Overview
The Mississippi Gorge Regional Park Master Plan is a guide for future park improvements and capital investments within the regional park. The proposed park improvements strive to balance the needs of the area’s delicate natural resources and the unique river ecology with park programs and healthy recreational activity. Master planning concepts proposed in this plan build on decades of gorge-related planning by neighborhood groups, advocacy groups, watershed districts, and federal, state, and local agencies. The planning concepts are in concert with the plan’s vision and guiding principles, reflect community values and desires, and provide specific recommendations intended to fulfill park goals and objectives. This chapter is organized to provide information on park improvements and recommendations using three planning scales (overall master plan approach, focus area recommendations, and parkway and trail recommendations), and are coupled with design guidelines, and public art and interpretation, in later chapters.

Overall Master Plan
This section lays out key components of the master plan’s recommendations and addresses the river’s character at a high level with and without dams and how these two river futures affect the regional park.

Focus Area Recommendations
This section provides more specific planning concepts for several areas located within the park. These framework plans address park facilities, access and connectivity, natural resources, ecology, interpretation and education, river views and access, amongst other initiatives.

Parkway and Trail Recommendations
This section provides recommendations for parkway improvements and initiatives, including the roadway, medians and boulevards, the adjacent paved trails and sidewalks, and the natural surface trails throughout the park.
Overall Master Plan

Mississippi Gorge Regional Park is a unique and treasured landscape in the heart of Minneapolis and a central feature of the Minneapolis park system and the historic Grand Rounds. It provides valuable habitat for wildlife and recreational opportunities for all residents and visitors to enjoy. Park and recreation opportunities must be appropriately balanced with the protection, preservation, and restoration of the park’s natural resources and sensitive river ecology. At a foundational level, the Master Plan for MGRP supports the following MPRB guiding principles and themes from its 2007-2020 Comprehensive Plan:

» Urban forests, natural areas, and waters that endure and captivate
» Recreation that inspires personal growth, healthy lifestyles, and a sense of community
» Dynamic parks that shape city character and meet diverse community needs
» A safe place to play, celebrate, contemplate, and recreate

The master plan also lives up to and reflects the goals, identity, and partnerships created by the overlaid Mississippi National River and Recreation Area of the National Park Service. MGRP’s identity should be reflected through the quality of its facilities and programs throughout the regional park. That identity begins by officially naming this regional park. The CAC recommends the MPRB officially name the park as it is commonly known – “Mississippi Gorge Regional Park.” It was determined that several other natural areas in the park may also require official naming, including areas commonly known as “Southeast Flats,” “Longfellow Flats,” and the “Oak Savanna.” Throughout this plan these areas are referred to by their commonly used names, but do not suggest their commonly used names are made official. Any name changes or name adoptions will be performed according to the naming policy of the MPRB.

The plan addresses park user needs and values by reflecting community input received throughout the planning process. For instance, the CAC and community has made it clear that the plan must protect, preserve, and restore natural resources throughout the river gorge, including restoration efforts and removal of invasive plant species. More specific natural resource and ecological recommendations will be coordinated with MPRB’s Ecological System Plan and Natural Areas Management Plan. This master plan also proposes new park facilities and programs that address park user requests, including community gathering spaces, like the outdoor amphitheater and Welcome Center proposed at Bohemian Flats, the labyrinth/peace garden proposed at Riverside Park, and additional picnic facilities at East River Flats. It proposes ways to improve access and connectivity to, from, and within the park, addressing ADA accessible picnic areas and proposed restoration of the historic WPA staircase at Annie Young Meadow, and the entryways to “Southeast Flats” and “Longfellow Flats.”

The master plan considers two possible futures for the regional park: with and without the nearby dams. Each future offers different circumstances for the river’s character, ecology, and recreational opportunities. These different futures are discussed more on the following pages.

The future of the Mississippi River gorge remains relatively unknown. The United States Army Corps of Engineers (USACE) is currently weighing the costs and benefits associated with maintaining the lock and dams under a no change scenario, disposing of the properties partially, or fully disposing of the properties through their disposition process. Section 1168 of the Water Resources Development Act of 2018 requires that all Corps disposition studies consider removal of structures that no longer fulfill an authorized Federal purpose. Currently, only the Upper St. Anthony Falls Lock and
Dam are going through the disposition study process. Lower St. Anthony Falls Lock and Dam No. 1 will be studied in the future. Regardless of the decision, the Mississippi River gorge will remain an aesthetic, recreational, and natural resource amenity within the core of the Twin Cities. The gorge will also continue to provide valuable habitat for urban wildlife and native plant communities. The following section will explore the potential future scenarios, discuss some of the changes that can be expected, identify unknowns, and suggest next steps.

Master Plan Alternatives with Dams

River Character
The geomorphology of the gorge will remain in its current state as an impounded river reach as long as the dams are in place, the most significant change being that the impoundments will continue to fill with sediment. The floodplains, banks, and beaches are expected to remain as they are. Historically, the USACE maintained a navigational channel through the gorge by dredging material out of the river. The navigation channel is no longer dredged upstream of Upper St. Anthony Falls. Both Lower St. Anthony Falls Lock and Dam No. 1 are open to navigation, with limited hours of locking operation. A future with dams and without dredging however, would lead to further deposition and accumulation of fine sediment upstream of Lock and Dam No. 1. Long term, sediment deposition may result in island formation upstream of the dams and expansion of some bank areas which may result in changes to the hydrology, ecology, and hydraulics within the gorge upstream of the current location of Lock and Dam No. 1.

Ecology
With the dams remaining, the ecology of the river is expected to remain in its current state. The forested riparian areas within the gorge will continue to be a refuge for urban wildlife and a critical migration corridor for hundreds of species of wildlife and birds. The reach, with a series of impoundments, will continue to sustain the impacts of increased water temperature, decreased water quality, nutrient loading, fine sediment deposition, and habitat degradation, and the dams will continue to be barriers to aquatic organism passage. The river will remain better suited for lake and large river fish species (including invasive Asian carp). Mussels will continue to live in the gorge but will have a difficult time thriving with fine sediment and fish passage barriers. Invasive species will continue to be a management concern.

Recreation
Recreational opportunities along the riparian corridor will be sustained and improved. People will continue to enjoy hiking, cycling, bird watching, rowing and paddling, and fishing. Current recreational boating opportunities will likely remain relatively unchanged for the next decade. Long term, and without dredging, sediment deposition will decrease water depths along depositional segments and riparian wetland vegetation may encroach on boating space especially for the commercial riverboats currently in operation at Bohemian Flats, or decrease water depths, limiting access to certain areas. There will still be natural education opportunities within the park.

Recommended Next Steps
In a future with the dams maintained the following actions are recommended with collaboration between applicable agencies and partners:

» Development of a sediment management plan if the USACE ceases dredging operations upstream of Lock and Dam No. 1
» Invasive species management:
  • Invasive plants (e.g. garlic mustard, honeysuckle, reed canary grass, and buckthorn)
  • Invasive aquatic plants (e.g. Eurasian watermilfoil)
  • Invasive fish species (e.g. Asian carp)
» Riparian corridor improvements - Hardscaped bank treatments (concrete walls, riprap) can be evaluated for replacement by bioengineering alternatives where appropriate.
» Recreational programs and facilities should be maintained and improved throughout the park, with new programs and facilities introduced to respond to changing park user needs.
» Stormwater outfall enhancement.
Figure 6-1. Master Plan Alternatives without Dams
Master Plan Alternatives without Dams

River Character
If the dams are removed, the Mississippi River within the gorge will look much different than it does today. More detailed studies would need to be completed to accurately predict the ecological and riverine changes to the gorge, post-dam removals, but anticipated changes based on other dam removals may include:

» The average velocity of the river flow will increase and the average water depth will decrease.
» Impounded sediment management and subsequent exposure of buried geomorphic features such as riffles (rapids), pools, islands, backwater channels, floodplain wetlands and bedrock outcrops, and other items below the surface of the water.
» Historic riffles (rapids) and pools will be exposed as the fine material is carried downstream or removed by mechanical methods. Figure 6-2 shows the Carver Rapids on the Minnesota River, which gives an idea of what some sections of the river might look like post dam removal.
» Historic islands may also be uncovered or formed. Figure 6-3 shows the potential river geomorphology with islands.
» Figure 6-1 shows the historic shoreline from 1895 and what a future shoreline may look like.
Ecology

Based on similar projects completed around the country, the overall ecological health of the Mississippi River through the gorge would be expected to improve with the removal of the dams. The process would require restoration efforts after the removal of the dams to restore and stabilize the newly exposed river banks and manage sediment deposition. Though the river will likely change to a quicker and more turbulent flow, there will still be large amounts of road pollution and trash that will enter the river from storm sewer outfalls during rain events. Anticipated improvements to the ecological health of the river may include:

- Improved water quality (increased dissolved oxygen, decreased biological oxygen demand, reduced water temperatures).
- Restoration of natural geomorphic habitat forming processes (sediment evacuation, exposure of riverine features).
- Improved fish passage through the gorge.
- Conversion from stagnant lake habitat to dynamic river habitat (riffles, pools, islands, backwater channels).
- Improved habitat for less tolerant macroinvertebrate species - some mayfly, caddisfly, and stonefly bug species would be able to occupy the gorge again with the presence of shallow oxygenated water.
- Improved mussel habitat and passage of mussel host fish.
- Increased vegetated island habitat area – Improved conditions for native plants, birds, mammals, reptiles, and amphibians.
- Increased natural riparian area – The lowered water levels would expose former wetlands, forested floodplain areas and river banks, which are all important corridor spaces for migrating birds and wildlife, including bald eagles and fishing raptors.

Recreation

Removal of the dams will have an impact on some recreational opportunities. Anticipated changes may include:

- Rowing would likely be eliminated given the activity’s spatial needs and maximum water velocity limitations.
- Existing beaches will be farther from the river and at a higher elevation. New beach areas may need to be established within existing park spaces.
- Angling by boat may be limited, but wading fishing opportunities will increase. Fish species will transition to communities resembling those downstream of Lock and Dam No. 1.
- Nature education opportunities will increase within the newly formed natural areas. There will be greater habitat complexity and education opportunities tied to the river’s restoration.
- More diverse canoe and kayak opportunities will include some steeper riffle reaches and potential whitewater segments. Paddlers may be able to access new islands exposed following removal of the dams.
- Bird watching opportunities will increase with increased riparian areas and island habitat.
- Natural surface hiking trail space could increase with exposed riverine floodplain area. Existing trails will remain unaffected by the removals.
- River boat cruises and other deep hulled motorized boats will likely no longer remain on this stretch of river.
**Recommended Investigation and Studies**

Even with historical maps, photographs, and descriptions suggesting a post dam removal condition of the river, it will require additional data collection and analysis. The following aspects require more field investigation and study to ascertain the anticipated conditions following dam removals. It is important to note that this list and the recommendations that follow would not be the sole responsibility of MPRB, as river management is not within their jurisdiction. Rather, this list captures topics that would likely be in shared interest of multiple agencies and organizations to explore in partnership/ or as a coordinated effort.

- Probing and sediment coring to determine exactly where the historical channel was located.
- Probing of impounded sediment depths and coring of historic surfaces to determine the quantity of sediment that has built up behind the dams.
- Coring and analysis of sediments to determine the character and extent (if any) of contaminants in the impounded sediment.
- Modeling of existing hydrology and proposed hydraulics and geomorphology to determine an appropriate channel size that fits the modern, altered hydrology of the river.
- Determining the extent and composition of the submerged Meeker Dam structure.
- Surveying of all properties, amenities, storm sewer outfalls, power, water, electrical, fiberoptic, and other infrastructure to quantify any engineering needs to protect or move affected infrastructure.

**Initial recommended first-steps in the investigation process:**
- Dam Removal Feasibility Study
  - Bathymetric and topographic surveying.
  - Hydrologic and hydraulic modeling of proposed conditions.
- Develop sediment management plan:
  - Estimate volume of impounded sediment that needs to be removed
  - Determine fate of impounded sediment released downstream
  - Sediment transport modeling
  - Sediment contaminate testing
- Historical Condition Assessment – Includes cultural resources investigation into potential impacts of historical and archeological sites.
- Existing infrastructure (bridges, stormwater outfalls, roadways, buildings, etc.) survey to identify potential impacts of dam removal.
- Natural resource impact assessment to quantify potential changes in wetland, riparian, and riverine habitats.
- Concept level design and cost estimates.
- Public meetings and coordination with stakeholder groups.
- Engineering design – Engineering includes detailed plans and specifications for access and staging, water control or diversion, demolition and dam removal, sediment management and river restoration, along with any associated park and infrastructure changes required as a result of the dam removals.
  - Permitting – As part of the engineering design process, meetings with regulatory agencies and permit filings are an important part of the dam removal process. This includes zoning, disposal, sediment management, in-water work, erosion control, stormwater, environmental quality, and cultural resource permitting.
- Implementation – includes contracting, dam removal demolition, sediment management, and river restoration construction.
- Invasive species management:
  - Invasive plants (e.g. garlic mustard, honeysuckle, reed canary grass, and buckthorn).
  - Invasive aquatic plants (e.g. Eurasian watermilfoil).
  - Invasive fish species (e.g. Asian carp).
Focus Area Recommendations

The 5.5 mile-long Mississippi Gorge Regional Park consists of natural areas, parkways, paved and unpaved trail corridors, and urban park spaces. The natural areas and park spaces within MGRP provide destinations for community gathering, passive and active recreation, nature hikes, and bird watching, among other activities. Several destinations in the park were identified during the planning process as areas requiring focused planning efforts for future park improvements and capital investments. The focus areas include:

» Bohemian Flats Park (with and without dams)
» Riverside Park and Annie Young Meadow
» "Longfellow Flats" and Minneapolis Rowing Club Boathouse Area
» "Oak Savanna" Area
» East River Flats Park
» “Southeast Flats” Area
» Lower Gorge Islands (without dams)

The following pages provide recommendations for park improvements and natural resource protection and preservation in each of the focus areas. Park improvements proposed in the focus areas address park facilities, river and riparian ecology, wildlife habitat, natural resources, site amenities, access and connectivity, safety and security, park identity, and features intended to make MGRP more welcoming to people of all ages, abilities, income levels, and backgrounds. Linear park areas outside the focus area boundaries are addressed in the Parkway and Trail Recommendations section.
Proposed improvements at Bohemian Flats Park

**Bohemian Flats Park (with dams)**

Bohemian Flats Park, located at the north end of Mississippi Gorge Regional Park, provides an excellent opportunity to welcome visitors entering the regional park from the north and to establish the park’s identity along West River Parkway. Consideration should be given to strengthening this important gateway into the park with park identity signage and special landscape features. The plan also recommends that a new “Welcome Center” be located in Bohemian Flats Park to provide a unique gathering space for park visitors and tell the history of both MGRP and Bohemian Flats Park. The Welcome Center is envisioned as an iconic park building with multi-use rooms, restrooms with wash facilities, vendor spaces, and historic/cultural interpretation features.

Bohemian Flats Park is a large, open site with the potential to be more actively used than it is today. Input received from community members identified the desire to create an outdoor community gathering space in the park and to consider facilities to host events and performances, such as festivals, music, and theater in the park. Park users also suggested the need for more seating and shaded areas within the park, places for picnicking, active recreation, and nature play. These more active uses have been sited on the north end of the park where there is adequate open space and parking to accommodate new park uses and facilities. Utilities and electrical services associated with these new, heavy demand uses like a swimming pool, welcome center, and performance pavillion/ amphitheater will require upgrading.

The south portion of Bohemian Flats Park is also open and relatively unused today. Planning concepts for this area of the park include a vertical connection to the Washington Avenue Bridge, more passive and nature-based ideas, such as restoring the prairie landscape that once existed here, planting orchard trees, and installing natural surface trails that provide better access through the park and get people closer to the river’s edge. The views down river from here are stunning and should be considered with any plantings in this area. Plantings should frame and not obstruct views. The following pages provide a proposed plan view of Bohemian Flats Park and more specific park recommendations.
Figure 6-4. Bohemian Flats Park (With Dams)
**Precedent Images**

**Bohemian Flats Park (with dams)**

**Park Recommendations:**

A. Beach with picnic tables, kayak and canoe storage, small boat (ADA accessible) launch and paddle share opportunity.

B. Sand volleyball courts

C. Children’s nature play area and picnic area/shelter

D. **Formal picnic area/shelter with green roof**

E. River barge: floating restaurant/cafe and swimming pool

F. Tour boat docking

G. **Natural amphitheater built into slope facing the river**

H. Stage area/bandshell for concerts and events

I. **Improved trail connection to U of M West Bank with stairs or ADA accessible trail up the slope**

J. Enhanced existing stormwater features and rain gardens: Protect existing outfall locations, protect or extend existing outfall locations, and integrate with park and shoreline improvements

K. Maintained and enhanced small wooded area

L. Welcome / cultural center that includes: restrooms with wash facilities, vendor space, multi-purpose rooms, and historic cultural interpretation

M. Clover lawn/prairie restoration/savanna area with public art, walking trails, terraced gardens

N. Opportunity for expanded/overflow parking for events under Washington Ave bridge (grass, permeable pavers)

O. **Additional shade trees and native landscaping throughout. Use tree stands to shape park spaces**

P. Separation of pedestrian and bicycle trails

Q. Orchard/Shade trees

R. Improved 4th Street sidewalk

S. Gateways to Mississippi Gorge Regional Park (monument signage/park identity)

T. Potential zipline across river, provided support by the community at the time of implementation, permits are approved, and forecast revenues are positive

*Bolded text identifies community prioritization items*
Children’s nature play area precedent image
Bohemian Flats Park (without dams)

The master planning process evaluated impacts to park and open spaces along the river corridor in the event that the existing dams are removed, as discussed earlier in this chapter. Removal of the dams would greatly reduce the river’s water levels and channel width in the gorge, and ultimately would change the character of the river from a relatively static reservoir to an active, free-flowing, whitewater stream through the gorge. Bohemian Flats Park is one of the areas along the river that would be significantly impacted by dam removal. Located on the opposite side of the cut bank through this section of the river, the shoreline along Bohemian Flats Park is expected to pull away from the existing bulkhead wall along the east side of the park as the width of the water channel through this section of the river is reduced, thereby eliminating the need for the wall.

The anticipated change in the river’s character through this section of the gorge would provide opportunities for a restored riparian shoreline along Bohemian Flats Park, new opportunities to access the river, and new forms of water-oriented recreation, such as whitewater paddling. Though there are added opportunities, there are also consequences; it is likely that rowing will no longer be feasible in this section of the river, along with no cruise boats, and likely limited motorized boat use and emergency response watercraft. The plan for Bohemian Flats Park with future dam removal proposes shoreline riparian enhancements with restored wetlands, emergent vegetation, and floodplain forest plantings. Also proposed are terraced limestone seating areas that allow park visitors to be near the river’s edge and view river-oriented activities, and boardwalk trails through wetland areas. Environmental interpretation should also be considered to educate park visitors.
Figure 6-5. Bohemian Flats Park (With Future Dam Removal)
Bohemian Flats Park (without dams)

about how dam removal has changed the river’s ecology. The following pages provide a proposed plan view of Bohemian Flats Park with future dam removal and more specific park recommendations.

Park Recommendations:
A. Expanded beach with picnic tables, kayak and canoe storage, small boat (ADA accessible) launch, and paddle share opportunity.
B. Sand volleyball courts
C. Children’s nature play area and picnic area/shelter
D. Formal picnic area/shelter with green roof
E. Wetland / Emergent vegetation
F. Giant Stone Step terraced seating with views up and down river
G. Natural amphitheater built into slope facing the river
H. Stage area/bandshell for concerts and events
I. Improved trail connections to U of M West Bank with stairs or ADA accessible trail up the slope
J. Enhanced existing stormwater features and rain gardens
K. Maintained and enhanced small wooded area
L. Welcome / cultural center that includes: restrooms with wash facilities, vendor space, multi-purpose rooms, and historic interpretation
M. Clover lawn/prairie restoration/savanna area with public art, walking trails, terraced gardens
N. Opportunity for expanded/overflow parking for events under Washington Ave bridge (grass pave)
O. Additional shade trees and native landscaping throughout. Use tree stands to shape park spaces
P. Separation of pedestrian and bicycle trails
Q. Orchard/Shade trees
R. Boardwalk through wetland area
S. Floodplain forest
T. Improved 4th street sidewalk
U. Gateways to Mississippi Gorge Regional Park (monument signage/park identity)

*Bolded text identifies changes to park under dam removal scenario
Precedent example: Giant Stone Step terraced seating with views up and down river
Riverside Park and Annie Young Meadow

Riverside Park and Annie Young Meadow (formerly Lower Riverside Park), located south of Bohemian Flats on the west side of the river, combine to provide MGRP visitors with a more active, urban, neighborhood park on top of the river gorge bluff (Riverside Park) and a more passive park located near the river’s edge (Annie Young Meadow). The plan proposes to better connect these two parks by restoring the existing WPA staircase in Annie Young Meadow and providing accessible pathways between the two areas of the park, thereby creating a more unified park from the neighborhood to the river’s edge.

Other improvements proposed at Riverside and Annie Young Meadow include new park facilities requested by park users and adjacent park neighbors, including restored volleyball courts, picnic areas, restrooms, a labyrinth, pollinator garden, two full-size basketball courts, and a nature play area. Annie Young Meadow will receive new ADA accessible picnic facilities, a trail kiosk, restroom, and improved connections across West River Parkway. Parking at Riverside Park is challenging today, warranting further study to resolve parking issues. Nearby uses such as the hospital and a university that are not park-related, attract people parking along the streets that line Riverside Park, creating conflicts with park users and neighbors.

The plan calls for bluff restoration to remove invasive plant species and overgrown vegetation. Maintenance of the wooded bluff should include maintaining views and overlooks near established and future seating/picnic areas and active bluff habitat management. New picnic areas located near the bluff edge and a trail to access them is proposed in Riverside Park. The following pages provide a proposed plan view of Riverside Park and Annie Young Meadow and more specific park recommendations.
Figure 6-6. Riverside Park and Annie Young Meadow
Riverside Park and Annie Young Meadow

Park Recommendations:

A. Pollinator plantings with picnic opportunity
B. New trail along edge of park with clearing of invasive plant species for views of the river
C. Picnic opportunity within pollinator garden
D. Additional picnic locations with views of river and consistent MPRB furnishings: picnic tables with concrete pads, lighting, grills, benches
E. Revitalize volleyball courts

G. Two full-size basketball courts
H. Improved and enlarged picnic location with consistent MPRB furnishings: picnic pavilion, picnic tables with concrete pads, shade structures, lighting, grills, drinking fountain, benches
I. Rehabilitated play area location with added play elements and shaded seating
J. Wading pool enhanced with added shaded seating
K. Improved soccer field–biochar opportunity for improved soil quality and carbon absorption near freeway

L. Renovated existing restroom building

M. Recommended parking study area

N. Mid-level terrace nature play/picnic area in glen area between Riverside Park and Annie Young Meadow - intensive invasive species removal

O. Restored historic staircase to Annie Young Meadow

P. Convenient and contextually sensitive pedestrian connections to Annie Young Meadow

Q. Picnic/BBQ area including shelter/shade structure

R. Improved connection with raised crossing table, pavers, and park entry with trailhead kiosk

S. Restroom facility and interpretive signage, bike parking, and ADA accessible paved area

T. Widened walkway - provide police car access; possible permeable paver opportunity

U. Potential future accessible route/connection between Riverside Park and Annie Young Meadow

V. Sidewalk along river wall eliminated and replaced with rain garden

W. Peace garden / labyrinth

*Bolded text identifies community prioritization items
Sand volleyball courts precedent example
“Longfellow Flats” and Minneapolis Rowing Club Boathouse Area

The area known as “Longfellow Flats,” located in the river flats on the west side of the gorge, consists of mature floodplain forest vegetation and sandy beach areas along the shoreline. This area is primarily accessed by a long and steep stone staircase located between 33rd and 34th Streets. Negotiating the long staircase can be a challenge, but once you’ve reached the river flats, natural surface trails wind their way through the floodplain forest and provide access to the beach at the river’s edge. The beach provides a place for people to access the water and to launch a canoe or kayak into the river.

Being in “Longfellow Flats” makes one feel as if they’re no longer in the city, and have been transported to a remote, natural escape. Recommendations for the “Longfellow Flats” area include improvements focused on protecting and restoring the natural resources and ecology of the wooded bluffs and floodplain forest, enhancing stormwater outfalls, trail maintenance, environmental interpretation, seating, waste receptacles, and wayfinding. Other proposed improvements include the clarification and extension of the Winchell Trail from the top of the bluff to the flats via the staircase, as well as the improvement of the trail proceeding from the base of the staircase north along the river’s edge and over the stormwater outfall located at 33rd Street. This may require the addition of boardwalks or stairs to transcend the large stormwater outfall pipe. As with all natural areas in the park, the plan also calls for restoration efforts to remove invasive plant species and overgrown vegetation.

The Minneapolis Rowing Club Boathouse is located north of the “Longfellow Flats,” at the base of the Lake Street Bridge. The boathouse and associated facilities are accessed by a gravel maintenance roadway that switchbacks from the top of the gorge down to the river flats. The boathouse program includes river access/boat launch, boat storage, and training and meeting spaces. The Minneapolis Rowing Club leases the land from the MPRB and has membership and non-membership rowing opportunities available to the public. Proposed improvements in this area include the extension and improved connections of the Winchell Trail from “Longfellow Flats” to areas north of the boathouse, a new staircase south of Lake Street that provides access between the river bluff/parkway and the Winchell Trail, and a new canoe/kayak/paddleshare launch area.

The following pages provide a proposed plan view of the “Longfellow Flats” and Minneapolis Rowing Club Boathouse area and more specific park recommendations.
Figure 6-7. “Longfellow Flats” and Minneapolis Boathouse Area
“Longfellow Flats” and Minneapolis Rowing Club Boathouse Area

Park Recommendations:
A. Connection from Longfellow Flats upstream by sustainable natural surface trail
B. Enhanced stormwater outfall below 33rd Street - improving water quality and wildlife habitat
C. Signage/wayfinding, interpretation, bike racks, and trash receptacle at top of staircase
D. Seating/benches in a few key locations
E. Environmental interpretation/plant identification
F. Repaired/renovated existing stairway
G. Canoe/kayak launch with paddleshare opportunity
H. Bike share opportunity near paved bike trail
I. New staircase to access river from parkway

*Bolded text identifies community prioritization items
Canoe / kayak launch precedent example
“Oak Savanna” Area

The “Oak Savanna,” located at 36th Street and West River Parkway, is a community of scattered oak trees above a layer of native prairie grass and perennials set amongst rolling hills at the top of the bluff. The remnant prairie that covers a portion of this area is incredibly important to protect and preserve. The trees of the savanna are spread out enough so that there is no closed canopy and the grasses and prairie flowers receive plenty of sunlight. “Oak savannas are important because they are beautiful, dynamic environments with diverse plants and animals that have evolved complex ecological relationships over time. Since savannas are transitional native landscapes from prairie to woodland, they have extremely high diversity in flora and fauna. Diversity is a measure of health and stability, so it is important that habitats in parks with diverse native plants and animals are protected through careful planning, design, and management.” - National Park Service

The “Oak Savanna” contains remnant prairie and savanna landscape features that have been carefully maintained and managed by MPRB staff, partnering organizations, and local volunteer groups for decades. As a result, the area presents park visitors with a unique, healthy, and beautiful native landscape within the park. It is an area that attracts a diverse range of bird species that spend time or pass through this important migratory route and is a popular place for bird watching. As directed by the MGRP CAC, any investments or recommendations for improvements in the “Oak Savanna” should prioritize and focus on protecting and preserving this sensitive landscape through continued maintenance, management, and stewardship of its natural resources, improved environmental interpretation and education, the closure of unsustainable/unintended natural surface trails, and the restoration of disturbed landscapes. Project implementation investments at this site should prioritize ecological restoration and management above human usage. The following pages provide a proposed plan view of the “Oak Savanna” area and more specific park recommendations.
Figure 6-8. “Oak Savanna” Area
“Oak Savanna” Area

Park Recommendations:

A. Formalized and marked entries into savanna. Develop a signage identity to help denote the savanna, remnant mesic prairie, the long-term, ongoing restoration efforts by neighbors and nonprofits, and birding opportunities

B. Improved and added interpretative and signage elements at the savanna and remnant prairie’s edges - including environmental, cultural history, and interpretation related to birds in the area

C. Ravine improvements: stone and water course adjustments, plantings and bioengineering. Partner with City on outfall

D. Stormwater outfall improvements to enhance water quality and wildlife habitat

E. Improved river valley overlook

F. Landscape Restoration: repair and restore eroded slopes

G. Preserve and protect remnant prairie and restore disturbed prairie to improve quality of natural area and habitat/wildlife value

H. New higher quality fencing along ravine

I. Closure of unintended natural surface trail segments and restoration of landscape

J. Preserve and protect remnant mesic prairie on nearby south-facing slope and restore additional areas of disturbed prairie to improve beauty of natural area and habitat/wildlife value

*Bolded text identifies community prioritization items
Bird watching opportunity precedent example
East River Flats Park

East River Flats Park, located on the east side of the river in the flats below the University of Minnesota campus, is a large and relatively open park space with good access to the river shoreline and flexible lawn areas for informal recreation. It’s also home to the University of Minnesota Rowing Crew Boathouse and attracts use by students throughout the year. The park is bordered by the East River Parkway and wooded river bluff on its north side, and the Mississippi River on its south side. The wooded bluff and river’s edge have become inundated with invasive plant species and overgrown vegetation making it difficult to see the river from the parkway and park areas. Opportunities to improve this condition were discussed in Chapter 2.

Also discussed in Chapter 2 are opportunities to incorporate new park facilities intended to activate the East River Flats Park and improve its relationship with the river. Considering the park’s size and location (near the U of M campus), it is relatively unused today. Proposed park improvements are intended to encourage more park use and provide a healthy balance between informal/passive uses (i.e. picnic areas, rain gardens, and terraced river seating), and more active recreational uses (i.e. sand volleyball, climbing wall, and zipline platform). Other park improvements are intended to provide better connections between the U of M campus and East River Flats Park, including a new and more formal pedestrian entry across East River Parkway, and a new staircase located at the far west side of the park.

The plan also calls for bluff restoration to remove invasive plant species and overgrown vegetation. Maintenance of the wooded bluff should include maintaining views and overlooks near established seating areas and active bluff habitat management. Likewise, ongoing restoration efforts and removal of invasive plant species should also be conducted along the river shoreline. The following pages provide a proposed plan view of East River Flats Park and more specific park recommendations.
Figure 6-9. East River Flats Park
East River Flats Park

**Park Recommendations:**

A. Additional connection to East River Parkway

B. Formalized park entry connecting Coffman Memorial Union and the U of M Campus to the East River Flats Park

C. Picnic tables and selective clearing for river views - remove invasive plant species

D. **Open event lawn/flexible open space**

E. Formalized garden edge (Orchard/ native plantings/ pollinator gardens) enhancing entry and defining open space

F. Terraced/stepped seating area (limestone slabs)

G. Rock or gravel beach

H. Accessible canoe/kayak launch and entry dock

I. Existing and enhanced stormwater/wetland plantings

J. Sand volley ball courts

K. Picnic/BBQ shelter area

L. Existing University of Minnesota boathouse

M. Restroom building - existing, reopen

N. Potential zipline across river, provided support by the community at the time of implementation, permits are approved, and forecast revenues are positive

O. Climbing wall

P. Wayfinding signage to “Southeast Flats”

Q. Protect existing outfall locations

*Bolded text identifies community prioritization items*
Formalized park edge precedent example
“Southeast Flats” Area

The “Southeast Flats” area, located on the east side of the river, between the Franklin Avenue and the railroad trestle bridge, offers park visitors with a beautiful and transcendent opportunity to escape the urban landscape of the city and be in nature. This large natural area consists of densely wooded bluffs with exposed bedrock, floodplain forest and prairie landscapes, and sandy beaches located in the flats. The flats are accessed by a shared-use paved trail that connects to East River Flats Park, a staircase located near the Franklin Avenue Bridge, and a maintenance access road located at the southeast end of the natural area, just north of the trestle bridge.

Recommendations proposed for the “Southeast Flats” area include improvements focused on enhancing the natural resources and ecology of the wooded bluffs, protecting floodplain forest and prairie landscapes, enhancing stormwater outfalls, trail maintenance, environmental interpretation, and more opportunities to access the river for fishing, canoeing and kayaking, including a paddleshare location at the southeast end of the park. The plan also recommends exploring opportunities to improve access and connectivity with better signage and wayfinding, improvements to the former service road at the southeast end of the area, and repairs to the staircase located near the Franklin Avenue Bridge.

The plan proposes bluff restoration to remove invasive plant species and overgrown vegetation. Maintenance of the wooded bluff should include maintaining views and overlooks near established seating areas and active bluff habitat management. Likewise, ongoing restoration efforts and removal of invasive plant species should be conducted in the floodplain forest located in the river flats. The following pages provide a proposed plan view of “Southeast Flats” area and more specific park recommendations.
Figure 6-10. South East Flats
“Southeast Flats” Park

Park Recommendations:

A. Possible formalized ice climbing on Bridal Veil Falls, noting safety warnings about ice climbing, and consider programming, enforcement, and maintenance implications
B. Boardwalk on seasonally flooded areas of trail
C. Repaired and maintained staircase
D. Fishing pier
E. Prairie restoration throughout flats
F. Existing seating with opportunity for selective clearing to improve overlook and river visibility- remove invasive plant species
G. Improved stormwater outfall locations and enhanced ecological habitat
H. Wayfinding and entry signage
I. Create an enhanced entry trail on former service road
J. Directional/trail signage
K. Overlook above Bridal Veil Falls
L. Canoe / kayak launch and paddle share opportunity
M. Possible connection of natural surface trails to the St. Paul trail system

*Bolded text identifies community prioritization items*
Accessible trail example
Lower Gorge Islands (without dams)

As previously mentioned, the master planning effort evaluated potential dam removal impacts to the Mississippi Gorge Regional Park. The lower gorge area is generally located between Lake Street and the Ford Dam (Lock and Dam No. 1) and is anticipated to change greatly with dam removal, presenting opportunities for new floodplain islands and increased habitat areas for wildlife as well as challenges to existing recreational uses on the river.

There are many unknowns under future conditions with a more naturalized river post dam removal, such as the extent of the natural river bottom due to past dredging efforts, potential sediment contamination, and altered river ecology due to urbanization and climate change. However, an evaluation of 1895 aerial photography and other sources of information of river conditions prior to the installation of the dams would suggest that removal of the dams and restoration of the river would approximate historical conditions of the river gorge. If there is a future without dams for this section of river, including the reach up to St. Anthony Falls, it poses both opportunities and challenges. Ecology-based benefits and recreation opportunities are abundant in a future with a restored river, but river restoration and dam removal will potentially displace current uses like competitive rowing at the University of Minnesota or the rowers of the Minneapolis Rowing Club near the Lake Street Bridge who use this pool. Page 6-7 has recommended investigations and studies associated with dam removal to help prepare the MPRB and its river partners for these potential recreation displacements.

The following pages provide a potential plan view of the “Lower Gorge Islands” area based on historical interpretation of conditions prior to installing the dams.
Figure 6-11. Lower Gorge Islands (Without Dams)
Lower Gorge Islands (without dams)

**Opportunities Under Future Conditions with Naturalized River**

- Restoration of floodplains and islands to approximate historical conditions
- Natural floodplain inundation and connectivity
- Increased floodplain forest area
- Increased habitat area for migratory birds
- Increased fish spawning habitat area
- Increased potential for river otter habitat
- Expanded natural riparian corridor
- Diverse habitats along river
- Potential canoe and kayak access
- Greater flat and accessible area for recreation (hiking, fishing, bird watching, picnicking)
- Increased area for stormwater treatment
- Rock/gravel beaches
- Informational signage (historical, ecological, restoration, etc.)

**Issues and Unknowns Under Future Conditions with Naturalized River**

- Unknown extent of natural bottom due to dredging
- Overlying sediment may be contaminated
- Unknown human-made objects may be uncovered
- Altered river ecology due to urbanization and climate change
- Possibly displaced recreation uses like rowing and riverboat cruises

**Park Recommendations:**

A. If dams are removed or in the process of being removed, initiate a master plan amendment which lays out the effects and solutions to any displaced uses and the future applicable uses of the new river landscape. Also include ecological/habitat restoration initiatives and new regional park boundary changes as applicable.
Park-Wide Recommendations

The purpose of these park-wide recommendations is to provide information to support the master plan’s vision and guiding principles with regards to several park-wide facilities and elements within the Mississippi Gorge Regional Park that may lie outside the focus areas previously discussed. These facilities and elements include:

» Parkways
» Paved and natural surface trails and sidewalks
» Signage and site amenities

These recommendations are meant to support and inform future design and development within the park. They are not a substitute for specific, detailed design and engineering.

Parkways

Parkways make up much of the park land that park users know and experience within Mississippi Gorge Regional Park. They are located within MGRP’s boundaries and provide conduits for the movement of automobiles, pedestrians, bicyclists, roller bladers, and roller skiers, among others. They also provide immediate access to and from the regional park from surrounding neighborhoods. They are generally characterized by linear, tree lined roadways, green medians, and paved shared-use trails that are dotted with site amenities, such as informational kiosks, river overlooks, seating, parking, and other site features. The roadways are paved with the iconic red aggregate surfaces that make them stand apart from other roadways, and (with a few exceptions) are lined with the classic pole mounted light fixtures common throughout the Minneapolis park and parkway system.

Many of the facilities and amenities found with the parkways, such as trails, landscaping, wayfinding and signage, and site amenities are discussed later in this chapter. This section focuses on roadways and medians.

Roadways

The roadway portion of each parkway (East and West River Parkway) provides vehicular access and circulation to, from, and within MGRP along both sides of the river gorge. Roadways are designed to accommodate motorized vehicles moving at slower speeds (25 mph) for recreational purposes. The following recommendations apply to roadways within the parkways:

B. Roadways should be well maintained throughout the year, cleared of debris and snowfall, to minimize disturbance to the movement of automobiles and bicycles.
C. All parkway roadways should be paved with the iconic red aggregate to strengthen park and parkway identity.
D. All parkway roadways should include the custom wide curb and gutter system.
E. Parkway light pole and fixture type, size, color, and material should match the existing poles and fixtures within the park/parkways today, consistent with MPRB standards.
F. Light fixtures should be installed at regular intervals and frequent enough and of such illumination levels to provide safe levels of light on parkways without negatively impacting adjacent residential uses.
Medians
Many of the parkways include planted and landscaped medians – open spaces between the parkways and either a frontage road or adjacent private property. They provide additional green space along each parkway and separation between the river bluff and development of surrounding neighborhoods. They also help to infiltrate stormwater runoff before making its way to the river. Medians include mature shade trees, lawn areas and native grasses, wayfinding signage, and other landscape features. The following recommendations apply to medians near the parkways:

A. Medians should be maintained to ensure healthy plant growth.
B. Injured or dying plant materials should be replaced with native and drought tolerant plant species.
C. Maintain visibility through the medians to reduce conflicts between pedestrians, bicyclists, and motorists.
D. Incorporate clover lawns in areas receiving more foot traffic to reduce the need for maintenance.
E. Promote native restoration over traditional lawn to minimize mowing where appropriate.
Paved and Natural Surface Trails and Sidewalks

Trails are an integral part of the Minneapolis Park and Recreation system. They are used by people of all ages and abilities to exercise, relax, socialize, experience nature, view wildlife, and travel to destinations such as school and work. The Minneapolis Park and Recreation Board is committed to providing high quality trails throughout Minneapolis. The term ‘trail’ broadly refers to paved sidewalks within parks, paved parkway and park trails, as well as unpaved natural surface trails.

One of the goals of the Mississippi Gorge Regional Park Master Plan is to create an interconnected system of safe and convenient paths and walks between parks, natural areas, and recreation facilities and connect them with residential areas, civic institutions, businesses, and other community destinations along the corridor. Proposed trail improvements are illustrated in figures 6-12 through 6-16. Community outreach and engagement conducted by the MPRB identified trails as one of the most heavily used resources in the park and a high priority. Enhancing the park’s trail system and associated trail amenities are key objectives of the park master plan. However, careful consideration must be given to balancing human access to sensitive landscapes with protecting and preserving quality wildlife and plant habitat. The following recommendations apply to trails:

A. Create a series of various length trail loops that connect both sides of the river, utilizing existing bridges and connecting to the St. Paul trail system.
B. Support the extension of the Midtown Greenway across the river.
C. Fill trail gaps to the extent possible, and partner with adjacent landowners where applicable.
D. Design trails and sidewalks to meet or exceed ADA accessibility standards, where feasible.
E. Provide a variety of trail experiences and levels of difficulty to accommodate various user abilities and levels of desired adventure.
F. Design the trail and sidewalk system to ensure access and connections to various park and neighborhood destinations.
G. Design trails to encourage their use throughout the year, including winter uses such as snowshoeing, XC skiing, winter hiking, and biking (on paved trails designated for biking).
H. Evaluate opportunities to improve natural surface trails throughout the park. Close unsustainable trails and unintended trails and restore the landscapes appropriately. Design and build new natural surface trails to be sustainable, per MN DNR trail standards, or the applicable MPRB standard at the time of improvement. Specifically:

1. Existing natural surface trails shall be pedestrian only.
2. Explore potential for additional natural-surface trails, for different uses, on the east side of the river.
3. The Winchell Trail should be clarified, the extension of it should be studied, and the trail should be pedestrian only for perpetuity.

I. Install boardwalks where trails are forced to cross wet areas or where indicated in the master plan.
J. Design and install wayfinding signage that will help make trails more accessible and easier to navigate.
K. Balance trail location with ecology. Some of the most desirable places to access may also be some of the most sensitive landscapes and habitats. Trails are to be designed to avoid conflicts in these areas and reduce the potential for erosion or disturbance to wildlife and/or plant communities in these high-quality landscapes.
L. Promote and support the river’s water trail. Many people travel from across the globe to traverse the entire length of the Mississippi River from Lake Itasca to the Gulf of Mexico. These long-distance travelers must portage around the lock and dams using MPRB trails and river access points.
M. Create more consistency and convey a sense of quality and strong identity for the park through trailhead design.
N. Stairways should be improved and maintained as safe and usable access into and out of the park. Ramps are preferable to stairways, where feasible.

Further guidance on trails is located in Chapter 7.
Figure 6-12. Trails and Trail Amenities Map
Figure 6-13. Trails and Trail Amenities Map - Segment 1
Segment 2

Legend
- City Boundary
- Existing On-Street Bikeway
- Planned On-Street Bikeway
- Existing Multi-Use Trail
- Proposed Multi-Use Trail
- Existing Pedestrian Path
- Proposed Pedestrian Path
- Existing Natural Surface Trail
- Proposed Natural Surface Trail
- Closed, Natural Surface Trail
- Existing Stairs
- Proposed Stairs
- Proposed Boardwalk
- Existing Boardwalk
- Winchell Trail
- Proposed Boardwalk
- Major Gateways
- Minor Gateways
- Major Trailheads
- Minor Trailheads
- River Access
- Paddle Share Opportunity
- Canoe/Kayak Launch
- Major Overlook
- Bathrooms
- Wayfinding
- Water Trail

Figure 6-14. Trails and Trail Amenities Map - Segment 2
Figure 6-15. Trails and Trail Amenities Map - Segment 3
Figure 6-16. Trails and Trail Amenities Map - Segment 4
Trail Design Considerations

The siting and design of trails within the park requires consideration of several factors, including safety, connectivity, trail location, trail user type, accessibility, sustainability, and trail type. The following provides a more detailed description of those considerations:

Safety

Safety is a vital concern. Vehicular traffic and trail use conflicts should be minimized wherever possible. Where the trail parallels a parkway, separate bicycle and pedestrian trails are preferred. Visibility is particularly important at intersections with roads and trail crossings. Design principles for crime prevention should be applied to reduce potential safety hazards. Different trail users also travel at different speeds, which can contribute to conflicts and accidents. Trail signage and markers should be used to identify different trail types for use by pedestrians, bicyclists and/or other trail users within the park. Where bicyclists and pedestrians share the same trail, markings should be incorporated into the trail design to separate slower trail users from faster trail users to minimize conflicts. Additional education and enforcement may be needed to reduce trail user conflicts. It is preferred to have separate trails for bicycles and pedestrian where space allows.

Connectivity

Connectivity is important because it helps to ensure visitors use the park, get to their destination, and enjoy a seamless experience. Trails also support and integrate with the on-street pedestrian and bike network. Trails should have multiple access points from the surrounding system of sidewalks, other trails, and bikeways to make varying length trips and loop trips possible. Connections to existing bridges at Ford Parkway, Lake Street, Franklin Avenue, Washington Avenue, and Bridge No. 9 should be enhanced to encourage a series of loop trails throughout the length of the park. Coordination with the City of St. Paul may be necessary to maximize the potential for loop trails.
Other potential opportunities to maximize trail connectivity include the partnering with the University of Minnesota to complete the shared-use trail alongside East River Road from Arlington Street to Bridge No. 9, and the potential connection across the river on the rail bridge extension of the Midtown Greenway.

**Trail Locations**

Trail design should respond appropriately to opportunities, constraints, and character of the surroundings. In some locations, impacts to environmentally sensitive areas and wildlife can be avoided by relocating the trail or adjusting trail width or material to limit impacts. The river gorge is a unique landscape with some areas of steep slopes that are unstable for trail use. Floodplain forests on the flats and the oak savanna area on the bluff top are special landscapes along the gorge. Trail design in these locations must be carefully considered to minimize disturbance to the natural vegetation and the character of these areas. Trail width, slope, and materials should be designed to fit terrain, vegetation, drainage needs, circulation patterns, and so forth.

**Trail Users**

A wide variety of users enjoy the trail system within the park today. Trails provide health benefits for all, including those with disabilities and a growing number of seniors. Where possible, paved trail design should accommodate diverse modes and mobility devices – walkers and runners, bicyclists and skaters, wheelchairs and strollers.

The natural surface trails system’s general aim should accommodate all activity levels, levels of trail difficulty, and a fun experience for all ages and abilities. Regional parks’ natural surface trail systems can often be shared amongst varying user types, such as hikers, trail runners, mountain bikers, dog walkers, snowshoers, fatbikers, and xc skiers. However, it is rare, especially within a populous city, that all these uses are accommodated on one 24-inch-wide natural surface trail. It is prudent to separate these trails by speed of user and provide two trails to minimize conflicts. Park agencies across the state and nation struggle with conflicts between users of natural surface trails, especially between mountain bikers and pedestrians. Hiking and mountain biking are incredibly popular; both users want to be outside, enjoy nature, get exercise, and have fun. Currently, there are instances of mountain bikers and fatbikers using the pedestrian only natural surface trails within the regional park and beyond its boundaries. During the course of the master planning process, conflicts between mountain bike uses and pedestrian uses arose. The addition of mountain bike facilities within the gorge was questioned as to its appropriateness for both its physical feasibility and sustainability and its social feasibility. It was clear from the final Community Advisory Committee (CAC) that the majority of members did not want mountain bikes on the regional park’s natural surface trails. The CAC discussed and took a vote regarding their natural surface trail recommendations for the Board of Commissioners. Their recommendations are written earlier in this chapter and below:

1. Existing natural surface trails shall be pedestrian only.
2. Explore potential for additional natural-surface trails, for different uses, on the east side of the river.
3. The Winchell Trail should be clarified, the extension of it should be studied, and the trail should be pedestrian only for perpetuity.

Careful consideration and study should be conducted prior to installation of any new natural surface trails. A set of natural surface trail standards is recommended to be adopted and general natural surface trail design educational resources be made available.

**Accessibility**

The American’s with Disabilities Act (ADA) requires, among other things, that newly constructed “places of public accommodation” be readily accessible to and usable by individuals with disabilities. Accessibility guidelines are developed by the Architectural and Transportation Barriers Compliance Board (Access Board). Most accessibility standards, however, are not readily applicable to the natural environment and natural surface trails may not always meet accessibility guidelines. The United Forest Service (USFS) has developed Forest Service Trail Accessibility Guidelines (FSTG) based on the guidelines on outdoor developed areas. The FSTG are helpful because they “provide guidance for maximizing accessibility of trails…while recognizing and protecting the unique characteristics of their natural setting.” [https://www.fs.fed.us/recreation/programs/accessibility/FSTAG_2013%20Update.pdf](https://www.fs.fed.us/recreation/programs/accessibility/FSTAG_2013%20Update.pdf)

MPRB seeks to provide a range of challenge levels for trails in the park. These guidelines encourage design for increased accessibility but do not require unreasonable efforts to provide an accessible route for hiking trails on steep terrain commonly found within the gorge. Everyone should be able to access the paved trails...
provided along the parkways and within the designated parks, such as Riverside, Bohemian Flats, East River Flats, and Annie Young Meadow. Fewer people may be able to access portions of the Winchell Trail and other natural surface trails within the park due to steep hillsides, rugged terrain, wetlands, or sensitive landscapes. Navigating steep slopes with accessibly designed trails is particularly challenging because the long lengths of trail (using 5% maximum gradient) and multiple switchbacks required may destroy the natural character of the park. While measures should be taken to maximize accessible routes, this needs to be balanced with environmental impacts due to trail construction. The United States Access Board’s section 1019 of the standards for Outdoor Developed Areas provides for exceptions to accessibility standards for trails where compliance is not practicable due to terrain and/or where compliance would fundamentally alter the function or purpose of the facility or the setting. On outdoor recreation access routes, trails, and beach access routes, the exceptions apply only on the portion of the route where the condition applies. Improvements such as edge protection, wayfinding and accessible signage, lighting, and site furnishings, and clearing of invasive, understory vegetation (i.e. buckthorn) can also improve accessibility within the park.

### Trail Sustainability

These considerations emphasize the development of physically and ecologically sustainable trails that serve the needs of users while preserving the sense of place and protecting the unique environment within the river gorge. The placement of any trail in the environment has an ecological impact. The goal is to minimize impacts while providing the desired trail experience. All natural surface trails should be viewed as low-impact recreational experiences with a built footprint only as needed. The Minnesota Department of Natural Resources: Trail Planning, Design, and Development Guidelines identify three key factors common to sustainable trails:

1. Ecological Sustainability – Minimizing the ecological impacts of trails, especially in sensitive areas.
2. Physical Sustainability – Designing trails to retain their form over years of use and natural forces acting on them.
3. Engendering Stewardship – Fostering a sense of individual responsibility for stewardship.

### Trail Types

Trails within the Mississippi Gorge Regional Park fall into four categories based on type of use, surfacing, and location. Seasonal use may vary on each trail type. The four trail types in the park include:

1. **Paved Trails** – Hard-surfaced trails for non-motorized uses. Paved trails may accommodate walking, running, bicycling, in-line skating, and wheel-chair use, although it is preferable to separate pedestrian and biking/running/skating uses where possible. Shared-use paved trails are provided along the parkways and within some of the parks and flats in the gorge.

2. **Paved Sidewalks** – Hard surfaced walkways for pedestrian use. Paved sidewalks typically serve walking and wheel-chair use. Sidewalks are provided within the parks and provide connections to the City sidewalk system.

3. **Natural Surface Trails** – Natural surface trails for non-motorized uses. Natural surface trails typically accommodate hiking, running, snowshoeing, XC skiing, and bird watching in the MGRP. Natural surface trails are provided on the gorge slopes (Winchell Trail) and within the parks and natural open spaces along the river gorge. All are designated pedestrian only within the Gorge and the MGRP CAC recommended that designation be continued.

4. **Water Trail** – The water trail is the surface of the Mississippi River. It accommodates all sorts of watercraft, both motorized and non-motorized, including kayaks, canoes, rowing sculls, fishing boats, cruise boats, and pleasure boats. For paddlers, it is important to provide access on and off the water, and portage routes around locks and dams.

While the park does not include trails specifically designed for winter use (i.e. groomed ski trails), each of the trail types mentioned above accommodate winter uses, including walking, running, skiing, snowshoeing, and bird watching among other things. Biking is only permitted on paved trails, excluding the Winchell Trail.
**Signage and Site Amenities**

Signage and wayfinding are an integral part of the park. They help visitors orient themselves, provide simple routes to destinations, and give the park a unique identity. Site amenities consist of features that help make the park more enjoyable to be within, and easier to use, such as benches, waste and recycling receptacles, lighting, fencing, retaining walls, bike racks, restrooms, picnic areas, drinking fountains, dog waste dispensers, etc. The following recommendations apply to site amenities.

A. Park identification, information, and regulatory signs should meet MPRB standards.
B. Wayfinding signs should provide clear routes to major destinations within the park.
C. Benches should be located at regular intervals along the park’s length and at trailheads, high activity areas, rest areas, and beaches.
D. Park lighting should be consistent with Minneapolis Grand Rounds standards and the standards set by the MPRB.
E. Fencing and guardrails should be used sparingly or where required and of a design and material that fits within the context of its location.
F. Retaining walls should be made of native materials to the extent possible. Walls should be properly maintained and monitored for stability.
G. Bicycle racks should be located at all rest stops, trailheads, picnic areas, and major trail intersections.
H. Restrooms should be located at regular intervals along the length of the park, at rest stops, trailheads, and parking areas.
I. Picnic areas and facilities should be located throughout the park at varying scales appropriate for its location.
J. Drinking fountains should be placed near high activity areas and at trailheads.
K. Waste and recycling receptacles should be placed at regular intervals throughout the park.
L. Dog waste dispensers should be placed at trailheads, parking areas, and periodically along the length of the paved parkway trails.

Further guidance on site amenities is located in Chapter 7.

**Plantings, Natural Resources, River Access, and Stormwater BMPs**

Plantings and landscape restorations within the regional park are incredibly important. Much of the park’s natural resources are altered either by humans or by climate and require landscape protection, restoration, or preservation. Access to the river and views within the park attract visitors and offer unique spaces and opportunities to interact with water. Implementing best management practices (BMPs) for stormwater management within the regional park offers both water quality improvements and educational opportunities to the parks visitors, and acts as an example for other communities along waterbodies. The following recommendations apply to plantings, river access, and stormwater BMPs.

A. Use native plant materials appropriate for the specific microclimate, soil, and moisture conditions.
B. Plantings should be consistent with MPRB management and restoration plans.
C. Restorations and improvements of habitat and other natural resources should be for the benefit of native plants, animals, insects, and the river landscape, and follow best management practices for natural resources.
D. The river should be accessible in varying locations along its length and provide users an opportunity to touch the water or launch a small watercraft.
E. Locations to view the river from the park are identified in this plan and should be maintained to preserve the view. Views from the water to the park area also important; providing access on to the water should be supported.
F. Where possible, and with the coordination of partners, stormwater outfalls and other sources of stormwater should be managed to ensure cleaner water enters the park and the river.

Further guidance on these recommendations is located in Chapter 7.
Interpretation and Public Art

Interpretive elements within a park or a landscape tell specific stories related to the land, history, cultural resources, or natural resources. These are educational opportunities and ways to preserve the histories of the park and the people who have lived or travel over it. Public art offers creative components located in the landscape that are derived from input by the community and implemented by an artist. Public art can be large and traditional, like a statue, or small and temporary, like a performance.

A. Interpretive signs should be located at special points within the park and tell the story of the park’s history, ecology, and other significant features.
B. Interpretive elements should align with the master plan, community input, and themes outlined in Chapter 8.
C. Public art must be derived from input and guidance of the public, including theme and location.

Further guidance on these recommendations is located in Chapter 8.