park in an attempt to restore native prairie. The park also has a large portion of old fields and forests of oak, hackberry, basswood, elm, and ash. Showy wildflowers such as blazing star, black-eyed susans, sunflowers, and coneflowers can be seen around the park.

Vegetation Management Recommendations

Recommendation 1: Avoid threatened and endangered species and avoid or minimize any impacts to special concern species and high quality plant communities, as defined by the Minnesota County Biological Survey (MCBS) maps or additional resource inventories.

Recommendation 2: Develop a vegetation inventory and management plan for the trail.

Recommendation 3: Efforts will be made to avoid impacting wetlands. Wetlands will be inventoried and a wetland mitigation plan will be prepared to address any identified impacted wetlands.

Recommendation 4: Restore or, if necessary, reestablish or reconstruct native plant communities along the trail to minimize maintenance, minimize the use of pesticides, control invasive species, and increase natural species abundance and biodiversity for enhanced user experience.

Recommendation 5: Follow the guidelines established for invasive species management by Operational Order # 113. Consult with and follow the guidelines of the Division of Ecological and Water Resources in areas adjacent to Scientific and Natural Areas and water accesses.

Recommendation 6: Revegetate areas disturbed by construction or in need of rehabilitation with plant species native to the area by collecting seeds from remnant prairie communities or by purchasing local genotype seed from a certified vendor. Use locally-sourced native shrubs and trees in landscaping trail access sites and waysides.

Water Resources

The middle portion of the subsection – known as the middle Coteau – is characterized by few lakes and a moderately developed dendritic drainage network. The outer Coteau, toward the western boundary of the subsection, has more wetlands and a greater number of lakes than the middle Coteau. Most lakes are shallow, typically less than 15 feet deep, and dominated by wetlands.

The Des Moines River

The Des Moines River Valley Trail search corridor falls completely within the West Fork Des Moines River watershed. The watershed extends across seven counties and covers an area of 1,333 square miles. The West Fork of the Des Moines River originates in the northwestern part of the watershed from several lakes including its principal source, Lake Shetek. The river flows from the Lake Shetek outlet near Currie in a southeasterly direction for 94 miles to the Minnesota/Iowa border and

eventually enters the Mississippi River at Keokuk, Iowa. From the Talcot Lake Dam to the Iowa border, the river drops a total of 135 feet, an average of 1.98 feet per mile.

Although the river has not undergone significant channelization, other alterations to the water body have occurred in the form of dams, which are located at several locations along the river. These include mainstem dams at the lower ends of Lake Shetek and Talcot Lake and in the cities of Windom and Jackson (the latter now removed and the former planned for removal). Smaller dams include those at North Heron Lake, Fulda Lake, the Graham lakes, and a fish barrier on the Heron Lake Outlet. The river is mainly slow flat water except for some moderate rapids near Kilen Woods State Park. The overall gradient from the Talcot dam to Jackson is approximately 2.1 feet per mile. The river is used for fishing, hunting, and canoeing in the summer and snowmobiling and ice fishing in the winter.

Peak stream flow is usually in early to mid-April when heavy rains can cause the river to flood.

The Des Moines River appeared on French maps as early as 1703. The origin of the word 'Des Moines' is somewhat unclear, but likely came from the French name 'La Rivière des Moines' which literally translates to 'River of the Monks'. The river was very important for commercial transportation in Iowa before the development of railroads in the late 1800s.

The Des Moines River is designated as a State Water Trail from Talcot Lake to the Iowa border, a distance of 68 river miles. Water access, campsites, and rest stops are located along the water trail. Because there are few rapids, the water level is usually sufficient for canoeing.

The river is also a water trail through parts of Iowa including Boone, Polk, Van Buren, and Webster counties and urban Des Moines. There are 8 dams along Iowa's designated water trail sections.

Tributaries

The Des Moines River watershed has poorly developed drainage patterns, as indicated by streams with very few tributaries and lakes with no outlets.

Among the major tributaries to the Des Moines River, in downstream order, are Beaver Creek, Lime Creek, Heron Lake Outlet, Scheldorf Creek (a designated trout stream), Division Creek and Story Brook.

Many smaller unnamed intermittent streams and drainage ditches also feed into the Des Moines River. Ditching of land and introduction of tile drainage systems have changed the aquatic connectivity in the watershed.

Lakes

There are few lakes in the middle portion of the Coteau Moraines subsection. Most of the lakes are in Cottonwood and Murray County, although a small cluster of lakes is located in southern Jackson County near the Iowa border. A majority of these are shallow lakes, typically less than fifteen feet in depth. These shallow lakes are important waterfowl refuge areas, providing feeding and resting areas along

with breeding and migration habitat for many species in greatest conservation need. Many lakes and wetlands in the area were drained in the early 1900s to increase the amount of arable land. A number of the shallow lakes have been severely degraded by high water levels and introduced rough fish populations.

Some of the larger lakes in the search corridor include Lake Shetek, Talcot Lake, Heron Lake, and North Oaks, Cottonwood and Fish lakes. There are many other lakes, marshes, sloughs and ponds throughout the search area. A walleye rearing pond is located north of Windom.

North and South Heron Lakes were once a nationally recognized migratory waterfowl habitat with over 700,000 staging canvasbacks, 50,000 nesting Franklin's gulls, and large numbers of other birds. However, drainage of wetlands, stream channelization, diking and intensive modern agricultural production created flooding, pollution and loss of habitat. Today the lake is primarily used by smaller flocks of mallards and other puddle ducks mainly for refuge during migration.

Floodplains

Severe flooding events are rather rare along the Des Moines River in its northern reaches. The National Oceanic and Atmospheric Administration (NOAA) has documented a dozen severe floods in Jackson County over the last 50 years, but not all of these were on the Des Moines River.

The areas adjacent to the river in Murray County are within the 100 year floodplains. In Jackson County, roughly 40 homes have been built within the mapped floodplain area. Floodplain data for Cottonwood County and Murray County was gathered for the National Flood Insurance Program in the 1970s, and has not been converted to digital form, and thus is not shown in this plan. It is not uncommon for trails to be located within floodplain areas and to be flooded occasionally. Trails must be designed to avoid interfering with streamflow or raising flood elevations, and to withstand occasional flooding.

Wetlands

A variety of wetland types are found within or near the trail search corridor, and are shown on the trail segment maps. The U.S. Fish and Wildlife Service and DNR identify eight primary types of wetlands. These include both Public Waters Inventory (PWI) wetlands, regulated by the DNR, and non-PWI wetlands, regulated by local governments under the Wetland Conservation Act. Wetlands provide important wildlife and fisheries habitat, erosion and flood control, and ground water recharge. It is estimated that about 95 percent of Southwest Minnesota's wetlands have been lost since settlement, most of them drained in the early 1900s to provide more arable land.

Many of the remaining wetlands are publically owned and on state and federal wildlife areas while a few are Public Waters Inventory wetlands¹⁰ on private lands.

¹⁰ Public Waters are a designated class of lakes, wetlands, and watercourses over which DNR Waters has regulatory jurisdiction. Public waters wetlands are defined by Minnesota

The major wetlands in and near the search corridor are located in the Heron Lake, Talcot Lake, Hanson Marsh, and Lake Shetek areas. Most of the wetlands in or near the corridor are classified under the Circular 39 system as seasonally flooded flats (Type 1), shallow marshes (Type 3), shallow open water (Type 5) or wooded swamp (Type 7).

One type of wetland common within the trail search area is the “prairie pothole,” a type of wetland that has no defined inflow or outflow. The prairie pothole region extends across the Great Plains of North America from Alberta, Canada to Nebraska and Iowa. Prairie potholes were formed 10,000 years ago when the glaciers receded and left millions of depressions that eventually became wetlands. These wetlands provide extremely important resting areas, nesting areas, and breeding habitat for migrating waterfowl populations. Most prairie potholes in this region appear as seasonally flooded flats or shallow marshes under the Circular 39 classification.

Water Quality

Because agriculture is the predominant land use in this area, water quality and quantity are significant concerns. Nonpoint pollution such as nitrates, phosphates, and pesticides are present in many shallow aquifers. Nonpoint sources are not regulated and therefore must be addressed through voluntary actions. Point sources such as storm sewer outfalls are addressed through the MPCA’s National Pollutant Discharge Elimination System (NPDES) permit programs.

The Minnesota Pollution Control Agency has listed 15 stream reaches in the West Fork Des Moines River (WFDNR) watershed as impaired for excess fecal coliform bacteria, a human health concern that limits recreational use of the water, and 15 stream reaches for excess turbidity, a measure of cloudiness of water that affects aquatic life. Some of these reaches were listed for both impairments and some were listed for either fecal coliform or turbidity. In addition, the MPCA listed North and South Heron Lake as impaired due to excess nutrients, which limits both its recreational use and ecological/wildlife function. Related to the Heron Lake problem is a listing for pH within the Heron Lake Outlet.

A TMDL (Total Maximum Daily Load) report was completed in 2008 for the West Fork Des Moines River and Heron Lake. A TMDL study is a pollution reduction plan – it identifies the maximum amount of a pollutant the water body can receive and still meet the standards for water quality. The report found that the primary sources of fecal coliform bacteria are livestock on overgrazed riparian pasture, surface-applied manure on cropland, feedlots lacking adequate runoff controls, and inadequate septic systems. Turbidity impairments are caused by streambank/streambed erosion, row cropland, algae and, to a lesser extent, benthic feeders

statute 103G.005, Subd. 15a as all types 3, 4, and 5 wetlands as defined in United States Fish and Wildlife Service (USFWS) Circular No. 39 (1971 edition), not included within the definition of public waters, that are ten (10) or more acres in size in unincorporated areas or 2.5 acres or more in incorporated areas.

(e.g., carp), overgrazed pasture and inadequate buffers near streams and waterways.

The TMDL report provides a general strategy for actions needed to address nonpoint source-related impairments, focusing on stakeholder involvement, education and outreach, and evaluation of best management practice options.

Working Lands for Wildlife Initiative

The program is a joint effort of DNR, the Board of Water and Soil Resources and the U.S. Fish and Wildlife Service. It brings together public, private, and non-profit organizations in local project teams to assist landowners in identifying economically viable conservation focus areas and strategies. The program's goals include sustainable and increasing wildlife populations and agronomic enhancement for landowners. Among the counties that are the focus of the program are Murray, Cottonwood, Jackson and Nobles; 2011 Target Areas are found throughout these counties, particularly around Heron Lake and the Boot Lake and Caraway WMAs. Note that the program results in purchase of easements on lands to be protected; these easements typically prohibit trail development.

Shoreland Zoning and Designations.

The State of Minnesota regulates the use of shoreland—land within 300 feet of a river or 1,000 feet of a lake. The DNR identifies three river types in the trail search corridor: Transition River Segments, Agricultural River Segments, and Tributary River segments.

Agricultural river segments are located in intensely cultivated areas. Cultivated crops, pastures, and occasional feedlots are common. Most of the Des Moines River is classified as Agricultural, with the exception of a few Transitional segments near Talcot Lake and Kilen Woods State Park, where wetlands or woodlands dominate.

Lakes are classified as Natural Environment, Recreational Development and General Development lakes. Guidelines for the development of lakes were developed by the DNR and adopted by the counties in their zoning codes.

Most lakes in the trail search region are classified as Natural Environment lakes: generally small, often shallow lakes with limited capacities for assimilating the impacts of development and recreational use. They often have adjacent lands with substantial constraints for development such as high water tables, exposed bedrock, and unsuitable soils. These lakes, particularly in rural areas, usually do not have much existing development or recreational use.

Recreational Development lakes are generally medium-sized lakes of varying depths and shapes, often with moderate levels of recreational use and existing development. Development consists mainly of seasonal and year-round residences and recreational-oriented commercial uses. Recreational Development lakes include Loon Lake and Little Spirit Lake in Jackson County, and Cottonwood Lake in Windom.

In Murray County, Lake Shetek and Lime Lake (in Avoca) are classified as General Development lakes. These are typically large, deep lakes of varying sizes and depths

with high levels and mixes of existing development. These lakes often are extensively used for recreation and, except for the very large lakes, are heavily developed around the shoreline.

Water Resource Management Recommendations

Recommendation 1: Minimize trail development and maintenance impacts to adjacent water resources through the use of mulching, geo-textiles, silt screens and seeding to establish vegetation.

Recommendation 2: Strive to limit water crossings and obtain permits for any needed crossing. Bridges should be designed for conveyance of flood flows and to accommodate existing or future water recreation.

Recommendation 3: Create angling and education opportunities where the trail intersects lakes and rivers that provide fishing opportunities.

Recommendation 4: Assess trailheads and trail-river and lake connections as to their suitability for development of “fishing pads” that promote fishing opportunities for people with mobility impairments.

Wildlife

The trail search area is home to many different wildlife species. The Des Moines River provides aquatic habitat for beavers and muskrat. The prairie landscape is home to many bird and small mammal species. The prairie potholes and wetlands provide important habitat for waterfowl and migrating birds. The few wooded areas provide shelter for many woodland species such as deer, fox, and squirrels. The state parks, wildlife management areas, waterfowl production areas, and scientific and natural areas protect many of the habitats required by the diverse wildlife in the trail area.

Mammals

Common mammal species in the trail area include: white-tailed deer, beavers, squirrels, mink, muskrats, fox, woodchucks, and coyote. Badgers and otters may also be seen in the area. Many mammals that depend on a prairie landscape for habitat, such as the prairie vole and prairie pocket mouse, are listed as state species of special concern.

Birds

Minnesota is located within the Mississippi flyway, a heavily used route for migrating waterfowl that generally follows the Mississippi River to the Gulf of Mexico. About 40% of North America’s migrating waterfowl and shorebirds use this route.¹¹

¹¹ ducks.org/conservation

The Prairie Pothole wetland and associated grassland complexes found in the Coteau Moraines subsection provide important habitat for American bitterns, Franklin's gulls, northern harriers, short-eared owls, Forster's terns, and a multitude of nesting ducks and associated wetland birds. The potholes provide critical nesting habitat for many species of waterfowl such as mallards, gadwall, blue-winged teal and canvasbacks.

Both Kilen Woods and Lake Shetek State Parks provide habitat for many different types of birds. Kilen Woods State Park is home to wood ducks, herons, and woodpeckers. Lake Shetek State Park has several wetlands that often have coots, grebes, ducks, heron, bobolinks, and the park's namesake pelicans. Other common bird species in the area include owls, hawks, bank swallows, Baltimore orioles, blue herons, and kingfishers. Bald eagle nests have been identified near the river.

Reptiles and Amphibians

Turtle species in the search corridor include the common snapping turtle, painted turtle, and spiny softshell turtle. The Blanding's turtle, a threatened species in Minnesota, is also found here. Blanding's turtles are the most threatened by habitat loss and degradation of uplands and wetlands and road mortality.

Numerous snakes can be found in the Des Moines River Valley. Some of the common snake species include the smooth green snake, common and plains garter snakes, and the redbelly snake. The prairie skink is also found in the area. Prairie skinks are often found along stream banks or openings in pine barrens, oak savannas, and grasslands.

Amphibians in the area include the Eastern tiger salamander, American toad, Great Plains toad, and numerous species of frogs. American bullfrogs are a highly aquatic species and most often found in large bodies of water such as lakes, slow-moving streams, and ponds. The northern leopard frog habitat consists of wet meadows and open fields near wetlands. Boreal chorus frogs are also common to the Des Moines River Valley.¹²

Fish

Because many of the lakes in the search corridor are shallow lakes, large populations of game fish are less common. The lower levels of dissolved oxygen in the water tend to limit the numbers of game fish populations the shallow lakes can support. Unhealthy shallow lakes generally support larger populations of "rough" fish such as carp and black bullhead.

The Des Moines River contains many species of fish including northern pike, walleye, crappie, channel catfish, yellow perch, and black bullheads. Scheldorf Creek is a fishable trout stream in Cottonwood County, northwest of Windom. The DNR stocks brown trout in Scheldorf Creek in April prior to the fishing opener.

¹² dnr.state.mn.us

Lake Shetek is a popular fishing lake . In 1987, the DNR began to stock the lake with walleye, northern pike, yellow perch, crappie, sunfish, and black bass. An aeration system was installed in 1974 because the shallow lake froze solid once every seven years on average, causing fish kills. The aeration system has also improved habitat for game fish. The lake depth was increased through improvements to the Currie Dam in 1995.

Invertebrates

Freshwater mussels are a very important part of marine ecosystems in Minnesota. These mollusks live on river and lake bottoms and filter oxygen and particles from the water. This process cleans the water in the area and provides nutrients to the river bottom. They modify the habitat around them to make it more suitable for both themselves and other aquatic organisms. Mussels are also an important food source for many other animals such as several species of fish, muskrats, and raccoons.¹³

Mussel species are threatened by nonpoint source pollution, habitat degradation, channelization, dams, and dredging, and the presence of non-native zebra mussels. Zebra mussels can attach themselves in large numbers to the shells of native mussels, eventually causing death by suffocation. Two mussel species of special concern, the Black Sandshell and Spike, and three threatened species, the Monkeyface, Mucket, and Round Pigtoe, have been found in the trail search corridor.

Species in Greatest Conservation Need

Species in Greatest Conservation Need (SGCN) have been identified for each ecological subsection in Minnesota. This category, which includes both plant and animal species, includes:

- Species whose populations are identified as being rare, declining, or vulnerable in Minnesota, including species with legal protection status (federal or state endangered or threatened species);
- Species at risk because they depend upon rare, declining, or vulnerable habitats;
- Species subject to specific threats that make them vulnerable (i.e. invasive species);
- Species with certain characteristics that make them vulnerable (i.e. highly localized distribution);
- Species with stable populations in Minnesota that are declining outside of Minnesota.

¹³ dnr.state.mn.us

There are 78 SGCN in the Coteau Moraines subsection, including 30 species that are federal or state endangered, threatened, or of special concern. More than half of the species are birds

Key habitats in the Coteau Moraines subsection include prairie, wetland, and stream habitats. Areas near the search corridor such as the numerous state Wildlife Management Areas, federal Waterfowl Production Areas, Kilen Woods and Lake Shetek State Parks, and the Des Moines River and Prairie Bush Clover SNAs are important for SGCN. A complete list of SGCN by subsection is included in *Minnesota's State Wildlife Action Plan: Tomorrow's Habitat for the Wild and Rare*.

Threatened, Endangered and Special Concern Species

Based on a search of the Natural Heritage Information database, the species listed in Appendix A as threatened, endangered, or species of special concern are found within or near (within one mile) of the trail search corridor. These species are protected by state law and should be considered during trail development. Some of these species are water-based (i.e., freshwater mussels) and would see little impact if water quality is protected during trail development. Others such as plant species are more vulnerable.

Wildlife and Habitat Recommendations

Recommendation 1: *Avoid threatened and endangered species and minimize any impacts to special concern species in trail planning, development and maintenance. Parks and Trails staff will keep current with Natural Heritage data, consult with regional plant ecologists and land managers, and perform on-the-ground surveys when an exact trail alignment is proposed.*

Recommendation 2: *Wildlife may be affected by the trail and recreational uses. Species with limited mobility, sensitive habitat requirements, or that are vulnerable to disturbance or exploitation require consideration in trail planning. Design considerations may include avoiding critical habitats, installing bridges or culverts in upland settings to provide wildlife travel ways, considering fish and wildlife needs when designing water crossings, managing and enhancing habitats along the proposed trail corridor, and using native species, consistent with the natural communities of the area, when re-vegetating areas disturbed by trail construction and maintenance.*

Historical and Cultural Resources:

Historical and Archaeological Context

This section discusses the historical and cultural resources of the region, and is organized thematically rather than geographically, according to these broad interpretive themes:

- Presettlement
- Exploration of the territory
- Settlement and agricultural development
- The railroad age and modern industry

Presettlement¹⁴

Migratory bands of people started moving into Minnesota during the **Paleoindian Period** (10,000 B.C. – 6,000 B.C.) as the glaciers retreated from the Upper Midwest. Stone knives and projectile points found throughout Minnesota suggest that hunters of the late Paleoindian Tradition pursued prairie animals such as mastodons and bison, as well as the deer and elk of the northern forests.

The **Archaic Period** (6,000 B.C. – 800 B.C.) was a time of increased diversity of plant and animal communities resulting from a changing climate. Humans also diversified their hunting, trapping, fishing, foraging, and woodworking technologies. Chipped stone tools, notched projectile points, and pecked and ground stone tools are evidence of this time period.

The **Woodland Period** (800 B.C. to Historic Contact) brought the beginnings of plant domestication and more intense settlement patterns, especially near stream and lake areas. The development of ceramics and mound construction for burial activities were significant advances in this time period.

During the **Oneota/Plains Village Occupation** (900 A.D. to Historic Contact) in southern Minnesota, there was much development along major river valleys. Subsistence strategies were developed based on simple agriculture, gathering, and bison hunting.

The Jeffers Petroglyphs are located in northern Cottonwood County. Over 2,000 images have been drawn by early Native American in the rock that was worn smooth by glaciers 14,000 years ago. The carvings depict bison, turtles, elk, salamanders, human stick figures, thunderbirds, and weapons such as atlatls, spear points, arrowheads, and lances. The oldest drawings at the site are roughly 7,000 to 9,000 years old.

Exploration, settlement and agricultural development

The Des Moines River valley was home to the Yankton Dakota (Sioux) at the time of European settlement.

The **Historic Contact** period began in the late 1600s, when French fur traders moved into Minnesota followed by English and American traders. In 1838 French scientist and explorer Joseph Nicollet led a government expedition through the area to explore the Minnesota and Missouri rivers, traversing the Des Moines River Valley. He provided one of the most accurate descriptions and maps of southwestern Minnesota. Nicollet noted an area slowly rising to several hundred feet above the surrounding open plains. This “plateau of prairie heights” held grand views of prairies, rivers and lakes surrounding the area. The Des Moines River in Jackson County lies on the eastern edge of this region he called the “Coteau des Prairies.”

¹⁴ osa.admin.state.mn.us

European settlement accelerated during the 1800s following the establishment of Fort Snelling. Agricultural communities developed in the southern and western portions of the state during the mid- to late 1800s.

The Des Moines River valley was initially settled by farming families during the 1850's, spurred by the U.S. government's relocation and resettlement of American Indians onto reservations. Throughout the 1850s, relations between Indians and the government continued to deteriorate, culminating in the 1862 U.S. – Dakota War. The Lake Shetek settlement was raided and fourteen settlers were killed and twelve taken captive but later released. These events are marked by monuments at Lake Shetek State Park and the nearby Slaughter Slough Waterfowl Production Area, a U.S. Fish and Wildlife Service preserve northeast of Currie.

As the area was slowly resettled after the Civil War, agriculture took hold. Wheat and flax were among the most common crops, with many grain mills along the Des Moines River. The soils in the area could withstand drought, making them ideal for farming. Dairy and livestock farms also developed in the area due to the abundance of prairie pastures. By the early 1900s, corn had become the staple crop in southwestern Minnesota. In 1873, what is known as "the grasshopper plague" occurred. Millions of Rocky Mountain Locusts descended on southern Minnesota, wiping out the crops for five years. The locusts were so thick that they sometimes even stopped trains by congregating on the tracks and making it too slippery for trains to make it up steeper grades. Farmers were offered state assistance to help compensate for the losses caused by the locusts.

A number of the small towns in Murray County, including Currie, Avoca, Fulda and Iona, were Catholic colonies, established by Archbishop John Ireland in the 1880s. The colonies were established for Catholic immigrants who were suffering from famine and poverty in their home countries or in the industrial cities of the East. Working with the railroads, the Archbishop provided land and supplies for the colonies, as well as priests to serve them. By 1885, 4,000 German, Irish, and Belgian Catholic families were living in southwestern and west-central Minnesota. While many of the colonists could not tolerate the isolation, cold winters, droughts and grasshopper invasions, others settled permanently in their communities.

The railroad age and modern industry

The advent of the railroads made it possible to bring agricultural products to market. Railroad corporate and building histories illustrate how the agricultural market areas of southwest Minnesota were connected to a growing Minneapolis and Saint Paul market dominated by the flour mills of Saint Anthony Falls. By 1870, the Chicago & North Western Railroad (later the St. Paul & Sioux City) had reached St. James, en route to the Missouri River. As described in *Railroads to the North Star: A Minnesota Railroad Atlas*, the StP&SC chief engineer set off across the largely uninhabited prairie to plot a route to Sioux City, using known reference points such as the Des Moines River and Heron Lake. "Graders and bridge-builders followed, and by the end of the year track reached the Iowa border near Bigelow. Townsites were platted at Mountain Lake, Bingham Lake, Windom, Heron Lake, Brewster, and Worthington."

Additional branch lines were constructed from Heron Lake to Pipestone in 1879-81, and from Bingham Lake to Currie in 1899-1900. Jackson was served by an east-west line of the Milwaukee Road by 1880, which extended west to Lakefield and into South Dakota.

The newest industry in southwest Minnesota is wind farming. There are over 1,000 wind turbines in the nine counties of southwest Minnesota, with large concentrations along the Jackson/Martin County boundary and along the Buffalo Ridge in Murray, Pipestone and Lincoln counties.

Historic Districts, Buildings and Sites

Historic resources in or near the trail search corridor that are listed on the National Register of Historic Places are listed below.

Cottonwood County

Cottonwood County Courthouse, Windom. Classical Revival/Renaissance Revival brick courthouse with domed atrium, designed by O'Meyer and Thori and built 1904, with murals by Odin J. Oyen of La Crosse, Wis.

Jackson County

Jackson Commercial Historic District, Jackson. Cohesive group of about 35 commercial buildings built in 1880-1944, largely brick with stone trim, that comprise town's retail and business center.

Jackson County Courthouse, Jackson. Classical Revival stone courthouse (1908) designed by Buechner and Orth, with murals by Odin J. Oyen of LaCrosse, Wis.

District 92 School, Middletown Township. Frame rural school built in 1906 on octagonal plan. Located near County Highway 6; currently used as town hall.

Robertson Park Site. Archaeological site classified as a multiple-component, stratified habitation site dating from Precontact Period (ca. 100 B.C.-A.D. 800).

Murray County

Avoca School. Town's first public school, a two-story, four-room brick school with bell tower built in 1894.

Chicago Milwaukee Saint Paul and Pacific Depot, Fulda. Frame passenger/freight depot with Stick Style second story for agent's quarters, built ca. 1901.

Chicago Saint Paul Minneapolis and Omaha Turntable, Currie. Manually operated, wood-and-steel turntable built in 1901 by American Bridge Company of Chicago to turn locomotives at western end of branch line. Part of End-o-Line County Park.

Lake Shetek State Park WPA/Rustic Style Historic District. Buildings/structures, mostly of split stone construction, and island causeway, all built in 1938-41 by WPA workers in park with extensively designed landscape.

Lake Shetek State Park WPA/Rustic Style Group Camp. Board-and-batten recreation building and mess hall with split stone fireplaces, built for public use in 1940-41 by WPA workers.



District 92 School, now Middletown town hall

Socioeconomic Resources:

The table below illustrates population change in the counties and cities of the area between 1990 and 2010. All three counties' populations have declined in the past decade. Most of the cities also show declines, with a few exceptions: Currie, Fulda, Slayton and Windom show increases and Avoca and Lakefield are relatively stable.

While populations are generally declining, the number of households (occupied housing units) in some cities remained relatively constant or even increased slightly between 2000 and 2010. For example, the City of Jackson seems to have lost almost 6% of its population but actually gained about 30 households. Often this phenomenon indicates an increase in one- or two-person households, perhaps through development of senior housing.

All of the local communities offer many choices for lodging, shopping, and food services. While agriculture and manufacturing are the primary industries in the area, the Des Moines River Valley Trail could provide many new opportunities for increased tourism in the communities, bringing outside money and positive financial impacts to the area.

Table 1: Population Change, 1990 – 2000

Counties	1990	2000	2010	Percent change 2000-2010
Cottonwood	12,694	12,167	11,687	-3.9%
Jackson	11,677	11,268	10,266	-8.9%
Murray	9,660	9,165	8,725	-4.8%

Cities	1990	2000	2010	% change
Avoca	150	146	147	0.7%
Bingham Lake	155	167	126	-24.6%
Currie	303	225	233	3.6%
Dovray	60	67	57	-14.9%
Dundee	107	102	68	-33.3%
Fulda	1,212	1,283	1,318	2.7%
Heron Lake	730	768	698	-9.1%
Jackson	3,559	3,501	3,299	-5.8%
Kinbrae	18	21	12	-42.9%
Lakefield	1,679	1,721	1,694	-1.6%
Slayton	2,147	2,072	2,153	3.9%
Storden	283	274	219	-20.1%
Westbrook	853	755	739	-2.1%

Cities	1990	2000	2010	% change
Wilder	83	69	60	-13.0%
Windom	4,283	4,490	4,646	3.5%

Table 2: Households, 2000-2010

Counties	2000	2010	Percent change 2000-2010
Cottonwood	4,917	4,857	-1.2%
Jackson	4,556	4,429	-2.8%
Murray	3,722	3,717	-0.1%

Cities	2000	2010	% change
Avoca	67	55	-17.9%
Bingham Lake	60	54	-10.0%
Currie	109	105	-3.7%
Dovray	33	31	-6.1%
Dundee	51	41	-19.6%
Fulda	528	549	4.0%
Heron Lake	285	287	0.7%
Jackson	1,487	1,517	2.0%
Kinbrae	10	7	-30.0%
Lakefield	731	734	0.4%
Slayton	914	946	3.5%
Storden	120	104	-13.3%
Westbrook	367	345	-6.0%
Wilder	29	27	-6.9%
Windom	1,910	1,944	1.8%

Financial Impacts of Trail Development

Communities that support trails and respond to the needs of trail users have seen positive effects on their local economies. DNR trail studies indicate that tourists attracted to the trails use local facilities for eating, shopping, and lodging.

The DNR estimates that for five trails surveyed between 2007 and 2009, summer spending totaled nearly \$5 million.¹⁵ Most of that spending (95% in total) comes from trail users who reside outside the local economy of the trail, and the spending represents “new” dollars to the local economy. Trail users who have traveled a long distance to the trail, not surprisingly, outspend local users by a factor of about 20 on a daily basis, primarily on food, travel, and overnight accommodations.

Trails also appear to increase property values and enhance the quality of life in the communities through which they run. Homes close to trails have become increasingly desirable. A number of studies of existing bike trails have shown that the average value of property near the trails is similar to or slightly above the value of other properties in the area.¹⁶

Trails also yield significant public health benefits. There is growing interest in the multiple benefits to public health that can result from the use of trails for outdoor recreation. Trail use has been shown to be valuable not only in combating obesity and related public health problems but also in reducing stress, improving mental health, and encouraging healthy lifestyles. To the extent that trail use replaces motor vehicle use, it can also result in monetary savings from lower air pollution, congestion, and oil imports.

¹⁵ Kelly, Tim (2010). *Status of Summer Trail Use (2007-09) on Five Paved State Bicycle Trails and Trends Since the 1990s*. Minnesota Department of Natural Resources, Office of Management and Budget Services. Trails surveyed in the 2007-2009 period were the Paul Bunyan, Heartland, Root River, Douglas, and Paul Bunyan-Bemidji State Park segment.

¹⁶ For example, see “Home Sales Near Two Massachusetts Rail-Trails,” 2005. americantrails.org

6. Implementation

What Happens After the Master Plan is Finished?

Chapter 86A.09 of Minnesota Statutes requires that a master plan be prepared for state trails before trail development can begin – although planning, design, and land acquisition can take place before the plan is complete. Trail users and trail advocates need to recognize that the completion of a master plan is only one step in what typically is a long process of implementation.

Throughout the planning process for this trail, local trail advocates have asked for guidance as to how to implement the plan – that is, how to establish feasible alignments, contact landowners, and work with DNR regional staff on land acquisition. The process can be lengthy and complex.

The first generation of state trails in Minnesota were developed primarily on abandoned rail rights-of-way that state or local governments were able to acquire. Since that time, most of the remaining abandoned rail rights-of-way in the state have reverted to private ownership. The next generation of trails must cross a variety of public and private lands, making them much more challenging to develop than the rail-trails of the past.

DNR Parks and Trails staff work with individual landowners to acquire land or easements on a willing seller basis, keeping in mind that a series of acquisitions on adjoining properties will be needed in order to create a trail segment with a logical beginning and end. In other words, a trail segment should begin at an existing park or town center that can serve as a trailhead, preferably with parking and restroom facilities, and end at some type of destination – a city, a park, a wildlife preserve, or a historic site.

In this process, DNR acquisition and development staff frequently work with city and county governments, conservation organizations, and local trail interest groups to assess the feasibility of a particular trail alignment. Acquisition is done on a willing seller basis. The DNR strongly discourages local governments from using other means.

Land can be acquired or otherwise set aside for trail development through a variety of methods:

- A trail may be located on non-DNR public land, such as county or city-owned land, through a cooperative agreement.
- A local government or not-for-profit organization can acquire land from a willing seller and then sell it to the DNR.
- Local interest groups and/or DNR staff may make the initial contact with landowners, then DNR staff will assess the feasibility of a particular trail alignment and complete the land acquisition.

No matter which method is used, advance coordination with DNR staff is essential in order to ensure that the selected trail alignment is feasible to develop.

In the course of trail implementation, it may become apparent that a needed trail alignment will not be obtainable for some time – for example, until a parcel is sold or passed to another family member. In such situations, it may be advisable to assess the feasibility of **interim routes on road shoulders or on lightly-traveled streets**. Street routes may be particularly important in cities where there is little undeveloped or publically-owned land available.

The following is a typical sequence of events in trail planning and development. However, the steps will likely overlap and the process will often require several rounds of feasibility assessment and landowner contacts.

1. **Complete the master plan.** The plan identifies a broad search corridor for the trail, within which one or more alternative alignments are identified. The intent of the plan is to provide flexibility while identifying the most feasible alignments, rather than “locking in” a specific route.
2. **Explore feasibility of each alignment.** Assess land ownership, road right-of-way width (is there enough room for a trail within the right-of-way?), connectivity, and physical conditions such as slope, wetlands and natural and cultural resources. The alignment must allow state and federal design guidelines and rules to be met, including trail width, shoulders, curvature, accessibility, etc. Therefore, it is important for local governments and trail groups to coordinate their efforts with DNR staff.
3. **Initial informal landowner contact.** It is often preferable for landowners to be contacted by local trail supporters rather than DNR staff. Landowner concerns frequently relate to privacy, safety and liability, and there are many information resources available to address these concerns.
4. **Formal landowner contact; complete acquisition process.** As mentioned above and with proper coordination, DNR or other entities may take the lead on land acquisition.
5. **Trail engineering and design.** The design process offers a final opportunity to assess feasibility, including the need to avoid sensitive natural or cultural resources and address constraints such as wetlands or steep slopes. Trail alignments may shift during the design process. Also note that design standards may differ depending on the funding source for the trail – for example, Mn/DOT trail standards may differ from DNR standards.
6. **Construction** on one or more segments, while the processes of negotiation and design continue on others.
7. **Ongoing maintenance and stewardship.** Trail associations often act as “eyes on the trail” to monitor conditions, notify DNR of concerns and volunteer on certain efforts. Local units of government may provide trail maintenance via a cooperative agreement.
8. **Orientation and Interpretation.** All trails are developed with traffic safety and directional signs. Some trails provide interpretive signs that highlight notable natural and cultural resources and landscape features. An interpretive plan may be developed to identify themes and features that will be interpreted.

BASIC DESIGN STANDARDS FOR PAVED, SHARED-USE STATE TRAILS

The following standards briefly highlight key points from the DNR publication *Trail Planning, Design and Development Guidelines*. See the full document for more details on the design of many types of trails.

- Pavement width: 10 feet is typical; 12 feet an option in high-use areas, 8 feet is an option where limitations exist or lower use is expected.
- Shoulders: 2 to 5 feet, depending on conditions such as side-slopes and hazards
- Maximum grade: 5% except where accessibility exceptions apply.
- 2% maximum cross-slope (the slope from one side of a trail to the other)
- Corners gently curved to meet standards rather than right angles
- 100' wide corridor width where possible to allow for buffers, storm water control and grading.

Trail Planning, Design and Development Guidelines is available through the DNR or Minnesota's Bookstore, dnr.state.mn.us

Actions Local Governments Can Take to Support Trail Development:

City and county governments can play an important role in trail development through their planning and development review processes, including the following:

- **Integrate the trail concept into community plans**, including comprehensive and land use plans, park and open space plans, and transportation plans.
 - Through the local park and trail plan, link the state trail corridor to local and regional trails; integrate it with local parks.
 - Seek opportunities to meet multiple goals through trail development – i.e., to improve water quality, protect natural areas, provide educational opportunities, or provide additional transportation options.
- **Require park and trail set-asides**. Through their subdivision ordinances, cities and counties may require that developers dedicate a reasonable portion of land within a development to public use for such things as streets, utilities, drainage, and parks, trails and recreational facilities.¹⁷ (If the set-aside is for a state trail, coordinate with DNR staff in advance.)
- **Work with DNR staff to seek funding for state trail acquisition and development**. State trails are typically funded by the State Legislature via bonding money or special appropriations, or through the Legislative-Citizen Commission on Minnesota Resources (LCCMR). Some federal grants are also eligible to be used in conjunction with state funding for development. Transportation enhancement project grants and other transportation funding sources may also be used for state trails. It is important for local government representatives to work closely with DNR regional staff in any pursuit of state trail funding.
- **Seek funding for local and regional trail connections**. Local and regional trails can be funded through a variety of sources, available through DNR and other agencies, including:
 - [Parks and Trails Regional Grant Program](#)
 - [Local Trail Connections Grant Program](#)
 - [Federal Recreation Trail Grant Program](#) (also available for state trails)
 - [Regional Trail Grant Program](#)
 - [Transportation Enhancement Projects](#) awarded by Mn/DOT with Federal Highway Administration funding (also available for state trails)
 - [Safe Routes to School](#): funding for local trail connections through Mn/DOT

¹⁷ Minn. Stat. §462.358 subd 2b (a) applies to cities; §394.25 subd. 7(c) to counties

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APPENDIX A: Rare Species and Communities of Concern

The following list of species is drawn from the database of the Natural Heritage Information System of the DNR, Division of Ecological and Water Resources, within or near (within one mile) of the proposed trail search corridor. Species are classified as follows:

- SPC** Special Concern
- THR** Threatened
- END** Endangered
- NON** A species with no legal status, but about which the Division of Ecological and Water Resources is gathering data for possible future listing

Terrestrial Communities are listed because they represent high-quality habitats, but have no legal status.

County/Common Name	Scientific Name	Type	MN Legal Status
Cottonwood County			
Blanding's Turtle	<i>Emydoidea blandingii</i>	Vertebrate Animal	THR
Calcareous Fen (Southwestern) Type		Terrestrial Community	
Dry Hill Prairie (Southern) Type		Terrestrial Community	
Eared False Foxglove	<i>Agalinis auriculata</i>	Vascular Plant	END
Forster's Tern	<i>Sterna forsteri</i>	Vertebrate Animal	SPC
Kitten-tails	<i>Besseyia bullii</i>	Vascular Plant	THR
Marbled Godwit	<i>Limosa fedoa</i>	Vertebrate Animal	SPC
Mesic Prairie (Southern) Type		Terrestrial Community	
Missouri Milk-vetch	<i>Astragalus missouriensis</i>	Vascular Plant	SPC
Powesheik Skipper	<i>Oarisma powesheik</i>	Invertebrate Animal	SPC
Prairie Bush Clover	<i>Lespedeza leptostachya</i>	Vascular Plant	THR
Red Three-awn	<i>Aristida purpurea</i> var. <i>longiseta</i>	Vascular Plant	SPC
Small White Lady's-slipper	<i>Cypripedium candidum</i>	Vascular Plant	SPC
Spike	<i>Elliptio dilatata</i>	Invertebrate Animal	SPC
Upland Sandpiper	<i>Bartramia longicauda</i>	Vertebrate Animal	NON
Wet Prairie (Southern) Type		Terrestrial Community	
Wilson's Phalarope	<i>Phalaropus tricolor</i>	Vertebrate Animal	THR

County/Common Name	Scientific Name	Type	MN Legal Status
Cottonwood, Jackson counties			
Mucket	Actinonaias ligamentina	Invertebrate Animal	THR
Spike	Elliptio dilatata	Invertebrate Animal	SPC
Trumpeter Swan	Cygnus buccinator	Vertebrate Animal	THR
Jackson County			
American Ginseng	Panax quinquefolius	Vascular Plant	SPC
Arogos Skipper	Atrytone arogos	Invertebrate Animal	SPC
Bald Eagle	Haliaeetus leucocephalus	Vertebrate Animal	SPC
Black Sandshell	Ligumia recta	Invertebrate Animal	SPC
Bullfrog	Rana catesbeiana	Vertebrate Animal	NON
Calcareous Fen (Southwestern) Type		Terrestrial Community	
Dry Hill Prairie (Southern) Type		Terrestrial Community	
Fescue Sedge	Carex festucacea	Vascular Plant	THR
Hair-like Beak-rush	Rhynchospora capillacea	Vascular Plant	THR
Henslow's Sparrow	Ammodramus henslowii	Vertebrate Animal	END
King Rail	Rallus elegans	Vertebrate Animal	END
Loggerhead Shrike	Lanius ludovicianus	Vertebrate Animal	THR
Marsh Arrow-grass	Triglochin palustris	Vascular Plant	NON
Mesic Prairie (Southern) Type		Terrestrial Community	
Monkeyface	Quadrula metanevra	Invertebrate Animal	THR
Mucket	Quadrula metanevra	Invertebrate Animal	THR
Native Plant Community, Undetermined Class		Terrestrial Community	
Northern Grasshopper Mouse	Onychomys leucogaster	Vertebrate Animal	NON
Ottoe Skipper	Hesperia ottoe	Invertebrate Animal	THR
Prairie Bush Clover	Lespedeza leptostachya	Vascular Plant	THR
Rattlesnake-master	Eryngium yuccifolium	Vascular Plant	SPC
Regal Fritillary	Speyeria idalia	Invertebrate Animal	SPC
Round Pigtoe	Pleurobema coccineum	Invertebrate Animal	THR
Small White Lady's-slipper	Cypripedium candidum	Vascular Plant	SPC
Snow Trillium	Trillium nivale	Vascular Plant	SPC
Southern Seepage Meadow/Carr Class		Terrestrial Community	
Spike	Elliptio dilatata	Invertebrate Animal	SPC

County/Common Name	Scientific Name	Type	MN Legal Status
Sullivant's Milkweed	<i>Asclepias sullivantii</i>	Vascular Plant	THR
Upland Sandpiper	<i>Bartramia longicauda</i>	Vertebrate Animal	NON
Western Harvest Mouse	<i>Reithrodontomys megalotis</i>	Vertebrate Animal	NON
Wet Prairie (Southern) Type		Terrestrial Community	
Wet Seepage Prairie (Southern) Type		Terrestrial Community	
Whorled Nut-rush	<i>Scleria verticillata</i>	Vascular Plant	THR
Murray County			
Trumpeter Swan	<i>Cygnus buccinator</i>	Vertebrate Animal	THR
Western Harvest Mouse	<i>Reithrodontomys megalotis</i>	Vertebrate Animal	NON

SPC Special Concern

THR Threatened

END Endangered

NON A species with no legal status, but about which the Division of Ecological and Water Resources is gathering data for possible future listing

APPENDIX B: Summary of Meeting Results and Public Comments

The trail planning process was initiated through several meetings with the Friends of Jackson County Trails and other City of Jackson interests. This group identified interest groups and elected and appointed officials in Cottonwood and Murray counties, and invited them to participate in the planning process.

An open house was held on February 8, 2011 at the DNR office in Windom. The meeting was attended by over 50 people, and included an overview of the planning process, discussion of the concerns and interests of area landowners and residents, and a visioning exercise.

A steering committee was organized, with about 18 members from Jackson, Cottonwood and Murray counties and cities in the corridor. The committee included horse riders, landowners, park and recreation staff, and other interested citizens. This group met twice in the spring of 2011 and focused on creating a vision statement for the trail and assessing potential trail routes and connections. Members contributed information on historic resources in the corridor.

The trail planning team also focused on spreading the word about the trail, with display booths at events such as the Cottonwood County Fair, the End-o-Line Park Open House, and a number of events in Jackson, in collaboration with the Statewide Health Improvement Program. Planners met with city and county staff, chambers of commerce, economic development agencies, park and recreation commissions, and other interested groups.

A draft of the master plan was released for public review in November 2011. Three open houses were held in November and December 2011 to review the draft plan, in the cities of Jackson, Windom and Currie. Presentations were also made to the board of commissioners of Jackson, Cottonwood and Murray counties. About 35 people attended the meeting in Jackson, almost 70 in Windom and about a dozen in Currie.

As the summaries below indicate, the proposed trail has attracted both support and opposition.

Concerns have been raised regarding many issues with trails on private property: liability, trail maintenance, wildlife management, hunting, and safety issues. Other topics included potential interference with agricultural activities and livestock, affect on wildlife, the costs of trail development, and whether a trail would bring economic benefits to the area.

An organization, the Des Moines River Valley Association, was formed to represent area landowners opposed to the trail. This group organized a letter-writing campaign, resulting in about 530 letters to DNR; a copy of the letter is included

below.¹⁸ To address these concerns, DNR Parks and Trails staff prepared a detailed response, also included below.

Several townships, primarily in Cottonwood County, have passed resolutions opposing the trail. Letters in opposition to the trail were also received from other individuals, from the Cottonwood County Game and Fish League, and from the Des Moines River Chapter of Ducks Unlimited.

Questionnaire responses and letters of support were received from other agencies, businesses and individuals, including:

- Friends of Jackson County Trails
- Southwest Regional Development Commission
- Ruby's Wetland Bank, LLC
- Windom Area Chamber of Commerce
- Windom Convention and Visitor's Bureau

Among the comments received from these respondents were:

- The lack of state trails in this region forces would-be trail users to travel for at least an hour to reach a trail.
- The river is a unique feature that should be highlighted, along with native prairie and marsh habitat.
- An uncrowded trail would appeal to many.
- Recommendations to broaden the trail search corridor to include nearby communities that could provide services for trail users.
- Recommendations to include interim bicycle routes using road shoulders, since a trail corridor of this magnitude takes many years to develop.
- Support of the importance of trails as contributors to economic development and community vitality.

Response to Comments

As noted in the response below, DNR Parks and Trails staff have tried to address landowners' concerns based on our experience with trail development and management elsewhere in Minnesota. Many now well-established state trails, including the Willard Munger State Trail and the Root River State Trail, faced similar levels of opposition when they were proposed and are now viewed by most area residents as valuable community assets.

Revisions to the draft Master Plan have taken review comments into consideration. This revised draft makes three major changes:

- The trail search corridor has been expanded to include nearby communities within 5-10 miles of the Des Moines River.

¹⁸ We received 517 form letters and about a dozen individual letters. Fifty-one of the form letters were from outside the region and 31 were from other states.

- Potential trail alignments along county and township roads are not shown on the segment maps, since these can frequently be misinterpreted as “final.”
- In addition to potential trail alignments, the plan identifies interim routes using existing or improved road shoulders on low-volume county and township roads

Finally, we recognize that the process of identifying and securing trail alignments is a long-term one, and will be guided in large part by community interest.

**Cottonwood County Fair, Windom
August 18-20, 2011
Des Moines River Valley State Trail Booth**

Staffed by Wilma Pell (8/17, 8/20), Lynn Anderson (8/17), Emily Shively (8/18-20), Chuck Lucht (8/18)

Display included: Photographs of trail users (Casey Jones Trail), Nelson Creek Trail in Jackson, Vision Statement for the trail; Digital photo display (trail benefits presentation; photos of the Des Moines River Area; maps); Paper maps of the DMRVST search corridor, City of Windom, area of the river west of Windom; TurningPoint interactive survey (on NPS laptop) with five individual response technology devices

Comments and observations:

- Nineteen survey sessions were conducted with thirty-two participants (see following pages for survey questions and results)
- A majority of survey respondents were supportive of the trail:

9.) Do you support the idea of a trail along the Des Moines River? (multiple choice)

	Responses	Percentage
Strongly support	18	62.07%
Support	7	24.14%
Neutral	3	10.34%
Don't support	0	0%
Strongly disagree	1	3.45%
Totals	29	100%

- It may be noted that people opposed or disinterested in the trail likely bypassed the booth altogether; additionally, some individuals who were very supportive of the trail were engaged but did not take the survey
- Positive comments included wanting a trail that was safe and scenic; connections within towns
- Landowners along the river expressed a desire to be consulted as early in the process as possible – they were reassured that a trail alignment had not yet been determined; many did not seem familiar with the proposed trail
- Very few people who stopped at the booth had heard about the trail; the vast majority of people engaged were supportive of the trail. Of those who were not, comments included concerns about fiscal priorities (should money be better spent elsewhere) and private property rights (wanting to be consulted and not required to allow a trail across their land). There were also feasibility concerns due to the large floodplain along the river. Landowners along the river may need to be contacted (via letter?) to give them a clear idea of the DMRVST planning process and goals.

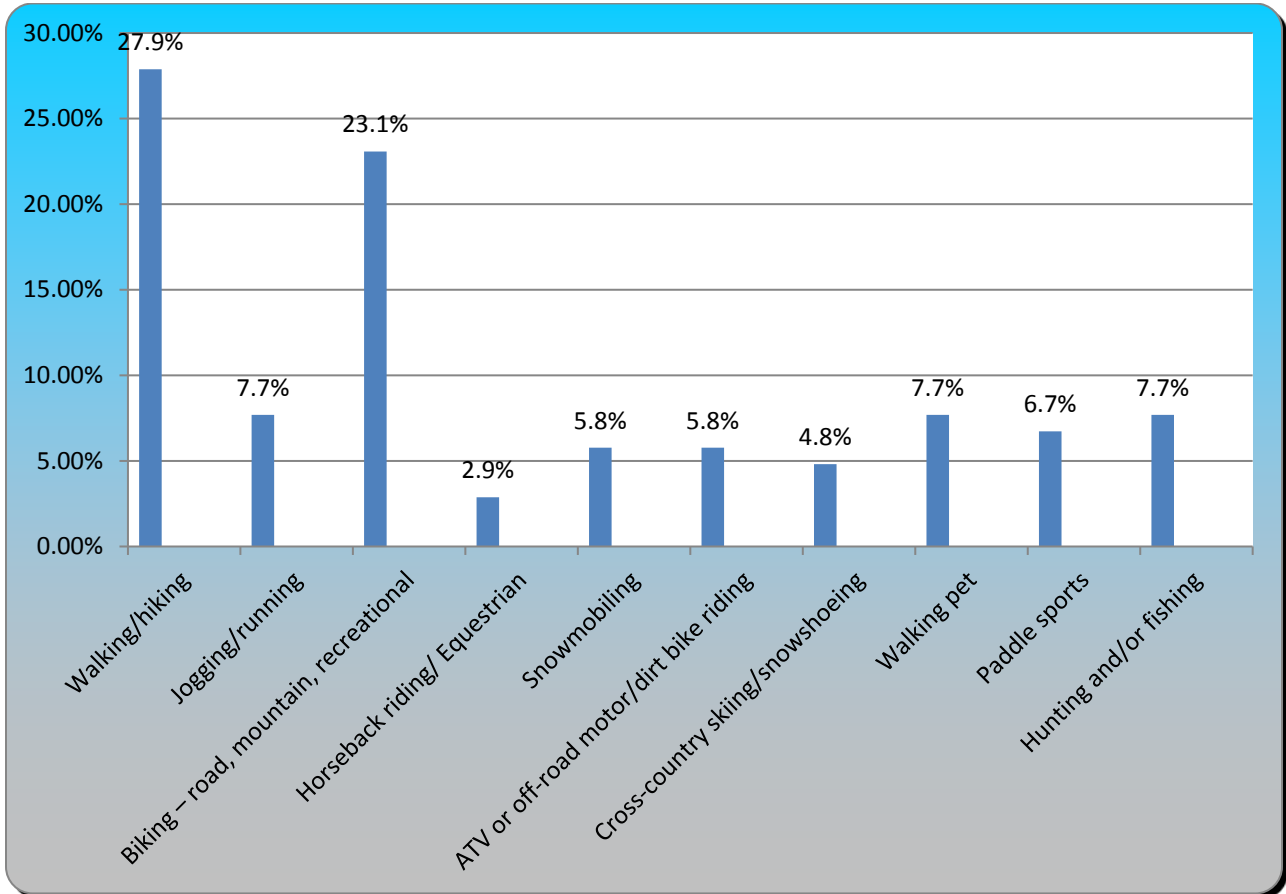
Potential Partnerships: Discussions were held with a DARE officer from the Windom Police Department (very supportive of a safe, off-road trail along the river) and staff from the Cottonwood County Soil and Water Conservation District (interested in partnering in the trail planning effort to utilize current relationships with landowners along the river)

Cottonwood County Fair Community Survey, August 18-20, 2011, Windom, MN
 Turning Graphical Results by Question

Session Name: Merged Survey Results From the Cottonwood County Fair
 Created: 9/7/2011 10:21 AM

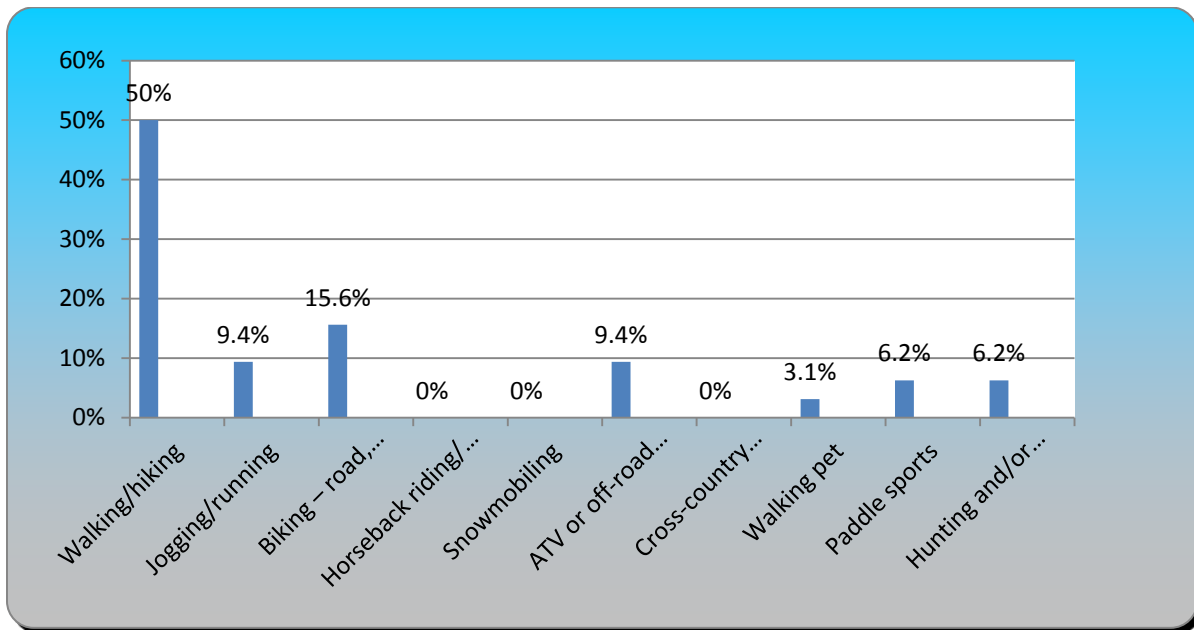
1.) Which activities do you participate in? (Select all that apply) (multiple choice)

	Responses	Percentage
Walking/hiking	29	27.88%
Jogging/running	8	7.69%
Biking – road, mountain, recreational	24	23.08%
Horseback riding/ Equestrian	3	2.88%
Snowmobiling	6	5.77%
ATV or off-road motor/dirt bike riding	6	5.77%
Cross-country skiing/snowshoeing	5	4.81%
Walking pet	8	7.69%
Paddle sports	7	6.73%
Hunting and/or fishing	8	7.69%
Totals	104	100%



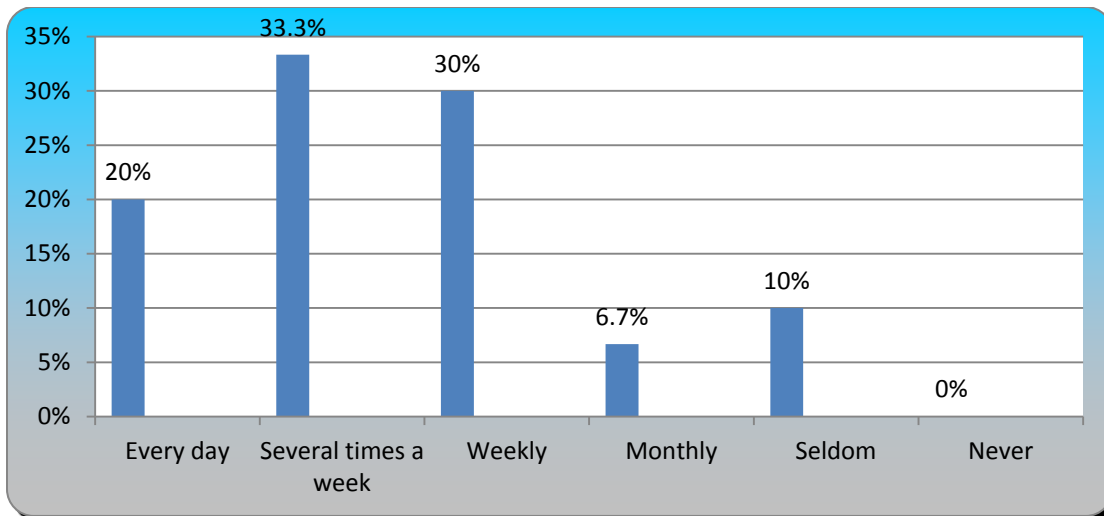
**2.) Which activity do you do most often?
(multiple choice)**

	Responses	Percentage
Walking/hiking	16	50%
Jogging/running	3	9.38%
Biking – road, mountain, recreational	5	15.62%
Horseback riding/ Equestrian	0	0%
Snowmobiling	0	0%
ATV or off-road motor/dirt bike riding	3	9.38%
Cross-country skiing/snowshoeing	0	0%
Walking pet	1	3.12%
Paddle sports	2	6.25%
Hunting and/or fishing	2	6.25%
Totals	32	100%



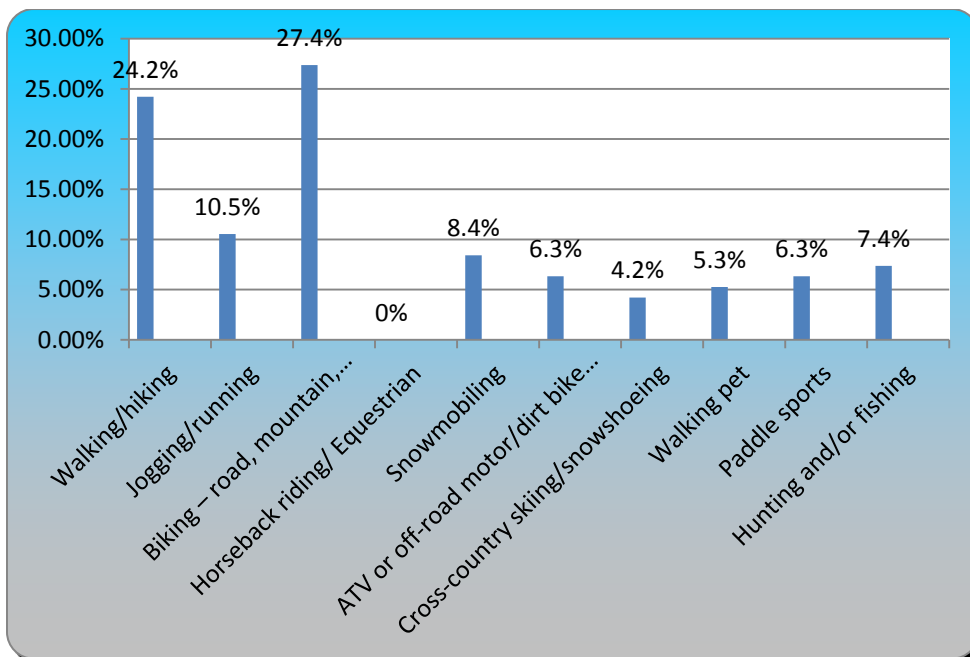
3.) How often do you do that activity? (multiple choice)

	Responses	Percentage
Every day	6	20%
Several times a week	10	33.33%
Weekly	9	30%
Monthly	2	6.67%
Seldom	3	10%
Never	0	0%
Totals	30	100%



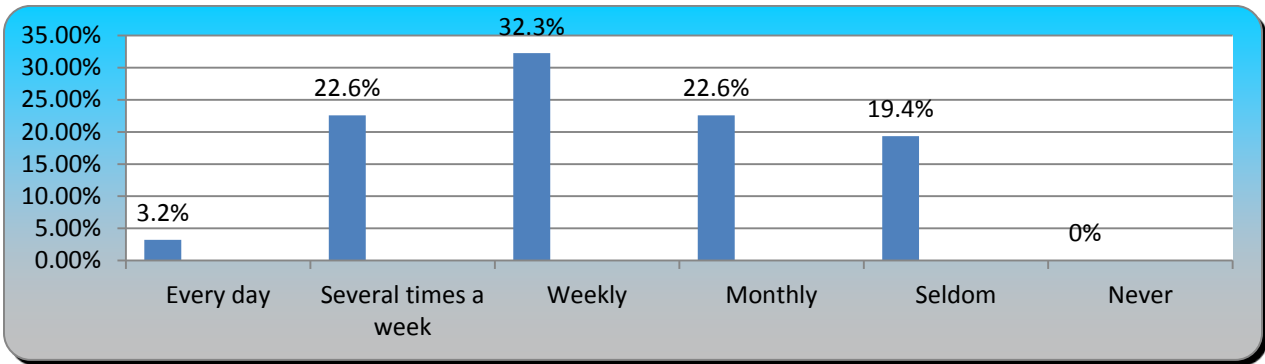
Responses Percentage

Activity	Count	Percentage
Walking/hiking	23	24.21%
Jogging/running	10	10.53%
Biking – road, mountain, recreational	26	27.37%
Horseback riding/ Equestrian	0	0%
Snowmobiling	8	8.42%
ATV or off-road motor/dirt bike riding	6	6.32%
Cross-country skiing/snowshoeing	4	4.21%
Walking pet	5	5.26%
Paddle sports	6	6.32%
Hunting and/or fishing	7	7.37%
Totals	95	100%



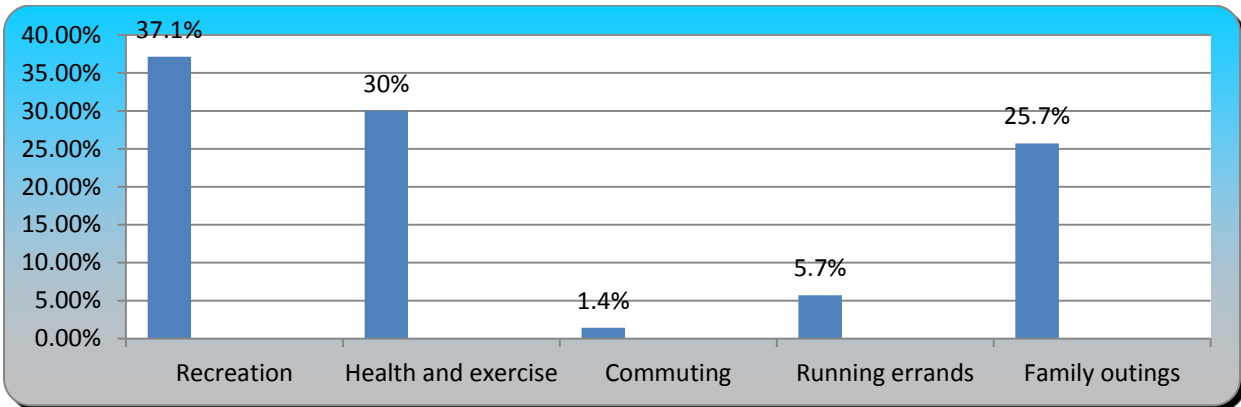
**5.) How often would you do these activities?
(multiple choice)**

	Responses	Percentage
Every day	1	3.23%
Several times a week	7	22.58%
Weekly	10	32.26%
Monthly	7	22.58%
Seldom	6	19.35%
Never	0	0%
Totals	31	100%



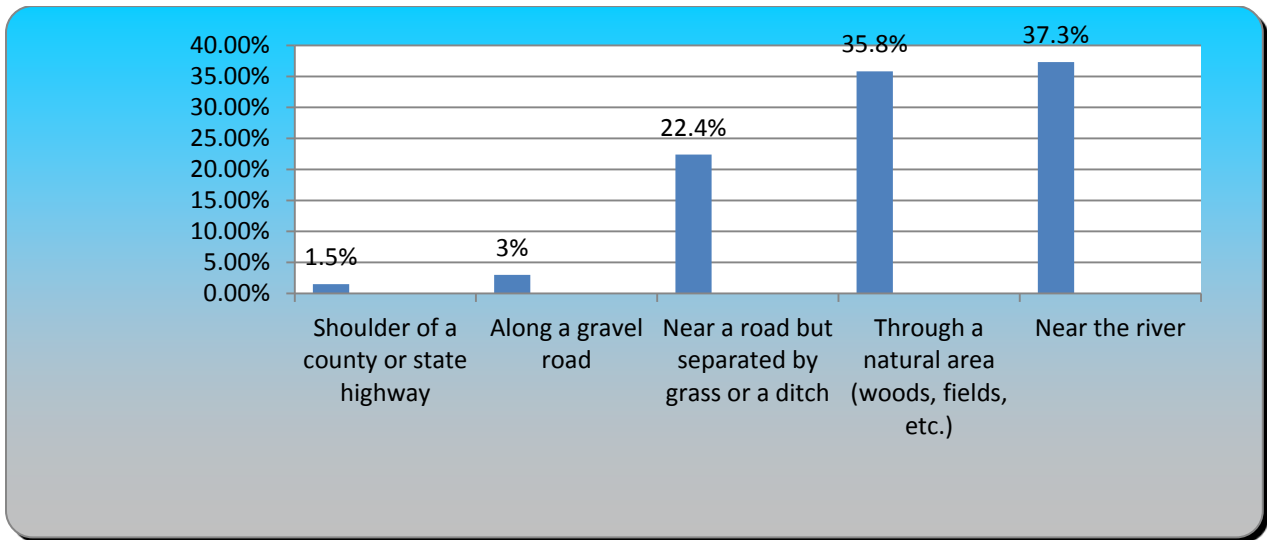
6.) Why or how would you use a trail? (Select all that apply) (multiple choice)

	Responses	Percentage
Recreation	26	37.14%
Health and exercise	21	30%
Commuting	1	1.43%
Running errands	4	5.71%
Family outings	18	25.71%
Totals	70	100%



**7.) Where would you prefer a trail to be located?
(multiple choice)**

	Responses	Percentage
Shoulder of a county or state highway	1	1.49%
Along a gravel road	2	2.99%
Near a road but separated by grass or a ditch	15	22.39%
Through a natural area (woods, fields, etc.)	24	35.82%
Near the river	25	37.31%
Totals	67	100%

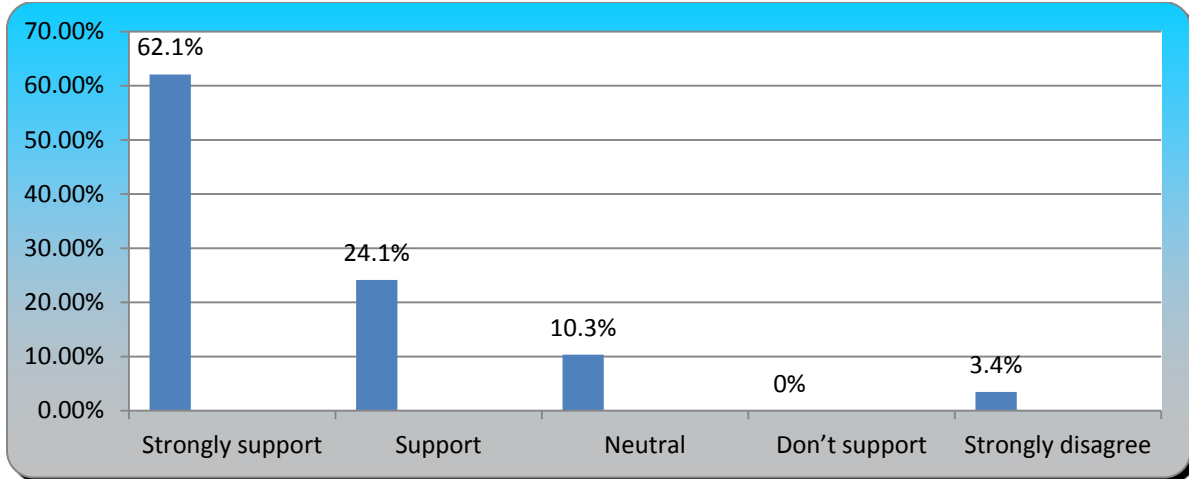


**8.) What would you like a trail to connect to?
(multiple choice)**

	Responses	Percentage
State Parks (Lake Shetek and Kilen Woods)	27	18%
County and city parks	20	13.33%
City of Jackson	10	6.67%
City of Currie	7	4.67%
Lake Okoboji/ Spirit Lake, IA	17	11.33%
Casey Jones Trail (Pipestone)	12	8%
Schools	13	8.67%
City of Mountain Lake	19	12.67%
Historic Sites	18	12%
Other cities in the region	7	4.67%
Totals	150	100%

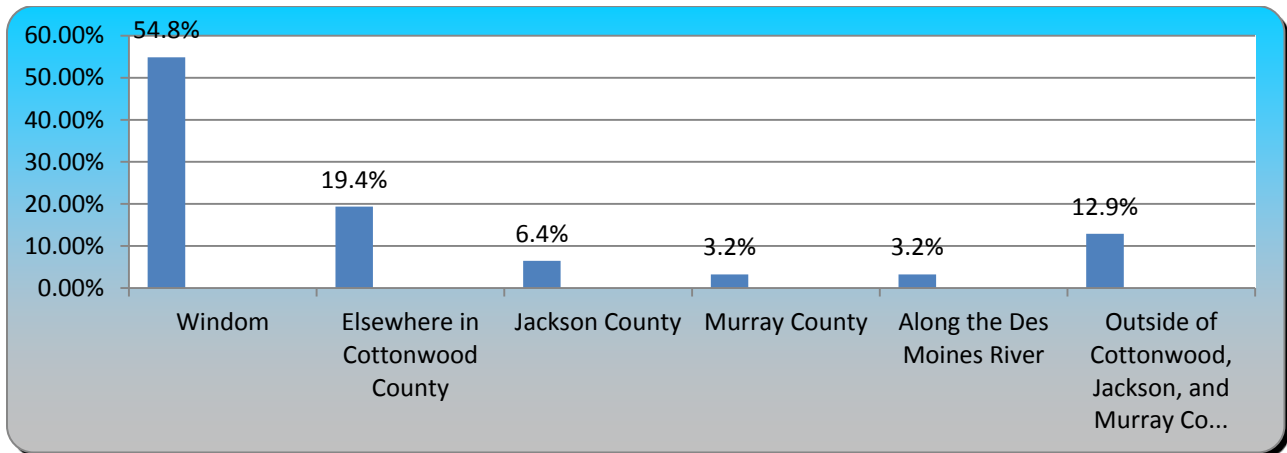
9.) Do you support the idea of a trail along the Des Moines River? (multiple choice)

	Responses	Percentage
Strongly support	18	62.07%
Support	7	24.14%
Neutral	3	10.34%
Don't support	0	0%
Strongly disagree	1	3.45%
Totals	29	100%



10.) Where do you live? (multiple choice)

	Responses	Percentage
Windom	17	54.84%
Elsewhere in Cottonwood County	6	19.35%
Jackson County	2	6.45%
Murray County	1	3.23%
Along the Des Moines River	1	3.23%
Outside of Cottonwood, Jackson, and Murray Co...	4	12.90%
Totals	31	100%



11.) What is your age group? (multiple choice) **Responses** **Percentage**

	Responses	Percentage
15 and under	7	22.58%
16-25	1	3.23%
26-35	3	9.68%
36-45	3	9.68%
46-55	6	19.35%
56-65	8	25.81%
66 and older	3	9.68%
Totals	31	100%

