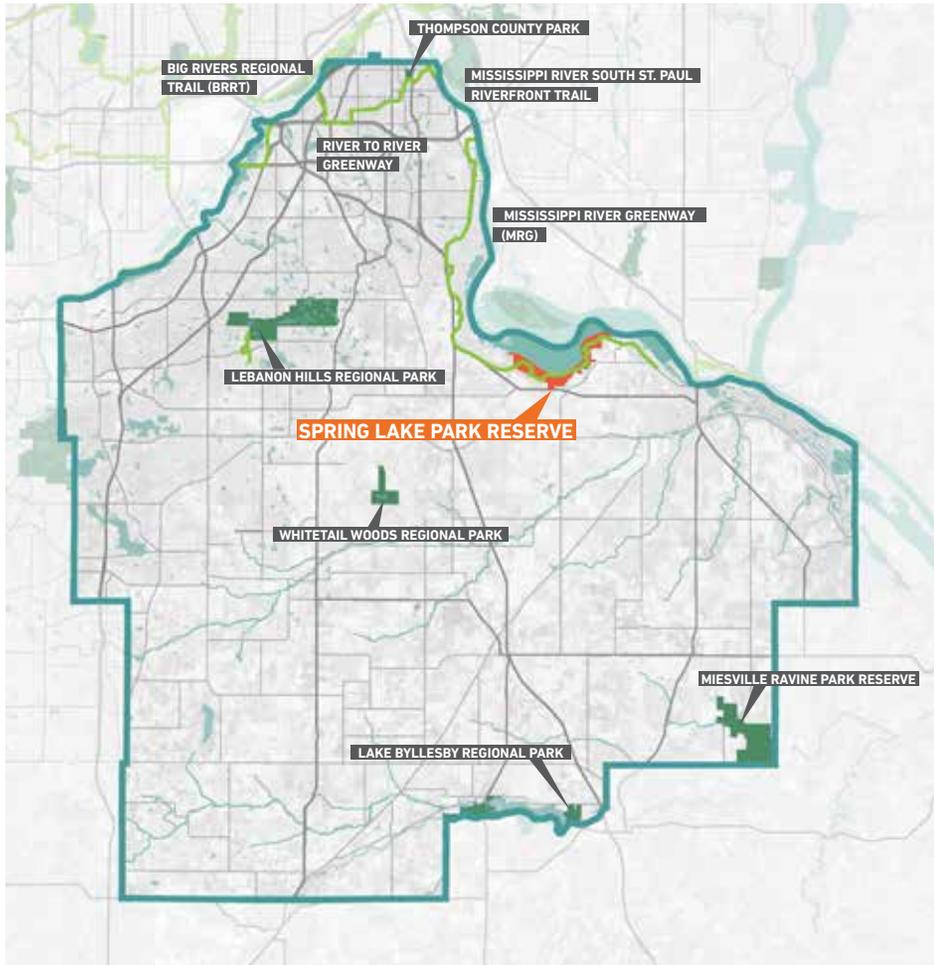


EXECUTIVE SUMMARY: SPRING LAKE PARK RESERVE MASTER PLAN

Adopted by the Dakota County Board June 22, 2021

OVERVIEW



Spring Lake Park Reserve's Location Within Dakota County

OVERVIEW

Spring Lake Park Reserve is singular among regional parks in the Twin Cities, located on a west-to-east flowing reach of the Mississippi River with north-facing bluffs and river terraces that support rare ecosystems and offer expansive river views. A rich legacy of archaeological discovery and history is testimony to the power of this place to draw people over millennia, spanning pre-history, recorded archaeological periods, Indigenous communities, Euro-American settlement, 20th century farming, and today's park visitors. It is a place to observe, reflect, dwell, gather, travel, and time-travel.

Recognizing the park's remarkable qualities, this master plan sets an attainable vision for the future, guides improvements, and carefully balances resource stewardship with public recreation. This plan builds from past plans, community feedback, regional recreation and education needs, and the park's natural and cultural landscape.

Goals of the Master Plan are to:

- Guide improvements and management of the park
- Preserve and enhance the park's natural areas
- Provide recreation amenities that meet park visitor needs
- Celebrate the park's rich cultural and natural heritage

EXISTING PARK CONDITIONS

Spring Lake Park Reserve is a 1,100 acre-park in eastern Dakota County on the Mississippi River in Rosemount and Nininger Township. The park's landscapes are associated with living Indigenous communities, early Euro-American settlement, the city of Nininger, and local agriculture.

Archaeological sites document Indigenous occupation from early pre-history to European contact. A high concentration of known sites and its location on a major river suggest greater archaeological significance, and potential for designation as a culturally significant landscape. Spring Lake is in the Upper Mississippi River Valley Regional Center, where ancestors of today's Indigenous communities lived, gathered for ceremonies, reinforced communal ties, forged alliances, and are buried.

The park's remarkable and diverse natural qualities - dramatic river views, terraces, bottomlands, north-facing limestone bluffs, ravines, and rare ecosystems - provide a strong foundation for public enrichment and respite, with opportunities to protect biodiversity, natural heritage, open space, and views.

The park's two program areas, Upper Spring Lake (Schaar's Bluff, east) and Lower Spring Lake (west), are connected by the Mississippi River Greenway (MRG). The upper park offers more visitor amenities, including the Schaar's Bluff Gathering Center, picnicking, playground, sand volleyball courts, community garden, the MRG trailhead, an overlook, and an interpretive cultural trail. The lower park includes the Camp Spring Lake Park Retreat Center, an archery trail, campground facilities, and a MRG trailhead.

The park has National and State significance as a destination within the Mississippi National River and Recreation Area (MNRRA), as a resource for the 10-state Great River Road scenic byway travelers, by including a segment of the National Mississippi River Trail, and as a stop on the as Mississippi River State

Water Trail. In addition Spring Lake Park Reserve is in the Mississippi Flyway, an waterfowl migratory corridor and is part of the Audubon Society's Mississippi River Twin Cities Important Birding Area.

VISION STATEMENT

Spring Lake Park Reserve showcases the ecological and cultural integrity of the land to provide a regional destination where visitors can experience the integral relationship between humans and the landscape

GUIDING PRINCIPLES

1. Protect, restore, enhance, and maintain natural resources.
2. Create an engaging gateway to the treasures of the Mississippi River Valley.
3. Become a regional, four-season destination.
4. Celebrate the area's rich cultural heritage.
5. Integrate ecological, cultural, educational, and recreational experience.
6. Provide inclusive, memorable, and relevant experiences for all



View of Mississippi River from Schaar's Bluff

THE MASTER PLAN

OVERVIEW

This plan focuses on improvements prioritized for the next five and 10 years within the framework of the long-term vision for the park. The long-term plan depicts the fully realized vision for the park and is important for understanding the five-year and 10-year phasing. All priorities are flexible enough to respond to change and unanticipated funding.

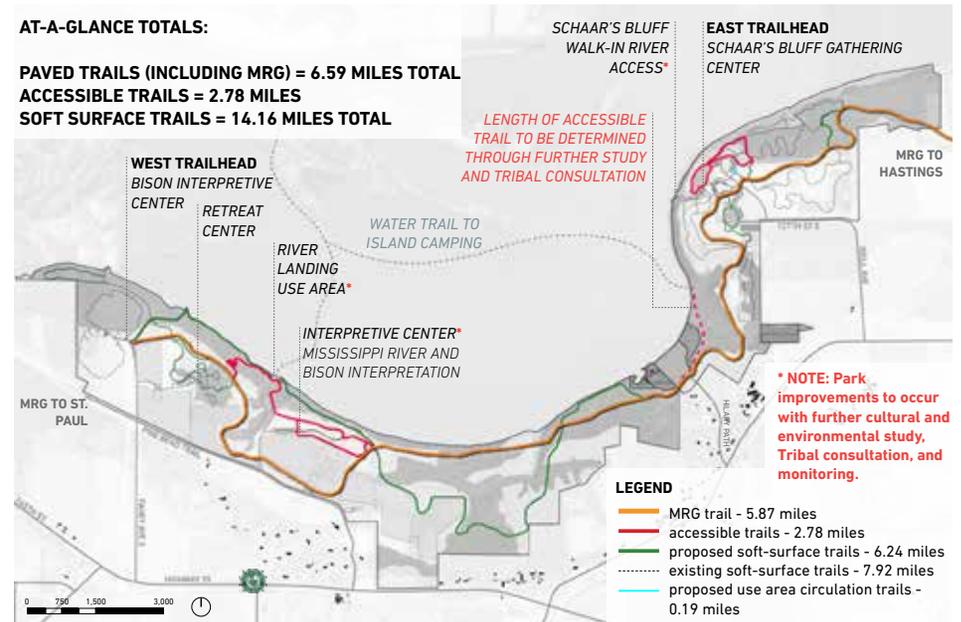
Improvements are organized into the Upper Park (Schaar's Bluff/east) and Lower Park (west). The Upper Park long-term plan enhances picnicking, play areas, the Gathering Center, community gardens, parking, water access, trails, and restoration areas. New features include the Farm and the Schaar's Bluff River Access and Use areas. The Lower Park long-term plan includes new hike-in campsites, river access points and overlooks, outdoor classrooms, pavilions, interactive interpretation, an interpretive center, trail extensions, and restoration areas.

The long-term plan integrates guidance from a Traditional Cultural Properties (TCP) Study that identifies "numerous highly sensitive TCPs of importance to the Dakota People and their ancestors for time immemorial."¹ Throughout this document, the master plan identifies the additional study, consultation, and monitoring by associated Indigenous communities that must occur to finalize design concepts.

SUSTAINABLE TRAIL DESIGN

This plan expands the park's soft-surface trail network. Although essential for recreation, trails can degrade natural areas by providing access for invasive species, fragmenting core habitat, altering hydrology, increasing erosion, and bringing visitors to sensitive areas. To protect the park's profound natural and cultural resources, trails should be "field fit" to on-site conditions and sustainably designed.

1 Upper Sioux Community Tribal Historic Preservation Office, "Spring Lake Park Reserve Traditional Cultural Properties Survey," on file at Dakota County, November 9, 2020.

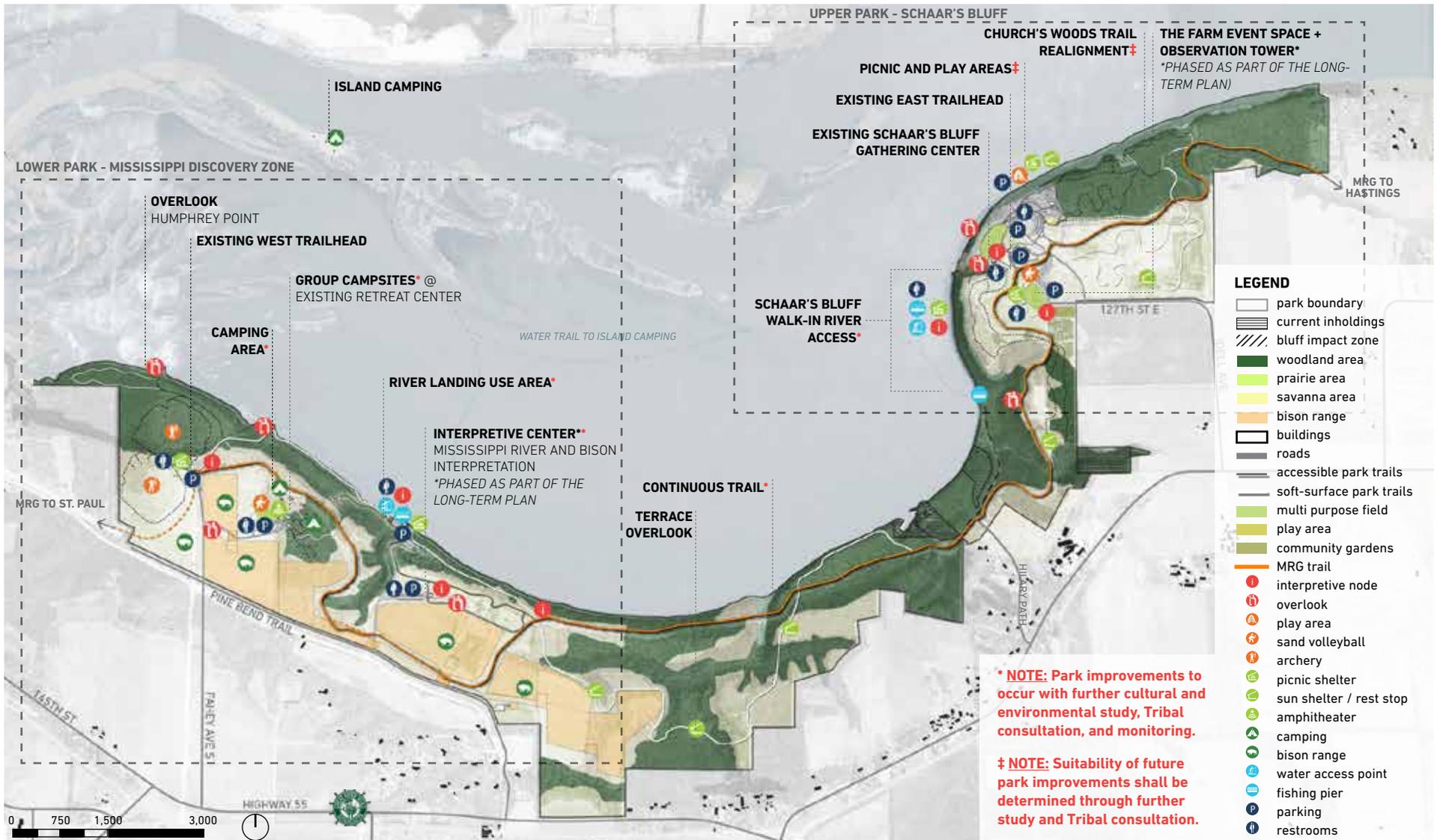


Site-wide Overview of Trail Types

WINTER USE

Winter activities include ski trails, snowshoeing loops, and maintenance of the MRG and accessible trails for winter walking. An improved Gathering Center will offer indoor warming space and equipment rentals. Parking lots and major access roads will be plowed.

LONG-TERM CONCEPT PLAN THE MASTER PLAN



Site-wide Concept Plan, Long-Term Development Plan

UPPER PARK: SCHAAR'S BLUFF

10-YEAR PLAN

Schaar's Bluff is situated high above the Mississippi River and offers stunning views of the river channel, Spring Lake, and the island-rich landscape below. Its captivating views and abundant natural resources have drawn people to the area for thousands of years. The Upper Park includes a high concentration of sensitive Traditional Cultural Properties (TCPs) of importance to past, present, and future generations of Dakota People. Additional study and Tribal consultation is needed to more fully understand the scope and significance of the Upper Park's cultural landscape and appropriate public park uses. Proposed improvements represent desired recreation program based on existing recreation facilities and activities, recreation trends, demographic trends, and community input to date. Final recreation program and locations for associated facilities is dependent on the results of future study and Tribal consultation.

Desired recreation program during the 10-year phase include:

- Refined natural surface trails that reduce conflict with TCPs and new, nonstructural river overlooks (simple rest stops such as a trailside bench with a scenic view)
- Access to the River Use Area via a trail leading from the Mississippi River Greenway (MRG) and a potential connection between the upper bluffs and lower shoreline
- Infrastructure supporting river access (picnicking, fishing dock, and shore fishing)
- Transformation of the Gathering Center from a private rental space to a trailhead with a public warming area, improved office space, and rental equipment facilities
- Improved Picnic Grounds including non-reservable sun shelters, modern reservation picnic shelters, and restrooms
- Relocated and Enhanced Play Areas (nature-themed and nature-play)



UPDATED PICNIC FACILITIES
modern picnic shelters



GATHERING CENTER ENHANCEMENT
public trailhead use, expanded office space, and equipment rentals



ENHANCED PLAY AREA
nature-themed play



ENHANCED PLAY AREA
nature play

10-YEAR PLAN

LOWER PARK - MISSISSIPPI DISCOVERY ZONE

The focus of Lower park improvements is on reintroduction of bison and providing access to Spring Lake and the Mississippi River. Facilities support visitor services at the Bison Range and River Landing Use Area, expand camping, and add trails to new park areas:

- Reintroduction of bison to the prairie ecosystem
- A Bison Range-accessible viewing trail and viewing platforms, and a shaded accessible outdoor classroom or shelter integrating interpretation of the role of large animals in ecological restoration
- A River Landing Use Area small watercraft boat launch, watercraft rental, a reconfigured access road, a picnic shelter, picnic grounds, and a fishing dock
- A Water/kayak trail and island camping
- Walk-in/bike-in camp sites with rustic amenities



1 RIVER LANDING USE AREA
outdoor classroom / riverside pavilion



2 RIVER LANDING USE AREA
boat launch / watercraft rental kiosk



3 EXPANDED TRAIL NETWORK WITH
INTEGRATED INTERPRETATION



4 BISON RANGE VISITOR SERVICES
ENHANCEMENTS
accessible trail and viewing platform



5 EXPANDED CAMPING OPPORTUNITIES
hike-in, river-oriented campsites



6 BISON HERD

LOWER PARK: MISSISSIPPI DISCOVERY ZONE 10-YEAR PLAN



*** NOTE:** Park improvements to occur with further cultural and environmental study, Tribal consultation, and monitoring.

STEWARDSHIP

Spring Lake Park Reserve's landscape has been shaped by human and natural processes over time.

IN DEVELOPING A PARK VISION, NATURAL AND CULTURAL RESOURCES WERE CONSIDERED AS LINKED SYSTEMS THAT CANNOT BE SEPARATED FROM ONE ANOTHER.

A separate Natural Resources Management Plan (NRMP) was developed in tandem with this plan, with an inventory of existing conditions, desired improvements, and action items. This natural resources section seeks to provide an overview of the direction outlined in the NRMP

LONG-TERM NATURAL RESOURCES MANAGEMENT GOALS

- Facilitate a experience of the area's natural heritage and improve that experience
- Provide habitat for native plants, birds, insects, mammals, amphibians, and reptiles
- Demonstrate native plant community regeneration
- Foster and build a resilient, mature, and high-functioning ecosystem
- Work with adjacent landowners for the best joint management of connected natural resources
- Conserve wildlife species of Greatest Conservation Need
- Mitigate impacts of climate change
- Achieve regionally outstanding ecological quality

Specific Natural Resources Management Goals:

- Regenerate a mosaic of upland communities along a continuum from oak forest to oak savanna to prairie
- Increase native plant diversity
- Minimize invasive species

- Prevent new non-native species encroachment
- Reduce negative visitor impacts
- Reduce erosion and stabilize ravines
- Protect lake water and groundwater quality
- Adapt to climate change by introducing appropriate species native to northern Iowa, southwestern Wisconsin, and Southern Minnesota
- Reintroduce bison or other large grazing animals
- Use fire as a management tool especially in woodlands and savannas
- Monitor native plant communities and wildlife population for changes

CULTURAL LANDSCAPE STEWARDSHIP CONSIDERATIONS

This plan's stewardship approaches for the park as a potential cultural landscape are based on US Secretary of the Interior standards for treatment of historic properties. Strategies address a collaborative process to protect Dakota connections to this landscape, protocols for treatment of important places, and care of artifacts associated with Dakota ancestors.

1. Establish consultation protocols and collaborative relationship with Tribal Historical Preservation Officers (THPOs) and associated Indigenous communities to address decision making on condition, maintenance, use, access, site safety, and interpretation.
2. Work with associated Indigenous communities on appropriate interpretation.
3. As evaluation of a park bison range proceeds, engage a representative of Prairie Island Indian Community experienced with their bison herd.
4. Develop protocols for permits or priority seasonal use for native plant harvesting by members of associated Indigenous communities.

INTERPRETATION FRAMEWORK

INTERPRETIVE GUIDELINES

Interpretation connects park users to Spring Lake Park Reserve’s natural and cultural landscapes. The National Association of Interpretation (NAI) defines interpretation as “a mission-based communication process that forges emotional and intellectual connections between the interests of the audience and the meanings inherent in the resource.” Interpretive guidelines ensure a cohesive interpretive experience at Spring Lake Park Reserve and assist in the development of interpretation content and features. Critical to understanding Spring Lake Park Reserve is emphasizing the stories of those that lived in and shaped this place. The Dakota people inhabited this land for thousands of years, and the significance of this place lives on today. Below are the plan guidelines:

- 1. This is a Dakota place.** Acknowledge the relationship between the Mississippi River and Dakota people.
- 2. Ecological and human history are tied.** Emphasize how ecological diversity and human activities need to be understood together.
- 3. The park and its stories continually evolve.** Highlight the evolution of specific locations.
- 4. Sites and stories must be connected.**
- 5. This is a place for gathering.** Connect interpretation to park gathering opportunities.

INTERPRETATION GOALS

- Emphasize that this is a sacred place to the Dakota community
- Engage THPOs, Dakota community members, and stakeholders on interpretation of river stories and landscapes
- Move beyond signs and engage visitors with memorable interactive interpretive features
- Renew interest in the park as a regional destination through high-quality recreation with integrated interpretive content
- Enhance river access and sense of connection to the water
- Phase interpretive development as funding becomes available

INTERPRETATION THEMES

The interpretive theme for Spring Lake Park Reserve is:

SPRING LAKE PARK RESERVE CONNECTS YOU TO **THE CHANGING RIVER,** WHICH CONTINUALLY SHAPES AND UNITES THE MANY, EVER-EVOLVING STORIES EMBEDDED IN THIS PLACE.

Three subthemes bring more detailed interpretive content to life.

GIFTS OF THE LAND: We cannot separate ourselves or our activities from the living landscape all around us.

IMPORTANCE OF PLACE: Inextricably linked with Mississippi River, Spring Lake Park Reserve is a park unlike any other.

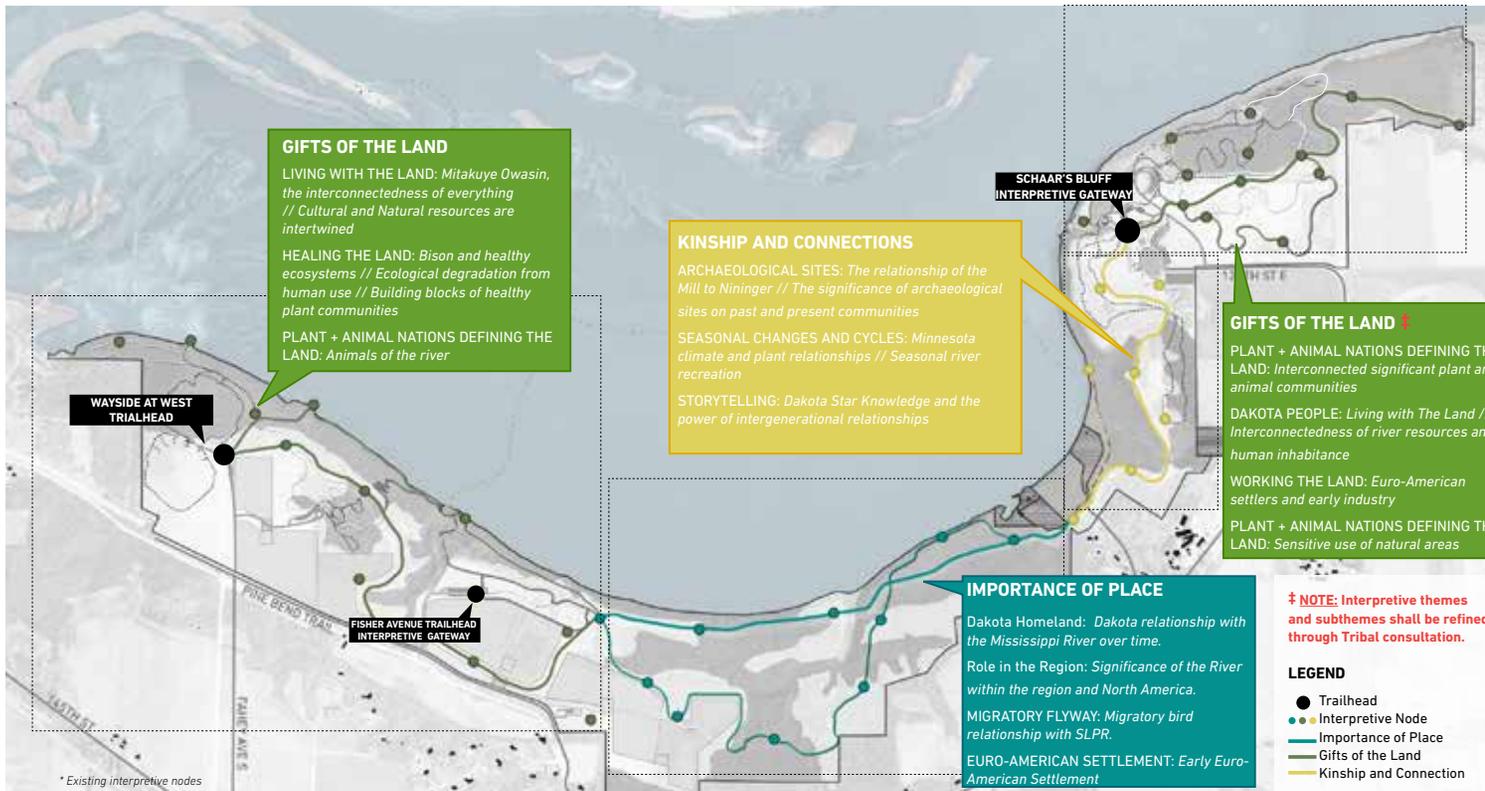
KINSHIP AND CONNECTION: Spring Lake Park Reserve is a regional center where people gather for ceremonies and events to reinforce communal ties and forge new relationships.

INTEGRATED INTERPRETATION: A CONTINUOUS STORY

IMPORTANCE OF PLACE + **GIFTS OF THE LAND** + **KINSHIP & CONNECTIONS**

A node-based trail interpretive experience tells the parks story across the three sub-themes . Nodes frame key views, demonstrate boundaries between ecologies, and expand site understanding.

INTERPRETATION FRAMEWORK



INDOOR EXPERIENCE: Spaces with tactile panels, hands-on interpretive activities, interpretive art, maps, and visitor information.



INTERACTIVE EXPERIENCE: Features that highlight views, focus on a specific topic, and create opportunities for information sharing interactive interpretive elements.



INTERPRETIVE PANEL: Tactile signs that enrich visitors' understanding of SLPR with hands-on elements or relevant facts.



WAYSIDE: Kiosk or rest area seating with immersive views, tactile elements, facts, and personal stories about SLPR often integrated into trailheads and other key destinations.



OVERLOOK: Moments for pause at key viewsheds throughout the park. May include interpretive art, hands-on elements, and/or personal stories of place.



REST STOP: Hands-on activities with interactive components. Engaging interpretive art, test stations, and activities.



OUTDOOR CLASSROOM: Gathering areas in key places with way-finding information, descriptive information about the adjacent area, interpretive art, and hands-on elements.

Interpretive Node Distribution Throughout Park Reserve

IMPLEMENTATION

CAPITAL PROJECTS COST ESTIMATE

Recreation and natural resource improvements are prioritized into five-year, 10-year, and long-term phases, based on connection to the vision and principles, community support, benefit-to-cost ratio, cost, and estimated operational costs. Estimates are planning level, prepared in 2020 dollars, and will be refined as projects advance to construction. Projects will require a predesign process evaluating natural, cultural, education, and equity considerations. Tribal consultation during design and engineering phases and Tribal monitoring during construction will also be needed.

PHASE	ESTIMATED COUNTY COST
5-YEAR PLAN	\$4,945,000
10-YEAR PLAN	\$6,278,000
RUNNING TOTAL OF 5 AND 10-YEAR PLANS	\$11,223,000
LONG-TERM PLAN	\$14,873,000

BOUNDARY

No changes are recommended to the park boundary. The current boundary encompasses 19 acres not owned by the County - three private properties and one public property.

STEWARDSHIP LANDS

The lands immediately south of the boundary have a significant impact on the natural resource quality within the park reserve, the views from the park reserve, and the “entrance experience”. The master plan recommends protection and management of these lands to enhance the park reserve. The 2020 Land

Conservation Plan for Dakota County Land” also identifies many of these same areas as being ecologically important. These properties are included within the preliminary Mississippi River – Spring Lake Park Unit Conservation Focus Areas (CFA). Landowners will be contacted to determine their interest in voluntary land protection and natural resource management opportunities through the County’s Land Conservation Program.

VISITOR SERVICES

This master plan includes facility recommendations that support visitor services at Spring Lake Park Reserve. Facility recommendations include outdoor spaces for guided outdoor education programs, self-guided interpretation, renovated reservation picnic shelters, non-reservation picnic shelters, equipment rental, and outdoor gathering spaces for occasional events. New and improved indoor spaces are also recommended. In the 10-Year Plan, the master plan recommends opening the Schaar’s Bluff Gathering Center as a public trailhead. The long-term vision for the park includes a new interpretive center in the lower portion of the park and a reservation four-season picnic pavilion at the Farm.

OPERATIONAL ANALYSIS

The Operations Analysis estimates the staffing requirements and annual operational costs needed to operate the park in the future as improvements are completed. The analysis estimates that when all of the improvements prioritized within the 10-Year Plan are complete and operational there will be a 50% increase in the operating expenses needed to operate the park over 2020 levels. The increase includes the cost for additional 2.76-5.18 FTE staff. This increase is due to the need to maintain new recreation facilities and natural resource restorations as well as to support picnic shelter reservations, camping reservations, recreation equipment rentals, facilitating park events, guided outdoor education programs, and opening the Gathering Center as a public trailhead.

DAKOTA COUNTY SPRING LAKE PARK RESERVE MASTER PLAN

Adopted by the Dakota County Board June 22, 2021

Dakota
COUNTY

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ACKNOWLEDGMENTS

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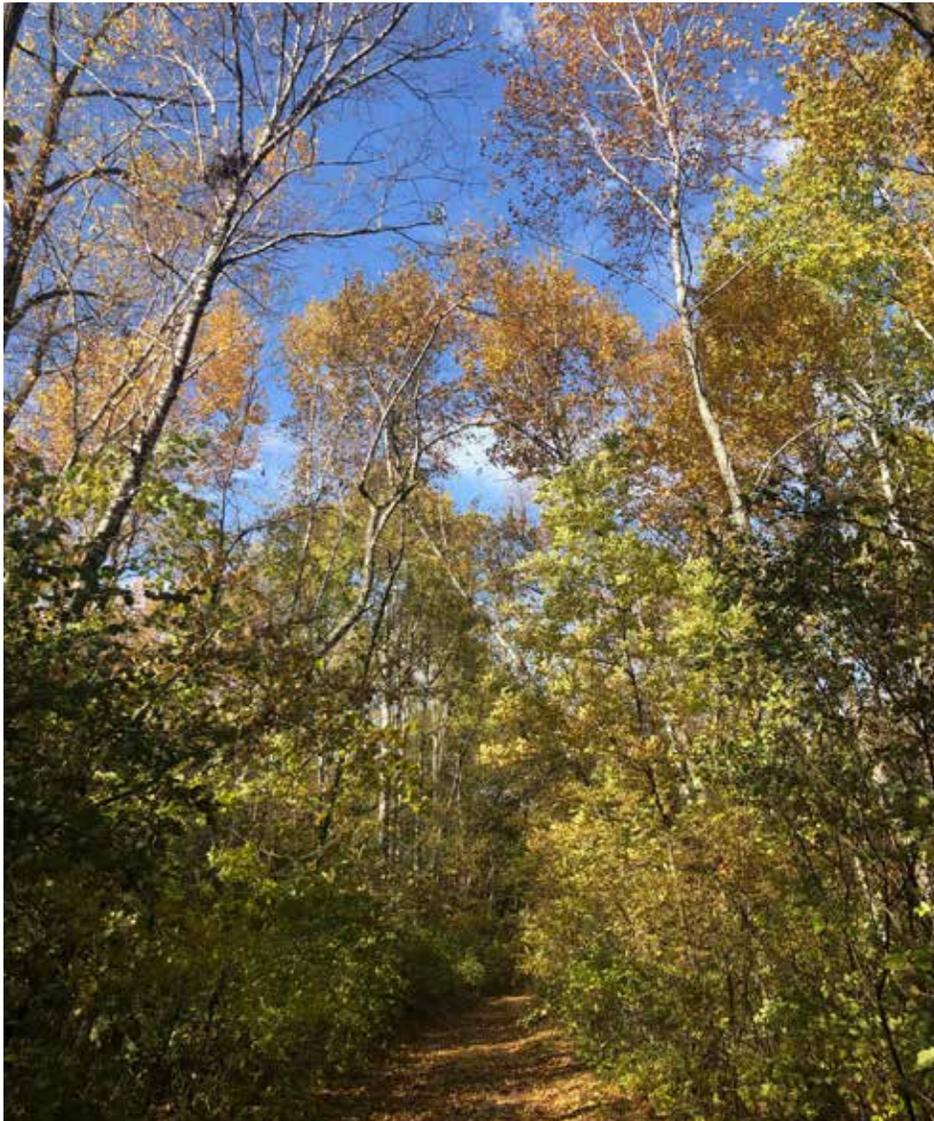
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CHAPTER 1: INTRODUCTION

*"YOU BRING ME TO THE MISSISSIPPI RIVER!
YOU HAVE A BEAUTIFUL NEW TRAIL THAT
WINDS ME ALONG THE OUTDOORS."*

From Metropolitan Council Love Letters to Regional Parks Project



OVERVIEW

This comprehensive master plan update for Spring Lake Park Reserve is built on previous plans, policies, and ordinances. A master plan establishes a specific vision for a park, while guiding its ecological management and physical development to appropriately accommodate public use. The master plan is a dynamic document, firm enough to guide park improvements, yet flexible enough to change based on increased knowledge, experience and changing public needs as the plan is implemented.

This master plan update drew from relevant County plan documents, the 2006 Spring Lake Park Reserve Interpretive Plan, the current regulatory setting, community and stakeholder feedback, recreational and educational needs of the region, and the park's natural and cultural landscape.

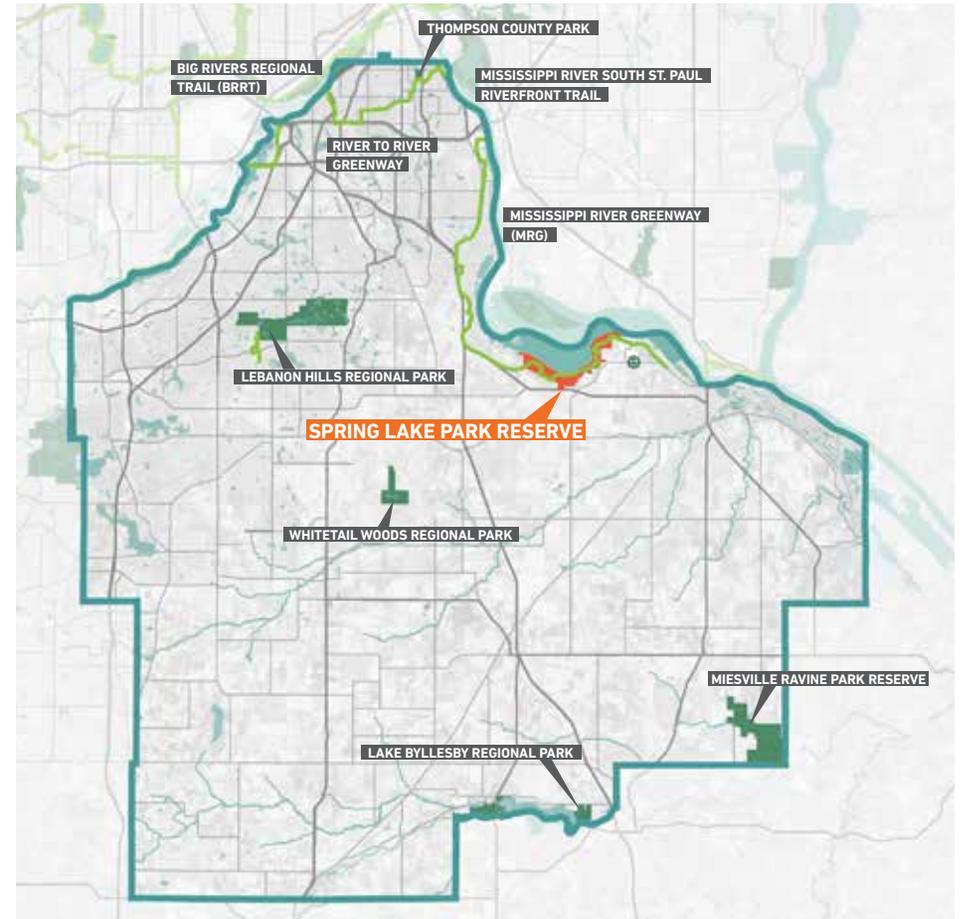


Figure 1.1 Spring Lake Park Reserve Location within Dakota County

OVERVIEW

ROLE IN THE REGION

The Dakota County Parks Department’s mission statement is to “enrich lives by providing high-quality recreation and education opportunities in harmony with natural resource preservation and stewardship.” Dakota County’s parks tradition emphasizes protection of large tracts of high-quality resource lands and providing nature-based recreation and education.

Spring Lake Park Reserve exemplifies that Mission. As one of seven “park reserves” in the Twin Cities Metropolitan Park System, Spring Lake Park Reserve is distinguished by its close relationship with the Mississippi River and its breadth of cultural and natural resources. Spring Lake Park Reserve draws visitors year-round for activities as varied as boating, cross-country skiing, and archery. As part of this system, Spring Lake Park Reserve is subject to regional policies committed to strengthening equitable use of parks and trails by the residents of the region across age, race, ethnicity, income, national origin, and ability.

In addition to its regional park role, Spring Lake Park Reserve is part of state and national parks and trails systems. The park has long served as an important intrinsic resource for the 10-state Great River Road scenic byway travelers. It is a destination within the Mississippi National River and Recreation Area (MNRRA) due to its natural history, cultural significance, wildlife watching, and family-friendly activities. The park is also situated along the southern most segment of the Mississippi River State Water Trail, from Minneapolis to Hastings.

Spring Lake Park Reserve hosts part of the National Mississippi River Trail in Minnesota. Of the five sections described in the National Trail, Spring Lake Park Reserve sits within the “Forested Floodplain” where the river begins to lose its urban character, the bluffs get higher, and the river widens. Dakota County has designated the segment of the national trail that runs through the county as the Mississippi River Greenway (MRG), linking St. Paul to Hastings.

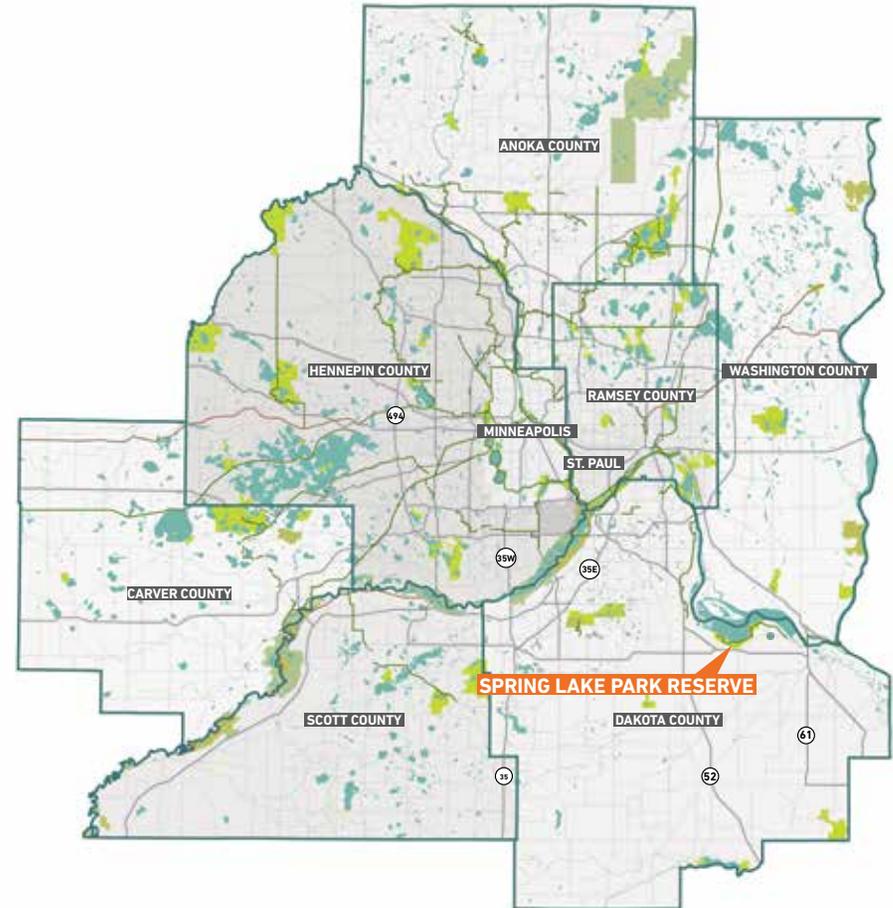


Figure 1.2 Twin Cities Metropolitan Regional Park System

Spring Lake Park Reserve is in the Mississippi Flyway, the migratory corridor for 40% of North America’s waterfowl and shorebirds. It is part of the Audubon Society’s Mississippi River Twin Cities Important Birding Area.

PLANNING CONTEXT

PREVIOUS PARK MASTER PLANS

Planning processes for Spring Lake Park Reserve in 1983 and 2003 have guided its development over time. The 2003 plan was a complete update of the 1983 plan, due to significant changes in recreational and educational demands and approaches to natural resource and cultural stewardship. The 2003 plan called for a connecting trail within the park, overlooks, rest stops, and more comprehensive management of natural resources. Other improvements, such as group camping and more formalized river access on the west end of the park, were not realized and have been incorporated in this 2021 master plan.

2003 Spring Lake Park Reserve Master Plan Overview

The 2003 master plan envisioned three park zones with different development program elements. Figure 1.3 illustrates the 2003 concept vision for the park.

The Schaar’s Bluff area at the eastern end of the park emphasized family and group activities, picnicking, social gatherings, education/interpretive programming, and general uses. The following elements have been implemented:

1. Schaar’s Bluff Gathering Center (formerly, Cultural Center): a unique and functional space that serves many uses
2. Reconfigured Parking: serving the Gathering Center and Picnic Grounds

Elements of the 2003 plan that have not been implemented include:

3. Riverside Day Use Area: shoreline picnic area and day-use boat dock with nature trails and cultural site/river observation point
4. Relocated Play Area: integrated into the Picnic grounds in a shaded, less visually dominant area
5. Outdoor Stage Area: small performance stage with formal seating to accommodate 20 to 50 people
6. Archaeological Interpretive Area: interpretive educational node recreating an active archaeological dig

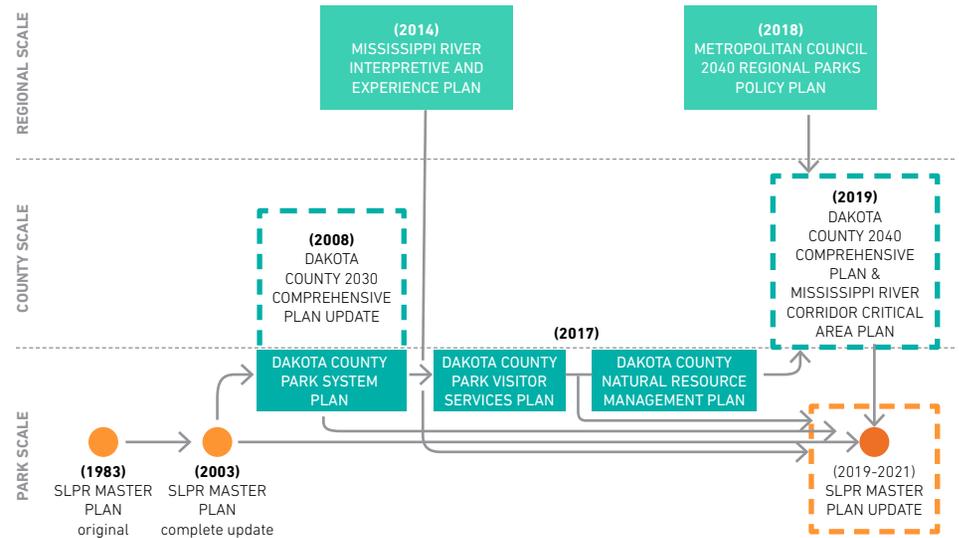


Figure 1.3 Relationship of Existing Planning Documents

The Preserve was envisioned as an intimate, lightly-developed experience in the central part of the park where visitors could enjoy nature, reflect, and learn about the cultural history of the park. With the exception of the Mississippi River Greenway (MRG), planned development in the Preserve has not been implemented. Amenities included:

7. The Harbor: a houseboat-style overnight camping experience right on Spring Lake, with shoreline picnic grounds and an overlook
8. Three parallel trails, a regional trail, a cultural trail, and a nature trail

The Outdoor Education and Activity Center in the western park focused on unique outdoor opportunities for individuals, families, and groups, with emphasis on unique year-round camping and educational opportunities, a higher level of

PLANNING CONTEXT

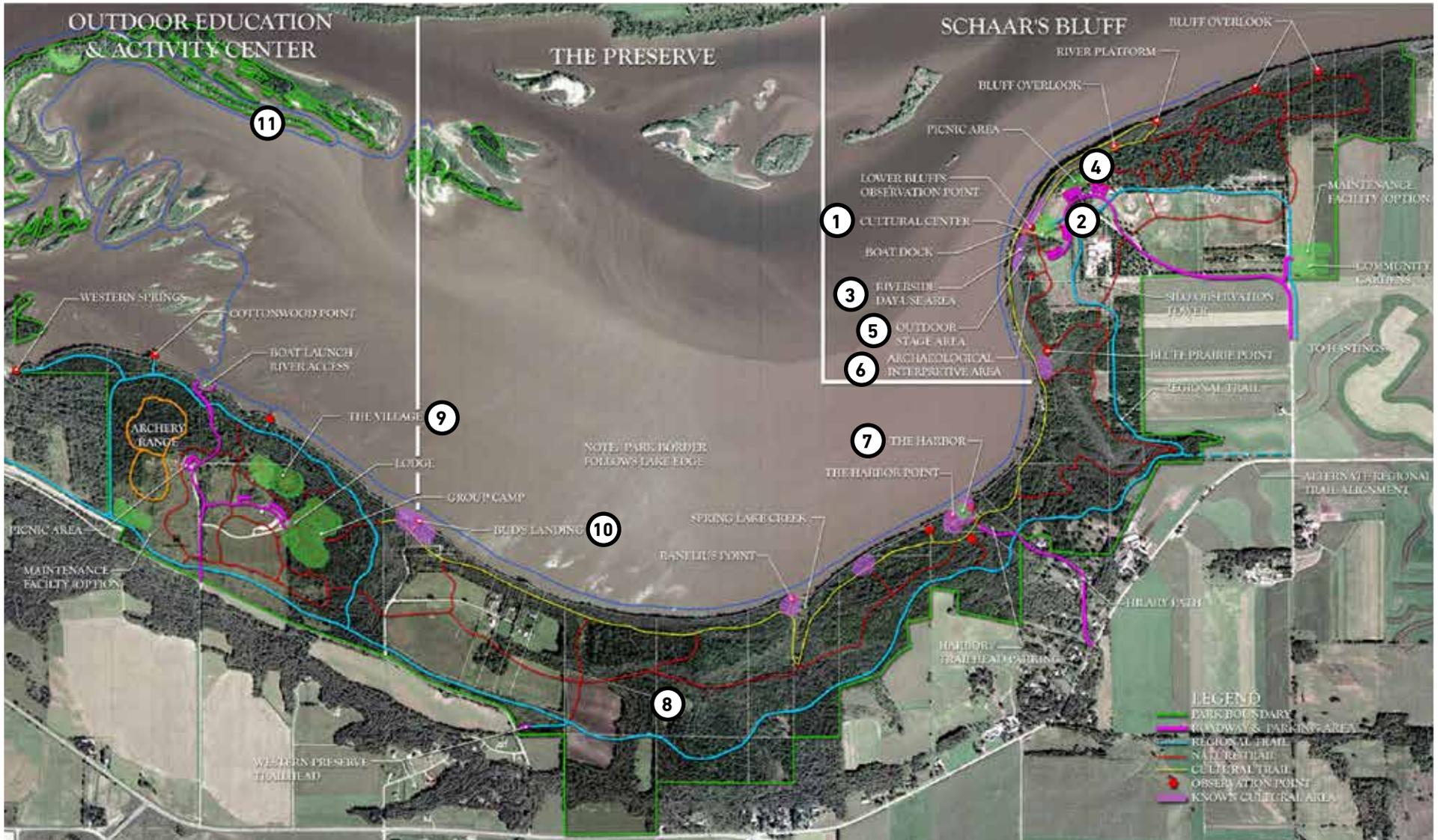


Figure 1.2 2003 Master Plan Concept for Spring Lake Park Reserve

PLANNING CONTEXT

access to the river, and a regional trail connection with the lake. The following planned developments have not been implemented:

9. The Village: unique, year-round camping, recreating a village atmosphere connected to the park's history
10. Relocated Boat/Canoe/Kayak Launch: relocation site for an existing DNR boat launch to serve more users and act as the main launch point for the water trail to the islands
11. Island Camping: rustic island camp sites

The Dakota County Parks System Plan, 2008

The Dakota County Park System Plan was updated in 2008 as part of the 2030 Comprehensive Plan update. The park system vision is:

- **Great Places:** Enhance parks by including the basic popular amenities that the public expects as well as innovative, thought-provoking, or singular activities that relate to each park as a unique place.
- **Connected Places:** Establish a countywide network of city and regional greenways for recreation, transportation, habitat, and water quality.
- **Protected Places:** Strategically protect resource areas to preserve natural processes and system function.

The 2008 Dakota County Park System Plan identified the theme for Spring Lake Park Reserve's as *"A Mississippi River Park - Rich resources framing balanced recreation based on the river, history, and discovery."*

Park System Plan priorities for Spring Lake Park Reserve include:

- Expanding scenic river views and river access
- Adding picnicking on Schaar's Bluff
- Adding trails with natural and cultural resource interpretation

Mississippi River Interpretive and Experience Plan, 2014

The Mississippi River Interpretive and Experience Plan recommends 10

interpretive nodes along Dakota County's Mississippi River Greenway. Two of the nodes are located in Spring Lake Park Reserve: the tree canopy walk near the West Trailhead and an node at Schaar's Bluff interpreting stories in the park.

Dakota County Park Visitor Services Plan, 2017

The 2017 Visitor Services Plan identified visitor trends for Spring Lake Park Reserve, such as:

- Middle-aged to older populations are found near Lake Byllesby, Miesville Ravine, and Spring Lake.
- Spring Lake Park Reserve hosts the third highest level of park visitation after Lebanon Hills and Thompson County Park and currently offers an intermediate level of service.

The Plan's Service Vision for Spring Lake Park Reserve is to maintain an intermediate service level and focus on the river setting, natural resources, and cultural significance with the following enhancements:

- Promote picnic facilities
- Evaluate facility modification needs for increasing service provision
- Deliver nature and cultural education programming
- Improve program cultural fluency to draw diverse visitors
- Improve trail-based self-guided interpretation
- Add bike rental and self-vend kayak rental
- Enhance outreach to all communities, including multicultural outreach
- Expand volunteer opportunities (e.g. adopt-a-park, stewardship)

Dakota County Natural Resource Management System Plan, 2017

The 2017 Dakota County Natural Resource Management System Plan identifies approaches to preserve and improve natural resources on County lands. As a park reserve, Spring Lake is intended to provide, protect, and manage representative

PLANNING CONTEXT

areas of the original major landscape types. Spring Lake Park Reserve contains predominantly natural and semi-natural vegetation with large areas of high biodiversity significance, as mapped by the Minnesota County Biological Survey. A large percentage of the park supports oak forest, savanna, shrubland, prairie, and non-prairie grassland, recalling historic prairie and savanna which prevailed across the southern two-thirds of the County prior to 1850.

Dakota County 2040 Comprehensive Plan and the Mississippi River Corridor Critical Area

Dakota County's 2040 Comprehensive Plan, adopted in 2019, provides high-level guidance, incorporating elements of the Park System Plan, with updated information from the Park Visitor Services Plan, and the Natural Resources Management System Plan. It also includes the updated Dakota County Mississippi River Corridor Critical Area Plan, developed in response to the below State mandate.

The purpose of the Mississippi River Corridor Critical Area (MRCCA) is to:

- Protect and preserve the Mississippi River and adjacent lands for the benefit of the health, safety, and welfare of the citizens of the state, region and nation;
- Prevent and mitigate irreversible damages to resources within the MRCCA;
- Preserve and enhance the natural, aesthetic, cultural, and historical values of the Mississippi River and adjacent lands for public use and benefit;
- Protect and preserve the Mississippi River as an essential element in the national, state, and regional transportation, sewer and water, and recreational systems; and
- Protect and preserve the biological and ecological functions of the Mississippi River corridor.

The MRCCA Standards and Guidelines establishes standards and guidelines for all plans, regulations, capital improvements, and public facilities for the MRCCA, including Spring Lake Park Reserve. The MRCCA was established by Governor's Executive Order in 1979. Minnesota Statute 116G.15 establishes Minnesota

policy and authority for MRCCA rules (6106.0010–6106.0180), which define requirements for local government units when preparing or updating plans or regulations that affect lands within the MRCCA and followed by state and regional agencies in developing plans within their jurisdiction.

Dakota County Shoreland and Floodplain Ordinance No. 50 specifically defines policies and ordinances associated with the Shoreland Management Districts and Floodplain Management District.

2019 Reintroducing American Plains Bison to Dakota County Parks: A Feasibility Study

This study assesses the feasibility of reintroducing bison into the County Park system to help restore and manage the prairie ecosystem, to enhance park visitor experience, and to interpret the strong historical relationship that the animal had with Native American culture. Of all Dakota County parks, Spring Lake Park Reserve is the most viable option for bison reintroduction. In 2021, concurrent to the master planning process, the bison concept at Spring Lake Park Reserve was further developed, and the preliminary range layout and phasing are incorporated into this Master Plan.

2020 Traditional Cultural Properties (TCP) Survey

In the fall of 2020, the Upper Sioux Community Tribal Historic Preservation Office conducted a survey of the Spring Lake Park Reserve to begin to identify TCP and culturally sensitive areas within the park and to evaluate their significance. The survey finds that sites within the park hold unmeasurable significance to the history, cultural identity, spirituality, and lifeways of the Dakota Oyate. Initial recommendations are incorporated into this Master Plan and are a starting point for further discussion between Dakota County and Tribal representatives on how to prevent negative impact to cultural resources within the park.

MASTER PLANNING PROCESS

In 2019, Dakota County began the process of updating the 2003 Spring Lake Park Reserve Master Plan and the 2005 Spring Lake Park Reserve Natural Resource Management Plan (NRMP). Dakota County hired TENxTEN with Quinn Evans Architects and Barr Engineering to develop the update to the 2003 plan.

The goals of this planning process were to:

- Emphasize the connectedness of the Park's natural and cultural resources; use these resources to direct primary design.
- Work collaboratively with the community, underrepresented populations, and key stakeholders with open communication about plan development to gain a well-rounded sense of community preferences and concerns.
- Engage visitors in immersive interpretive experiences that share the story of Spring Lake Park Reserve.
- Provide realistic phasing opportunities for the five-year, 10-year, and long-term implementation windows.

The planning process occurred across six tasks from 2019 to 2021:

- Task 1: Project Initiation
- Task 2: Research, Findings, and Vision
- Task 3: Listening and Gathering
- Task 4: Concepts and Draft Recommendations
- Task 5: Plan Development and Plans
- Task 6: Final Plan and Approvals



2019 Kick Off Tour



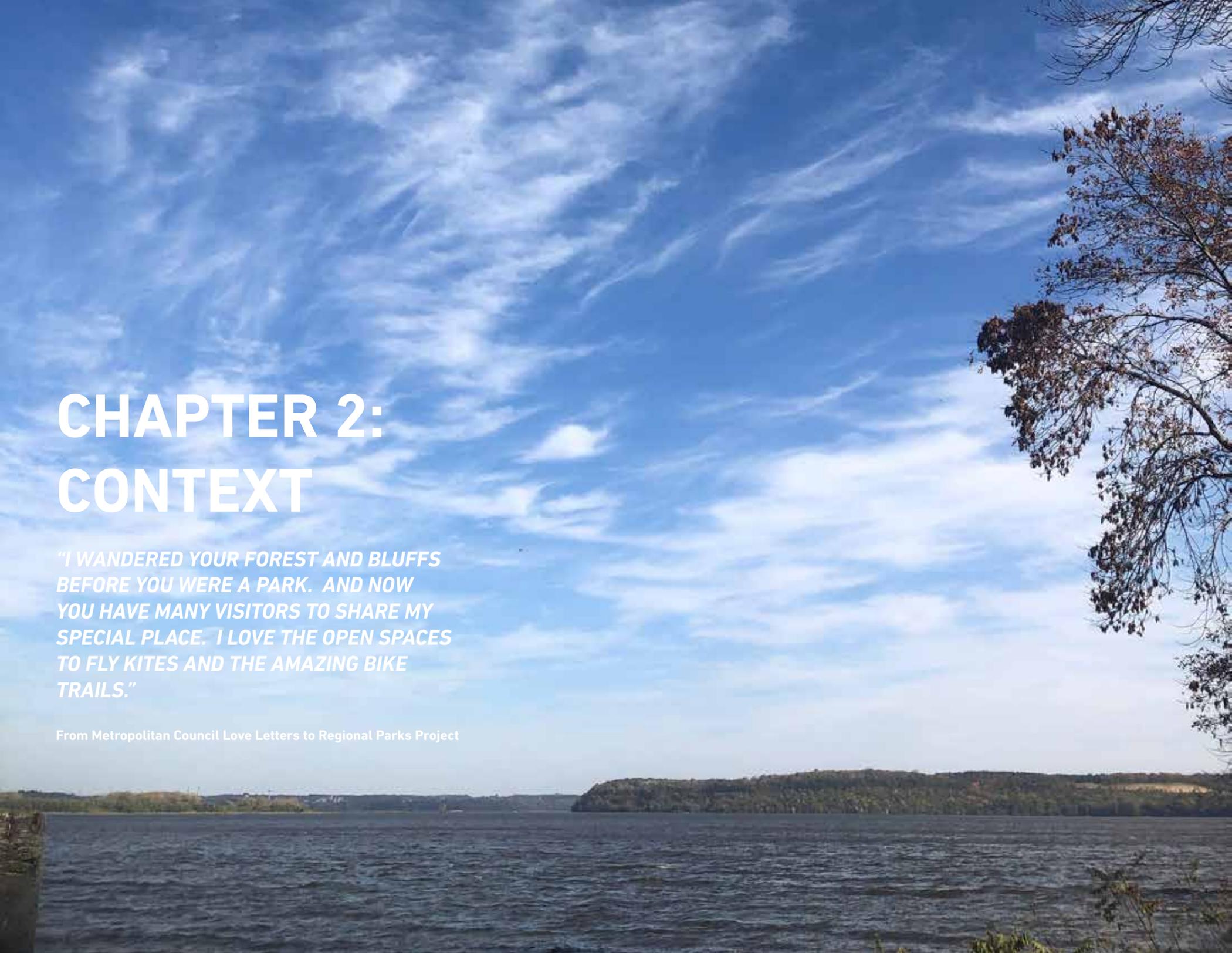
2019 Planning Commission Tour



2019 THPO Site Walk



2019 THPO Site Walk



CHAPTER 2: CONTEXT

*"I WANDERED YOUR FOREST AND BLUFFS
BEFORE YOU WERE A PARK. AND NOW
YOU HAVE MANY VISITORS TO SHARE MY
SPECIAL PLACE. I LOVE THE OPEN SPACES
TO FLY KITES AND THE AMAZING BIKE
TRAILS."*

From Metropolitan Council Love Letters to Regional Parks Project

OVERVIEW

Located in the southeast Minneapolis-St. Paul metropolitan area, the Dakota County Park System serves the third most populous county in Minnesota. With more than 6,000 acres and a fast-growing network of greenways, Dakota County's nature-based system provides valuable recreational, cultural, and natural resources to the County and the region.

Minnesota has been Dakota homeland for thousands of years. Dakota connections to Minnesota's rivers, lakes, rocks, landforms, plants, and village sites are deep and enduring. Several culturally significant sites are present in Spring Lake Park Reserve, all of which have been built upon and damaged by farming, development, and archaeological investigation. This Master Plan aims to share the stories of this place while honoring and respecting these cultural gifts.

This chapter reviews local and regional recreational needs and opportunities related to Spring Lake Park Reserve. Special attention has been paid to best practices for maintaining balance between provision of recreation and the stewardship of cultural and natural resources throughout the planning process. The following sections represent Spring Lake Park Reserve's regional and use context.

- **Park Context:** summarizes the location of the park within the region and parks within the service area,
- **Demographics and Trends:** looks at demographics within the park service area and current recreation trends
- **Demand Forecasting and Needs:** synthesizes how demographic and recreation trends will influence demand for future activities within the park
- **Community and Partner Engagement:** summarizes the master planning community engagement process and feedback received
- **Equity Analysis:** examines the public engagement process and outcomes for stakeholders underrepresented in park visits.

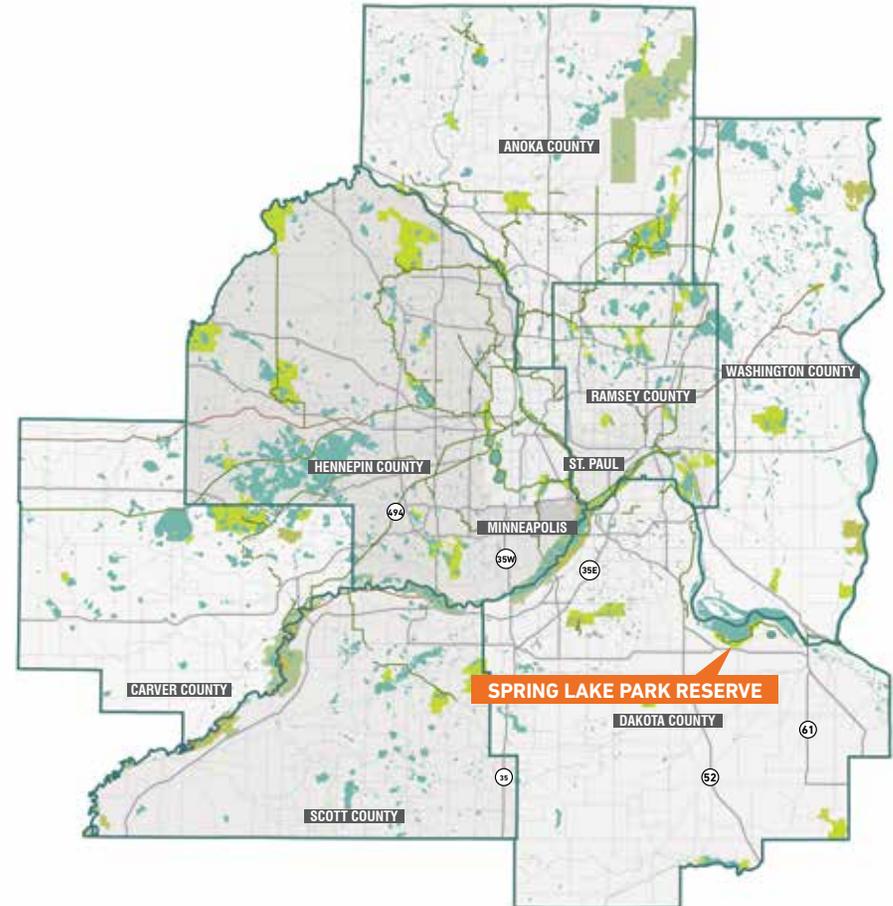


Figure 2.1 Twin Cities Metropolitan Regional Park System

PARK CONTEXT

Spring Lake Park Reserve is in eastern Dakota County on the south shore of the Mississippi River's Spring Lake in Rosemount and Nininger Township. The park was first proposed as a County park in the 1970 Dakota County Parks and Recreational Facilities Plan. Acquisition of park property began in 1972. In 1975, the State Legislature passed the Metropolitan Parks Act that established the Regional Park System. Spring Lake Park Reserve was given regional designation and included 1,100 acres. In 1980, the park boundary was expanded as a part of the Dakota County Long Range Comprehensive Plan and expanded again in 1993. Since the 2003 master plan, all but three private properties within the park have been acquired. The designation of park "reserve" signifies its rich ecological and cultural assets. The interplay of the ecological, cultural, and scenic assets makes Spring Lake Park Reserve one of the most unique parks in the regional system.

The immediate park surroundings are primarily farmland, making the park a local destination for the adjacent towns and a regional destination from the more populated urban centers in the Twin Cities area. Visitors access the park by car from the north and south via US Highway 52 or by State Highway 61 to Highway 55 and County Road 42.

Local visitors may access the park from the City of Hastings on the Mississippi River Greenway (MRG) regional trail. The Rosemount Greenway will provide future trail access to Spring Lake Park Reserve.

SERVICE AREA

With five miles of Mississippi River frontage, high-quality natural areas, and unique cultural landscape, Spring Lake Park Reserve has the potential to draw visitors from throughout the Twin Cities Metro Area. Its service area is approximately a 20-mile drive to the park and encompasses Dakota County and portions of Ramsey and Washington counties in Minnesota and Pierce County, Wisconsin. The service area is bisected by the Mississippi River and abuts the border of the City of St. Paul. Five regional parks lie within this service area,

including Murphy-Hanrehan Park Reserve, Lake Elmo Regional Park, Hyland-Bush Anderson Lakes Regional Park, and Miesville Ravine Park Reserve. As regional travel increases, recreational amenities within a 30-mile drive radius from Spring Lake Park Reserve have also been considered.

RECREATIONAL CONTEXT

Minnesota's State Comprehensive Outdoor Recreation Plan (SCORP) indicates that two-thirds of all recreation occurs within a half hour drive of home. Using this metric, regional parks within a 30-mile drive radius of the SLPR were analyzed to understand the various recreational opportunities available in the park's vicinity. Table 2.1 includes activities identified by the SCORP, including trail types, active and passive recreation opportunities, lodging and learning centers, cultural resources, ecological communities, and unique features.

Several other regional parks are within the 30-minute drive from Spring Lake Park Reserve; however, none offers access to the Mississippi River or the same breadth of diverse ecological communities. Of the nearby regional parks, two park reserves (Miesville Ravine and Murphy-Hanrehan) and two parks (Battle Creek and Lebanon Hills) emphasize the parks' natural resources. Among park reserves, Spring Lake Park Reserve offers the most types of active and passive recreation. Phalen Regional Park and Lebanon Hills Regional Park are popular for recreation, with swimming and fishing being highlights. Whitetail Woods (camper cabins) and Lebanon Hills (drive in sites) regional parks offer the best camping within a 30-minute drive of Spring Lake Park Reserve.

Spring Lake Park Reserve stands out for its remarkably robust set of recreational opportunities in the context of park reserves, its diverse ecological communities, and the presence of cultural landscapes associated with both Euroamerican settlement and living Indigenous communities.

PARK CONTEXT

		Spring Lake Park Reserve	Phalen Regional Park	Battle Creek Regional Park	St. Croix Bluffs Regional Park	Cannon River Turtle Preserve	Lebanon Hills Regional Park	Miesville Ravine Regional Park Reserve	Whitetail Woods Regional Park	Murphy-Hanrehan Park Reserve
Type		Park Reserve	Regional Park	Park Reserve	Regional Park	Scientific and Natural Area	Regional Park	Park Reserve	Park Reserve	Park Reserve
Size		1,100 acres	494 acres	1,840 acres	579 acres	214 acres	2,000 acres	1,600 acres	456 acres	2,800 acres
Trails	Paved	x	x	x	x	x	x		x	
	Unpaved	x		x			x	x	x	x
Active Recreation	Cross Country Skiing	x	x	x	x	x	x		x	x
	Swimming		x	x	x		x	x		
	Cycling	x	x	x	x	x	x			
	Hiking / Walking	x	x	x	x	x	x		x	x
	Playground	x	x	x	x		x		x	
	Archery	x	x							
	Mountain Biking						x			x
Passive Recreation	Athletic Fields		x							
	Nature Observation	x				x	x		x	x
	Geocaching	x					x	x	x	x
	Picnicking	x	x	x	x		x	x	x	
	Paddle Sports		x				x	x		x
	Fishing		x				x			x
	Hunting	x				x	x			x
Lodging / Centers	Gardening	x								
	Tent Camping				x		x			
	RV Camping				x		x			
	Camper Cabins								x	
	Visitor / Event Center	x	x		x		x			
Cultural Resources	Nature Center									
	Archaeological Artifacts	x								
	Sacred Sites (Indigenous)	x								
	Colonial History	x								
Ecological Communities	Oak Savanna	x			x					
	Prairie	x			x	x				x
	Floodplain Forest	x				x				
	Forest	x	x	x	x	x	x	x		x
	Water Body	x	x	x	x	x	x	x		
Unique Features	Equipment Rentals		watercraft	dog park	boating					boating
	Attractions			sledding			sledding		sledding	snowmobiling
				amphitheater			turtle sanctuary areas (observation only)	ice fishing		
						horse trails			horse trails	

Table 2.1 Project Area Context: Activity Types and Programming within 30-Mile Radius

DEMOGRAPHICS & TRENDS

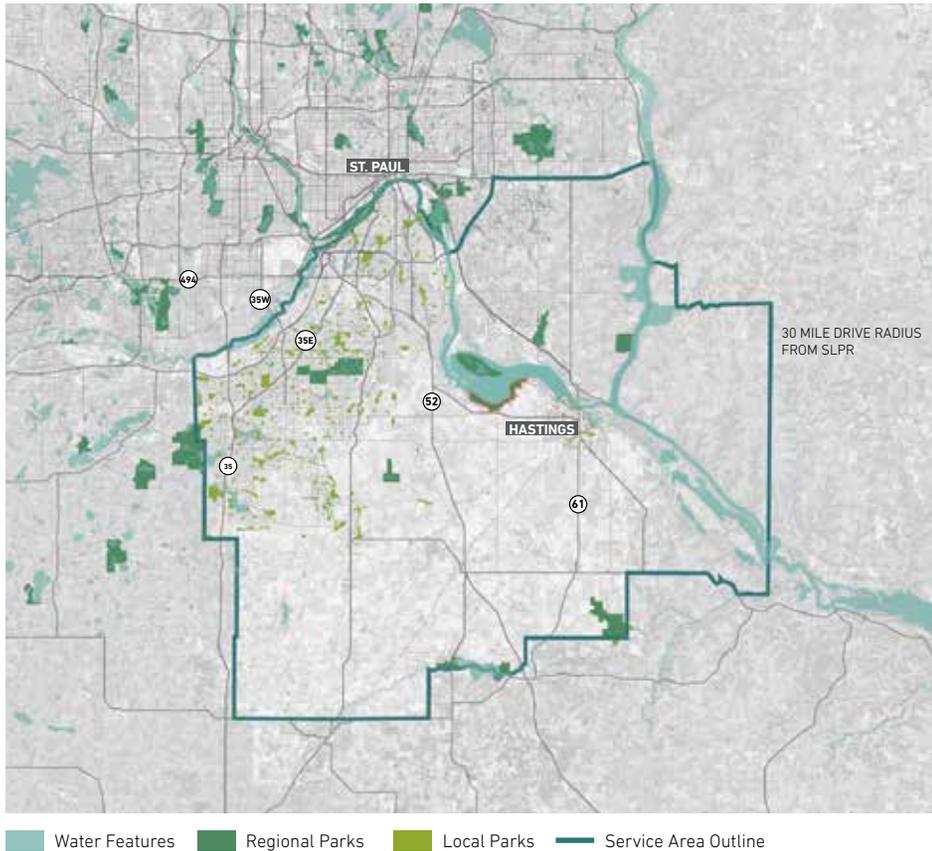


Figure 2.2 Spring Lake Park Reserve Service Area

The demographic analysis provides an understanding of service area populations for Spring Lake Park Reserve.

RACE AND ETHNICITY DEFINITIONS

This report uses the following categories for data on race and ethnicity for consistency with Federal statistics, program administrative reporting, and civil rights compliance reporting:

- **American Indian.** A person having origins in any of the original peoples of North and South America (including Central American), and who maintains tribal affiliations or community attachment.
- **Asian.** A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.
- **Black.** A person having origins in any of the Black racial groups of Africa.
- **White.** A person having origins in any of the original peoples of Europe, the Middle East, or North Africa
- **Hispanic or Latino.** An ethnic distinction, a subset of a race as defined by the Federal Government which includes a person of Mexican, Puerto Rican, Cuban, South or Central American, or other Spanish culture or origin, regardless of race.

TWIN CITIES REGIONAL DEMOGRAPHICS

The Twin Cities population will grow, become more diverse, and be older, on average, in the future. Between 2010 and 2040 the Twin Cities Metro population is forecasted to grow by 824,000 residents (Thrive MSP 2040), a more than 29 percent increase, which is projected to require 13,000 new housing units annually. By 2040, only one in five of net new households are projected to include children. One in five residents will be aged 65 or older, compared to one in nine in 2010. The region is also growing in racial and ethnic diversity, with a projected 40 percent of the population identifying as a person of color compared to 24 percent in 2010.

DEMOGRAPHICS & TRENDS

DAKOTA COUNTY DEMOGRAPHICS

The US Census Bureau estimates that Dakota County's population will grow from nearly 430,000 (2018 estimate) to over 500,000 in 2040. Over the next five years, Dakota County can expect to add more than 10,000 new residents. As populations continue to grow, recreation services must expand accordingly. Increasing the capacity and services of parks in the county will require a clear vision and strategy for evolving park facilities and spaces, as well as their maintenance, to meet future needs.

SERVICE AREA DEMOGRAPHICS

Demographic analysis within the Spring Lake Park Reserve service area gives an understanding of populations who are likely to visit the park. For the purposes of this analysis, the service area is comprised of Dakota County and communities shown in Figure 2.1. The analyses are reflective of the total population within the service area, and its key characteristics that impact park use such as age segments, income level, race, and ethnicity.

Population and Age

Following state and metro trends, population within the service area for Spring Lake Park Reserve is projected to steadily grow, from 532,884 in 2010 to 554,464 in 2019, and to 610,087 by 2024. Based on the 2019 American Community Survey US Census Bureau (ACS) estimate, the age distribution of residents is fairly even. Over time, the age groups over 55 are expected to experience the most growth.

Race and Ethnicity

While the population majority is white/non-Hispanic, projections show slight growth in the percentage of non-white population over the next five years. Based on ACS Data, race and ethnicity projections in the service area parallel the metro-area, with the Black population projected to grow the most, doubling between 2010 and 2024. Asian, Pacific Islander, Multiple Race, and Hispanic populations

will grow between 50 and 65 percent. The populations identifying as "Two or More Races" is projected to grow by 63 percent between 2010 and 2024 from approximately 15,126 to 24,673.

Income

The overall average household income for the service area is approximately \$120,000 with a median of \$85,450. The majority of households own at least one vehicle. The 2016 Metropolitan Council Regional Park System Visitor Study Report showed that people with higher incomes are visiting parks more frequently than those with lower incomes. The report defines "higher income" as those earning more than \$100,000, which resulted in higher annual visits, fewer/no safety concerns, and greater satisfaction with the quality of facilities, services, and recreation opportunities. The median household income for the Spring Lake Park Service Area is \$85,450, falling within the mid-range income level defined by the Metropolitan Council. This suggests that addressing safety concerns and developing unique and welcoming programming will be critical to serve the

2010–2024 POPULATION BY ETHNICITY IN SERVICE AREA

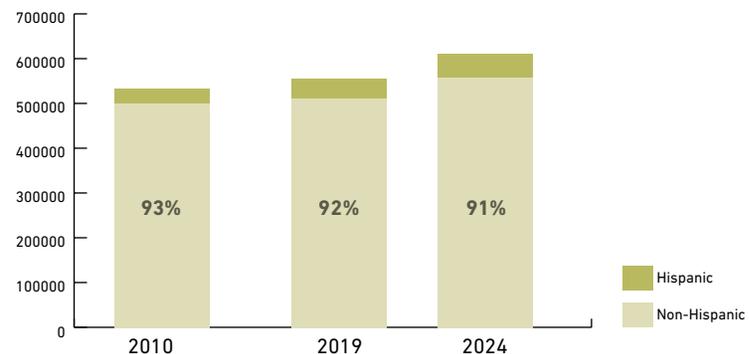


Figure 2.3 Population by Ethnicity in Service Area, 2010–2024

DEMOGRAPHICS & TRENDS

median income groups in the service area. Awareness and physical access to parks are two of the largest hurdles for low-income families and individuals. Providing more non-web-based promotional materials and occasional public transportation to the park for public events would benefit low income visitors.

GROUPS UNDERREPRESENTED IN PARK VISITS

The 2017 Dakota County Parks Visitor Services Plan (VSP) engaged several groups underrepresented in park visits, including:

- Older adults
- Foreign-born Latinos
- South Asian Indians
- Youth
- African Americans
- Vietnamese
- People living with disabilities
- Somalis
- US-born Latinos

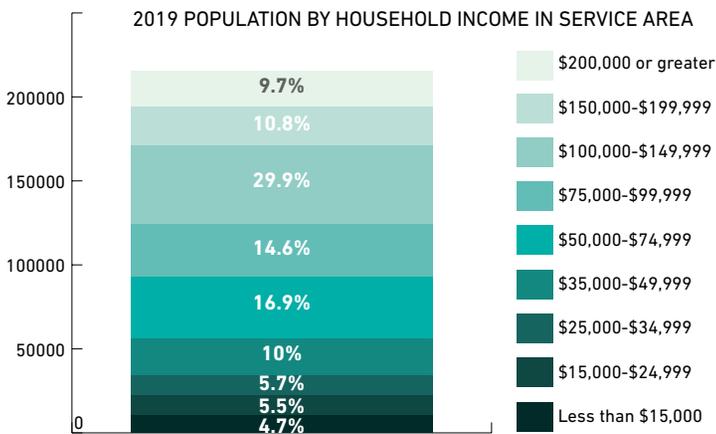


Figure 2.4 Population by Household Income in Service Area, 2019

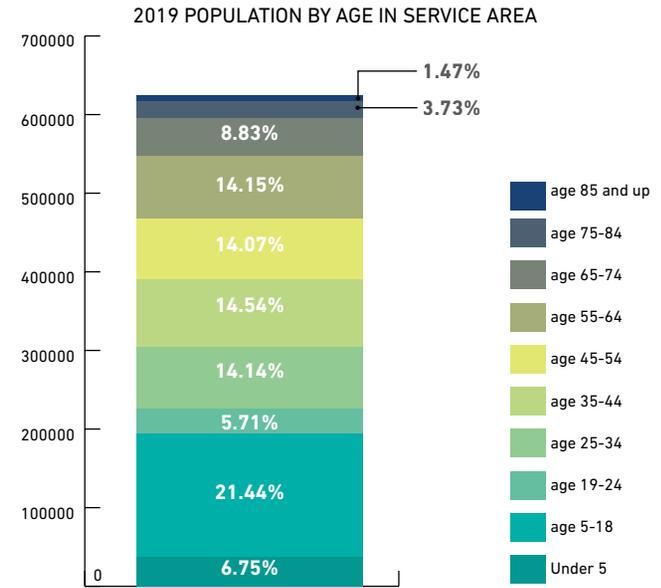


Figure 2.5 Population by Age in Service Area, 2019

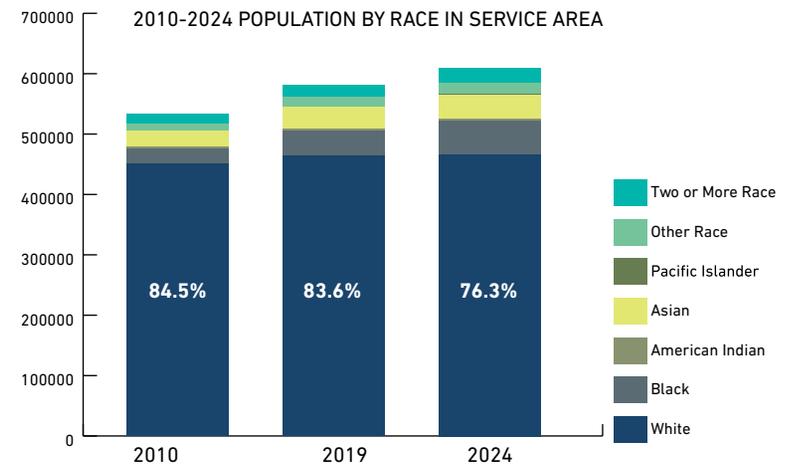


Figure 2.5 Population by Race in Service Area, 2010-2024

DEMOGRAPHICS & TRENDS

The VSP also indicated that park visitation is growing but at a rate lower than expected because Dakota County parks are not drawing from all communities—specifically from under-represented groups. The Metropolitan Council's 2014 Regional Park Use Among Select Communities of Color, a Qualitative Investigation, and 2016 Regional Parks System Visitor Study Report concluded that income and ethnicity have significant impact on park usage, information behavior, and experience. Non-white visitors are more likely to use parks for fishing, picnicking, and attending special events and are also more likely to get information about the parks from family and friends. Low-income visitors rely more on public transportation. Spring Lake Park Reserve is well situated to accommodate the activities generally preferred by non-white groups but will struggle to address the accessibility need of low-income visitors because of its location outside a town center and lack of transit service.

Growth forecast for the service area includes populations currently underrepresented in park visits, including older adults, African Americans, Somalis, and US-born Latinos. Future park improvements and programs can provide activities and programs that appeal to these audiences. Increasing racial and ethnic diversity and accommodating the aging population require increased capacity and flexibility of park services in the region and county.

DEMOGRAPHIC SUMMARY

Demographic trends for the service area indicate overall population growth and growth in populations currently underrepresented in park visits including older adults, African Americans, Somalis, and US-born Latinos. Future park improvements and programs will need to provide activities and programs that appeal to these audiences. Growth in non-white and older populations will require increased capacity and flexibility.

	African American	African Immigrant	Asian Immigrant / Asian American	Hispanic	Diverse Composition
Preferred Outdoor Recreation Activities & Amenities	<ul style="list-style-type: none"> • Picnicking/BBQ • Biking • Basketball 	<ul style="list-style-type: none"> • Playground use • Walking • Being with family 	<ul style="list-style-type: none"> • Walking • Fishing • Rest/relaxation 	<ul style="list-style-type: none"> • Celebration/ parties • Picnicking/ BBQ • Spending time with family 	<ul style="list-style-type: none"> • Walking • Playground use • Swimming / going to the lake
Fear and Safety Concerns	<ul style="list-style-type: none"> • Violent crime • Being over • Accidents • Behavior of others 	<ul style="list-style-type: none"> • Violent crime • Kids getting lost • Drowning • Being alone • Getting lost inside the park 	<ul style="list-style-type: none"> • Snakes • Bees • Water-viruses • Getting lost inside the park • Hunters • Being alone • Behavior of others 	<ul style="list-style-type: none"> • Water-viruses • Getting lost • Darkness • Crime • Animals • People • Getting hurt 	<ul style="list-style-type: none"> • Violent crime • Getting lost inside the park • Kid's safety • Strangers • Crazy People • Behavior of others • Animals
Suggestions to Increase Awareness	<ul style="list-style-type: none"> • List of events • Description of what park offers • Clarifying "What is a regional park?" 	<ul style="list-style-type: none"> • List of events • Description of what park offers • Clarifying "What is a regional park?" 	<ul style="list-style-type: none"> • Clarifying "What is a regional park?" • Location • Directions 	<ul style="list-style-type: none"> • Description of what park offers • Locations based on activity • Directions • Communicating about which parks have what, schedules, locations, and contact information 	<ul style="list-style-type: none"> • Communicating about which parks have what • Communicating about what is happening at the park/ Events • Location

Table 2.2 Park Preferences and Concerns (Source: Regional Park Use Among Select Communities of Color, a Qualitative Investigation, Metropolitan Council, March 2014)

RECREATION TRENDS

Recreation Trends provide an understanding of national, regional, and local trends.

NATIONAL TRENDS

At a national level, according to the Outdoor Foundation's 2018 Outdoor Recreation Participation Topline Report, almost half of the American population participated in outdoor activities in 2017. The report shows increasing diversity in outdoor recreation participants with the overall American population being motivated to get outside for exercise and fitness. Participation has been slowly increasing over the past three years. The most popular outdoor activities by participation rate are as follows:

1. Running, Jogging, and Trail Running
2. Freshwater, Saltwater, and Fly Fishing
3. Road, Mountain, and BMX Biking
4. Hiking and Walking
5. Car, Backyard, Backpacking, and RV Camping

Some of the above-noted activities are currently accommodated at the park, and others can be considered.

Top-Growing Outdoor Activities:

1. Stand-Up Paddling
2. Cross-Country Skiing
3. BMX Bicycling
4. Adventure Racing
5. Boardsailing and Windsurfing
6. Kayak Fishing

For emerging activities, it will be important to consider ecological impacts and the demographics to which they would appeal. Not all trends are appropriate for Spring Lake Park Reserve and inclusion in this discussion does not constitute a recommendation. Some trends, such as mountain biking, bmx biking, and car/RV

Nationally Most Popular Outdoor Activities by Participation Rate:



1. Running / Jogging
19% of Americans /
55.9 million participants



2. Fishing
17% of Americans /
49.1 million participants



3. Road Biking, Mountain Biking, BMX 16% of Americans / 44.9 million participants



4. Hiking
15% of Americans /
44.9 million participants



5. Camping
14% of Americans /
41.8 million participants

Nationally Ranked Top-Growing Outdoor Activities:



1. Stand-Up Paddling
18% increase in participation from 2013 to 2016



2. Cross-Country Skiing
13% increase in participation from 2013 to 2016



3. BMX Biking
13% increase in participation from 2013 to 2016



4. Adventure Racing
11% increase in participation from 2013 to 2016



5. Boardsailing/Windsurfing
10% increase in participation from 2013 to 2016



6. Kayak Fishing
10% increase in participation from 2013 to 2016

RECREATION TRENDS

camping would significantly impact the park’s cultural and natural landscape and are not recommended.

STATEWIDE & REGIONAL TRENDS

In 2017, the Minnesota DNR created the Minnesota Outdoor Activities Survey, in which a random sample of 8,000 Minnesotans were invited to share information on their participation in outdoor activities, what motivates them to recreate, factors that limit participation, and preferences for communication. This survey showed an increase in those who considered outdoor activities to be important, growing from 57 percent in 2004 to 70 percent in 2017. Minnesotans from all regions are showing a greater willingness to travel farther for activities in which they occasionally participate. In the Twin Cities Metro, 26 percent of respondents are willing to travel 26 miles or more for daily or weekly activities; 43 percent of Minnesotans outside the metro are willing to travel this distance for activities. This information is particularly applicable to Spring Lake Park Reserve as a regional destination

Notable statewide and regional trends give insight to the long-term prospects for Spring Lake Park Reserve in terms of user base and challenges. Generally, the state and region are seeing an aging population, more localized user base, and increasing racial and ethnic diversity in user groups. Specifically, the statewide trends include:

- The fastest growing age group in Minnesota, and the Spring Lake Park Reserve Service Area, is the 65-and-older group, which will shift recreation trends. Walking, jogging, stand-up paddle-boarding, and geocaching are all statewide trends on the rise according to the MN DNR. (Met Council System Analysis of the Regional, Recreation Open Space System Study, 2016).
- Programs and facilities focused on an older adult population will assume a greater importance in the years to come. Older adults experience greater physical limitations, so it will be important to ensure that facilities and

services are accessible (DC Parks Visitor Service Plan).

- The number of non-local visits (visits to regional parks made by people who do not live in the jurisdiction of the respective regional park implementing agency where the park is located) are declining (Met Council 2040 Regional Parks Policy Plan).
- Facilities in regional parks need to be assessed to ensure they help meet the needs of the growing ethnically diverse segments of the population (SLPR MP 2003).
- Technology will continue to have a greater presence in parks and may facilitate new recreational activities, such as those using drone, eSports, or GPS-dependent activities (NRPA, Predictions for Parks and Recreation’s Top Trends in 2019).



Recreational Walking



Camper Cabins



Serving Diverse Populations



GPS-Dependent Activities

DEMAND FORECASTING AND NEEDS



Bison observation



Biking and Mountain Biking



Nature Play Areas



Winter Hiking

DESIRE OF EXISTING USERS

Based on Twin Cities Metro and Dakota County demographic projections and recreation trends, future visitors to Spring Lake Park Reserve are likely to be older and more diverse than ever before. Catering to these populations will require some adjustments in the way that the park programs and markets itself. As people age, their recreation needs change. Older adults will require facilities and equipment that meet their mobility needs as they age, as well as programming that caters to their interests, capabilities, and activity level. People of color tend to participate in nature-based recreation less than white and/or non-Hispanic populations, so introducing these populations to outdoor recreational activities and encouraging continued participation will be essential to maintaining use of the regional parks and trails system in the future. It will be important to overcome people's perceptions of park safety and promote awareness of the park system and its offerings.

People of lower incomes tend to visit regional parks at lower rates than those with higher incomes. Ensuring that the park is financially accessible and offering affordable equipment rentals will help ensure the park can be used by all residents.

Spring Lake Park Reserve's 2017 Visitation Estimate, according to the Met Council, was 115,200 visits. This is about one-seventh of the Lebanon Hills Regional Park visitation estimate of 886,800. By emphasizing Spring Lake Park's high-quality natural resources and unique cultural resources, there is opportunity appeal to more people.

RESPONDING TO EXISTING USER DESIRES

ESRI's 2019 Sports Market Potential indicates regional interest in a wide range of outdoor activities and park programming. Swimming, jogging, and hiking were all reported as frequent respondent activities. Boating, canoeing/kayaking, and

DEMAND FORECASTING AND NEEDS

bicycling were also reported with high frequency. Some of these regional patterns were reflected in more localized engagement about the future of Spring Lake Park Reserve.

Online mapping, open houses, and focus groups explored the interests of existing users at Spring Lake Park Reserve. Participants expressed interest in bison observation opportunities as a natural and cultural landscape asset and learning opportunity, birding, biking and mountain biking, camping, and winter hiking. Interest in outdoor education programs and interpretive themes supports more passive recreation focused around the unique education opportunities the park offers. Some existing park users suggest that their ability to take advantage of current park offerings is limited by the lack of specialized and basic facilities. For example, increased restroom access, overlooks for birding, and a warming structure to encourage more winter use would support longer stays and seasonal use. Winter users also requested differentiated trails for skiing and snowshoeing/ winter hiking as the two activities require different maintenance.

PLANNING FOR FUTURE PARK USERS

Spring Lake Park Reserve can showcase the park's natural and cultural landscape as well as integrate emerging activities. In addition, to better serve future park visitors, provide basic popular activities and protect/enhance the ecological integrity and expansive undeveloped nature of the Reserve.

- Spring Lake Park Reserve offers a unique combination of Mississippi River frontage, high-quality natural landscape, and a rich cultural landscape with unmeasurable significance to the Dakota people. Providing physical and visual access to the river, enhancing natural resources, and more thoroughly integrating cultural interpretation into the park experience can work together to provide a unique park visit. There is opportunity to proactively facilitate Dakota Tribal community reconnection with this culturally significant landscape.

- Specialized uses, such as cultural interpretation and wildlife viewing, draw participants from a larger geographic area due to limited availability. Events, such as races or music, help introduce new visitors to the park and its offerings.
- With the Twin Cities becoming increasingly urban, places that offer nature-based recreation in proximity to the Twin Cities Metro have an advantage.
- Rental equipment will give more people an opportunity to try to get exposure to new activities.

As the population of Dakota County and the region continues to change and expand, the parks system must also be able to adapt and accommodate new users. Spring Lake Park Reserve is a key resource for the Twin Cities and is well-positioned to become a regional destination. National and regional data in combination with community engagement feedback (outlined in more detail in Appendix B) has informed a vision for more inclusive programming and recreation at SLPR in order to better serve the park users of the future.



Spring Lake Park Reserve Site Photo, 2019

PARTNER AND COMMUNITY ENGAGEMENT

OVERVIEW

Derived from the Public Participation Spectrum developed by the International Association for Public Participation, the public participation goal was to consult. The master planning process sought to reach a range of representative stakeholders to build awareness and support for future investment in Spring Lake Park Reserve. Specific objectives included:

- Identifying what would make the park relevant and fun for both current park users and those who are interested in park experiences but do not visit the park today.
- Assessing park needs for recreation, interpretation, visitor services, natural resource restoration, and natural resource management.
- Assessing opportunities to improve the park's appeal as a regional destination, building on the park's Mississippi River setting, high-quality natural resources, and significant cultural resources.
- Engaging with Tribal Historic Preservation Officers representing the Prairie Island Indian Community, Shakopee Mdewakanton Sioux Community, Lower Sioux Indian Community, and the Upper Sioux Community to better understand the significance of the park's indigenous cultural landscape and to receive guidance on how to manage significant sites.
- Building new and strengthening existing relationships with stakeholders, project partners, and residents.

To achieve the project objectives, the planning process developed targeted engagement activities for those who actively use Spring Lake Park Reserve as well as County residents who may only occasionally visit county parks and may not have visited Spring Lake Park Reserve. In addition, effort was made to reach demographics underrepresented in Dakota County park visits including Indigenous, Hispanic/Latinx, people living with disabilities, people with low incomes, youth, and older adults. Findings from dialogues conducted in 2016 as part of the County's Visitor Park Services Plan with people underrepresented in park visits, findings from the Metropolitan Council's 2014 Report Regional Park

Use Among Select Communities of Color, and findings from the Metropolitan Council's 2019 Report Youth & Parks: Getting Outdoors Close to Home also influenced recommendations in this plan. A complete list of engagement activities as well as summaries of input received can be found in Appendix B.

The approach for community engagement for the master planning process was based on the following principles:

- **Make it Fun and Easy.** Make engagement convenient, interactive, thoughtful, and valuable to all parties. Whenever possible, the County should seek opportunities to meet people on their terms, going beyond a traditional community meeting.
- **Include Everyone.** Provide opportunities for all interested parties to participate and be heard regardless of race, income, religion, gender, or age (including youth and seniors). Reach and engage diverse populations of the area, especially those typically underrepresented in Dakota County Parks and planning/engagement processes.
- **Speak their Language.** Make engagement activities and materials inclusive, written in plain language, and translated into multiple languages, as appropriate (e.g., Spanish).
- **Build relationships.** Set the stage for developing long-term relationships with underrepresented populations. Build partnerships based on common goals with cities, agencies, and non-profit organizations.

Community engagement began in 2019 and shifted to online engagement opportunities in March 2020, due to the COVID-19 Pandemic stay-at-home order and social distancing best practices.

PARTNER AND COMMUNITY ENGAGEMENT

PROMOTION OF THE PLANNING PROCESS

A variety of marketing and outreach methods were employed to contact potential park users and interested parties. The County's website hosted a page with information about the park master plan; flyers were mailed to residents living close to the park; there was outreach to those who had rented the gathering center and picnic shelters in the past; press releases included opportunities for public engagement; signs were posted within the park; and social media and email were used to alert Dakota County residents about the planning process.

PARTNER ENGAGEMENT

The project team engaged partners throughout plan development, including the City of Rosemount, Nininger Township, the City of Hastings, the National Park Service, the MnDNR, and the YMCA. Key to the planning process was engaging with Tribal Historic Preservation Officers (THPOs) through a series of listening sessions.

Tribal Historic Preservation Officers (THPOs)

Because of known Indigenous cultural sites within the park, consultation with THPOs from the Prairie Island Indian Community, Shakopee Mdewakanton Sioux Community, Lower Sioux Indian Community, and Upper Sioux Community was an integral part of the project. The project team held seven listening sessions with the THPOs at key times during the planning process. The THPOs reviewed plan concepts, discussed how to best respect and protect culturally significant areas, and guided the interpretive planning. In addition, the Upper Sioux Tribal Historic Preservation Office completed a Traditional Cultural Property (TCP) Survey for the portions of the park reserve being considered for new recreation or redevelopment during the fall of 2020. The survey revealed a significantly higher concentration of TCPs in the park than had been previously known, and the Master Plan was adjusted based on the new information.

Overall, the THPOs expressed comfort with the goals for natural resource restoration, recreation program, and interpenetration within the park reserve and strongly recommend further study and planning to understand and protect TCPs in the park from additional disturbance. Areas for further study were determined and are noted throughout the master plan document, including:

- Further study is to ensure that existing cultural assets and significant sites are protected.
- Additional study is needed in the Upper Park to more fully understand the extent and significance of TCPs. This will allow for more informed decisions about appropriate recreation program, interpretation, and conceptual locations.
- All future implementation projects should include Tribal consultation during the design and engineering phases and Tribal monitoring during construction.
- Interpretation should embed culturally significant plantings and Dakota language, and discuss the history of the landscape while remaining sensitive to the significance and integrity of culturally significant sites.

PHASE 1 COMMUNITY ENGAGEMENT

Community engagement events for the first phase of the Spring Lake Park Reserve Master Plan Update were held October to December 2019. The events were intended to engage a cross section of Dakota County residents, park users, and stakeholders to collect valuable perspective, and input and generate interest in the planning process.

In total, there were more than a dozen engagement activities with nearly 1,000 people engaged. Events were conducted using various formats including an open house, pop-ups at existing community events, individual and agency meetings, stakeholder meetings, and emails and phone calls. Online engagement consisted of an interactive map and questionnaire on the Social Pinpoint platform and a questionnaire sent to existing and potential partner community organizations.

PARTNER AND COMMUNITY ENGAGEMENT

During Phase 1, effort was made to reach out to people who are typically underrepresented in park visits. Events included:

- Met Council Youth and Parks Research Study (Latinx, youth)
- Latino Health / Salud Latina Community Health Fair, Burnsville (Latinx, youth)
- Reality Store Resources Outreach, Dakota County Technical College (people living with disabilities, youth)
- Sharks (people living with disabilities, youth)
- Hastings Y Pop-up Event (older adults)
- South St. Paul Early Childhood Education (Latinx)
- Hastings Family Service (People with low incomes)

Below are the key themes that emerged:

- Spring Lake Park Reserve is appreciated for its beauty and restored natural areas. People are primarily drawn to the park for the setting, bird/wildlife observation, space rental, trails, and archery.
- Since Spring Lake Park Reserve is mainly accessible by car and is surrounded by farmland, the park is primarily a monthly destination for visitors. Some locals mentioned that they will occasionally bike or run from Hastings to the park along the new Mississippi River Trail.
- The spectacular Mississippi River Valley views at this park are a primary draw for many visitors, and it will be important to protect and continue to enhance these views.
- Users acknowledge that this is a park reserve and plays a major role as bird habitat along the Mississippi River Flyway.
- People had numerous ideas for how to improve the clarity and length of trails with particular interest in expanding or creating winter trails, running trails, and mountain bike trail offerings.
- People had positive responses to the interpretive themes outlined in the 2003 master plan. Suggestions on Social Pinpoint and on the activity board also

requested more interpretation of the unique cultural resources that exist on this site.

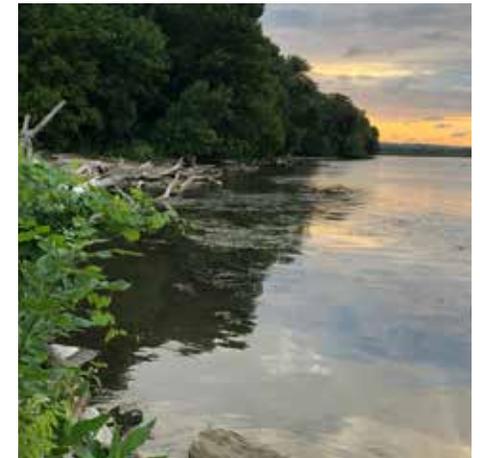
- Participants are interested in new activities and amenities in addition to improving existing facilities including camping, equipment rental, safer boat launch, improved playground, and more youth programs.

PHASE 2

The purpose of Phase 2 engagement was to seek input on draft concepts that proposed new programming, amenities, and natural resource investment. The feedback received was used to inform a preferred master plan. Engagement occurred in April, May, and June 2020 during the COVID-19 pandemic and the social unrest following the death of George Floyd. Engagement methods included evaluation of the concepts online via Social Pinpoint, a Survey, an online open house, social media mini polls, email responses, and stakeholder meetings. During Phase 2, nearly 1,000 unique individuals were engaged. The need to



THPO Site Walk, 2019



Planning Commission Tour, 2019

PARTNER AND COMMUNITY ENGAGEMENT

pivot to online platforms and competing priorities, especially for communities disproportionately impacted, meant that communities underrepresented in park visits were harder to reach and less likely to provide input than during Phase I.

Key themes that emerged in Phase 2 were:

- **Natural Features:** Many comments indicate that the community value maintaining the park as a “reserve” that will not be overdeveloped especially Native Prairie and the Bluff Ecosystem. Over-development was a consistent concern across engagement types.
- **Views to the Mississippi River:** The community values the visual connection to the Mississippi River and favored opportunities to visually connect with or get closer to the River throughout the Park.
- **Soft Surface Trails:** Narrow, natural surface walking/hiking trails that explore remote areas of the park with minimal impact to natural resources were favored by community members.
- **Bison:** There was a strong positive response to bringing bison to the park and including an interpretive center to help educate visitors.

PHASE 3

The purpose of Phase 3 engagement was to seek feedback on the Draft Master Plan and Natural Resources Management Plan Documents and confirm priorities. Community engagement events occurred February 17, 2021 to April 19, 2021. Over 350 individuals participated and Facebook reach was over 22,000. All events occurred on digital platforms due to the COVID-19 pandemic. The engagement strategies were intended to continue to engage a cross section of Dakota County residents, park users, and stakeholders. Particular attention was made to notify those who had participated in the Spring Lake Park Reserve planning process in 2019 and 2020.



Community Open House, 2019

PARTNER AND COMMUNITY ENGAGEMENT

Engagement methods utilized:

- Email outreach to stakeholders and past participants in the planning process
- POLCO Questionnaire
- Online Open House
- Social Media
- Dakota County Staff and Stakeholder Meetings and presentations (including YMCA, DNR, Wilderness In the City, Legacy of Nature Alliance, Hastings Environmental Protectors, Public Art Citizen Advisory Committee, Tribal Historic Preservation Officers, Minnesota Indian Affairs Council, Minnesota State Office of Archeology, Hastings City Council, Rosemount Parks and Recreation Commission, Hastings Rotary Club)

KEY THEMES

Feedback on the Draft Master Plan showed that the majority of respondents are supportive of the plans.

- There is broad support for natural resource restoration, bison reintroduction, river access, wildlife viewing, and minimal impact natural surface walking trails.
- There is also support for more specialized activities that such as nature themed play/nature play, camping, paved biking trails, picnicking, cross-country skiing, and snowshoeing.
- Participants continue to place high priority on maps and park information, ADA accessibility, restrooms, and equipment rentals.
- Several participants expressed appreciation for Tribal Historic Preservation Officer involvement and consultation.
- Many participants continued to voice concerns about over-development and expressed interest in further environmental review as part of the design and construction for specific projects.
- Many urged that sustainable design principals be utilized to minimize the ecological impact of park development.

What is your level of support for the Draft Master Plan for Spring Lake Park Reserve?



EQUITY ANALYSIS

PROJECT DATA

As covered earlier in this chapter, demographics of those living within the service area in 2019 are white (83%), Black (7.58%), American Indian (0.54%), and Asian (6.34%). Eight percent of the population is Hispanic. Median Income in the service area is \$85,000. Fourteen percent of the population is over 65, and 28% is under 18. In general, demographics of census blocks closer to the park are less diverse and wealthier than the larger service area.

Dakota County's Parks, including Spring Lake Park Reserve, are not drawing residents from all communities. The Dakota County Visitor Services Plan and Metropolitan Council research on visitor demographics has found that several groups are under-represented among park visitors. People of color, people with disabilities, seniors, and those with lower household income comprise a smaller share of park visitors than would be predicted by their proportion of the general resident population.

Current reasons for underrepresentation include distance from home, lack of awareness, time, and transportation options. In addition, safety concerns, language barriers, weather, cultural or religious insensitivity and discrimination, and lack of desired recreation facilities contribute to inequity in park use.

The historic reasons for this inequity are numerous. Reasons can be traced to the US-Dakota War of 1862 after which many Dakota people living in the area were sent into exile. In the 150 years that have followed, government programs and policies have enabled white settlement and discouraged people of color from living in the rural areas and suburbs surrounding Spring Lake Park Reserve. In addition, government policies, institutional racism, and personal discrimination have discouraged generations of people of color from visiting parks. People who were not raised going to parks tend to not visit parks as adults or take their children to parks.

EVALUATION SUMMARY

The Master Plan was directly shaped by the community input received both from the general public and underrepresented audiences. Recurring themes expressed throughout the process included preserving and protecting natural resources, increasing access to the Mississippi River, providing access to more of the park with low-impact natural surface trails, emphasis on cultural interpretation, and adding visitor amenities such as more restrooms, improved playground, equipment rentals, and picnic facilities. Recurring input themes, feedback received, and plan response are summarized in Table 2.3.

Though the Master Plan addresses park activities and amenities that may result in increased park use among underrepresented audiences and sets a goal of creating a park that is welcoming to people of all abilities, races, and backgrounds, additional efforts will be needed to address equity. Barriers to park use among demographic groups underrepresented in park visits include lack of awareness of the park and its distance from most of the County's residents. Dakota County efforts, such as the Parks Awareness and Promotion Plan, and a Marketing Plan which will be completed in 2021 will recommend strategies to raise park system awareness.

EQUITY ANALYSIS

	Contributing Stakeholder Group	Phase 1: General Input October 2019	Phase 2: Initial Concepts April–June 2020	Phase 3: Draft Plan Review 2021	Master Plan Recommendations
Natural Resource Restoration	General public Older adults Tribal Historic Preservation Officers	Appreciation for park's beauty and high-quality natural areas	Strong support for natural resource restoration	Strong support for natural resource restoration	New development outside of the existing use areas is limited. Long term vision for the park is for full restoration.
Bison Reintroduction	General public People living with disabilities Tribal Historic Preservation Officers	Support for Bison Reintroduction	Support for Bison Reintroduction	Support for Bison Reintroduction	Bison reintroduction is recommended in the Plan.
Birding/Wildlife viewing	General public	Support for birding	High support for wildlife viewing	Strong support for both wildlife viewing and birding	Natural resource restoration to support wildlife is recommended in the Plan.
Mountain Biking	General public	Mixed feedback on mountain biking	Limited comments	A few comments requesting mountain biking	Mountain biking is not included in the Plan due to park's sensitive ecological and cultural landscape.
Hiking	General public	Requests for additional hiking trail mileage and easier access to the trails in the center of the park	Support for low impact natural surface hiking trails Concern about Hilary Path trailhead	High support for low impact natural surface hiking trails. Some concern about habitat fragmentation	Camping area and associated trails are moved away from shore to reduce habitat fragmentation.
Mississippi River Views	General public Latinx participants	Interest in river valley views	Support for Mississippi River views/overlooks	Support for Mississippi River views/overlooks	Additional river valley overlooks are included in the Plan.
Play	General public	Requests for improved playground, shade, nature play	Support for nature-based play	Support for nature themed and nature play	The Plan includes renovation of existing play area, inclusion of nature play, shade, and closer proximity to restrooms

Table 2.3 Key Community Input Themes and Master Plan Response

EQUITY ANALYSIS

	Contributing Stakeholder Group	Phase 1: General Input October 2019	Phase 2: Initial Concepts April–June 2020	Phase 3: Draft Plan Review 2021	Master Plan Recommendations
Picnicking/Four Season Rental Space	General public People living with disabilities	Requests for more handicapped accessibility in picnic area	No comments	Interest in picnicking in picnic areas and informal opportunities at overlooks or other park locations	Renovation of existing picnic shelters, new non-reservation shelters, new four-season reservation space is included in the Plan.
Mississippi River Access/River Use Areas	General public Latinx participants Older adults	Requests for safer boat launch and more places to access the river	Support for boat launch on west side of park	Support for boat launch on west side of park Concern about Upper Park use area impacts	River use areas are recommended at the Landing (with boat launch) and in Upper Park (walk-in only, subject to further cultural and environmental review).
Camping	General public Latinx participants	Interest in camping	Highest support for walk-in/bike-in/canoe-in camping along with concerns about locations and environmental impact.	Continued interest in camping from many with concern about environmental and cultural impact from some participants	Walk-in/bike-in camping are included in the Plan and are located south of the Mississippi River Greenway Trail to reduce impact to shoreline habitat.
Equipment Rental	General public	Interest in equipment rental: bikes, skis, snowshoes, watercraft	Support for equipment rental	Support for equipment rental	Equipment rental is recommended in the Plan.
Archery Trail	General public People living with disabilities Youth Tribal Historic Preservation Officers	Appreciation for the archery trail	No comments	Suggestions to expand rental and programming to increase use	Existing archery trail remains in the Plan.

Table 2.3 Key Community Input Themes and Master Plan Response (continued)

EQUITY ANALYSIS

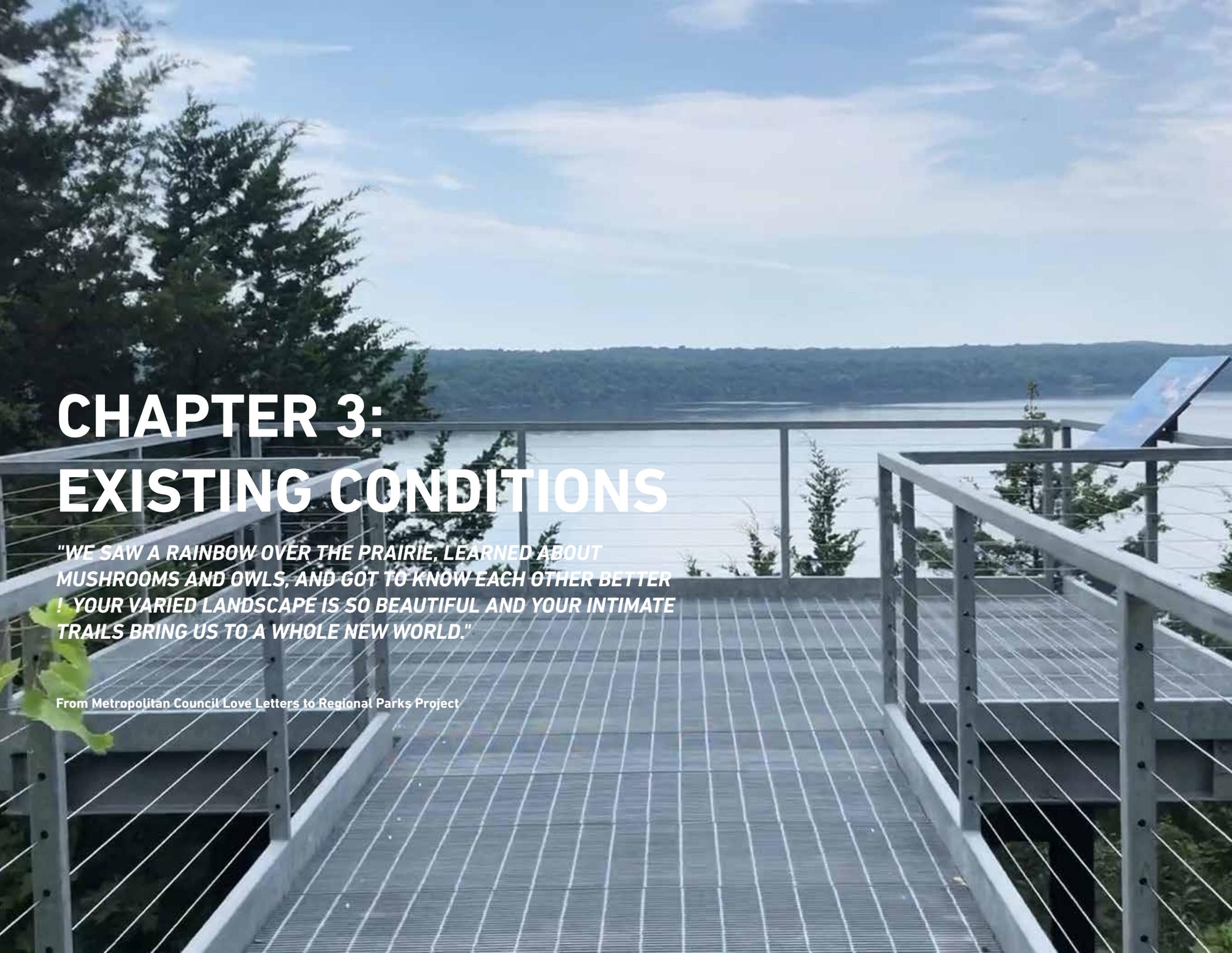
	Contributing Stakeholder Group	Phase 1: General Input October 2019	Phase 2: Initial Concepts April–June 2020	Phase 3: Draft Plan Review 2021	Master Plan Recommendations
Cultural Landscape Interpretation	General public Older adults Tribal Historic Preservation Officers	Positive response to the themes in the 2003 master plan, requests for more interpretation, interest in outdoor education programs	Support for an interpretive center, opportunities for partnership with indigenous youth organizations	Positive response to interpretation themes around natural environment, wildlife, history, and Indigenous culture	The Plan recommends guided and self-guided interpretation to be integrated into all aspects of the visitor experience.
Winter Use	General public	Interest in ski and snowshoe trails	Interest in ski and snowshoe trails	Support for cross-country ski and snowshoe trails	The Plan recommends maintaining the existing ski trail mileage, increasing snowshoe and winter walking trail mileage, and winter equipment rentals.
Mississippi River Greenway	General public Latinx participants Older adults	Interest in biking Interest in MRG completion	Continued interest in completion of the MRG	Continued interest in completion of the MRG	Dakota County is working on completion of the MRG in a separate process with anticipated opening in 2022.
Barriers to park use	General public Latinx participants Older adults Youth Low-income households	Awareness, transportation, cost for events, time, distance	No comments	More information/ signage on what there is to do in the park	Dakota County is currently preparing an awareness and outreach plan and will be completing a Marketing Plan.
Photography	General public	Enthusiasm for the park as a location to take photos	No comments	Limited comments	Additional river valley overlooks are included in the Plan.

Table 2.3 Key Community Input Themes and Master Plan Response (continued)

EQUITY ANALYSIS

	Contributing Stakeholder Group	Phase 1: General Input October 2019	Phase 2: Initial Concepts April–June 2020	Phase 3: Draft Plan Review 2021	Master Plan Recommendations
Stargazing	People living with disabilities Youth General public Low-income households Tribal Historic Preservation Officers	Request for stargazing/observatory/indigenous star knowledge	Concerns over light pollution from Flint Hills	No comments	An observatory is not included in Plan due to light pollution from Flint Hills.
Restrooms	General public Latinx participants	More bathroom facilities, longer open hours	Support for increased restroom access	Continued support for more restrooms in the park, request for accessibility features, including adult changing stations	Five new restroom/vault toilet locations are included in the Plan
Traditional Cultural Properties	Tribal Historic Preservation Officers General public Latinx	Limited comments	Protection of Traditional Cultural Properties within the park	Protection of TCP within the Park Interest in monitoring number of visits by Indigenous people to the park over time Desire from the public to learn more about past and current indigenous connection to the landscape	The Plan recommends further study and discussion around cultural sites for the Upper Park, includes cultural stewardship recommendations, recommends Tribal consultation during design and engineering, and tribal monitoring during construction for future park projects. The Plan recommends on-going collaboration and consultation regarding interpretation, programs, and operations.

Table 2.3 Key Community Input Themes and Master Plan Response (continued)



CHAPTER 3: EXISTING CONDITIONS

"WE SAW A RAINBOW OVER THE PRAIRIE, LEARNED ABOUT MUSHROOMS AND OWLS, AND GOT TO KNOW EACH OTHER BETTER ! YOUR VARIED LANDSCAPE IS SO BEAUTIFUL AND YOUR INTIMATE TRAILS BRING US TO A WHOLE NEW WORLD."

From Metropolitan Council Love Letters to Regional Parks Project

OVERVIEW



Picnic Shelter at Schaar's Bluff, 2019



DNR Boat Launch, 2019



View from Schaar's Bluff, 2019



Church's Woods and Hiking Trails, 2019



Overlooks, 2019



Gathering Center, 2019



Asphalt and Concrete Cultural Trail at Schaar's Bluff, 2019



McCarriel's Mill, 2019



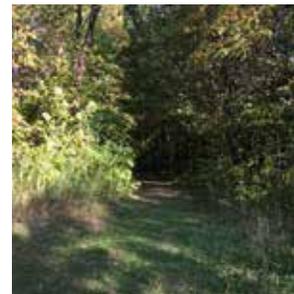
Mississippi River Greenway Trail, 2019



Soft Trail near the picnic area, 2019



Mown Soft Trail in the field, 2019



Mown Trail transition, 2019

This chapter describes current conditions in Spring Lake Park Reserve for the following major park assets:

- **Cultural Landscape:** overview, significance, history summary, and analysis of cultural significance and contributing features
- **Natural Resources:** inventory and assessment, including topography, water resources, vegetation, and wildlife
- **Existing Park Conditions:** inventory and assessment, including issues and opportunities
- **Outdoor Education & Events:** a summary of current park programming and services
- **Key Considerations:** key findings to consider in development of concepts and recommendations

CULTURAL LANDSCAPE OVERVIEW

This section integrates environmental and cultural understanding of Spring Lake Park Reserve to inform the planning process. It begins with an overview of the landscape's historic significance, followed by an illustrated chronological narrative of physical landscape change over time. Features that potentially contribute to the landscape's significance are identified at the end of the section.

Inventory and analysis follow a cultural landscape approach based on federal standards, including [A Guide to Cultural Landscape Reports: Contents, Process, and Techniques](#) and [The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes](#).¹ This approach relies on historical documentation as a basis for understanding landscape evolution, building on the site history from the 2003 Master Plan.²

This chapter identifies potentially significant features using existing research, as formal determination of significance has not occurred for all resources within the park.

WHAT IS A CULTURAL LANDSCAPE?

A cultural landscape is “a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values”³ The four types of cultural landscapes are:

Historic Site: significant association with a historic event, activity, or person such as battlefields and house properties of presidents.

Historic Designed Landscape: designed or laid out by a landscape architect, master gardener, architect, or horticulturist using design principles, or by others working in a recognized style or tradition. It may be associated with a significant person(s), trend, event, or development in landscape architecture. Examples include parks, campuses, and estates.

Historic Vernacular Landscape: shaped by human activities, reflecting the physical, biological, and cultural character of everyday lives. Function is significant in vernacular landscapes, which can be a single property or collection of properties. Examples include rural villages, industrial complexes, and agricultural landscapes.

Ethnographic Landscape: includes natural and cultural resources defined as heritage resources, such as contemporary settlements, sacred sites, and unique geological structures. Plant communities, and animals, subsistence and ceremonial grounds are often included.⁴

1 Robert R. Page, Cathy A. Gilbert, and Susan A. Dolan, [A Guide to Cultural Landscape Reports: Contents, Process, and Techniques](#) (Washington, DC: U.S. Department of the Interior, National Park Service, Cultural Resource Stewardship and Partnerships, Park Historic Structures and Cultural Landscapes Program, 1998); and Birnbaum and Peters, [The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes](#), 3-5.

2 Brauer and Associates, Ltd. [Spring Lake Park Reserve Master Plan](#) (Dakota County, MN: Dakota County Planning Department, 2003).

3 Charles A. Birnbaum, “Protecting Cultural Landscapes: Planning, Treatment and Management of Historic Landscapes,” [Preservation Brief 36](#) (US Department of the Interior, National Park Service, 1994).

4 Birnbaum, [Preservation Brief 36](#).

CULTURAL LANDSCAPE SIGNIFICANCE

WHAT IS THE NATIONAL REGISTER OF HISTORIC PLACES?

The National Register of Historic Places (NRHP) recognizes districts, sites, buildings, structures, and objects that meet at least one of four significance criteria and possess integrity.⁵

Criterion A. associated with events that significantly contribute to broad patterns of history.

Criterion B. associated with the lives of significant persons in the past.

Criterion C. embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master or possess high artistic values; or represent a significant, distinguishable entity whose individual components may lack distinction.

Criterion D. have yielded, or are likely to yield, information important on history or prehistory.⁶

POTENTIALLY SIGNIFICANT VERNACULAR LANDSCAPE

Although no part of Spring Lake Park Reserve is listed in the National Register of Historic Places, the NRHP framework can be used to evaluate the potential significance and integrity of the park's historic resources.

The McCarriel's Mill site may be locally significant under Criterion A related to the local history of Nininger township, early Euro-American settlement along the Upper Mississippi River, and the boom town of Nininger. After Nininger's decline, the McCarriel family continued mill operation until construction of Lock and Dam No. 2. The proposed period of significance for the McCarriel's Mill Site is

⁵ National Park Service, "How to Apply the National Register Criteria for Evaluation," *National Register Bulletin 15* (Washington, DC: US Department of the Interior, National Park Service, 1995), 44.

⁶ National Park Service, *National Register Bulletin 15*, 2.

1854 to 1932, beginning with its construction and ending with demolition of the mill structure following construction of Lock and Dam No. 2. This site also may be significant under Criterion D. A 2019 cultural resources assessment found the site to have moderate to high potential for intact post-contact archaeological resources.⁷

There are seven archaeological sites associated with early Indigenous occupation within the study area, and one post-contact archaeological site. With a high concentration of archaeological sites and location on the Mississippi River and Spring Lake, the park may also be significant under Criterion D due to its moderate to high potential for intact archaeological resources associated with Indigenous occupation and use.

The park contains remnants of late 19th and early 20th century Euro-American agricultural development, including farm buildings dating from the early to mid-20th century at the former Schaar farm and a foundation possibly associated with the 1857–1858 Blakely property. Remaining period buildings do not appear to retain adequate integrity to be eligible for the National Register of Historic Places, as they are disconnected from their agricultural context by park development and restoration of prairie and oak savanna.

⁷ 106 Group, Ltd., *Cultural Resources Literature Review and Assessment for the McCarriel's Mill Site at Spring Lake Park Reserve* (Dakota County Parks Department, 2019).

CULTURAL LANDSCAPE SIGNIFICANCE

SIGNIFICANT ETHNOGRAPHIC LANDSCAPE

Ethnographic significance of the landscape was reviewed by Tribal Historic Preservation Officers of associated Indigenous tribes and nations for inclusion in this plan and supported by a Traditional Cultural Property (TCP) Survey conducted in portions of the park in fall 2020. An expanded discussion of significance is provided in Appendix A.

The TCP Survey identified TCPs and culturally sensitive areas within the boundaries of the park, and evaluated the cultural significance of known archaeological sites. A Traditional Cultural Property, as defined by the National Park Service, is a “property that is eligible for inclusion in the National Register of Historic Places (NRHP) based on its associations with the cultural practices, traditions, beliefs, lifeways, arts, crafts, or social institutions of a living community. TCPs are rooted in a traditional community’s history and are important in maintaining the continuing cultural identity of the community.”⁸

The park landscape has great significance to the history, cultural identity, spirituality, and lifeways of the Dakota Oyate as a place where the ancestors of today’s associated Indigenous communities lived and are buried. It lies within the upper Mississippi River valley regional center where people came together for ceremonies and events to reinforce communal ties and to forge alliances.⁹ The landscape also has proximity to significant Indigenous historic village locations at Pine Bend, Grey Cloud Island, and the original location of Inyan Sa (Red Rock).

The park landscape may also be significant as a portion of the Bdote, an area surrounding the Mississippi and Minnesota river confluence that has deep

8 National Park Service, “Bulletin 38: Guidelines for Evaluating and Documenting Traditional Cultural Properties” U.S. Department of the Interior, National Park Service, Interagency Resources Division, 1.

9 Bdote Memory Map, Dr. Chris Mato Nunpa, Phd and Dave Larsen, Dakota elder, accessed November 2018 as part of the Indian Mounds Regional Park Cultural Landscape Study, <http://bdotememorymap.org/>.

significance to many Dakota communities.¹⁰

“[Mdewakanton] Dakota elders tell of the creation of humans occurring in our homeland of Minisota Makoce, but specifically at the place called Maka Cokaya Kin, or the Center of the Earth. This place is at Bdote, which means the joining or juncture of two bodies of water and in this instance refers to the area where the Minnesota River joins the Mississippi.” Bdote extends out from the confluence, including Historic Fort Snelling, Mni Si (Coldwater Spring), Oheyawahi (Pilot Knob), Imnīžaska (the white river bluffs), and other significant sites along the Mississippi and Minnesota river corridors.

Traditional stories and natural landscape features are mutually supporting parts of existence in Dakota culture, rather than a distinction between “natural” and “cultural.” The interconnectedness of everything is Mitakuye Owasin. This includes the land, earth, rocks, sky, rivers, animals, plants, ancestors, and living

10 The term Bdote (also rendered as Mdote or Mendota, meaning “confluence”), is used by some Dakota groups to describe where the rivers meet. Documentation of the importance of the Bdote to Indigenous Peoples is part of the oral history of many communities. Published sources include: Gary Clayton Anderson and Alan R. Woolworth, *Through Dakota Eyes: Narrative Accounts of the Minnesota Indian War of 1862* (St. Paul, Minnesota: Minnesota Historical Society Press, 1988); Roy W. Meyer, *History of the Santee Sioux: United States Indian Policy on Trial* (Lincoln, Nebraska: University of Nebraska Press, 1967); Gwen Westerman and Bruce White, *Mni Sota Makoce: The Land of the Dakota* (St. Paul, Minnesota: The Minnesota Historical Society, 2012); Waziyatawin Angela Wilson, *What Does Justice Look Like? The Struggle for Liberation in Dakota Homeland* (St. Paul, Minnesota: Living Justice Press, 2008); Waziyatawin Angela Wilson, *In the Footsteps of Our Ancestors: The Dakota Commemorative Marches of the 21st Century* (St. Paul, Minnesota: Living Justice Press, 2006); Nick Coleman and John Camp, *The Great Dakota Conflict* (St. Paul, Minnesota: Pioneer Press Dispatch, 1987). Further documentation supports the long-time association of Indigenous Peoples with the area: Valentine Mott Porter, ed., “Journal of Stephen Watts Kearny” *Missouri Historical Society Collections* 3, no. 2 (April 1908): 103-111; Christina Harrison, *Before the Fort: Native American Presence at the Confluence of the Mississippi and Minnesota Rivers* (Minneapolis Park and Recreation Board, 2002); John O. Anfinson, Thomas Madigan, Drew M. Forsberg, and Patrick Nunnally, *River of History: A Historic Resources Study of the Mississippi National River and Recreation Area* (National Park Service, 2003); Summit Envirosolutions, Inc. and Two Pines Resource Group, LLC. *The Cultural Meaning of Coldwater Spring: Final Ethnographic Resources Study of the Former U.S. Bureau of Mines Twin Cities Research Center Property, Hennepin County, Minnesota* (National Park Service, Mississippi National River and Recreation Area, June 2006); David Mather, *Fort Snelling Historic District, Update of National Register of Historic Places Documentation* (Draft project outline dated March 24, 2015)

SUMMARY SITE HISTORY

descendants. All are one whole entity.

INDIGENOUS OCCUPATION AND USE, CA. 10,000 BCE–CE LATE 1840S

Landscape changes during this period are illustrated on Historic Period Plan 1.

Humans have lived within the park area for thousands of years, supported by the river, forest, and prairie landscape. Understanding of this vast time period is drawn from the oral history of the living communities, extant important sites associated with their ancestors, and remnants left behind in the archaeological record.

While archaeologists use various terms for early area inhabitants, Dakota people simply call the earliest populations of Minnesota their ancestors. Four fires of the Seven Council Fires (Oceti Sakowin) make up the Dakota Nation (Oyate). “They include the Mdewakanton (Dwellers by Mystic Lake), the Wahpekute (Shooters of the Leaves), Wahpetunwan (Dwellers Among the Leaves), and the Sisitunwan (Dwellers by the Fish Campground).”¹¹

PaleoIndian Tradition: ca. 10,000–6000 BCE

Humans likely began occupying the region as the last glaciers retreated (12,000 to 10,000 years ago), following the spread of plants and animals northward. The landscape initially was characterized by tundra, replaced by a boreal forest, and followed by a short-lived pine-birch-elm woodland as the climate warmed. People in this area likely lived in small, mobile groups hunting megafauna such as mammoth, mastodon, or ancient bison.¹²

11 Waziyatawin, *What Does Justice Look Like?*, 20.

12 Fleming et al., *An Archaeological Survey of Dakota County*, 34; page 11 indicates there are 4 known sites (outside of SLPR) in DC where either mammoth or mastodon

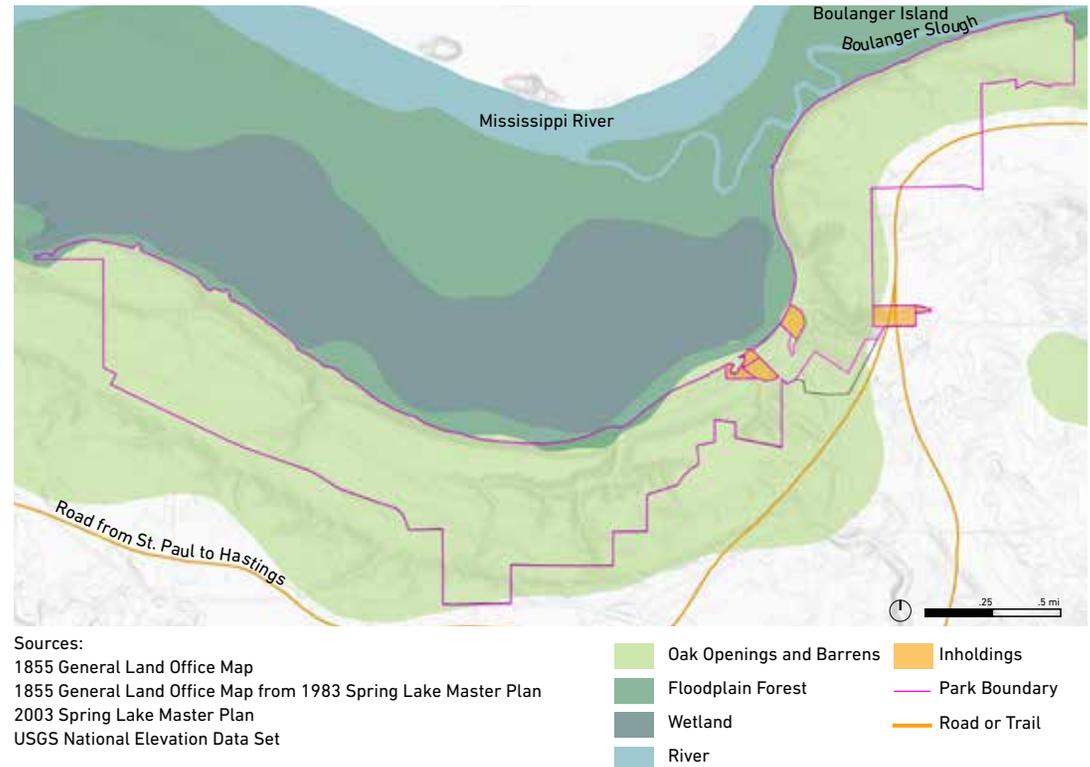


Figure 3.1 Historic Period Plan 1: 10,000 BCE–CE late 1840s

SUMMARY SITE HISTORY

By 8000 BCE (before common era), southeastern Minnesota was dominated by forests comprised of oak, maple, elm, and ash. Prairie expanded into east central Minnesota as the climate warmed over the next 2,000 years. By about 6000 BCE, the Dakota County area was predominantly prairie with deciduous forests in river valleys.¹³

Archaic Period, ca. 6000–1000 BCE

After 6000 BCE, the climate became wetter and cooler. Forest expanded, pushing prairie regions southwest and reaching its present-day extent between 2500 and 1200 BCE. People in the region likely became more locally-oriented, as evidenced by artifacts manufactured using less far-ranging raw materials, and more habitation sites. They took advantage of the wide range of plant and animal resources through hunting, gathering, and fishing.¹⁴

People likely lived in at least two locations on bluffs overlooking Spring Lake during this time. Artifacts suggest that portions of the landscape were used both in the summer and the fall. As described in the 2003 Master Plan, “The use of nets by the occupants of the Lee Mill Cave Site to catch fish points to a summer occupation of Spring Lake Park. The presence of acorns at the Ranelius Site indicates that people were also present in the park during the fall. During these times, the lake and especially the river would have provided not only consumables, but also places to bathe and to take refuge from the heat.” The water level in the lake is not known during this period. As a spring-fed waterbody draining into the Mississippi River, the water may have been high enough to have formed a lake or so low that it appeared as a marsh, as recorded during the 19th century.¹⁵

remains have been found.

13 Fleming et al., An Archaeological Survey of Dakota County, 37.

14 Fleming et al., An Archaeological Survey of Dakota County, 37; and Anfinson, River of History, 41-42.

15 Brauer and Associates, Ltd., Spring Lake Park Reserve Master Plan, 6.6.

Mound Construction, ca. 1000 BCE–CE 1100

Over the next 1,000 years, large, complex communities formed along waterbodies. Agriculture developed and wild rice cultivation intensified, supplemented by hunting, gathering, and fishing. With cooler and wetter climate conditions, lake levels likely rose.¹⁶

Park archaeological investigations suggest two occupations during this period. The first occupation, between about 200 BCE and CE 300, appears related to a cultural tradition referred to by archaeologists as “Hopewell Havana.” During this period, a vast trade network stretched across most of North America.¹⁷

Mounds in the park were likely constructed during the second occupation (between CE 300 and 1100). Similar to other mounds in the region, they were typically conical or linear and located on bluffs overlooking major bodies of water. Although not all mounds contain burials and not all burials were placed in mounds, these massive structures indicate a significant spiritual landscape that remains even though some above-ground features have been destroyed. During this period, people lived in permanent settlements supported by farming, hunting, and fishing.¹⁸

Oneota Period, ca. CE 900–1650

Archaeologists associate the people who lived in the area during this period with the Oneota material culture, based on a style of elaborately decorated globular pottery made of clay mixed with crushed shell. Their descendants are members of today’s Chiwere Siouan speaking tribes, including the Ioway, Otoe, Missouria, and Winnebago. Scholars and tribal elders indicate that these groups split from a common ancestor.¹⁹

16 Brauer and Associates, Ltd., Spring Lake Park Reserve Master Plan, 6.8; and Fleming et al., An Archaeological Survey of Dakota County, 8

17 Brauer and Associates, Ltd., Spring Lake Park Reserve Master Plan, 6.8

18 Brauer and Associates, Ltd., Spring Lake Park Reserve Master Plan, 6.8

19 Lance M. Foster, The Indians of Iowa (Iowa City, Iowa: University of Iowa Press, 2009).

SUMMARY SITE HISTORY

People lived in larger permanent settlements on river terraces, supported by floodplain agriculture, particularly corn, beans, and squash, and animal resources such as aquatic food sources and bison. Park sites from the Oneota Period appear to have been temporary rather than permanent, likely used as encampments during hunting or trade expeditions.²⁰

Archaeological materials related to this time period have been identified at the Lee Mill Cave Site, Ranelius Site, and Hamm Site.

Contact with Early Euro-American Settlers, ca. 1650– late 1840s

Historical documents and the archaeological record have not identified villages or use sites within the park reserve between those associated with Oneota material culture and the 19th century.

Although not recorded within the park, Dakota villages were located throughout the region during this time. Villages were generally near lakes and rivers to provide transportation and access to wild rice, and moved seasonally to follow game animals and harvest winter plants. Agricultural production included corn, squash, tobacco, and other crops.²¹

By the late 1600s, French exploration and trading were common along the upper Mississippi River. At the time of French contact, four primary Dakota groups lived in the region: Mdewakantons, Wahpekutes, Sissetons, and Wahpetons. The arrival of Euro-Americans and other Indigenous tribes and nations to the area had a dramatic effect on the lives of the Dakota, bringing conflict, disease, and land claims and depleting the Indigenous population and resources. Treaties in 1805, 1830, 1837, 1851, and 1858 transferred land rights from the Dakota to the U.S. through insincere promises and threats.²²

²⁰ Brauer and Associates, Ltd., Spring Lake Park Reserve Master Plan, 6.9

²¹ Westerman and White, Mni Sota Makoce, 34-36.

²² Wazyatawin, *What Does Justice Look Like?*, 29-32; Meyer, *History of the Santee Sioux*, 25; Westerman and White, *Mni Sota Makoce*, 140-143.

Euro-American explorers and settlers also provided detailed descriptions of the landscape during this time. Just east of the park where Lake St. Croix meets the Upper Mississippi, painter George Catlin documented a landscape of sparsely treed bluffs rising over a wooded floodplain. Vegetation would have been a mosaic of upland forest, savanna, and prairie on bluff tops and slopes, with forest and wetland in the floodplain.²³ Vegetation patterns depended on soils, topography, and especially fire, which is affected by features that provide fire breaks. The Dakota frequently used fire as a vegetation management tool.²⁴

²³ Webb et al., "Holocene Changes in the Vegetation of the Midwest," 162-163; and Gilbert A. Leisman, "Vegetation of the Spring Lake Area," in "Spring Lake Archaeology," *Science Bulletin Number 3, Part 4* (1959), 1

²⁴ Webb et al., "Holocene Changes in the Vegetation of the Midwest," 162-163; and Gilbert A. Leisman, "Vegetation of the Spring Lake Area," in "Spring Lake Archaeology," *Science Bulletin Number 3, Part 4* (1959), 1

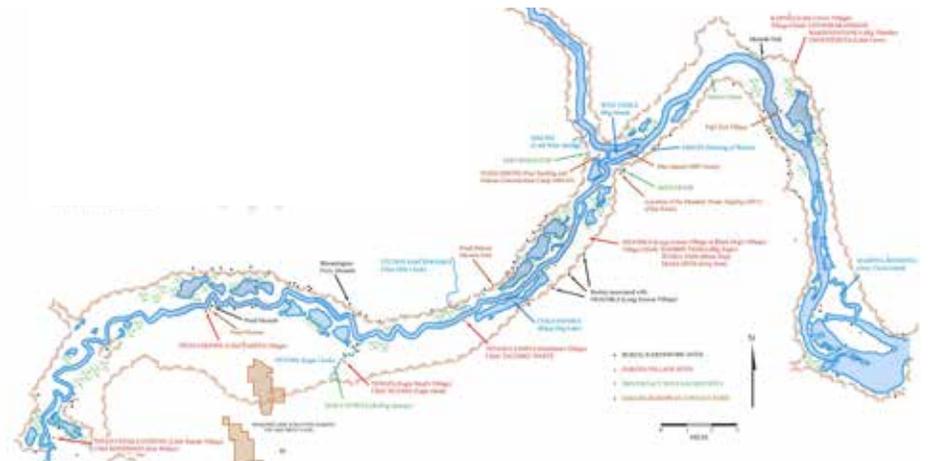


Figure 3.2 Dakota presence in the river valley (Shakopee Mdewakanton Sioux Community)

SUMMARY SITE HISTORY

In the 1830s, Dakota people established a village on the west end of Grey Cloud Island, with lodges, fields, and gardens. It was occupied until the autumn of 1837, when its inhabitants relocated to Pine Bend. The next year, the village site was taken over by the Mooers and Roberson families.²⁵

EARLY EURO-AMERICAN SETTLEMENT, CE LATE 1840–1928

Landscape changes during this period are illustrated on Historic Period Plan ²⁵.

Euro-American settlers were drawn to the area by financial opportunities provided by the Mississippi River as a power source for mills and transportation route for grain, lumber, and other goods. Louis Belanger, the first Euro-American settler in the area, arrived in the late 1840s and built a log cabin on an island. Other land claims quickly followed. In 1855, Daniel W. Truax and John Blakely built the Spring Lake Mill. After mill construction, water levels rose in Spring Lake, which would never be as shallow as it was prior to 1855.²⁶ New settlers knew the area as “Bluff Landing” or “Bassett’s Landing,” referring to a trading post established just to the east.²⁷

Dakota people continued to live at Pine Bend until an 1851 treaty resulted in their forced relocation to a reservation. During this time,

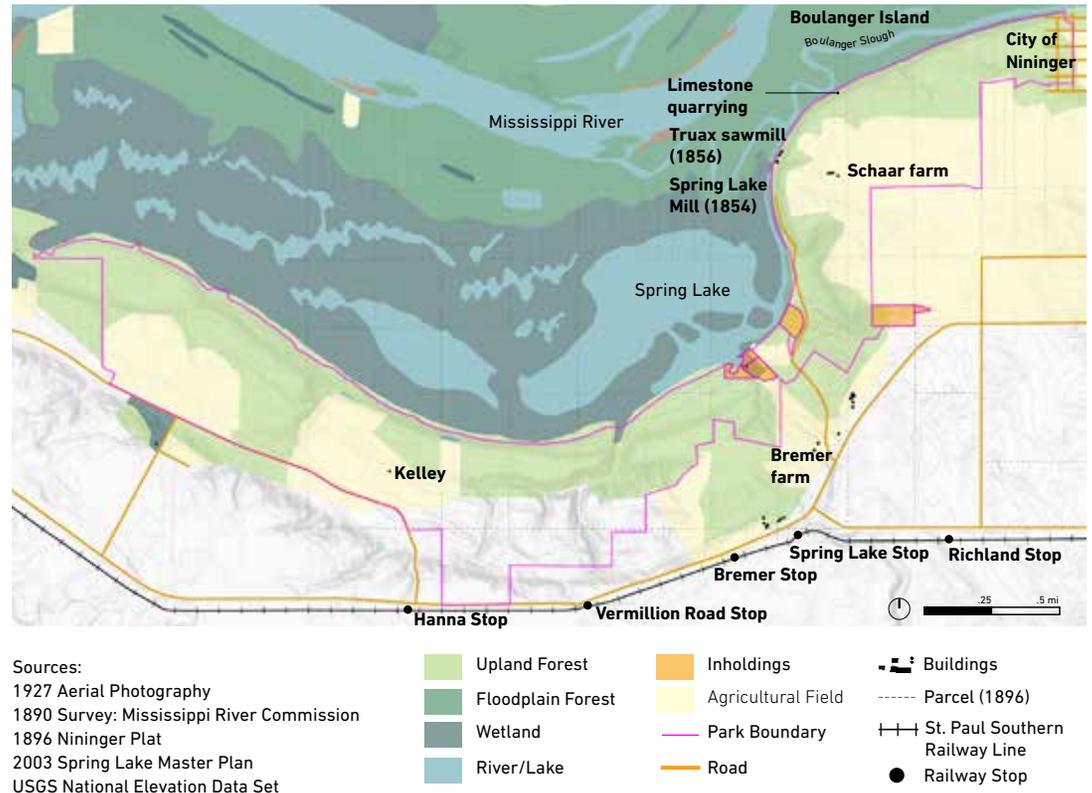


Figure 3.3 Historic Period Plan 2: CE late 1840s–1928

no villages are recorded within the study area.²⁸

Frustration from unkept promises from the Treaty of 1837, as well as the treatment of Dakota people by the US Government and new settlers, erupted into the US-Dakota War in 1862. In May of 1863, many Dakota were sent into exile, moving west to the plains and north to Canada.²⁹ It would be several decades before the four Dakota communities in Minnesota

²⁵ John Higley Case and Minnesota Historical Society, Historical notes of Grey Cloud Island and its vicinity (St. Paul, Minn.: Published by The Society, 1915), 3, retrieved from the Library of Congress, www.loc.gov/item/19002000/; and Douglas A. Brink, “The Survey of Grey Cloud Island, Washington County Minnesota: An Archaeological Approach,” *The Minnesota Archaeologist* 32, no. 1 and no. 2, (1973)

²⁶ Brauer and Associates, Ltd., Spring Lake Park Reserve Master Plan, 6.10

²⁷ Leslie A. Guelcher, *The History of Nininger... More Than Just a Dream: An Illustrated History of Nininger Township* by the Nininger Chapter of the Dakota County Historical Society (Stillwater, Minnesota: The Croixside Press, 1982), 85.

²⁸ Brauer and Associates, Ltd., Spring Lake Park Reserve Master Plan, 6.10

²⁹ Coleman and Camp, *The Great Dakota Conflict*; Anderson and Woolworth, *Through Dakota Eyes*. This is a brief

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(Shakopee Mdewakanton Sioux Community, Prairie Island Indian Community, Upper Sioux Community, and Lower Sioux Community) would be recognized by the federal government.³⁰ Accounts from Nininger Township residents suggest that Dakota people continued to live near Spring Lake into the 1890s, although no villages are recorded within the park boundary during this time.³¹

Beginning in the 1850s, the landscape dramatically changed from a mosaic of oak savanna, prairie, mesic forest, and floodplain wetlands to plowed crop land. Early Euro-American farmsteads typically planted grains (wheat, oats, and corn) and included small numbers of livestock and a vegetable plot to support limited farm income.³²

Land investors Ignatius Donnelly and John Nininger, capitalizing on a prime location along the Mississippi River, platted the City of Nininger in 1856. The city grew quickly; but, despite early commercial success, it became a “ghost town” by 1860.³³

After Nininger’s decline, agriculture dominated economic activity in the township, and the Spring Lake Mill continued to process grain. Rock quarries were established along the Mississippi River bluffs to construct wing dams along the Mississippi River for navigation. A sawmill operated in the location of the Truax mill, and a beer cellar and store were established just to the east of the park. A short-lived line of the St. Paul Southern Electric Railway Company extended along the southern park area for faster and easier transportation between St. Paul and Hastings.³⁴

summary of complex events; for more information, see also <http://www.usdakotawar.org/>; Westerman and White, Mni Sota Makoce.

30 Coleman and Camp, *The Great Dakota Conflict*; Anderson and Woolworth, *Through Dakota Eyes*.

31 Brauer and Associates, Ltd., *Spring Lake Park Reserve Master Plan*, 6.10

32 Guelcher, *The History of Nininger*, 32

33 Brauer and Associates, Ltd., *Spring Lake Park Reserve Master Plan*, 6.11

34 Brauer and Associates, Ltd., *Spring Lake Park Reserve Master Plan*, 6.13



View of Mississippi River above Hastings, ca. 1890 (MNHS) MD2.9 NG h1 (Locator Number) YR1939.5715 (Accession Number)



Group of people at quarry on A.J. Jeremy property, ca. 1910–1914 (Guelcher, 215).



Spring Lake Mill and Pond 1907 (Dakota County Historical Society, 77-9470-1960 HA)

SUMMARY SITE HISTORY

LOCKS AND DAMS, CE 1929–1972

Landscape changes during this period are illustrated on Historic Period Plan 3.

Shifting sandbars and shallow depths frequently limited navigation of the Mississippi River north of Hastings. Concerned that this would encourage a railroad monopoly and reduce U.S. competitiveness in the world economy, Congress approved a series of locks and dams along the river between St. Louis and Minneapolis; Lock and Dam No. 2 at Hastings was authorized in 1927. Once completed, the dam flooded approximately 10,000 acres of land between St. Paul and Hastings, creating an artificial lake that submerged the earlier shoreline of Spring Lake. Seven hundred landowners lost access to floodplain property through flowage easements, although they still retained ownership of the underlying land.³⁵ The Spring Lake Mill was abandoned and demolished shortly after the flooding.³⁶

Agriculture within Nininger township shifted from grain to livestock in the 1930s and 1940s with expanded dairy and turkey farming. Other local industries included quarrying along the limestone bluffs and a resort near the south end of Spring Lake.³⁷

On the west side of the park, the Ranney Well was constructed to supply water for the Gopher Ordinance Works, which opened in 1943 in Coates and Rosemount. The Gopher Ordinance Works plant produced smokeless gunpowder for WWII.



Sources:
1937 Aerial Photography
1947 Aerial Photography
1970 Aerial Photography
1955 Photographs and Personal Surveys of G.A. Leisman
2003 Spring Lake Master Plan
USGS National Elevation Data Set

Upland Forest
Agricultural Field
River/Lake
Inholdings
Park Boundary
Road
Buildings

Figure 3.4 Historic Period Plan 3: 1929–1972

The Science Museum of Minnesota conducted the Spring Lake Archaeology Project from 1952 to 1956. As part of this project, Lee Mill Cave, the Sorg Site, the Ranelius site, Bremer Village, Bremer Mounds, and the Bud Josephs site were excavated.³⁸

SPRING LAKE PARK RESERVE, CE 1973–PRESENT

Spring Lake Park Reserve was first proposed as a County park in the 1970 Dakota County

³⁵ Brauer and Associates, Ltd., Spring Lake Park Reserve Master Plan, 6.13–6.14; “Dam Site Soon to be Deserted,” Hastings Gazette, 1930.

³⁶ 106 Group, Ltd., Cultural Resources Literature Review and Assessment for the McCarriel’s Mill Site, 8

³⁷ Brauer and Associates, Ltd., Spring Lake Park Reserve Master Plan, 6.15

³⁸ Elden Johnson and P. S. Taylor, “Spring Lake Archeology: The Lee Mill Cave” in Science Bulletin No. 3, part 2. St. Paul, Minnesota: The Science Museum of the St. Paul Institute, 1956

SUMMARY SITE HISTORY

Parks and Recreational Facilities Plan. Acquisition began with the Carl and Dorothy Schaar property in 1973, and additions and boundary revisions continued through the 1970s and 1980s.³⁹

The park received regional designation in 1975, and the first master plan was developed in 1983.⁴⁰ An archery range and youth camp were constructed in 1993.⁴¹ Since 2005, structures and homes on Fischer Ave have been removed, and, over the last 25 years, nearly 200 acres of blufftop prairie and oak savanna were restored. The Schaar's Bluff Gathering Center was constructed in 2006.⁴² In 2017, the Mississippi River Greenway (MRG), a designated bicycle and pedestrian trail connecting along the Mississippi River, was extended through the length of the park.

Archaeological investigations have continued over the past 40 years at Lee Mill Cave (1996), Bud Josephs Site (1995), Schaar's Bluff and Sorg Site (2005), Ranelius Site (2010), Bremer Village (1996; 2011–2013; 2014), Bremer Mounds (2010), and the Spring Lake Park Bluff Site (2012).⁴³

39 Brauer and Associates, Ltd., Spring Lake Park Reserve Master Plan, 2.1; Memorandum, Dakota County Parks Director, May 25, 1976

40 Brauer and Associates, Spring Lake Park Reserve Master Plan, 2.1

41 Dakota County Parks, "Approval of an Amendment to the Spring Lake Park Reserve Master Plan and Development of a Youth Group Camp in the Park," January 26, 1993

42 URS, 2006

43 Fleming et al., An Archaeological Survey of Dakota County.



Fishing at Bud's Landing, no date (Twin Cities Pioneer Press, 2012)



Gene Josephs looks out on Spring Lake from site of Bud's Landing, 2012 (Twin Cities Pioneer Press)



Nininger town sign (MinnPost, no date)



Ranelius turkey farm, no date (Guelcher, 265)

CULTURAL LANDSCAPE ANALYSIS

This section presents an analysis of historic integrity for the cultural landscape. It identifies and documents those qualities and features that potentially contribute to historic character, retain integrity, and contribute to the significance of the landscape as related to the periods of significance. The landscape analysis is intended to guide design and inform treatment of significant aspects of the cultural landscape according to the United States Secretary of the Interior's Standards for the Treatment of Historic Properties.

Integrity is the ability of the physical features of the landscape to convey the property's historic significance, as evidenced by the survival of physical characteristics that existed during the property's period of significance. To retain integrity, a landscape must convey a sense of its historic character and retain essential physical features that define why and when a property was significant. The cultural landscape is documented and evaluated according to the following landscape characteristics: natural systems and topography; spatial organization; archaeological resources; Traditional Cultural Properties; vegetation; views; circulation; and buildings, structures, and small-scale features. The McCarriel's Mill site was assessed separately.

Potential periods of significance for the Spring Lake Park Reserve cultural landscape are:

- Vernacular landscape of McCarriel's Mill Site: CE 1854 to 1932
- Traditional Cultural Properties and culturally sensitive sites associated with Indigenous occupation and use: ca. 6000 BCE to CE late 1840s



Sources:
2003 Spring Lake Master Plan, MN OSA, 1890 Survey;
Mississippi River Commission, USGS National
Elevation Data Set

- Park Boundary
- Potentially Contributing Circulation Route
- River/Lake
- ▨ Steep Slopes/Bluff
- Historic farm remnant (primary building present for 50+ years)
- Remnant/restored forest
- Remnant/restored prairie/savanna
- Inholdings

Figure 3.5 Map of Potentially Contributing Landscape Features

NATURAL SYSTEMS AND TOPOGRAPHY

Existing conditions of natural systems and topography are described in the Natural Resource Inventory section of this chapter. Primary alterations to these features since the end of the period of significance include quarrying at the bluff edge in the late 19th and early 20th centuries and cut and fill for construction of the Mississippi River Greenway (MRG) in 2017. Rising water levels have altered the relationship of the bluff and cliffs to the floodplain,

CULTURAL LANDSCAPE ANALYSIS

expanding Spring Lake and inundating marshes and islands present before construction of the Spring Lake Mill in 1854 and Lock and Dam No. 2 in 1930.

Contributing features include:

- Mississippi River
- Spring Lake
- Topography of bluff and floodplain
- Caves
- Springs

SPATIAL ORGANIZATION

The overall spatial organization is described in the Existing Park Conditions section of this chapter. While little is known about the organization of the built landscape during its early occupation, villages and terrace mound sites likely had proximity to and views over the river valley, emphasizing relationships to the bluff and lake. The MRG's alignment with current park facilities departs from this conjectural historic organization. Encroaching woody vegetation has blocked visual connections to the water and sky.

Spatial organization of the McCarriel's Mill site has been impacted by mill demolition, addition of structures after the end of the period of significance, and rising water levels.

TRADITIONAL CULTURAL PROPERTIES AND CULTURALLY SENSITIVE SITES

The 2020 Traditional Cultural Property survey of portions of the park reserve identified TCPs and culturally sensitive areas within the boundaries of the park and evaluated the cultural significance of known archaeological sites. The survey found that "the boundaries of Spring Lake Park Reserve encompass numerous highly sensitive TCPs of importance to the Dakota people and their ancestors."⁴⁴

⁴⁴ Upper Sioux Community Tribal Historic Preservation Office, "Spring Lake Park Reserve Traditional Cultural Properties Survey," on file at Dakota County, November 9, 2020.

In addition, the survey report notes that the caves were incorrectly identified by archaeologists as habitation sites, and have much greater cultural significance. A summary of previously identified archaeological sites is provided below; location information is not provided in this document.

While many archaeological studies have identified discrete locations where people lived, worked, and were buried, the entire region is a Dakota place. Known sites are listed below by archaeological stages and do not identify all places important to associated Dakota communities. Archaeological sites were frequently named for former property owners and do not represent Dakota place names.

Stages of Occupation and Use

10,000–1000 BCE (ARCHAIC)

- Lee Mill Cave
- Bremer Village
- Ranelius

200 BCE–CE 1100 (WOODLAND PERIOD OR CERAMIC/MOUND STAGE)

- Lee Mill Cave
- Bremer Village
- Ranelius
- Bremer Mounds
- Sorg

CE 900–1650 (LATE PRECONTACT/ONEOTA)

- Lee Mill Cave
- Bremer Village
- Ranelius

CULTURAL LANDSCAPE ANALYSIS

- Hamm

Sorg Site

The Sorg Site lies at the eastern end of Spring Lake in a gently sloping outwash plain fanning out from the base of a limestone bluff. Excavations revealed a rectangular hearth, pieces of pottery, lithic tools, small mammal bones, and turtle remains. The most notable discovery was a ceramic vessel that had been broken in place.⁴⁵ Portions of the site have been eroded by rising water levels following construction of Lock and Dam No. 2, and gullies from the uplands cut through the southern portion of the site. Historic quarrying and residential activity have destroyed other parts of this site.⁴⁶

Lee Mill Cave

The Lee Mill Cave Site is 75 feet above the Mississippi River in a limestone bluff at the eastern end of Spring Lake. Lee Mill Cave was carved out by water seeping down from the blufftop and eroding the limestone.⁴⁷ Excavations uncovered two hearths and two middens, with a large number of lithic tools and pottery shards. Small and large mammal bones, bird bones, fish bones, clam shell fragments, turtle remains, and a single piece of maize were also unearthed. A small number of human remains were recovered from the site, some of which were associated with a rock fall.⁴⁸ As indicated in the 2018 Dakota County Archaeological Survey, rock falls, erosion, recreational activities, and archaeological investigations have destroyed much of the site. However, the cave extends far into the bluff, and the inner cave may be undisturbed.⁴⁹

Hamm Site

The Hamm site overlooks the shore of Spring Lake near Hamm's Bay in

45 Fleming et al., An Archeological Survey of Dakota County, Minnesota, 82-84

46 Fleming et al., An Archeological Survey of Dakota County, Minnesota, 84.

47 Johnson and Taylor, "Spring Lake Archeology: The Lee Mill Cave; and Johnson, Spring Lake Archeology: The Sorg Site.

48 Fleming et al., An Archeological Survey of Dakota County, Minnesota, 85-87.

49 Fleming et al., An Archeological Survey of Dakota County, Minnesota, 86.

the western end of the park and may extend into the lake. Archaeological investigations uncovered lithic debitage and shell-tempered pottery sherds. Near the edge of a terrace along Spring Lake, the site has been impacted by erosion. Intact below-grade deposits may still exist.⁵⁰

Ranelius Site

The Ranelius site is on a peninsula-like terrace overlooking the southern shore of Spring Lake. Numerous features consistent with habitation have been unearthed at the site, including projectile points, end scrapers, pottery sherds, and bone and groundstone tools.⁵¹ The site has been disturbed by excavations but is otherwise largely intact.⁵²

Bremer Mounds

This site is a pair of mounds on a terrace overlooking the southern shoreline of Spring Lake. One mound is linear and the other is conical/ovoid in shape. Above-ground features of the conical mound were mostly destroyed by excavations in the 1950s. Although the linear mound has been disturbed, its form is still visible on Lidar imagery and in-person.⁵³

Bremer Village

Bremer Mounds and Bremer Village are about one-quarter mile apart on river terraces along the southeastern edge of Spring Lake. The village site is located on a terrace 50 feet lower in elevation than the mounds, adjacent to the edge of Spring Lake.⁵⁴

Shovel testing in 2011–2014 found that debris is not consistently deposited across the terrace, suggesting a series of camp sites. Pottery found at the site indicate

50 Fleming et al., An Archeological Survey of Dakota County, Minnesota, 88.

51 Fleming et al., An Archeological Survey of Dakota County, Minnesota, 88-89.

52 Fleming et al., An Archeological Survey of Dakota County, Minnesota, 88.

53 Fleming et al., An Archeological Survey of Dakota County, Minnesota, 90.

54 Johnson and Taylor, "Spring Lake Archeology: The Lee Mill Cave; and Johnson, Spring Lake Archeology: The Sorg Site

CULTURAL LANDSCAPE ANALYSIS

Initial (Middle) and Terminal (Late) Woodland and Late Pre-contact (Oneota) occupations, with the Terminal Woodland being the most common.⁵⁵

Due to its position only a few feet above Spring Lake, the site has experienced erosion, particularly on its north side. The village may have extended into the area that is now submerged. The southern portion of the site has also been disturbed by construction of the Mississippi River Greenway (MRGW).⁵⁶

Bud Joseph's Site (21DK043)

The Bud Joseph's/Bud's Landing Site is located on a terrace and outwash area on the shoreline of Spring Lake.⁵⁷ The site yielded 33 flakes of lithic scatter. Local residents also report finding Woodland sherds in the lake adjacent to the site.⁵⁸ The site likely was impacted by development of Bud's Landing resort and nearby residences. It has also been damaged by erosion; a gully cuts through the site.⁵⁹

Spring Lake Park Bluff (21DK088)

The Spring Lake Park Bluff site is on a terrace 100 feet above the shore of Spring Lake. Findings consisted of 11 pieces of Prairie du Chien chert debitage scattered over less than one acre.⁶⁰ The site is in a relatively undisturbed wooded area and is likely intact.⁶¹

Analysis

Traditional Cultural Properties and culturally sensitive sites, including those that encompass previously identified archaeological sites, contribute to the

55 Fleming et al., An Archeological Survey of Dakota County, Minnesota, 91-92.

56 Fleming et al., An Archeological Survey of Dakota County, Minnesota, 92.

57 Johnson and Taylor, "Spring Lake Archeology: The Lee Mill Cave; Johnson, Spring Lake Archeology: The Sorg Site.

58 Fleming et al., An Archeological Survey of Dakota County, Minnesota, 118.

59 Fleming et al., An Archeological Survey of Dakota County, Minnesota, 118.

60 Christina Harrison, Phase 1 Archaeological Review for the Mississippi River Regional Trail: Spring Lake Park Segment, Nininger Township and the City of Rosemount, Dakota County, Minnesota (Minneapolis, MN: Archaeological Research Services for Dakota County Parks and Open Space, 2011).

61 Fleming et al., An Archeological Survey of Dakota County, Minnesota, 145-146.

significance of the cultural landscape.

VEGETATION

Existing vegetation is described in detail in the Natural Resource section of this chapter. Vegetation patterns have changed substantially over the past ten thousand years of human habitation. Prior to Euro-American settlement, vegetation was a mosaic of upland forest, savanna, and prairie on the bluff tops and slopes, with forest and wetland in the floodplain. As new settlers arrived, fire management of prairies and oak savanna on the blufftop ceased, the blufftop and floodplain were converted to agriculture, and forest remained on steep slopes. Today's vegetation patterns reflect successional regrowth of woody vegetation following conversion of farm and resort land to park land in the 1970s

Although today's vegetation types differ from the periods of significance, extensive efforts have restored prairie and oak savanna to the blufftop. Potentially contributing features include:

- Remnant/restored prairie and savanna/oak openings
- Remnant/restored mesic forest/oak forests

VIEWS

Existing views are described in detail in the Existing Park Conditions section of this chapter. Woody vegetation was sparse on the blufftop during early use and occupation when the vegetation was characterized by prairie or oak savanna, allowing expansive views of Spring Lake, the river valley, and the sky. Today, views are restricted by encroaching woody vegetation, with select points providing views of the River or sky. Locations of key views during Indigenous use and occupation are not known, and existing viewpoints do not correspond to recorded village or mound sites.

Views related to the McCarriel's Mill site have been modified due to flooding from Lock and Dam No. 2.

CIRCULATION

Existing circulation is described in detail in the Circulation and Connectivity section of this chapter. Two known historic routes are evident within the landscape. A road remnant connecting Schaar's bluff to the McCarriel's Mill site is steep and heavily eroded, with limited stacked stonework supporting the road grade. The route is documented on the 1855 Government Land Office survey. Hilary Path connects from Mississippi Trail (MN 42) to the base of the bluff at the eastern end of the park, following a route shown on the 1880s Mississippi River Commission map and 1896 plat of Nininger Township.

During Indigenous use of the site and early Euro-American settlement, water routes were important modes of transportation. Potentially contributing features include:

- Road remnant (Wagon Trail) from Schaar's Bluff to McCarriel's Mill Site
- Route of Hilary Path

BUILDINGS, STRUCTURES AND SMALL SCALE FEATURES

Existing buildings, structures, and small-scale features are described in detail in the Existing Park Conditions section of this chapter. Although no buildings remain, several Indigenous village sites have been identified. Post-holes at the Sorg site and Bremer Village site suggest a structure in this location. Above- and below-ground remnants of features from this period were damaged or destroyed by agriculture and mining, although subsurface features may still be intact. Several remaining late-19th and early-20th century buildings from the Schaar farm do not retain integrity as part of the cultural landscape. The Schaar family purchased the 150-acre property at the east end of the park in 1899 and grew grain and raised dairy cows. The milkhouse and silo date to the mid-1940s.

A foundation possibly associated with the 1857–1860 Blakely property is near the McCarriel's Mill site. The structure is disconnected from its historic context and does not retain integrity.

MCCARRIEL'S MILL SITE

This site at the base of Schaar's bluff occupies 1.5 acres. The 2019 Literature Review and Assessment indicated that all remaining site features McCarriel's Mill Site appear to retain sufficient integrity to be evaluated for eligibility in the NHRP. The age of the boat is not known. Potentially contributing site features include:

- "Icehouse" (ca. 1860–1907)
- "Fish Pond" (before 1936)
- Retaining wall (ca. 1860–1907)
- Foundations/locations for the house (1860), Garage (c. 1950s), Metal Shed (ca. 1966), Lumber Shed (ca. 1966), Saw Shed (ca. 1966)

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View of River Valley from Schaar's Bluff area



View from the bottom of the central ravine up to the Mississippi River Greenway

INTRODUCTION

Spring Lake Park Reserve displays an impressive assemblage of natural landscape features, including dramatic River and Spring Lake views, bottomland and upland terraces, and unique natural landscapes. Much of the park consists of north-facing limestone bluffs, steep slopes, and ravines that compose an ecosystem that is rare in the region. The park's natural qualities provide a strong foundation for public enjoyment and enrichment. These qualities also provide a unique opportunity to protect a natural environment for biodiversity, preservation of natural heritage, open space, scenery, and respite from the built form.

PRE-SETTLEMENT PLANT COMMUNITIES

Prior to Euro-American settlement, a mosaic of prairie and oak savanna covered the park except for the bluffs, shoreline, and steep ravines where oak forest thrived. Oak savannas are scattered trees and scrubby oak groves with some shrub thickets, within a matrix of grasses and wildflowers. This community thrived on the park's sandy loam soils. Oak savannas and prairies were sustained by Native Americans who deliberately set fires to sustain productive hunting and food-gathering sources. The 1890 Mississippi River Commission map (Figure 3.7) gives clues as to what the first Euro-American settlers found as they began cultivating the land.

In the late 1800s settlers, cleared trees and tilled prairie to build farmsteads, plant row crops, and graze cattle. They logged lumber and cut firewood. Native plants were eliminated through plowing, logging, and intensive cattle grazing. Settlers eliminated two natural landscape influences by suppressing large-scale fires and extirpating the bison and elk that grazed woody plant growth preventing forest succession. Aerial photos from 1937 show that most of the park land had been altered.

The Post Settlement Human Impact Map (Figure 3.8) identifies the types of activities that altered the land. Farming gradually ceased as park property was

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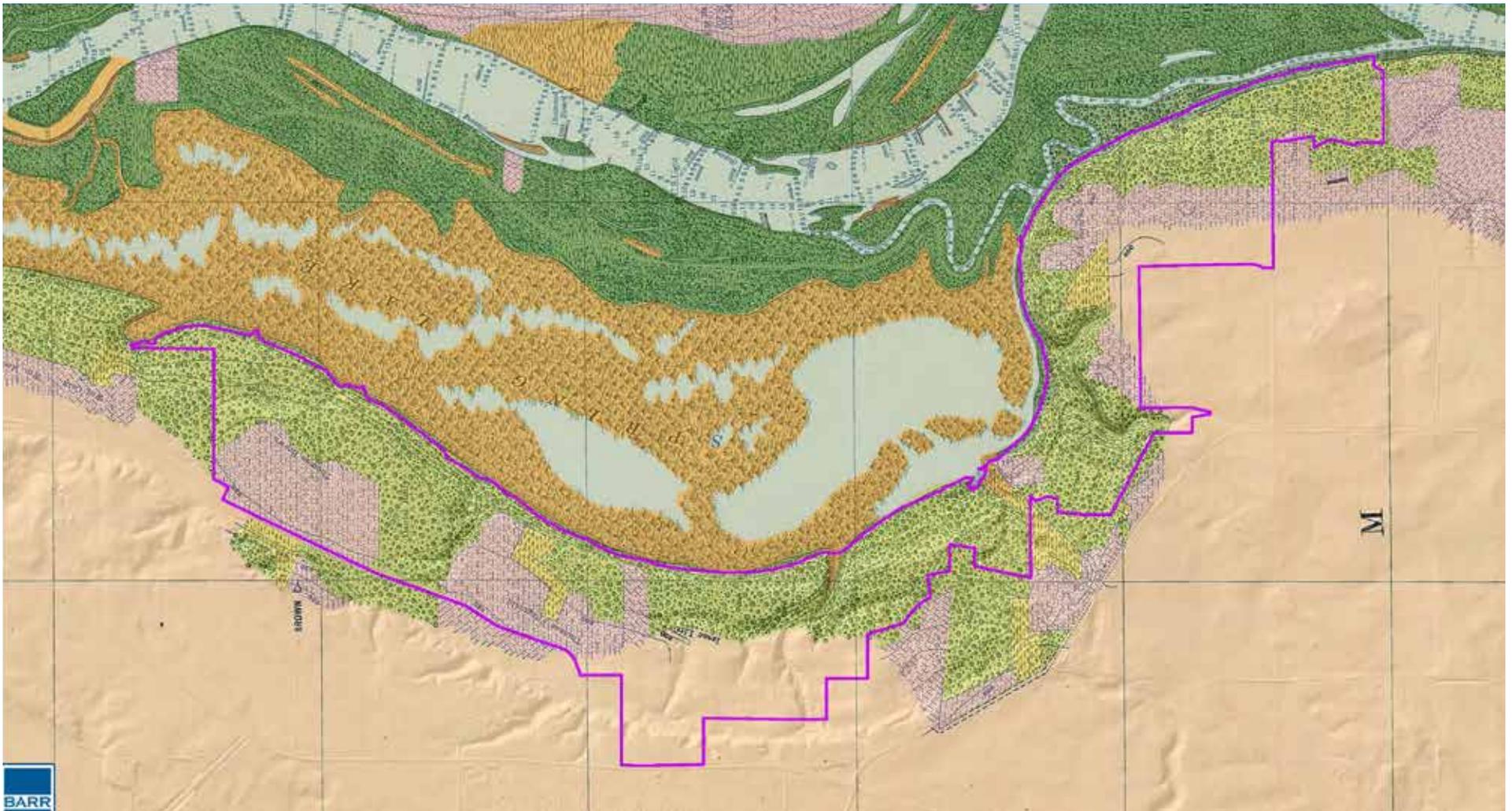


Figure 3.6 Mississippi River Commission Survey, 1890s



NATURAL RESOURCES INVENTORY

purchased and managed by Dakota County Parks. The ecological integrity of the park is evolving and improving. Figure 3.11 shows the extent to which woodlands have established with the suppression of fire.

CURRENT CONDITIONS

The park's dominant physical features—the Mississippi River, bluffs, topography, forests, and ecological diversity—provide a unique setting within the regional park system.

WATER RESOURCES

Mississippi River and Spring Lake

The most compelling park feature is its location along the Mississippi River and Spring Lake. Situated within the Mississippi Flyway, the river and lake provide essential stopovers for migratory waterfowl and habitat for an impressive variety of wildlife species. As the third largest river in the world, the Mississippi draws people to its scenic valley for observation of nature, water-based recreation, hunting, and fishing. Figure 3.9 illustrates the dominance of the river and lake, which underscores the value of these features to the park's master plan.

Pool 2 of the Mississippi River, which includes Spring Lake, is an impoundment formed by construction of Lock and Dam 2 at Hastings in 1930. Pool 2 includes 32 river miles from Lock and Dam 1 (Ford Dam) to Lock and Dam 2 and also includes the Minnesota River from Savage, MN, to its confluence with the Mississippi River. The reach between Lower Grey Cloud Island and Lock and Dam 2 was most affected by the 1930 impoundment. In pre-European times, it was a floodplain forest and marsh. Spring Lake is now a shallow water area swept by wind and battered by barge-generated waves. High turbidity has excluded aquatic plants except in the shallowest waters and areas sheltered by islands, negatively impacting fish habitat.

Upgraded wastewater treatment over recent decades has improved much of

this reach to better support aquatic life, including an emerging game fishery and a rebounding mussel community. Despite improvements to point source pollution, non-point source pollution from agriculture and other land uses is still a significant water quality problem.

The Minnesota River has a profound effect on the size and water quality of the Mississippi River and Pool 2, contributing significant sediment and nutrient loading to the Mississippi, including Spring Lake, where still and slow-moving water drops fine sediment. Aquatic vegetation surveys completed by the EPA's Environmental Monitoring and Assessment Program, 2006—2008, documented the absence of submerged aquatic vegetation at the sites sampled in Spring Park.

State and federal water quality reports for Mississippi River Pool 2 (including Spring Lake) show improvement over the past decade, although the river remains on state and federal lists of impaired waters. Impaired uses include fish consumption, due to mercury, polychlorinated biphenyls (PCBs), and Perfluorooctanesulfonic acid (PFOS); aquatic life, due to high nutrient and total suspended solids; and recreation, due to elevated fecal coliform numbers. Mercury and PCBs are persistent toxins detected in Pool 2 sediments and in various fish species. The State of Minnesota has issued advisories recommending restricted consumption of eight species of fish caught in Pool 2.

Spring Lake supports a wide variety of fish species, including game such as walleye and channel catfish. Special regulations for Mississippi River Pool 2 allow only catch and release fishing for walleye, sauger, smallmouth bass and largemouth bass

Surface Water Flow

Five significant ravines have formed in the park as water from south of the park has etched a path into the park's soils and geological layers. These ravines are somewhat stable except for a large, branched central ravine that is eroding and

NATURAL RESOURCES INVENTORY



Figure 3.7 Post Settlement Human Impact (1951 Aerial)

Post Settlement Human Impact

- Cropped
- Cultural
- Grazing

- Spring Lake Park Reserve
- Private Inholding



NATURAL RESOURCES INVENTORY



The shoreline of Spring Lake is battered by waves, but is naturally stable because of the naturally occurring rock and woody vegetation.



Eroded gravel and soil from Hilary Path deposited in the forest near existing DNR boat landing

receiving sediment from large volumes of water that occasionally enter from agricultural land beyond the park borders.

The eastern ravine in which Hilary Path was constructed is also eroding, requiring repeated repairs. This will continue until the ravine is stabilized and stormwater can be held upstream. Since the park is entirely vegetated and has very limited impervious surface, surface water quality is high. Most precipitation landing on the park infiltrates into its permeable soils.

Seeps and Springs

Water seeping through limestone layers and emerging out the face of Schaar's bluff has allowed unique plant communities to evolve, especially on north-facing bluffs that benefit from a near continuous supply of calcareous water. Seeps are visible in the area of Church's woods. A significant spring exists in the large central ravine just south of the new regional trail bridge. Groundwater pours out of the surface in the ravine, yet the surface higher up in the ravine is dry. Here a unique and lush wet meadow plant community thrives.

GEOLOGY

Bluffs

The park's dominant bedrock cliff, Schaar's Bluff, rises 150 feet from Spring Lake. This bluff is characteristic of the Upper Mississippi River basin, whose banks are controlled by iconic bedrock strata deposited in ancient beach and sea floor environments. Deposition and wave action along the shores of ancient Lake Ordovician produced Saint Peter Sandstone, a friable sandstone with extremely well-rounded white grains. As sea levels rose in the Devonian era, organisms with carbonate shells settled out and lithified atop the Saint Peter sea floor. These carbonate strata formed the fossiliferous Platteville Limestone layer visible in the park bluff.

The striking bluffs result from differing resistance to physical erosion between

NATURAL RESOURCES INVENTORY

the friable Saint Peter Sandstone and the durable Platteville Limestone. The Platteville protects the Saint Peter, which is easily eroded by the river's lateral migration and stream power along its banks. Erosion undercuts the rigid cap of the Platteville, demonstrating geology in action with limestone rock falls at the base of the bluffs. The cliff area captures the geologic history of the Upper Mississippi's response to and influence on Minnesota geology. In addition to dramatic views of the river, lake, and surrounding landscape, the cliff area harbors several unique plant communities such as the fern and Canada yew colonies near Church's Woods. The park's bluffs provide habitat for cave bats, big brown bats, red-shouldered hawk, red-tailed hawk, broad-winged hawk, bald eagles, turkey vultures, and also nesting birds such as swallows and swifts.

Ravines, Slopes, and Terraces

Spring Lake Park Reserve has dramatic ravines and terraces formed by glacial activity and erosion over the millennia. Although not as visible from one viewpoint, these features are integral to the unique experience offered by the park.

As illustrated on Figure 3.9 and described above, the landforms along the river are characterized by steep slopes, rolling terraces, and bluff lines; many slopes are well in excess of 30 percent. The topographic changes across the park create a series of terraces from the river up to the bluff land. These terraces are the result of the planation and abandonment inherent in the footprint the historic Mississippi River left on the land. Specific to the park, three main terraces are carved in the Saint Peter Sandstone and form a contrast to the steep bluffs on the east end of the park. These terraces represent an area where the thick Platteville Limestone cap that protects the eastern bluffs was thinner and more readily eroded, allowing the river more freedom in its bedrock valley to planate the Saint Peter below. As base level for the Mississippi lowered over geologic time, the river bed was sequentially abandoned in three main episodes, leaving behind the three terraces characteristic of the park today. This lowering of the river water level in turn lowered the local base level for small tributary streams in the park. These streams have since carved small, steep-sided ravines into the Saint Peter sandstone as they drop in elevation to meet the base level of the Mississippi.



Beautiful diversity of native plants on the north-facing cliffs below Church's Woods.



Green ash swamp at the base of the central ravine.

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Soils

Figure 3.10 illustrates the park's soils textures. Much of the western park is sand terrace, which transitions to several classes of silty loam at the eastern end of the park. Soils range from well- to excessively drained. Loamy sand is concentrated along the heads of major ravine branches. Silt loam covers much of the flat land above bluff lines. Soils in low areas near the river's edge are seasonally inundated with water. Bluff lines and ravine sides are composed of steep, well drained soils and bedrock outcrops. From an ecological perspective, restored plant communities must be consistent with the inherent soil characteristics.

Soil erodibility can limit park development (see Figure 3.10), especially on steep slopes, in poorly vegetated areas, and adjacent to hard surfaces where runoff can concentrate. Particular attention must be given to soils with trail development and placement. Ravines, steep slopes, and bluffs pose severe constraints on development and are best left undisturbed. Existing development generally is located where the soils can support built structures. New facilities must only be proposed for areas where soils offer the least limitations.

WILDLIFE

Wildlife diversity and health are directly related to the quality and connectedness of habitats within and outside of the park. The diminishing quality of the park's plant habitats is discussed in detail in the next section. Connectedness refers to the degree to which a habitat 'patch' or island (the park) has links to other habitats through surrounding developed lands. Landscape Ecologists describe habitat connectedness as the relationship between patches and corridors. The park has two habitat advantages: 1) it is a large patch at 1,100 acres, and 2) it connects to other patches through the forests and marshes along the Mississippi River. Southward, the park 'patch' is separated from other habitats by agricultural fields and industrial land where many species, including plants, cannot exist or cross. Regardless of the quality of the park's habitats, they will only support species to the extent that plants and animals can move in and out of the park.

Birds

Spring Lake Park reserve is in the Mississippi Flyway migratory corridor and is included in the Audubon Society's Mississippi River Twin Cities Important Birding Area. The park provides feeding and nesting habitat to a great diversity of birds. Many migratory birds—including common loons, egrets, ducks, geese, swans, grebes, gulls, terns, and pelicans—feed and rest at the park. The prairie and forest of the park are home to a variety of migratory bird species including passerines (perching birds), raptors, and owls. In 2018-2019, 47 avian species were counted in the annual breeding bird count conducted by County staff. Eleven species of warblers were identified in the park (2019 Minnesota Breeding Bird Atlas), and the ovenbird, American redstart, and common yellowthroat nest within the park's deciduous forests. Several birds found in the park are identified in the 2015-2025 MN DNR, Minnesota Wildlife Action Plan: Species of Greatest Conservation Need (SGCN) including Dickcissel, field sparrow, lark sparrow, grasshopper sparrow, eastern towhee, and brown thrasher.

The park provides habitat for the northern saw-whet owl, great horned owl, and the long-eared owl, which use deciduous forest for cover and open grasslands for hunting. Red-tailed hawks can be seen hunting open prairie or using thermals rising from the bluffs for soaring. Eagles, vultures, and other buteos (soaring birds) also use these thermals. Other unique species in the park include red-headed woodpecker and loggerhead shrike (state-listed special concern); both are listed under the SGCN, and their populations are in decline due to habitat loss and fragmentation. These species rely on healthy habitats including open savanna, forest, and grassland habitats.

Grassland birds have been rapidly declining in Minnesota. With restoration of over 200 acres of park prairie, nesting opportunities have been provided for species like dickcissel, grasshopper sparrow, lark sparrow, and field sparrow and could be expanded with further restoration of prairie and the expansion of oak savanna.

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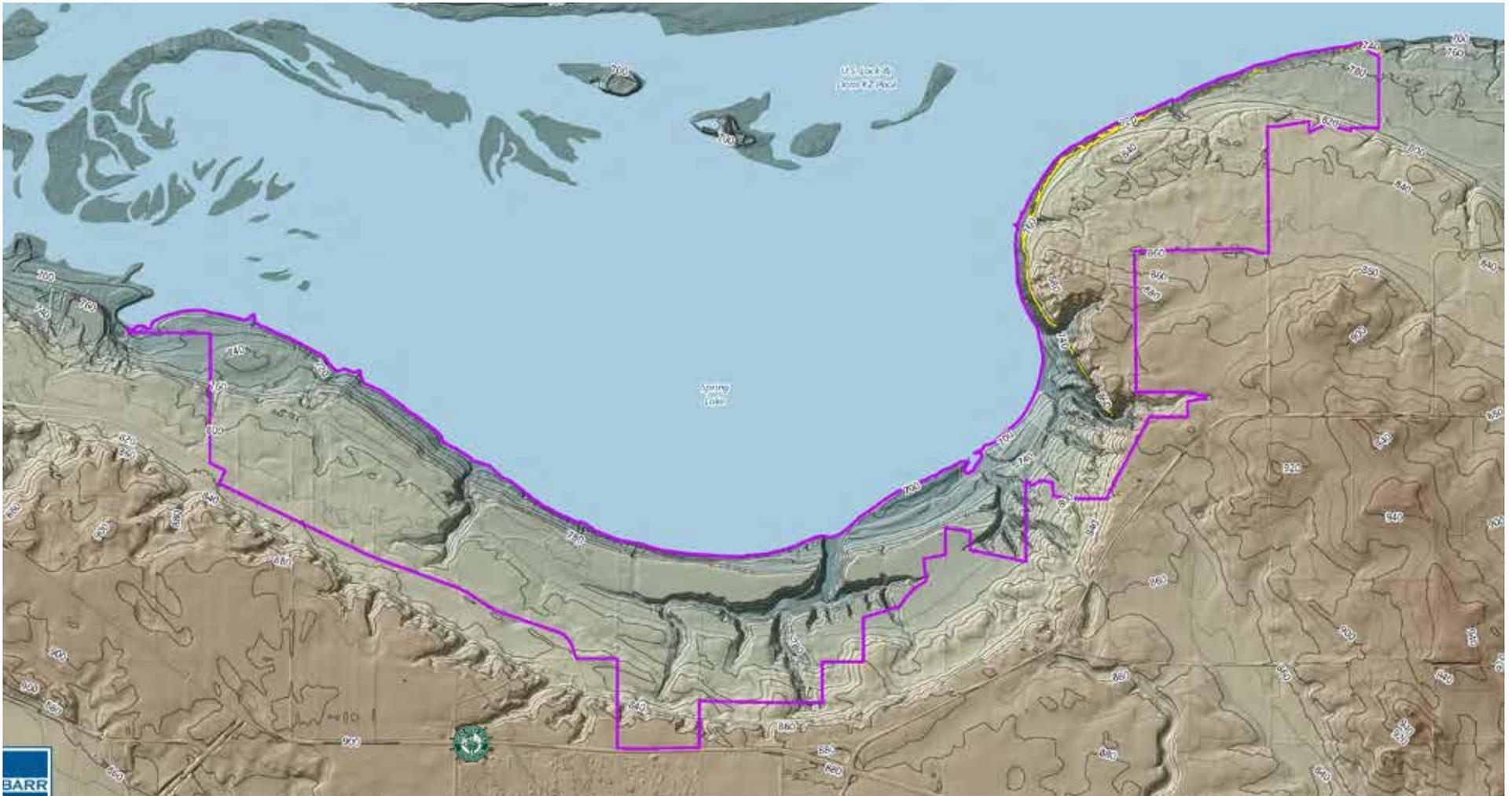
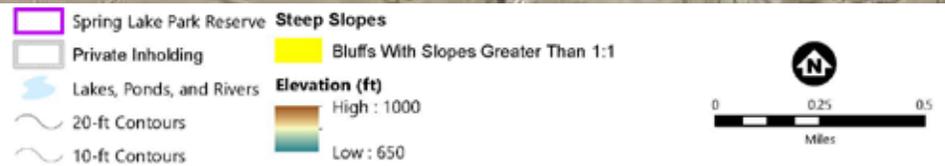


Figure 3.8 Topography



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Mammals

Several bat species have been reported in Dakota County, including the northern long-eared bat (NLEB), tri-colored bat, big brown bat, little brown bat, evening bat, silver-haired bat, hoary bat, and red bat. Several of these species use the park's limestone bluffs and roost within its forested areas. Cave dwelling bat hibernacula may exist within the crevices and caves. Calling surveys conducted by park staff in 2017 detected abundant NLEB calls. Further surveys could document local populations trends and inform measures to accommodate these species. Hibernacula suitability, habitat quality, and effects of white-nose syndrome on the park's cave dwelling bats would be important wildlife management information since many bat species are in drastic decline in Minnesota.

The park provides suitable habitats for small mammals including pocket gophers, ground squirrels, shrews, voles and mice, which are prey for raptors and larger furbearers. Abundant local prey near suitable resting/denning sites favors furbearers, including fisher and badger. Fishers are indicators of quality habitat and have been identified through trail camera surveys within the park. They use structurally complex forest habitats with mature forest features, which are found in the park.

Park deer populations fluctuate and are influenced by the population on lands surrounding the park. When park populations are elevated and/or potential exists for increased in-migration from outside of the park, park managers authorize annual deer control hunting. Keeping deer populations under control allows for vegetation regeneration in the park and ensures that habitat is provided for many other species.

Bison

Bison do not exist in the park but likely had roamed the area prior to Euro-American settlement. Grazing by indigenous species like bison and natural fire patterns are important ecological processes that have been eliminated. Disturbance from random patterns of mob grazing by indigenous species

increases native plant diversity and prevents savannas from becoming forests.

Amphibians and Reptiles

Reptiles and amphibians can be found in the park. Snakes include fox, red belly, and garter snakes. Race runners have been found near the park. A few frogs and toads exist, but the lack of ephemeral ponds limits their populations. The northern cricket frog has been seen in river wetlands near Hastings and it may exist in the park. Painted turtles have been documented near the park, although the park lacks sufficient clear streams and open water to provide habitat for a variety of turtles.

Insects

Prairie restoration has improved habitat for insects, especially pollinators, which have been declining due to habitat loss and agricultural pesticide use. Park prairies can provide habitat for the rusty patched bumblebee (Federally Endangered). The park is within the federally-designated Primary Dispersal Zone for conservation of this bumblebee. The park's prairie and forest edges support Monarch butterflies, which also have declined and are under consideration for protection by the US Fish and Wildlife Service for 2020. Monarchs rely on milkweed, found throughout the park's open areas. Additional prairie restoration and maintenance are needed to enrich pollinator diversity.

Rare Wildlife Species

The 2015–2025 MN DNR Minnesota Wildlife Action Plan emphasizes wildlife species of greatest conservation need (SGCN). These species, habitats, or populations are at risk of declining within a significant portion of their range. Associated SGCN habitats are typically rare or declining due to farming and development. SGCN can also include those species whose populations are stable within Minnesota but are declining in a significant portion of their range outside of the state.

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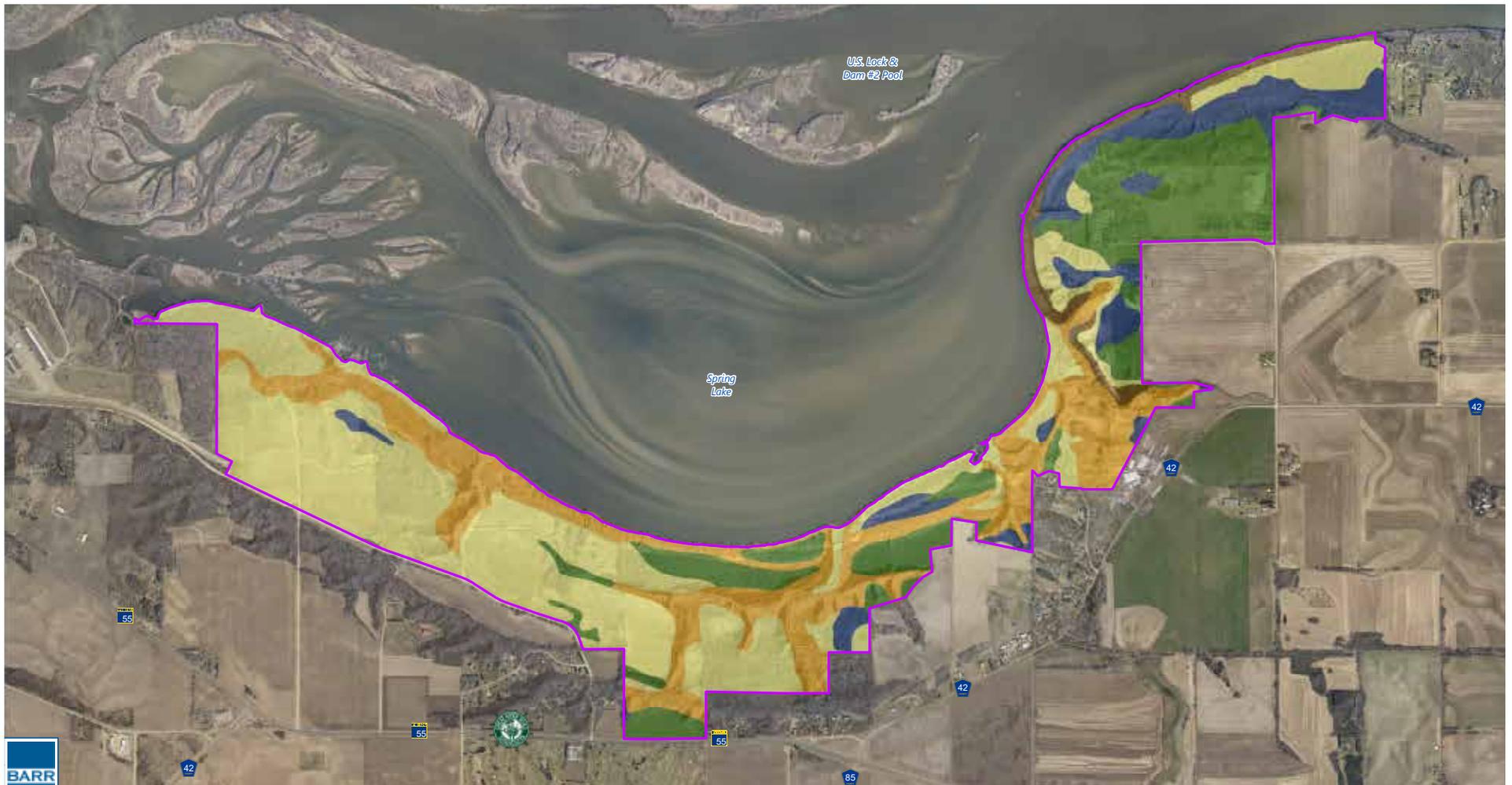
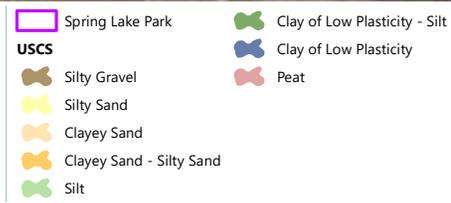
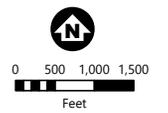


Figure 3.9 Soil textures found across the park



The Unified soil classification system (USCS) classifies mineral and organic mineral soils for engineering purposes on the basis of particle-size characteristics, liquid limit, and plasticity index.

The various groupings of this classification correlate in a general way with the engineering behavior of soils. This correlation provides a useful first step in any field or laboratory investigation for engineering purposes. It can serve to make some general interpretations relating to probable performance of the soil for engineering uses.



NATURAL RESOURCES INVENTORY

Prairie restoration has expanded park habitats since the 2003 plan. Other habitats have degraded due to a lack of fire and the encroachment of invasive species. Undisturbed habitat is critical for many species. Limiting development in the central portion of the park would protect existing habitats. Other habitats could be restored to host wildlife species. See Chapter 5: Stewardship Plans for recommendations for habitat regeneration.

CURRENT PLANT COMMUNITIES

Natural resource field investigations were conducted in summer, 2019 to review the Minnesota Land Cover Classification System (MLCCS) data, assess plant community ecological quality, and evaluate other issues such as erosion, soil degradation, and invasive species.

Figure 3.11 highlights the ecological communities of the park today. The park has evolved from an oak savanna pre-settlement landscape to forest, aided by fire suppression and elimination of elk and bison. Although most of the original oak savanna has degraded to forest, more than 200 acres of agricultural land has been restored to prairie since 1995.

Native plant community restoration projects since 1995:

- 2015, Plateau Prairie and Woodland Restoration
- 2014, Mississippi River Flyway Restoration
- 2014 & 2016, Archery Range Restoration
- 2012, Prairie near Maintenance Shop
- 2010–2011, Church’s Woods by FMR
- 2010, Prairie south of the previously planted Youth Lodge prairie
- 2009–2010, Prairie around the Gathering Center
- 2003, Prairie east of the Youth Lodge off of Pine Bend Trail
- 1995, Prairie by the Youth Lodge

ECOLOGICAL QUALITY

A. High Quality: Important to Protect and Preserve. Highest quality plant communities with less than five percent invasive plant species and little or no evidence of human disturbances such as logging, grazing, or soil compaction. These communities should be preserved and any disturbance such as trail placement should be undertaken with extreme care. Monitor for invasive species and control as they establish.

B. Degraded Remnant Native Plant Communities: Excellent Potential for Restoration to Enhance Biodiversity. Natural communities showing signs of disturbance since Euro-American settlement but are still clearly recognizable as native plant communities. Invasive species encroachment is currently low (5–50 percent). Primary natural disturbances such as intentional burning and mob grazing by bison have been suppressed in recent times. These areas should be carefully managed to avoid further damage. Native plant community restoration is highly feasible.

C. Lowest Quality Native Plant Community: Require Aggressive Stewardship to Increase Plant Diversity, Wildlife, and Aesthetic Value. Sites that were highly disturbed by previous land uses such, as clearing and over grazing, with very low plant species diversity. Shrub and/or groundcover layers are dominated by invasive species (>50 percent), with low diversity of native plant species. Natural processes have been altered by soil tilling or compaction, fire suppression, or altered hydrology. The community may not resemble any naturally occurring community as described by the MN DNR Natural Heritage Database. In forested areas, mid-story and ground layers are primarily invasive species. Grasslands are dominated by non-native cool season grasses with minimal wildflower diversity and abundance. These communities are restorable, but a greater effort is required to restore native plant diversity. These areas are the most appropriate for trails and recreational features.

NATURAL RESOURCES INVENTORY



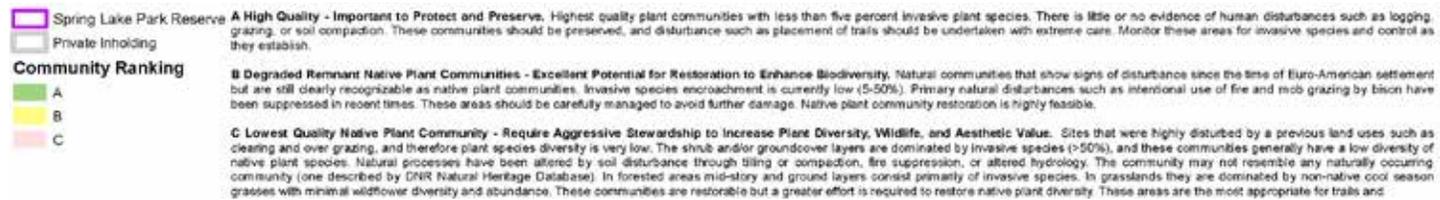
Figure 3.10 Natural Resource Inventory: Existing Ecological Communities



NATURAL RESOURCES INVENTORY



Figure 3.11 Ecological Communities Ranking



EXISTING PARK CONDITIONS

OVERVIEW SUMMARY

Spring Lake Park Reserve is a linear park atop the Mississippi River bluffs, with facilities serving a range of public recreation needs. The park has two distinctively-defined program areas: Upper Spring Lake Park Reserve (Schaar’s Bluff) and Lower Spring Lake Park Reserve (West Trailhead). The Mississippi River Greenway (MRG) connects these two ends of the park.

PARK-WIDE ASSESSMENT

Issues and opportunities identified at the park scale relate to circulation and connectivity, recreation offerings, and outdoor education.

CIRCULATION & CONNECTIVITY

Issues

- Unpaved trails are not intuitively laid out, limited in distance, and subject to erosion.
- Park boundaries are difficult to discern and signage indicating private properties is limited.
- Public interest in expanding trails and recreational uses (mountain biking) raises concerns about vegetation loss and compositional changes, soil compaction, erosion, and disruption of wildlife.
- The MRG is the only means traveling the full length of the park.
- There is a lack of clear wayfinding and orientation associated with trail use, especially in Upper SLPR. Trailheads and access points are not

PARK LOCATION	FACILITY / AMENITY	DESCRIPTION	YEAR BUILT
Upper	Schaar’s Bluff Gathering Center	3,500 sq ft, gathering space for 75, lobby with interpretation, kitchen, and restrooms; Net-zero-energy building	2008
Lower	Camp Spring Lake Retreat Center	Overnight , 4-season facility. Lodge, 10 group-campsite, outdoor classroom	1994
Lower	Archery Picnic Shelter & Archery Trails	Restroom, parking, horseshoe pit, grills, archery trails, 150 capacity shelter	1994
Upper	East Picnic Shelter (Small)	150 capacity shelter, electricity, grills, restrooms, picnic tables, parking, fire pit	1980
Upper	West Picnic Shelter (Large)	80 capacity shelter, electricity, grills, restrooms, picnic tables, parking, fire pit	1986
Upper	Community Garden Plots	66 plots	1980
Upper	Playground	Play Equipment, seating, sandbox	1996
Upper	Sand Volleyball Courts		1996
Throughout Park	Mississippi River Trail	5.4 miles with bridge crossings, overlooks, seating	2015
Throughout Park	Softscape Trails	9 miles of trails	1972
Upper	Overlooks	Located on the MRT, interpretive signage	2015
Upper, via Hilary Path	DNR Boat Launch		not available
Lower	Water Trail	Small watercraft water trail traversing the Spring Lake Islands	Established 2012
Abutting Park	Great River Road CR 42	Designated All-American Road,	Initiated 1938

Table 3.1 Spring Lake Park Reserve Facility Inventory

EXISTING PARK CONDITIONS

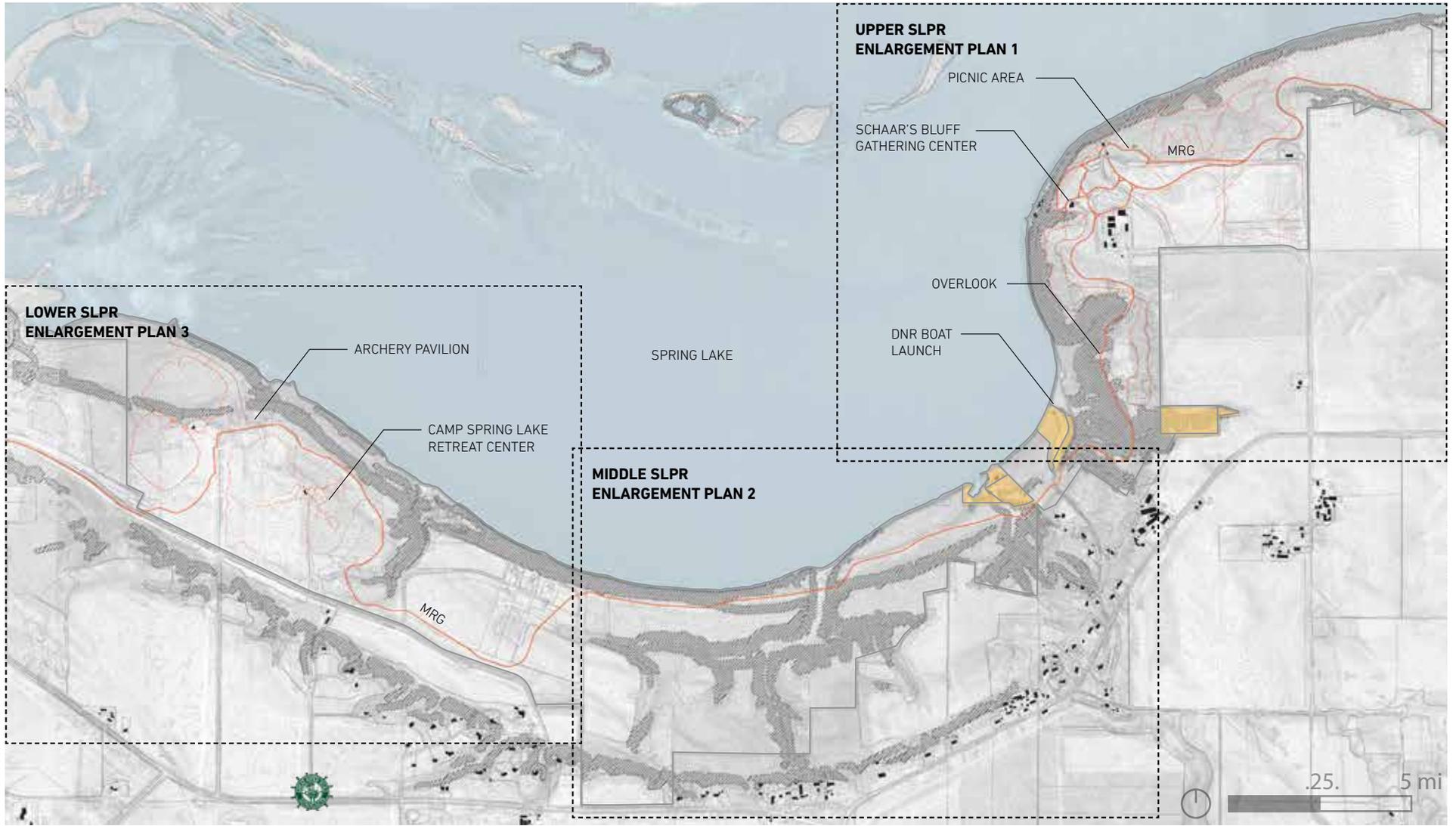


Figure 3.12 Existing Conditions Map

EXISTING PARK CONDITIONS



clearly identified nor is trail experience linking east and west sections of soft-surfaced trails in Upper SLPR.

Opportunities

- Expand the unpaved trail network to create summer and winter loops for day users and events such as cross-country running and cross-country ski meets.
- Create loops that connect to the MRG to expand the east-west park connections.
- Clarify the park boundary through identity, wayfinding, and branding.
- Use the park's proximity to Hastings as an asset and programming opportunity.
- Connect the MRG to other trails outside the park in the future to increase park visitation.



RECREATION

Issues

- Public river access is limited and the park lacks swimming and shore fishing.
- Four-season recreation is limited: ski trails are short and the park has no warming house or changing facility.
- The park does not offer equipment rental to support trail use and water access.
- Camping opportunities are limited to group offerings at Camp Spring Lake Retreat Center.
- Spring Lake is not suitable for larger boats as it is very shallow.



Opportunities

- Nonmotorized watercraft or bike rentals to help people enjoy the park.
- Expanded camping opportunities.
- A year-round facility to support winter recreation.

OUTDOOR EDUCATION

Issues

- Outdoor education programs are limited by low capacity facilities and visitation levels.
- Lake and River access is limited, which limits ability to hold water-focused programs.
- Self-guided interpretation is limited to the Schaar's Bluff area and signs on the MRG Trail.
- Significant historic and cultural resources are not interpreted or accessible to the public.
- Services that appeal to under-represented communities are lacking.



Opportunities

- Add year-round outdoor education.
- Expand outdoor education programs for adults focused on birds, photography, and history.
- Establish partnerships with organizations in Hastings.
- Integrate interpretation celebrating cultural and natural features i.
- Create interactive and tactile interpretive features to reach youth or others with limited ability to read the existing signs.
- Expand interpretation to appeal to more diverse populations.



EXISTING PARK CONDITIONS

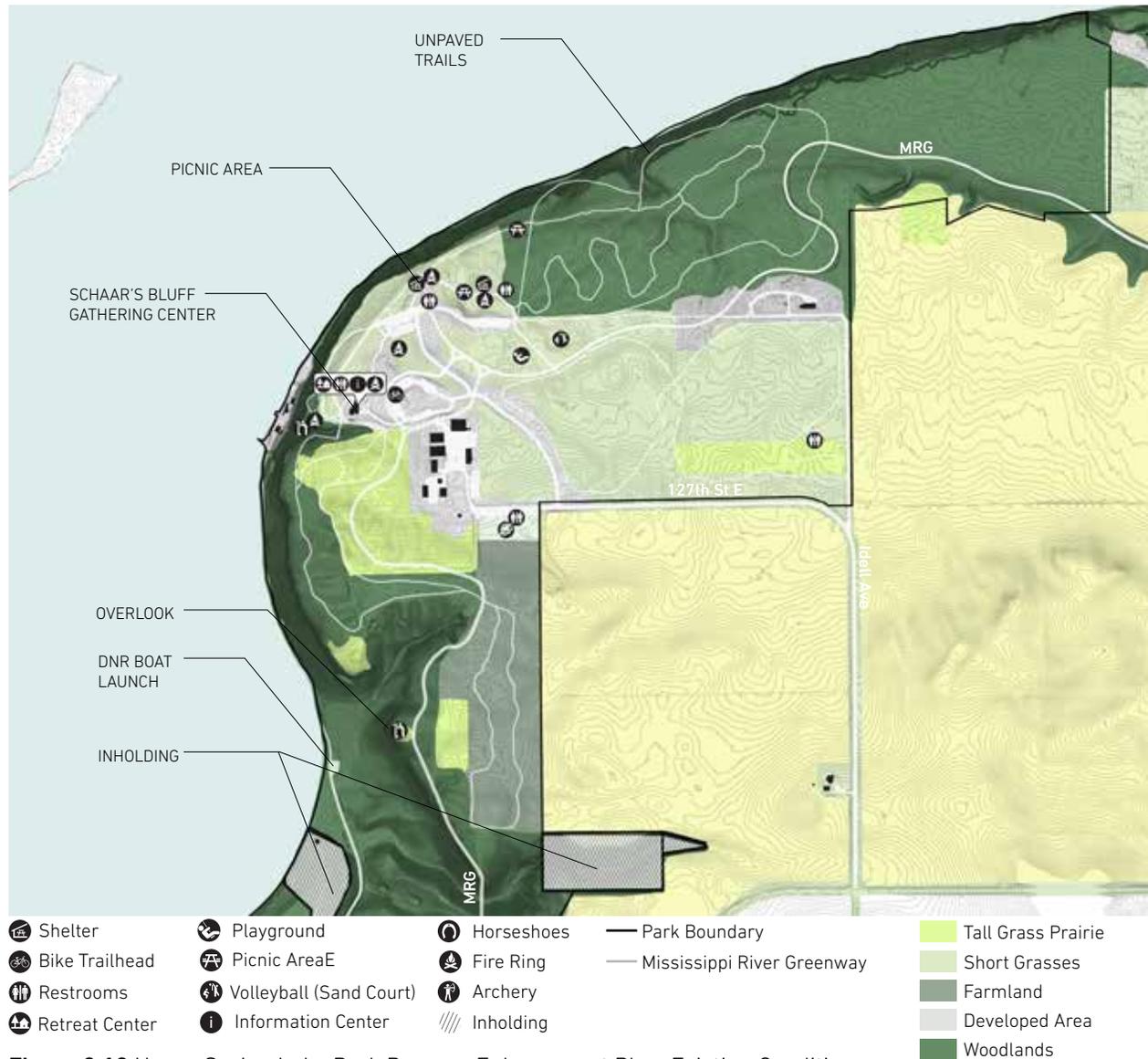


Figure 3.13 Upper Spring Lake Park Reserve Enlargement Plan, Existing Conditions

EXISTING CONDITIONS



Parking Lot: complex entry with two disconnected lots, divides the site



Entry Lawn: large gathering, view of river



Schaar's Bluff Gathering Center: bathrooms, office, storage



East Shelter: 6 picnic tables



West Shelter: 10 picnic tables



Playground: nearing the end of life span

EXISTING PARK CONDITIONS

UPPER SPRING LAKE PARK

This area, commonly known as Schaar's Bluff, offers the most amenities and is most heavily-used by visitors. It is also an area rich in culturally sensitive sites. Amenities include Schaar's Bluff Gathering Center, picnic shelters, a playground, sand volleyball courts, community garden plots, MRG trailhead, an overlook, benches, fire pits, an interpretive cultural trail, and picnic tables and grills. Issues and opportunities follow.

Issues

- **Park Entry:**
 - » The parking lot separates the picnic area from the playground and gathering center, limiting visual and physical connectivity between two primary amenities.
 - » The entry drive sequence from 127th St East to Schaar's Bluff causes confusion with two disconnected parking lots.
- **Bluff fence** is visually bulky and in need of repair.
- **Schaar's Bluff Gathering Center:** a gathering and event space that holds 80 people, with a small office, storage, rear loading area, lobby with interpretation, serving kitchen, and restrooms.
 - » As a trailhead, it lacks expected provisions such as maps, orientation, and program information.
 - » The office is very small and windowless, a limitation to staffing and a safety concern.
 - » The facility is only open by reservation and does not serve park visitors on a consistent basis.
 - » Rentable space is small, accommodating up to 80 people.
 - » The building is not suited to hosting events and serving the general public as it lacks a dedicated dressing room or mother's room (for weddings), and kitchen amenities for catering are limited.
- **Picnic Area:** East and West Picnic shelters, for up to 150 and 80 people respectively. Both shelters have electricity with nearby restrooms and drinking water.
 - » Shelters are outdated, limited in the range of sizes offered, and do not

provide contemporary amenities (drinking fountains/jug filler, serving kitchen space, refrigeration, and food staging areas).

- » Underground utilities run through use areas at Schaar's Bluff, which may limit alterations and uses.
- **Playground**
 - » Built in 1996, the playground is reaching end of life. It is becoming more difficult to source replacement parts. Recent improvements will likely last five more years.
 - » The playground is far from the picnic pavilions and offers little shade.
 - » The parking lot separates the picnic area from the playground and gathering center.
- **District Maintenance Facility / Former Schaar's Farm:**
 - » Currently fenced off, the maintenance facility is disconnected from park facilities.
 - » Maintenance facilities will relocate to an off-site location within 10 years.
- **DNR Boat Launch:**
 - » Open for public use but difficult to access via Hilary Path, which is minimally maintained and heavily eroded. In addition, the water near the boat launch is shallow with unpredictable currents and abundant snags.
- **Cultural Assets:**
 - » Upper Spring Lake Park is culturally sensitive and includes Traditional Cultural Properties which are close to and, in some instances, in conflict with existing park uses.

Opportunities

- Update picnic shelters to align with current standards.
- Re-purpose the barn, silo, and outbuildings with new program opportunities after the maintenance site is relocated.
- Redesign the entry drive and parking lot sequence would result in a more intuitive and an aesthetically pleasing arrival experience.

EXISTING PARK CONDITIONS

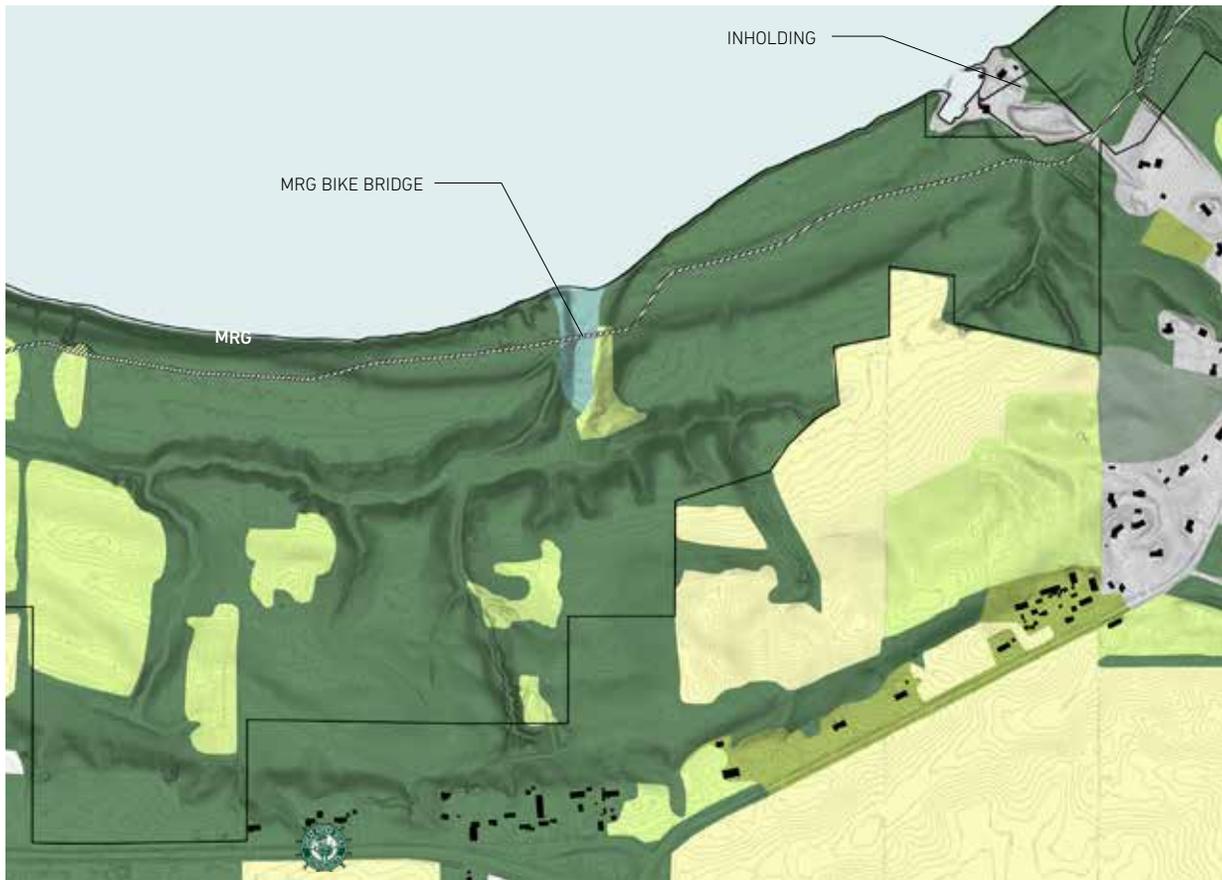


Figure 3.14 Middle Spring Lake Park Reserve Enlargement Plan, Existing Conditions



MRG: cut and fill as a result of trail construction



MRG: small gathering and interpretation stops along it



Wetland and Springs



Spring Lake



Floodplain Woodlands



MRG Bike Bridge

EXISTING PARK CONDITIONS

MIDDLE SPRING LAKE PARK

The center of the park is maintained for natural resources and the Mississippi River Greenway (MRG).

Issues

- The park middle is dedicated primarily to natural resources, lacks amenities, and is only accessible by the MRG.
- The MRG bisects the park into two long, thin halves, reducing adjacent habitat quality.
- There are no soft surface trails in the center of the park, which limits hiking, snowshoeing, and trail running opportunities.

Opportunities

- Introduce a mid-point destination along the MRG with a restroom facility or other amenities to expand use of the trail for shorter distances.
- Add a soft surface trail to the center of the park to provide access to the natural areas and to connect the existing soft surface trails in the upper and lower park.
- Increase river views.

LOWER SPRING LAKE PARK

Lower Spring Lake Park includes Camp Spring Lake Park Retreat Center, campground facilities, MRG trailhead, archery trail, picnic shelter, Bud's Landing (a seasonal waterfowl hunting water access point), and fire pits.

Issues

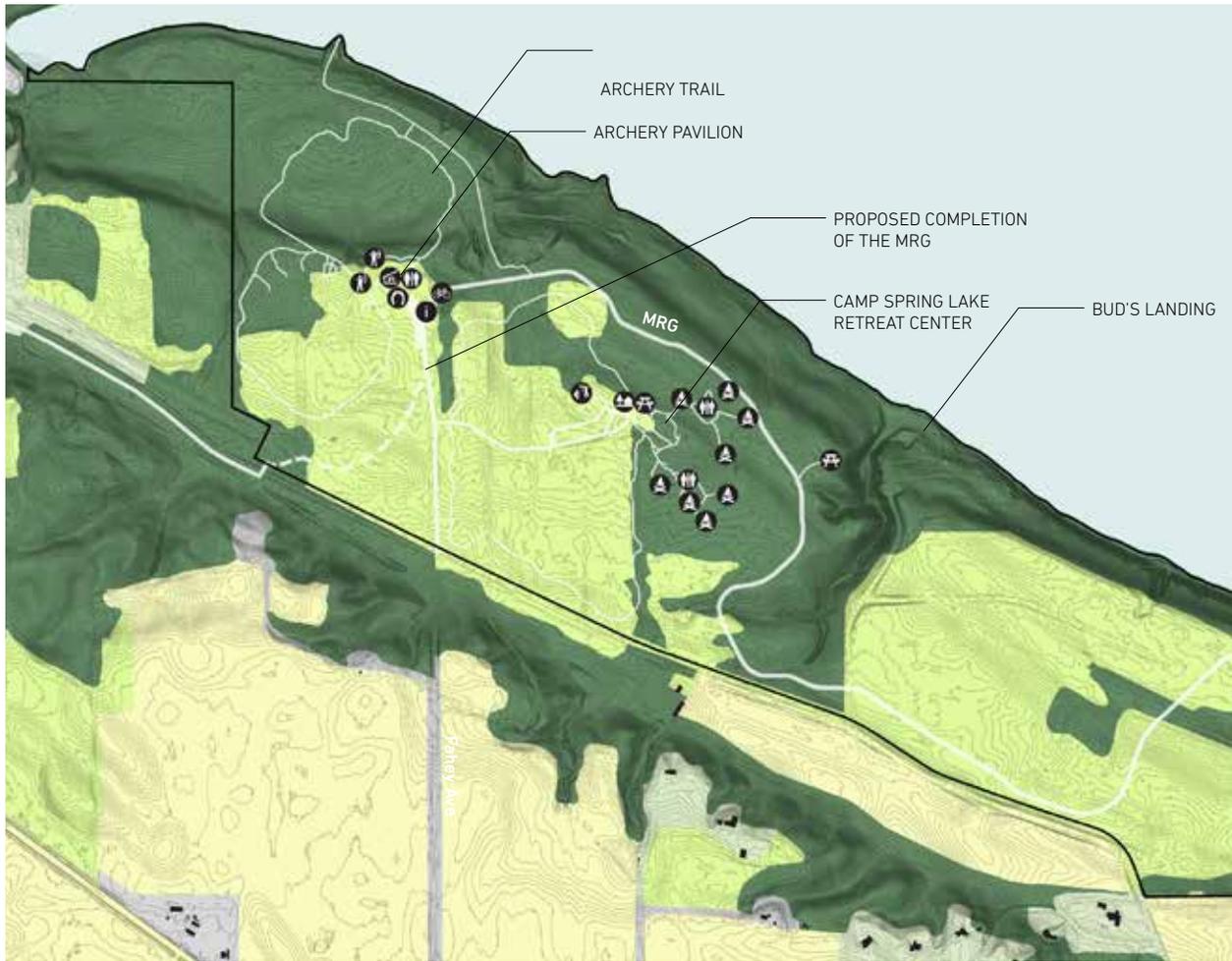
- **Camp Spring Lake Retreat Center and Camp Ground:** has overnight accommodations, four-season facility for up to 50 people, 10 group campsites, outdoor classroom, and amphitheater.
 - » Outdoor fire pits need light repair.
 - » The facility is exclusively rented during summer months by the YMCA for a summer camp, excluding public use.
- **Archery Picnic Shelter:** capacity of 150, restrooms, horseshoe pit, grills.
 - » The shelter is outdated and does not meet new County standards.

- **Archery Trail:** various target distances along a prairie and forest trail.
 - » The archery trail is underused.
 - » The archery trail is open to the public, with potential for user conflicts.
- **Parking:** gravel road with 90-degree parking spaces.
 - » Paving material may present challenges to increased traffic and opportunities for expanded program offerings.

Opportunities

- Develop river access at Bud's Landing.
- Expand partnerships and marketing with the YMCA.
- Add river activities for older campers.
- Partner with the Rotary Club for small boat fishing excursions.
- Update the archery picnic shelter to County standards.
- Partner with regional bow shops on 3D targets and archery events.
- Provide bow and broadhead target rentals to expand audience and increase use.
- Increase trail access and views to river.
- Expand camping opportunities with cart-in, bike-in, and canoe-in primitive camping.

EXISTING PARK CONDITIONS



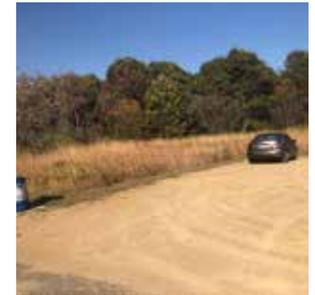
- | | | | | |
|----------------|-------------------------|------------|----------------------------|--------------------|
| Shelter | Playground | Horseshoes | Park Boundary | Tall Grass Prairie |
| Bike Trailhead | Picnic Area | Fire Ring | Mississippi River Greenway | Short Grasses |
| Restrooms | Volleyball (Sand Court) | Archery | | Farmland |
| Retreat Center | Information Center | Inholding | | Developed Area |
| | | | | Woodlands |

Figure 3.15 Lower Spring Lake Park Reserve Enlargement Plan, Existing Conditions

EXISTING CONDITIONS



Entry Signage: archery trail rules and fees, paybox



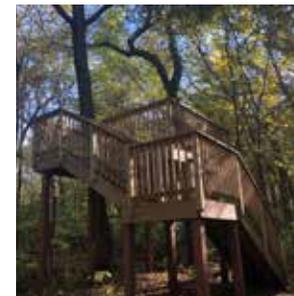
Parking Lot: compacted gravel



Archery Shelter: 9 tables, bathrooms, and grill



Horseshoes: adjacent to picnic tables and shelter



Archery Station: wood structure



Archery Signage: identifies targets & shoot distance

EXISTING OUTDOOR EDUCATION & EVENTS

OVERVIEW

Spring Lake Park Reserve is popular for birding and nature programs and has offered programs such as owl banding and wildflower walks. Self-guided interpretive opportunities tell the stories of the land and people who have lived on it for thousands of years. The park has hosted small trail running events held by outside organizations with County assistance. In 2017 and 2019, the park offered popular Candlelight Walk events.

Examples of past park events include a community music festival, high school cross-country meets, and a kite flying festival. These events have stopped for various reasons, including disruptions caused by the MRG construction, noncompetitive rental fees, and inconsistent participant turn-out.

OUTDOOR EDUCATION PROGRAMS

Stakeholders, community members, and staff have voiced interest in expanding the park's education program offerings. Family nature nights, ski lessons, school field trips, adult nature-inspired craft classes, and nature-based birthday parties are popular at other County parks and could be expanded to Spring Lake Park Reserve. Additional recreation programs could be introduced if the necessary supporting facilities and amenities are identified as priorities. These include paddling programs, warming space to support winter activities, and expanded trail networks

for trail-based activities and running meets.

PARTNERSHIPS

Dakota County partners with a diverse group of national, regional, and local organizations, including Hastings Park and Recreation, AARP, Boy Scouts, Girl Scouts, Carpenter Nature Center, REI, Surly, ECFE, the National Park Service, and local art organizations. These partnerships create ongoing opportunities to expand program offerings that reach a broader range of communities and interest groups in the region.



Trails by Candlelight Event, 2017

KEY CONSIDERATIONS



Restored Prairie, 2019



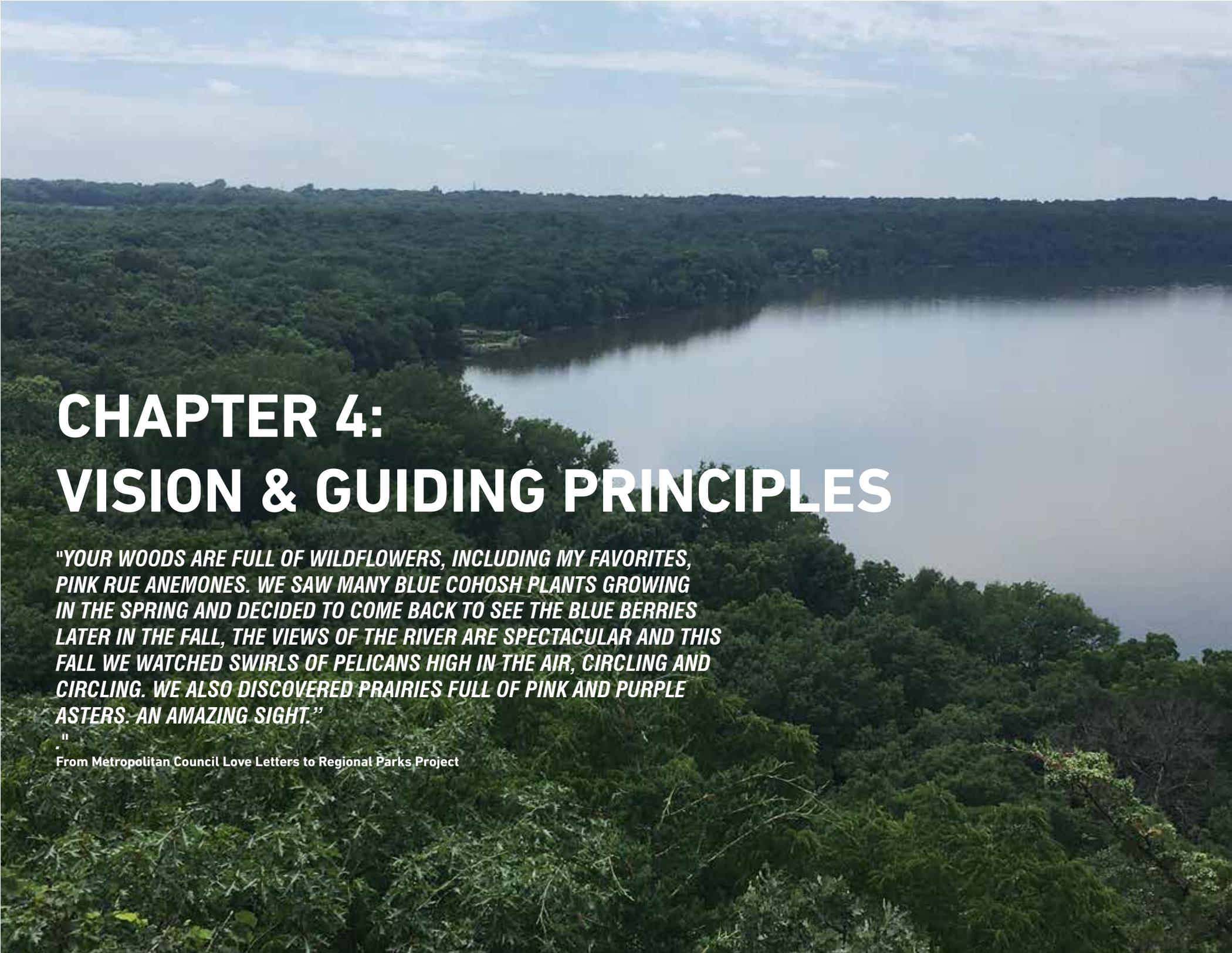
Church's Woods, 2019



Bremer Village Site, 2019

Drawn from the park assessments, service area demographics, recreation trends, community engagement; and input from staff, elected officials, Tribal Historic Preservation Officers, and key stakeholders, the following key considerations inform the park vision, guiding principles, and development concepts in the following chapter.

1. The park is a unique cultural and natural landscape with great experiential potential. Celebrating the park's unique natural resources while honoring its cultural significance to Indigenous people can create a singular destination.
2. The park is not well known. Building partnerships across national, state, regional, and community organizations such as the Great River Parkway Commission of Minnesota can diversify programming, expand visitation, focus the park's identity on its natural and cultural assets, and improve branding.
3. The park is on the Mississippi River but has limited connectivity to water. Improving the physical connection to the river will increase opportunities for education, interpretation, and recreation to reach more diverse users.
4. Visitors appreciate the trails, but recreational uses are limited. Expanding the unpaved trail network can improve the visitor experience and support more trail activities including snowshoeing, shorter family hikes, and nature walks.
5. The park's natural resources are degraded by forces outside the park boundary, including erosion, water contamination, and viewshed interruptions. Working with landowners on best management practices, considering river management, and conducting view analyses can protect the park's natural resources.
6. As a reserve required to maintain 80 percent of its land for natural resources, there is great potential in outdoor education that focuses on the park's diverse plant communities.
7. The park could accommodate a greater range of visit lengths, from short visits for families to overnight trips. Expanding camping can serve local visitors and improve the park as a destination for those traveling farther.
8. Highlighting the park's cultural, natural, and recreational assets will increase the appeal of the park as a unique regional destination.



CHAPTER 4: VISION & GUIDING PRINCIPLES

"YOUR WOODS ARE FULL OF WILDFLOWERS, INCLUDING MY FAVORITES, PINK RUE ANEMONES. WE SAW MANY BLUE COHOSH PLANTS GROWING IN THE SPRING AND DECIDED TO COME BACK TO SEE THE BLUE BERRIES LATER IN THE FALL, THE VIEWS OF THE RIVER ARE SPECTACULAR AND THIS FALL WE WATCHED SWIRLS OF PELICANS HIGH IN THE AIR, CIRCLING AND CIRCLING. WE ALSO DISCOVERED PRAIRIES FULL OF PINK AND PURPLE ASTERS. AN AMAZING SIGHT."

"

From Metropolitan Council Love Letters to Regional Parks Project

VISION AND GUIDING PRINCIPLES

OVERVIEW AND PURPOSE

The Vision Statement and Guiding Principles set the stage for concept development and initiatives. The Vision describes what the park will be in the future while the Guiding Principles suggest how the park will achieve that vision.

VISION STATEMENT

Spring Lake Park Reserve showcases the ecological and cultural integrity of the land to provide a regional destination where visitors can experience the integral relationship between humans and the landscape.



View of the Mississippi River from the shores of Spring Lake Park Reserve

GUIDING PRINCIPLES

1. **Protect, restore, enhance, and maintain natural resources.** Respect Spring Lake Park as a “reserve” with a maximum development footprint of 20 percent of the park land. Ensure natural resources are enhanced as new recreational and educational programming is introduced.
2. **Create an engaging gateway to the treasures of the Mississippi River Valley.** Preserve and enhance existing habitat for birds and wildlife, preserve bluff views, and give visitors an opportunity to access and experience one of the greatest regional and national assets.
3. **Become a regional, four-season destination.** Develop programming and facilities that are welcoming to visitors of all ages and abilities throughout all four seasons. Connect to the regional tourism network.
4. **Celebrate the area’s rich cultural heritage.** Maximize educational opportunities to tell the past, present, and future stories of the park’s cultural and ecological assets.
5. **Integrate ecological, cultural, educational, and recreational experience.** Consider innovative approaches to integrate recreational and educational activities with resource preservation and protection for a more connected park. Strengthen connectivity through the park to increase access and provide for more diverse experiences.
6. **Provide inclusive, memorable, and relevant experiences for all.** Improve the quality and types of access to the unique features of Spring Lake Park Reserve. Create a park that is welcoming to people of all abilities, races, and backgrounds.



CHAPTER 5: MASTER PLAN

*"YOU ARE A SHORT DRIVE AWAY FROM
WORK (8 MINUTES) BUT FEEL LIKE A
WORLD AWAY. ALSO, I DISCOVERED I LOVE
TO RUN IN GREAT PART OF YOU."*

From Metropolitan Council Love Letters to Regional Parks Project

OVERVIEW

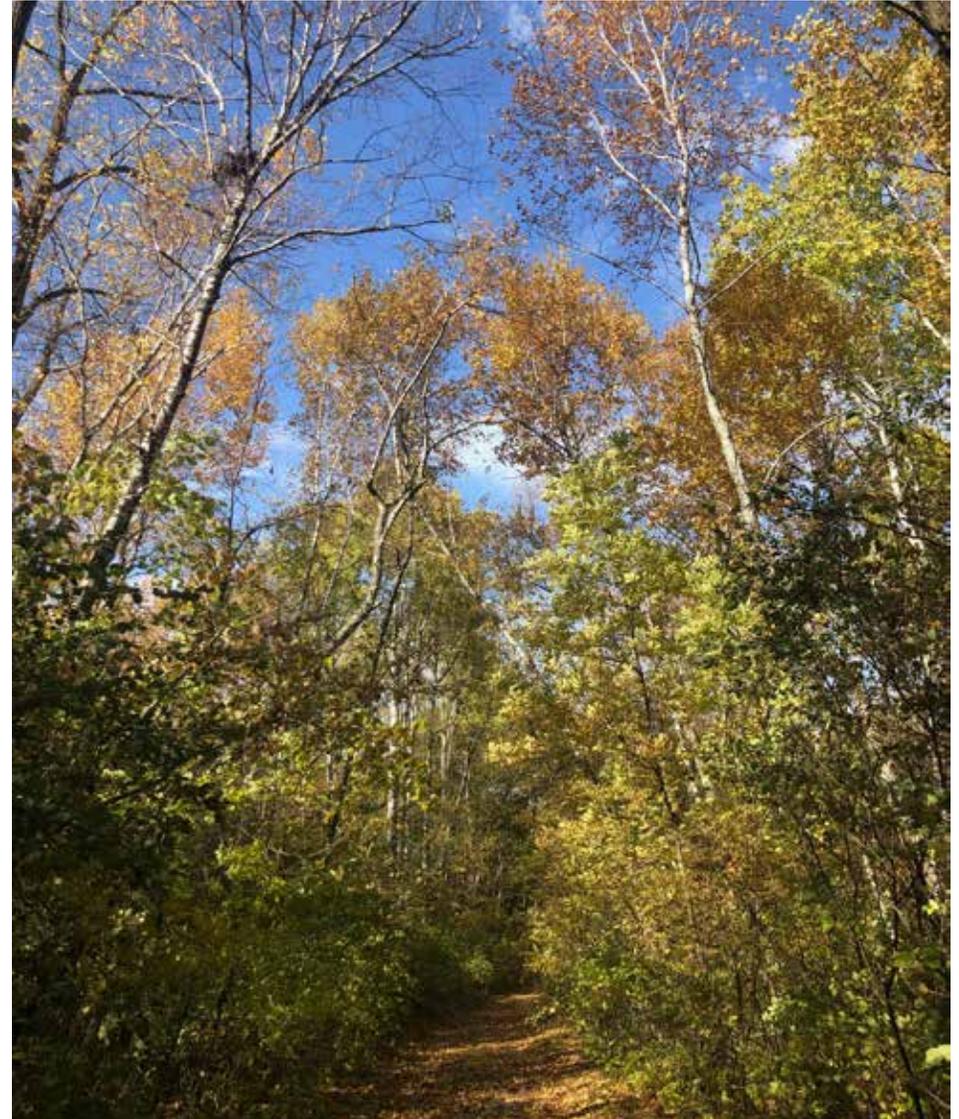
PARK DEVELOPMENT CONCEPT PLAN

At Spring Lake Park Reserve, there is the opportunity to develop a signature park that builds on the park reserve's inherent assets: the Mississippi River, outstanding ecological quality, and rich history as an area where ancestor's of today's Dakota Tribal communities lived, prayed, hunted, gathered, battled, and buried their relatives.

This chapter defines the recreation and interpretive concept and specific physical and programmatic improvements proposed for Spring Lake Park Reserve. The concept for the park is organized by the upper and lower focus areas of the park.

For the lower and middle portions of the park, focus is on improvements prioritized for the next 10 years, and the long-term concept plan shows the park at full realization. The Upper Park, including Schaar's Bluff, requires special consideration as a place that encompasses a high concentration of highly sensitive Traditional Cultural Properties (TCPs) of importance to the Dakota people and their ancestors for time immemorial. For this area, the master plan outlines initial recreation desires and recognizes that more study and Tribal consultation is needed before a more detailed development concept can be finalized. The purpose of this work, anticipated to occur as part of the 10-year plan, is to better understand the breadth and significance of Traditional Cultural Properties in the park and how to best protect these properties while allowing for public park uses.

Long-term elements not currently included in the 10-year plan may be accomplished sooner, based on changing priorities or unforeseen funding opportunities. Graphics, narrative descriptions, and precedents describe the desired improvements, including improvements related to visitor services, cultural and natural resources, and interpretation.



OVERVIEW

SENSITIVE IMPROVEMENTS

Spring Lake Park Reserve is defined by its location on Spring Lake and the Mississippi River. The power and dynamism of the river and people who have made this place their homeland—the Dakota People—shaped it into the unique landscape that visitors experience today. The park is well known for its distinctive riverine landscape; diverse, high-quality, and regenerated plant communities; and many identified sites of cultural significance. These natural and cultural assets deserve protection and celebration. Each plan recommendation reacts to these significant resources using a sensitive approach to balance recreational and educational opportunities with responsible stewardship. It is anticipated that the majority of recreational, educational, and ecological improvements will be implemented with additional Dakota Tribal consultation during design and Tribal monitoring during construction.

80/20 COMPARISON

As a reserve, Regional Park policy dictates that development should not exceed 20 percent of the park, and the remaining 80 percent should be in its natural state. The existing development footprint in SLPR is 12 percent. Total development under the new master plan (existing and proposed) would reach 15 percent. The conservative extent of development in the long-term park vision reflects the plan's intent to protect, restore, enhance, and maintain natural resources while allowing visitors to access and appreciate this protected landscape.

OVERVIEW

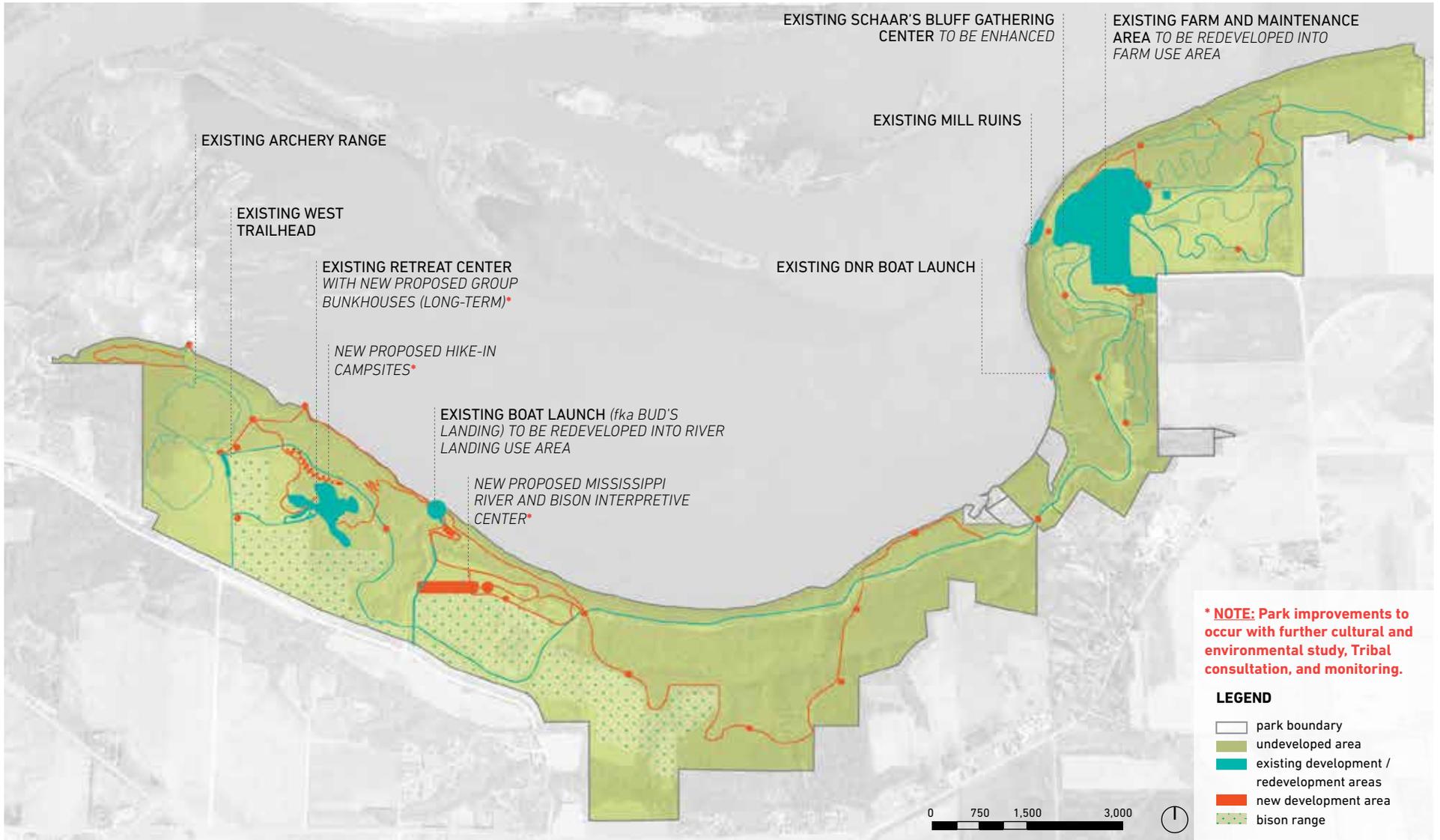


Figure 5.1 Comparison of Undeveloped vs. Developed Footprint

LONG TERM CONCEPT PLAN

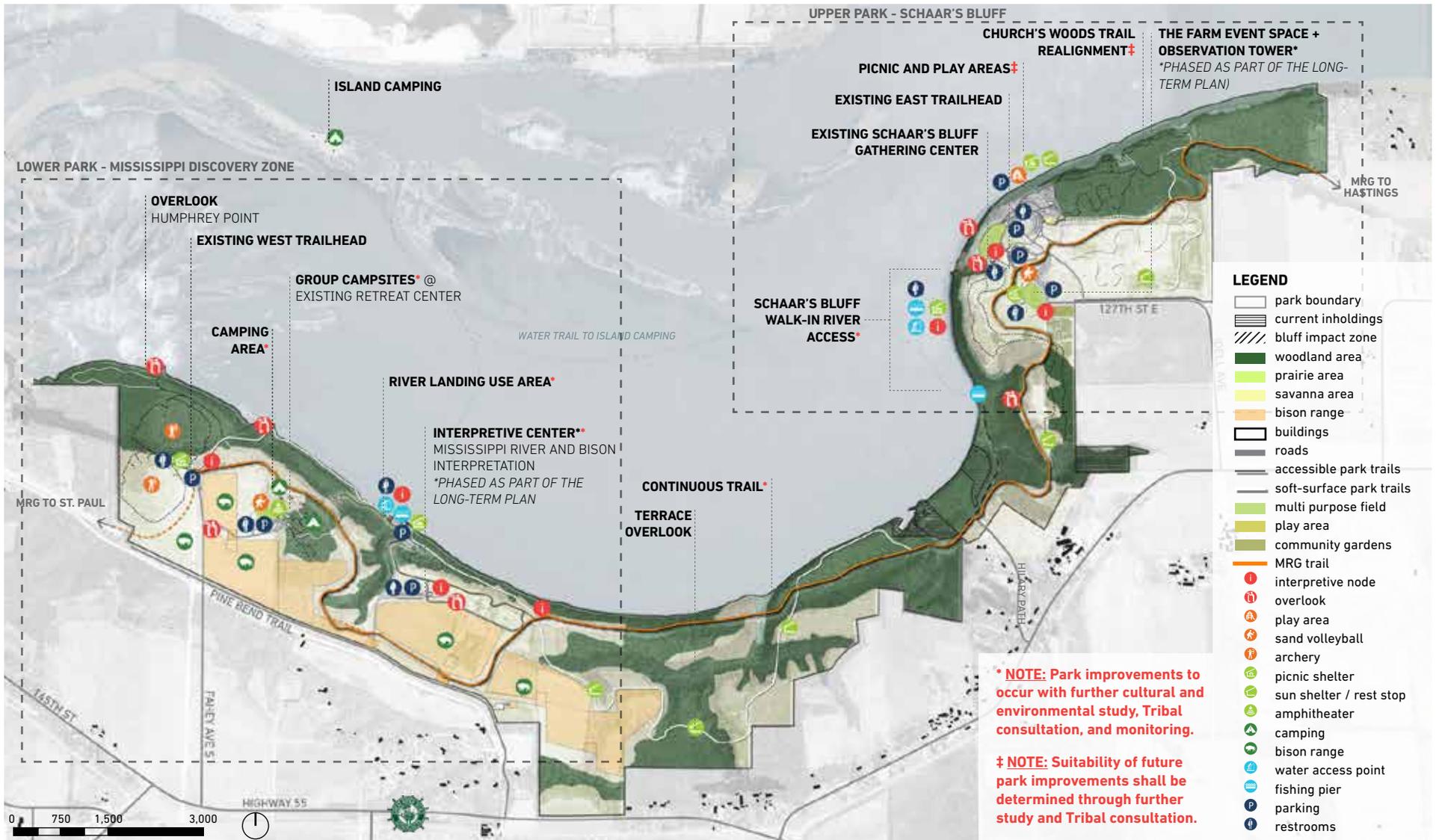


Figure 5.2 Site-wide Concept Plan, Long-Term Development Plan

LONG TERM CONCEPT PLAN

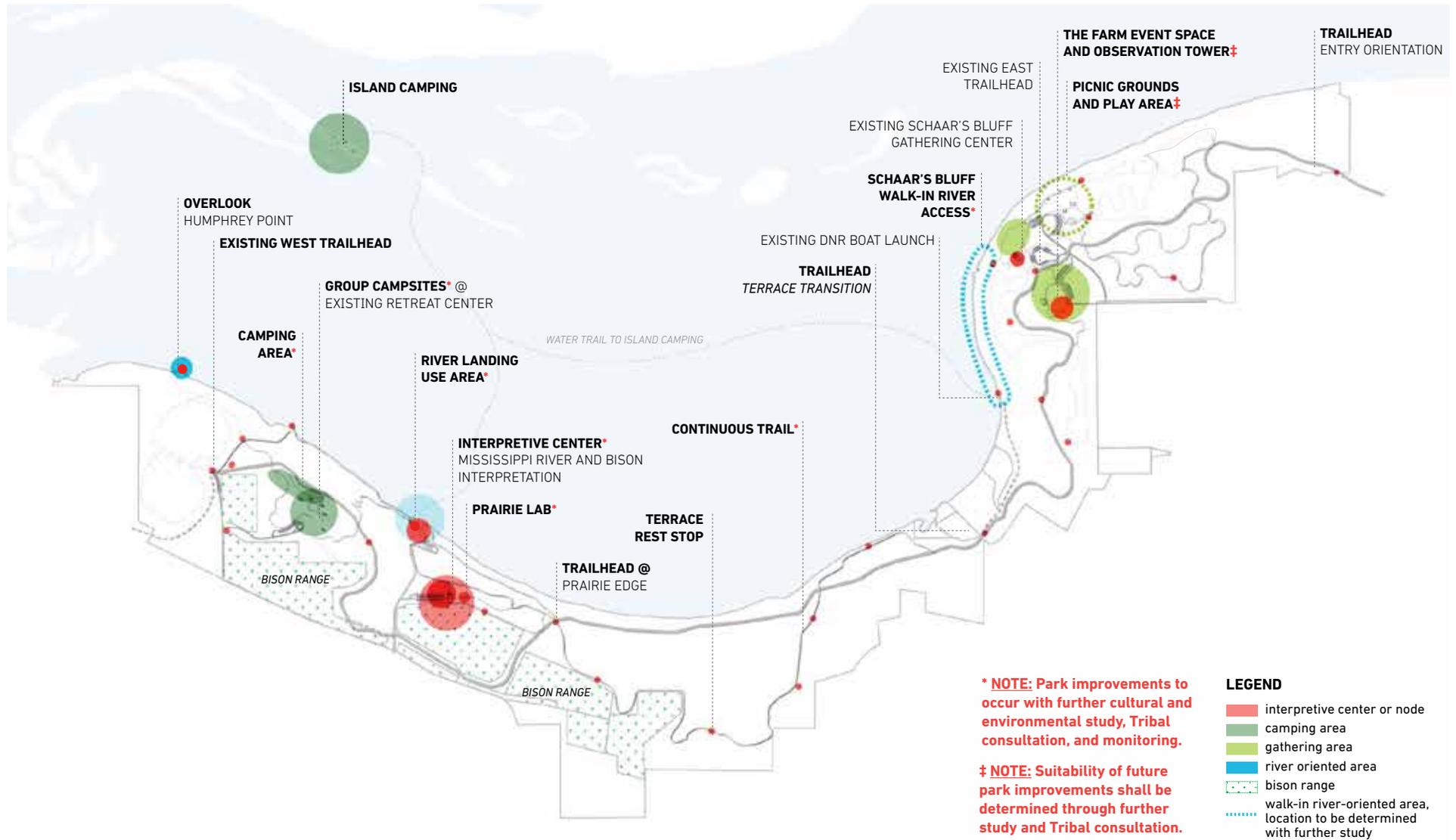


Figure 5.3 Program Distribution, Long-Term Development Plan

UPPER SPRING LAKE PARK RESERVE: SCHAAR'S BLUFF

AREA OVERVIEW

Schaar's Bluff is situated high above the Mississippi River and offers stunning views of the river channel, Spring Lake, and the island-rich landscape below. Its captivating views and abundant natural resources have drawn people to the area for thousands of years. The Upper Park includes a concentration of sensitive Traditional Cultural Properties (TCPs) of importance to past, present, and future generations of Dakota People. Additional study and Tribal consultation is needed to more fully understand the scope and significance of TCPs in the Upper Park and appropriate recreational uses that can occur. Proposed improvements shown in the long-term concept represent desired recreation program based on existing recreation facilities and activities, recreation trends, demographic trends, and community input to date. It does not represent a full understanding of the existing cultural landscape or compatibility with the proposed recreation activities. Final recreation program and locations for associated facilities is dependent on the results of future study and Tribal consultation.

Desired recreation program shown in the long-term concept increases visual and physical access to the Mississippi River, enhances picnicking and play, increases capacity to host gatherings and events, expands opportunities for nature-based recreation, and integrates interpretation nodes. Several key concepts will be explored further:

- The Church's Woods trail network, picnic grounds, and playground will be refurbished and re-configured with the goals of better protecting TCPs while serving park visitors. Modern reservation picnic shelters are needed to replace outdated structures. The play area will be updated with traditional nature-themed equipment and a nature-play space.
- The area by the community gardens currently occupied by park maintenance will be reconsidered as a potential location for gathering and events, Indigenous cultural events, picnicking, play, a four-season pavilion, and Schaar's farm silo re-use as an observation tower.



View of the Mississippi



Recreational Water Access

- A River Use Area featuring picnicking, river access, and an interactive interpretation will be along the Mississippi River Shore at a location to be determined with Tribal consultation.
- Comprehensive interpretation across the area will connect visitors with cultural and natural assets telling the many, ever-evolving stories embedded in this place (see pages 104–127 for more information.)
- Natural resource restoration and enhancement throughout the eastern park will improve the overall setting, provide demonstration plantings, and model stewardship opportunities for educational and interpretive purposes.

10-YEAR PLAN SUMMARY

The upper park's first development phase is predicated on further study of the cultural landscape and development of a more refined vision and concept in consultation with Dakota Tribal Representatives. The desire is to protect TCPs and provide clear access to previously disconnected park resources, enhance existing

LONG TERM DEVELOPMENT PLAN

UPPER SPRING LAKE PARK RESERVE- SCHAAR'S BLUFF

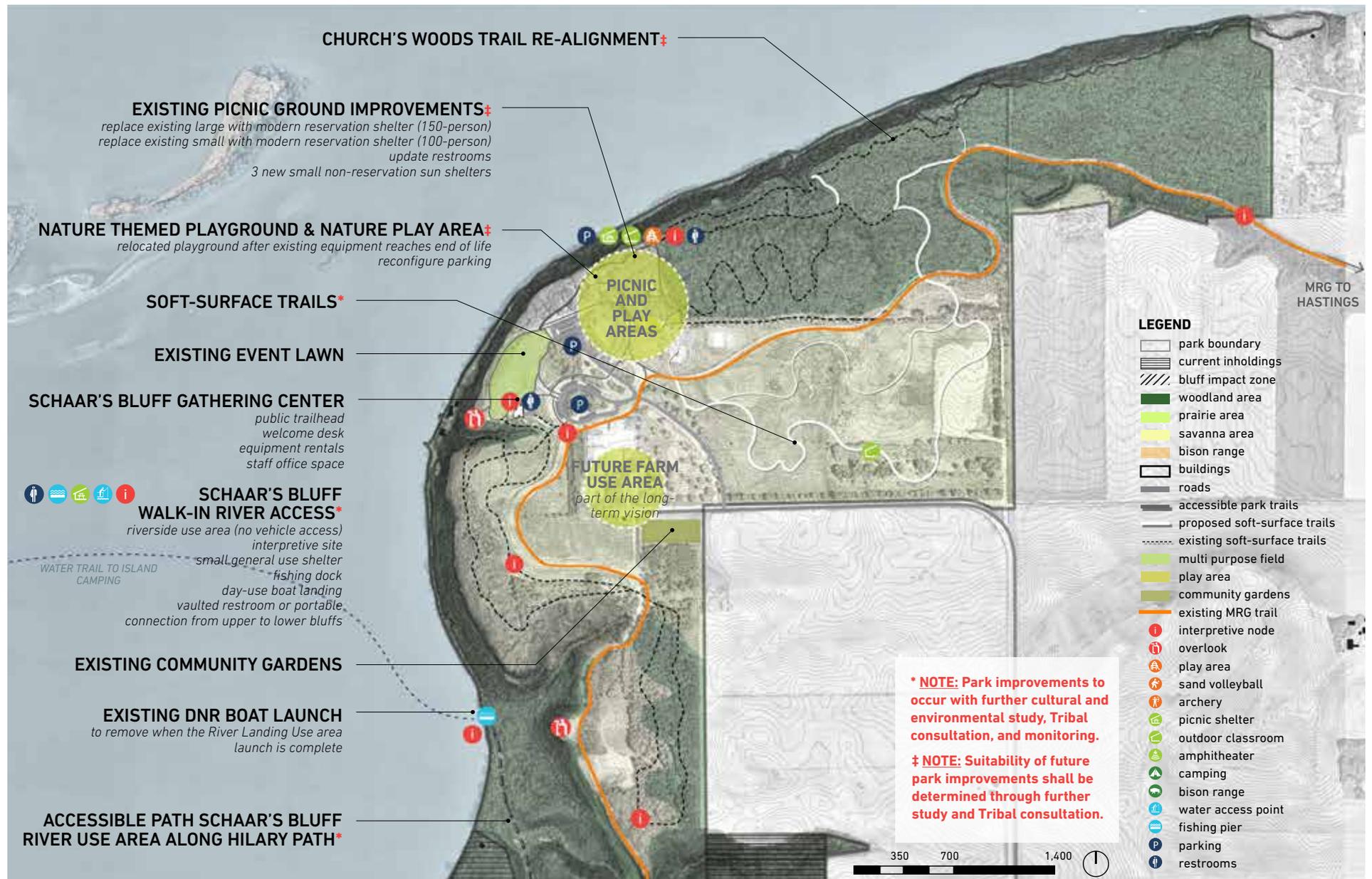


Figure 5.4 Upper Park / Schaar's Bluff Enlargement, Long-Term Development Plan

10-YEAR DEVELOPMENT PLAN

UPPER SPRING LAKE PARK RESERVE: SCHAAR'S BLUFF

park amenities to serve contemporary visitor interests, and strengthen the park's connection to the Mississippi River. Projects prioritized for development during the 10-year phase include:

- Refined natural surface trails that reduce conflict with TCPs and new, nonstructural river overlooks
- Access to the River Use Area via a trail leading from the Mississippi River Greenway (MRG) and a potential connection between the upper bluffs and lower shoreline
- Infrastructure supporting river access (picnicking, fishing dock, and shore fishing)
- Transformation of the Gathering Center from a private rental space to a trailhead with a public warming area, improved office space, and rental equipment facilities
- Improved Picnic Grounds including non-reservable sun shelters, modern reservation picnic shelters that can be rented for weddings and other gatherings, and restrooms
- Relocated and enhanced Play Areas (accessible nature-themed and nature-play). Elements to include in nature-themed play include adult activities, such as a climbing wall or fitness element, zip line, swings, slide, and monkey bars.



RIVER USE AREA
highlighting cultural assets



GATHERING AREA ENHANCEMENT
providing office space and equipment rentals



ENHANCED PLAY AREA
nature themed play



ENHANCED PLAY AREA
nature play



ENHANCED PICNIC GROUNDS
modern picnic shelters



RECONFIGURED TRAIL NETWORK WITH
INTEGRATED INTERPRETATION

LONG-TERM DEVELOPMENT PLAN

UPPER SPRING LAKE PARK RESERVE: SCHAAR'S BLUFF

LONG-TERM PLAN DEVELOPMENT SUMMARY

Long-term projects for the upper park increase recreational river access at the River Use Area and create a Farm Use Area to increase park capacity for rental space and events.

Long-term Plan Developments include:

1. Improvements to River Use Area, including custom picnic shelter and restrooms, interactive interpretation, and day use boat landing
2. Farm Use Area including four-season pavilion for event rental (including weddings), silo observation tower, multi-purpose field (informal sports, special programs, and Indigenous cultural events), relocated sand-volleyball, natural surface trails, and parking
3. River Overlooks providing powerful views of the river valley with safe access to the bluff edge

INTEGRATED DEVELOPMENT

Program areas were sited through careful consideration of their relationship to the park's cultural and natural resources.

Natural Resources

Natural resource management will continue regenerating a mosaic of upland plant communities including oak savanna, oak woodland, and grasslands. (See the page 104 for more information).

Interpretation

Interpretation will be integrated into the design framework of all new physical elements (see page 120) including:

- » The River Use Area's picnic shelter and interactive experience
- » The Farm Area's silo observation tower
- » The Gathering Center's enhanced indoor exhibit space
- » Waysides for Church's Woods and the park-wide trails
- » Trail rest stops, overlooks, and signage



RIVER USE AREA
riverside sun shelter and picnic area



RIVER OVERLOOKS



FARM AREA
silo observation tower
(reuse of existing structure)

LONG-TERM DEVELOPMENT PLAN

LOWER SPRING LAKE PARK RESERVE: MISSISSIPPI DISCOVERY ZONE

AREA OVERVIEW

Major long-term improvements for the lower (west) park include Bison reintroduction and redeveloping an historic access as the River Landing, with educational and recreational connections at the river's edge. An indoor interpretive center will be the nexus for guided programming on interconnections among the prairie ecosystem and bison, the river, and the landscape of Spring Lake Park Reserve. All improvements require additional investigation as to the location of TCPs in the lower park, Tribal consultation during design, and Tribal monitoring during construction to ensure protection of TCPs.

Lower park improvements include:

- An Interpretation Center to enhance programming and visitor experiences of the prairie ecosystem, natural resource management, and the reciprocal relationship between the Mississippi River's natural systems and legacy of human activity. The interpretive center will support guided education programs and school field trips.
- Rustic campsites accessible only by biking, hiking, or small watercraft to open the door to visitors who want a longer and more immersive nature experience within the metropolitan region.
- Trail loops, spurs, and overlooks to bring hikers to the river's edge to see, hear, and feel the water that shaped the land and lives of all with stories of the area.
- Reintroduction of bison, a keystone prairie species, to help establish a diverse, resilient, and sustainable prairie ecosystem, to enhance park visitor experience, providing opportunities to view and learn about bison, the prairie ecosystem, and the strong historical relationship that the animal had with Indigenous culture. The County is currently scheduled to reintroduce bison in 2022. If bison are not reintroduced, the prairie ecosystem would be managed with fire and mowing, and facilities specifically related to bison would not be implemented.



EXPANDED TRAILS
provide access to more areas of the park



RIVER CONNECTIONS
opportunities to highlight integral connections to the river



BISON HERD



OVERLOOKS
structures providing views of landscape beyond

LONG TERM DEVELOPMENT PLAN

LOWER SPRING LAKE PARK RESERVE - MISSISSIPPI DISCOVERY ZONE

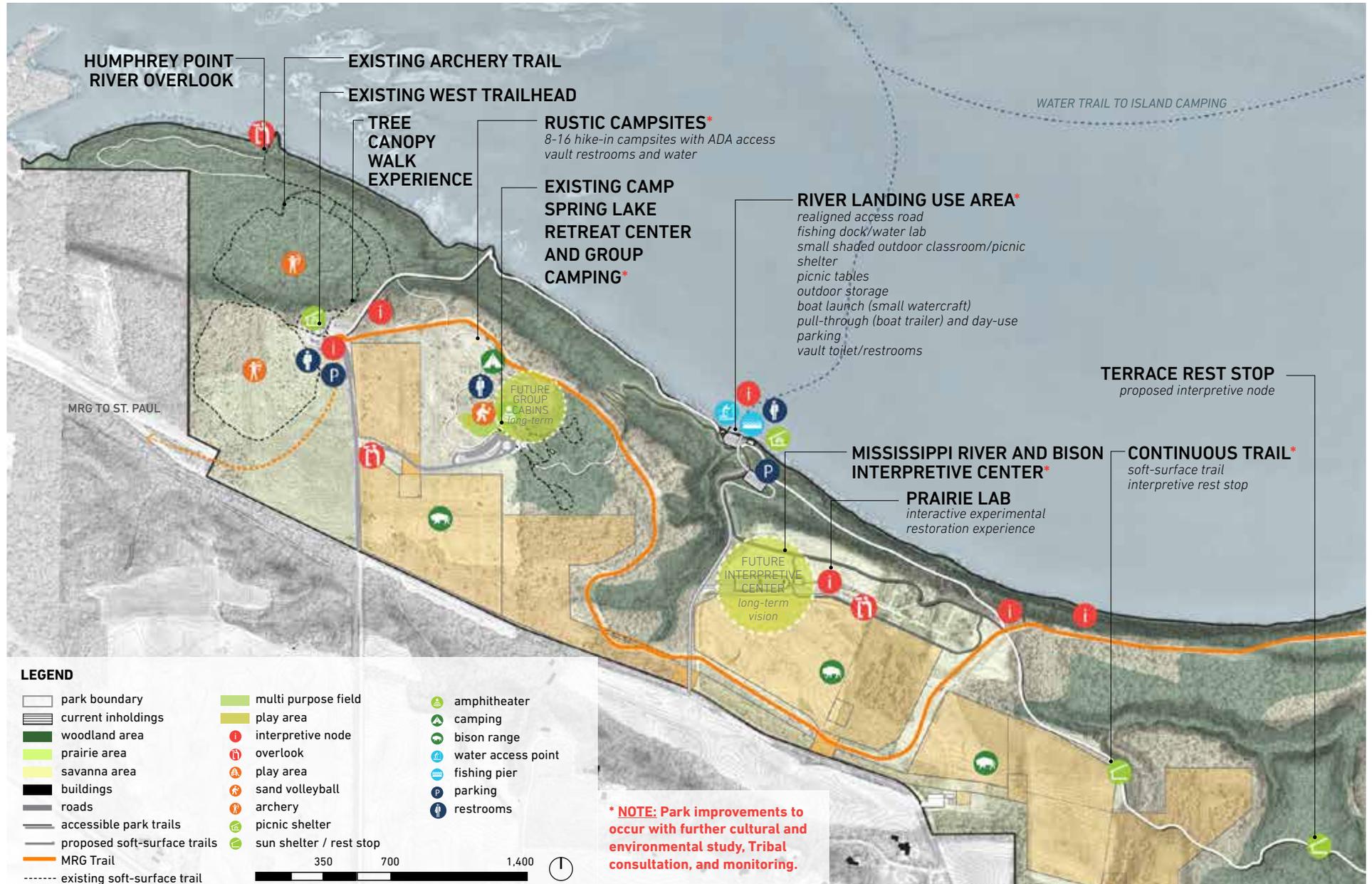


Figure 5.5 Lower Mississippi Discovery Zone Enlargement, Long-Term Plan

10-YEAR DEVELOPMENT PLAN

LOWER SPRING LAKE PARK RESERVE: MISSISSIPPI DISCOVERY ZONE

10-YEAR PLAN SUMMARY

The first development phase in the lower park supports visitor services connected to the bison range and River Landing Use Area, expands camping, and provides trail access to new areas of the park. Projects prioritized for the 10-year phase:

- Initial development, with Dakota Tribal consultation, of the River Landing Use Area, with a boat launch reached by a reconfigured access road, a picnic shelter, equipment storage, a watercraft rental kiosk, picnic grounds, and a fishing dock. Access for waterfowl hunting in the MnDNR WMA will remain.
- The Fischer Avenue Trailhead with parking, bus drop off, a shaded outdoor classroom, and vault toilet
- The Bison Range Visitor Service Enhancements with an accessible viewing trail and viewing platform
- Water/Kayak Trail and Island Camping
- Camping (Walk-in/Bike-in Sites with rustic amenities)
- Trails connecting the West Trailhead to the Retreat Center, the Landing, and the Fischer Avenue Trailhead with simple, non-structural river overlooks
- Relocation of the existing mowed prairie trail adjacent to the retreat center. Location will be determined after bison range extent is finalized.



RIVER LANDING USE AREA
outdoor classroom / riverside pavilion



RIVER LANDING USE AREA
boat launch / watercraft rental kiosk



EXPANDED TRAIL NETWORK WITH
INTEGRATED INTERPRETATION



BISON RANGE VISITOR SERVICES
ENHANCEMENTS
accessible trail and viewing platform



EXPANDED CAMPING OPPORTUNITIES
hike-in, river-oriented campsites

10-YEAR DEVELOPMENT PLAN

LOWER SPRING LAKE PARK RESERVE: MISSISSIPPI DISCOVERY ZONE



Figure 5.6 Lower Mississippi Discovery Zone Enlargement, 10-year Development Plan

LONG-TERM DEVELOPMENT PLAN

LOWER SPRING LAKE PARK RESERVE: MISSISSIPPI DISCOVERY ZONE

LONG-TERM PLAN DEVELOPMENT SUMMARY

Long-term projects for the lower park focus on the Mississippi River and Bison Interpretive Center, enhancing leisure and education at the River Landing Use Area, and providing group camping at the existing Retreat Center.

Long-term Plan Developments Include:

1. Interpretive Center, located to avoid conflict with TCPs in the area
2. River Landing Use Area Phase 2 includes restrooms, an outdoor classroom, the Water Lab Experience with test plots of shoreline plantings, and an interactive river flow and sediment play element and water quality feature
3. Group bunkhouses at the Retreat Center, located to avoid conflict with TCPs
4. River Overlooks including the Tree Canopy walk at the West Trailhead
5. Additional Bison range observation platform

INTEGRATED DEVELOPMENT

Program areas were sited through careful consideration of their relationship to the park's cultural and natural resources..

Natural Resources

- Introduction of a Bison herd for prairie ecosystem management
- Natural resource management will continue to regenerate a mosaic of upland plant communities including oak savanna, oak woodland, and grasslands. (See the page 103 for more information.)

Interpretation

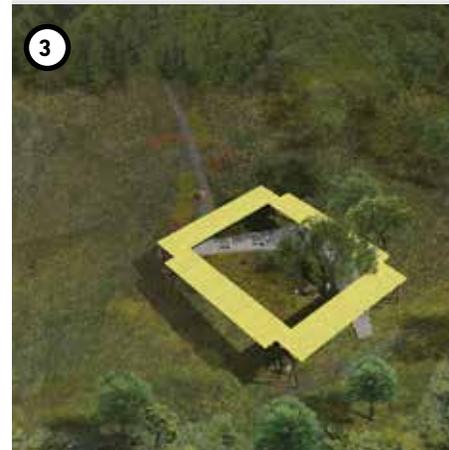
- Interpretation will be integrated into the design of interpretive nodes (see page 120) including:
 - The Prairie Lab and Water Lab experiences
 - Bison and River Overlooks
 - Indoor exhibition space at the Mississippi River and Bison Interpretive Center
 - Waysides and Sun Shelters for the expanded network of accessible and soft-surface trails
 - Tree Canopy Walk at the West Trailhead on the highest part of the bluff to allow for a view of the Mississippi River and Ranney Wells



1
INTERPRETIVE CENTER
Bison and Mississippi river interpretation



2
RIVER LANDING USE AREA
water lab experience (test plantings, interactive river flow play element, and water quality education)



3
PRAIRIE LAB
outdoor classroom



4
EXPANDED CAMPING OPPORTUNITIES
group bunkhouses

LONG TERM DEVELOPMENT PLAN

LOWER SPRING LAKE PARK RESERVE- MISSISSIPPI DISCOVERY ZONE



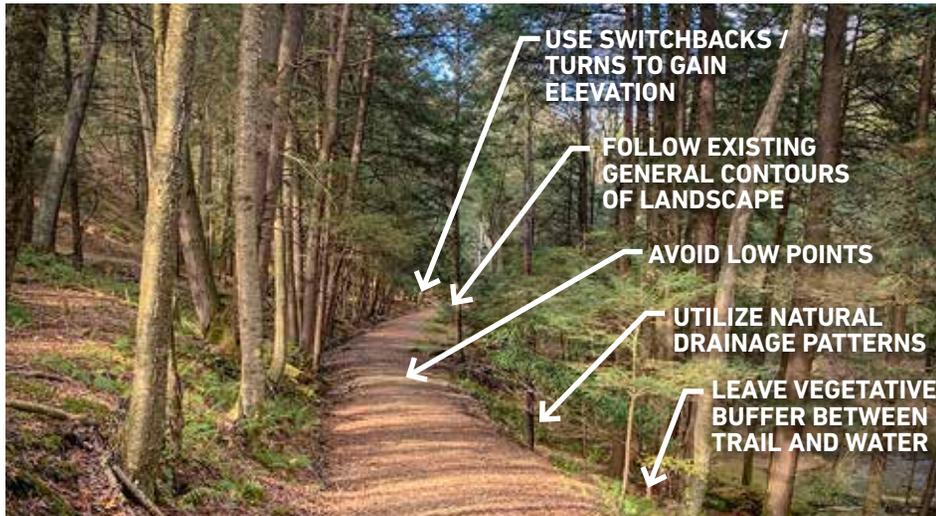
Figure 5.7 Lower Mississippi Discovery Zone Enlargement, long-term development plan

TRAIL SYSTEM

SUSTAINABLE TRAIL DESIGN

The 10-year and long-term development plans expand the trail system. Trails are essential recreational features that if not designed properly can degrade natural areas by serving as conduits for invasive species, fragmenting core habitat, altering hydrology, and encouraging use in ecologically and culturally sensitive areas. It is imperative to protect the park's important natural and cultural resources when expanding or modifying trails by minimizing their footprint and impacts as much as possible.

Low-impact trail design requires the use of topographic maps, aerial photos, natural resource data, and cultural resource locations to identify approximate trail locations. Once identified, expertise is used to 'field fit' the trail. This process is sensitive and responsive to existing conditions, subtle variations in topography, surface conditions, and other critical features. New trails should weave naturally around existing trees of significant age and quality and respond to natural drainage patterns and slopes. Existing trails should be modified to follow Low-



FEATURES OF A "Field Fit" TRAIL

Trail Image: Chuck Beard

89 6.22.21

impact design principles. Low-impact trails will be more aesthetically pleasing to visitors and will also have embedded best management practices (BMPs) for preventing future trail erosion

BEST MANAGEMENT PRACTICES FOR TRAIL DESIGN

Trails that resist erosion and run-off problems and avoid Traditional Cultural Properties begin with appropriate layout. Best Management Practices designed to mimic natural processes and functions result in a more resilient trail over time, based on these principles:

- Performing proper field-fitting and construction with regular inspection and maintenance to prevent erosion problems.
- Locating trails in consultation with Dakota Tribal representatives.
- Keeping as much water (concentrated or not) as possible off trail surfaces to prevent soil disturbance and reduces the risk of compromised soil structure leading to runoff.
- Avoiding runoff into water bodies by maintaining existing hydrological systems on site.
- Following International Mountain Bike Association trail design standards and MN DNR Trail Planning, Design, and Development Guidelines (2007).
- Using reinforcement where needed to prevent future erosion.



TRAIL EROSION BMP: Create Runoff Systems

Image: State of New Hampshire Department of Resources and Economic Development



TRAIL EROSION BMP: Trail Armoring

Image: State of New Hampshire Department of Resources and Economic Development

TRAIL SYSTEM

AT-A-GLANCE TOTALS:

PAVED TRAILS (INCLUDING MRG) = 6.59 MILES TOTAL
ACCESSIBLE TRAILS = 2.78 MILES
SOFT SURFACE TRAILS = 14.16 MILES TOTAL

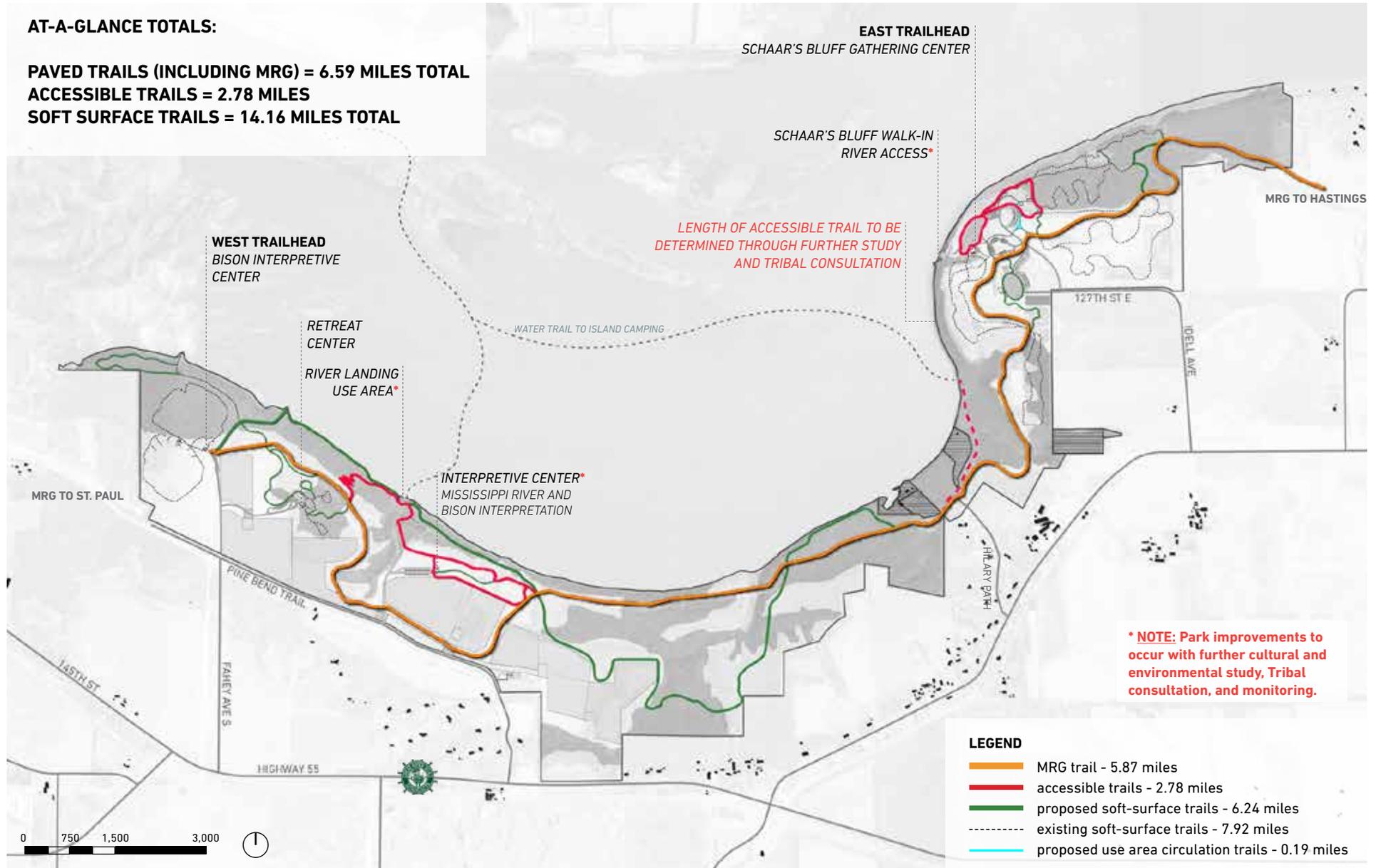


Figure 5.8 Site-wide Overview of Trail Types

TRAIL SYSTEM



Cross country skiing



Snowshoeing



Winter walking

WINTER USE

Current winter activities include limited cross-country skiing and snowshoeing in the upper park and winter walking on the plowed Mississippi River Greenway trail. The long-term plan envisions maintaining cross-country trails and snowshoeing trail loops in the upper park, expanding snowshoe trails in the lower park, and plowing accessible trails in the lower park to create winter walking loops. Winter recreation opportunities will be supported by transforming Schaar's Bluff Gathering Center to a public trailhead with indoor warming space, rental facilities, and additional visitor services. All park trailheads and parking areas will be plowed during winter months for access to the entire park

TRAIL SYSTEM

SUMMER & FALL USE LOOPS

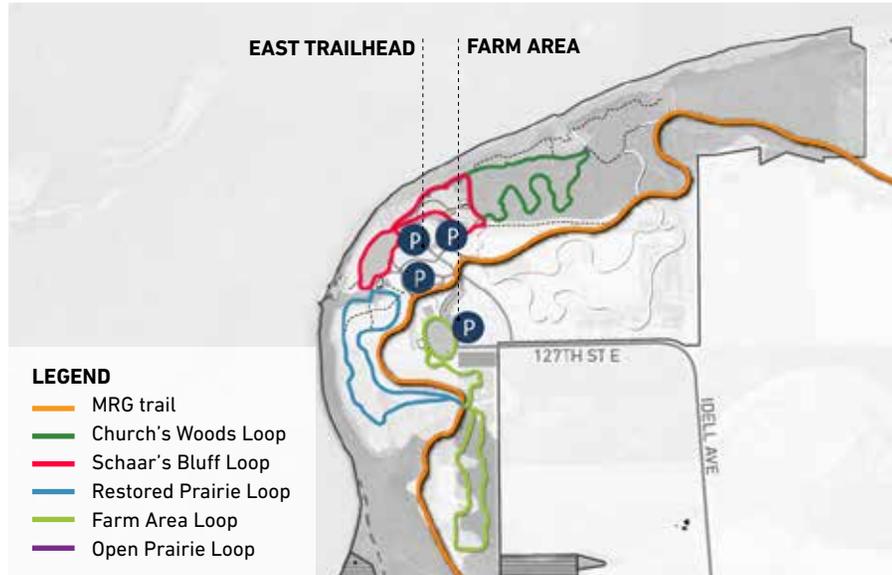


Figure 5.9 Upper Park Summer and Fall Trail Loops

WINTER USE LOOPS

* NOTE: Park improvements to occur with further cultural and environmental study, Tribal consultation, and monitoring.

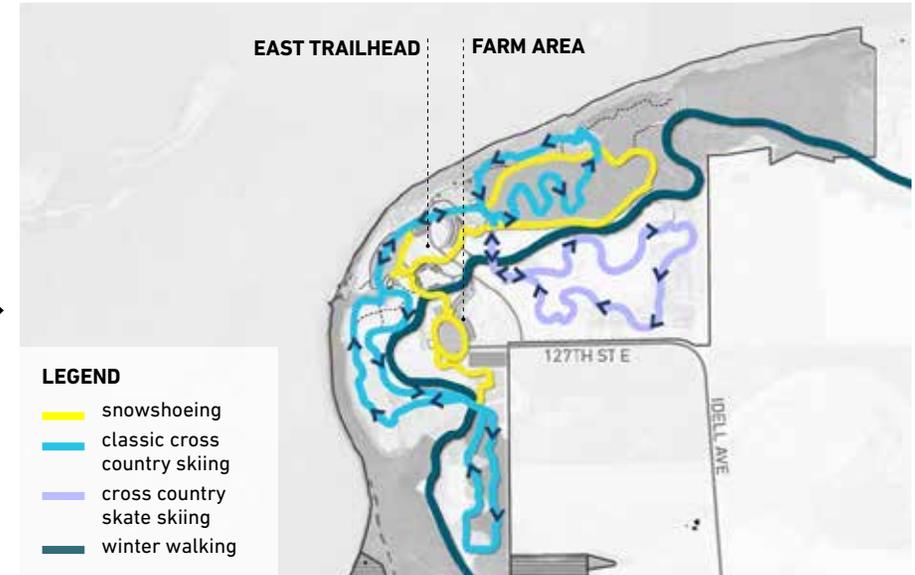


Figure 5.10 Upper Park Winter Trail Loops

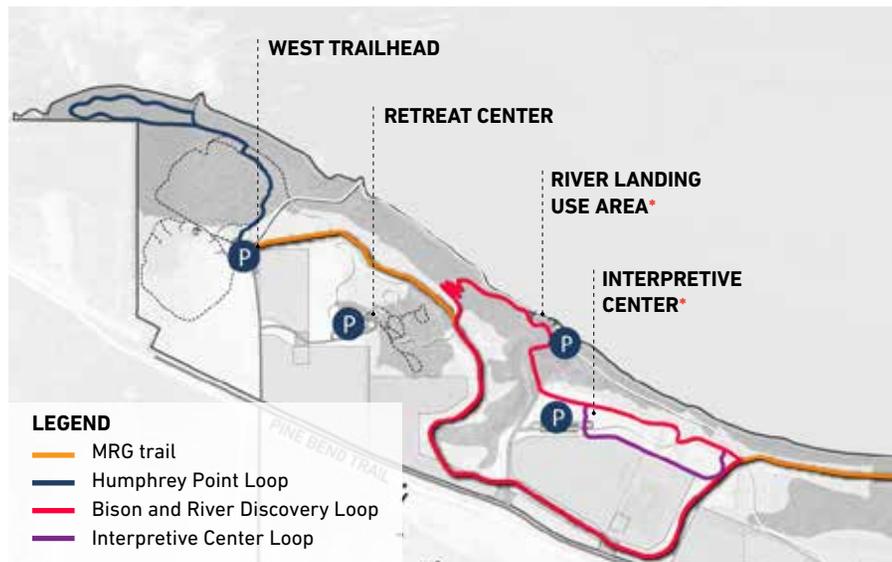


Figure 5.11 Lower Park Summer and Fall Trail Loops

MASTER PLAN

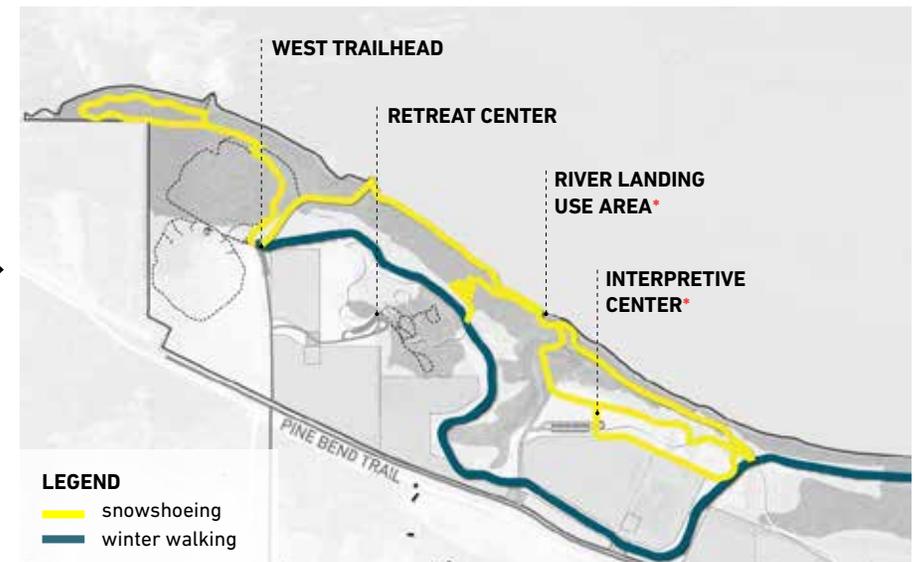


Figure 5.12 Lower Park Winter Trail Loops

ACCESSIBILITY

Dakota County recognizes the need to provide accessible facilities and amenities to all park users, regardless of resources, age, or ability, and is committed to Universal Design. Future facilities will be designed to be ADA and State Code compliant and use U.S. Access Board guidelines for Outdoor Developed Areas. This plan seeks to create a welcoming environment that consistently gives all visitors opportunities for a full and supportive experience.

The plan will:

- Work with the park's steep topography to provide accessible trails connecting existing and planned use areas.
- Provide an accessible bison viewing trail loop for visitors with physical limitations to engage in programming and bison viewing.
- Include an accessible canoe and kayak launch at the Landing River Use Area.
- Improve wayfinding and signage with clear symbology, colors, the use of multiple languages, clear labeling, and trail information. Trail signs should include distances, connections, and recommendations on usability and reachable destinations for those with physical challenges.
- Provide interpretation using a variety of guided, self-guided, and integrated items. Multi-sensory elements highlight the history, landscapes, and unique features t. Outdoor classrooms at the River Landing and Fischer Trailhead will be accessible.
- Include accessible roll -in tent camping via the MRG.
- Include accessible signage.
- Include accessible parking spaces.
- Invite children and adults of all abilities to play together in a safe and inclusive environment with a new nature-themed playground.
- Accommodate seating and picnicking needs using tables with wheelchair space and movable chairs and a variety of seating along accessible trails.
- Reprogram the Gathering Center to provide greater public access and provide a climate-controlled environment for visitors to relax and escape the hustle and bustle of the park.

- Equip new and renovated buildings with family restrooms that have adult changing stations and larger handicap stalls with seating and room for caregivers.
- Consider details such as automatic hand soap dispensers and labeling in restrooms.
- Make sensory kits with items such as noise-canceling headphones available.
- Include adaptive equipment rentals.



PLAY AREAS
inclusive elements



RIVER LANDING USE AREA
ada accessible boat launch



SITE-WIDE CONSIDERATIONS
accessible trails and clear wayfinding

PARK VIEWS

Visitors are drawn to Spring Lake Park Reserve for Mississippi River Valley views as well as opportunities to observe wildlife.

MISSISSIPPI RIVER VALLEY VIEWS

Stunning expansive views of the Mississippi River and Spring Lake draw people to Schaar's bluff and the Upper Park. There are opportunities to increase locations for river valley views in the Upper Park along the bluff as well as near the water by the existing DNR boat launch. The Lower Park offers opportunities for views adjacent to the Mississippi River and Spring Lake along the shoreline and at the Landing. In addition, existing Mississippi River Greenway Trail rest areas in the Lower Park would benefit from selective tree removal to allow for filtered views of

the river in summer months. Final selection of view locations will be done with Tribal consultation to ensure protection of Traditional Cultural Properties.

BISON VIEWING

The MRG Trail provides opportunities for bison viewing. In some locations, trees obstruct views of the range. Selective removal of trees within bison range (in the areas shown on the diagrams below) is recommended to improve sight-lines. In addition, raised, accessible viewing platforms are recommended to improve viewing opportunities.



Figure 5.13 Bison Range Visibility, Fayhe Ave.

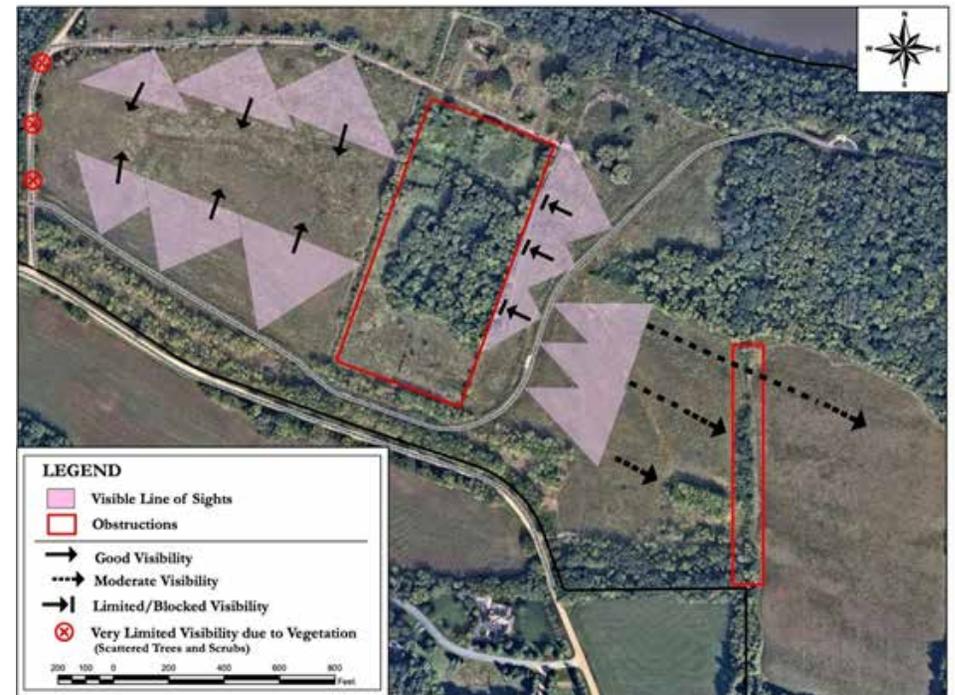


Figure 5.14 Bison Range Visibility, Fischer Ave.

PARK SETTING

The setting for Spring Lake Park Reserve is largely rural. Agriculture and homes dominate the southwest, south, and southeast park edges. The northern park edge follows the Mississippi River shoreline. Some residential properties along County Road 42 and Hilary Path abut the southern middle section of the park, obscuring the park boundary.

Agriculture and forested land adjacent to the west park along Pine Bend Trail and Fahey Ave South provide a quiet and intimate setting surrounding the park. Agriculture is adjacent to the east park along Idell Ave and 127th Street E. The east entry experience provides open and expansive views of the gently rolling farmland, making the Schaar's Bluff entrance visible from a distance and easy to find.

This plan recommends that the rural and natural setting be maintained in park design and natural resource management. Views from roads, trails, and developed areas approaching the park and from within the park affect visitors' perceptions. It is important that the park's character welcomes current and future visitors by framing iconic views, buffering views to and from adjacent areas, and creating unique park areas immersed in natural settings.

BUFFERS

The pastoral, agricultural, and natural landscape setting enhances the natural character of the park, although adjacent lands may develop in the future. If adjacent land uses change, the Master Plan recommends buffers to preserve the visitor experience of immersion in a park preserve.

DENSE BUFFER

A dense buffer provides an opaque visual and spatial barrier through multi-layered planting along park edges where screening from adjacent land uses is desired. Most existing buffers along the park are "dense", with a variety of planting

types used in succession to provide a smooth height transition between prairie areas and forested edges. Evergreen trees and deeper zones of multi-layered planting (herbaceous, shrub, sub-canopy, and canopy) can increase visual opacity and reduce sound pollution in the park.

SEMI-PERMEABLE BUFFER

A semi-permeable buffer can be formal or more naturalized. Formal buffers provide a visual barrier with organized tree planting (hedgerows, allées, and grids). Naturalized buffers provide a visual barrier with scattered tree plantings. Both buffers can provide a semi-opaque visual screen, psychologically separating the park and adjacent land uses or different programs areas within the park.

NATURAL EDGE

A natural edge allows any existing or restored ecological community to come up to the park boundary to maximize ecosystem function. A significant part of the park boundary abuts private property and is not publicly accessible on foot, bike, or vehicle. These edges are not highly visible from outside or within the park and should be treated as valuable habitat and ecological zones with minimal human impact. There is opportunity to preserve the natural edge through the Spring Lake Park Unit Conservation Focus Area (CFA) as part of the County's Land Conservation Program.

PARK SETTING



1 FAHEY AVE S + PINE BEND TRAIL ENTRY



2 FISHER AVE + PINE BEND TRAIL ENTRY



3 HWY 55 + PINE BEND TRAIL ENTRY



4 HILARY PATH + MISSISSIPPI TRAIL/42



5 IDELL AVE + MISSISSIPPI TRAIL/42
MASTER PLAN

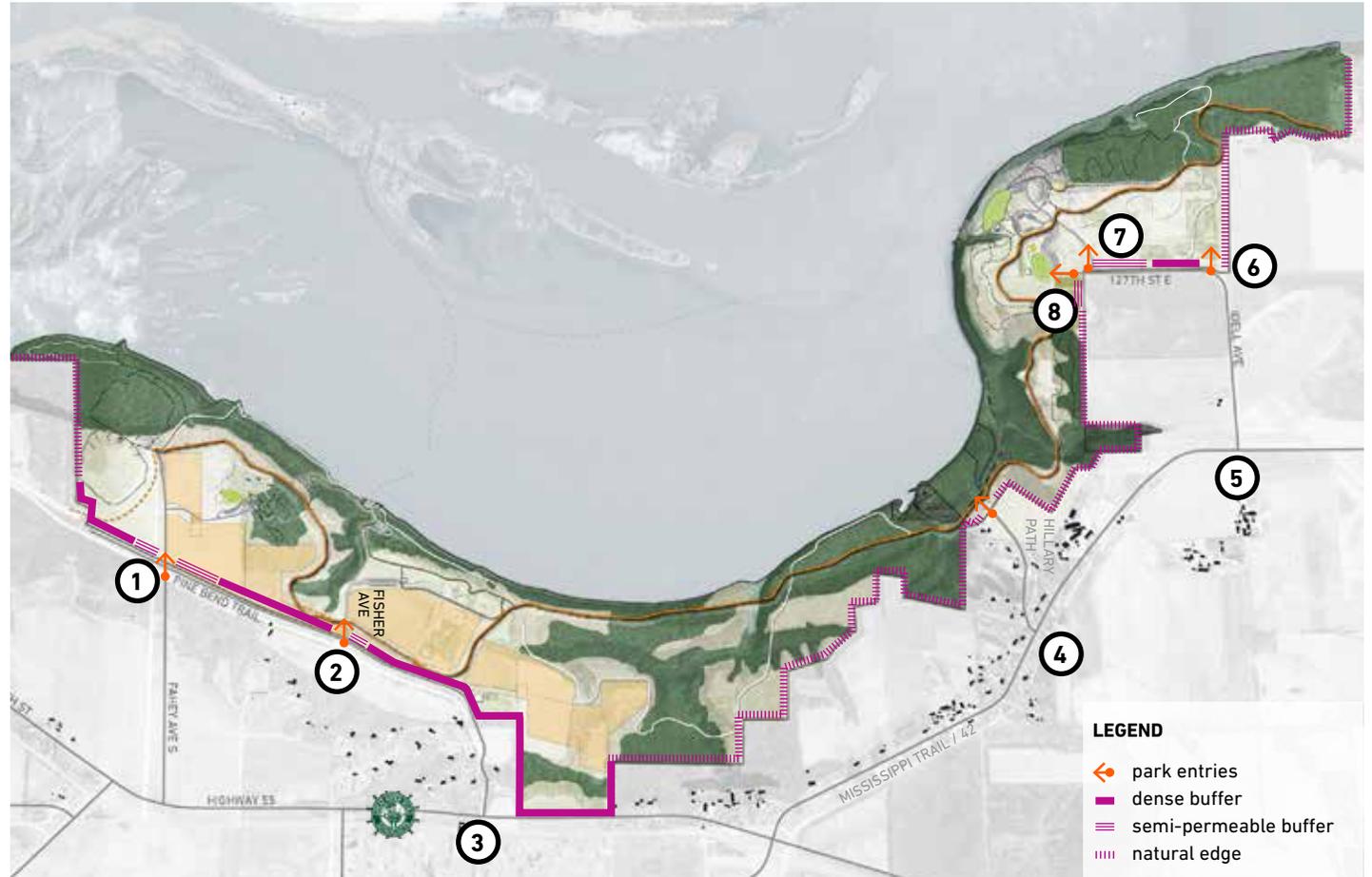


Figure 5.15 Park Setting Plan



6 IDELL AVE ENTRY



7 127TH ST ENTRY



8 127TH ST MAINTENANCE ENTRY

PARK FACILITIES, AMENITIES, AND SIGNAGE

SIGNAGE AND WAYFINDING

Wayfinding orients commuters and visitors, provides park identity, and helps ensure that visitors have a safe and enjoyable experience. Signage will meet ADA-accessibility laws and consider incorporating multiple languages.

Park Monument Signs

Monument signs for Spring Lake Park Reserve and the Mississippi River Greenway (MRG) should be placed at every major vehicular entrance and comply with park branding. They should convey a strong sense of quality and character with material choices, welcome visitors, and clearly identify where to enter or leave the park.

Vehicular Directional Signs

Vehicle directional signs should be placed at all major roadway intersections in the park and where drivers have to choose direction. They should comply with park branding and notify visitors of major parking areas, street parking, exits/entrances, additional parking when lots are full, and nearby major amenities/programming that could inform their decision where to park.

Informational Kiosks

Kiosks should be located at the MRG trail and trailheads within the park, comply with park branding, and contribute to park identity with the use of consistent materials. Kiosks should include a map that marks the precise location of the kiosk within the park area. Labels and icons depicting important amenities and programming should be clearly located on a map and labeled within a legend. Other possible displays include winter and summer use diagrams, park policies, historical or educational information, and information regarding the MRG.

Directional Signs

Directional signs should comply with park branding and be located at all trail intersections. They should indicate whether a trail is accessible and point visitors to amenities that are nearby or along the way. Trail signs should show approximate trail length and time to complete by walking, biking, or traveling by wheelchair.



Monument Park Entry Sign



Kiosk



Directional Sign

PARK FACILITIES, AMENITIES, AND SIGNAGE



Figure 5.16 Park Wayfinding Signage Plan

STEWARDSHIP PLANS

The landscape of Spring Lake Park Reserve has been shaped by human activities and natural processes throughout time. Human relationships with Spring Lake, the Mississippi River, and the park landscape have shaped natural systems much the same way natural systems have shaped the way people have inhabited and engaged with Spring Lake Park over time.

IN DEVELOPING A PARK VISION, NATURAL AND CULTURAL RESOURCES WERE CONSIDERED AS LINKED SYSTEMS THAT CANNOT BE SEPARATED FROM ONE ANOTHER.

Similarly, mapping zones of habitation or other cultural resources incorrectly suggests an identified boundary limiting these resources to a particular area. The entirety of this park must be considered culturally significant as Dakota Homeland and any mapped zones only indicate areas of known archaeological sites. In these two intrinsically linked resources, natural and cultural resources were mapped together, emphasizing their relationship to one another.



Prairie and the Mississippi River



Prairie and the Mississippi River



Church's Woods



Bremer Village

STEWARDSHIP PLANS

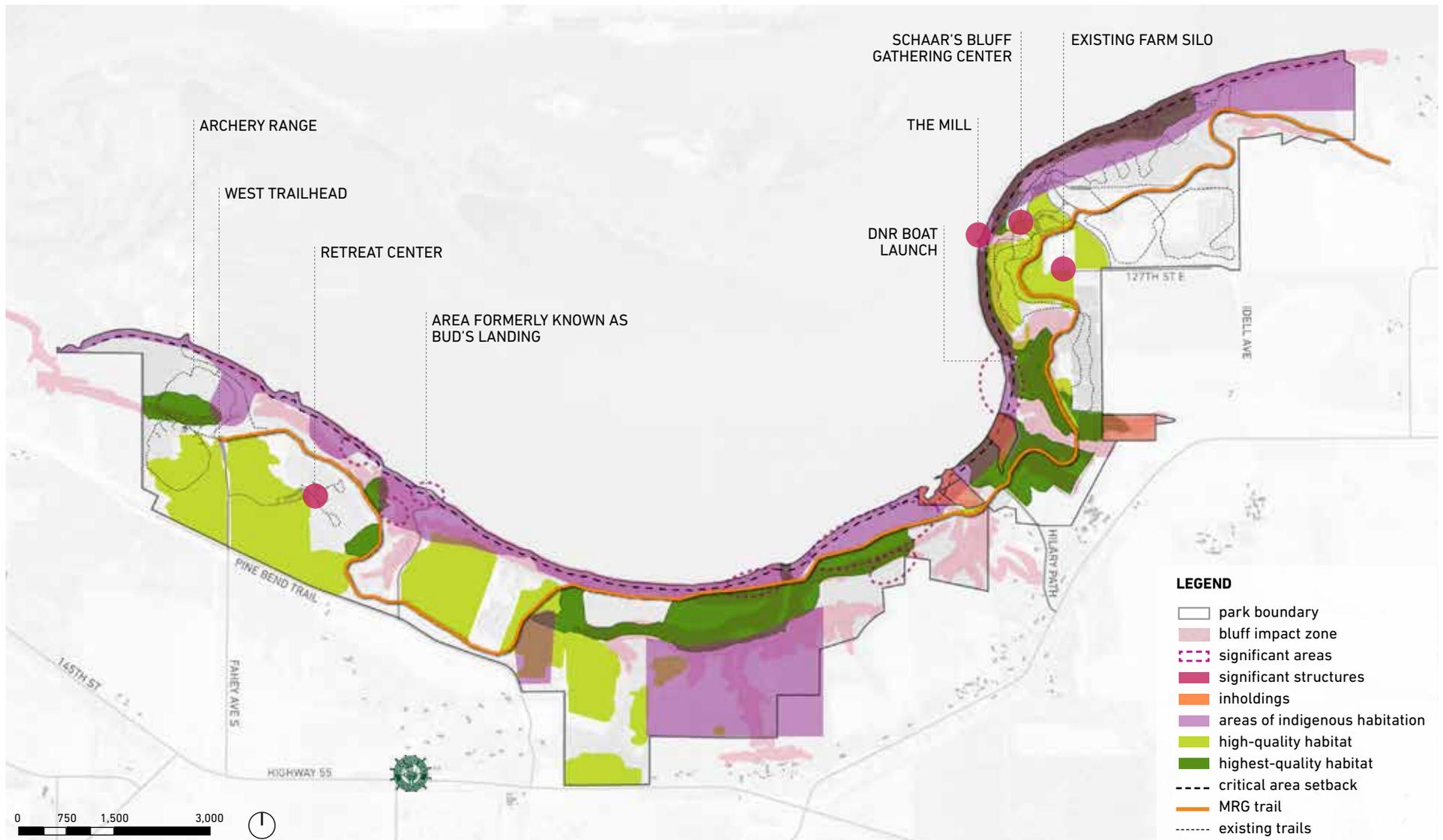


Figure 5.17 Overview Diagram of Sensitive Ecological and Cultural Areas

STEWARDSHIP PLANS

VISITOR FACILITY DESIGN

The park's high-quality natural landscape requires that future visitor facilities utilize best practices for sustainable design whenever possible. For new park buildings such as the Interpretive Center (long-term plan), the intent is for green, high functioning, and energy efficient buildings. Best management practices for sustainable site design, such as storm water management, use of solar and wind power, and bluff and river setbacks will be integrated when practical.

Facility design will reflect best practices at time of construction. Strategies for consideration include but are not limited to:

- Minimal building footprints
- Porous paving
- Storm-water best management practices
- Sustainable building materials
- Solar and wind power
- Energy efficient buildings
- Milled wood from trees removed in the park as part of natural resources management incorporated into new park structures
- Design to minimize impacts on migrating birds such as window design to reduce bird/window collisions and minimizing light pollution.

MISSISSIPPI RIVER CORRIDOR CRITICAL AREA

Spring Lake Park Reserve is within the Mississippi River Corridor Critical Area's (MRCCA) Rural and Open Space District. MRCCA rules limit public recreation uses in a 200' setback from the Mississippi River and 100' setback in the Bluff Impact Zone. This plan generally limits recreation development within these setbacks, although some development within these zones is recommended to allow visitors to enjoy views of and access to the river. Accessible trails and vehicular access to all use areas within the MRCCA will need to be established. New recreation within the Mississippi River setback and the Bluff Impact Zone includes:

1. Trails
2. The Schaar's Bluff River Use Area: picnic shelter, picnic tables, outdoor interpretive features, restroom (long-term)
3. The Landing River Use Area: access road, picnic shelter/outdoor classroom, equipment storage, parking, trails, restroom (long-term)
4. Bike-in/walk-in camping: campsites with tent pad, fire pit, picnic table, water access, vault toilet

Most uses in this master plan are allowed under MRCCA rules. All new features will be designed and constructed to minimize impacts to shoreline vegetation, erodible soils and slopes, and other sensitive resources and will comply with the standards stated in Minn. Rules 6106.0130.

To provide a level of visitor service consistent with Dakota County park standards, this plan recommends restroom facilities for the Schaar's Bluff River Use Area, the Landing River Use Area, and the bike-in/walk-in camp sites. To build these facilities, zoning variances will be sought from Nininger Township and the City of Rosemount, and the County will seek MN DNR approval.

STEWARDSHIP PLANS

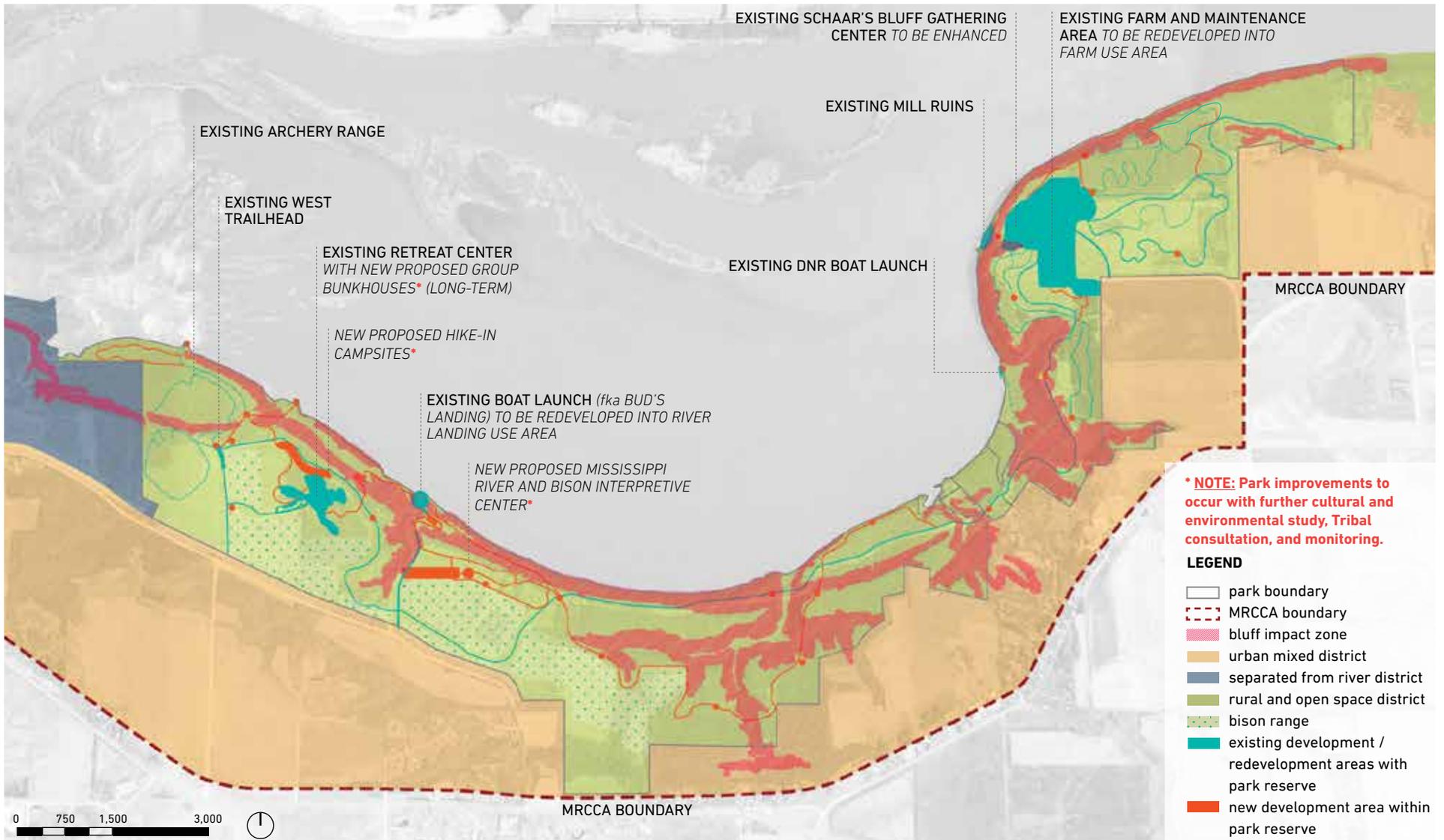


Figure 5.18 Park Reserve's Relationship with Mississippi Corridor Critical Area

STEWARDSHIP PLANS

NATURAL RESOURCES MANAGEMENT PLAN

The Spring Lake Park Reserve Natural Resources Management Plan (NRMP) was developed in tandem with this development master plan and includes detailed descriptions of natural resources existing conditions, desired improvements, and action items. Planned natural resource improvements are summarized below.

NATURAL RESOURCES PLANNING AND PUBLIC VALUE

People value natural resources and understand that they rely on them for clean air, clean water, food, materials, recreation, and enjoyment. Reserves are lands set aside in their natural state to provide access to nature and demonstrate ecological integrity.

LONG-TERM PARK MANAGEMENT GOALS

Overarching goals for Spring Lake Park Reserve natural resources management include:

- Allow people to experience the natural heritage of the area and improve their experience in the park
- Provide habitat for native plants, birds, insects, mammals, amphibians, and reptiles
- Conserve wildlife Species of Greatest Conservation Need (MNDNR designation)
- Demonstrate the native plant community's regeneration process
- Foster and build resilient, mature, and high-functioning ecosystems
- Collaborate and partner with adjacent landowners to achieve the best joint management of natural resources for the area
- Mitigate impacts of climate change
- Achieve regionally outstanding ecological quality

Specific Natural Resources Management Goals:

- Regenerate a landscape mosaic of upland plant communities across a continuum from oak forest to oak savanna to prairie

- Increase native plant diversity
- Minimize invasive species cover
- Prevent new non-native species encroachment
- Reduce visitor impacts, for example, by establishing new trails that allow park exploration without adverse impacts
- Reduce erosion and stabilize ravines
- Protect lake water and groundwater quality
- Adapt to climate change by introducing appropriate species native to northern Iowa, southwestern Wisconsin, and southern Minnesota

NATURAL RESOURCE MANAGEMENT RECOMMENDATIONS

- Restore a diversity of native plant communities through phasing (see Figure 5.19).
- Provide adequate budget to maintain increasing acres of native plant community as they are restored.
- Increase the use of fire as a management tool, especially in woodlands and savannas.
- Assist nature's adaptation to climate change by introducing appropriate plants native to northern Iowa and converting degraded forests to oak savanna.
- Control invasive plant and animal species.
- Continue purchasing inholdings.
- Continue educating visitors about the park's ecology.
- Reintroduce bison or other large grazing animals.
- Carefully place and design recreational facilities to avoid damaging the park's ecology; restore ecological function where impact is unavoidable.
- Reduce deer populations to 10 deer per square mile.
- Monitor native plant communities and wildlife population for changes.

STEWARDSHIP PLANS



Figure 5.19 Target Plant Communities, Site-Wide

STEWARDSHIP PLANS

RESTORING ECOLOGICAL SERVICES

The park's ecological functioning occurs within a greater ecological context of the county and beyond. Its wildlife, plant communities, air and water quality, and climate influence are highly influenced by the greater context. The park's ecological potential is limited by the influence of immediate agricultural and industrial neighbors, regional habitat destruction, air pollution, and urbanization even from distant locals. Examples include the heavy sediment loads flowing down the Mississippi River, clouding Spring Lake and limiting aquatic vegetation that sustains fish and waterfowl habitat. Elimination of forest and savanna throughout the Mississippi flyway has eliminated feeding habitat for migrating song birds, reducing the number and species of birds reaching the park. Farming adjacent to the park has eliminated local sources of native plant propagules and reduced the greater area of wildlife habitat.

Recommendations:

- Lead by example: continue restoring native plant communities and improving ecological conditions so that the park inspires neighbors and visitors to help improve its local ecological context.
- Work with the US Army Corps of Engineers, MN DNR, and other agencies to improve the water quality of Spring Lake and to restore its aquatic vegetation.
- Work with US Army Corps to perform periodic drawdowns of Spring Lake to help regenerate native wetland seedbanks and improve water fowl habitat.
- Work with US Army Corps to build habitat islands in Spring Lake to help improve wildlife habitat.
- Continue working with adjacent land owners to establish good relations and to improve their lands in ways that benefit the park's ecological quality, such as controlling erosion and restoring native plant communities.
- Continue educating visitors about the park's ecology and the value of their own actions outside of the park to improve the ecology of Dakota County and beyond

CURTAILING RAVINE EROSION

The park's ravines are evidence of past erosion. Historically, water moving from upland areas washed soil away to incise the ravines. There is a continual, natural rate of erosion inherent to all ravines. Altered land use within the park's watershed and increased precipitation due to climate change are amplifying the volumes of water moving through the park's ravines compared to historic levels. Development in this plan should address current erosion and avoid triggering future erosion by following the below set of recommendations.

Goal: Stabilize ravine slopes and eliminate the accumulation of sediment in ravine bottoms.

Recommendations:

- Protect and enhance vegetation in the contributing watersheds of the ravines by establishing and managing native plant communities.
- As watersheds have become stabilized, focus on the stabilizing of ravine side slopes and bottoms through planting and plant community management.
- Continue working with property owners within the ravine watersheds to manage stormwater runoff that flows to the park ravines. Encourage permanent vegetation and share information about stormwater management features that can slow or infiltrate stormwater. Direct landowners to publicly available funds for project implementation.
- Work with County Facilities Management staff to change trail snow plowing practices that cause erosion near trails.
- Site and design trails such that they do not cause soil erosion, such as by aligning trails with the contours of slopes and not against them.
- Follow International Mountain Bike Association trail design standards and MN DNR Trail Planning, Design, and Development Guidelines.

STEWARDSHIP PLANS

REGENERATING SOILS

Soil regenerates with the growth of plant communities that are not disturbed through tilling, grading, or construction. Healthy soils are able to hold nutrients, retain additional moisture, and resist erosion. Restoring and managing native plant communities will continue regenerating the park's soils.

When undertaking construction projects, sufficient budget allocation and planning must occur to implement soil regeneration within the disturbance zone. Methods may include importing topsoil or the incorporation of soil amendments and must include restoration and management of appropriate native plant communities.

Goal: Regenerate soils by eliminating negative impacts and supporting the building of soil structure.

Recommendations:

- Limit off-road and off-trail use of vehicles. Vehicles compact soil and destroy soil structure, reducing soil's ability to hold water and oxygen necessary for plants.
- Prior to construction, install tree protection fencing around mature trees to protect their critical root zones.
- During construction, minimize the impact area and ensure that contractors remain within project limits.
- After construction, mechanically rip compacted areas to a depth of eighteen inches and till eight inches of compost six inches into the soil.
- In areas of past construction where negative soil impacts have lingered (such as the MRG corridor), top dress with compost to boost the soil regeneration process and feed the soil food web.

PROTECTING WATER RESOURCES

Park managers should continue work with neighboring property owners to manage stormwater runoff from their properties. Decreasing the volume and rate of stormwater entering the park from surrounding properties will stabilize its ravines.

New construction of park facilities and trails must include the construction of stormwater management facilities to infiltrate and filter stormwater running off hard surfaces. Rain gardens, bioretention swales, and stormwater ponds can be implemented to manage stormwater.

The shoreline of Spring Lake is very stable, secured with naturally-occurring boulders and large trees. Erosion is not occurring, but it would be advisable to inspect the shoreline every other year or so for changes. When boating and recreational facilities are designed for the lake shore, considerable effort and resources must be invested to protect this dynamic shoreline from the erosive power of flood waters and wave action.

STEWARDSHIP PLANS

This section presents approaches for care and rehabilitation of aspects of the cultural landscape that potentially contribute to its historic significance. Historic preservation guidelines are identified, including specific application of The US Secretary of the Interior's (SOI) standards for treatment of historic properties. Strategies also include developing a collaborative process to protect Dakota connections to this landscape, identifying appropriate protocols for important places within the landscape, and planning for the care of materials extracted from the park that are associated with Dakota ancestors.

SECRETARY OF THE INTERIOR'S STANDARDS (SOI)

The SOI provides professional standards and guidance for cultural landscapes listed in or eligible for the National Register of Historic Places. The Standards for the Treatment of Historic Properties are regulatory only for projects receiving Historic Preservation Fund grants and other federally-assisted projects but provide general guidance for work on any historic property. The selected treatment approach for a cultural landscape directs its future management decisions. The four approaches include Rehabilitation, Preservation, Restoration, and Reconstruction.

Rehabilitation (selected)

Rehabilitation allows for repairs, alterations, and additions as necessary to enable compatible use of a property as long as the portions or features that convey the historic, cultural, or architectural values are preserved. Rehabilitation is appropriate when depiction at one particular period of time is not appropriate; repair or replacement of deteriorated features is necessary and alterations or additions are needed for a new use.

Features that are not compatible with the historic character of the property may be removed. New elements that are compatible with historic conditions may be added to address current needs, including revealing missing or hidden features

to enhance interpretation, and improving accessibility. Design requires careful consideration to complement historic features without creating a false sense of history. Alterations must also be designed to be differentiated from the historic features.

Rehabilitation is the most appropriate treatment approach for the park landscape. This approach allows for protection of archaeological sites, rehabilitation of potentially contributing structures to serve park needs, and reestablishment of historic vegetation patterns while supporting visitor experience.

Preservation

Preservation sustains the existing form, integrity, and materials (contributing features) of a historic property by stabilizing and protecting extant historic resources rather than replacing missing elements.

Preservation is appropriate when a historic property is essentially intact and does not require extensive repair or replacement, depiction at one particular period of time is not appropriate, or continuing or new use does not require additions or alterations.

Although preservation may be appropriate for treatment of the park landscape, it limits the ability to add use areas, an interpretive center, trails, and other additions to serve future park needs.

Restoration

Restoration accurately depicts the form, features, and character of a property as it appeared at a particular period in time. This includes reconstruction of missing features from the restoration period and removal of features from all other periods.

STEWARDSHIP PLANS

Restoration can be considered only when the property's significance during a particular period of time outweighs the loss of elements from other historical periods, there is substantial physical and documentary evidence for the work, and contemporary alterations and additions are not planned.

Because the park includes landscape characteristics and features that developed over thousands of years, and documentation of historic conditions at any moment in time is limited, restoration is not the most appropriate approach.

Reconstruction

Reconstruction uses new construction to depict a non-surviving site, landscape, building, structure, or object as it appeared at a specific period of time in its historic location. The work must be clearly identified as a contemporary recreation. Reconstruction can be considered only when the property's significance during a particular period of time outweighs the loss of extant elements from other historical periods and there is substantial physical and documentary evidence for the work.

Given the need to protect potentially contributing features that were developed incrementally over time and requirements for future use of the park reserve, reconstruction is not appropriate for the cultural landscape.

SOI STANDARDS FOR REHABILITATION

The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes provides guidance for planning, design, implementation, and review of project work for significant historic sites.¹ The standards for rehabilitation are as follows:

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.
2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
4. Changes to a property that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.

¹ National Park Service, "The Secretary of the Interior's Standards for the Treatment of Historic Properties and Guidelines for the Treatment of Cultural Landscapes," accessed August 2020, <https://www.nps.gov/tps/standards/fourtreatments/landscape-guidelines/index.htm>

STEWARDSHIP PLANS

7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archaeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
10. New additions and adjacent or related new construction will be undertaken in a such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

CULTURAL LANDSCAPE STEWARDSHIP CONSIDERATIONS

General

1. Work with Tribal Historical Preservation Officers (THPOs) to establish consultation protocols and a collaborative relationship between Dakota County and Indigenous communities associated with the park to address decision-making on condition, maintenance, use, safety, and interpretation.
 - Schedule regular consultation and collaboration meetings between Dakota County and THPOs.
 - Communicate with THPOs on a quarterly basis and meet bi-annually.
 - Consult with THPOs as part of developing scopes of work and making decisions about maintenance and management of the landscape. Topics to address may include:
 - » Development of consultation protocols and a collaborative relationship plan.
 - » Development of a list of work that can be undertaken without further consultation with THPOs, clearly explaining the reasons the work does not need further review.
 - » Development of a list of work that must always be reviewed with THPOs prior to planning or implementation.
 - » Identification of activities and access appropriate (and possibly those that are not appropriate) in locations that are important to associated Indigenous communities.
 - » Ways to acknowledge and respect significant sites while also protecting them from unwanted attention or vandalism (refer to Consideration 3).
 - » Ways to increase outreach, access, and connections to this landscape, for associated Indigenous community members, including opportunities for private activities on site.
 - » Determination of the role of associated Indigenous communities in the proposed bison herd.
 - » Cemetery delineation and Mound Management Plan (refer to Consideration 5).
 - » Maintenance and monitoring practices for specific locations and actions, including monitoring of ground disturbing activities (refer to consideration 6).

STEWARDSHIP PLANS

- » Protocols for inadvertent discoveries (refer to Consideration 7)
 - » Ownership of cultural materials (refer to Consideration 7)
 - » Reintroduction of culturally important vegetation (refer to Consideration 8)
2. Expand the relationship between Dakota County and representatives of associated Indigenous communities to address significant properties throughout the County through a more holistic approach.
 - Work with THPOs to develop broad-scale strategies and processes for specific types of sites throughout the county.
 - Discuss individual project plans and process with representatives of associated communities before developing a scope of work. Build flexibility into the process to allow for adjustments based on tribal requests. If possible, include representatives of associated communities on project teams.
 - Work with THPOs, MIAC, and OSA to expand on the relationships developed through this master planning process to relationships with Tribal representatives, Tribal councils, and members. For example, visit Tribal communities to better understand the perspectives of formal representatives and community members, and visit the physical sites with representatives of associated communities to better understand the connection between people and place.
 - Make efforts to include Indigenous community members on advisory committees, county staff, project team and project advisory groups.
 3. Work with THPOs to determine level and type of messages to convey to visitors about the significance of the site, and to encourage appropriate behavior and respect, without sharing private or sensitive information. Possible messages to consider:
 - Acknowledgment of Dakota land;
 - Ways to show respect for the spiritually significant landscape while discouraging unwanted attention or vandalism;
 - Connection between living associated communities and significant plants for traditional use;
 - Removal of Euro-American names applied to Dakota sites, and replacement with Dakota names;
 - Integration of Dakota language in place names and messaging;
- Consideration of opportunities for integrated technology and multi-tactile messaging.
- Traditional Cultural Properties and Archaeological Sites**
4. Work with representatives of associated Indigenous tribes and nations, the Minnesota Office of the State Archaeologist (OSA), and the Minnesota Indian Affairs Council (MIAC) to determine additional understanding required for priority locations. Possible next steps may include:
 - Meet with representatives of associated Indigenous communities, MIAC, and OSA within the landscape so that all parties can work together to address protection, use, and impacts.
 - Follow recommendations from the 2020 TCP Study.
 - In locations where additional study is required to determine landscape treatment, work with THPOs, MIAC, and OSA to identify and assess additional TCPs, culturally sensitive sites, and archeological sites.
 - Consider conducting a cultural landscape planning study to determine appropriate long-term landscape treatment priority locations.
 - » Work with representatives of associated communities to develop the scope of work. Include disciplines, expertise, and processes that should be incorporated to develop a vision, program, and locations for appropriate facilities, building on the considerations in the “Long-Term Development Plan” section of this chapter.
 - » Include representatives of associated communities on the project team.
 5. Work with representatives of associated Indigenous communities, the Minnesota Office of the State Archaeologist, and the Minnesota Indian Affairs Council (MIAC) to delineate cemeteries within the park and develop burial, cemetery, and Mound Management Plans.
 - Dakota County to send formal request to MIAC asking that the cemetery be delineated.
 - The Mound Management Plans will be legally binding documents between the State (represented by MIAC) and Dakota County.
 - Delineation of cemeteries and protocols and management recommendations in the Mound Management Plan may necessitate modifications to master plan design or implementation.

STEWARDSHIP PLANS

6. Work with representatives of associated Indigenous communities to develop appropriate maintenance and monitoring practices for significant sites, vegetation, circulation routes, views, and other important landscape elements (related to Consideration 1).
 - Include protocols for archaeological evaluation of debris.
 - If new development or disturbance is required, consult with THPOs to determine design, process, and protocols.
7. Develop policies that address ownership of cultural materials from the site.
 - Work with representatives of associated Indigenous communities to place any materials discovered on site in the care of designated associated Dakota communities.
 - Work with former landowners, museum collections, and associated Indigenous communities to appropriately protect cultural materials removed from the park in the past. Consider integration with a county-wide awareness and promotion plan to return and protect these items.

Vegetation

8. Manage vegetation based on the park's Natural Resources Management Plan, with consideration of vegetation that is important to associated Indigenous communities and reintroduce culturally important plants through reestablishment of wild rice, traditional/medicinal gardens, or other plantings.

Circulation

9. Evaluate access between Schaar's Bluff and the McCarriel's Mill Site. Determine long-term treatment through a comprehensive planning process for the upper park (Consideration 4).
10. Maintain Hilary Path as a pedestrian and service vehicle route. Address erosion issues.

Buildings, Structures, and Small-Scale Features

11. Consider opportunities to rehabilitate the historic Schaar farm buildings and structures to support future park use and avoid ground disturbance. Follow SOI Standards for Rehabilitation of Cultural Landscapes.

McCarriel's Mill Site

12. Work with THPOs, MIAC, OSA, and State Historic Preservation Office (SHPO) to determine an appropriate process for evaluation and treatment of the McCarriel's Mill Site. Visit the Mill Site with THPOs and representatives of MIAC, OSA, and SHPO to determine next steps for evaluation.
13. Continue to reestablish physical connections to Spring Lake and the Mississippi River.

Buildings, Structures, and Small-Scale Features

14. Consider opportunities to rehabilitate the historic Schaar farm buildings and structures to support future park use according to the SOI Standards for Rehabilitation of Cultural Landscapes.

STEWARDSHIP PLANS

CONTRIBUTING FEATURE ASPECT	DATE OF ORIGIN	STEWARDSHIP	CONTRIBUTING FEATURE ASPECT	DATE OF ORIGIN	STEWARDSHIP
Known and unknown TCPs and archaeological sites	ca. 10,000–1,000 BCE; ca. 200 BCE–CE 1100; ca. CE 900–1650	Protect following protocols established by OSA, MIAC, and representatives of associated Indigenous communities	Blakely building foundation	ca. 1857–1860	Preserve
Known and unknown burial sites (Bremer Mounds)	ca. 200 BCE–CE 1100	Protect following Mound Management Plan	McCarriel Foundation	1860	Work with THPOs, MIAC, OSA, and SHPO to determine next steps
Remnant/restored prairie and savanna/oak openings	consistent with vegetation condition present before ca. 1800	Maintain existing remnant/restored patches and continue to expand prairie and savanna/oak openings following Natural Resources recommendations	McCarriel “Icehouse”	ca. 1860–1907	Work with THPOs, MIAC, OSA, and SHPO to determine next steps
Remnant/restored mesic forest/oak forests	consistent with vegetation condition present before ca. 1800	Maintain existing remnant/restored patches and continue to expand mesic/oak forests following Natural Resources recommendations	McCarriel “Fish Pond”	before 1936	Work with THPOs, MIAC, OSA, and SHPO to determine next steps
Road remnant (Wagon Trail) from Schaar’s Bluff to McCarriel’s Mill Site	present by 1880s	Preserve. Determine treatment through cultural landscape planning study of Upper Park.	McCarriel Retaining Wall	ca. 1860–1907	Work with THPOs, MIAC, OSA, and SHPO to determine next steps
Route of Hilary Path	present by 1855	Maintain as a park circulation route.			
Schaar Farm Buildings	mid-1940s	Evaluate opportunities to rehabilitate to support park use.			

Table 5.1 Summary of Cultural Stewardship Recommendations

INTERPRETATION FRAMEWORK

GUIDELINES

Interpretation is a critical component to connecting park users to the natural and cultural resources at Spring Lake Park Reserve. The National Association of Interpretation (NAI) defines interpretation as “a mission-based communication process that forges emotional and intellectual connections between the interests of the audience and the meanings inherent in the resource.”

The interpretive guidelines set forth in this master plan update will ensure a cohesive interpretive experience at Spring Lake Park Reserve and will assist in the development of interpretation content and features in the future. Critical to understanding Spring Lake Park Reserve are the stories of those that have lived in and shaped this place. The Dakota people have inhabited this land for thousands of years, and the significance of this place lives on today.

Below are the plan guidelines:

- 1. This is a Dakota place.** Interpretation will acknowledge the relationship between the Mississippi River and Dakota people.
- 2. Ecological and human history are tied.** Interpretation will emphasize how the ecological diversity and the human activities on this site need to be understood together.
- 3. The site and its stories are continually evolving.** Interpretation will communicate evolution of specific locations within the park over time.
- 4. Connected sites and stories.** Interpretation will be structured by physical places connected to stories and be mindful of other adjacent planning efforts.
- 5. This is a place for gathering.** Interpretation will be connected to gathering opportunities across the site.

GOALS

- Emphasize that this is a sacred place to the Dakota community
- Engage THPOs, Dakota community members, and stakeholders on the possibilities for interpreting the stories and landscapes of this place
- Move beyond signs to engage park visitors with interactive interpretive installations that are memorable
- Draw renewed attention to Spring Lake Park Reserve as a regional destination with high-quality recreational opportunities imbued with integrated interpretive content
- Create a greater sense of river access and connection to the water
- Create a plan that can be phased as funding becomes available
- Integrate interpretive content into the design of park amenities



Wabasha's Village (Image: MNopedia.org)



Dakota canoe found in Lake Victoria. (Image: MNHS)

INTERPRETATION FRAMEWORK

INTEGRATED INTERPRETATION: A CONTINUOUS STORY

IMPORTANCE OF PLACE + GIFTS OF THE LAND + KINSHIP & CONNECTIONS

A continuous interpretive experience throughout the park tells the story of Spring Lake Park Reserve through a series of nodes across the three sub-themes through the head, hands, heart model of learning. Together, the **nodes create an immersive interpretive experience throughout the park by integrating interpretive information into the design of elements.** Interpretive nodes frame key views and boundaries between ecologies and expand understanding of the sites across the park. Nodes can be experienced alone or as a collection of stories and information, depending on the length of visit.

THEME: THE CHANGING RIVER

The Changing River Theme and its subthemes shape and inform the content of interpretation at the Park while the “Head-Heart-Hands” model of learning forms the structure of how interpretive themes will be applied in an integrated, engaging way. The following pages will describe both the subthemes and the way these themes are structured throughout the site.

The interpretive theme for Spring Lake Park Reserve is:

SPRING LAKE PARK RESERVE CONNECTS YOU TO THE CHANGING RIVER, WHICH CONTINUALLY SHAPES AND UNITES THE MANY, EVER-EVOLVING STORIES EMBEDDED IN THIS PLACE.

SUBTHEMES

Subthemes support and develop the theme. For Spring Lake Park Reserve, subthemes help organize the stories told, the resources revealed, and the experiences that park users will have when the master plan is implemented. Interpretation throughout the park should inform the design of landscape, structures, and other features. The Changing River is supported by three sub-themes: #1 Importance of Place, #2 Gifts of the Land, and #3 Kinship & Connections

MULTI-SENSORY TRANSFORMATIVE EXPERIENCES: THE HEAD-HANDS-HEART MODEL OF LEARNING



The head, hands, heart model of interpretive learning aims to offer visitors different mediums for engaging with interpretive information. From hands-on immersive experiences that offer visitors opportunities to walk, push, lift, or touch interpretive elements to reinforce the content shared.

SELF-GUIDED INTERPRETATION

Self-guided interpretation opportunities include interactive experiences, at rest stops, overlooks, trailheads, and signs. Each interpretive node has the opportunity to include tactile and multi-sensory elements, interpretive art, first-hand storytelling, as well as historical and ecological information.

GUIDED INTERPRETATION

Park programming such as field trips, classes, guided tours, or lectures would take place at interpretive nodes such as the outdoor classrooms, interactive experience sites, and the interpretive centers at Schaar’s Bluff and the Mississippi River Interpretive Center. Guided programming can be led by staff or visiting lecturers. Guided interpretive experiences aim to engage the head, hands, and heart equally for visitors.

INTERPRETATION FRAMEWORK

SUBTHEME

GIFTS OF THE LAND: WE CANNOT SEPARATE OURSELVES OR OUR ACTIVITIES FROM THE LIVING LANDSCAPE ALL AROUND US.

KEY INTERPRETIVE QUESTIONS

Interpretation can be used to answer questions such as:

“What am I seeing inside and outside of the park?”

“What changes can I observe in the Park?”

“What is my relationship to the ecology here?”

“What can I do at home to support wildlife?”

POTENTIAL TOPICS TO EXPLORE THROUGH THIS SUBTHEME

Dakota People (Living with the Land): describe the way that the rich resources of the river valley were able to support Indigenous communities for thousands of years through a sustainable balance of hunting, gathering, fishing, and agriculture (cultivation of wild rice)

Why did Indigenous villages thrive here?

Farmers (Working the Land): connect visitors to the way of life in rural Minnesota while introducing them to the challenges of the day

Why are restorative agricultural methods important to all of us?

Ecologists (Healing the Land): highlight the ongoing extensive natural resource management work and stewardship at SLPR

Doesn't nature manage itself? Why do we need to act as responsible landscape stewards?

SUBTHEME

IMPORTANCE OF PLACE: INEXTRICABLY LINKED WITH THE MISSISSIPPI RIVER, SPRING LAKE PARK RESERVE IS A PARK UNLIKE ANY OTHER.

KEY INTERPRETIVE QUESTIONS

Interpretation can be used to answer questions such as:

“Who lived here?”

“How can I care for Spring Lake Park Reserve?”

“What connects me to this place?”

“What is this place?”

POTENTIAL TOPICS TO EXPLORE THROUGH THIS SUBTHEME

Dakota Homeland: explain that the Mississippi River Valley had been home to the Dakota people for thousands of years prior to Euro-American settlement and that it remains a center of profound spiritual meaning today

What is the Bdote and why is this place so meaningful to the Dakota people?

Migratory Flyway: highlight that Mississippi River is a superhighway for migrating birds and explain how SLPR helps support dwindling songbird populations

Why is SLPR important to wildlife?

Euro-American Settlement: explain why SLPR was an attractive place for early Euro-American settlers

What happened to the boom town of Nininger?

Role in the Region: describe the historic importance and current day impact of the Mississippi River not only within the region but also within North America

INTERPRETATION FRAMEWORK

SUBTHEME

KINSHIP AND CONNECTIONS: *SPRING LAKE PARK RESERVE IS A REGIONAL CENTER WHERE PEOPLE COME TOGETHER FOR CEREMONIES AND EVENTS TO REINFORCE COMMUNAL TIES AND TO FORGE NEW RELATIONSHIPS.*

KEY INTERPRETIVE QUESTIONS

Interpretation can be used to answer questions such as:

“Who has called this place home?”

“What stayed the same over time?”

“How can I understand the interconnectedness of humans and nature?”

POTENTIAL TOPICS TO EXPLORE THROUGH THIS SUBTHEME

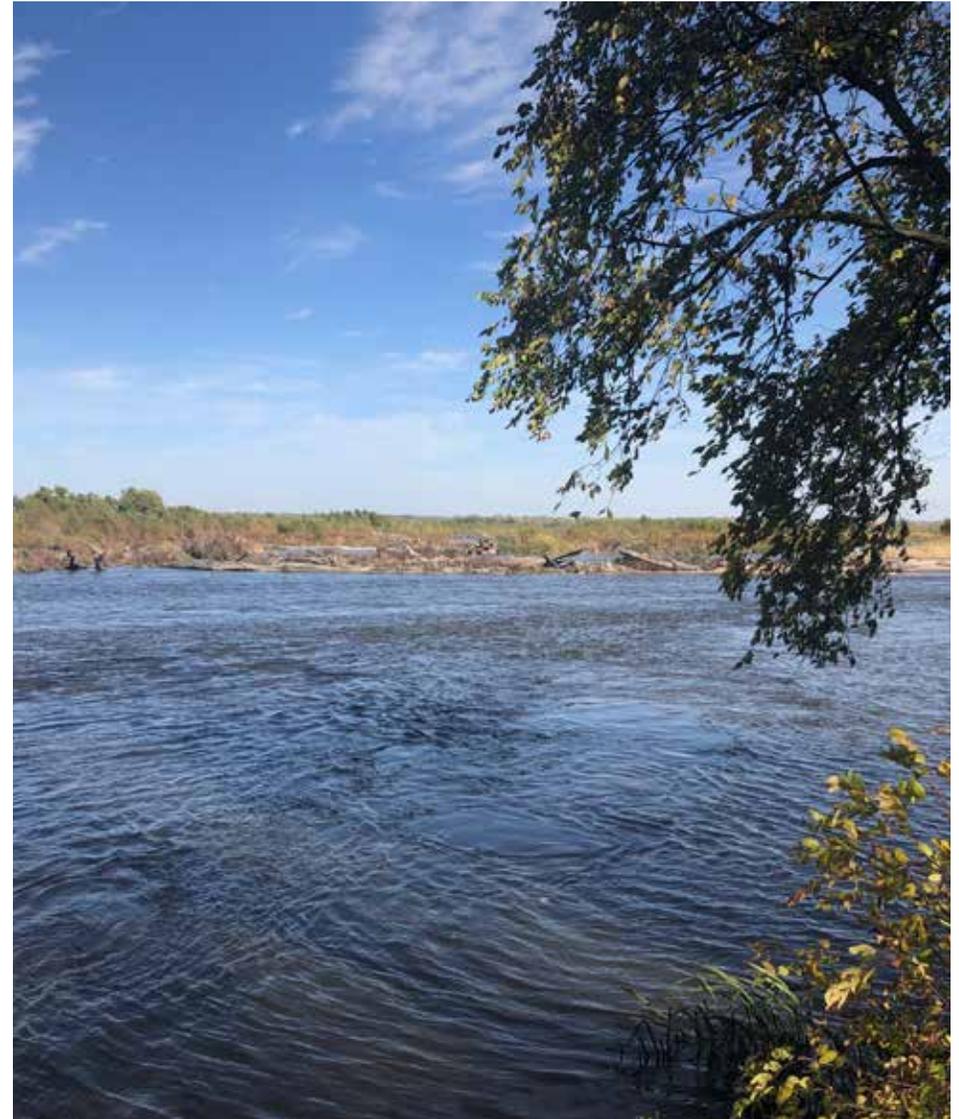
Archaeological Sites: describe the significance and meaning of archaeological sites that connect our present lives and experiences with those of ancestors reaching thousands of years into the past

What was life like for those living here thousands of years ago?

Storytelling: use the re-purposed Farm Silo as a feature to convey Dakota star knowledge

Seasonal Changes and Cycles: describe how cultural celebrations, gatherings, and recreation opportunities hinge and change in character based on seasonality—these events showcase the shared rhythm of our lives

Community Garden: foster an understanding of tending to land and the products of that effort



INTERPRETATION FRAMEWORK

THE HEAD-HEART-HANDS MODEL OF LEARNING

The Changing River and its subthemes shape and inform the content of interpretation at the Park while the Head-Heart-Hands model of learning forms the structure of how interpretive themes will be applied in an integrated, engaging way. For an experience to be transformative or meaningful, it should focus on connecting with learners in three ways: the head, the heart, and the hands

HEAD: FACTS, TIMELINES, ECOLOGY

TRAILHEADS | SIGNS | OVERLOOKS

REFLECTION: *Inward contemplation that identifies, questions, and re-frames underlying values and beliefs; acknowledges and challenges assumptions; recognizes bias and identifies fears*

HEART: PERSONAL STORIES

REST STOPS | OVERLOOKS

RELATIONAL KNOWING: *Recognition that we are connected to all life and development of a strong sense of relationship with place and all who live there.*
**Self-examination and Transformation requires Emotional Investment, sparked by a genuine Love of Place*

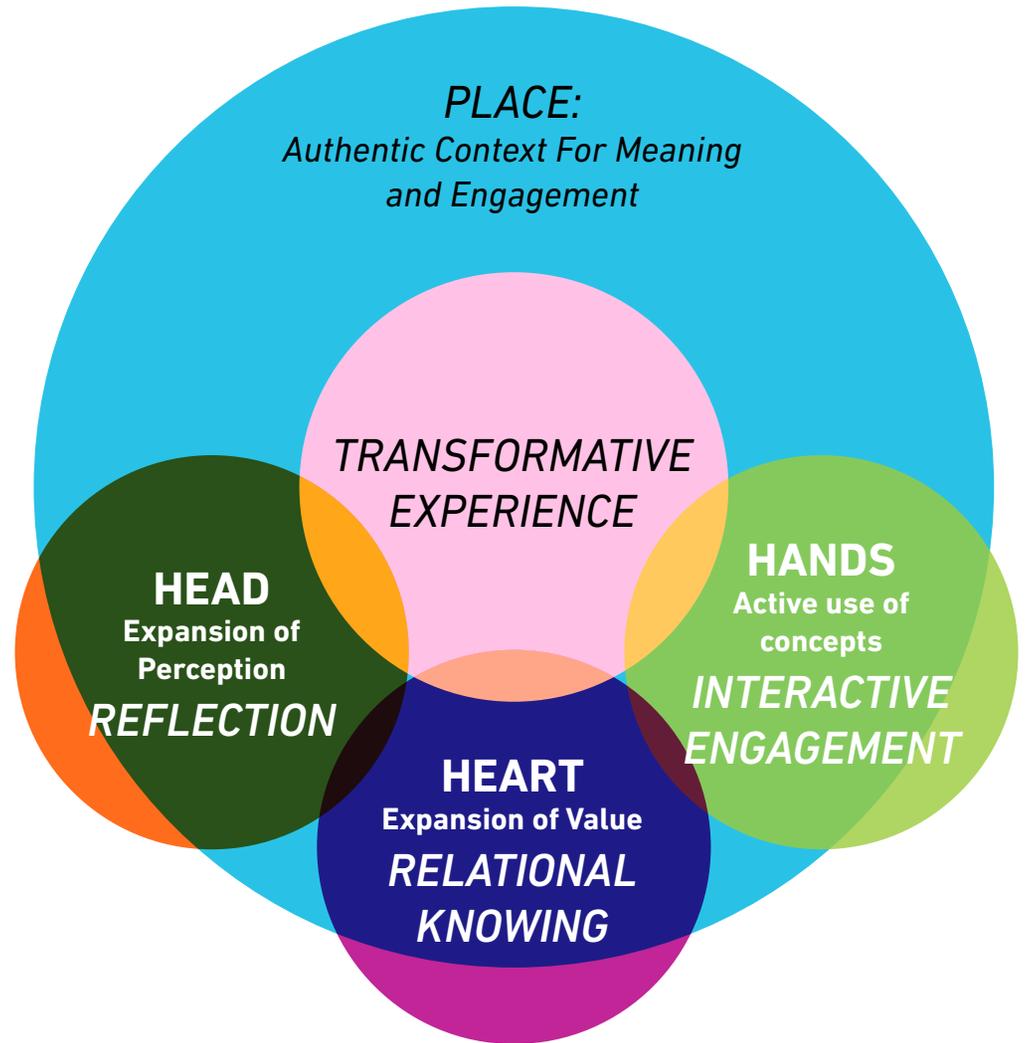
HANDS: OPPORTUNITIES TO EXPERIENCE CONCEPTS

THROUGH OUTDOOR EDUCATION AND RECREATION

INTERACTIVE EXPERIENCES | CLASSROOM | INDOOR INTERPRETIVE SPACE

INTERACTIVE ENGAGEMENT: *Being physically present in a place, building relationship with that place, critically reflecting on the values one puts on a place*

***To be engaged is to actively participate, to be involved and invested**



INTERPRETATION FRAMEWORK

EACH INTERPRETIVE NODE TYPE SUPPORTS THE TRANSFORMATIVE EXPERIENCES OF **HEAD**, **HANDS**, AND **HEART** IN DIFFERENT PROPORTIONS. EACH NODE CONTRIBUTES TO THE CONTINUOUS INTERPRETIVE EXPERIENCE THROUGHOUT SPRING LAKE PARK RESERVE.

	PARK AMENITY:	INTEGRATED INTERPRETATION OPPORTUNITIES:	PRIMARY TRANSFORMATIVE EXPERIENCE:	METHODS:
MORE SELF-GUIDED	 INTERPRETIVE PANEL	Sign with interpretive content. Signs will vary in size from small, low-intensity signs for plant identification to larger, tactile signs for interpretive themes.	HEAD 	Convey content that will catalyze reflection about the audience's prior assumptions, beliefs, or values
LESS INFRASTRUCTURE REQUIRED	 INTERPRETIVE WAYSIDE	Kiosk or sign with embedded interpretive signage and small interactive elements, maps, benches, trashcans, and bike station. Elements could include texture, movable elements, orienteering elements.	HEAD + HANDS 	Link unique messages about cultural and natural resources with opportunities to interact with the landscape through recreation
	 OVERLOOK	Sign(s), panels, or framed views with interpretive content about the scenery, benches, defined pull-off space.	HEAD + HEART 	Highlight stories with universal themes connected to physical resources to tap into the user's emotions
	 SUN SHELTER / REST STOP	Sun shade and/or benches with embedded interpretive content and defined pull-off space.	HEAD + HEART + HANDS 	Encourage contemplation of new concepts by providing spaces of rest and restoration that immerses users in SLPR's beauty
	 INTERACTIVE EXPERIENCE	Interpretive activities that involve hands-on experiences with the ecology, hydrology, personal stories, and history of the park.	HEAD + HEART + HANDS 	Create opportunities to apply learned concepts though immersive interpretive moments that convey the stories of the people and landscape that make up SLPR
MORE INFRASTRUCTURE REQUIRED	 OUTDOOR CLASSROOM	Nodes with embedded interpretive content, benches, defined pull-off space. Could include interactive structures, tactile panels, interactive art.	HEAD + HEART + HANDS 	Provide spaces that facilitate group and individual expression of reflections , immersive learning through engagement of the senses , and the active implementation of learned concepts
MORE GUIDED	 INDOOR INTERPRETATION	Fully conditioned indoor space for year-round programming.	HEAD + HEART + HANDS 	Offer year-round in-depth explorations of site history though fact-based information sharing that illustrates the human and ecological intersections that exist at SLPR

INTERPRETATION FRAMEWORK

A CONTINUOUS STORY

The interpretive strategy for the site builds a **continuous story** through the entire park via themed **interpretive nodes that engage with the HEAD, HANDS, and HEART model of learning.**

Each subtheme offers a range of interpretive learning style opportunities that engage visitors through embedded design elements that convey the stories of Spring Lake Park Reserve.



Bison



Example of a Wayside



Example of Interactive Engagement: Knife River Indian Villages Historic Site



Example of Interpretive Art

INTERPRETATION FRAMEWORK

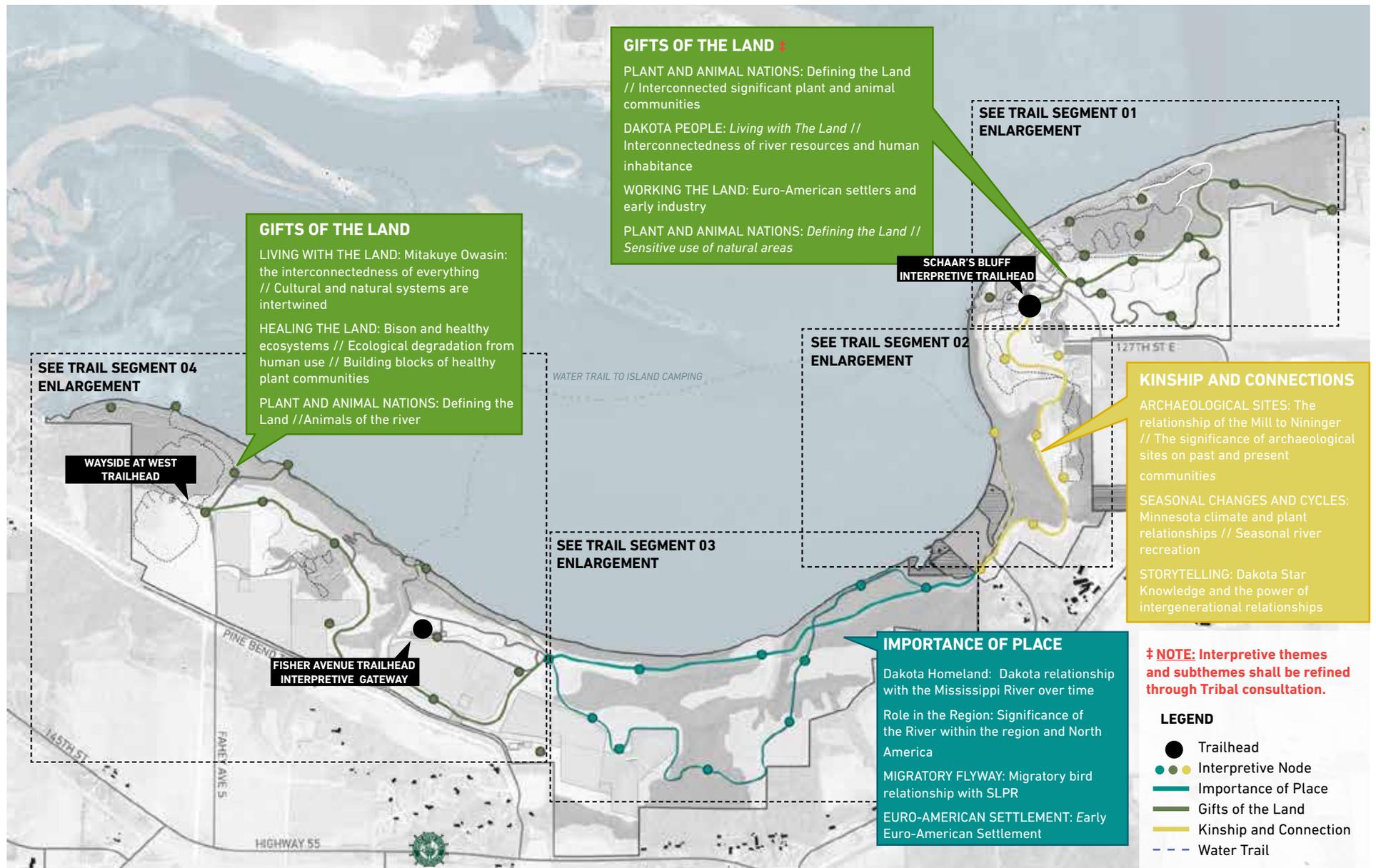


Figure 5.20 Interpretive Framework Map, Site-Wide Themes

INTERPRETATION FRAMEWORK

INTERPRETIVE PANEL

self-guided



Tactile signs that enrich visitors' understanding of SLPR with hands-on elements or relevant facts.

WAYSIDE

self-guided



Kiosk or rest area seating with immersive views, tactile elements, facts, and personal stories about SLPR often integrated into trailheads and other key destinations.

OVERLOOK

self-guided



Moments for pause at key viewsheds throughout the park. Overlooks may include interpretive art, hands-on elements, and/or personal stories of place.

REST STOP

self-guided



Hands-on activities with interactive components. Engaging interpretive art, test stations, and activities.

INTERPRETATION FRAMEWORK

OUTDOOR CLASSROOM

guided



Gathering areas in key places with way-finding information, descriptive information about the adjacent area, interpretive art, and hands-on elements.

INTERACTIVE EXPERIENCE

self-guided or guided



Unique outdoor features that highlight immersive views, focus on a specific topic, and create opportunities for information sharing through physical activity, interactive art, or other interactive interpretive elements.



INDOOR EXPERIENCE

self-guided or guided



Indoor spaces with tactile panels, hands-on interpretive activities, interpretive art, maps, and visitor information.

INTERPRETATION FRAMEWORK PLAN

GIFTS OF THE LAND TRAIL SEGMENT 01

SELF-GUIDED



HEAD SIGN

STORIES EXPLORED AND INTEGRATED

WORKING THE LAND: DESCRIBE HOW EARLY EURO-AMERICAN SETTLERS QUARRIED THE BLUFFS TO BUILD HOUSE FOUNDATIONS
WHY DO THE BLUFF EDGES LOOK THIS WAY RIGHT HERE?

MEDIA AND DESIGN ELEMENTS

SIGNS: TACTILE AND MULTI-SENSORY PANEL ELEMENTS CONNECT VISITORS WITH THE GEOLOGIC AND INDUSTRIAL HISTORY OF THE SITE.



HEAD + HANDS TRAILHEAD + WAYSIDES

1. PARK EDGE
2. PRAIRIE
3. CHURCH'S WOODS

1. PARK EDGE, PLANT AND ANIMAL NATIONS: DEFINING THE LAND: PREPARE TRAIL USERS TO ENTER A HIGH-QUALITY NATURAL RESOURCE AREA
WHY ARE THE TRAILS SO NARROW?

2. PRAIRIE, HEALING THE LAND: HIGHLIGHT THE ONGOING EXTENSIVE NATURAL RESOURCE MANAGEMENT WORK AND STEWARDSHIP AT SLPR
WHY SHOULD WE ACT AS STEWARDS?

WAYSIDES: WAYFINDING PANELS WITH SEATING, MAPS, FACTS ABOUT THE ECOLOGICAL SYSTEMS ALONG THE TRAIL. INTERPRETIVE THEMES ARE EXPERIENCED BY MOVING THROUGH THE LANDSCAPE.



HEAD + HEART + HANDS REST STOP

DEFINING THE LAND, ECOLOGISTS: HIGHLIGHT THE ONGOING EXTENSIVE NATURAL RESOURCE MANAGEMENT WORK AND STEWARDSHIP AT SLPR
WHY IS THE PRAIRIE LANDSCAPE ECOLOGICALLY SIGNIFICANT?

REST STOPS: INTERPRETIVE ART PANELS WITH INTERACTIVE FEATURES ABOUT THE PRAIRIE LANDSCAPE. PANELS MAY USE LIGHT, SHADOWS, OR TEXTURE TO CREATE DYNAMIC, CHANGING EXPERIENCES.

GUIDED



HEAD + HEART + HANDS INDOOR INTERPRETATION

POSSIBLE GUIDED TOPICS

1. HABITATION OF SPRING LAKE PARK RESERVE OVER TIME
2. ECOLOGY OF SPRING LAKE PARK RESERVE

PROGRAMS

OUTDOOR EDUCATION PROGRAMS
LECTURES
GUIDED WALKS

INTERPRETATION FRAMEWORK PLAN



Figure 5.21 Interpretive Nodes Enlargement Plan, Gifts of the Land Segment 01

INTERPRETATION FRAMEWORK

KINSHIP AND CONNECTIONS TRAIL SEGMENT 02

SELF-GUIDED



HEAD SIGN

STORIES EXPLORED AND INTEGRATED

SEASONAL CHANGES AND CYCLES: DESCRIBE HOW PLANT COMMUNITIES HAVE ADAPTED TO MN CLIMATE
WHY DOES THIS LOOK DIFFERENT THROUGHOUT THE YEAR?

MEDIA AND DESIGN ELEMENTS

SIGNS: TACTILE AND MULTI-SENSORY ELEMENTS REINFORCING THE INTERPRETIVE CONCEPTS AND UNDERSTANDING OF THE THEMES PRESENT USING LIGHT, SHADOWS, AND TEXTURE.



HEAD + HEART OVERLOOK

1. EXISTING INTERPRETIVE PANEL
2. OVERLOOK OF SHORELINE

1. SORG VESSEL AND ARCHAEOLOGICAL HISTORY: EXISTING SIGN
HOW CAN I LEARN FROM OTHERS?

2. ARCHAEOLOGICAL SITES: DESCRIBE THE SIGNIFICANCE AND MEANING OF ARCHAEOLOGICAL SITES THAT CONNECT OUR PRESENT LIVES AND EXPERIENCES WITH THOSE OF ANCESTORS
WHAT WAS IT LIKE TO LIVE AT SLPR IN THE PAST?

OVERLOOKS: INTERPRETIVE ART AND/OR PANELS WITH FIRST-HAND STORIES OF LIVING WITH THE LAND. OVERLOOK INTERPRETATIVE THEMES AND METHODS WILL REACT TO THE UNIQUE FEATURES AND VISTAS OF THE SURROUNDING LANDSCAPE.



HEAD + HANDS WAYSIDES (2)

1. CHANGING RIVER
2. IMPORTANCE OF PLACE

1. THE CHANGING RIVER: SEASONAL CHANGES AND CYCLES: DESCRIBE HOW RECREATION ON THE RIVER CHANGES WITH THE SEASONS
HOW DO I GET WHERE I WANT TO GO?

2. IMPORTANCE OF PLACE: ARCHAEOLOGICAL SITES: PREPARE TRAIL USERS TO ENTER AREAS OF KNOWN CULTURAL SIGNIFICANCE (BURIAL MOUNDS)
WHAT IS THIS PLACE? WHAT HAPPENED HERE? HOW DOES THE PAST CONNECT TO THE PRESENT?

WAYSIDES: WAYFINDING PANELS WITH SEATING, MAPS, FACTS ABOUT THE ECOLOGICAL SYSTEMS ALONG THE TRAIL. TRAILHEADS COULD INCLUDE TEXTURE, ORIENTEERING INFORMATION, CULTURALLY SIGNIFICANT PLANTINGS.



HEAD + HEART + HANDS REST STOP

BLUFF TERRACE: SEASONAL CHANGES AND CYCLES: OBSERVE THE CHANGES AT SLPR YEAR-ROUND

SUN SHELTERS AND REST STOPS: OPPORTUNITIES TO TOUCH INTERPRETIVE ART, ENGAGE WITH TACTILE PANELS, AND READ ABOUT THE HUMAN RELATIONSHIP TO THE LANDSCAPE THROUGH EMBEDDED INTERPRETIVE DESIGN FEATURES.

GUIDED OR SELF-GUIDED



HEAD + HEART + HANDS INTERACTIVE EXPERIENCE

1. SCHAAR'S BLUFF WALK-IN RIVER ACCESS*
2. INTERACTIVE SILO TOWER

* **NOTE:** Park improvements to occur with further cultural and environmental study, Tribal consultation, and monitoring.

STORIES EXPLORED AND INTEGRATED

1. ARCHAEOLOGICAL SITES: DESCRIBE THE PURPOSE OF THE MILL AND ITS RELATIONSHIP TO THE BOOM TOWN OF NININGER -BRING VISITORS TO THE WATER'S EDGE FOR OBSERVATION OF THE RIVER
WHAT IS THIS PLACE? WHAT HAPPENED HERE? HOW DOES THE PAST CONNECT TO THE PRESENT?

2. INTERACTIVE EXPERIENCE AT SILO OBSERVATION TOWER
STORYTELLING: CONVEY MESSAGES ABOUT DAKOTA STAR KNOWLEDGE, HOST PROGRAMMING TO STRENGTHEN INTERGENERATIONAL RELATIONSHIPS
HOW CAN I LEARN FROM OTHERS?

MEDIA AND DESIGN ELEMENTS

INTERACTIVE ENGAGEMENT: HANDS-ON ACTIVITIES THAT REINFORCE THE INTERPRETIVE THEMES PRESENT.

INTERPRETATION FRAMEWORK

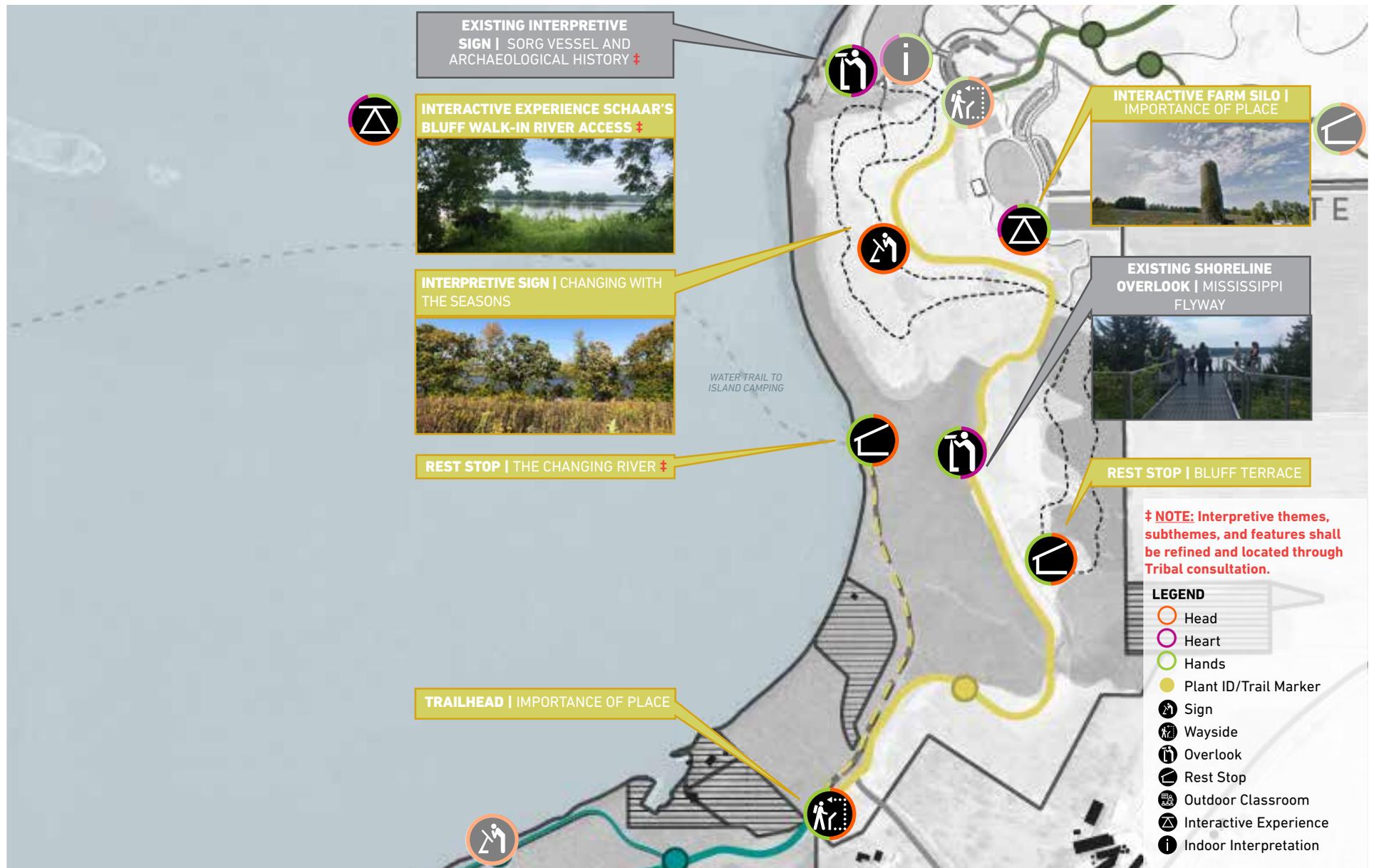


Figure 5.22 Interpretive Nodes Enlargement Plan, Kinship and Connections Trail Segment 02

INTERPRETATION FRAMEWORK

IMPORTANCE OF PLACE TRAIL SEGMENT 03

SELF-GUIDED



HEAD SIGN

1. RESERVE EDGE
2. RIVER SPUR
3. EXISTING INTERPRETIVE SIGN

STORIES EXPLORED AND INTEGRATED

1. MIGRATORY FLYWAY: HIGHLIGHT THAT MISSISSIPPI RIVER IS A SUPERHIGHWAY FOR MIGRATING BIRDS AND EXPLAIN HOW SLPR HELPS SUPPORT DWINDLING SONGBIRD POPULATIONS
WHY IS SLPR IMPORTANT TO WILDLIFE?

2. CHANGING RIVER: FOCUS INTERPRETATION ON OPPORTUNITIES TO TOUCH THE RIVER

MEDIA AND DESIGN ELEMENTS

SIGNS: TACTILE AND MULTISENSORY ELEMENTS REINFORCE THE IMPORTANCE OF THE SPRING LAKE PARK RESERVE LANDSCAPE. UNDERSTANDING OF THE THEMES IS PRESENTED USING LIGHT, SHADOWS, AND TEXTURE.



HEAD + HEART + HANDS REST STOP

1. REST STOP
2. ECOTONE REST STOP
3. TRAIL EDGE REST STOP
4. TERRACE REST STOP

1. ROLE IN THE REGION DESCRIBE THE HISTORIC IMPORTANCE AND CURRENT DAY IMPACT OF THE MISSISSIPPI RIVER WITHIN THE REGION BUT AND NORTH AMERICA; TALK ABOUT AGRICULTURAL RUNOFF AND ITS IMPACT ON HYDROLOGICAL SYSTEMS

2. ECOTONE: HIGHLIGHT WILDLIFE DIVERSITY FOUND AT EDGE CONDITIONS BETWEEN HABITAT TYPES (PRAIRIE AND FOREST); EDUCATE PARK USERS AS TO THE NATURAL ROLE OF THIS VARIOUS ANIMALS (EX: DEER), AND HOW PEOPLE CAN BEST NURTURE BALANCED POPULATIONS

3. TRAIL EDGE: FOCUS ON CLIMATE CHANGE AND ITS ONGOING IMPACT ON THE PARK; TEACH PARK VISITOR ABOUT THE IMPACTS OF CLIMATE CHANGE AND INSTRUCT THEM ON HOW THEY MIGHT BE ABLE TO HELP THROUGH VOLUNTEER ACTIVITIES

4. EURO-AMERICAN SETTLEMENT: EXPLAIN WHY SLPR WAS AN ATTRACTIVE PLACE FOR EARLY EURO-AMERICAN SETTLERS
WHAT HAPPENED TO THE BOOM TOWN OF NININGER?

REST STOPS: PROVIDE SHADE WHILE OFFERING ENGAGING INTERPRETIVE CONTENT THAT IS EMBEDDED IN THE ARCHITECTURE OF THE SHELTER. LIGHT, SHADOW, TEXTURE, CULTURALLY SIGNIFICANT PLANTS.

INTERPRETATION FRAMEWORK

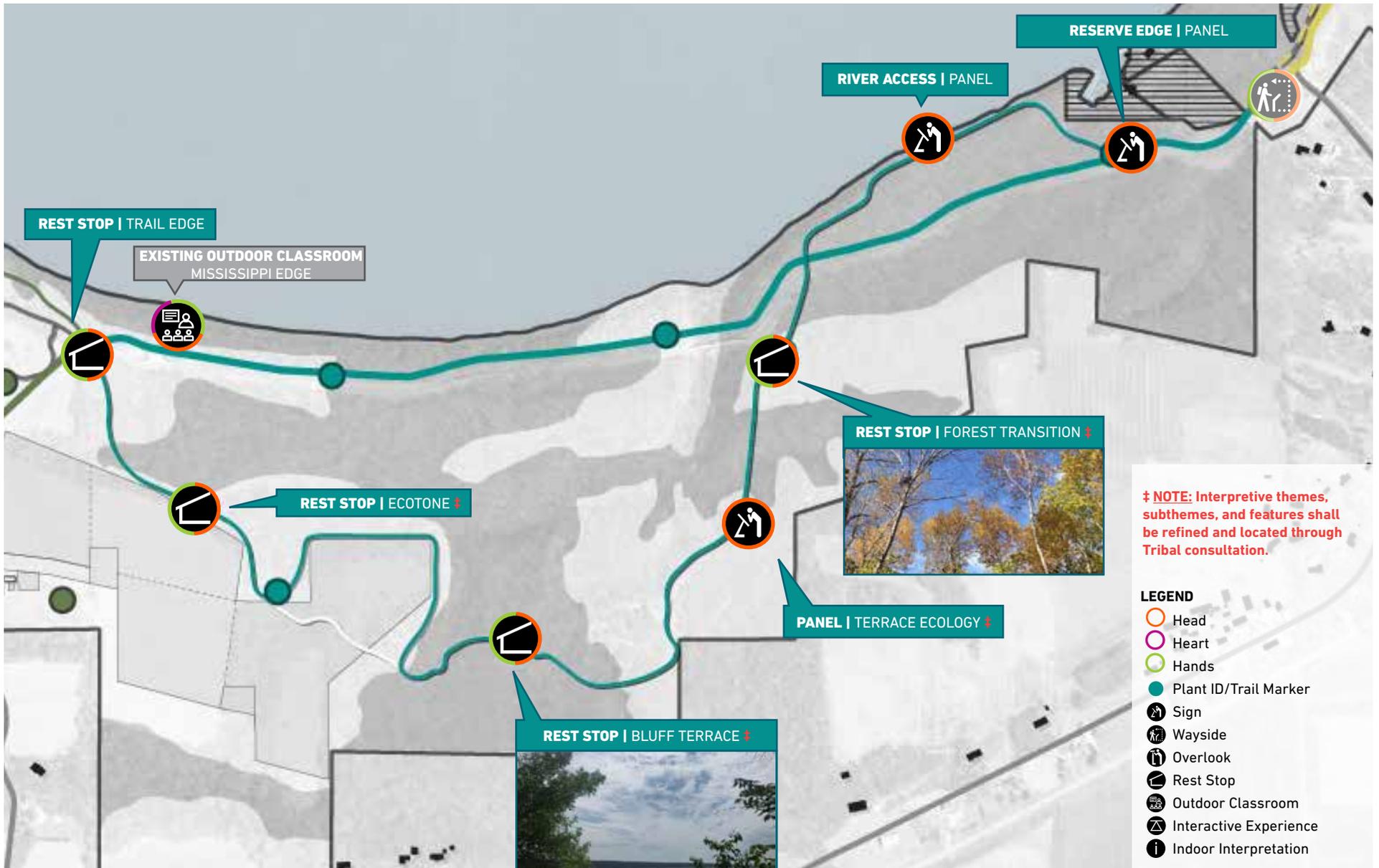


Figure 5.23 Interpretive Nodes Enlargement Plan, Importance of Place Segment 03

INTERPRETATION FRAMEWORK

GIFTS OF THE LAND TRAIL SEGMENT 04

SELF-GUIDED



HEAD SIGN

STORIES EXPLORED AND INTEGRATED

CHANGES OF LAND OVER TIME: EXISTING SIGN

MEDIA AND DESIGN ELEMENTS

SIGNS: TACTILE AND MULTI-SENSORY ELEMENTS REINFORCE THE INTERPRETIVE CONCEPTS AND UNDERSTANDING OF THE THEMES PRESENTED USING LIGHT, SHADOWS, AND TEXTURE.



HEAD + HEART OVERLOOK

1. BISON OVERLOOK
2. BISON OVERLOOK 02
3. MISSISSIPPI EDGE OVERLOOK
4. HUMPHREY POINT OVERLOOK

1. HEALING THE LAND: EXPLAIN HOW THE BISON HERD CONTRIBUTES TO MAINTAINING A HEALTHY ECOSYSTEM (DISTURBANCES, SEED MOVEMENT, AND NUTRIENT TRANSPORT)
WHY ARE THERE BISON HERE?

2. HEALING THE LAND: DESCRIBE HOW THE LOSS OF KEY ECOLOGICAL PROCESSES HAS OCCURRED THROUGH THE IMPROVEMENT OF THE LAND TO MEET HUMAN NEEDS, WITH UNINTENTIONAL CONSEQUENCES.
WHY ARE THERE BISON HERE?

3. AND 4. PLANT AND ANIMAL NATIONS DEFINING THE LAND:
DESCRIBE THE ANIMAL SPECIES THAT LIVE IN THE RIVER.
HOW DOES THE LAND AND WATER INTERACT?

OVERLOOKS: INTERPRETIVE ART, PANELS WITH FIRST-HAND STORIES OF LIVING WITH THE LAND ARE PRESENTED IN RELATIONSHIP TO THE SIGNIFICANT VIEWS OF THE OVERLOOK. PANELS AT OVERLOOKS WILL FEATURE DAKOTA LANGUAGE AND INTERPRETIVE THEMES THROUGH ART, ENGRAVING, AND/OR SEASONALLY CHANGING ELEMENTS.



HEAD + HANDS WAYSIDE

LIVING WITH THE LAND: INTRODUCE THE CONCEPT OF MITAKUYE OWASIN - THE INTERCONNECTEDNESS OF EVERYTHING
WHY SHOULD WE BE STEWARDS?

WAYSIDES: PANELS WITH SEATING, MAPS, FACTS ABOUT THE ECOLOGICAL SYSTEMS ALONG THE TRAIL. INTERPRETIVE THEMES ARE INTEGRATED INTO THE TRAILHEAD USING INTERPRETIVE ART, TEXTURE, AND CULTURALLY SIGNIFICANT PLANTINGS

GUIDED



HEAD + HEART + HANDS INTERPRETIVE CENTER + TRAILHEAD*

STORIES EXPLORED+INTEGRATED

BISON AND PRAIRIE ECOSYSTEM | MISSISSIPPI RIVER INTERPRETIVE CENTER

MEDIA AND DESIGN ELEMENTS

INDOOR INTERPRETIVE BUILDING WITH SPACE FOR INSTALLATIONS, LEARNING, AND A WELCOME DESK



HEAD + HEART + HANDS OUTDOOR CLASSROOM

1. WATER LAB*
2. PRAIRIE LAB*

* **NOTE:** Park improvements to occur with further cultural and environmental study, Tribal consultation, and monitoring.

1. LIVING WITH THE LAND: EMPHASIZE THAT CULTURAL AND NATURAL RESOURCES ARE INSEPARABLY INTERTWINED AND INTENTIONAL CHANGES TO EITHER EFFECTS BOTH
HOW DO OUR DECISIONS IMPACT THE WATER?

2 HEALING THE LAND: DESCRIBE HOW INCREASED PLANT AND HABITAT DIVERSITY ESTABLISHES RESILIENT PLANT COMMUNITIES BECAUSE SPECIES ARE ADAPTED TO DIFFERING NICHES AND WILL TOLERATE DIFFERENT STRESSES
HOW CAN WE FACE CLIMATE CHANGE?

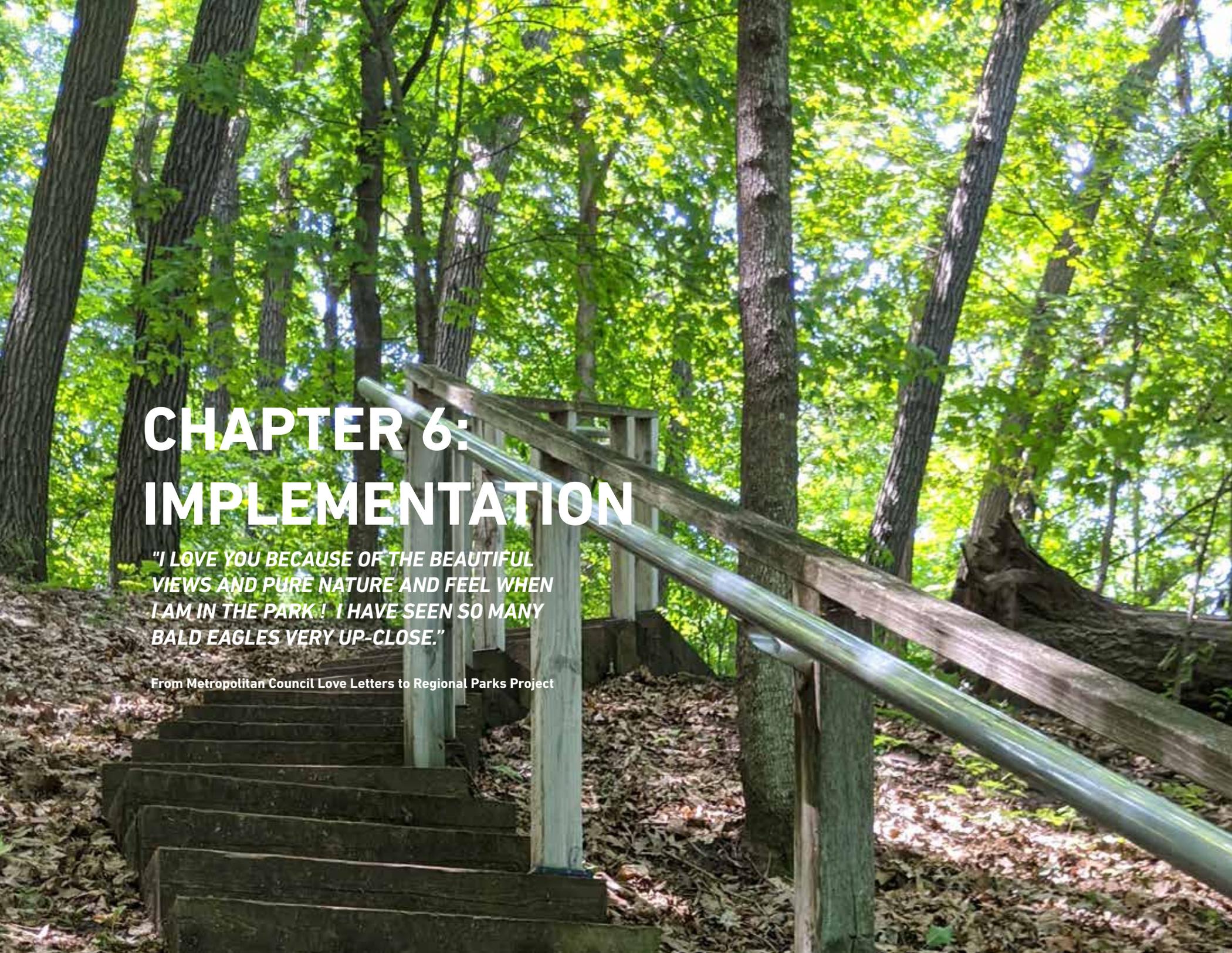
WATER LAB CLASSROOM: WATER LAB INTERPRETATION ELEMENT INCLUDES PLANTING TEST PLOTS, AN INTERACTIVE RIVER FLOW AND SEDIMENT PLAY ELEMENT, AND WATER QUALITY FEATURE INTEGRATED INTO AN OPEN AIR PAVILION/ SUN SHELTER.

PRAIRIE LAB CLASSROOM: TACTILE AND MULTI-SENSORY ELEMENTS REINFORCE THE INTERPRETIVE CONCEPTS AND UNDERSTANDING OF THE THEMES PRESENTED USING LIGHT, SHADOWS, AND TEXTURE.

INTERPRETATION FRAMEWORK



Figure 5.24 Interpretive Nodes Enlargement Plan, Gifts of the Land Segment 04

A photograph of a wooden staircase with a railing, set in a lush green forest. The stairs are made of dark wood and lead up a hillside. The railing is made of light-colored wood. The background is filled with tall trees and dense foliage, with sunlight filtering through the leaves. The overall scene is bright and natural.

CHAPTER 6: IMPLEMENTATION

*"I LOVE YOU BECAUSE OF THE BEAUTIFUL
VIEWS AND PURE NATURE AND FEEL WHEN
I AM IN THE PARK! I HAVE SEEN SO MANY
BALD EAGLES VERY UP-CLOSE."*

From Metropolitan Council Love Letters to Regional Parks Project

OVERVIEW & PHASING PLAN

The Implementation chapter describes how the master plan will be accomplished, identifying priorities, actions, and necessary resources. Applicable County policies and operational directions are included.

PHASING, PRIORITIES, AND COSTS ESTIMATES

Staff prioritized park improvements into five-year, 10-year, and long-term categories, revised by the Planning Commission and confirmed by the County Board. Prioritization considered each improvement's consistency with the park vision and guiding principles, level of community support, benefit-to-cost ratio, cost, and estimated future operations and maintenance cost.

Improvements are grouped into 29 projects with cost estimates (in 2020 dollars) that include design, engineering, and contingency. Although improvements are designated as five-year, 10-year, or long-term, any improvement may be constructed sooner if opportunities or funding become available. Priorities and cost estimates are shown in Figure 6.1 and Tables 6.1, 6.2, and 6.3. Tables indicate projects with interpretive elements included in the cost. All costs include a 10 percent allowance for integrating interpretation into design in addition to interpretive signage, interactive experiences, overlooks, and rest areas. A detailed interpretive plan for the park is recommended to further refine interpretive design and estimated costs. Cost estimates are based on past practice, work in other park systems, and expert opinion and are preliminary, as many variables can influence the actual project costs. Cost estimates will be refined as individual projects move into detailed design for construction.

PARKS CAPITAL IMPROVEMENT BUDGET

The five-year Parks Capital Improvement Program (CIP) provides for acquisition, greenway and parks improvements, and planning. The 2020–2024 Parks Capital Improvement Budget includes \$108,146,965 for acquisition, greenway and park improvements, and park system planning. Half of the CIP Budget is derived from County funds, with the rest from outside sources, including grants from the Metropolitan Council and other agencies.

PROJECT EVALUATION

Due to Spring Lake Park Reserve's sensitive ecological and cultural landscape, additional evaluation will be needed prior to capital improvement projects. An important part of this process will be thorough evaluation of each proposed CIP element, assessing the potential effects on natural and cultural sites, showing alternatives (including a "no-build" option), and describing ways to avoid, minimize, or mitigate potential impacts in a pre-design process. The purpose is to document and communicate to decision-makers the natural and cultural resource risks, needs, and recommendations for a proposed project, operational action, or special event. The evaluation process will include community outreach and will have the following components:

- **Natural Resource Review.** This evaluation will analyze potential project location and visitor use to document existing natural features, including rare species, erosion potential, fragmentation of core habitat, cumulative effects, regional implications, water quality, and other critical natural resource components. This evaluation will inform location decisions and design features and operational components (e.g. window design to minimize bird/window collisions, lighting designs to reduce light pollution, and impacts on migrating birds).
- **Cultural Review.** This process will evaluate the existence and importance of historic and Indigenous cultural sites that may or may not be known at the time of the Master Plan update. Additional evaluation of the potential for Indigenous sites may be needed. The results will inform location decisions and potentially operational and interpretive decisions.
- **Diversity, Inclusion, and Equity Review.** Visitor facilities will be evaluated on the ways that they will change how visitors interact with the park using an inclusion, diversity and equity lens.
- **Educational/Interpretive Review.** As part of the location and design process of both visitor service and natural resource improvements, an educational/interpretive evaluation will be done to ensure that the location and design take into consideration how the improvements will be interpreted.

PHASING PLAN

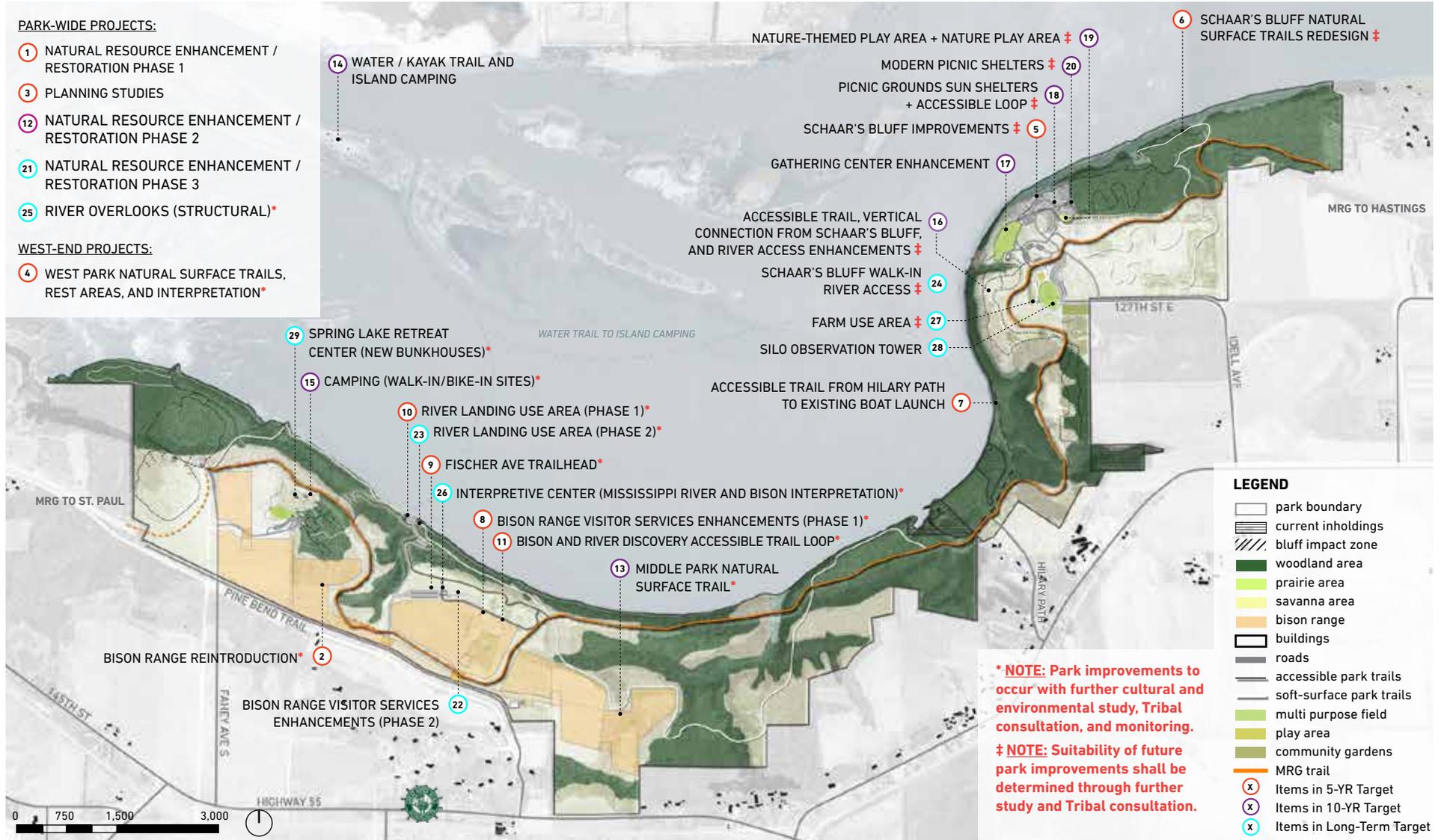


Figure 6.1 Phasing Key Plan

5-YEAR DEVELOPMENT PLAN

PHASING PLAN

ID	Description	External Funding Assumption	Estimated County Project Cost	Portion of Project Dedicated to Interpretation	Community Support
1	Phase 1 Natural Resource Enhancement / Restoration	\$ 1,309,000	\$ 535,000	Interpretive signs; plant species significant to Indigenous communities	High
2	Bison Reintroduction*	\$ 1,107,000	\$ 164,000		High
3	Planning Studies and Cultural Landscape Assessment and Stewardship (Mound Management Plan, Cemetery Delineation, Gathering Center/Public Trailhead Architectural Design Study, Cultural Landscape Study Planning Study [to include maintenance site re-use])	\$ 60,000	\$ 370,000		High
4	Lower Park Natural Surface Trails, Rest Areas, Overlooks, and Interpretation*		\$ 170,000	Interpretive signs; interpretation informs design of rest stops and sun shelters	High
5	Schaar's Bluff Improvements (Sun shelter at Existing Playground, Water Fountain at Community Gardens)+		\$ 98,000		High
6	Schaar's Bluff Natural Surface Trails Redesign+		\$ 181,000	Interpretive signs; interpretation informs design of rest stops, overlooks, and sun shelters	Medium
7	MnDNR Boat Launch Access Accessible Trail via MRG / Hilary Path*		\$ 280,000	Interpretive signs; interpretation informs design of rest stops and sun shelters	High
8	Bison Range Visitor Service Enhancements (Accessible Bison Viewing Trail, 1 Bison Viewing Platform, 1 Vehicle Pull-Off, Interpretation)*	\$ 137,000	\$ 238,000	Interpretive signs, audio tour interpretation informs design	High
9	Fischer Ave. Trailhead (Shared Parking for MRG, River Landing Use Area, Field-Trip Drop Off, Shaded Outdoor Classroom/Shelter, Vault Toilet)*		\$ 884,000	Interpretation informs design	High
10	Phase 1 River Landing Use Area (Boat Launch, Access Road, Sun Shelter/Outdoor Classroom, Storage, Watercraft Rental Kiosk, Vault Toilet, Fishing Dock/Water Lab, Parking)*	\$ 660,000	\$ 1,280,000	Interpretation informs design	High
11	Bison and River Discovery Accessible Trail Loop (Fischer Trailhead to the River Landing Use Area to the Retreat Center)*		\$ 745,000	Interpretive signs	High
^Estimated costs will be refined after studies are complete * Park improvements to occur with further study, Tribal consultation, and monitoring + Suitability of future park improvements shall be determined through further study and Tribal consultation					
					FIVE-YEAR SUBTOTAL: \$4,945,000

5 YEAR TARGET IS \$3.5 to \$5 MILLION

Table 6.1 SLPR Project Prioritization Table, 5-Year Development Plan

10-YEAR DEVELOPMENT PLAN PHASING PLAN

ID	Description	External Funding Assumption	Estimated County Project Cost	Portion of Project Dedicated to Interpretation	Community Support
12	Phase 2 Natural Resource Enhancement / Restoration	\$ 1,111,000	\$ 278,000	Interpretive signs; plant species significant to indigenous communities	High
13	Middle Park Natural Surface Trail (Fischer Ave to Hilary Path, Rest Stops, Interpretation)*		\$ 299,000	Interpretive signs; interpretation informs design of rest stops, overlooks, and sun shelters	High
14	Water / Kayak Trail and Island Camping*	\$ 67,000	\$ 70,000		Medium
15	Camping (Walk-in/Bike-in Sites, Vault Toilet, Water)*	\$ 84,000	\$ 88,000		Medium
16	Schaar's BluffRiver Access (River Access, River Access Enhancements)^+	\$ 240,000	\$ 366,000	Interactive interpretive site; interpretation informs design	Medium
17	Gathering Center Enhancement (Office Space, Rental Equipment Facilities)^+		\$ 560,000	Indoor interpretive exhibit	High
18	Picnic Grounds (2 Small Non-Reservation Sun Shelters, Accessible Schaar's Bluff Loop)^ +		\$ 229,000	Interpretation informs project design	Medium
19	Play (Nature-Themed Play Area + Nature Play Area+ Parking Reconfiguration)^+		\$ 1,838,000	Interpretation informs project design	Medium
20	Picnic Grounds (Replace 2 Existing Reservation Shelters with Modern Shelters and Restrooms)^+		\$ 2,550,000	Interpretation informs project design	Medium
10-YEAR SUBTOTAL: \$6,278,000					

10 YEAR TARGET IS \$11 MILLION

^Estimated costs will be refined after studies are complete
 * Park improvements to occur with further study, Tribal consultation, and monitoring
 + Suitability of future park improvements shall be determined through further study and Tribal consultation

Table 6.2 SLPR Project Prioritization Table, 10-Year Development Plan

LONG-TERM DEVELOPMENT PLAN PHASING PLAN

ID	Description	External Funding Assumption	Estimated County Project Cost	Portion of Project Dedicated to Interpretation	Community Support
21	Phase 3 Natural Resource Enhancement / Restoration	\$ 573,000	\$ 143,000	Interpretive signs, include species significant to indigenous communities	High
22	Phase 2 Bison Visitor Service Enhancements (Observation Platform, Prairie Lab)		\$ 294,000	Prairie lab; interpretive signs; interpretation informs design	High
23	River Landing Use Area Phase 2 (Picnic Shelter & Restroom)		\$ 959,000	Interpretive signs; interpretation informs design	High
24	Schaar's Bluff River Use Area (Custom Picnic Shelter, Restrooms, Interpretive Site, Fishing Dock, Day Use Boat Landing, Bluff to River Access)^+	\$ 240,000	\$ 916,000	Interactive interpretive site, interpretation informs design	Medium
25	River Overlooks (Structural) and Interpretive Canopy Walk*		\$ 1,602,000	Interpretation informs design	High
26	Interpretive Center (Mississippi River and Bison Interpretation)		\$ 4,655,000	Interpretation informs design; interactive indoor and outdoor exhibits	High
27	Silo Observation Tower		\$ 980,000	Interpretation informs design	High
28	Farm Use Area (Farm Use Area Business Plan: based on refined Farm Area Concept to be completed in Phase 1)^+*		\$ 4,148,000	Interpretation informs design	Medium
29	Spring Lake Retreat Center (New Bunkhouses)*		\$ 1,176,000	Interpretation informs design	Low
LONG-TERM SUBTOTAL: \$14,873,000					

LONG-TERM ITEMS

^Estimated costs will be refined after studies are complete

* Park improvements to occur with further study, Tribal consultation, and monitoring

+ Suitability of future park improvements shall be determined through further study and Tribal consultation

Table 6.3 SLPR Project Prioritization Table, Long-term Development Plan

BOUNDARIES AND ACQUISITION

No changes are recommended to the Spring Lake Park Reserve boundary. There are three private properties and one non-County public property, totaling 19 acres within the current boundary.

CURRENT INHOLDINGS

There are three privately-owned (inholding) properties located within the designated park reserve boundary. An inholding is a privately-owned property located within the designated park reserve boundary.

Parcel 1 (portions of two tax parcels) is included within the park reserve boundary to permanently protect the origin of a ravine that extends into the park reserve from continued erosion. The two primary options to secure protection are fee title acquisition or acquiring a permanent conservation easement with maintenance access. The preferred option is a permanent conservation and access easement and, if acquired, this property could be removed from the park reserve boundary without negative impacts.

Parcel 2 (two tax parcels) is subject to a 2016 settlement. That Agreement included the landowners to continue owning a small parcel with a family cabin and the County acquiring a permanent natural area conservation easement on the adjacent parcel to prevent future expansion of the cabin. However, this property is recommended for continued inclusion in the park boundary to ensure consistent natural resources management with the surrounding park lands and to provide for a future riverside trail and water access.

Parcel 3 (two tax parcels) is governed by a 2014 agreement between the County and the landowner. The County acquired a 6.6-acre natural area conservation easement on one parcel to prevent commercial marina development and has the right to purchase fee title to the 6.6 acres in 2034. The County also has the right to purchase the remaining property including a small home after April 1, 2054, and the owner may lease the home site until April 1, 2064. The property is included in the park reserve boundary to provide an opportunity for water access on the eastside of the park, to provide consistent natural resources management

with the surrounding park land, and to accommodate a future riverside trail. This property contains a Dakota County-identified Industrial Waste Disposal Site. Prior to purchase, the County should pursue additional information about potential contamination and required cleanup.

There is one public inholding within the park reserve.

Parcel 4 is currently owned by the Minnesota Department of Natural Resources (MnDNR) as a public water access. The master plan recommends working with the MnDNR to relocate the water access to the west side of the park reserve at the north end of Fischer Avenue. This location provides easier vehicle access; a more protected, safer boat access site; and closer proximity to the camping and day-use area within the adjacent state Spring Lake Wildlife Management Area. When the water access is relocated, the Master Plan recommends that the current public access remains in public ownership allowing public trail access to the Mill Site and a riverside overlook/picnic area. The MnDNR will retain ownership of the land and have the right to reopen the public water access if for any reason Fischer Avenue public water access is closed.

ID	PARCEL ID	PARCEL DESCRIPTION	ACREAGE AFFECTED (ROUNDED TO NEAREST WHOLE ACRE)
1	300240026010, 300240025020	Portion of two parcels, 25 total acres	5
2	300230001011, 300230006010	2 parcels, 5 acres total	5
3	300370000082, 300230007010	2 parcels, 8 acres total	8
4	300230003010	1 parcel, 1 acre total	1

Table 6.4 Inholding Parcel Description Table

BOUNDARIES AND ACQUISITION

STEWARDSHIP LANDS

The lands immediately south of the boundary have a significant impact on the natural resource quality within the park reserve, the views from the park reserve, and the “entrance experience.” The master plan recommends protection and management of these lands to enhance the park reserve. The 2020 “Land Conservation Plan for Dakota County Land” also identifies many of these same areas as being ecologically important. These properties are included within the preliminary Mississippi River: Spring Lake Park Unit Conservation Focus Areas (CFA). Landowners will be contacted to determine their interest in voluntary land protection and natural resource management opportunities through the County’s Land Conservation Program.

There are known and suspected environmental clean-up listed sites in the Dakota County Environmental Sites Inventory and on the MPCA’s What’s In My Neighborhood on lands adjacent to the park boundary and within the Spring Lake Park Unit CFA. The County will work with these landowners on a voluntary basis on additional investigation and potential cleanup of these sites. Depending on the nature of the site, the clean up may improve surface water quality, ground water, public health, and habitat resources within the park.

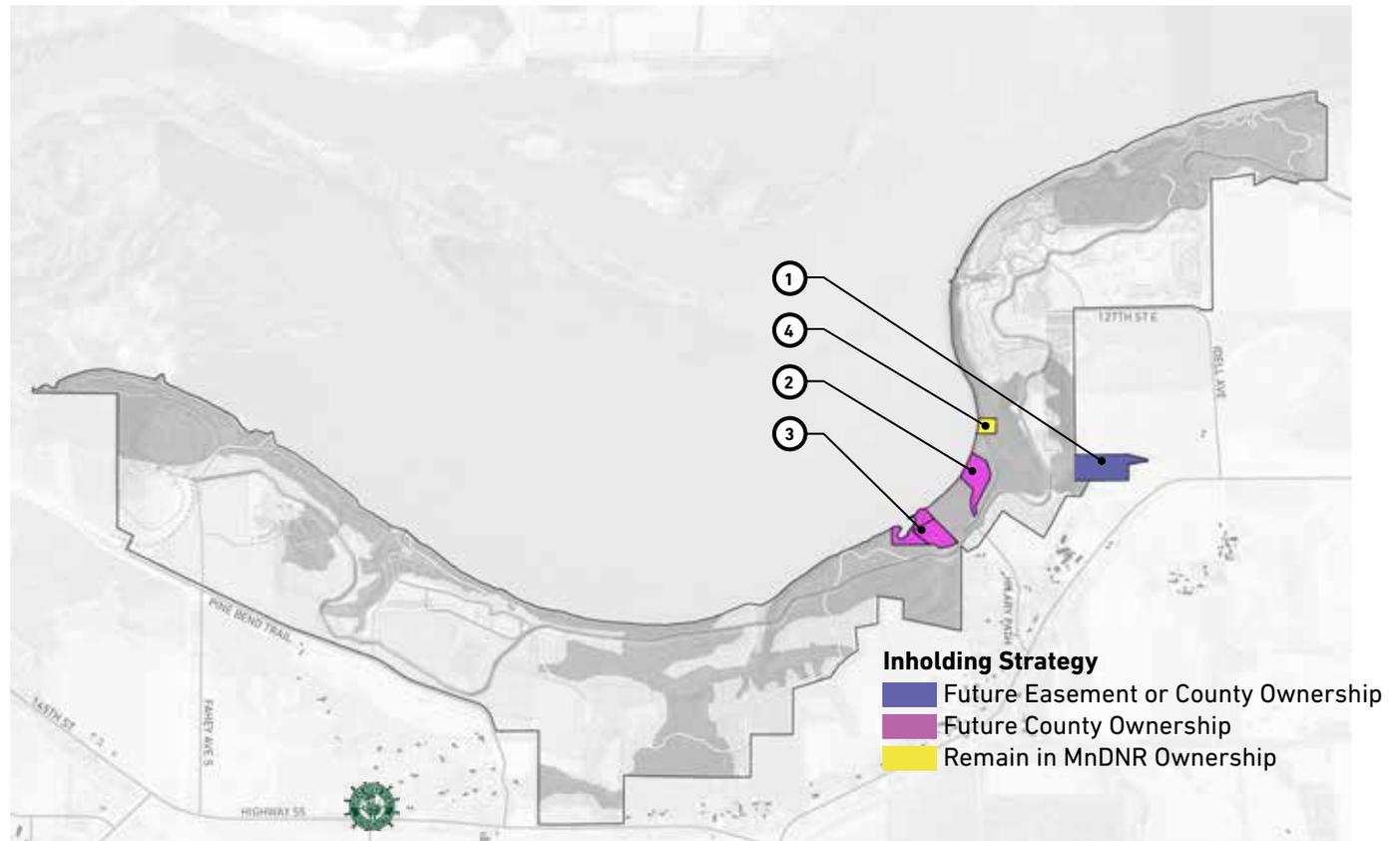


Figure 6.2 Inholding Key Plan

ADDITIONAL STUDIES

The master planning process identified areas for further studies on cultural resources management and monitoring, feasibility, cost, and phasing, to ensure improvements best serve the needs of park visitors.

Cultural Landscape Planning Study

Additional study is needed in the upper park before park development or facility refurbishment can take place. The goals of this work are to better understand the scope, breadth, and significance of the cultural landscape and to develop a refined vision and concept for the upper park. The 2020 Traditional Cultural Properties (TCP) Survey designated all of the upper park as “Newly Identified Cultural Area” because of the high concentration of TCP and high likelihood of additional TCP. The 2020 Survey was limited in scope and more study will need to be done in partnership with Dakota Tribal representatives, the Minnesota Indian Affairs Council (MIAC), and the State Archaeologist (OSA), to better understand the extent, significance, and options for protection of TCPs while allowing for public park use. After the upper park’s cultural landscape is more fully understood, a refined concept plan for the area will be developed, in consultation with Dakota Tribal representatives.

Burial, Cemetery, and Mound Management Plan

These plans will be legally binding documents between the State of Minnesota (represented by the Minnesota Indian Affairs Council [MIAC]) and Dakota County. They will be developed in consultation with Tribal Historic Preservation Officers of associated Indigenous Tribes and Nations. The document will address the desired condition, cultural protocols, management, or other topics to protect burial places in the park.

Monitoring and Inadvertent Discovery Plan

The Monitoring and Inadvertent Discovery Plan will be developed with Tribal Historic Preservation Officers of associated Indigenous Tribes and Nations to

plan for monitoring of ground-disturbing activities and potential inadvertent discoveries of cultural materials during implementation of master plan projects. The plan will identify the types of activities that require monitoring, appropriate notification, protection of cultural materials, and other topics determined by representatives of associated Indigenous communities. Monitoring and inadvertent discovery may also be addressed in the Mound Management Plan.

Upper Park River Area Interpretive Plan

An engaging interpretive experience is desired for the River Use Area in the upper park. The goal is to create a unique riverfront destination where visitors will learn about the history of indigenous habitation and use at the water’s edge.

Farm Area Studies

The long-term plan envisions the existing maintenance area be transformed into a gathering area with four-season reservable space, a flexible open space for community events and play, and adapting the existing silo into an observation tower. The existing maintenance area may also be a potential future location for picnicking and play uses in the upper park. The maintenance functions are scheduled for relocation in 2026 at which time decisions will need to be made about keeping or removing the existing buildings, some of which were part



Proposed Farm Use Area



Proposed Silo Observatory

ADDITIONAL STUDIES & NATURAL RESOURCES STEWARDSHIP

of the Schaar Farm and are remnants of early 20th Century Euro-American development. Additional study is needed to refine the vision for this area. The purpose is to:

- Determine if the existing structures can be adapted to park functions for short- or long-term use and how they would be integrated into the existing Gathering Center campus
- Create a business plan to assess the market for rental space, refine the program for the four-season space, estimate construction costs, operations costs, and revenue, and determine cost recovery goals
- Evaluate the feasibility of adapting the silo into an accessible observation tower and provide refined costs

Gathering Center Trailhead Study

An architectural feasibility and programming study will evaluate adapting and potentially expanding the Gathering Center to create a public trailhead for year-round use, equipment rental, and office space to support increased programming and education capacity.

Park Name and Park Place Names

The Dakota County Parks Department should collaborate with the Dakota County Communications Department regarding potentially renaming the park and establishing place names within the park.

Concerns about the current park name include:

- There is a Spring Lake Regional Park in Prior Lake which can be confused with Spring Lake Park Reserve
- Some think that the park is in the City of Spring Lake Park, which is in Anoka
- The name creates an expectation of a lake experience, which is not present in the park

- The current park name does not evoke the park's defining features such as the Mississippi River or the Indigenous cultural landscape

In addition, place names for recreation use areas and other park features need to be considered. Generic names for new recreation areas, such as The Mill, The Landing, and The Fischer Avenue Trailhead, are used in this document. Recreation area names should be established prior to park use area development. Use of previous Euro-American landowner place names for Indigenous sites should be avoided. Possible use of Indigenous place names/use of Dakota language can be explored in close consultation with Dakota Tribal representatives.

NATURAL RESOURCES STEWARDSHIP

Natural resources stewardship is guided by the Spring Lake Park Natural Resources Management Plan (NRMP) developed in tandem with the master plan. The NRMP's comprehensive natural resource management strategy includes a mix of stewardship practices and initiatives techniques to manage the park including grazing, fire, forest 'gap' cutting, ravine stabilization, invasive species monitoring, deer management, improving bird habitat, and climate adaptation. The NRMP includes restoration priorities and phasing, long-term maintenance plans, implementation costs, and potential funding sources.

The 2019 Feasibility Study, Reintroducing American Plains Bison to Dakota County Parks includes detailed analysis and recommendations about ecosystem benefits, risk management, park operations, costs, and animal care and health related to reintroducing Bison in the park. These topics will continue to be at the forefront as bison are reintroduced.

INTERPRETATION IMPLEMENTATION

The Interpretive Framework illustrates how The Changing River theme is experienced across the park, through the sub-themes of Gifts of the Land, Kinship and Connection, and Importance of Place. The interpretive framework envisions a continuous experience that also can be appreciated in smaller segments. Phasing is organized with elements in each subtheme implemented in each of the three phases so that the continuous story can be experienced after the five-year plan is complete. The interpretive experience will be enriched over subsequent implementation phases.

IMPLEMENTATION PRIORITY BY ELEMENT TYPE

It is envisioned that interpretation of the area and park history and the natural and cultural landscape inform the design of all improvements. The County will need to continue to work with the Dakota Tribal Historic Preservation Officers on how to best share the park's indigenous stories. Successful and sustainable interpretation requires an ongoing process of planning, implementation, and evaluation. The County should evaluate its progress toward achieving its goals annually by identifying what actions were completed related to the interpretive recommendations in this plan and how much time and money were invested to complete the action.

Guided Interpretation

Interpretive Programs are regularly scheduled activities such as classes, talks, tours, or workshops. These items should be scheduled as events occur, course agendas are made, or new course ideas are created according to proposed areas of the park that they utilize become built. The Mississippi River Interpretive Center, outdoor classrooms, and interactive experiences directly support guided interpretation.

Self-Guided Interpretation

Mobile:

The mobile tours could be developed immediately to build support for the park and share its stories about cultural and natural history. The mobile elements (i.e., audio tours and augmented reality) are not linked to new physical structures, so they can be developed separately from physical park development.

Graphic Panels (Interactive Signs and Tactile Elements):

Graphic panels and associated other elements, such as tactile, should be developed as the park area in which they are located is developed. These will occur throughout the park at trailheads, waysides, rest stops, overlooks, and in indoor spaces.

Audio Posts:

Audio Posts provide onsite interpretive and accessibility-related auditory experiences. These items should be developed as the park area where they are located in is developed. As with graphic panels, these will be installed at trailheads, waysides, rest stops, overlooks, and indoor spaces.

INTEGRATED INTERPRETATION

Integrated interpretive elements promote a holistic park experience and provide surprises in the landscape that support interpretive messaging. Interpretation should be integrated into all park improvements. Examples of integrated interpretation are selections of a particular plant species, the architectural form of a picnic shelter or bench, and framing of a view at an overlook. Design of trailheads, waysides, rest stops, overlooks, and indoor spaces will all integrate interpretation.

PUBLIC AWARENESS, OUTREACH & MARKETING

Dakota County publicizes its park system through a semi-annual County newsletter that is mailed to every household in the county, the County's website, a listserv with more than 3,500 subscribers, a Facebook page with over 11,000 likes, limited advertising for fee-based rentals, and news releases. Nevertheless, research conducted for the 2008 Park System Plan found that many County residents were unaware of the park system and its services.

In response, Dakota County Communications developed a marketing strategy and brand for parks to raise awareness and recognition of the system. The "Forever Wild" brand distinguishes Dakota County's parks as a unique system. Dakota County prepares an internal parks communication plan each year to ensure that the public has access to timely updates on parks-related topics and major events. In 2019, Dakota County Parks established a Parks Outreach Coordinator position to focus on building relationships and community outreach.

In 2021, Dakota County will be developing a marketing plan. In 2020, Dakota County conducted a broad community engagement for the Parks Awareness and Promotion Plan, which has the goals of building awareness of the park system services and increasing use. Dakota County will be using this community input to develop an Awareness and Promotion Plan with focus on building an effective, multi-year, inclusive promotion for the Dakota County Parks system. It will aim to raise awareness of the system and its offerings among target audiences and use effective, relevant, and inclusive communication techniques.

The goals of the project are to:

- Increase awareness and visitation of Dakota County parks and greenways by current and potential new users, including underrepresented groups.
- Build an inclusive, welcoming Dakota County Parks identity.
- Increase overall engagement with the Dakota County parks and greenways.

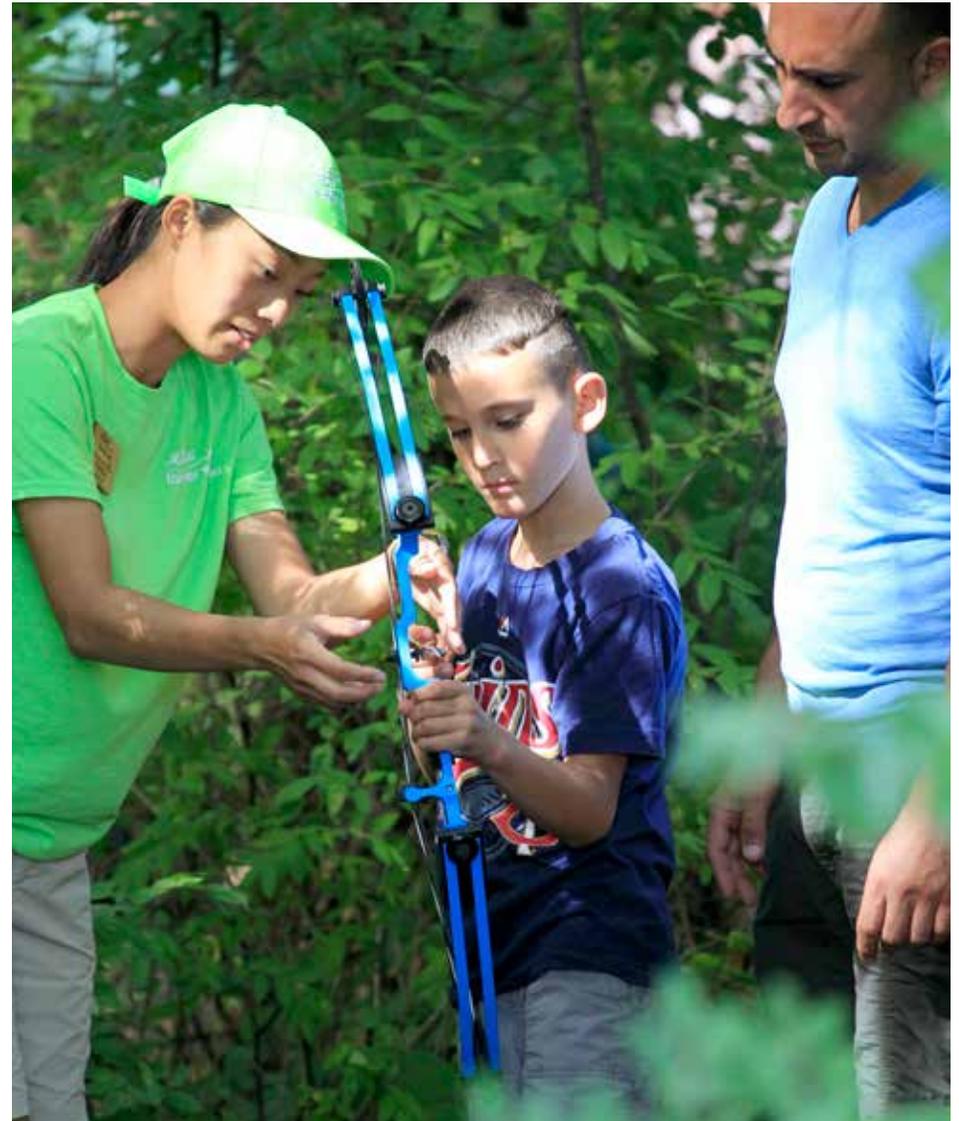


event promotion

VISITOR SERVICES

Parks Visitor Services manages outdoor education, interpretation, facility and equipment rentals, events and food, customer service and permitting, and volunteerism. The 2017 Dakota County Park Visitor Services Plan guides provision of services throughout the park system. This master plan includes facility recommendations that support visitor services at Spring Lake Park Reserve:

- Outdoor spaces, including the prairie lab at the Fischer Trailhead and the water lab at The Landing for staff-led education and recreation programming focused on nature and culture
- Interpretive Center focused on the Mississippi River and prairie ecosystem in the long-term plan
- Renovated picnic facilities and new non-reservation shelters to promote picnicking at Schaar's Bluff
- Potential concessions at the Gathering Center
- Four-season picnic facilities that can be reserved for weddings and other celebrations in the long-term plan
- New outdoor gathering spaces that augment gathering spaces at Schaar's Bluff in the long-term plan
- Equipment rental, such as bicycles, snowshoes, skis at Schaar's Bluff
- Small watercraft rental at the Landing River Use Area
- Archery equipment rental and guided programs at the Archery Range
- Outdoor gathering spaces that can accommodate occasional events
- Expanded volunteer opportunities (adopt-a-park, others)



Outdoor education in Spring Lake Park Reserve

PUBLIC SERVICES, UTILITIES, AND IMPACTS

SANITARY SEWER/SEPTIC

Buildings and restrooms at the West Trailhead, Schaar's Bluff, the Retreat Center, and the Maintenance Area are served by septic systems. Over the long term, additional septic treatment will be needed for the Interpretive Center and Farm Use Area (at the Existing Maintenance Area) and when restrooms are built at the Landing River Use Area and The Mill River Use Area.

WATER

Water service at the West Trailhead, the Retreat Center, the Maintenance Area, and Schaar's Bluff is provided by on-site wells. Water will be required from existing or new wells at these proposed use areas: Walk-in/Bike-in Camping Area, Interpretive Center, Landing River Use Area, and Mill River Use Area. Water will also be needed within the Bison range.

STORMWATER

The Spring Lake Park Reserve NRMP addressed stormwater runoff, water quality, and groundwater recharge within park watersheds and developed ecologically appropriate actions and engineering solutions for on- and off-site runoff and drainage issues. Parts of the park receive runoff from outside of the park. Sandy soils and steep slopes have led to erosion within the park, particularly within ravines and along the MRG. In 2020, Dakota County reviewed erosion sites throughout the park and prepared preliminary mitigation solutions and cost estimates. The County is pursuing grant funding and working with landowners outside of the park boundary to address runoff and erosion issues. As new recreation amenities are built, best management practices to capture stormwater onsite, sustainable trail design, and shoreline and bluff buffer zones will be used to minimize future stormwater impacts.

UTILITY SERVICE NEEDS

The West Trailhead, the Retreat Center, the Maintenance Area, and Schaar's Bluff are served by underground electric power lines. New utility service needs are

concentrated at the future Interpretive Center and Landing River Use Area off of Fischer Avenue.

UNDERGROUND PIPELINES

Underground pipelines exist in the Schaar's Bluff Area east of the entrance drive to the eastern park boundary.

DAKOTA COUNTY ENVIRONMENTAL SITES INVENTORY

There are two sites in the Dakota County Environmental Site Inventory within the park boundary within park ownership:

- Korneski Disposal, Industrial Waste Disposal east of the Mill
- Fischer Trail Dump, at the north end of Fischer Trail

The County should pursue additional information about potential contamination and clean up these sites if the sites pose a threat to surface or ground water quality, natural resource habitat, or public health.

CONFLICTS

Spring Lake Park Reserve is bordered by single family homes, agricultural land, and roadways. Residential uses are generally compatible with the park and this plan minimizes recreation use near the park's edges. As previously noted, stormwater runoff from outside of the park is contributing to erosion within the park. Dakota County is working with individual landowners to address the stormwater runoff issues. Dakota County will continue to engage the public as this plan is implemented, to reduce conflicts among park use, adjacent neighbors, and land uses.

PARK ACCESS

ROADWAYS

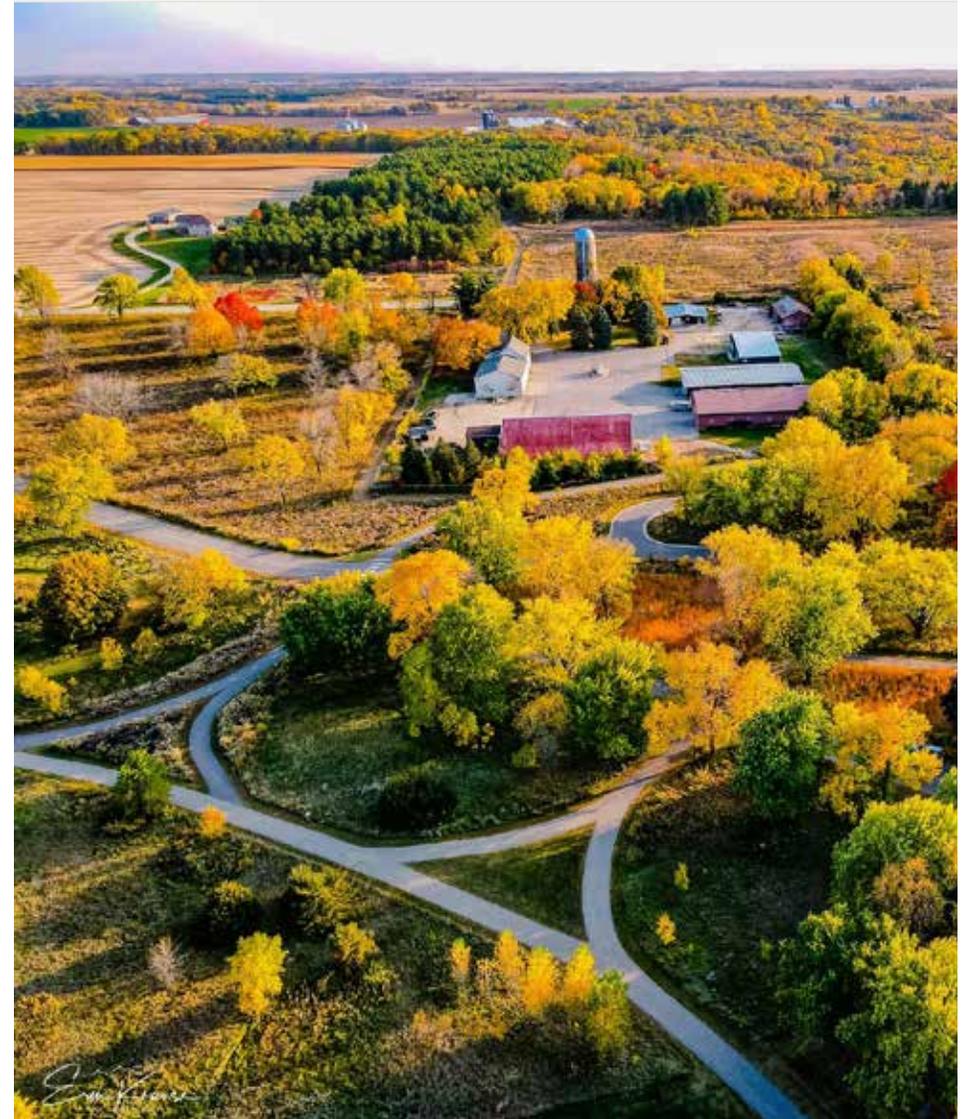
Access to Spring Lake Park Reserve is primarily provided by multiple local, county, and state roadways rather than an internal park roadway system.

- The West Trailhead and Retreat Center are accessed from Fahey Avenue and Pine Bed Trail, both of which connect to State Highway 55.
- A new park access and trailhead is recommended off of Pine Bend Trail on Fischer Ave. Fischer Avenue north of Pine Bend Trail is entirely within the park boundary.
- The existing MnDNR Boat Launch is accessed from Hilary Path. Hilary Path is operated and maintained by Nininger Township outside of the park and, inside of the park, is owned and operated by Dakota County. The master plan recommends relocating the MnDNR boat launch to the west side of the park and converting Hilary Path inside the park into a recreational trail that can also be used as maintenance access. Until the boat launch is relocated, the County intends to continue maintaining Hilary Path inside the park as a minimum maintenance road to provide access to the boat launch.
- Schaar's Bluff Trailhead is accessed from Idell Ave/127th Street East.

TRANSIT AND NON-MOTORIZED TRANSPORTATION

Located in a less densely populated portion of the county, most visitors arrive at Spring Lake Park Reserve via private automobile. The Mississippi River Greenway Trail currently provides a multi-use trail link to the City of Hastings. It is anticipated that by 2022 the trail will connect to St. Paul, making it easier for more people to bike and walk to the park.

There is currently no transit service to Spring Lake Park Reserve. Due to low population density surrounding the park, it is unlikely there will be transit regular service to the park in the foreseeable future. While there is a circulator in Hastings, service is limited and there currently is not a stop at Spring Lake Park Reserve. For special events, the County should explore providing shuttle services to the park.



Schaar's Bluff entrance road

OPERATIONS

WASTE MANAGEMENT

Dakota County's 2018 Solid Waste Master Plan seeks to increase recycling and diversion of organic waste from landfills. The County provides labeled recycling containers in its parks and promotes "green events" with compostable materials and reusable service ware. Dakota County also uses recycled tear-off shingles in hot-mix asphalt for trail paving projects. In securing waste hauling services for its own facilities, Dakota County developed and uses resource management contracts to promote handling waste at preferred levels of the waste management hierarchy.

ENERGY

Dakota County's 2009 Energy Management Plan adopted the following principles for its own operations:

- Reduce energy use and greenhouse gas emissions from buildings through design, construction, operations, and user habits.
- Reduce energy use and greenhouse gas emissions in transportation through transportation fuel alternatives, fleet-related business practices, and transportation system design and use.
- Manage waste, land, and water to conserve energy and sequester carbon.
- Increase renewable energy use to reduce greenhouse gas emissions and reliance on fossil fuels.
- Inform, advocate, and anticipate the future with others to collectively conserve energy, transition to renewable resources, and sequester carbon.

ORDINANCES

Dakota County Ordinance No. 107, the Park Ordinance, controls the public use and enjoyment of the County park system. Last revised on June 3, 1997, it incorporates pertinent Minnesota statutes and addresses the following:

- Regulation of Public Use
- Regulation of General Conduct
- Regulations Pertaining to General Parkland Operation
- Protection of Property, Structures, and Natural Resources
- Regulation of Recreational Activity
- Regulation of Motorized Vehicles, Traffic, and Parking

OPERATIONAL ANALYSIS

This analysis identified operational needs based on master plan implementation, for Visitor Services, Natural Resource Management, Grounds Maintenance, Facility Maintenance, and Law Enforcement. Impact is expressed as the change between baseline operations (2019 financials) for the park and estimated increases/decreases in revenues and expenses based on plan implementation.

SUMMARY

With implementation of the five-year plan, operational costs at the park are estimated to increase from a 2019 baseline of \$689,330 to \$801,100, an increase of \$111,770 (16 percent). Staffing requirements increase by an estimated 0.86–1.61 full-time equivalent staff (FTE). The largest increases are in Grounds Maintenance (\$59,599 increase), Natural Resources (\$34,325), and Visitor Services (\$11,065).

With implementation of the 10-year plan, operational costs are estimated at \$1,039,013, a \$237,913 (30 percent) increase over the five-year plan requirement. Staffing requirements increase by an estimated 1.90–3.57 FTE in Grounds Maintenance (\$114,232 increase), Natural Resources (\$56,635), and Visitor Services (\$55,327).

FIVE YEAR PLAN

The five-year plan includes improvements listed in Table 6.5, many of which have a bearing on park operations.

Assumptions

Based on potential operational impacts summarized in Table 6.5, the following assumptions were used to estimate financial and staffing requirements. Financial impact is expressed as the estimated increase or decrease from the 2019 operational baseline for Spring Lake Park Reserve. Staffing impact is estimated as a range, assuming 1.0 FTE for every \$40,000 (highest impact) to \$75,000 (lowest impact) of new costs.

Visitor Services

Assumptions for increased operational expenses include:

- Bison range visitor service enhancements, particularly for interpretative programming and content development.
- Fischer Avenue trailhead amenities, particularly outdoor classroom programming.
- Phase 1 of the River Landing Use Area, particularly outdoor classroom / water lab programming and the watercraft rental kiosk.

Combined, it is estimated these improvements will require a 25 percent (\$11,065) increase in operational staffing and non-staffing expenses over the 2019 estimated total of \$44,261. This equates to an estimated staffing impact of 0.12–0.23 FTE.

Assumptions for increased operational revenues includes Phase 1 of the River Landing Use Area, particularly from outdoor education and equipment rentals. These improvements are estimated to generate a nine percent (\$7,922) revenue increase over the 2019 estimated total of \$87,394.

Natural Resource Management

Assumptions for increased operational expenses include implementation of Phase 1 park-wide natural resource enhancement and restoration. Phase 1 will require an estimated 25 percent (\$34,325) increase in operational staffing and non-staffing expenses over the 2019 estimated total of \$137,298, an estimated staffing impact of 0.37-0.69 FTE.

OPERATIONAL ANALYSIS

ID	Description	Operational Impact					Revenue Potential
		Visitor Services	Natural Resources	Grounds Maintenance	Buildings Maintenance	Law Enforcement	
1	Natural Resource Enhancement / Restoration Phase 1		Medium				
2	Planning Studies (Mound Management Plan, Gathering Center/Public Trailhead Architectural Design Study, Mill Interpretive Plan)						
3	West Park Natural Surface Trails, Rest Areas, Overlooks, and Interpretation			Low			
4	Schaar's Bluff Improvements (Sun shelter at Existing Playground, Water Fountain at Community Gardens)			Low			
5	Schaar's Bluff Natural Surface Trails, Rest Areas, Overlooks, and Interpretation			Low			
6	The Mill Accessible Trail via MRG / Hilary Path, Connection from Schaar's Bluff, and River Access Enhancements			Low			
7	Bison Range Visitor Service Enhancements (Accessible Bison Viewing Trail, 1 Bison Viewing Platform, 1 Vehicle Pull-Off, Interpretation)	Medium		Low			
8	Fischer Ave. Trailhead (Shared Parking for MRG, River Landing Use Area, Field-Trip Drop Off, Shaded Outdoor Classroom/Shelter, Vault Toilet)	Low		Medium	Low		
9	Phase 1 River Landing Use Area (Boat Launch, Access Road, Sun Shelter/Outdoor Classroom, Storage, Watercraft Rental Kiosk, Vault Toilet, Fishing Dock/Water Lab, Parking)	Medium		Medium	Low		Yes
10	Bison and River Discovery Accessible Trail Loop (Fischer Trailhead to the River Landing Use Area to the Retreat Center)			Low			

Table 6.5 Five-year improvements impacting park operations

OPERATIONAL ANALYSIS

Grounds Maintenance

Assumptions for increased operational expenses include:

- Natural surface trails, rest areas, and overlooks at Schaar's Bluff and the West unit.
- Improvements at Schaar's Bluff, including a sun shelter and other amenities.
- An accessible trail via the MRG / Hilary Path and related river access enhancements.
- Bison range visitor service enhancements: an accessible Bison viewing trail, viewing platform, and vehicle pull-off.
- Fischer Ave. trailhead amenities, including the outdoor classroom/shelter and vault toilet.
- Phase 1 of the River Landing Use Area, including the boat launch, sun shelter/outdoor classroom, vault toilet, and fishing dock.

These combined improvements will require an estimated 15 percent (\$59,599) increase in operational staffing and non-staffing expenses over the 2019 estimated total of \$397,328, an estimated staffing impact of 0.33-0.62 FTE.

Buildings Maintenance

Assumptions for increased operational expenses include:

- Fischer Ave. trailhead amenities, particularly the shelter.
- Phase 1 of the River Landing Use Area, particularly the sun shelter, storage area, and watercraft rental kiosk.

These combined improvements will require an estimated five percent (\$4,260) increase in operational staffing and non-staffing expenses over the 2019 estimated total of \$85,209, an estimated staffing impact of 0.03–0.06 FTE.

Law Enforcement

Increased operational expenses increase due to new patrol areas and increased visitation, which will require an estimated 10 percent (\$2,520) increase in operational staffing and non-staffing expenses over the 2019 estimated total of \$25,234, an estimated staffing impact of 0.01-0.02 FTE.

10 YEAR PLAN

The 10-year plan is characterized by the following improvements listed in Table 6.8 that have a bearing on park operations.

10-Year Plan Assumptions

Based on the potential operational impact summarized in the table above, the following assumptions were used to estimate financial and staffing requirements for the 10-year plan, using the same parameters as the five-year plan.

Visitor Services

Assumptions for increased operational expenses include:

- Gathering Center enhancements, particularly rental equipment facilities.
- Improvements to picnic grounds.
- Development of a water/kayak trail and island camping.
- Development of walk-in/bike-in campsites.

These combined improvements will require an estimated 100 percent (\$110,653) increase in operational staffing and non-staffing expenses over the five-year requirement of \$55,327, an estimated staffing impact of 0.61–1.14 FTE.

Assumptions for increased operational revenues reflect additional outdoor education and equipment rentals and decreased revenues expected from discontinuation of the Gathering Center as a facility rental. These modifications will result in an estimated 36 percent (\$34,019) decrease in revenue over the five-year estimated total of \$95,316.

OPERATIONAL ANALYSIS

Functional Area	Category	Baseline (2019)	Five-Year Plan Requirement (estimated)	Increase over Baseline
Visitor Services	Staffing/Personal Services	\$ 36,629	\$ 45,757	\$ 9,157
	Materials, Supplies, Operational Contracts	\$ 7,632	\$ 9,540	\$ 1,908
	Subtotal	\$ 44,261	\$ 55,327	\$ 11,065 (+25%)
Natural Resource Management	Staffing/Personal Services	\$ 109,838	\$ 137,298	\$ 27,460
	Materials, Supplies, Operational Contracts	\$ 27,460	\$ 34,325	\$ 6,865
	Subtotal	\$ 137,298	\$ 171,623	\$ 34,325 (+25%)
Grounds Maintenance	Staffing/Personal Services	\$ 164,373	\$ 189,029	\$ 24,656
	Materials, Supplies, Operational Contracts	\$ 232,955	\$ 267,898	\$ 34,943
	Subtotal	\$ 397,328	\$ 456,927	\$ 59,599 (+15%)
Building Maintenance	Staffing/Personal Services	\$ 14,628	\$ 15,359	\$ 731
	Materials, Supplies, Operational Contracts	\$ 70,581	\$ 74,110	\$ 3,529
	Subtotal	\$ 85,209	\$ 89,469	\$ 4,260 (+5%)
Law Enforcement	Staffing/Personal Services	\$ 25,204	\$ 27,724	\$ 2,520
	Materials, Supplies, Operational Contracts	\$ 30	\$ 30	\$ 0
	Subtotal	\$ 25,234	\$ 27,754	\$ 2,520 (+10%)
OVERALL	Staffing/Personal Services	\$ 350,672	\$ 432,365	\$ 81,693
	Materials, Supplies, Operational Contracts	\$ 338,658	\$ 412,728	\$ 74,070
	GRAND TOTAL	\$ 689,330	\$ 801,100	\$ 111,770 (+16%)

Table 6.6 Five-year plan operational expenses (estimated)

OPERATIONAL ANALYSIS

Natural Resource Management

Increased operational expenses reflect implementation of the NRMP Phase 2 throughout the park. The improvements will require an estimated 33 percent (\$56,635) increase in operational staffing and non-staffing expenses over the five-year requirement of \$171,623, an estimated staffing impact of 0.60–1.13 FTE.

Grounds Maintenance

Assumptions for increased operational expenses include:

- Natural surface trails, rest areas, and overlooks in the Middle unit.
- Improvements to picnic grounds, particularly sun shelters and the accessible Schaar's Bluff trail loop.
- Development of a nature-themed play area, nature play area, and associated enhancements.
- Development of a water/kayak trail and island camping.
- Development of walk-in/bike-in campsites.

These combined improvements will require an estimated 25 percent (\$114,232) increase in operational staffing and non-staffing expenses over the five-year requirement of \$456,927, an estimated staffing impact of 0.63–1.18 FTE.

Buildings Maintenance

Assumptions for increased operational expenses reflect enhancement of the Schaar's Bluff Gathering Center and increased use by staff and visitors as an equipment rental facility. These enhancements will require an estimated 10 percent (\$8,947) increase in operational staffing and non-staffing expenses over the five-year requirement of \$89,469, an estimated staffing impact of 0.02–0.04 FTE.

Law Enforcement

Assumptions for increased operational expenses reflect new patrol areas and increased visitation. This will require an estimated 10 percent (\$2,772) increase in operational staffing and non-staffing expenses over the five-year requirement of \$27,754, an estimated staffing impact of 0.04–0.07 FTE.

OPERATIONAL ANALYSIS

Functional Area	Category	Baseline (2019)	Five-Year Plan (estimated)	Increase over Baseline
Visitor Services	Facility Rentals	\$ 71,985	\$ 75,584	\$ 3,599 (+5%)
	Equipment Rentals	\$ 0	\$ 2,500	\$ 2,500 (n/a)
	Permits	\$ 13,071	\$ 13,724	\$ 654 (+5%)
	Outdoor Education	\$ 2,338	\$ 3,507	\$ 1,169 (+50%)
	TOTAL	\$ 87,394	\$ 95,316	\$ 7,922 (+9%)
	Cost Recovery (Revenues / Expense ratio)	13%	12%	-1%

Table 6.7 Five-year plan operational revenues (estimated)

ID	Description	Operational Impact					Revenue Potential
		Visitor Services	Natural Resources	Grounds Maintenance	Buildings Maintenance	Law Enforcement	
11	Phase 2 Natural Resource Enhancement / Restoration		Medium				
12	Middle Park Natural Surface Trail (Fischer Ave to Hilary Path, Rest Stops, Interpretation)			Low			
13	Gathering Center Enhancement (Office Space, Rental Equipment Facilities)	High			Low		Yes
14	Picnic Grounds (2 Small Non-Reservation Sun Shelters, Accessible Schaar's Bluff Loop)	Low		Low			
15	Play (Nature-Themed Play Area, Nature Play Area, and Parking Reconfiguration)			Medium			
16	Picnic Grounds (Replace 2 Existing Reservation Shelters with Modern Shelters and Restrooms)						Yes
17	Water / Kayak Trail and Island Camping	Medium		Medium			Yes
18	Camping (Walk-in/Bike-in Sites, Vault Toilet, Water)	Medium		Medium			Yes

Table 6.8 10-year improvements impacting park operations

OPERATIONAL ANALYSIS

Functional Area	Category	Five-Year Plan Requirement (estimated)	10-Year Plan Requirement (estimated)	Increase over Five-Year Plan
Visitor Services	Staffing/Personal Services	\$ 45,757	\$ 91,573	\$ 45,787
	Materials, Supplies, Operational Contracts	\$ 9,540	\$ 19,080	\$ 9,540
	Subtotal	\$ 55,327	\$ 110,327	\$ 55,327 (+100%)
Natural Resource Management	Staffing/Personal Services	\$ 137,298	\$ 219,127	\$ 54,370
	Materials, Supplies, Operational Contracts	\$ 34,325	\$ 54,783	\$ 13,593
	Subtotal	\$ 171,623	\$ 273,910	\$ 67,963 (+33%)
Grounds Maintenance	Staffing/Personal Services	\$ 189,029	\$ 256,832	\$ 51,366
	Materials, Supplies, Operational Contracts	\$ 267,898	\$ 363,992	\$ 72,798
	Subtotal	\$ 456,927	\$ 620,825	\$ 124,165 (+25%)
Building Maintenance	Staffing/Personal Services	\$ 15,359	\$ 17,699	\$ 1,609
	Materials, Supplies, Operational Contracts	\$ 74,110	\$ 85,403	\$ 7,764
	Subtotal	\$ 89,469	\$ 103,103	\$ 9,373 (+10%)
Law Enforcement	Staffing/Personal Services	\$ 27,724	\$ 30,497	\$ 2,772
	Materials, Supplies, Operational Contracts	\$ 30	\$ 30	\$ 0
	Subtotal	\$ 27,754	\$ 30,527	\$ 2,772 (+10%)
OVERALL	Staffing/Personal Services	\$ 432,365	\$ 615,729	\$ 155,904
	Materials, Supplies, Operational Contracts	\$ 412,728	\$ 523,288	\$ 103,695
	GRAND TOTAL	\$ 801,100	\$ 1,139,017	\$ 259,599 (+30%)

Table 6.9 10-year operational expenses (estimated)

OPERATIONAL ANALYSIS

Functional Area	Category	Five-Year Plan (estimated)	10-Year Plan (estimated)	Increase over Five- Year Plan
Visitor Services	Facility Rentals	\$ 75,584	\$ 36,816	\$ -38,768 (-51%)
	Equipment Rentals	\$ 2,500	\$ 5,000	\$ 2,500 (+100%)
	Permits	\$ 13,724	\$ 15,097	\$ 1,372 (+10%)
	Outdoor Education	\$ 3,507	\$ 4,384	\$ 877 (+25%)
	TOTAL	\$ 95,316	\$ 61,297	\$ -34,019 (-36%)
	Cost Recovery (Revenues / Expense ratio)	12%	6%	-6%

Table 6.10 10-year Operational Revenues (estimated)